DENON

AV SURROUND PRE-AMPLIFIER

AVP-A1HD

Owner's Manual

I

❏ NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION / NOTE SULL'USO / NOTAS SOBRE EL USO / ALVORENS TE GEBRUIKEN / OBSERVERA ANGÅENDE ANVÄNDNINGEN

- Avoid high temperatures.
  Allow for sufficient heat dispersion when installed in a rack.
- Vermeiden Sie hohe Temperaturen.
  Beachten Sie, dass eine ausreichende Belüftung gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Eviter des températures élevées.
  Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature elevate.
  Assicuratevi che vi sia un'adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas.
  Permite la suficiente dispersión del calor cuando está instalado en la consola.
- Vermijd hoge temperaturen.
  Zorg er bij installatie in een audiorack voor, dat de door het toestel geproduceerde warmte goed kan worden afgevoerd.
- Undvik höga temperaturer.
  Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.

- Handle the power cord carefully.
  Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um.
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution.
  Tenir la prise lors du débranchement du cordon.
- Maneggiate il cavo di alimentazione con attenzione.
  Tenete ferma la spina quando scollegate il cavo dalla presa.
- Maneje el cordón de energía con cuidado.
  Sostenga el enchufe cuando desconecte el cordón de energía.
- Hanteer het netsnoer voorzichtig.
  Houd het snoer bij de stekker vast wanneer deze moet worden aan- of losgekoppeld.
- Hantera nätkabeln varsamt.
  Håll i kabeln när den kopplas från el-uttaget.

- Keep the unit free from moisture, water, and dust.
- Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern.
- Protéger l'appareil contre l'humidité, l'eau et la poussière.
- Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere.
- Mantenga el equipo libre de humedad, agua y polvo.
- Laat geen vochtigheid, water of stof in het apparaat binnendringen.
- Utsätt inte apparaten för fukt, vatten och damm.

- Unplug the power cord when not using the unit for long periods of time.
- Wenn das Gerät längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes.
- Scollegate il cavo di alimentazione quando prevedete di non utilizzare l'unità per un lungo periodo di tempo.
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- Neem altijd het netsnoer uit het stopcontact wanneer het apparaat gedurende een lange periode niet wordt gebruikt.
- Koppla loss nätkabeln om apparaten inte kommer att användas i lång tid.

* (For apparatuses with ventilation holes)

- Do not obstruct the ventilation holes.
- Decken Sie den Lüftungsbereich nicht ab.
- Ne pas obstruer les trous d'aération.
- Non coprite i fori di ventilazione.
- No obstruya los orificios de ventilación.
- De ventilatieopeningen mogen niet worden beblokkeerd.
- Täpp inte till ventilationsöppningarna.

- Do not let foreign objects into the unit.
- Lassen Sie keine fremden Gegenstände in das Gerät kommen.
- Ne pas laisser des objets étrangers dans l'appareil.
- Non inserite corpi estranei all'interno dell'unità.
- No deje objetos extraños dentro del equipo.
- Laat geen vreemde voorwerpen in dit apparaat vallen.
- Se till att främmande föremål inte tränger in i apparaten.

- Do not let insecticides, benzene, and thinner come in contact with the unit.
- Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Assicuratevi che l'unità non entri in contatto con insetticidi, benzolo o solventi.
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
- Voorkom dat insecticiden, benzeen of verfverdunner met dit toestel in contact komen.
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens hölje.

- Never disassemble or modify the unit in any way.
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder zu verändern.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Non smontate né modificate l'unità in alcun modo.
- Nunca desarme o modifique el equipo de ninguna manera.
- Dit toestel mag niet gedemonteerd of aangepast worden.
- Ta inte isär apparaten och försök inte bygga om den.

CAUTION:
- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths, curtains, etc.
- No naked flame sources, such as lighted candles, should be placed on the unit.
- Observe and follow local regulations regarding battery disposal.
- Do not expose the unit to dripping or splashing fluids.
- Do not place objects filled with liquids, such as vases, on the unit.

ACHTUNG:
- Die Belüftung sollte auf keinen Fall durch das Abdecken der Belüftungsöffnungen durch Gegenstände wie beispielsweise Zeitungen, Tischtücher, Vorhänge o. Ä. behindert werden.
- Auf dem Gerät sollten keinerlei direkte Feuerquellen wie beispielsweise angezündete Kerzen aufgestellt werden.
- Bitte beachten Sie bei der Entsorgung der Batterien die örtlich geltenden Umweltbestimmungen.
- Das Gerät sollte keiner tropfenden oder spritzenden Flüssigkeit ausgesetzt werden.
- Auf dem Gerät sollten keine mit Flüssigkeit gefüllten Behälter wie beispielsweise Vasen aufgestellt werden.

ATTENTION:
- La ventilation ne doit pas être gênée en recouvrant les ouvertures de la ventilation avec des objets tels que journaux, rideaux, tissus, etc.
- Aucune flamme nue, par exemple une bougie, ne doit être placée sur l'appareil.
- Veillez à respecter les lois en vigueur lorsque vous jetez les piles usagées.
- L'appareil ne doit pas être exposé à l'eau ou à l'humidité.
- Ne pas poser d'objet contenant du liquide, par exemple un vase, sur l'appareil.

ATTENZIONE:
- Le aperture di ventilazione non devono essere ostruite coprendole con oggetti, quali giornali, tovaglie, tende e così via.
- Non posizionate sull'unità fiamme libere, come ad esempio candele accese.
- Prestate attenzione agli aspetti legati alla tutela dell'ambiente nello smaltimento delle batterie.
- L'apparecchiatura non deve essere esposta a gocciolii o spruzzi.
- Non posizionate sull'unità alcun oggetto contenente liquidi, come ad esempio i vasi.

PRECAUCIÓN:
- La ventilación no debe quedar obstruida por haberse cubierto las aperturas con objetos como periódicos, manteles, cortinas, etc.
- No debe colocarse sobre el aparato ninguna fuente inflamable sin protección, como velas encendidas.
- A la hora de deshacerse de las pilas, respete la normativa para el cuidado del medio ambiente.
- No exponer el aparato al goteo o salpicaduras cuando se utilice.
- No colocar sobre el aparato objetos llenos de líquido, como jarros.

WAARSCHUWING:
- De ventilatie mag niet worden belemmerd door de ventilatieopeningen af te dekken met bijvoorbeeld kranten, een tafelkleed, gordijnen, enz.
- Plaats geen open vlammen, bijvoorbeeld een brandende kaars, op het apparaat.
- Houd u steeds aan de milieuvoorschriften wanneer u gebruikte batterijen wegdoet.
- Stel het apparaat niet bloot aan druppels of spatten.
- Plaats geen voorwerpen gevuld met water, bijvoorbeeld een vaas, op het apparaat.

OBSERVERA:
- Ventilationen bör inte förhindras genom att täcka för ventilationsöppningarna med föremål såsom tidningar, bordsdukar, gardiner osv.
- Inga blottade brandkällor, såsom tända ljus, får placeras på apparaten.
- Tänk på miljöaspekterna när du bortskaffar batterier.
- Apparaten får inte utsättas för vätska.
- Placera inte föremål fyllda med vätska, t.ex. vaser, på apparaten.

II

A NOTE ABOUT RECYCLING:

This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with the local recycling regulations.

When discarding the unit, comply with local rules or regulations.

Batteries should never be thrown away or incinerated but disposed of in accordance with the local regulations concerning battery disposal.

This product and the supplied accessories, excluding the batteries, constitute the applicable product according to the WEEE directive.

HINWEIS ZUM RECYCLING:

Das Verpackungsmaterial dieses Produktes ist zum Recyceln geeignet und kann wieder verwendet werden. Bitte entsorgen Sie alle Materialien entsprechend der örtlichen Recycling-Vorschriften.

Beachten Sie bei der Entsorgung des Gerätes die örtlichen Vorschriften und Bestimmungen.

Die Batterien dürfen nicht in den Hausmüll geworfen oder verbrannt werden; bitte entsorgen Sie die Batterien gemäß der örtlichen Vorschriften.

Dieses Produkt und das im Lieferumfang enthaltene Zubehör (mit Ausnahme der Batterien!) entsprechen der WEEE-Direktive.

UNE REMARQUE CONCERNANT LE RECYCLAGE:

Les matériaux d'emballage de ce produit sont recyclables et peuvent être réutilisés. Veuillez disposer des matériaux conformément aux lois sur le recyclage en vigueur.

Lorsque vous mettez cet appareil au rebut, respectez les lois ou réglementations en vigueur.

Les piles ne doivent jamais être jetées ou incinérées, mais mises au rebut conformément aux lois en vigueur sur la mise au rebut des piles.

Ce produit et les accessoires inclus, à l'exception des piles, sont des produits conformes à la directive DEEE.

NOTA RELATIVA AL RICICLAGGIO:

I materiali di imballaggio di questo prodotto sono riutilizzabili e riciclabili. Smaltire i materiali conformemente alle normative locali sul riciclaggio.

Per lo smaltimento dell'unità, osservare le normative o le leggi locali in vigore.

Non gettare le batterie, né incenerirle, ma smaltirle conformemente alla normativa locale sui rifiuti chimici.

Questo prodotto e gli accessori inclusi nell'imballaggio sono applicabili alla direttiva RAEE, ad eccezione delle batterie.

ACERCA DEL RECICLAJE:

Los materiales de embalaje de este producto son reciclables y se pueden volver a utilizar. Disponga de estos materiales siguiendo los reglamentos de reciclaje de su localidad.

Cuando se deshaga de la unidad, cumpla con las reglas o reglamentos locales.

Las pilas nunca deberán tirarse ni incinerarse. Deberá disponer de ellas siguiendo los reglamentos de su localidad relacionados con los desperdicios químicos.

Este producto junto con los accesorios empaquetados es el producto aplicable a la directiva RAEE excepto pilas.

EEN AANTEKENING MET BETREKKING TOT DE RECYCLING:

Het inpakmateriaal van dit product is recycleerbaar en kan opnieuw gebruikt worden. Er wordt verzocht om zich van elk afvalmateriaal te ontdoen volgens de plaatselijke voorschriften.

Volg voor het wegdoen van de speler de voorschriften voor de verwijdering van wit- en bruingoed op.

Batterijen mogen nooit worden weggegooid of verbrand, maar moeten volgens de plaatselijke voorschriften betreffende chemisch afval worden verwijderd.

Op dit product en de meegeleverde accessoires, m.u.v. de batterijen is de richtlijn voor afgedankte elektrische en elektronische apparaten (WEEE) van toepassing.

OBSERVERA ANGÅENDE ÅTERVINNING:

Produktens emballage är återvinningsbart och kan återanvändas. Kassera det enligt lokala återvinningsbestämmelser.

När du kasserar enheten ska du göra det i överensstämmelse med lokala regler och bestämmelser.

Batterier får absolut inte kastas i soporna eller brännas. Kassera dem enligt lokala bestämmelser för kemiskt avfall.

Denna apparat och de tillbehör som levereras med den uppfyller gällande WEEE-direktiv, med undantag av batterierna.

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1. IMPORTANT NOTICE: DO NOT MODIFY THIS PRODUCT

This product, when installed as indicated in the instructions contained in this manual, meets R&TTE directive requirements. Modification of the product could result in hazardous Radio and EMC radiation.

2. CAUTION
- Separation distance of at least 20 cm must be maintained between the antenna of this product and all persons.
- This product and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

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1. WICHTIGER HINWEIS: NEHMEN SIE KEINE VERÄNDERUNGEN AN DIESEM PRODUKT VOR

Wenn dieses Produkt entsprechend dieser Bedienungsanleitung aufgebaut wird, entspricht es den Anforderungen der R&TTE-Richtlinie. Veränderungen am Produkt können zu gefährlicher Funk- und EMV-Strahlung führen.

2. VORSICHT
- Zwischen der Antenne dieses Produkts und Personen muss ein Schutzabstand von 20 cm eingehalten werden.
- Dieses Produkt und seine Antenne dürfen nicht neben anderen Antennen oder Sendern aufgestellt oder zusammen mit ihnen verwendet werden.

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1. MISE EN GARDE IMPORTANTE : NE JAMAIS MODIFIER CE PRODUIT

Si toutes les consignes indiquées dans ce mode ont été respectées pendant son installation, ce produit est conforme aux directives R&TTE. Toute modification du produit risquerait alors de générer des radiations radio et EMC dangereuses.

2. ATTENTION
- L'antenne de l'appareil devra être située à une distance de 20 cm au moins des personnes.
- Ce produit ainsi que son antenne ne devront en aucun cas être utilisés à proximité d'une autre antenne ou transmetteur.

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1. AVVERTENZA IMPORTANTE: NON MODIFICARE QUESTO PRODOTTO

Se installato come indicato nelle istruzioni del presente manuale, questo prodotto soddisfa i requisiti della direttiva R&TTE. Eventuali modifiche apportate al prodotto potrebbero causare pericolose radiazioni radio ed EMC.

2. ATTENZIONE
- È necessario mantenere una distanza minima di 20 cm tra l'antenna di questo prodotto e le persone.
- Questo prodotto e la relativa antenna non devono essere posizionati in prossimità di altre antenne o trasmettitori e non devono essere utilizzati congiuntamente a questi ultimi.

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1. NOTA IMPORTANTE: NO MODIFIQUE ESTE PRODUCTO

Este producto, si es instalado de acuerdo con las instrucciones contenidas en este manual, cumple los requisitos de la directiva R&TTE. La modificación del producto puede producir radiación de Radio y EMC peligrosa.

2. PRECAUCIÓN
- Se debe mantener una separación de al menos 20 cm entre la antena del producto y las personas.
- Este producto y su antena no debe instalarse ni utilizarse conjuntamente con otra antena o transmisor.

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1. BELANGRIJKE MEDEDELING: BRENG AAN DIT PRODUCT GEEN AANPASSINGEN AAN

Dit product, indien geïnstalleerd volgens de aanwijzingen in deze gebruiksaanwijzing, voldoet aan de vereisten van de R&TTE-richtlijn. Aanpassing van dit product kan gevaarlijke radio- en EMC-straling tot gevolg hebben.

2. LET OP
- Houd tussen antenne en personen altijd een afstand van tenminste 20 cm aan.
- Dit product en zijn antenne mogen niet in de buurt van een andere antenne of zender worden geplaatst of in combinatie daarmee worden gebruikt.

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1. VIKTIGT: APPARATEN FÅR INTE MODIFIERAS

Under förutsättning att apparaten installeras enligt anvisningarna i denna bruksanvisning, uppfyller denna kraven i R&TTE-direktivet. Ev. modifiering av apparaten kan resultera i farlig radio- och elektromagnetisk strålning.

2. FÖRSIKTIGT
- Se till att det finns ett avstånd på minst 20 cm mellan apparatens antenn och personer i omgivningen.
- Apparaten och dess antenn får inte placeras eller användas i närheten av andra antenner eller sändare.

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Thank you for purchasing this DENON product. To ensure proper operation, please read this owner's manual carefully before using the product.

After reading them, be sure to keep them for future reference.

Accessories

Check that the following parts are supplied with the product.

① Owner's manual 1
② CD-ROM (Owner's manual) 1
③ Service station list 1
④ Power cord (Cord length: Approx. 1.5 m) 1
⑤ Main remote control (RC-1067) 1
⑥ LR6/AA batteries (for RC-1067) 2
⑦ Sub remote control (RC-1070) 1
⑧ R03/AAA batteries (for RC-1070) 2
⑨ Rod antenna for wireless LAN connection 1
⑩ Setup microphone (Cord length: Approx. 7.6 m) 1

② ④ ⑤

⑦ ⑨ ⑩
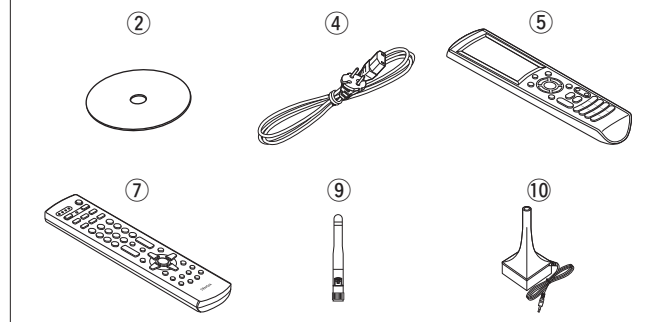
Cautions on Handling

• **Before turning the power switch on**
Check once again that all connections are correct and that there are no problems with the connection cables.

• Power is supplied to some of the circuitry even when the unit is set to the standby mode. When traveling or leaving home for long periods of time, be sure to unplug the power cord from the power outlet.

• **About condensation**
If there is a major difference in temperature between the inside of the unit and the surroundings, condensation (dew) may form on the operating parts inside the unit, causing the unit not to operate properly.
If this happens, let the unit sit for an hour or two with the power turned off and wait until there is little difference in temperature before using the unit.

• **Cautions on using mobile phones**
Using a mobile phone near this unit may result in noise. If so, move the mobile phone away from this unit when it is in use.

• **Moving the unit**
Turn off the power and unplug the power cord from the power outlet.
Next, disconnect the connection cables to other system units before moving the unit.

• Note that the illustrations in these instructions may differ from the actual unit for explanation purposes.

• Light Emitting Diodes (LED) are used in the AVP-A1HD circuit. When powered on, a green light shows inside part of the AVP-A1HD, however this is not a fault.

Cautions on Installation

Note:
For proper heat dispersal, do not install this unit in a confined space, such as a bookcase or similar enclosure.

※ **Note**

Wall
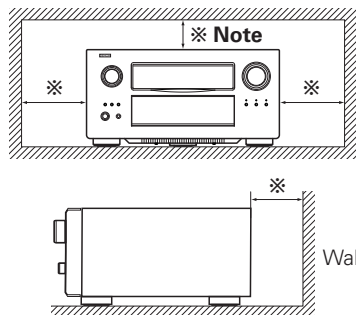
About the Remote Control Unit

In addition to the AVP-A1HD, the included main remote control unit (RC-1067) can also be used to operate the equipment listed below.
① DENON system components
② Non-DENON system components
  • By setting the preset memory (☞ page 66 ~ 68)
  • By using the learn function (☞ page 69)

Inserting the Batteries

① Lift the clasp and remove the rear lid.

(RC-1067)　　　　　(RC-1070)
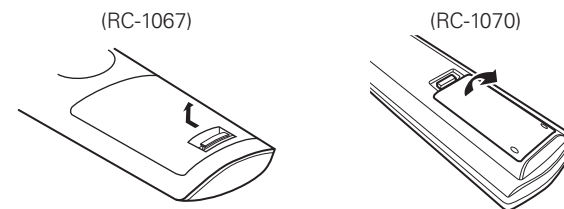
② Load the two batteries properly as indicated by the marks in the battery compartment.

(RC-1067)　　　　　(RC-1070)

LR6/AA　　　　　R03/AAA

③ Put the rear cover back on.

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Operating Range of the Remote Control Unit

Point the remote control unit at the remote sensor when operating it.

(RC-1070)

or

(RC-1067)

30°
30°

Approx. 7 m
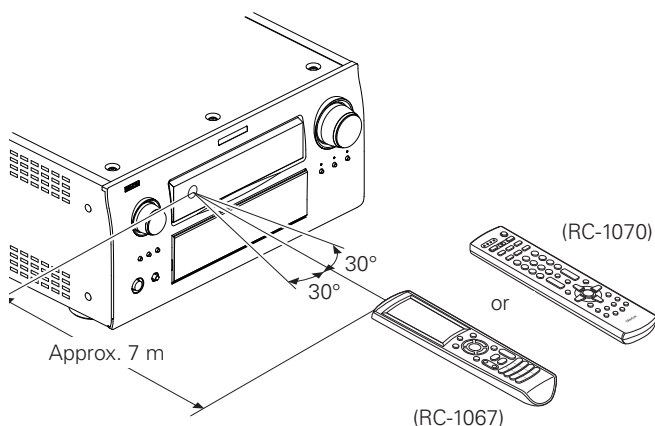
NOTE

The set may function improperly or the remote control unit may not operate if the remote control sensor is exposed to direct sunlight, strong artificial light from an inverter type fluorescent lamp or infrared light.

Part Names and Functions

For buttons not explained here, see the page indicated in parentheses ( ).

Front Panel
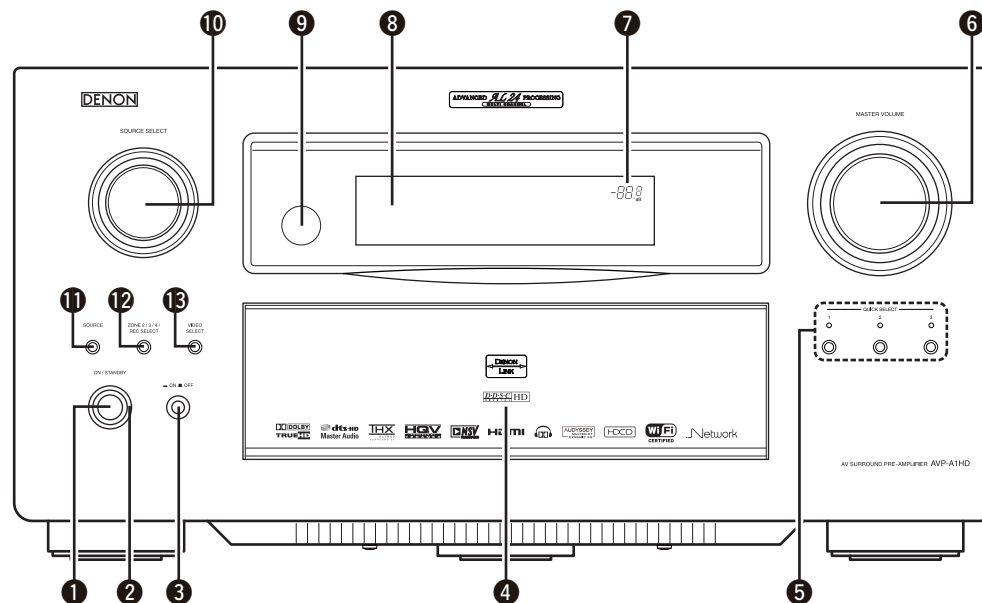
❶ **Power operation button (ON/STANDBY)** ·····················(54)

❷ **Power indicator** ··(54)

❸ **Power switch (ON OFF)** ·································(54)

❹ **Door**

❺ **QUICK SELECT buttons / indicators** ·····················(65)

❻ **MASTER VOLUME control knob** ·····························(54)

❼ **Master volume indicator**

❽ **Display**

❾ **Remote control sensor** ··(4)

❿ **SOURCE SELECT knob** ·······································(42)

⓫ **SOURCE button** ···(42)

⓬ **ZONE2/3/4 / REC SELECT button** ·····················(62, 76)

⓭ **VIDEO SELECT button** ··(44)

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【With the door open】
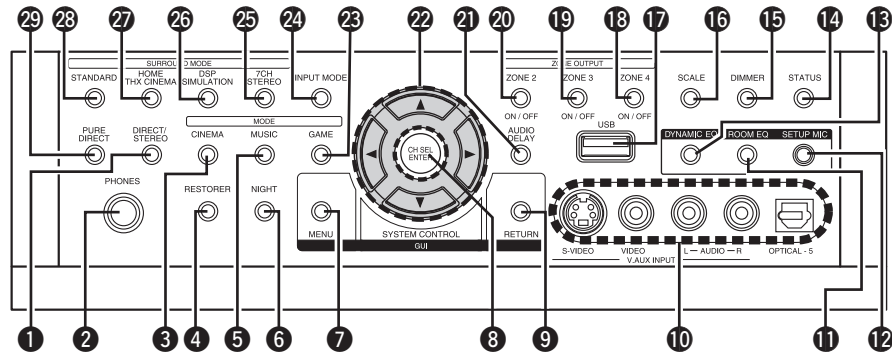
q DIRECT/STEREO button ································· (48)

w Headphones jack (PHONES) ·············· (54, 63)

e CINEMA button ··· (47)

r RESTORER button ······································ (51)

t MUSIC button ·· (47)

y NIGHT button ··· (51)

u MENU button ··· (23)

i CH SEL / ENTER button ······················· (23, 65)

o RETURN button ··· (23)

!0 V.AUX INPUT connectors ························· (18)

!1 ROOM EQ button ·· (51)

!2 SETUP MIC jack ··· (25)

!3 DYNAMIC EQ button ································· (51)

!4 STATUS button ··· (53)

!5 DIMMER button ·· (41)

!6 SCALE button ·· (45)

!7 USB port ·· (19)

!8 ZONE4 ON/OFF button ····························· (76)

!9 ZONE3 ON/OFF button ····························· (76)

@0 ZONE2 ON/OFF button ····························· (76)

@1 AUDIO DELAY button ································ (52)

@2 Cursor buttons (△▽◁▷) ························ (23)

@3 GAME button ·· (47)

@4 INPUT MODE button ································· (45)

@5 7CH STEREO button ································· (47)

@6 DSP SIMULATION button ························ (48)

@7 HOME THX CINEMA button ······················ (46)

@8 STANDARD button ···································· (47)

@9 PURE DIRECT button ································· (48)

Display
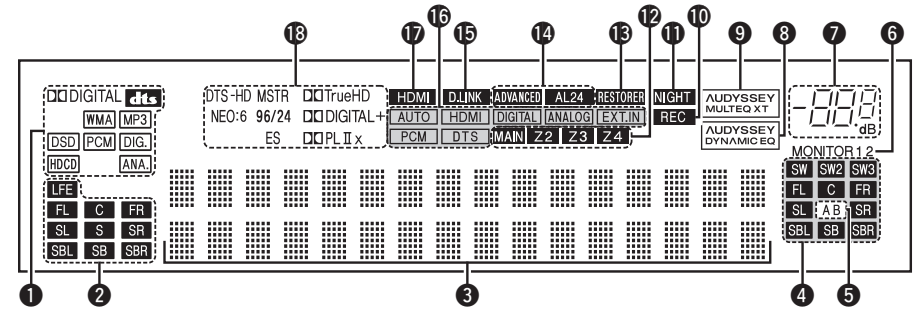
q Input signal indicators

w Input signal channel indicators
These light when digital signals are input.

e Information display
The input source name, surround mode, setting values and other information are displayed here.

r Output signal channel indicators

t Surround speaker indicators
These light according to the settings of the surround A and B speakers.

y Monitor output indicators
These light according to the HDMI monitor output setting. When set to "Auto (Dual)", the indicators light according to the connection status.

u Master volume indicator

i AUDYSSEY DYNAMIC EQ indicator
This lights when the Dynamic EQ is selected.

o AUDYSSEY MULTEQ XT indicator
This lights when the room equalizer is selected.

!0 Recording output source indicator
This lights when the REC OUT mode is selected.

!1 NIGHT indicator
This lights when the night mode is selected.

!2 Multi zone indicators
These light when the power for the respective zone is turned on.

!3 RESTORER indicator
This lights when the RESTORER mode is selected.

!4 ADVANCED AL24 indicator
This lights when Advanced AL24 Processing is activated (☞page 81).

!5 D.LINK indicator
This lights when playing using DENON LINK connections.

!6 Input mode indicators

!7 HDMI indicator
This lights when playing using HDMI connections.

!8 Decoder indicators
These light when the respective decoders are operating.

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Rear Panel

❶ CONTROL LINK connector ··························(11)

❷ RS-232C connector ································ (22)

❸ Analog audio connectors (AUDIO) ··········· (14)

❹ RCA PRE OUT connectors ·····················(11, 21)

❺ AC inlet (AC IN) ······································ (22)

❻ AC OUTLET ··· (22)

❼ XLR PRE OUT connectors ·························(11)

❽ EXT. IN connectors ································ (18)

❾ COMPONENT VIDEO connectors ········ (13, 21)

❿ Digital audio connectors
   (OPTICAL / COAXIAL / BNC) ··············· (13, 21)

⓫ HDMI connectors ··································· (12)

⓬ ETHERNET connector ······························ (20)

⓭ USB port ··· (19)

⓮ WLAN ANTENNA terminal ························ (20)

⓯ DENON LINK connector ··························· (18)

⓰ TRIGGER OUT jacks ······························· (22)

⓱ REMOTE CONTROL jacks ························· (21)

⓲ XLR audio connectors (CD) ····················· (14)

⓳ DOCK CONTROL jack ····························· (14)

⓴ SIGNAL GND terminal ···························· (14)

㉑ VIDEO / S-VIDEO connectors ················· (13)

6

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Connections
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Remote Control
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Remote Control Unit

❏ Main remote control unit (RC-1067)
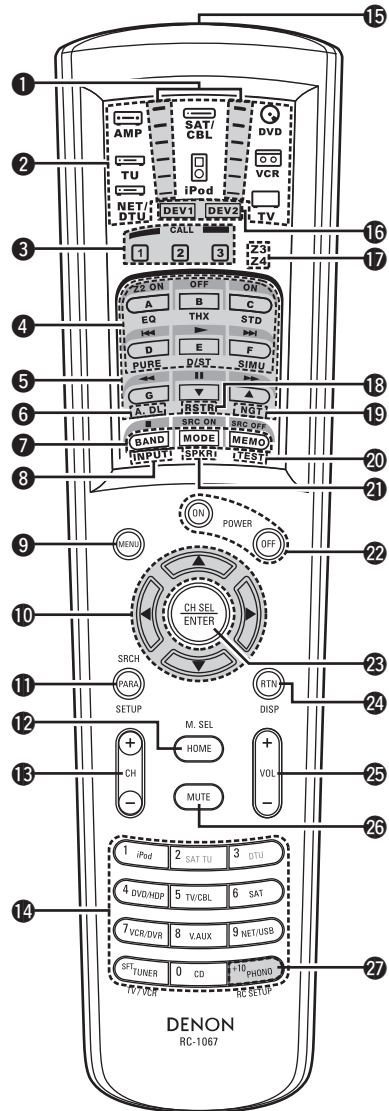
❶ **Signal transmission indicator** ·················· (66)

❷ **Mode select buttons** ································· (66)

❸ **Quick select / System call buttons** ····· (65, 70)

❹ **Surround mode buttons** ····················(46 ~ 48)

❺ **System buttons** ····························· (67, 68)

❻ **Audio delay button (A. DL)** ························ (52)

❼ **Tuner system buttons** ························· (68)

❽ **Input mode button (INPUT)** ····················· (45)

❾ **MENU button** ································· (23)

❿ **Cursor buttons (△▽◁ ▷)** ························· (23)

⓫ **Parameter / Search button**
   (PARA / SRCH) ····················· (48, 55)

⓬ **Monitor select (M. SEL) /**
   HOME button ························· (31, 66)

⓭ **Channel buttons (CH)** ···················· (55, 67)

⓮ **Input source select / Number buttons** ·· (42, 54)

⓯ **Remote control signal transmitter** ·············· (4)

⓰ **Device select indicators (DEV1 / DEV2)** ··· (66)

⓱ **ZONE3 / ZONE4 select indicators**
   (Z3 / Z4) ························· (76)

⓲ **RESTORER button (RSTR)** ························· (51)

⓳ **Night button (NGT)** ························· (51)

⓴ **Test tone button (TEST)** ····················· (29)

㉑ **Surround speaker select button (SPKR)** ··· (30)

㉒ **POWER buttons** ··························· (54)

㉓ **Channel select (CH SEL) /**
   ENTER button ························· (23, 65)

㉔ **Return button (RTN)** ····················· (23)

㉕ **Master volume control buttons (VOL)** ······ (54)

㉖ **Muting button (MUTE)** ···················· (54, 76)

㉗ **Main remote control unit setup button**
   (RC SETUP) ································· (66)

✎

The time for which the backlight stays on can be changed (☞page 71 "Setting the Time the Backlight Stays Lit").

NOTE

The **SAT TU**, **DTU**, ZONE2 mode **QUICK SELECT (1 ~ 3)**, **A. DL**, **RSTR**, **NGT**, **INPUT**, **SPKR**, **TEST** and surround mode buttons cannot be used.

❏ Sub remote control unit (RC-1070)
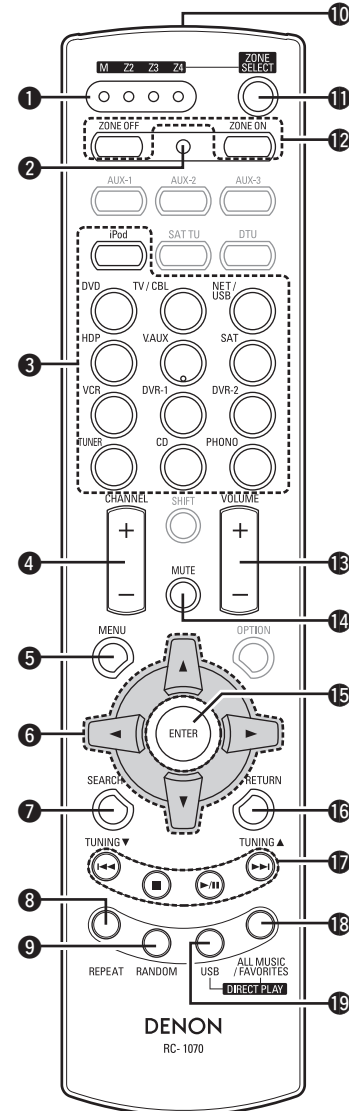
❶ **ZONE indicators**································(74)

❷ **Advanced setup button**····························(74)

❸ **Input source select buttons**····················· (42)

❹ **CHANNEL buttons**····························· (55, 73)

❺ **MENU button**··································· (23)

❻ **Cursor buttons (△▽◁ ▷)**························· (23)

❼ **SEARCH button**································· (55)

❽ **REPEAT button**································· (55)

❾ **RANDOM button**································· (55)

❿ **Remote control signal transmitter**··············· (4)

⓫ **ZONE SELECT button**·····························(74)

⓬ **Zone power on/off buttons**
   (ZONE ON / ZONE OFF)························· (76)

⓭ **Master volume control buttons**
   (VOLUME)································· (54)

⓮ **Muting button (MUTE)**························· (54, 76)

⓯ **ENTER button**································· (23)

⓰ **RETURN button**································· (23)

⓱ **System buttons**································· (73)

⓲ **ALL MUSIC/FAVORITES**
   (DIRECT PLAY) button························· (72)

⓳ **USB (DIRECT PLAY) button**························· (72)

NOTE

The **AUX-1**, **AUX-2**, **AUX-3**, **SAT TU**, **DTU**, **SHIFT** and **OPTION** buttons cannot be used.

7

Getting Started

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Connections

Connections for all compatible audio and video signal formats are described in these operating instructions. Please select the types of connections suited for the equipment you are connecting.
With some types of connections, certain settings must be made on the AVP-A1HD. For details, refer to the instructions for the respective connection items below.
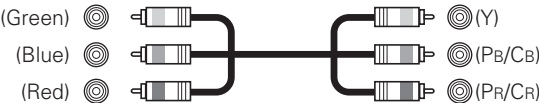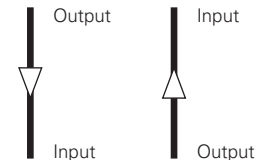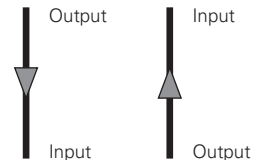
NOTE

• Do not plug in the power cord until all connections have been completed.
• When making connections, also refer to the operating instructions of the other components.
• Be sure to connect the left and right channels properly (left with left, right with right).
• Do not bundle power cords together with connection cables. Doing so can result in humming or noise.

Preparations

Cables Used for Connections

Select the cables according to the equipment being connected.

Audio cables	Video cables
Coaxial digital connections	**Component video connections**
(Orange) Coaxial digital (75 Ω/ohms pin-plug) cable	(Green) (Y) (Blue) (PB/CB) (Red) (PR/CR) Component video cable
Optical digital connections	(Green) (Y) (Blue) (PB/CB) (Red) (PR/CR) BNC (75 Ω/ohms) cable
Optical cable	
BNC digital connections	**S-Video connections**
BNC (75 Ω/ohms) cable	S-Video cable
Analog connections (XLR)	**Video connections**
Balanced cable	(Yellow) 75 Ω/ohms pin-plug video cable
Analog connections (stereo, RCA)	**Audio and video cables**
(White) (L) (Red) (R) Stereo pin-plug cable	**HDMI connections**
Analog connections (monaural, for subwoofer)	19-pin HDMI cable
(Black) Pin-plug cable	**Signal direction**
DENON LINK connections	Audio signal: Output Input
DENON LINK cable	Video signal: Output Input
Network connections (wired LAN)	Input Output
Ethernet cable	Input Output

8

Video Conversion Function

• This function automatically converts various formats of video signals input to the AVP-A1HD into the format used to output the video signals from the AVP-A1HD to a monitor.
• The AVP-A1HD's video input/output circuitry is compatible with the following four types of video signals:
  Digital video signals: HDMI
  Analog video signals: Component video, S-Video and Video

【**Flow of video signals inside the AVP-A1HD**】

---- : When 480i/576i signals are input

【**Flow of video signals for ZONE2**】

---- : When 480i/576i signals are input
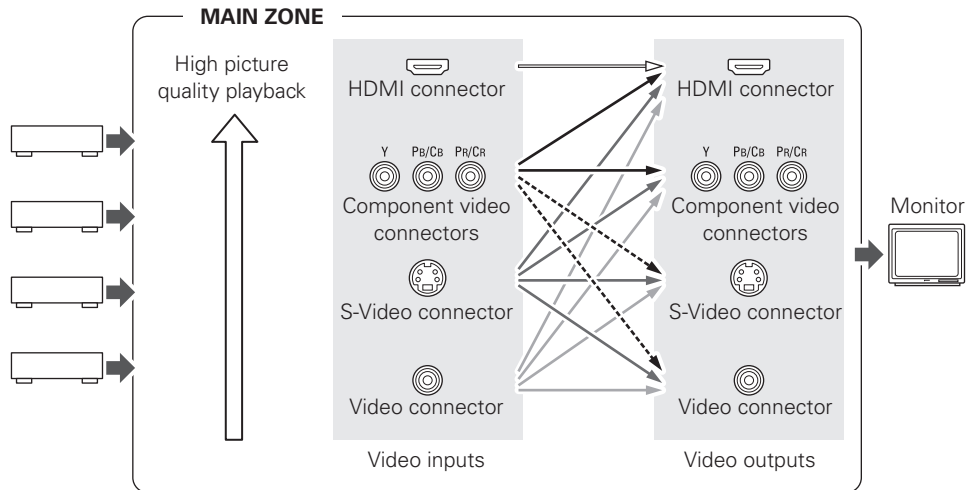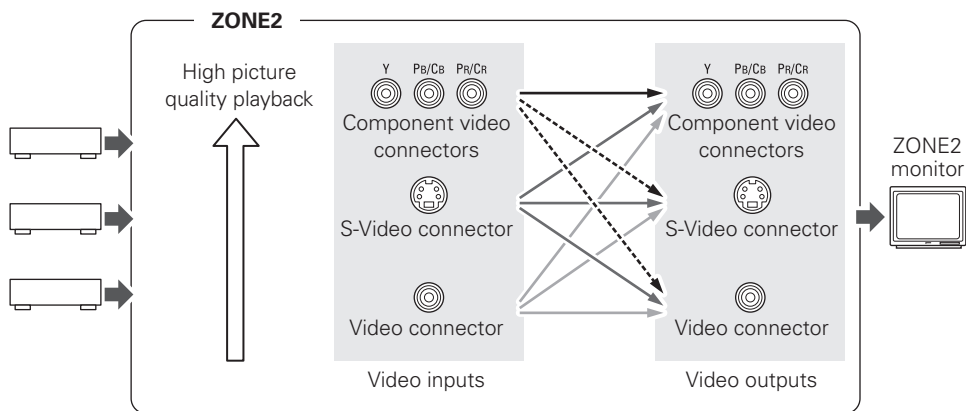
【**Flow of video signals for ZONE3**】
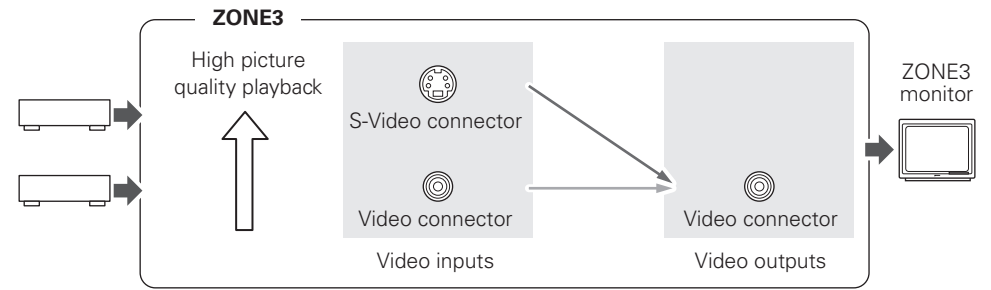
• When not using this function, connect a monitor output with the same type of connector as the video input connector.
• The resolution of the HDMI input-compatible monitor connected to the AVP-A1HD can be checked at GUI menu "Information" – "HDMI Information" – "Monitor1" or "Monitor2" (☞page 53).

NOTE

• For optimum video performance, THX recommends that you set the conversion mode to "OFF" to use video signals pass through system without up conversion.
  Example: View video input from a component video on the component video monitor.
• HDMI signals cannot be converted into analog signals.
• 1080p component input video signals cannot be output to anything other than component video connectors.
• 480p/576p, 1080i and 720p component video input signals cannot be converted into S-Video or Video format.
• When a non-standard video signal from a game machine or some other source is input, the video conversion function might not operate.

9

Speaker Layout

The illustration below shows a basic example of installation of the amplifier combined with 8 speakers and a monitor.

Subwoofer

Center speaker

Surround back speakers

Front speakers
Place the front speakers to the sides of the monitor or screen and as flush with the screen surface as possible.

Surround speakers

Two surround back speakers are required to use the THX Ultra2 Cinema, THX Music mode and THX Games mode.
Set the surround back speakers so that the distance to the listening position is the same for both the left and right speakers. It is also recommended that the deviations of the distance from the listening position to L and R channel speakers (front left (FL) and front right (FR), surround left (SL) and surround right (SR), surround back left (SBL) and surround back right (SBR)) is less than 60 cm.

🖉

The table below shows a typical speaker configuration for the AVP-A1HD.

	FRONT		CENTER	SURROUND A		SURROUND B		SURROUND BACK			SUBWOOFER (※)
	L	R		L	R	L	R	L	R	1 only	
9.1-channels	○	○	○	○	○	○	○	○	○	–	○
7.1-channels	○	○	○	○	○	–	–	○	○	–	○
6.1-channels	○	○	○	○	○	–	–	–	–	○	○
5.1-channels	○	○	○	○	○	–	–	–	–	–	○
3.1-channels	○	○	○	–	–	–	–	–	–	–	○
2.1-channels	○	○	–	–	–	–	–	–	–	–	○
2-channels	○	○	–	–	–	–	–	–	–	–	–

※ The AVP-A1HD can be connected to a maximum of 3 subwoofers.

Connecting to the Power Amp

• Connect the AVP-A1HD pre-out terminal to the power amp (sold separately).
• AVP-A1HD has a RCA pre-out terminal and XLR pre-out terminal. Connect accordingly with the power amp you want to use.
• The polarity of the XLR pre-out terminal can be switched using GUI menu "Manual Setup" – "Option Setup" – "XLR Out Polarity" (☞page 38).
• Connect the speakers to the power amp.
• Refer to the owner's manual of each piece of equipment when making connections.

POA-A1HD Connection and Operation

• When connecting the AVP-A1HD to the power amp POA-A1HD with a control link cable (included with the POA-A1HD), you can perform the following control operations.
  • POA-A1HD channel input selection and power amp settings
  • Link POA-A1HD to AVP-A1HD On/Standby control
  • Link POA-A1HD meter operation to AVP-A1HD display on/off control (☞page 41)
  • Updating POA-A1HD firmware (☞page 41)
• Up to 2 POA-A1HD units can be connected. Refer to the POA-A1HD owner's manual for making connections and POA-A1HD settings.

🖉

• For instructions for connecting speakers, please refer to the POA-A1HD owner's manual.
• When using just one surround back speaker, connect it to the left channel (SBL).

Connections

✎ When using Subwoofer 2 or 3, set GUI menu "Manual Setup" – "Speaker Setup" – "Subwoofer Setup" (☞page 28).

❏ Connecting the RCA pre-out terminal (Example : 9.3-channels)
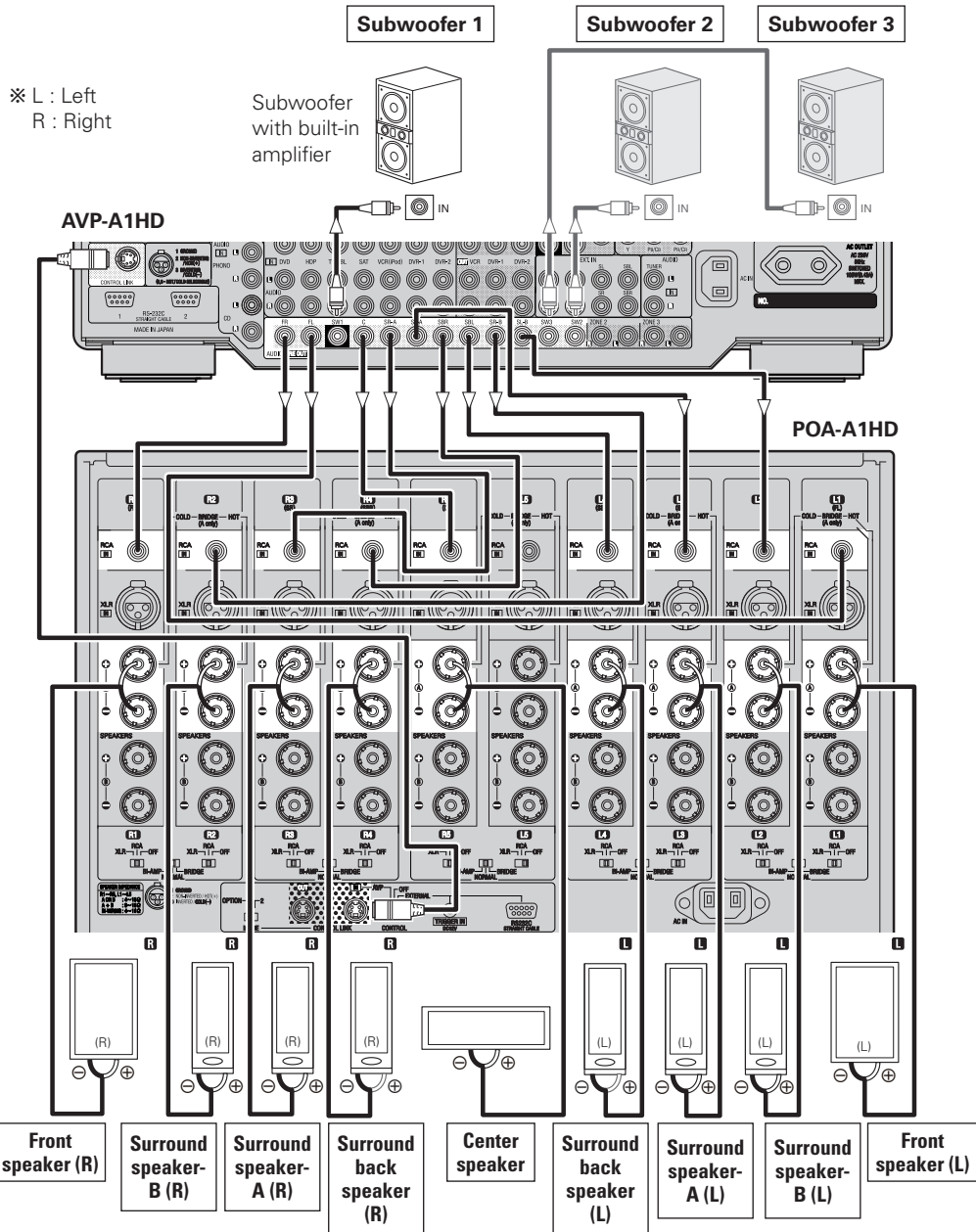
❏ Connecting the XLR pre-out terminal (Example : 9.3-channels)

✎
The default AVP-A1HD balance model XLR pre-out terminal pin alignment is as shown.
① : GROUND   ② : HOT   ③ : COLD
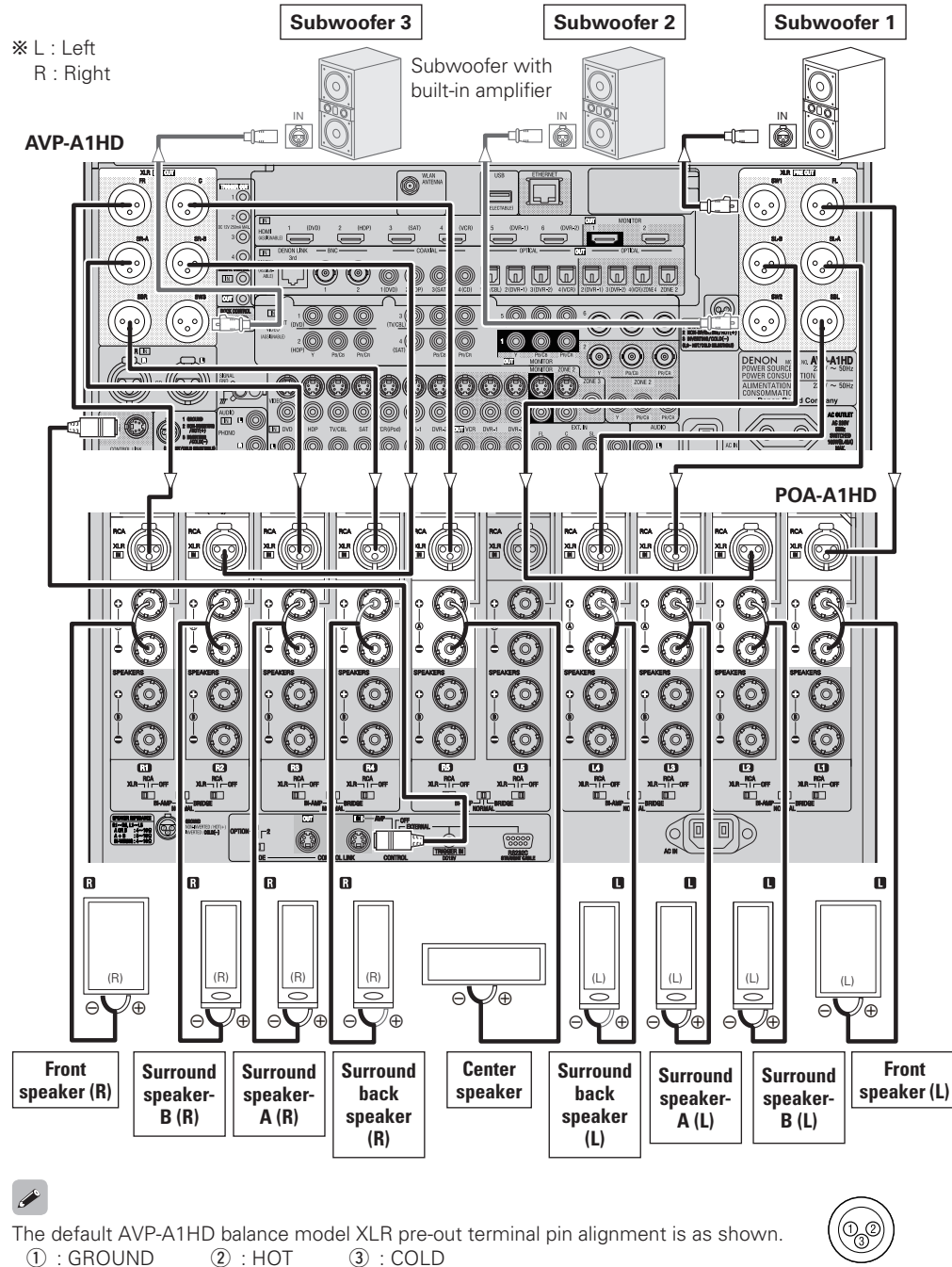
Operations

1 Connect AVP-A1HD and POA-A1HD with the control link cable.

※ The control link cable is included with the POA-A1HD.

※ AVP-A1HD can be connected and control to up to 2 POA-A1HD units.

Refer to the POA-A1HD user's manual for how to connect.

2 Set the POA-A1HD's control selector switch to "AVP".

3 Set the POA-A1HD's mode select switch according to the number of POA-A1HD units you are connecting.

When connecting 1 unit : "1"

When connecting 2 units : 1st unit "1", 2nd unit "2"

※ Refer to the POA-A1HD owner's manual for details.

4 Switch the AVP-A1HD and POA-A1HD power on.

5 Depending on the number of POA-A1HD units to be connected, set GUI menu "Option Setup" – "POA Setting" – "POA LINK" to either "ON (Single)" or "ON (Dual)" (☞ page 38).

6 Use GUI menu "Option Setup" – "POA Setting" – "LINK Check" to check the connection.

Connecting Equipment with HDMI connectors

With HDMI connections, the video and audio signals can be transferred with a single cable.

🖉
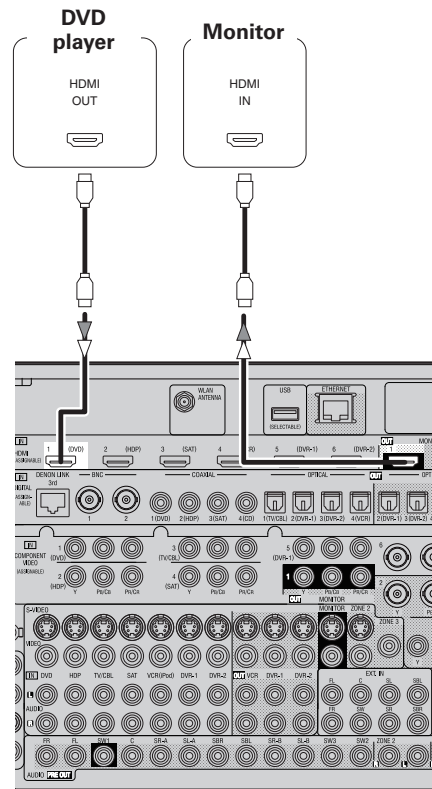
• By default, HDMI sound is output from the speaker of the power amp connected to AVP-A1HD.

• To output the sound from the TV, make the settings at GUI menu "Manual Setup" – "HDMI Setup" – "Audio" – "TV" (☞ page 31).

※ The AVP-A1HD is supported to the feature of HDMI listed below.

• 30 and 36 bit Deep Color
• xvYCC
• Auto Lipsync Correction

Compatible audio format	Details	Discs (examples)
2-channel linear PCM	2ch 32-192 kHz 16/20/24 bits	CD, DVD-Video, DVD-Audio
Multi-channel linear PCM	8ch 32-192 kHz 16/20/24 bits	DVD-Audio
Dolby Digital, DTS	Bitstream	DVD-Video
DSD	2/5.1ch 2.8224 MHz 1 bit	SACD
Dolby Digital Plus, Dolby TrueHD, DTS-HD	Bitstream	HD DVD, Blu-ray Disc

Copyright protection system (HDCP)

In order to play the digital video and audio signals of a DVD-Video or DVD-Audio disc using HDMI/DVI connections, both the connected DVD player and monitor must be equipped for a copyright protection system called "HDCP" (High-bandwidth Digital Content Protection). HDCP is a copy protection technology consisting of data encoding and mutual identification of the devices.

The AVP-A1HD is HDCP-compatible. For details on the DVD player or monitor you are using, refer to its operating instructions.

When connecting with an HDMI/DVI converter cable (adapter)

• HDMI video signals are theoretically compatible with the DVI format.

When connecting to a monitor, etc., equipped with a DVI-D connector, connection is possible using an HDMI/DVI converter cable, but depending on the combination of components in some cases the video signals will not be output.

• When connecting using an HDMI/DVI converter adapter, the video signals may not be output properly due to poor connections with the connected cable, etc.

NOTE

- Use a CPPM-compatible DVD player to play DVD-Audio discs that are copyright-protected by CPPM.
- The audio signals output from the HDMI connector (sampling frequency, bit rate, etc.) may be restricted by the connected device.
- Video signals are not output properly when using devices that are not HDCP-compatible.
- Video signals are not output if the input video signals do not match the monitor's resolution. In this case, switch the DVD player's resolution to a resolution with which the monitor is compatible.
- If the GUI menu "Manual Setup" – "HDMI Setup" – "Audio" setting (☞ page 31) is set to "Amp", the sound may be interrupted when the monitor's power is turned off.
- Use a cable on which the HDMI logo is indicated (a certified HDMI product) for connection to the HDMI connector. Normal playback may not be possible when using a cable other than one on which the HDMI logo is indicated (a non-HDMI-certified product).
- If the monitor or DVD player does not support Deep Color, Deep Color signal transfer is not possible.
- If the monitor or DVD player does not support xvYCC, xvYCC signal transfer is not possible.
- If the monitor does not support "Auto Lipsync Correction" function, this function will not work.
- The AVP-A1HD is compatible with the HDMI's CEC (Consumer Electronics Control) function. Please note the following.
  - It may not work depending on the device it is connected to and its setup.
  - It does not operate with televisions or players that are not compatible with HDMI's CEC.

✎

- When the AVP-A1HD and DVD player are connected using an HDMI cable, also connect the AVP-A1HD and monitor using an HDMI cable.
- If the connected monitor or DVD player only has a DVI-D connector, use an HDMI/DVI converter cable. When using a DVI cable, no audio signals are transmitted.
- Use a Deep Color compatible cable for connection to Deep Color compatible devices.

Connecting the Monitor

- Connect the cables to be used (☞ page 9 "Video Conversion Function").
- With HDMI connections, the video and audio signals can be transferred with a single cable.
- To output the audio signals to the monitor with HDMI connections, set GUI menu "Manual Setup" – "HDMI Setup" – "Audio" to "TV" (☞ page 31).
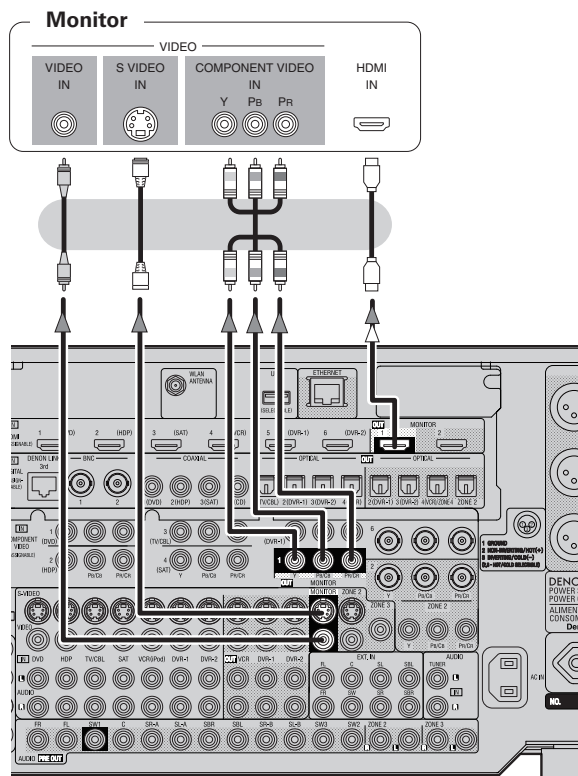
NOTE

- The component video connectors may be indicated differently on your monitor. For details, see the monitor's operating instructions.
- The audio signals output from the HDMI connectors are only the HDMI input signals.

Connecting the Playback Components

Carefully check the left (L) and right (R) channels and the inputs and outputs, and be sure to interconnect correctly.

DVD Player

- Connect the cables to be used.
- With HDMI connections, the video and audio signals can be transferred with a single cable.

✎
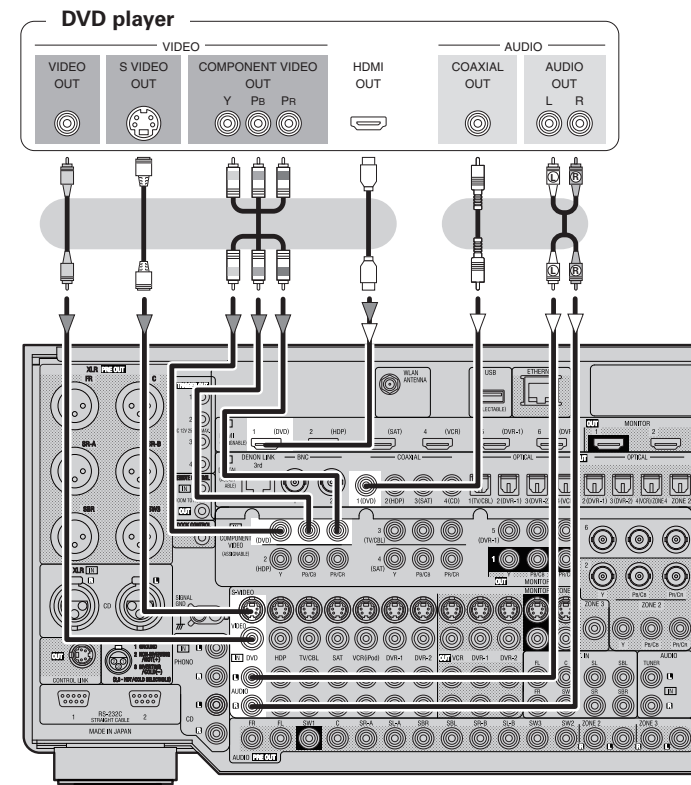
- Connect an HDP (High-Definition Player) in the same way.
- When using an optical cable or a BNC cable for the digital audio connection, make the settings at GUI menu "Source Select" – "DVD" – "Assign" – "Digital" (☞ page 44).
- When using a BNC cable for the component video connection, make the settings at GUI menu "Source Select" – "DVD" – "Assign" – "Component" (☞ page 44).

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Record Player

Turntable (MM cartridge)

AUDIO OUT   GND

🖉
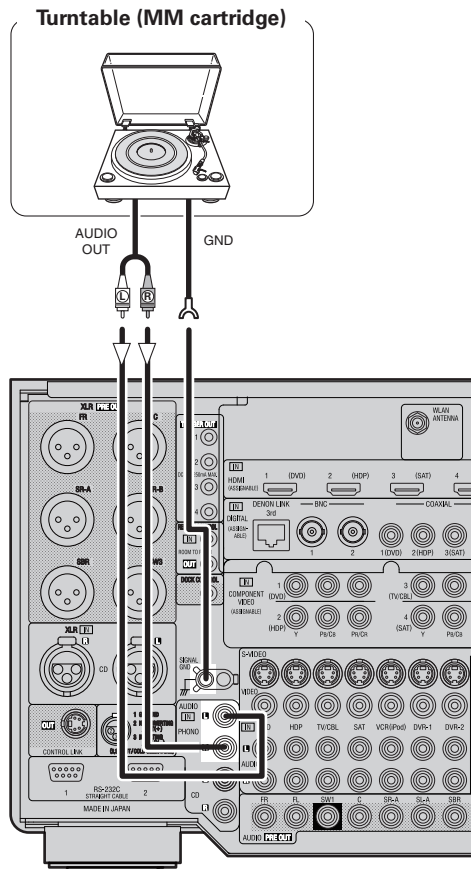
• When connecting a record player with an MC cartridge, use a commercially available MC head amplifier or a step-up transformer.
• Induction humming (a booming sound) may be produced from the speakers if the volume is raised with no record player connected.
• With some record players, noise may be generated when the ground wire is connected. If so, disconnect the ground wire.

NOTE

The AVP-A1HD's SIGNAL GND terminal is meant to reduce noise when a record player is connected. This is not a safety ground terminal.

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CD Player

Connect the cables to be used.
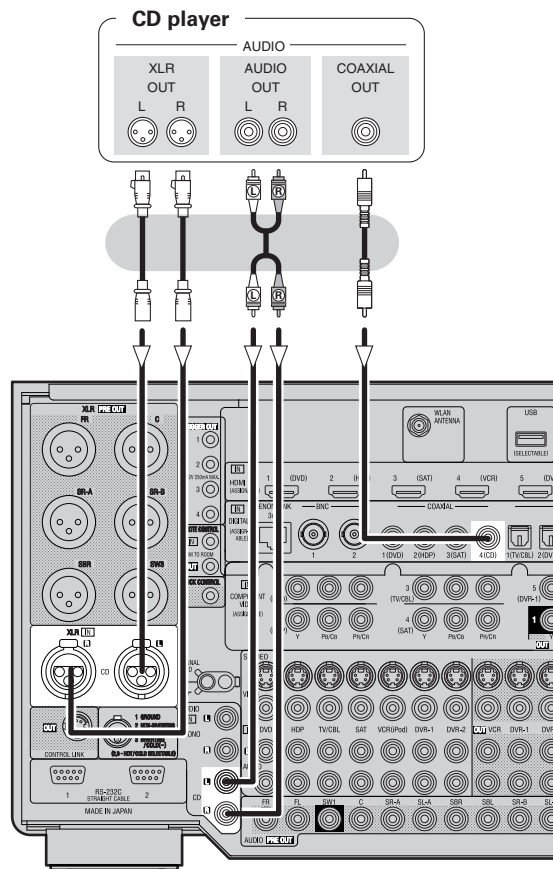
CD player

AUDIO

XLR OUT L R   AUDIO OUT L R   COAXIAL OUT

🖉

• When using an optical cable or a BNC cable for the digital audio connection, make the settings at GUI menu "Source Select" – "CD" – "Assign" – "Digital" (☞ page 44).
• The default analog audio input setting is "RCA". When using a balanced cable for the analog audio connection, make the settings at GUI menu "Source Select" – "CD" – "Assign" – "Analog" (☞ page 44).

NOTE

The default AVP-A1HD balance model XLR input connectors pin alignment is as shown.
① : GROUND
② : HOT
③ : COLD

iPod®

Use a DENON Control Dock for iPod (ASD-1R, sold separately) to connect the iPod to the AVP-A1HD. For instructions on the Control Dock for iPod settings, refer to the Control Dock for iPod's operating instructions.

Example :

iPod

ASD-1R

🖉
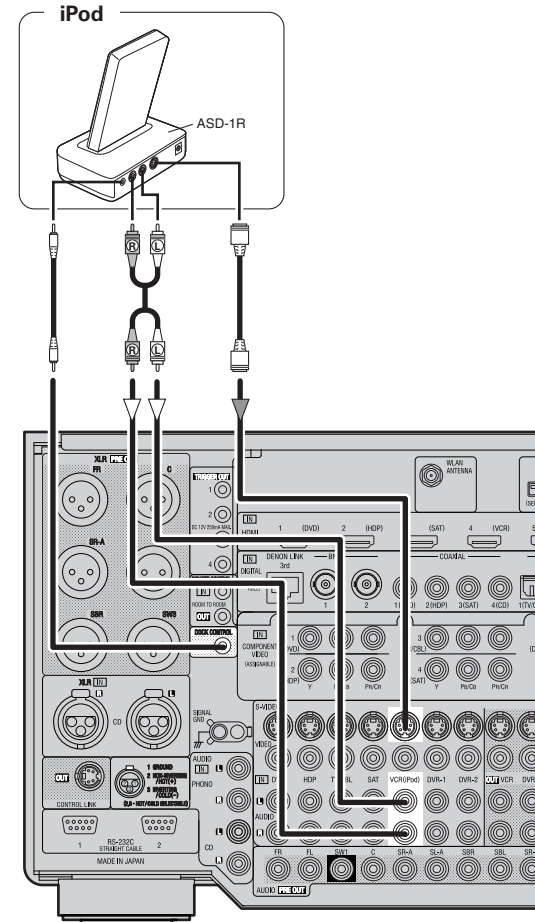
• With the default settings, the iPod can be used connected to the VCR (iPod) connector.
• To assign the iPod to a connector other than VCR (iPod), make the settings at GUI menu "Source Select" – "(input source to which iPod dock assigned)" – "Assign" – "iPod dock" (☞ page 44).

TV/CABLE Tuner

Connect the cables to be used.

TV tuner

VIDEO

VIDEO OUT	S VIDEO OUT	COMPONENT VIDEO OUT
		Y PB PR

AUDIO

OPTICAL OUT	AUDIO OUT
	L R

🖉
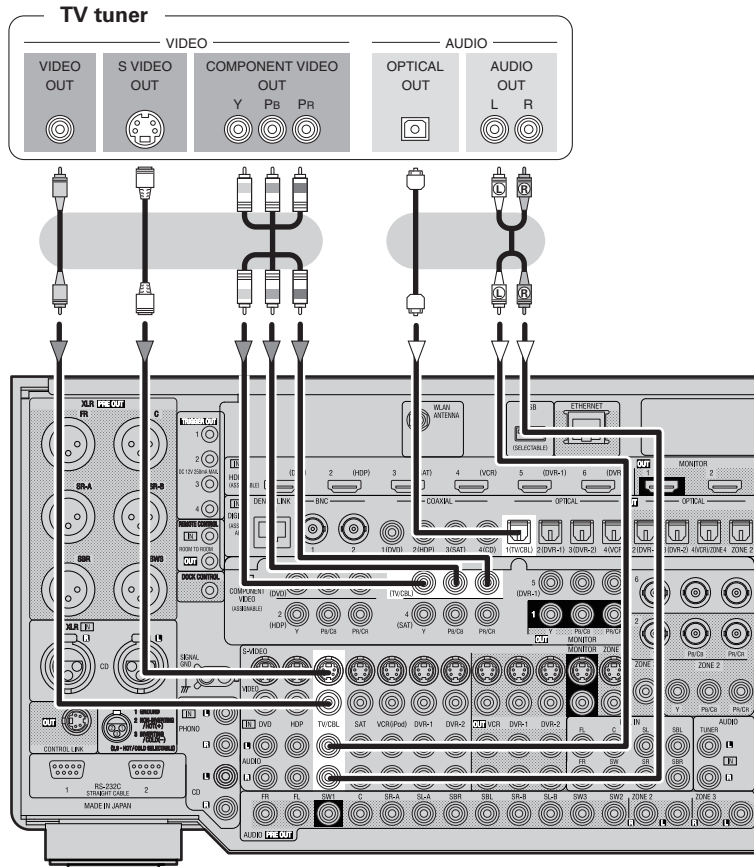
- When using a coaxial digital cable or a BNC cable for the digital audio connection, make the settings at GUI menu "Source Select" – "TV/CBL" – "Assign" – "Digital" (☞ page 44).
- When using a BNC cable for the component video connection, make the settings at GUI menu "Source Select" – "TV/CBL" – "Assign" – "Component" (☞ page 44).

Satellite Receiver

Connect the cables to be used.
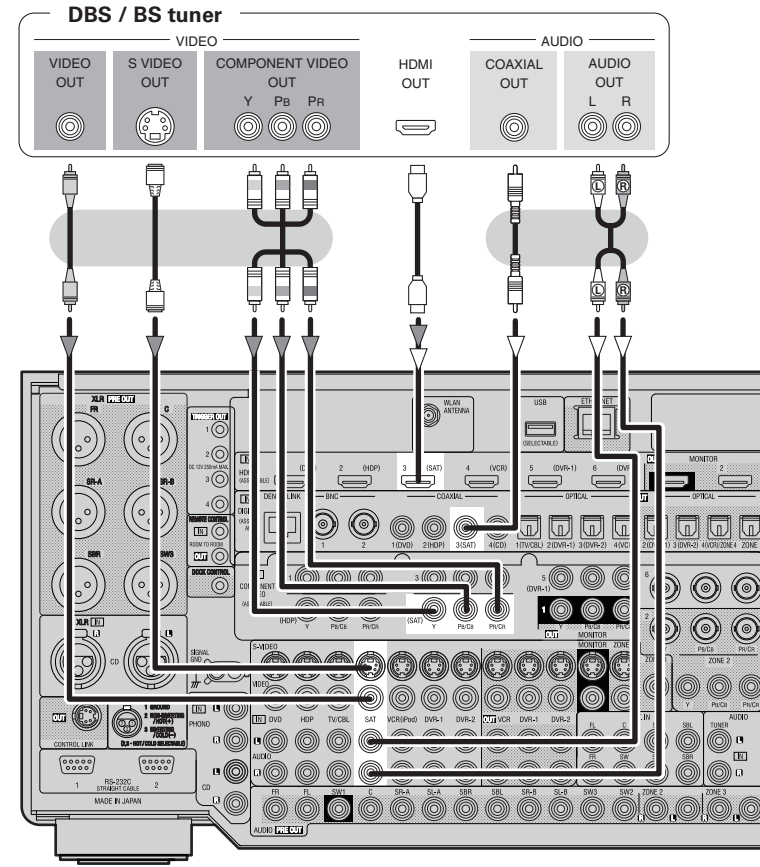
DBS / BS tuner

VIDEO

VIDEO OUT	S VIDEO OUT	COMPONENT VIDEO OUT	HDMI OUT
		Y PB PR	

AUDIO

COAXIAL OUT	AUDIO OUT
	L R

🖉

- When using an optical cable or a BNC cable for the digital audio connection, make the settings at GUI menu "Source Select" – "SAT" – "Assign" – "Digital" (☞ page 44).
- When using a BNC cable for the component video connection, make the settings at GUI menu "Source Select" – "SAT" – "Assign" – "Component" (☞ page 44).

15

Connecting the Recording Components

Carefully check the left (L) and right (R) channels and the inputs and outputs, and be sure to interconnect correctly.

Digital Video Recorder

Connect the cables to be used.

Digital video recorder

VIDEO			AUDIO		VIDEO		AUDIO	
VIDEO OUT	S VIDEO OUT	COMPONENT VIDEO OUT Y PB PR	HDMI OUT	OPTICAL OUT	AUDIO OUT L R	S VIDEO IN	VIDEO IN	AUDIO IN L R	OPTICAL IN
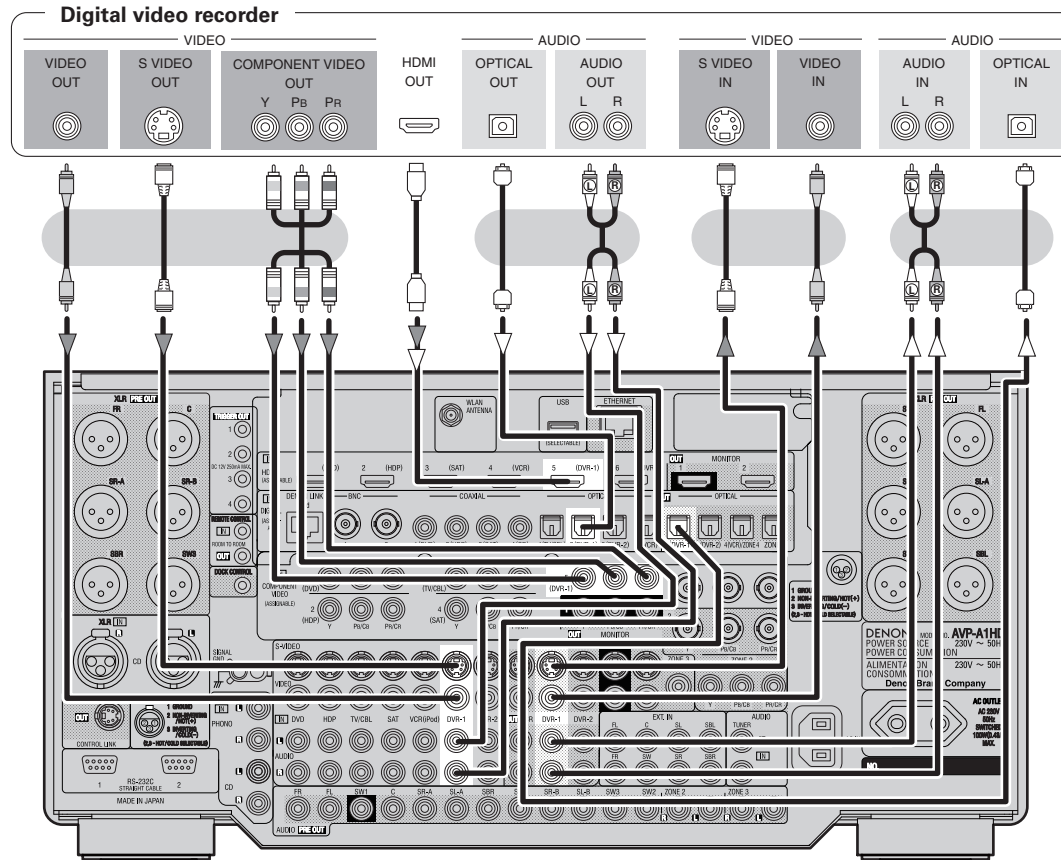
• Make analog connections if you wish to record analog audio signals.
• When recording to a digital video recorder, it is necessary that the type of cable used with the playback source equipment be the same type that is connected to the AVP-A1HD DVR-1 OUT connector.

  Example: TV IN → S-Video cable : DVR-1 OUT → S-Video cable
  TV IN → Video cable : DVR-1 OUT → Video cable

• Connect a DVR-2 in the same way.
• When using a component video cable or a BNC cable for the component video connection of DVR-2, make the settings at GUI menu "Source Select" – "DVR-1" or "DVR-2" – "Assign" – "Component" (☞page 44).

NOTE

• Do not connect the output of the component connected to the AVP-A1HD's OPTICAL2 output connector to any input connector other than OPTICAL2.
• Do not connect the output of the component connected to the AVP-A1HD's OPTICAL3 output connector to any input connector other than OPTICAL3.

16

Video Cassette Recorder

Connect the cables to be used.

Video cassette recorder

🖉
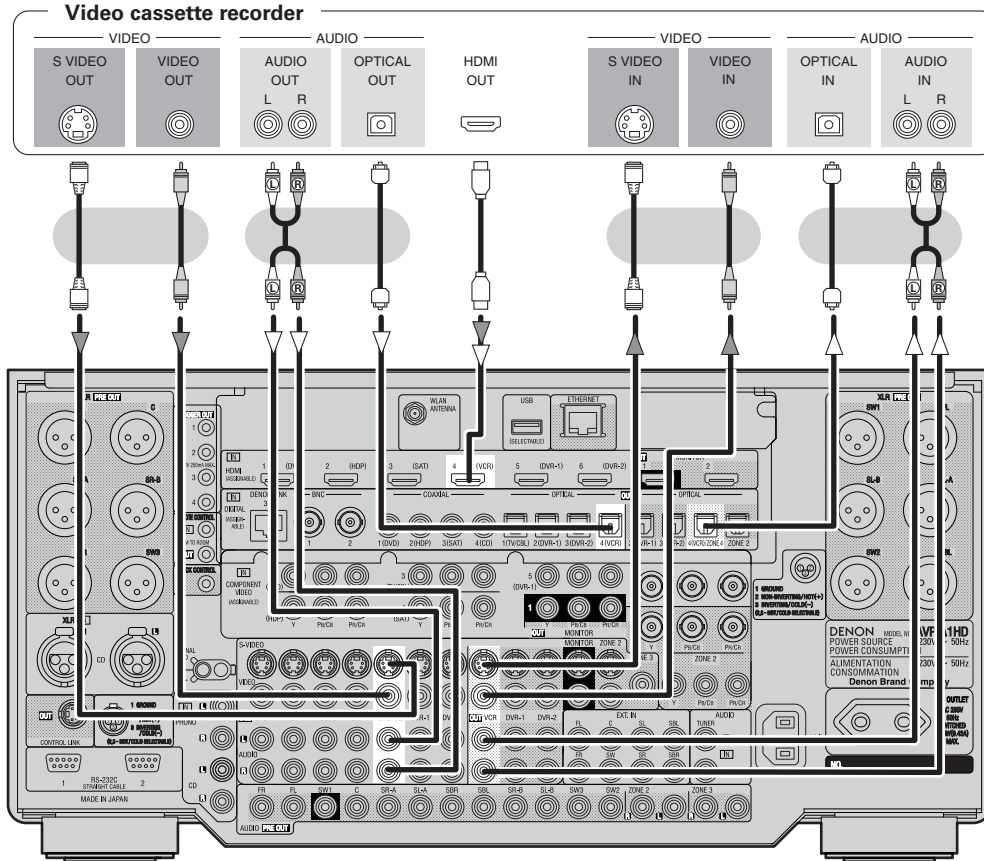
- When recording to a VCR, it is necessary that the type of cable used with the playback source equipment be the same type that is connected to the AVP-A1HD VCR OUT connector.
  Example: TV IN → S-Video cable : VCR OUT → S-Video cable
       TV IN → Video cable : VCR OUT → Video cable
- When using a component video cable or a BNC cable for the video connection, make the settings at GUI menu "Source Select" – "VCR" – "Assign" – "Component" (☞page 44).

NOTE

Do not connect the output of the component connected to the AVP-A1HD's OPTICAL4 output connector to any input connector other than OPTICAL4.

CD Recorder / MD Recorder / Tape Deck

Make analog connections if you wish to record analog audio signals, or digital connections if you wish to record digital audio signals, depending on the types of connectors on the components being used.
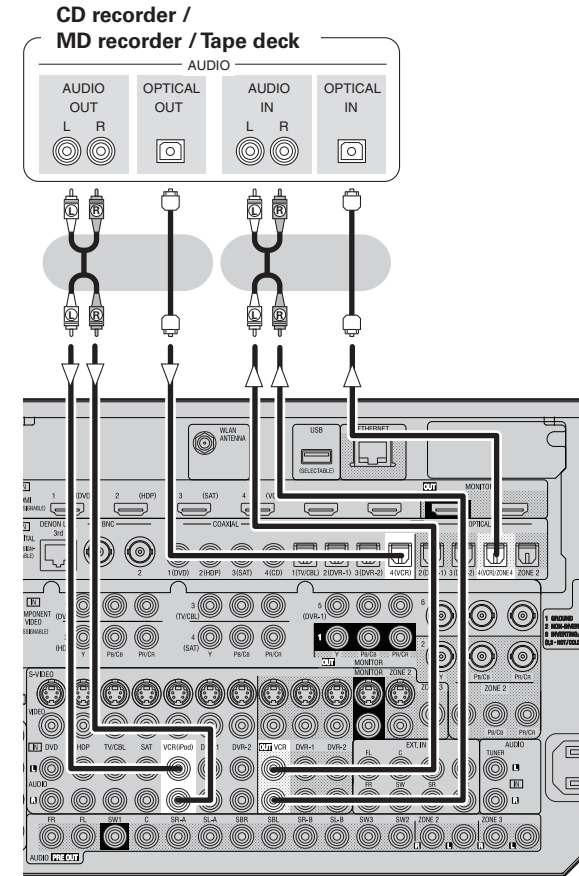
CD recorder / MD recorder / Tape deck

NOTE

Do not connect the output of the component connected to the AVP-A1HD's OPTICAL4 output connector to any input connector other than OPTICAL4.

17

Connections to Other Devices

Carefully check the left (L) and right (R) channels and the inputs and outputs, and be sure to interconnect correctly.

Components Equipped with a DENON LINK connector

Multi-channel playback is possible with DVD-Audio discs, Super Audio CD, etc.

DVD player

AUDIO

DENON LINK

✎
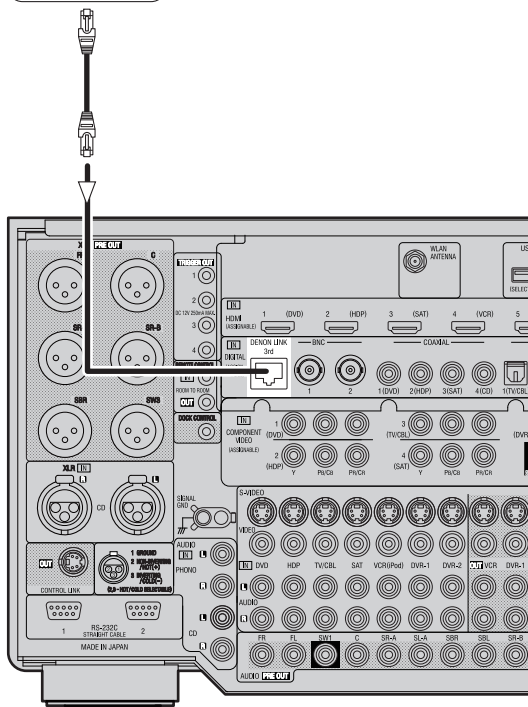
To use with DENON LINK connections, make the settings at GUI menu "Source Select" – "(input source)" – "Assign" – "Digital" – "DENON LINK" (☞ page 44).

Video Camera / Game Console

Video camera / Game console

VIDEO | AUDIO

S VIDEO OUT | VIDEO OUT | AUDIO OUT L R | OPTICAL OUT
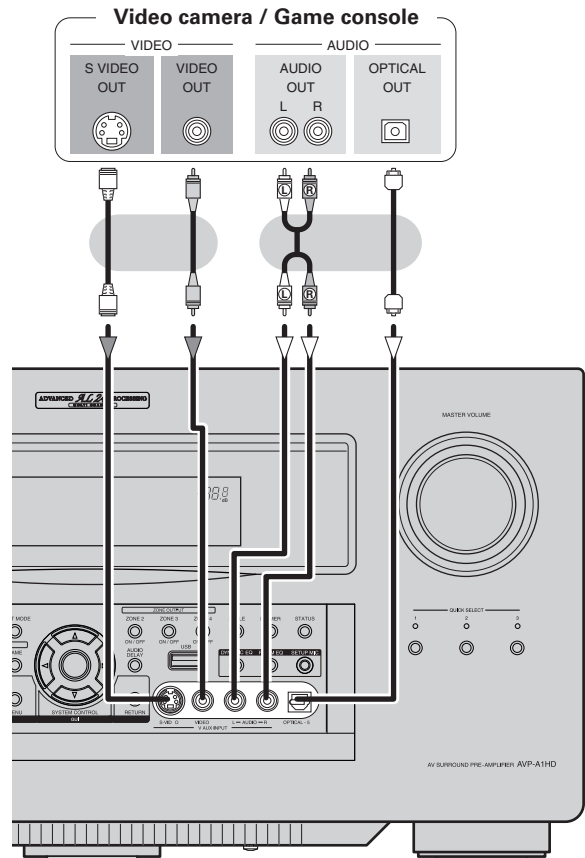
Component with Multi-channel Output connectors

DVD player / Super Audio CD player / External decoder

AUDIO

SUB-WOOFER | FRONT L R | CENTER | SURROUND L R | SURROUND BACK L R

✎
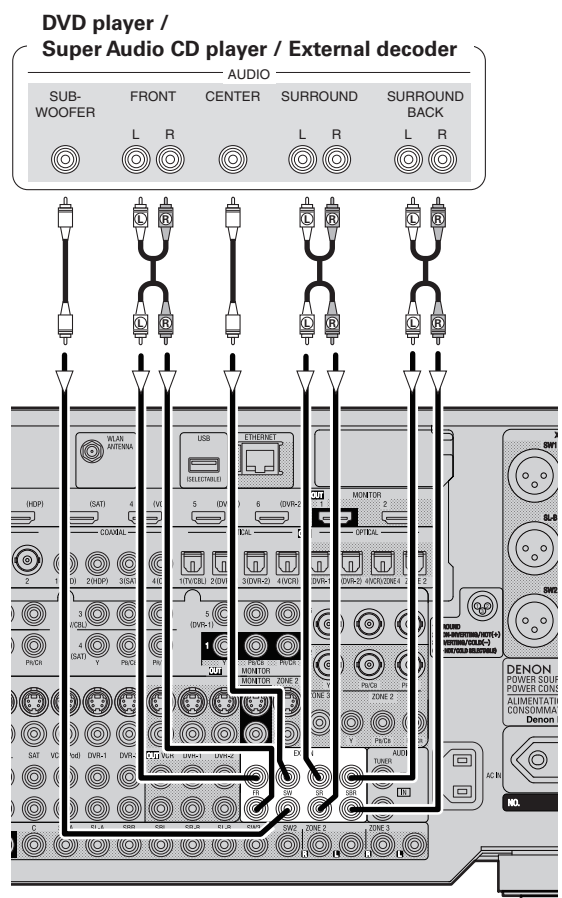
• To play the analog input signals input to the EXT. IN connectors, press the **INPUT MODE** button on the main unit or **INPUT** button on the main remote control unit and select "EXT. IN" or make the settings at GUI menu "Source Select" – "(input source)" – "Input Mode" – "Input Mode" – "EXT. IN" (☞ page 45).
• The video signal can be connected in the same way as a DVD player (☞ page 13).
• To play copyright-protected discs, connect the AVP-A1HD's EXT. IN connector with the DVD player's analog multi-channel output connector.

USB Port

❏ Front panel

USB memory device

❏ Rear panel

USB memory device

🖉
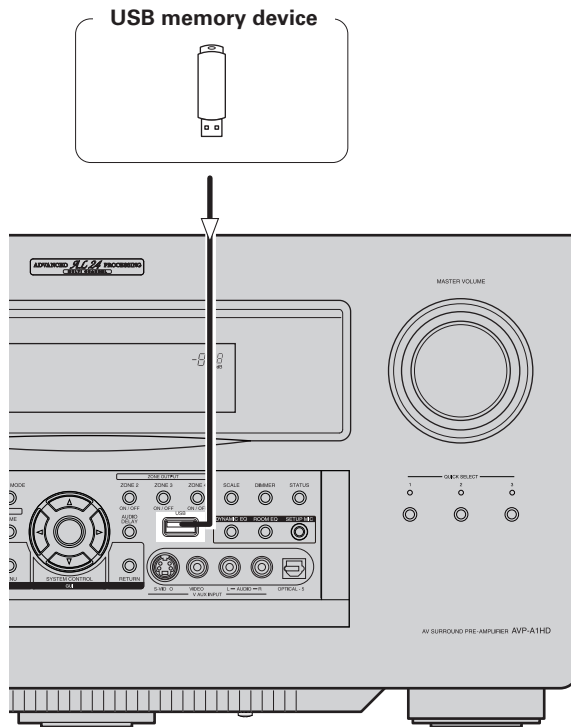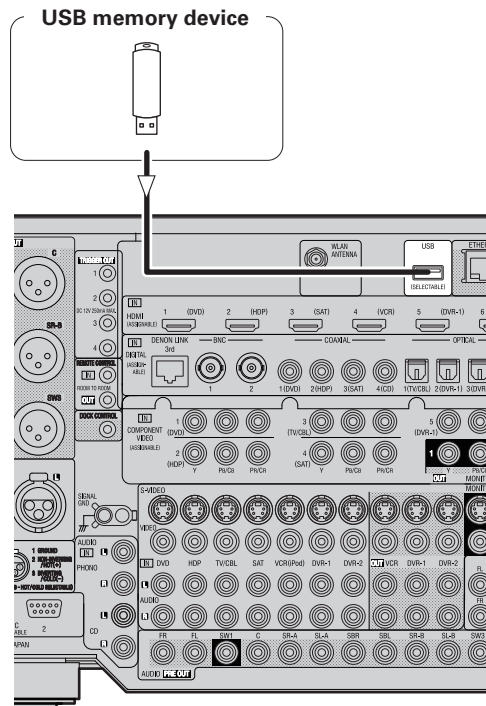
• In the initial status, USB memory devices can be used by connecting them to the USB port on the front panel.
• To change the port to be used, see "USB Select" on page 46.
• For instructions on playing the files on a USB memory device, see page 60, 61.

NOTE

• Set to the USB port you want to use.
• The AVP-A1HD is equipped with two USB ports, one each on the front and rear panels. It is not possible to use the set with USB memory devices connected to both the ports at the same time. Select the USB port you want to use at the GUI menu "Source Select" – "NET/USB" – "Playback Mode" – "USB Select".

• Do not use the extension cable for connecting the USB memory deveice to the AVP-A1HD's USB port.
  Use of the extension cable may cause harmful interference.

19

Network Audio

[Wired LAN]

Internet

Modem

Computer

To WAN side

To LAN port

To LAN port

LAN port/Ethernet connector

LAN port/Ethernet connector

Router

[Wireless LAN]

Internet

Modem

Computer

To WAN side

Router with access point

Rod antenna (supplied)

Turn clockwise.
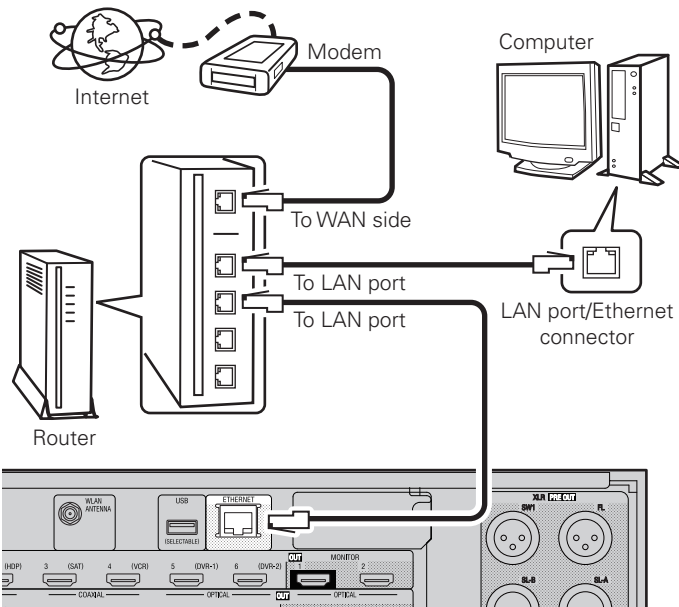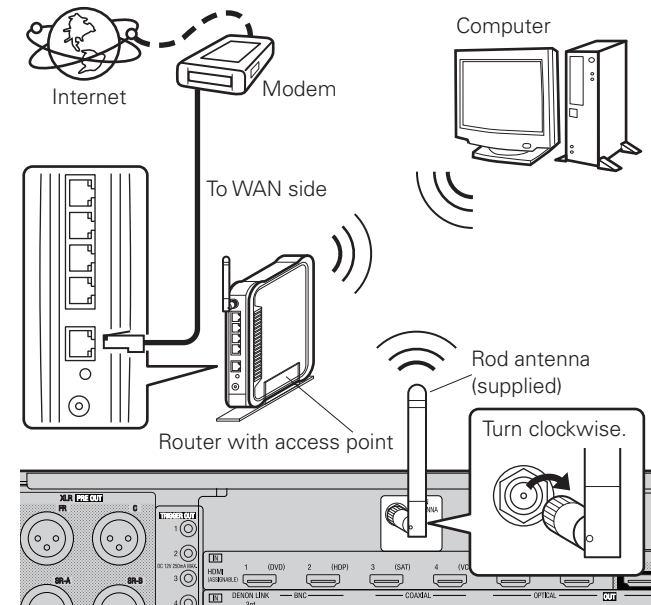
Required system

❏ Broadband Internet connection

A broadband line connection to the Internet is required in order to use the AVP-A1HD's Internet radio function and firmware update.

❏ Modem

This is a device that is connected to the broadband line to communicate with the Internet. Some are integrated with the router.

❏ Router

• When using the AVP-A1HD, we recommend you use a router equipped with the following functions:
  · Built-in DHCP (Dynamic Host Configuration Protocol) server
    This function automatically assigns IP addresses on the LAN.
  · Built-in 100BASE-TX switch
    When connecting multiple devices, we recommend a switching hub with a speed of 100 Mbps or greater.
• When using with a wireless LAN, prepare a broadband router with built-in access point.

❏ Ethernet cable (CAT-5 or greater recommended)

Use for wired LAN.
• The AVP-A1HD does not come with an Ethernet cable.
• Some flat type Ethernet cables are easily affected by noise.
  We recommend using a normal type cable.
• For the Ethernet cable, used a shielded twisted pair (STP) cable. Do not use an unshielded twisted pair (UTP) cable, as it may exceed noise standard limits.

❏ Computer

A computer with the following specifications is required to use a media server:
• OS
  Windows® XP Service Pack2, Windows Vista
• Software (Prepare one of the following.)
  · .NET Framework 1.1 and Windows Media Connect (Windows XP)
  · Windows Media Player ver.11
  · DLNA-compatible server software
• Internet browser
  Microsoft Internet Explorer 5.01 or later
• LAN port
• 300 MB or more free disk space

※ Free disk space is required to store music and video files. The following sizes are approximate.

Format	Bit rate	Per minute	Per hour
MP3 / WMA **MPEG-4 AAC**	128 kbps	Approx. 1 MB	Approx. 60 MB
	192 kbps	Approx. 1.5 MB	Approx. 90 MB
	256 kbps	Approx. 2 MB	Approx. 120 MB
	392 kbps	Approx. 3 MB	Approx. 180 MB
WAV (LPCM)	1400 kbps	Approx. 10 MB	Approx. 600 MB
FLAC	1080 kbps	Approx. 7.7 MB	Approx. 464 MB

For connections to the Internet, contact an ISP (Internet Service Provider) or a computer shop.

NOTE

• A contract with an ISP is required to connect to the Internet.
  No additional contract is needed if you already have a broadband connection to the Internet.
• The types of routers that can be used depend on the ISP. Contact an ISP or a computer shop for details.
• Depending on the server, video files may be displayed, but they cannot be played on the AVP-A1HD.

❏ Others

• If you have an Internet provider contract for a line on which network settings are made manually, make the settings at GUI menu "Manual Setup" – "Network Setup" (☞ page 34, 35).
• With the AVP-A1HD, it is possible to use the DHCP and Auto IP functions to make the network settings automatically.
• When using a broadband router (DHCP function), the AVP-A1HD sets the IP address, etc., automatically.
  When using the AVP-A1HD connected to a network with no DHCP function, make the settings for the IP address, etc., at GUI menu "Manual Setup" – "Network Setup" (☞ page 34, 35).
• The AVP-A1HD is not compatible with PPPoE. A PPPoE-compatible router is required if you have a contract for a line of the type with which the PPPoE is set.
• Depending on the ISP with which you have your contract, it may be necessary to make proxy server settings to use the Internet radio function. If you made proxy server settings on the computer to connect to the Internet, make the proxy server settings on the AVP-A1HD in the same way.

20

Multi Zone

ZONE2 or ZONE3 Pre-out Connections

• If another power amplifier or pre-main (integrated) amplifier is connected, the ZONE2 or ZONE3 pre-out (variable or fixed level) connectors can be used to play a different program source in ZONE2 or ZONE3 the same time (☞page 75, 76).

• To the monitor output of ZONE2, various formats of video signals input by the video conversion function are automatically converted and output (☞page 9).

• To the monitor output of ZONE3, video signals input from the S video terminal or video terminal is output (☞page 9).

• The ZONE2 (ZONE3) video out is only for ZONE2 (ZONE3).
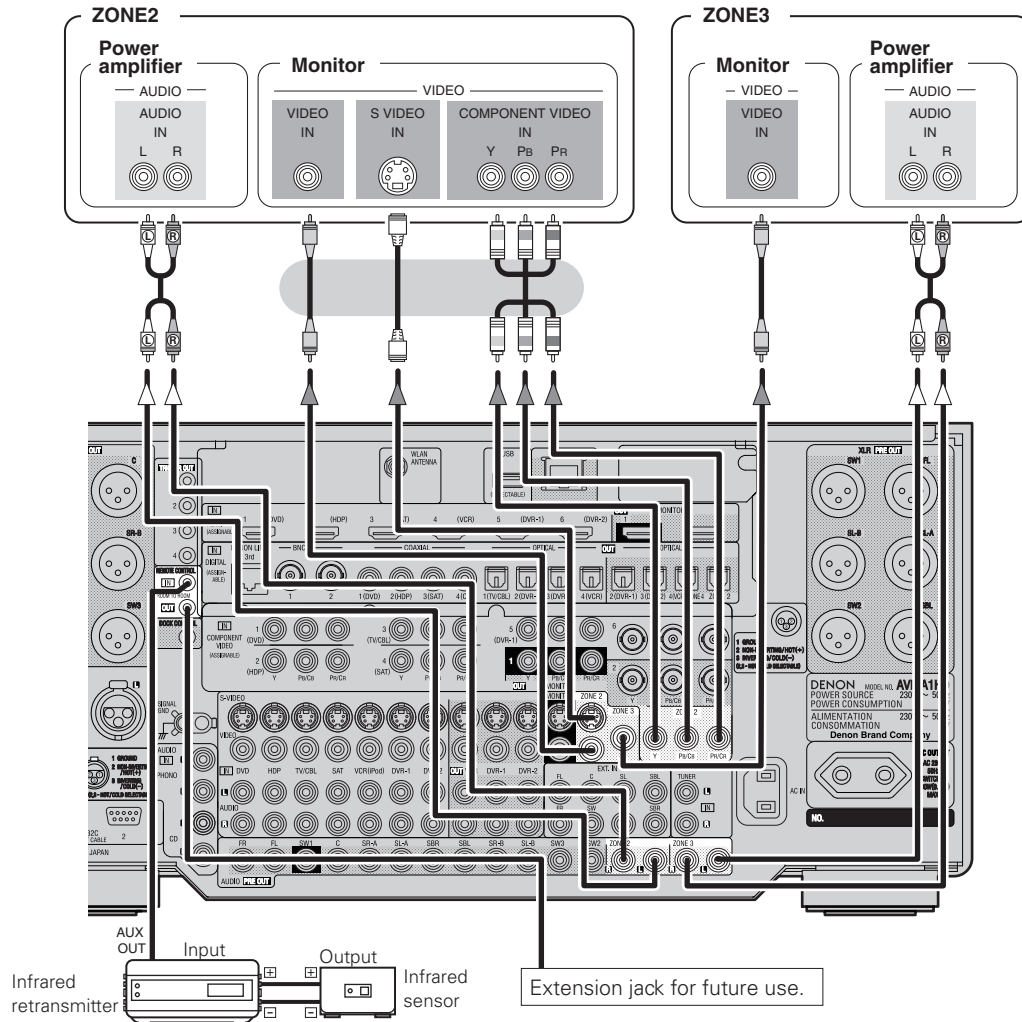
NOTE

• For the audio output, use high quality pin-plug cords so that no induction humming or noise is produced.

• For instructions on installing and operating separately sold devices, refer to the respective devices' operating instructions.

• To conduct multi-zone playback, see "Multi-Zone Connections and Operations" (☞page 75, 76).

ZONE2 or ZONE4 Optical Connections

The AVP-A1HD is equipped with Optical output connectors for ZONE2 and ZONE4. If a bit-stream amp is rigged-up, these zones can also be used to enjoy home theater.
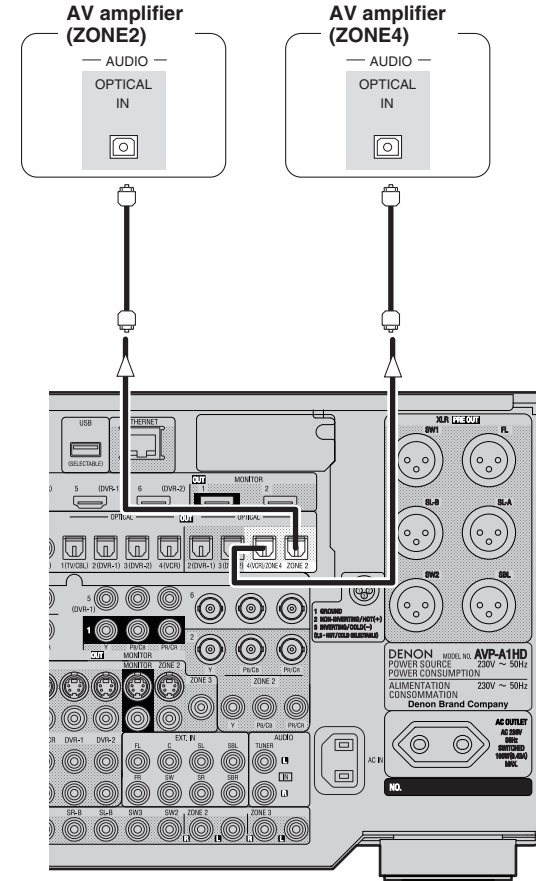
• Connect the monitor for ZONE2 the same as the "ZONE2 or ZONE3 Pre-out Connectors". (☞See left column).

• If the signal inputted to ZONE2 is analog, change to PCM(2-channel) signal, and output it from ZONE2 optical output connectors.

21

External Controller
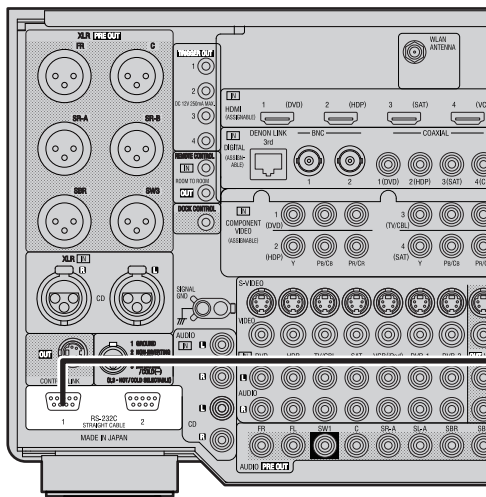
RS-232C connector

This connector is used for an external controller.

※ If you use an external controller to operate the unit via the RS-232C terminal, you must confirm the following beforehand.
q Turn on the AVP-A1HD's power.
w Turn off the AVP-A1HD's power from the external controller.
e AVP-A1HD enters the standby status.

✎

• When using in combination with an RF Remote Controller (RC-7000CI, sold separately) and RF Remote Receiver (RC-7001RCI, sold separately) two-way communication with an RF Remote Controller is possible. The AVP-A1HD's status information as well as iPod and Internet audio music files can be browsed watching the RF Remote Controller's display. For details, refer to the operating instructions of the respective devices.
• When used in combination with an RF Remote Controller and RF Remote Receiver, make the settings at GUI menu "Manual Setup" – "Option Setup" – "2Way Remote" – "Used" (☞ page 40).
• When using the 2-way remote control unit, connect to the Port 1 RS-232C connector.
• If GUI menu "Manual Setup" – "Option Setup" – "2Way Remote"is set to "Used", you cannot use port 1 of the RS-232C terminal for the external controller.
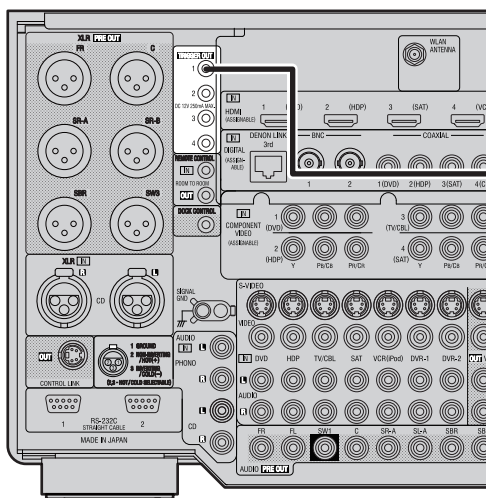
Trigger output jacks

The power of an external device equipped with a trigger input jack can be turned on and off in association with operations on the AVP-A1HD. For details, see GUI menu "Manual Setup" – "Option Setup" – "Trigger Out 1", "Trigger Out 2", "Trigger Out 3" or "Trigger Out 4" (☞ page 40).
• Output level: 250 mA/12 V
 Check the trigger input conditions of the connected device.

22

Connecting the Power Cord

Wait until all connections have been completed before connecting the power cord.

Power cord (included)

To household power outlet (AC 230 V, 50 Hz)

Connection to the AC outlet

• These outlets supply power to external audio devices.
• The power supplied from this outlet turns on and off together with the set's power switch.
• Audio equipment with a total power consumption of 100 W (0.43 A) can be connected.
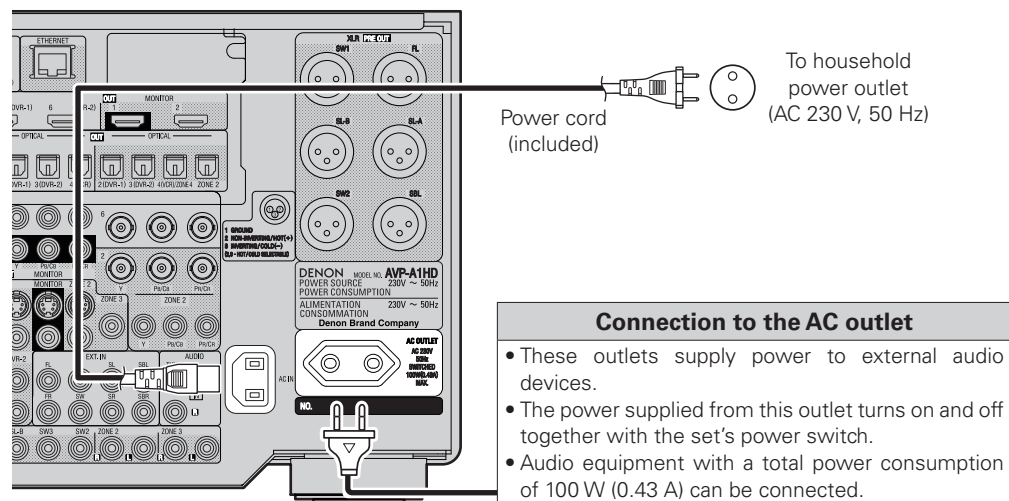
NOTE

• Insert the AC plugs securely. Incomplete connections could cause noise.
• Only use the AC outlet to plug in audio devices. Do not use them as power supplies for hairdryers or anything other than audio equipment. In addition, do not connect audio devices such as high electricity consumption power amplifiers (e.g. POA-A1HD).

Once Connections are Completed

Turning the Power On (☞ page 54)

GUI Menu Operations

With the AVP-A1HD, settings and operations for most functions can be performed by operating while looking at the GUI menus displayed on the monitor screen.

🖉

The GUI cannot be superimposed when xvYCC signals and component 1080p signal, computer's resolution (e.g.VGA) are input.

Example of the Display of the GUI Mark at a Title

Items for which this mark is indicated at the title can be operated from the GUI.
We recommend performing such operations from the GUI.

Auto Setup   GUI

Optimize settings for speakers in use.

This is the GUI icon for this setting item or for the menu series to which this item belongs.

Example of Display of Default Values

In lists of selectable items or adjustable ranges, the item surrounded by a border is the default value.

[Selectable items]   9.1   7.1   5.1

Examples of GUI Screen Displays

Some typical examples are described below.

Example: Browse Menu (Top Menu)

DENON
■ SOURCE SELECT — **Selected item name**
DVD
HDP
TV/CBL — **List of subsequent items**
SAT
VCR
DVR-1 — **Guidance text for item at cursor position**

Select input source and make playback settings
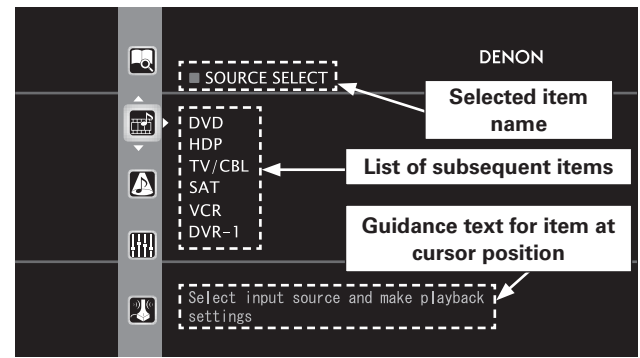
Example: Menus with Illustrations (Auto Setup)

Operation guidance text   **Operation step indicators**

AUTO SETUP   AUDYSSEY MULTEQ XT DYNAMIC EQ   DENON
STEP1 Speaker Detection   1 2 3 4 5
Please place the microphone at ear
height at main listening position.   **Illustration**

Start
Config.   9.1
SW   1SP
Pre-out Assign
XLR Out Polarity
⦿ Enter   RETURN Cancel

Start Auto Setup

Guidance text for item at cursor position   **Operation button guidance**

Cursor Position Display

❏ **Icon**

Switch the selected item

Switch to the next item

Selected item

Switch the selected item

❏ **List**

Selected item

Assign   **Switch to the next item**
Video
Input Mode
Rename

※ Switch the selected item using △▽.
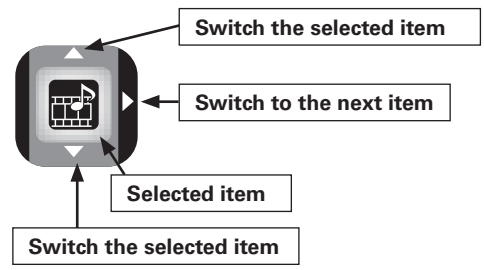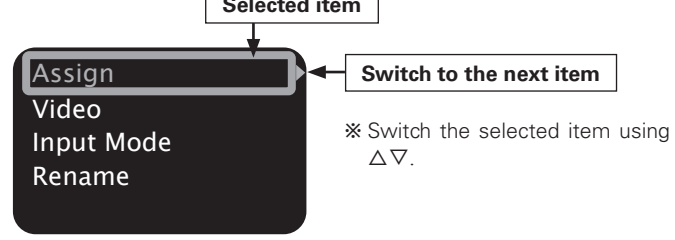
Operations

The same operation is possible on the main unit or remote control unit.

1 **Press the MENU button.**
The GUI menu is displayed.
※ To operate from the main remote control unit, be sure to set the remote control unit to the AMP mode.

2 **Press the △ ▽ ▷ button to select the menu to be set or operated.**
※ To return to the previous item, press the ◁ or RETURN button.

3 **Press the ENTER button to enter the setting.**

4 **Press the MENU button to finish.**

23

GUI Menu Map

Information
(☞ page 52, 53)

❏ **Status**
- **MAIN ZONE**
- **ZONE2/3/4**

❏ **Audio Input Signal**

❏ **HDMI Information**

❏ **Auto Surround Mode**

❏ **Quick Select**

❏ **Preset Station**

Parameter
(☞ page 48 ~ 52)

❏ **Audio**
- **Surround Parameters**
  - **Mode**
  - **Decoder**
  - **Cinema EQ**
  - **DRC**
  - **D.COMP**
  - **LFE**
  - **Center Image**
  - **Panorama**
  - **Dimension**
  - **Center Width**
  - **Delay Time**
  - **Effect**
  - **Effect Level**
  - **Room Size**
  - **AFDM**
  - **SB CH Out**
  - **Input Channel**
  - **Subwoofer Att.**
  - **Subwoofer**
  - **Default**
- **Tone**
  - **Tone Defeat**
  - **Bass**
  - **Treble**
  - **Front**
  - **Center**
  - **Surround**
  - **Surround Back**
  - **Subwoofer**
- **Room EQ**
- **Dynamic EQ**
- **RESTORER**
- **Night Mode**
- **Audio Delay**

❏ **Picture Adjust**
- **Contrast**
- **Brightness**
- **Chroma Level**
- **Hue**
- **DNR**
- **Enhancer**
- **Sharpness**
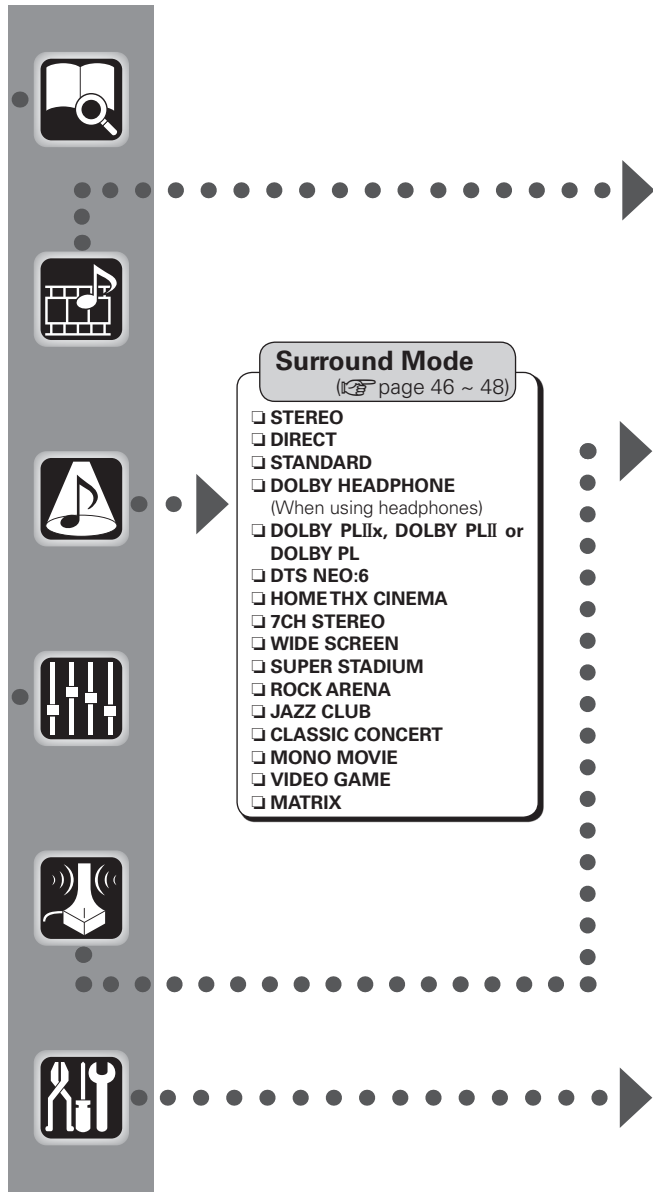
Surround Mode
(☞ page 46 ~ 48)

❏ **STEREO**
❏ **DIRECT**
❏ **STANDARD**
❏ **DOLBY HEADPHONE**
  (When using headphones)
❏ **DOLBY PLⅡx, DOLBY PLⅡ or DOLBY PL**
❏ **DTS NEO:6**
❏ **HOME THX CINEMA**
❏ **7CH STEREO**
❏ **WIDE SCREEN**
❏ **SUPER STADIUM**
❏ **ROCK ARENA**
❏ **JAZZ CLUB**
❏ **CLASSIC CONCERT**
❏ **MONO MOVIE**
❏ **VIDEO GAME**
❏ **MATRIX**

✎
When "Screensaver" is set to "ON", the screensaver is activated if no operation is performed for about 3 minutes.

Source Select (☞ page 42 ~ 46)

❏ **DVD, HDP, TV/CBL, SAT, VCR, DVR-1, DVR-2, V.AUX, CD, TUNER**
- **Play (iPod)**
- **Playback Mode (iPod)**
- **Assign**
  - **HDMI**
  - **Digital**
  - **Component**
  - **Analog** (CD only)
  - **iPod dock**
- **Video**
  - **Video Select**
  - **Video Convert**
    (Excluding CD and TUNER)
  - **i/p Scaler**
  - **Resolution**
  - **Progressive Mode**
    (Excluding CD and TUNER)
  - **Aspect**
    (Excluding CD and TUNER)
- **Input Mode**
- **Rename**
- **Source Level**
- **Input Att.**

❏ **NET/USB**
- **Play**
- **Playback Mode**
- **Still Picture**
- **Video**
  - **Video Select**
  - **i/p Scaler**
  - **Resolution**
- **Input Mode**
- **Rename**
- **Source Level**

❏ **PHONO**
- **Video**
  - **Video Select**
  - **i/p Scaler**
  - **Resolution**
- **Input Mode**
- **Rename**
- **Source Level**
- **Input Att.**

Auto Setup (☞ page 25 ~ 27)

❏ **Auto Setup**
- **STEP1: Speaker Detection**
- **STEP2: Measurement**
- **STEP3: Calculation**
- **STEP4: Check**
- **STEP5: Store**

❏ **Option**
- **Room EQ**
- **Direct Mode**
- **Mic Select**

❏ **Parameter Check**
- **Speaker Configuration Check**
- **Distance Check**
- **Channel Level Check**
- **Crossover Check**
- **EQ Check**
- **Restore**

Manual Setup (☞ page 28 ~ 42)

❏ **Speaker Setup** (☞ page 28 ~ 30)
- **Speaker Configuration**
- **Subwoofer Setup**
- **Distance**
- **Channel Level**
- **Crossover Frequency**
- **THX Audio Setup**
- **Surround Speaker**

❏ **HDMI Setup** (☞ page 31)
- **Color Space**
- **RGB Range**
- **Auto Lip Sync**
- **Audio**
- **Monitor Out**
- **HDMI Control**

❏ **Audio Setup** (☞ page 32, 33)
- **EXT. IN Setup**
  - **Mode**
  - **Surround Back Input**
  - **Surround Speaker**
  - **Subwoofer Level**
  - **Input Att.**
- **2ch Direct/Stereo**
- **Downmix Option**
- **Auto Surround Mode**
- **Manual EQ**

❏ **Network Setup** (☞ page 34 ~ 36)
- **Network Setup**
- **Other**
  - **Power Saving**
  - **Character**
  - **PC Language**
- **Network Information**

❏ **Zone Setup** (☞ page 36, 37)
- **ZONE2, ZONE3**
  - **Bass**
  - **Treble**
  - **HPF**
  - **Lch Level**
  - **Rch Level**
  - **Channel**
  - **Volume Level**
  - **Volume Limit**
  - **Power On Level**
  - **Mute Level**
  - **Video Convert** (ZONE2 only)
- **OSD**

❏ **Option Setup** (☞ page 37 ~ 41)
- **Pre-out Assign**
- **XLR Out Polarity**
- **POA Setting**
- **Volume Control**
  - **Volume Limit**
  - **Power On Level**
  - **Mute Level**
- **Source Delete**
- **GUI**
  - **Screensaver**
  - **Wall Paper**
  - **Format**
  - **Text**
  - **Master Volume**
  - **NET/USB / iPod**
- **Quick Select Name**
- **Trigger Out 1**
- **Trigger Out 2**
- **Trigger Out 3**
- **Trigger Out 4**
- **Transducer Setup**
- **Digital Out**
- **Remote ID**
- **2Way Remote**
- **Dimmer**
- **Setup Lock**
- **Maintenance Mode**
- **Firmware Update**
- **Add New Feature**

❏ **Language** (☞ page 42)

24

Auto Setup

- Audyssey MultEQ® XT automatically measures the acoustical problems in the listening environment to create the best audio experience for your home theater.
- It optimizes a large listening area where one or more listeners are seated.

  Measurements are performed by placing the calibrated microphone (DM-A505Z) successively at multiple positions throughout the listening area as shown in **Example** ①. For best results, it is strongly recommended to measure 6 or more positions so that the measurements have the proper spatial weighting.

  Even if the listening environment is small as shown in **Example** ②, measuring at multiple points throughout the listening environment results in more effective correction.

Example ① **Example** ②

(■:Measuring positions)
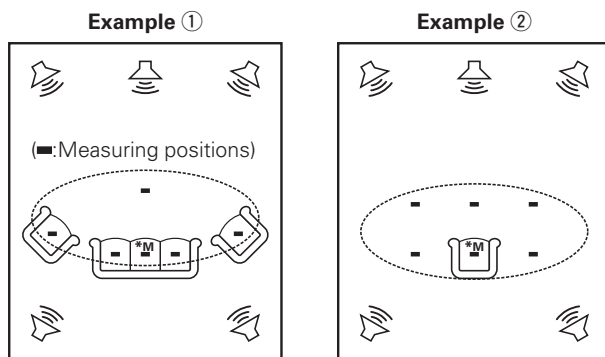
About the main listening position (*M)

The main listening position refers to the most central position where one would normally sit within the listening environment.
MultEQ XT uses the measurements from this position to calculate speaker distance, level, polarity, and the optimum crossover value for the subwoofer.

To make manual adjustments to the settings, see pages 28 ~ 30.

Preparations

1 **Connect the included calibrated setup microphone to the SETUP MIC jack on the main unit.**
The "Auto Setup" screen appears automatically.

Sound receptor
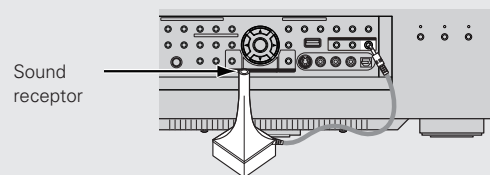
2 **Place the microphone at ear height on a tripod or stand with the microphone pointing directly up towards the ceiling.**

Setup microphone
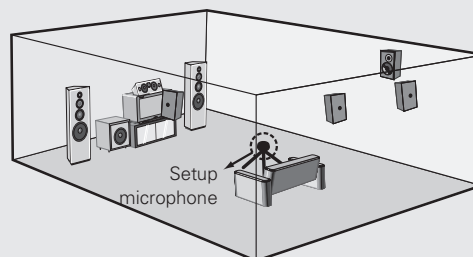
※ It is not recommended to hold it in your hand. Be sure that the path from microphone to the speakers is not blocked by objects. Avoid placing the microphone close to a seat back or wall as sound reflections may give inaccurate results.

When using a subwoofer, make the following settings before starting the auto setup procedure:
- Defeat the volume and crossover controls if possible
- If this is not possible then set
  - Volume: "12 o'clock" position
  - Crossover frequency: "Maximum/Highest Frequency"
  - Low pass filter: "Off"
  - Standby mode: "Off"

NOTE
- Do not disconnect the setup microphone until the auto setup procedure is completed.
- When using headphones, unplug the headphones before starting the auto setup procedure.

Auto Setup

Optimize settings for speakers in use.

● **Menu tree** ●

Auto Setup

- **1 Auto Setup**
- **2 Option**
- **3 Parameter Check**

1 Auto Setup

The settings are performed automatically.

【**Auto setup flow**】

STEP1: Speaker Detection

STEP2: Measurement (2 to 8 positions)

STEP3: Calculation

STEP4: Check

STEP5: Store

25

Start

Start Auto Setup.

The Audyssey MultEQ XT Auto Setup process automatically calculates the size, level, distance, bass management crossover frequency, and optimal settings for each speaker and subwoofer. Audyssey MultEQ XT corrects acoustical distortions within the listening area.

Before starting, connect and position all your speakers.

Once started, MultEQ XT will play a series of test tones through each speaker.

✎

If an error message appears during the measurements, check "Error Messages" (☞ page 27), take the advised action, then start the measurements again.

Configuration

The speaker system to be measured can be selected ahead of time here.

[Selectable items]

9.1 $*1$	7.1 $*1$	5.1 $*1$
9.2 $*2$	7.2 $*2$	5.2 $*2$
9.3 $*3$	7.3 $*3$	5.3 $*3$

$*1$: This can be set when "Subwoofer" is set to "1SP".

$*2$: This can be set when "Subwoofer" is set to "2SP L/R" or "2SP MIX".

$*3$: This can be set when "Subwoofer" is set to "3SP L/R/LFE" or "3SP MIX".

✎

Setting the correct speaker configuration can reduce the time required to measure during the auto setup procedure as the system will not have to look for speakers that are not connected.

Subwoofer

The configuration of the measuring subwoofer can be selected beforehand.

[Selectable items] 1SP   2SP L/R   2SP MIX

3SP L/R/LFE   3SP MIX

Pre-out Assign

Change the pre-out assignment.

[Selectable items] Normal   Free Assign

XLR Out Polarity

Set to switch the XLR pre-out terminal polarity.

[Selectable items] XLR   XLR (INV)

✎

Set each channel.

STEP1 : Speaker Detection

The speaker connection and polarity are detected at the first measurement position. The following attributes are also determined at this time: "Speaker Size", "Speaker Distance", "Channel Level", "Crossover Frequency".

Once the measurements are completed, the results are displayed.

NOTE

- Loud test tone may be played during Audyssey MultEQ XT Automatic Speaker Setup. This is part of normal operation. If there is background noise in room, these test tones will increase in volume.
- Do not stand between the speakers and setup microphone or allow obstacles in the path while the measurements are being made. This will cause inaccurate readings.
- Quiet the listening environment before beginning measurements and refrain from talking. Turn off air conditioning units or other devices that emit noise if at all possible as measurements may be affected by these sounds.
- Operating the **MASTER VOLUME** knob on the main unit or the **VOL +/–** buttons on the remote control unit during the measurements will cancel the measurements.
- Do not change the speaker connections or subwoofer volume after "STEP1".

STEP2: Measurement

After completing a measurement position, move the microphone to the next position.

✎

Measure at least 6 positions (main listening position and at least 5 other surrounding positions). For best results it is recommend measuring **6 or more positions** (with a maximum of 8 positions).

STEP3: Calculation

When "Calculate" is selected at "STEP2", the measurements taken are analyzed automatically to determine how the speaker system interacts with the room.

✎

The time required for this analysis depends on the number of speakers connected. The higher the number of speakers, the longer the time required for analysis.

STEP4: Check

Once the auto setup procedure is complete, a measuring result check screen appears.

Select any item whose results you want to check to review the results.

✎

Values that are different from the actual distance may be set for speakers with built-in filters (subwoofers, etc.). This is because filters add electrical delay to the signal that should be compensated.

STEP5: Store

The auto setup measurement results are stored in the AVP-A1HD.

NOTE

Do not turn the power off while the settings are being stored.

Error Messages

If the auto setup procedure could not be completed due to speaker installation, the measuring environment, etc., an error message is displayed. If this happens, check the relevant items, be sure to take the necessary measures, then perform the auto setup procedure over again.

Error messages (examples)	Cause	Measures
No microphone or speaker	• Included setup microphone is not connected. • Not all speakers could be detected. • The front L speaker was not properly detected.	• Connect the included setup microphone to the **SETUP MIC** jack on the main unit. • Check the speaker connections.
Ambient noise is too high or Level is too low	• Too much noise in the room for accurate measurements to be made. • Speaker or subwoofer sound is too low for accurate measurements to be made.	• Either turn off any device generating noise or move it away. • Try again when the surroundings are quieter. • Check the speaker installation and the direction in which the speakers are facing. • Adjust the subwoofer's volume.
None	• Displayed speaker could not be detected. · The front R speaker was not properly detected. · Only one channel of the surround (A) and surround (B) speakers was detected. · Sound was output from the R channel when only one surround back speaker was connected. · The surround back or the surround (B) speaker was detected, but the surround (A) speaker was not detected. · When the subwoofer configuration is set at "2SP L/R", "2SP MIX", "3SP L/R/LFE" or "3SP MIX", the subwoofer could not be detected.	• Check the connections of the displayed speaker.
Phase	• Displayed speaker connected with the polarities reversed. • If the XLR pre-out terminal is used, the polarity is reversed.	• Check the polarities of the displayed speaker. • Check the polarity setting for the XLR output of the displayed pre-set channel. • For some speakers, this error message may be displayed even if the speaker is properly connected. If you are sure that the wiring is correct, select "Skip".

• Sometimes due to the electrical complexities of subwoofers and the interaction with the room, THX recommends setting the level and the distance of the subwoofer manually.
• Sometimes due to interaction with the room, you may notice irregular results when setting the level and/or distance of the main speakers. If this happens, THX recommends setting them manually.
• Please note that any THX main speakers should be set to Small (80 Hz). If you set up your speakers using Auto Setup, please make sure manually that any THX speakers are set to Small with 80 Hz crossover.

✎ Select "Retry" to make the measurements again.

NOTE Be sure to turn the power off before checking the speaker connections.

❷ Option

Select settings for room EQ, mic, etc.

Room EQ

Select room EQ setting method.

[Selectable items] All Assign

Direct Mode

Select room EQ use for DIRECT or PURE DIRECT mode.

[Selectable items] ON OFF

Mic Select

Select the microphone type if not using supplied mic.
The microphone connected to V.AUX Lch is used.

[Selectable items] Mic V.AUX L

✎

Only a professionally certified installer should ever connect a professionally-calibrated microphone to the V.AUX L input on the front panel.

❸ Parameter Check

Check auto setup measurement results.
This is displayed after the auto setup procedure is completed.

[Selectable items]

Spkr Config Check   Distance Check   Ch. Level Check

Crossover Check   EQ Check   Restore

✎

The auto setup results can be reset to what was originally calculated by MultEQ XT when "Restore" is selected.

Getting Started

Connections

Setup

Playback

Remote Control

Multi-Zone

Information

Troubleshooting

GUI

Manual Setup

Make detailed settings for various parameters

Speaker Setup

GUI

Use this procedure to set the speakers manually or if you wish to change the settings made with the auto setup procedure.

● Menu tree ●

Manual Setup

Speaker Setup

1 Speaker Configuration

2 Subwoofer Setup

3 Distance

4 Channel Level

5 Crossover Frequency

6 THX Audio Setup

7 Surround Speaker

1 Speaker Configuration

Select speaker configuration and size.
(bass reproduction capability)

Front

Select front speaker size.

[Selectable items] Large Small

Center

Select center speaker use and size.

[Selectable items] Large Small None

Subwoofer

Select subwoofer use.

[Selectable items] Yes No

Surround A

Select surround speakers A use and size.

[Selectable items] Large Small None

Surround B

Select surround speakers B use and size.

[Selectable items] Large Small None

Surround Back

Select surround back speaker use and size.

[Selectable items] Large Small None

2spkrs 1spkr

Large : Select this for a large speaker with strong bass reproduction.

Small : Select this for a smaller speaker with weaker bass reproduction.

✎

• Select "Large" or "Small" not according to the physical size of the speaker but according to the low frequency reproduction capabilities based on the frequency set at "Crossover Frequency" (☞ page 29, 30).

• When "Front" is set to "Small", "Subwoofer" is automatically set to "Yes".

• If "Subwoofer" is set to "No", "Front" is automatically set to "Large".

• If "Surround A" is set to "None", "Surround B" and "Surround Back" are automatically set to "None".

• When using just one surround back speaker, connect it to the left channel (SBL).

• To take full advantage of the performance of the Home THX certified speaker systems, set the front, center and surround speaker size parameters to "Small" and the subwoofer to "Yes".

2 Subwoofer Setup

Select subwoofer output configuration and bass signal for playback.

Configuration

Select number of subwoofers and configuration.

[Selectable items]

1SP 2SP L/R 2SP MIX 3SP L/R/LFE 3SP MIX

Subwoofer Configuration		Subwoofer Connector
1SP		SW1
2SP L/R	L	SW1
	R	SW2
2SP MIX	1	SW1
	2	SW2
3SP L/R/LFE	L	SW1
	R	SW2
	LFE	SW3
3SP MIX	1	SW1
	2	SW2
	3	SW3

✎

When "2SP MIX" or "3SP MIX" is selected, "Subwoofer 1", "Subwoofer 2" and "Subwoofer 3" are each displayed.

Mode

Select bass signal for playing with the subwoofer.

[Selectable items] LFE–THX– LFE+Main

✎

• THX recommends LFE–THX– mode so that bass interference is less likely to occur in the room.

• This can be set when the GUI menu "Speaker Configuration" – "Subwoofer" is set to "Yes".

• Play music or a movie source and select the mode offering the strongest bass.

• Select "LFE+Main" if you want the bass signals to always be produced from the subwoofer.

❸ Distance

Set distance from listening position to speakers.
Before making the settings, measure the distance from the listening position to the different speakers.

Meters / Feet

Select unit for distance.

Step

Select step. (smallest distance)

[Selectable items]

| 0.1m | 0.01m | : Can be selected when "Meters" is set. |

| 1ft | 0.1ft | : Can be selected when "Feet" is set. |

Default

Resets the settings to the default values.

Distance measurement

Select the speaker you want to set, then set the distance.
Set the value closest to the measured distance.

[Variable range]

| 0.00m ~ 18.00m | : Display when "Meters" is set. |

| 0.0ft ~ 60.0ft | : Display when "Feet" is set. |

✎

Two surround back speakers are required to use the THX Ultra2 Cinema, THX Music mode and THX Games mode.
Set the surround back speakers so that the distance to the listening position is the same for both the left and right speakers.
It is also recommended that the deviations of the distance from the listening position to L and R channel speakers (front left (FL) and front right (FR), surround left (SL) and surround right (SR), surround back left (SBL) and surround back right (SBR) is less than 60 cm (2 ft).

NOTE

Set the distance between the listening position and the various speakers to no more than 6.00 meters (20 ft).

❹ Channel Level

Adjust channel levels to obtain equal volume from all speakers.

Mode

Select test tone playback method.

[Selectable items] | Auto | Manual |

Surround

Select surround speaker from which test tone is output.

[Selectable items] | A | B | A+B |

Start

Output test tone.

[Variable range] | OFF | * | −12dB | ~ | 0dB | ~ | +12dB |

∗ : "OFF" can be set by pressing ◁ when the subwoofer's volume is set to −12 dB.

Default

Resets the settings to the default values.

☞ Operating from the main remote control unit

Adjusting with the main remote control unit using the test tones is only possible in the "Auto" mode and only effective in the STANDARD (Dolby/DTS Surround) and HOME THX CINEMA modes. The adjusted levels for the different modes are automatically stored in the memory.

[Adjusting using test tones]
① Press the **TEST** button.
   Test tones are output from the various speakers.
② Use the ◁ ▷ button to adjust so that the volume is equal for all speakers.
③ When the adjustments are completed, press the **TEST** button again.

✎

- The level of each channel should be adjusted to 75 dB (Cweighted, slow meter mode) on a sound level meter at the listening position. If a sound level meter is not available adjust the channels by ear so the sound levels are the same. Because adjusting the subwoofer level test tone by ear is difficult, use a well known music selection and adjust for natural balance.
- When the GUI menu "Speaker Configuration" – "Surround Back" setting (☞page 28) is set to "1spkr", the surround back speaker display is set to "Surround Back".
- Speakers set to "None" in the "Speaker Configuration" settings are not displayed.
- "Surround" can be set when GUI menu "Speaker Configuration" –"Surround B" is set to "Large" or "Small" (☞page 28).
- When using surround speakers, be sure to adjust the volume of the different speakers.
- When "Channel Level" is adjusted, the adjusted values are set for all the surround modes. To adjust the channel level separately for the different surround modes, use the operation see page 65.

❺ Crossover Frequency

Select crossover frequency from which subwoofer handles low range signal.

[Selectable items]

| FIXED–THX– | :

Setup when using a THX-certified speaker.

| 40Hz | 60Hz | 80Hz | 90Hz | 100Hz | 110Hz | 120Hz | 150Hz |
| 200Hz | 250Hz | :

Only the portion of the bass sound of the various speakers output from the subwoofer that has a frequency below the frequency set here is output.
Set this according to the low frequency reproduction capabilities of the speakers you are using.

| Advanced | :

Specify crossover frequency for each speaker.

✎

- Please set all THX Certified speakers, set the "Speaker Configuration" for all speakers to "Small". We recommend using with the crossover frequency set to "FIXED–THX–", but depending on the speaker, setting it to a different frequency may improve frequency response near the crossover frequency.
- The "Crossover Frequency" can be set when there are speakers that have been set to "Small" at GUI menu "Speaker Configuration" or when "Subwoofer" is set to "Yes" (☞page 28).
- At the "Advanced" settings, if the "Subwoofer Setup" (☞page 28) setting is set to "LFE–THX–", GUI menu speakers for which "Speaker Configuration" is set to "Small" can be set. If set to "LFE+Main", the setting can be made regardless of the speaker size.
- For speakers set to "Small", sound below the crossover frequency is cut from the sound output. The cut bass sound is output from the subwoofer or front speakers.

❻ THX Audio Setup

Set the speaker to play the optimal THX surround mode.

THX Ultra2 Subwoofer

Set when using a subwoofer compatible with THX Ultra2 standards or a subwoofer that can be properly played at low range.

[Selectable items] | Yes | No |

✎

Make these settings when "Yes" is selected for the subwoofer in the "Speaker Configuration" settings. This option is not available when "No" is selected (☞page 28).

BGC (Boundary Gain Compensation)

If bass sound feels big compensate by lowering volume.

[Selectable items] | ON | OFF |

✎

- If the bass sound seems too strong:
  Set "BGC" to "ON". This activates a filter that gently reduces very deep bass below 55 Hz to provide the flattest overall deep bass response. Select "ON" or "OFF" according to how strong you prefer the deep bass response to be.
- This can be set when the "THX Ultra2 Subwoofer" setting is set to "Yes".

SB Speaker Position

Set the distance between the left and right surround back speakers.

[Selectable items] | Under 0.3m | 0.3m – 1.2m | Over 1.2m |

✎

- When two surround back speakers have been set in "Speaker Configuration" (☞page 28), set the distance of the speakers. This option is not available when "1spkr" is selected.
- This setting is necessary to achieve the optimum effect in the THX Surround EX, THX Ultra2 Cinema, THX Music mode and THX Games mode.

❼ Surround Speaker

Select surround speakers to use for each surround mode.

THX/DOLBY/DTS Cinema

[Selectable items] | A | B | A+B |

THX/DOLBY/DTS Music

[Selectable items] | A | B | A+B |

THX/DOLBY Game

[Selectable items] | A | B | A+B |

WIDE SCREEN

[Selectable items] | A | B | A+B |

7CH STEREO

[Selectable items] | A | B | A+B |

DSP SIMULATION

[Selectable items] | A | B | A+B |

MULTI CH MODE

[Selectable items] | A | B | A+B |

☞ **Operating from the main remote control unit**

Press the **SPKR** button.
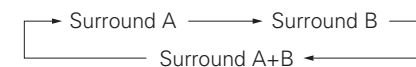
Surround A ⟶ Surround B ⟶ Surround A+B ⟶ (back to Surround A)

✎

- This can be set when GUI menu "Speaker Configuration" – "Surround A" and "Surround B" are used (☞page 28).
- Make the surround speaker settings when the input mode is set to "EXT. IN" at GUI menu "Manual Setup" – "Audio Setup" – "EXT. IN Setup" (☞page 32).

About Speaker Type Setting when Using Both Surround speakers A and B

If "Small" is set for either surround speakers A or B, the output is the same as when "Small" is set for both A and B.

HDMI Setup

Make settings for HDMI video/audio output.

● **Menu tree** ●

Manual Setup

HDMI Setup

1 **Color Space**
2 **RGB Range**
3 **Auto Lip Sync**
4 **Audio**
5 **Monitor Out**
6 **HDMI Control**

1 Color Space

Make settings for output color space.

[Selectable items] | **YCbCr** | **RGB** |

✎

When connected to a monitor with a DVI-D connector (HDCP compatible) using an HDMI/DVI converter cable, the signals are output in RGB format, regardless of this setting.

2 RGB Range

Make settings for RGB output range.

[Selectable items] | **Normal** | **Enhanced** |

✎

When "YCbCr" is selected under "Color Space", "RGB Range" will have no effect.

3 Auto Lip Sync

Automatic compensation for timing shift in audio and video output.

[Selectable items] | **ON** | **OFF** |

4 Audio

Select HDMI audio output device.

[Selectable items] | **Amp** | **TV** |

✎

GUI menu "HDMI Control"- "Control" is "ON", the "Amp" and "TV" will switch with the operation of any television not related to this setting.

5 Monitor Out

Make settings for HDMI monitor output.

[Selectable items] | **Auto (Dual)** | **Monitor 1** | **Monitor 2** |

☞ **Operating from the main remote control unit**

Press the **M.SEL** button.

Auto (Dual) ⟶ Monitor 1 ⟶ Monitor 2 (loops back to Auto (Dual))

✎
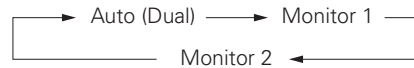
• When "Monitor Out" is set to "Auto (Dual)", connections with the MONITOR 1 or MONITOR 2 connectors are recognized automatically.
• If both the MONITOR 1 and 2 connectors are connected and "Resolution" is set to "Auto" (☞ page 45), the signals are output with a resolution compatible with both monitors.
• If "Resolution" is set to something other than "Auto", check the resolutions with which your monitor is compatible at GUI menu "Information" – "HDMI Information" – "Monitor 1" and "Monitor 2" and set accordingly (☞ page 53).

6 HDMI Control

Make settings for HDMI control function.

Control

Set HDMI control function to ON/OFF.

[Selectable items] | **ON** | **OFF** |

Control Monitor

Select the interlocking monitor through the HDMI controls.

[Selectable items] | **Monitor1** | **Monitor2** |

✎

This can be set when "Control" is set to "ON".

Power Off Control

Interlock with the power off function through the HDMI controls.

[Selectable items] | **ON** | **OFF** |

✎

• This can be set when "Control" is set to "ON".
• Please consult the operating instructions for each connected device to check the settings.

NOTE

• When the "Control" setting has been changed, always turn off the power to the connecting devices afterwards and then turn back on.
• The HDMI control function does not work when the power to the equipment is off.
• For details, see "HDMI Control Function" (☞ page 63).

Audio Setup

GUI

Make settings for audio playback.

● Menu tree ●

Manual Setup

Audio Setup

1 **EXT.IN Setup**

2 **2ch Direct/Stereo**

3 **Downmix Option**

4 **Auto Surround Mode**

5 **Manual EQ**

1 EXT. IN Setup

Setup playback method for analog signals inputted from external input connectors (EXT. IN).

Mode

Select playback mode.

[Selectable items] DSP   Analog

Surround Back Input

Select surround back channel input in combination with the connected player.

[Selectable items] Not Used   SBL/SBR   SB(SBL)

✏

This can be set when "Mode" is set to "DSP".

Surround Speaker

Select the surround speakers to use.

[Selectable items] A   B   A+B

✏

- This can be set when "Mode" is set to "Analog".
- This can be set when GUI menu "Speaker Setup" – "Speaker Configuration" – "Surround A" and "Surround B" are used (☞ page 28).

Subwoofer Level

Set the subwoofer level for playback.
Select according to the player in use.

[Selectable items] 0dB   +5dB   +10dB   +15dB

✏

We recommend setting to "+15 dB".

Input Att.

Setup when input level is too large and playback volume is distorted.

[Selectable items] OFF   –6dB

✏

This can be set when "Mode" is set to "DSP".

2 2ch Direct/Stereo

Make speaker settings for 2-channel mode playback.

Setting

To change the settings, select "Custom".

[Selectable items] Basic *   Custom

∗ : Use the same settings as in "Speaker Setup".

Front

Select front speaker size.

[Selectable items] Large   Small

Subwoofer

Select subwoofer use.

[Selectable items] Yes   No

Subwoofer Mode

Select low range signal to be reproduced by subwoofer.

[Selectable items] LFE–THX–   LFE+Main

Crossover

Select crossover frequency from which subwoofer handles low range signal.

[Selectable items]

THX   40Hz   60Hz   80Hz   90Hz   100Hz   110Hz   120Hz

150Hz   200Hz   250Hz

Distance FL

Set distance from listening position to front left speaker.

[Variable range] 0.00m ~ 18.00m

Distance FR

Set distance from listening position to front right speaker.

[Variable range] 0.00m ~ 18.00m

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3 Downmix Option

Set dynamic range for downmix playback of Dolby Digital sources.

[Selectable items] **ON** **OFF**

🖉

• Set this to "ON" if the sound from the front speakers seems distorted.
• When not using the center speaker or surround speakers, the playback sound is down-mixed and output from the front speakers.

4 Auto Surround Mode

Make setting for memorizing surround mode setting for each input signal type.

[Selectable items] **ON** **OFF**

🖉

• The auto surround mode function lets you store in the memory the surround mode last used for playing the four types of input signals listed below.
  ① Analog and PCM 2-channel signals
  ② Dolby Digital and DTS 2-channel signals
  ③ Dolby Digital and DTS multi-channel signals
  ④ Multi-channel signals other than Dolby Digital and DTS (PCM, DSD, etc.)
• When playing in the PURE DIRECT mode, the surround mode does not change even if the input signal is changed.

5 Manual EQ

Adjust tonal quality for each speaker using graphic equalizer.

Adjust CH

Select speaker adjustment method.

[Selectable items] **Each** **L/R** **All**

Select the speaker and frequency band and adjust the level.

[Selectable items]

| 63Hz | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz |
| 16kHz |

[Variable range]

–20dB ~ **0dB** ~ **+6dB**

Curve Copy

Copy the Room EQ's "Audyssey Flat" correction curve.

[Selectable items] **Yes** **No**

🖉

"Curve Copy" is displayed after the auto setup procedure has been performed.

### **Default**

Resets the settings to the default values.

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Network Setup

Make network settings.

GUI

● **Menu tree** ●

Manual Setup

└─ **Network Setup**

    ├─ **1** **Network Setup**

    ├─ **2** **Other**

    └─ **3** **Network Information**

1 Network Setup

Make settings for wired or wireless LAN.

Wired LAN settings

Make settings for wired LAN.

> **Turn on the AVP-A1HD's power.**

> If a Ethernet cable is connected

> **The mode automatically switches to "Wired".**

> **To acquire the IP address automatically using the DHCP function**

> **To enter the IP address manually**

> **At the GUI menu "Manual Setup" – "Network Setup" – "Network Setup" – "Detail" setting, set "DHCP" to "OFF" and enter the IP address, subnet mask, default gateway, primary DNS and secondary DNS.**

> **To not pass through the proxy server**

> **When a proxy server is used**

This setting is required when the network is established via proxy servers.

> **At the GUI menu "Manual Setup" – "Network Setup" – "Network Setup" – "Detail" – "Proxy" setting, set "Proxy" to "ON" and enter the address or domain name and port numbers.**

> **This completes the setting.**

✏ Recheck the connections and settings if you cannot connect to the Internet (☞ page 20).

NOTE Knowledge about networks is required to make the IP address and proxy settings. For details, consult a network administrator.

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Wireless LAN settings

Make settings for wireless LAN.

Turn on the AVP-A1HD's power.

If no Ethernet cable is connected

The mode automatically switches to "Wireless".

Display GUI menu "Manual Setup" – "Network Setup" – "Network Setup".

Access point settings

To search for the network automatically

To set manually ✻

Search

"Detail" setting

① **Input the SSID.**
② **If there is security, select the encryption method.**
③ **Input the encryption key.**
④ **If "WEP" was selected in step ②, select the default key.**
Normally select "1".

If searching is possible, the access points are displayed.

If searching is not possible

Select the access point to be set.

Make the SSID setting at "Manual".

Without security

With security

Input the encryption key. For WEP, also input the default key.

Connection (continued on right page)

Connection

To acquire the IP address automatically using the DHCP function

To enter the IP address manually

At the GUI menu "Manual Setup" – "Network Setup" – "Network Setup" – "Detail" setting, set "DHCP" to "OFF" and enter the IP address, subnet mask, default gateway, primary DNS and secondary DNS.

To not pass through the proxy server

When a proxy server is used

This setting is required when the network is established via proxy servers.

At the GUI menu "Manual Setup" – "Network Setup" – "Network Setup" – "Detail" – "Proxy" setting, set "Proxy" to "ON" and enter the address or domain name and port numbers.

This completes the setting.

✻ : This is the flow for infrastructure type communications. For ad-hoc communications, set "Mode" at the "Detail" settings to "Ad-hoc".

NOTE Knowledge about networks is required to make the IP address and proxy settings. For details, consult a network administrator.

2 **Other**

Make setting for amp power save mode and computer language environment.

Power Saving

Make setting for power saving when not connected to network.

[Selectable items] ON OFF

✎

To use the web control function, set this setting to "OFF".

Character

Set the character code type of the MP3 ID3-Tag played by USB.

[Selectable items] Auto Latin Japanese

✎

If the characters are not properly displayed when set to "Auto", set to "Latin" or "Japanese".

PC Language

Select computer environment language.

[Selectable items]

| ara | chi (smpl) | chi (trad) | cze | dan | dut | eng | fin |

| fre | ger | gre | heb | hun | ita | jpn | kor | nor | pol |

| por | por (BR) | rus | spa | swe | tur |

3 **Network Information**

Display network information.

[Items to be checked]

Wired or Wireless SSID DHCP= ON or OFF IP Address

MAC Address

Zone Setup GUI

Make settings for audio playback in a multi-zone system.

● **Menu tree** ●

Manual Setup

Zone Setup

1 ZONE2
2 ZONE3
3 OSD

1 **ZONE2**

Make settings for audio playback in a ZONE2 system.

2 **ZONE3**

Make settings for audio playback in a ZONE3 system.

Bass

Adjust low frequency range (bass).

[Variable range] −10dB ~ 0dB ~ +10dB

Treble

Adjust high frequency range (treble).

[Variable range] −10dB ~ 0dB ~ +10dB

HPF

When using speakers that cannot satisfactorily play low frequencies, distortion of the bass sound can be reduced by setting "HPF" to "ON".

[Selectable items] ON OFF

Lch Level

Adjust the left channel output level.

[Variable range] −12dB ~ 0dB ~ +12dB

✎

The "Lch Level" and "Rch Level" can be set when "Channel" is set to "Stereo".

Rch Level

Adjust the right channel output level.

[Variable range] −12dB ~ 0dB ~ +12dB

Channel

Switch between stereo and mono output.

[Selectable items] Stereo Mono

Volume Level

Adjust the main volume level.

[Selectable items] Variable −40dB 0dB

36

Volume Limit

Make a setting for maximum volume.

[Selectable items] | OFF | –20dB | –10dB | 0dB |

🖉

This can be set when "Volume Level" is set to "Variable".

Power On Level

Define the volume setting that is active when the power is turned on.

[Selectable items] | Last | – – –dB | –70dB ~ 18dB |

🖉

This can be set when "Volume Level" is set to "Variable".

Mute Level

Set the amount of attenuation when muting is on.

[Selectable items] | Full | –40dB | –20dB |

Video Convert (ZONE2 only)

Automatically convert video input signal to ZONE2 monitor output format.

[Input source]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |

[Selectable items] | ON | OFF |

---

3 OSD

Set ZONE2 monitor as onscreen display Zone.

[Selectable items]

ZONE2 : Display only ZONE2 operations.

ZONE2/ZONE3 : Display ZONE2 and ZONE3 operations.

NOTE

On-screen display appears only on the ZONE2 monitor. It does not appear on the ZONE3 monitor.

Option Setup GUI

Make various other settings.

● **Menu tree** ●

Manual Setup

  Option Setup

    1 **Pre-out Assign**
    2 **XLR Out Polarity**
    3 **POA Setting**
    4 **Volume Control**
    5 **Source Delete**
    6 **GUI**
    7 **Quick Select Name**
    8 **Trigger Out 1**
    9 **Trigger Out 2**
    10 **Trigger Out 3**
    11 **Trigger Out 4**
    12 **Transducer Setup**
    13 **Digital Out**
    14 **Remote ID**
    15 **2Way Remote**
    16 **Dimmer**
    17 **Setup Lock**
    18 **Maintenance Mode**
    19 **Firmware Update**
    20 **Add New Feature**

❶ Pre-out Assign

Change the pre-out assignment.

Setting "Free Assign" allows you to freely assign each pre-out to any channel, depending on the environment used.

[Selectable items] | Normal | Free Assign |

Preout terminal / Pre-out Assign	FL	FR	C	SL (A)	SR (A)	SL (B)	SR (B)	SBL	SBR	SW1	SW2	SW3
Normal	FL	FR	C	SL (A)	SR (A)	SL (B)	SR (B)	SBL	SBR	SW1	SW2	SW3
Free Assign	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL	FL
	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR	FR
	C	C	C	C	C	C	C	C	C	C	C	C
	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)	SL (A)
	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)	SR (A)
	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)	SL (B)
	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)	SR (B)
	SBL	SBL	SBL	SBL	SBL	SBL	SBL	SBL	SBL	SBL	SBL	SBL
	SBR	SBR	SBR	SBR	SBR	SBR	SBR	SBR	SBR	SBR	SBR	SBR
	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1	SW1
	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2	SW2
	SW3	SW3	SW3	SW3	SW3	SW3	SW3	SW3	SW3	SW3	SW3	SW3

✎

• Channels that are set up in the GUI menu "Speaker Setup"-"Speaker Configuration" to "None" can be set up, but will not generate output.
• Pre-out terminals in ZONE2 and ZONE3 can not be allocated.

❷ XLR Out Polarity

Set to switch the XLR pre-out terminal polarity.

[Selectable channels]

| Front L | Front R | Center | Surround A L | Surround A R |

| Surround B L | Surround B R | Surround Back L |

| Surround Back R | Subwoofer 1 | Subwoofer 2 | Subwoofer 3 |

[Selectable items] | XLR | ①GROUND ②HOT ③COLD

XLR (INV)   ①GROUND ②COLD ③HOT

❸ POA Setting

Set when connecting the receiver to a POA-A1HD.

POA LINK

Set when connecting the receiver to a POA-A1HD through a CONTROL LINK.

[Selectable items] | OFF | ON (Single) | ON (Dual) |

POA 1/POA 2

Set POA-A1HD for which the MODE select switch is set to "1" or "2".

✎

See the POA-A1HD operating instructions.

❏ **Input Selector**

Select the setup channel.

[Selectable items]   L1   R1   L2   R2   L3   R3   L4   R4   L5   R5

Select the connector input to be used for each channel.

[Selectable items]   RCA   XLR   OFF

❏ **Power Amp**

Select the setup channel.

[Selectable items]   L1/L2   L3/L4   L5/R5   R1/R2   R3/R4

Set the power amp usage for each channel.

[Selectable items]   NORMAL   BI-AMP   BRIDGE (BTL)

LINK Check

Check CONTROL LINK.

4 Volume Control

Set the MAIN ZONE volume setting.

Volume Limit

Make a setting for maximum volume.

[Selectable items]   OFF   –20dB   –10dB   0dB

Power On Level

This sets the volume set when the MAIN ZONE's power is turned on.

[Selectable items]   Last   – – –dB   –80dB ~ 18dB

Mute Level

This sets the amount of attenuation of the volume when the mute mode is set in the MAIN ZONE.

[Selectable items]   Full   –40dB   –20dB

5 Source Delete

Remove input sources that are not used from the display.

[Selectable items]   ON   Delete

NOTE

• Input sources being used in the various zones cannot be deleted.
• Input sources set to "Delete" cannot be selected from GUI menu "Source Select" or using the **SOURCE SELECT** knob on the main unit or **SOURCE SELECT** button on the remote control unit.

6 GUI

Make GUI related settings.

Screensaver

Make screensaver settings.
Use the screensaver to prevent burn-in on the monitor screen.
When set to "ON", the screensaver is activated if there is no activity for about 3 minutes.

[Selectable items]   ON   OFF

Wall Paper

Change the GUI background.

[Selectable items]   Picture   Black   Gray   Blue

Format

Select the video output signal format to match the monitor.

[Selectable items]   PAL   NTSC

NOTE

When a format other than the video format of the connected monitor is set, the picture will not be displayed properly. Use the procedure described below to change the video format.

🖰 Operating from the main unit

※ The GUI menu is not displayed when performing this setting.

① Press and hold the **AUDIO DELAY** and **RETURN** buttons for at least 3 seconds.
   "Video Format" appears on the display.
② Use the ◁ ▷ button to make the setting.
③ Press the **ENTER**, **MENU** or **RETURN** button to complete the setting.

```
 *Video Format
    <  PAL  >
```

Text

Text information display.

[Selectable items]   ON   OFF

Master Volume

Master volume display during adjustment.

[Selectable items]   ON   OFF

NET/USB / iPod

This sets the time the on-screen display is displayed when an operation is performed.

[Selectable items]   Always   30s   10s   OFF

7 Quick Select Name

Change "Quick Select" display name.
Up to 16 characters can be input.

[Input characters]

A ~ Z   a ~ z   0 ~ 9   ! " # % & ' ( ) * + , - . / : ; < = > ? @ [\ ] (space)

39

w8 **Trigger Out 1**

Select the conditions to turn on the trigger out 1 with respect to the zone, input source, surround mode, HDMI monitor, etc.
For details about the trigger out function, see page 22.

w9 **Trigger Out 2**

This sets the conditions to turn on the trigger out 2, in the same way as "Trigger Out 1" above.

wq **Trigger Out 3**

This sets the conditions to turn on the trigger out 3, in the same way as "Trigger Out 1" above.

we **Trigger Out 4**

This sets the conditions to turn on the trigger out 4, in the same way as "Trigger Out 1" above.

[Selectable items]   **ON**   **– – –**

Setting with Respect to the Zone

When the power of the zone turned on/off, the trigger out turns on.

Setting with Respect to the Input Source

When the input source set to on is selected, the trigger out turns on.

✍

Associated with respect to the input source for zones set to "ON" at "Setting with Respect to the Zone".

Setting with Respect to the Surround Mode

When the surround mode set to on is selected, the trigger out turns on.

✍

This is effective when the "MAIN ZONE" has been set to "ON" for the "Setting with Respect to the Zone" and the input source which is set to "ON" has been selected for the "Setting with Respect to the Input Source".

Setting with Respect to the Monitor

When the HDMI monitor set to on is selected, the trigger out turns on.

✍

This is effective when the "MAIN ZONE" has been set to "ON" for the "Setting with Respect to the Zone" and the input source which is set to "ON" has been selected for the "Setting with Respect to the Input Source".

wr **Transducer Setup**

Set when using transducer.

✍

The Transducer Setup can be accessed through GUI menu "Speaker Setup" - "Subwoofer Setup" is "1SP", "2SP L/R" or "2SP MIX". The transducer signal is outputted from "SW3".

Level

[Variable range]

–12dB   ~   **0dB**   ~   **+12dB**   :

Set the transducer level.

OFF   :

Turn the transducer output off.

✍

When you adjust "Level", the adjusted value is set for all surround modes. To adjust the level for individual surround modes, use "Channel Level" (☞page 65).

LPF

Set the upper limit of the low frequency output to the transducer.

[Selectable items]

40Hz   **60Hz**   **80Hz**   **90Hz**   **100Hz**   **110Hz**   **120Hz**

150Hz   **200Hz**   **250Hz**

wt **Digital Out**

Set usage of OPT4 OUT.

[Selectable items]   **ZONE4 Select**   **Rec Select**

NOTE

The ZONE4 operations cannot be performed when set to "Rec Select".

wy **Remote ID**

Set remote control ID.
Match the ID setting of the remote control unit and the receiver.

[Selectable items]   **1**   **2**   **3**   **4**

✍

• When changing the remote ID, also change the AMP, iPod and NET/DTU modes of the main remote control unit at the same time (☞page 69).
• When changing the remote ID, also change the sub remote control unit at the same time (☞page 74).

wu **2Way Remote**

Set when using the 2-way remote control unit.

[Selectable items]   **Used**   **Not Used**

✍

When using a 2-way remote control unit (RC-7000CI and RC-7001RCI, sold separately), set this to "Used".

NOTE

• When using the 2-way remote control unit, connect to the Port 1 RS-232C connector.
• If GUI menu "Manual Setup" – "Option Setup" – "2Way Remote" is set to "Used", you cannot use port 1 of the RS-232C terminal for the external controller.

16 Dimmer

Adjust display brightness of the receiver.

[Selectable items] | Bright | Dim | Dark | OFF

✍ Operating from the main unit

Press the **DIMMER** button.

Bright → Dim → Dark → OFF → (back to Bright)

✎

If POA-A1HD is connected using the control link, POA-A1HD meter operation is turned OFF when the AVP-A1HD display is turned "OFF".

17 Setup Lock

Protect settings from inadvertent change.

[Selectable items] | ON | OFF

✎

• When "Setup Lock" is set to "ON", the settings listed below can no longer be changed. Also, "SETUP LOCKED!" is displayed if you attempt to operate related buttons.
 · GUI menu operations
 · RESTORER
 · Night Mode
 · Parameter
 · Room EQ
 · Channel Level
 · Audio Delay
• To cancel the setting, press the **MENU** button to re-display the "Setup Lock" screen, then change the setting to "OFF".

18 Maintenance Mode

This sets the function for maintenance by a DENON serviceperson or installer. (For professional use only.)

This function allows a DENON serviceperson or installer to check the AVP-A1HD's status and make settings via the Internet.

NOTE

Only use this function if so instructed by a DENON serviceperson or installer.

19 Firmware Update

Update the firmware of the receiver.

✎

If POA-A1HD is connected using the control link, POA-A1HD is updated simultaneously with update of AVP-A1HD.

Check for Update

You can check for firmware updates. You can also check approximately how long it will take to complete an update.

Start

Execute the update process.
When updating starts, the power indicator becomes red and the GUI screen is shut down.
The amount of update time which has elapsed is displayed during the update process.
When updating is complete the power indicator becomes green and normal status is resumed.

※ If the display reads as shown below, check the settings and network environment, then update again.

Display	Description
Updating failed	Updating failed.
Login failed	Failure to log into server.
Server is busy	Server is busy. Wait a while then try again.
Connection fail	Failure connecting to server.

20 Add New Feature

Display the new functions which can be purchased for downloading to the AVP-A1HD and upgrade.

When you purchase a new function and register your user information, "Registerd" is displayed on this menu and you can proceed with the upgrade.
Upon completion of the upgrade, you can start using the new function.

Upgrade

Execute the upgrade process.
When upgrading starts, the power indicator becomes red and the GUI screen is shut down.
The amount of upgrade time which has elapsed is displayed during the upgrade process.
When upgrading is complete the power indicator becomes green and normal status is resumed.

※ If the upgrade is not successful, an error message identical to those in "Firmware Update" will appear on the display.

Notes concerning use of "Firmware Update" and "Add New Feature"

• In order to use these functions, you must have the correct system requirements and settings for a broadband Internet connection. For details, see pages 34 ~ 36.
• Do not turn off the power until updating or upgrating is completed.
• Normally there is no need to use this function, aside from the cases described below.
 · Firmware Update : In the case of applying the latest firmware updates (free)
 · Add New Feature : In the case of future upgrades to add new functions to the receiver (payment required)
 · Information regarding the "Firmware Update" function and "Add New Feature" will be announced on the DENON web site each time related plans are defined.
• Even with a broadband connection to the Internet, approximately 1 hour is required for the updating/upgrading procedure to be completed.
 Once updating/upgrading starts, normal operations on the AVP-A1HD cannot be performed until updating/upgrading is completed.
 Furthermore, updating/upgrading the firmware may reset the backup data for the parameters, etc., set for the AVP-A1HD.
• When updating/upgrading the firmware, we recommend using wired connections (Ethernet cable).

Language

Select the language displayed on the GUI screen.

GUI **Aa**

● **Menu tree** ●

Manual Setup

├── Language

[Selectable items]

English	Deutsch	Français	Italiano	Español

Nederlands	Svenska	日本語

Operating from the main unit

※ The GUI menu is not displayed when performing this setting.

① Press and hold the **AUDIO DELAY** and **RETURN** buttons for at least 3 seconds.

"Video Format" appears on the display.

② Use the △▽ button to set "GUI Language".

③ Use the ◁ ▷ button to make the setting.

④ Press the **ENTER**, **MENU** or **RETURN** button to complete the setting.

```
*GUI Language
< ENGLISH >
```

GUI

Source Select

Use this procedure to select the input source and make the settings related to playing input sources.

Input Source Selection

● **Menu tree** ●

Source Select

├── DVD
├── HDP
├── TV/CBL
├── SAT
├── VCR
├── DVR-1
├── DVR-2
├── V.AUX
├── NET/USB
├── TUNER
├── PHONO
└── CD

Operating from the main unit or main remote control unit

〖Operation on the main unit〗

Turn the **SOURCE SELECT** knob.

※ If "Rec Select" or "Video Select" is selected, press the **SOURCE** button before turning the **SOURCE SELECT** knob.

〖Operation on the main remote control unit〗

Press the **SOURCE SELECT** button.

The desired input source can be selected directly.
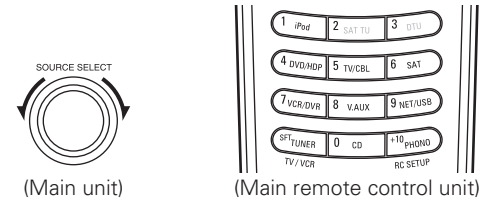
SOURCE SELECT

1 iPod	2 SAT TU	3 QTU
4 DVD/HDP	5 TV/CBL	6 SAT
7 VCR/DVR	8 V.AUX	9 NET/USB
SFT TUNER	0 CD	+10 PHONO

TV / VCR   RC SETUP

(Main unit)   (Main remote control unit)

• To operate the AVP-A1HD using the main remote control unit, set the remote control unit to the AMP mode (☞ page 66 "Remote Control Unit Operations").

• Pressing the **DVD/HDP** button and the **VCR/DVR** button on the main remote control will switch between the following.
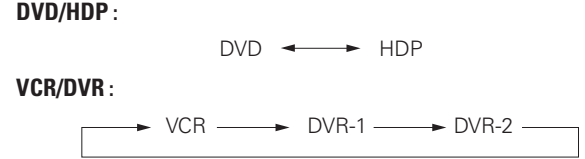
DVD/HDP :

DVD ◄───► HDP

VCR/DVR :

VCR ───► DVR-1 ───► DVR-2

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Settings Related to Playing Input Sources GUI

● Menu tree ●

Source Select

DVD, HDP, TV/CBL, SAT, VCR, DVR-1, DVR-2, V.AUX, TUNER, CD

1 **Play** *

2 **Playback Mode (iPod)** *

3 **Assign**

4 **Video**

5 **Input Mode**

6 **Rename**

7 **Source Level**

8 **Input Att.**

NET/USB

1 **Play**

9 **Playback Mode**

10 **Still Picture**

4 **Video**

5 **Input Mode**

6 **Rename**

7 **Source Level**

PHONO

4 **Video**

5 **Input Mode**

6 **Rename**

7 **Source Level**

8 **Input Att.**

* : "Play" and "Playback Mode (iPod)" are displayed for input sources for which "iPod dock" is assigned.

1 Play

The playback screen is displayed.

[Input source] **NET/USB** (**iPod**)

2 Playback Mode (iPod)

Make settings for iPod playback.

Repeat

Make settings for repeat mode.

[Input source]

DVD **HDP** **TV/CBL** **SAT** **VCR** **DVR-1** **DVR-2** **V.AUX**

TUNER **CD**

[Selectable items] **All** **One** **OFF**

Shuffle

Make settings for shuffle mode.

[Input source]

DVD **HDP** **TV/CBL** **SAT** **VCR** **DVR-1** **DVR-2** **V.AUX**

TUNER **CD**

[Selectable items] **Songs** **Albums** **OFF**

This can be selected for input sources for which "Assign" is assigned at the "iPod dock" setting.

3 Assign

Assign input sources to input connectors.

HDMI

Select HDMI connector to assign to this source.

[Input source]

DVD **HDP** **TV/CBL** **SAT** **VCR** **DVR-1** **DVR-2** **V.AUX**

[Selectable items] **1** **2** **3** **4** **5** **6** **None**

Input source	DVD	HDP	TV/CBL	SAT
Default setting	**HDMI1**	**HDMI2**	None	**HDMI3**

Input source	VCR	DVR-1	DVR-2	V.AUX
Default setting	**HDMI4**	**HDMI5**	**HDMI6**	None

- With an HDMI connection, video and audio signals are transmitted simultaneously. To play the video signal assigned at "HDMI" combined with the audio signal assigned at "Digital", select "Digital" at the GUI menu "Source Select" – "Input Mode" (vpage 45).
- When the AVP-A1HD and monitor are connected with an HDMI cable, if the monitor is not compatible with HDMI audio signal playback, only the video signals are output to the monitor.
- The audio signals input from the analog, digital and EXT. IN connectors are not output to the monitor.

NOTE

This cannot be set for input sources for which "iPod dock" is assigned.

Digital

Select digital input connector to assign to this source.

[Input source]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |

| TUNER | CD |

[Selectable items]

| Coaxial1 ~ 4 | Optical1 ~ 5 | DENON LINK | * | BNC1/2 | None |

* : When a DENON DVD player and the DENON LINK have been connected, be sure to make a setting to "DENON LINK".

Input source	DVD	HDP	TV/CBL	SAT	VCR
Default setting	Coaxial 1	Coaxial 2	Optical 1	Coaxial 3	Optical 4

Input source	DVR-1	DVR-2	V.AUX	TUNER	CD
Default setting	Optical 2	Optical 3	Optical 5	None	Coaxial 4

NOTE

This cannot be set for input sources for which "iPod dock" is assigned.

Component

Select component video input to assign to this source.

[Input source]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |

[Selectable items] | 1 ~ 5 – RCA | 6 – BNC | None |

Input source	DVD	HDP	TV/CBL	SAT
Default setting	1-RCA	2-RCA	3-RCA	4-RCA

Input source	VCR	DVR-1	DVR-2	V.AUX
Default setting	None	5-RCA	None	None

NOTE

This cannot be set for input sources for which "iPod dock" is assigned.

Analog

Select the analog connector using the CD input.

[Input source] | CD |

[Selectable items] | RCA |

| XLR | ①GROUND ②HOT ③COLD |

| XLR (INV) | ①GROUND ②COLD ③HOT |

NOTE

When you assign "iPod dock," you cannot select "XLR", or "XLR(INV)".

iPod dock

Assign Control Dock for iPod to this source.

[Input source]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |

| TUNER | CD |

[Selectable items] | Assign | None |

✎

• With the default settings, the Control Dock for iPod can be used connected to the VCR (iPod) connector.
• Even if "iPod dock" is set to "Assign", if the set is not connected to a Control dock for iPod, the input source can be used as the normal input source.

4 Video

Setting the video source.

Video Select

Switch video input source while listening to audio signal.

[Selectable items]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |

| SOURCE |

Operating from the main unit

Press the **VIDEO SELECT** button, then turn the **SOURCE SELECT** knob until the desired picture appears.
※ To cancel, press the main unit's **VIDEO SELECT** button, then turn the main unit's **SOURCE SELECT** knob and select "SOURCE".

NOTE

• It is not possible to select HDMI input signals.
• When playing HDMI video input signals, the analog video signal of another input source cannot be selected for the HDMI video output.
• Input sources for which "Delete" is selected at "Source Delete" cannot be selected.

Video Convert

Automatically convert video input signal to monitor output format.

[Input source]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |

[Selectable items] | ON | OFF |

NOTE

• For optimum video performance, THX recommends that you set the conversion mode to "OFF" to use video signals pass through system without up conversion.
  Example: View video input from a component video on the component video monitor.
• When a non-standard video signal from a game machine or some other source is input, the video conversion function might not operate. If this happens, please set the conversion mode to "OFF".

i/p Scaler

Make settings for i/p scaler function.

[Selectable items] | A to H | A to H & H to H | OFF |

✎

• This can not be set when "Video Convert" is set to "OFF".
• The "A to H & H to H" can be set to the input source assigned to the HDMI input connector.
• "A to H & H to H" setting:
  ・ Deep color (10 bit/12 bit) signals are converted into 8-bit signals.
  ・ The i/p scaler function does not work if xvYCC or computer's resolution signals are input.

Resolution

Set resolution for video signal output to HDMI.

[Selectable items] | Auto | 480p/576p | 1080i | 720p | 1080p |

☞ Operating from the main unit

Press the **SCALE** button.

Auto ⟶ 480p / 576p ⟶ 1080i
1080p ⟵ 720p ⟵

✎
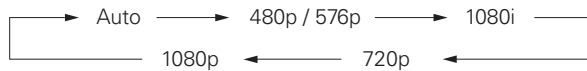
• This can be set when "i/p Scaler" is set to anything other than "OFF".
• When the "i/p Scaler" is set to "A to H & H to H", the resolutions can be setup to the analog video input signal and HDMI input signal.

Progressive Mode

Select optimum progressive mode for video material.

[Selectable items] | Auto | Video1 | Video2 |

✎

This can be set when "i/p Scaler" is set to anything other than "OFF".

Aspect

This sets the aspect ratio when outputting 480i/576i or 480p/576p input signals from the HDMI output connector.

[Selectable items] | Full | Normal |

✎

This can be set when "i/p Scaler" is set to anything other than "OFF".

➎ Input Mode

Make input mode and decode mode settings for this source.
The selectable input modes depend on the input source and "Assign" setting (☞ page 43, 44).

Input Mode

Set the input mode for this source.

[Input source] | PHONO | (iPod)

[Selectable items] | Analog | EXT. IN |

[Input source] | NET/USB |

[Selectable items] | Auto | EXT. IN |

[Input source]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |
| TUNER | CD |

[Selectable items]

| Auto | HDMI | Digital | Analog | EXT. IN |

✎

When a digital signal is properly input, the "DIG." indicator lights on the display. If the "DIG." indicator does not light, check the digital input connector assignment and the connections.

☞ Operating from the main unit or main remote control unit

Press the **INPUT MODE** button on the main unit or the **INPUT** button on the main remote control unit.

Auto ⟶ HDMI *1 ⟶ Digital *2
EXT. IN ⟵ Analog ⟵

＊1: This can be selected for input sources for which the GUI menu "Assign" setting is set to "HDMI" (☞ page 43). Excluding CD and TUNER.
＊2: This can be selected for input sources for which the GUI menu "Assign" setting is set to "Digital" (☞ page 44).

Decode Mode

Set the decode mode for this source.

[Input source]

| DVD | HDP | TV/CBL | SAT | VCR | DVR-1 | DVR-2 | V.AUX |
| TUNER | CD |

[Selectable items] | Auto | PCM | DTS |

✎

• This can be selected for input sources for which the GUI menu "Assign" setting is set to "HDMI" or "Digital".
• Only set "PCM" and "DTS" when playing the respective signals.

➏ Rename

Change the display name for this source.
Names containing up to 8 characters can be input.

[Characters that can be input]

| A ~ Z | a ~ z | 0 ~ 9 | ! " # % & ' ( ) * + , - . / : ; < = > ? @ [\ ] (space) |

➐ Source Level

Corrects the playback level of the selected input source's audio input.

[Variable range] | –12dB | ~ | 0dB | ~ | +12dB |

✎

For input sources for which "HDMI" or "Digital" are set at the GUI menu "Assign" setting, the analog input level and digital input level can be set separately.

➑ Input Att.

Set when replay sound is distorted because the input level is too large.

[Selectable items] | OFF | –6dB |

o Playback Mode

Make settings for "NET/USB" playback.

[Input source] NET/USB

USB Select

Select USB port to use.

[Selectable items] Front Rear

✎

Match the port to be used and the setting.

Repeat

Make settings for repeat mode.

[Selectable items] All One OFF

Random

Make random mode settings.

[Selectable items] ON OFF

Direct Play

Set the folder to be played using the **DIRECT PLAY** button on the sub remote control unit.

[Selectable items] Favorites All Music

!0 Still Picture

Make settings for still picture (JPEG) playback.

[Input source] NET/USB

Slide Show

Make slideshow settings.

[Selectable items] ON OFF

Interval

Set the playback time per image.

[Variable range] 5s ~ 60s

Surround Mode

GUI

HOME THX CINEMA

THX surround sound mode to recreate the authentic sound of movie soundtracks.

Surround Playback of 2-channel Sources

[Selectable items]

PLⅡx CINEMA PLⅡ CINEMA Pro Logic NEO:6 CINEMA

Playing Multi-channel Sources (Dolby Digital, DTS, etc.)

[Selectable items]

HOME THX CINEMA :

This mode is for decoding the input signals according to their format and playing THX surround sound.

The display when the HOME THX CINEMA mode is selected depends on the input signal and surround back output playback mode.

Input signal		Display
Dolby Digital Source	DOLBY DIGITAL (other than 2ch) / DOLBY DIGITAL EX DOLBY DIGITAL Plus DOLBY TrueHD	THX SURROUND EX
		THX Ultra2 Cinema
		THX Music Mode
		THX Games Mode
		THX Cinema
		PLⅡx C + THX
DTS Surround Source	DTS (5.1ch) / DTS-ES Discrete 6.1 / DTS-ES Matrix 6.1 / DTS 96/24 / DTS-HD High Resolution Audio DTS-HD Master Audio	ES MTRX6.1 + THX (∗1)
		ES DSCRT6.1 + THX (∗2)
		THX Ultra2 Cinema
		THX Music Mode
		THX Games Mode
		THX Cinema
		PLⅡx C + THX
DVD-Audio, SACD	PCM (multi ch) / DSD (multi ch)	THX SURROUND EX
		THX Ultra2 Cinema
		THX Music Mode
		THX Games Mode
		PLⅡx C + THX
		M CH 5.1 + THX
		M CH 7.1 + THX

∗1: This is displayed when the input signal is "DTS-ES Matrix 6.1" and the AVP-A1HD's "AFDM" setting is set to "ON".

∗2: This is displayed when the input signal is "DTS-ES Discrete 6.1".

✎

🖝 **Operating from the main unit or main remote control unit**

Press the **HOME THX CINEMA** button on the main unit or the **THX** button on the main remote control unit.

Standard Playback

This is the standard mode for enjoying surround sound according to the program source.

To select these surround modes pressing the **STANDARD** button on the main unit or press the **STD** button on the main remote control unit. The mode switches each time the button is pressed.

Surround Playback of 2-channel Sources

❏ When using a surround back speaker

[Selectable items] DOLBY PLⅡx DTS NEO:6

❏ When not using a surround back speaker

[Selectable items] DOLBY PLⅡ DTS NEO:6

DOLBY PLⅡx or DOLBY PLⅡ : The signals are decoded in DOLBY PLⅡx or DOLBY PLⅡ for playback.

→ Cinema : This mode is suited for movie sources.

→ Music : This mode is suited for music sources.

→ Game : This mode is suited for games.

→ Pro Logic : This is the Pro Logic playback mode. This can be selected when playing with a DOLBY PLⅡ decoder. When this mode is selected, "DOLBY PL" is displayed.

Operating from the main unit

The "Cinema", "Music", or "Game" modes can be directly selected with the **CINEMA**, **MUSIC** or **GAME** button on the main unit.

DTS NEO:6 : The signals are decoded in DTS NEO:6 for playback.

→ Cinema : This mode is suited for movie sources.

→ Music : This mode is suited for music sources.

Operating from the main unit

The "Cinema" or "Music" modes can be directly selected with the **CINEMA** button or **MUSIC** button on the main unit.

Select the "Cinema", "Music", "Game" and "Pro Logic" modes at GUI menu "Parameter" – "Audio" – "Surround Parameters" – "Mode" (☞page 48).

Playing Multi-channel Sources (Dolby Digital, DTS, etc.)

[Selectable items]

STANDARD :

This mode is for decoding the input signals according to their format and playing surround sound.
The display when the STANDARD mode is selected depends on the input signal and surround back output playback mode.

Input signal		Display
Dolby Digital Source	DOLBY DIGITAL (other than 2ch) / DOLBY DIGITAL EX	DOLBY DIGITAL
		DOLBY DIGITAL EX
		DOLBY DIGITAL+PLⅡx CINEMA
		DOLBY DIGITAL+PLⅡx MUSIC
	DOLBY DIGITAL Plus	DOLBY DIGITAL +
	DOLBY TrueHD	DOLBY TrueHD
DTS Surround Source	DTS (5.1ch) / DTS-ES Discrete 6.1 / DTS-ES Matrix 6.1 / DTS 96/24	DTS SURROUND
		DTS+PLⅡx CINEMA
		DTS+PLⅡx MUSIC
		DTS+NEO:6
		DTS ES MTRX6.1 (∗1)
		DTS ES DSCRT6.1 (∗2)
		DTS 96/24 (∗3)
	DTS-HD High Resolution Audio	DTS-HD HI RES
	DTS-HD Master Audio	DTS-HD MSTR
DVD-Audio, SACD	PCM (multi ch) / DSD (multi ch)	MULTI CH IN
		MULTI IN+PLⅡx CINEMA
		MULTI IN+PLⅡx MUSIC
		MULTI CH IN 7.1

∗1: This is displayed when the input signal is "DTS-ES Matrix 6.1" and the AVP-A1HD's "AFDM" setting is set to "ON".
∗2: This is displayed when the input signal is "DTS-ES Discrete 6.1".
∗3: This is displayed when the input signal is "DTS 96/24".

For details, see page 84, 85.

Dolby Headphone

The Dolby Headphone mode is set when headphones are connected to the **PHONES** jack while in the STANDARD (DOLBY/DTS SURROUND) mode.

[Selectable items] DOLBY HEADPHONE

When RECOUT mode is set to "SOURCE", with this amplifier signals encoded in the Dolby Headphone mode can be output from the recording output terminals and recorded on another recorder (☞page 63).

DSP Simulation Playback

The desired mode according to the program source and viewing situation can be selected from among 9 DENON original surround modes.
The surround parameters can be adjusted (☞page 82, 83) to achieve an even more realistic, powerful sound field.

[Selectable items]

7CH STEREO ∗1 : This mode is for enjoying stereo sound from all speakers.

WIDE SCREEN : This mode is for enjoying the atmosphere of viewing a movie on a large screen.

SUPER STADIUM : This mode is suited for viewing sports programs.

ROCK ARENA : This mode is for enjoying the atmosphere of a live concert in an arena.

JAZZ CLUB : This mode is for enjoying the atmosphere of a live concert in a jazz club.

CLASSIC CONCERT : This mode is for appreciating classical concert programs.

MONO ∗2 : This mode is for playing monaural movie sources with surround sound.

VIDEO GAME : This mode is suited for achieving surround sound with video games.

MATRIX : This mode lets you add a sense of expansion to stereo music sources.

∗1: Can also be set by pressing the **7CH STEREO** button on the main unit. However, the GUI menu is not displayed.

∗2: When playing sources recorded in monaural in the MONO MOVIE mode, the sound will be off balance with a single channel (left or right), so input to both channels.

✎

• Press the **DSP SIMULATION** button on the main unit or **SIMU** button on the main remote control unit to switch the surround mode. The mode switches each time the button is pressed.
• Depending on the program source being played, it may not be possible to achieve a satisfactory surround effect. In this case, try other modes to achieve a sound field suited to your tastes.

Stereo Playback

[Selectable items]

STEREO :

This is the mode for playing in stereo. The tone can be adjusted.
Sound is output from the front left and right speakers and subwoofer.

✎

When the main unit's **DIRECT/STEREO** button or the main remote control unit's **D/ST** button is pressed, DIRECT mode can be switched to STEREO mode.

Direct Playback

[Selectable items]

DIRECT :

In this mode the signals bypass the tone control circuitry for high quality sound.
The display when the DIRECT mode is selected depends on the input signal.
For multi-channel sources, the display depends on the surround back output's play mode.

Input signal	Display
Analog signal / PCM (2ch) / Dolby Digital source / DTS source / Other 2-channel digital signals	DIRECT
DSD (2ch)	DSD DIRECT (∗)
PCM (multi ch)	MULTI CH DIRECT
	M DIRECT + PLIIx CINEMA
	M DIRECT + PLIIx MUSIC
	M DIRECT 7.1
DSD (multi ch)	DSD MULTI DIRECT (∗)

∗ : When DSD signals are converted to PCM signals as set by the audio parameters and speaker settings, "DIRECT" or "MULTI CH DIRECT" is displayed.

✎

For details, see page 85.

Playback in the PURE DIRECT Mode

This is the mode that recreates the original sound most faithfully, providing extremely high quality sound.

Press the PURE DIRECT button on the main unit or the PURE button on the main remote control unit.

✎

• To cancel, press the **PURE DIRECT** button on the main unit or the **PURE** button on the main remote control unit.
• When in the PURE DIRECT mode, the GUI screen is not displayed and the display on the main unit is turned off.
• If the HDMI input connector is selected, video outputs are output in the PURE DIRECT mode.
• The channel level and surround parameters in the PURE DIRECT mode are the same as in the DIRECT mode.

GUI

Parameter

Parameters can be called out directly by pressing the **PARA** button on the main remote control unit.

Audio

GUI

Adjust various audio parameters.

● Menu tree ●

Parameter
  Audio
  1 **Surround Parameters**
  2 **Tone**
  3 **Room EQ**
  4 **Dynamic EQ**
  5 **RESTORER**
  6 **Night Mode**
  7 **Audio Delay**

1 Surround Parameters

Adjust surround sound parameters.
The adjustable parameters differ for the different surround modes (☞ page 82, 83).

Mode

Select the mode according to the playback source.

❏ In the PLIIx or PLII mode

[Selectable items] **Cinema** **Music** **Game** **Pro Logic**

❏ In the DTS NEO:6 mode

[Selectable items] **Cinema** **Music**

✎

The "Music" mode is also effective for movie sources including a lot of stereo music.

Getting Started

Connections

Setup

Playback

Remote Control

Multi-Zone

Information

Troubleshooting

❏ In the THX mode (for 2-channel sources)

[Selectable items]

Surround Back ON   Surround Back OFF   THX Games Mode

❏ In the THX mode (for Multi-channel sources)

[Selectable items]

THX Surr. EX   ES DSCRT   ES MTRX   7.1+THX

PLⅡx Cinema + THX   THX Ultra2 Cinema   THX Music Mode

THX Games Mode   Surround Back OFF

Decoder

Select this when playing analog, PCM or other 2 channel sources. The signals are converted into multichannel signals using the decoders shown below and played in the Dolby Headphone mode.

❏ In the THX mode (for 2-channel sources)

[Selectable items]

PLⅡx CINEMA   PLⅡ CINEMA   Pro Logic   NEO:6 CINEMA

❏ In the DOLBY HEADPHONE mode

[Selectable items]

PLⅡ CINEMA   PLⅡ MUSIC   NEO:6 CINEMA

NEO:6 MUSIC   OFF

Cinema EQ

Soften the treble range of movie soundtracks for better understanding.

[Selectable items]   ON   OFF

DRC

Compress dynamic range (difference between loud and soft sounds).

[Selectable items]   Auto   Low   Middle   High   OFF

🖉

This can be set in the Dolby TrueHD mode.

D.COMP

Compress dynamic range (difference between loud and soft sounds).

[Selectable items]   OFF   Low   Middle   High

🖉

When playing DTS sources, this is only displayed for compatible software.

LFE

Adjust the low-frequency effects level (LFE).

[Variable range]   –10dB   ~   0dB

🖉

For proper playback of the different program sources, we recommend setting to the values below.
• Dolby Digital sources: "0 dB"
• DTS movie sources: "0 dB"
• DTS music sources: "–10 dB"

Center Image

Assign center channel signal to front left and right channels for wider sound.

[Variable range]   0.0   ~   0.3   ~   1.0

Panorama

Assign front L/R signal also to surround channels, for wider sound.

[Selectable items]   ON   OFF

Dimension

Shift sound image center to front or rear, to adjust playback balance.

[Variable range]   0   ~   3   ~   6

Center Width

Assign center channel signal to front left and right channels for wider sound.

[Variable range]   0   ~   3   ~   7

Delay Time

Adjust delay time to control sound stage size.

[Variable range]   0 ms   ~   30 ms   ~   300 ms

Effect

Switch effect signal for multi-surround speakers on and off.

[Selectable items]   ON   OFF

Effect Level

Adjust effect signal level.

[Variable range]   1   ~   10   ~   15

※ Only when the surround mode is "MONO".

[Variable range]   0   ~   15

🖉

Set to a lower level if the positioning and sense of phase of the surround signals seems unnatural.

Room Size

Determine size of acoustic environment.

[Selectable items]

Small   Medium small   Medium   Medium large   Large

NOTE

"Room Size" does not indicate the size of the room in which sources are played.

AFDM

Auto-select surround mode by source.
This function only works for software containing a special identification signal.
If the software being played is recorded in Dolby Digital EX or DTS-ES, it is played in 6.1-channels. If not, it is played in 5.1-channels.

[Selectable items] ON OFF

Example : Playing Dolby Digital software (with EX flag)

• When "AFDM" is set to "ON", the surround mode is automatically set to the DOLBY D + PLIIx C mode.
• To play in the DOLBY DIGITAL EX mode, set "AFDM" to "OFF" and "SB CH Out" to "MTRX ON".

🖉

Some Dolby Digital EX sources do not include EX flags. If the playback mode does not switch automatically even when "AFDM" is set to "ON", set "SB CH Out" to "MTRX ON" or "PLIIx CINEMA".

SB CH Out (for Multi-channel sources)

Select playback mode for surround back channels.

[Selectable items]

NON MTRX MTRX ON PLIIx CINEMA *1 PLIIx MUSIC *2

ES MTRX *3 ES DSCRT *4 DSCRT ON OFF

*1: This can be selected when "Surround Back" is set to "2spkrs" at the GUI menu "Manual Setup" – "Speaker Setup" – "Speaker Configuration" setting (☞page 28).
*2: This can be selected when "Surround Back" is set to "2spkrs" or "1spkr" at the GUI menu "Manual Setup" – "Speaker Setup" –"Speaker Configuration" setting.
*3: This can be selected when playing DTS sources.
*4: This can be selected when playing DTS sources including a discrete 6.1-channel signal identification signal.

SB CH Out (for 2-channel sources)

Determine whether to use surround back speakers.

[Selectable items] ON OFF

Input Channel

Select channel using external input connectors (EXT. IN) for source being played.

[Selectable items] 8CH 2CH

🖉

Can be selected when GUI menu "Manual Setup" – "Audio Setup"– "EXT. IN Setup"– "Mode" is set to "DSP" (☞page 32).

Subwoofer Att.

Attenuate subwoofer level when using EXT. IN input.

[Selectable items] ON OFF

🖉

Set this to "ON" if the subwoofer channel level seems too high when playing Super Audio CD.

Subwoofer

Turn subwoofer output on and off.

[Selectable items] ON OFF

Default

Resets the settings to the default values.

2 Tone

Adjust the tonal quality of the sound.

Tone Defeat

Turn tone adjustments off.

[Selectable items] ON OFF

🖉

The tone cannot be adjusted when in the DIRECT, PURE DIRECT and HOME THX CINEMA mode.

Bass

Adjust bass for all channels together.

[Variable range] –6dB ~ +6dB

Treble

Adjust treble for all channels together.

[Variable range] –6dB ~ +6dB

🖉

"Bass" and "Treble" can be set when "Tone Defeat" is set to "OFF".

Front

Adjust each front channel tone.

[Selectable items] Bass Treble

[Variable range] –6dB ~ +6dB

Center

Adjust each center channel tone.

[Selectable items] Bass Treble

[Variable range] –6dB ~ +6dB

Surround

Adjust each surround channel tone.

[Selectable items] Bass Treble

[Variable range] –6dB ~ +6dB

Surround Back

Adjust each surround back channel tone.

[Selectable items] Bass Treble

[Variable range] –6dB ~ +6dB

Subwoofer

Adjust each subwoofer channel tone.

[Selectable items]　Bass

[Variable range]　**–6dB ~ +6dB**

✏

This can be set individually for the separate surround mode other than PURE DIRECT, DIRECT and Home THX Cinema mode.

❸ Room EQ

Select room equalizer for current environment.

[Selectable items]

Audyssey	: Optimize frequency response of all speakers.
Audyssey Byp. L/R	: Optimize frequency response of speakers except front L and R speakers.
Audyssey Flat	: Optimize frequency response of all speakers to flat response.
Manual	: Apply frequency response set with "Manual EQ" (☞ page 33).
OFF	: Turn equalizer off.

👆 Operating from the main unit or main remote control unit

Press the **ROOM EQ** button on the main unit or the **EQ** button on the main remote control.

OFF ⟶ Audyssey ⟶ Audyssey Byp. L/R
Manual ⟵ Audyssey Flat ⟵
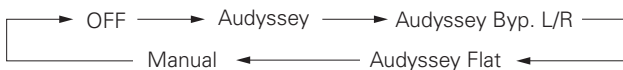
When "Audyssey" is selected, " AUDYSSEY MULTEQ XT " lights.

When "Audyssey Byp. L/R" or "Audyssey Flat" is selected, or when the auto setup measuring results have changed, " AUDYSSEY MULTEQ XT " lights.

✏

• "Audyssey", "Audyssey Byp. L/R" and "Audyssey Flat" can be selected after the auto setup procedure has been performed.
• If the settings of the speakers for which "None" has been determined at "Auto Setup" are changed, "Audyssey", "Audyssey Byp. L/R" and "Audyssey Flat" cannot be selected and measurements have to be taken again to include the newly-added speakers.
• When using headphones, "Room EQ" is always set to "OFF".

❹ Dynamic EQ

Make Dynamic EQ settings.

[Selectable items]　ON　OFF

👆 Operating from the main unit

Press the **DYNAMIC EQ** button.

✏

• "Dynamic EQ" is displayed when selecting "Audyssey", "Audyssey Flat" or "Audyssey Byp.L/R" in the "Room EQ" setup. When set to "ON", the " AUDYSSEY DYNAMIC EQ " indicator is lit.

• When the audio setup measuring results have changed, " AUDYSSEY DYNAMIC EQ " lights.

❺ RESTORER

This function restores compressed audio signals to how they were before compression and corrects the sense of volume of the bass and treble to obtain richer playback sound.

[Selectable items]

OFF	
Mode1	(RESTORER 64)
Mode2	(RESTORER 96)
Mode3	(RESTORER HQ)

The default setting for "NET/USB" and "iPod" is "Mode3". All others are set to "OFF".

👆 Operating from the main unit or main remote control unit

During playback, press the **RESTORER** button on the main unit or the **RSTR** button on the main remote control unit.

When set to something other than "OFF", " RESTORER " is displayed.

OFF ⟶ Mode 1 ⟶ Mode 2
(RESTORER 64) (RESTORER 96)
Mode 3 ⟵
(RESTORER HQ)
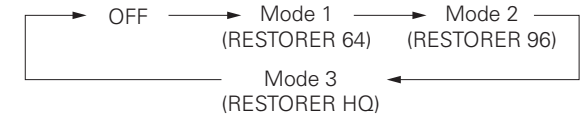
About the RESTORER function

• Such compressed audio formats as MP3, WMA (Windows Media Audio) and MPEG-4 AAC reduce the amount of data by eliminating signal components that are hard for the human ear to hear. The RESTORER function generates the signals eliminated upon compression, restoring the sound to conditions near those of the original sound before compression. It also corrects the sense of volume of the bass to obtain richer sound with compressed audio signals.
• This is displayed on the GUI menu and can be set when the input source is set to "NET/USB", or when analog signals or PCM signals (fs = 44.1/48 kHz) are input.

❻ Night Mode

Optimized setting for late-night listening.

[Selectable items]　OFF　Low　Middle　High

👆 Operating from the main unit or main remote control unit

Press the **NIGHT** button on the main unit or the **NGT** button on the main remote control unit.

The " NIGHT " indicator lights when "Low", "Middle" or "High" is selected.

OFF ⟶ Low ⟶ Middle
High ⟵
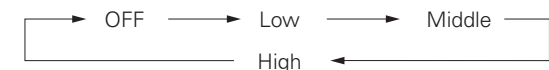
z **Audio Delay**

Compensate for mismatched timing between video and audio.

Delay audio.
This sets the delay time for audio signals.

[Variable range] | 0 ms | ~ | 200 ms |

✎ **Operating from the main unit or the main remote control unit**

※ The GUI menu is not displayed when carrying out this setting.

① Press the **AUDIO DELAY** button on the main unit or **A. DL** button on the main remote control unit.
② Use the ◁ ▷ button to set.

✐

• This cannot be adjusted when playing in the EXT. IN (when in analog mode), DIRECT or STEREO mode (with "Crossover Frequency" set to "FIXED–THX–"; "Front" set to "Large"; "Tone Defeat" to "ON" and "Room EQ" to "OFF").
• The adjustment range is 0 to 100 ms when the Auto Lipsync Correction function is activated.

Picture Adjust **GUI**

Adjust the picture quality.

● **Menu tree** ●

Parameter

- **Picture Adjust**
  - 1 **Contrast**
  - 2 **Brightness**
  - 3 **Chroma Level**
  - 4 **Hue**
  - 5 **DNR**
  - 6 **Enhancer**
  - 7 **Sharpness**

q **Contrast**

Adjust picture contrast.

[Variable range] | –6 | ~ | 0 | ~ | +6 |

52

w **Brightness**

Adjust picture brightness.

[Variable range] | 0 | ~ | +12 |

e **Chroma Level**

Adjust picture chroma level (saturation).

[Variable range] | –6 | ~ | 0 | ~ | +6 |

r **Hue**

Adjust color hue.

[Variable range] | –6 | ~ | 0 | ~ | +6 |

t **DNR**

Reduces the overall level of noise on the picture.

[Selectable items] | OFF | Low | Middle | High |

y **Enhancer**

Emphasize picture contours.

[Variable range] | 0 | ~ | +12 |

u **Sharpness**

Adjust color definition.

[Variable range] | –6 | ~ | 0 | ~ | +6 |

✐

• When the input signal is 1080p the "Picture Adjust" setting will be ineffective.
• Adjusting the "Contrast"; "Brightness"; "Chroma Level" and "Hue" settings does not affect the HDMI input signal.
• "Hue" can be adjusted for composite video and S-Video signals.
• The adjustment values are stored for the individual input sources.
• "DNR"; "Enhancer"; and "Sharpness" are each effective with HDMI output. However, they are ineffective with 480i/576i output.

Information **GUI**

Status **GUI**

Shows information about current settings.

● **Menu tree** ●

Information

- **Status**
  - 1 **MAIN ZONE**
  - 2 **ZONE2/3/4**

q **MAIN ZONE**

Shows information about settings for MAIN ZONE.
The items displayed differ according to the input source.

[Items to be checked]

| Select Source | Name | Surround Mode | Input Mode | Room EQ |

| Dynamic EQ | Video Select | i/p Scaler | Source Level |

| Rec Select | Night Mode | RESTORER | etc.

w **ZONE2/3/4**

Shows information about settings for multi-zone.

[Items to be checked]

| Power | Select Source | Volume Level |

Audio Input Signal GUI

Shows information about audio input signals.

● **Menu tree** ●

Information
└── Audio Input Signal

[Items to be checked]

Surround Mode	:	The currently set surround mode is displayed.
Signal	:	The input signal type is displayed.
fs	:	The input signal's sampling frequency is displayed.
Format	:	The number of channels in the input signal (front, surround, LFE) is displayed.
Offset	:	The dialogue normalization correction value is displayed.
Flag	:	"MATRIX" is displayed if the input signal has undergone matrix processing, "DISCRETE" if the input signal has undergone discrete processing.

Dialogue normalization function

Dialogue Normalization (Dial Norm) is a feature of Dolby Digital, which is used to keep the programs at the same average listening level so the user does not have to change the volume control between Dolby Digital programs. When playing back software which has been encoded in Dolby Digital, sometimes you may see a brief message in the front panel display which will read "Dial. Norm X dB" (X being a numeric value). The display is showing how the program level relates with THX calibration level. If you want to play the program at calibrated theatrical levels, you may wish to adjust the volume. For example, if you see the following message: "Dial. Norm + 4 dB" in the front panel display, to keep the overall output level at THX calibrated loudness, just turn down the volume control by 4 dB. However, unlike a movie theater where the playback loudness is preset, you can choose your preferred volume setting for best enjoyment.

```
Dial.Norm
Offset  + 4dB
```

HDMI Information GUI

Shows information about HDMI input/output signals and monitor.

● **Menu tree** ●

Information
└── HDMI Information
    ├── ❶ Signal Information
    ├── ❷ Monitor1
    └── ❸ Monitor2

❶ Signal Information

The HDMI input/output signal information is displayed.

[Items to be checked] Resolution Color Space Pixel Depth

❷ Monitor1

The HDMI monitor 1 information is displayed.

❸ Monitor2

The HDMI monitor 2 information is displayed.

[Items to be checked] Interface Supported resol.

Auto Surround Mode GUI

Shows information about auto surround mode settings.
The surround mode for which the last memory function was used for the different input signal types is displayed.

● **Menu tree** ●

Information
└── Auto Surround Mode

[Items to be checked]

Analog/PCM 2ch Digital 2ch Digital 5.1ch Multi ch

Quick Select GUI

Shows information about "Quick Select" settings.

● **Menu tree** ●

Information
└── Quick Select
    ├── Quick Select 1
    ├── Quick Select 2
    └── Quick Select 3

[Items to be checked]

Select Source Input Mode Room EQ

Auto Surround Mode setting Volume Level

✎

For instructions on storing settings at Quick Select 1 to 3, see page 65.

Preset Station GUI

Shows information about preset stations.

● **Menu tree** ●

Information
└── Preset Station
    ├── A
    ├── B
    ├── C
    ├── D
    ├── E
    ├── F
    └── G

[Input source] NET/USB

[Items to be checked] A1 ~ G8

✎

When the **STATUS** button on the main unit is pressed, the set's status can be checked on the display.
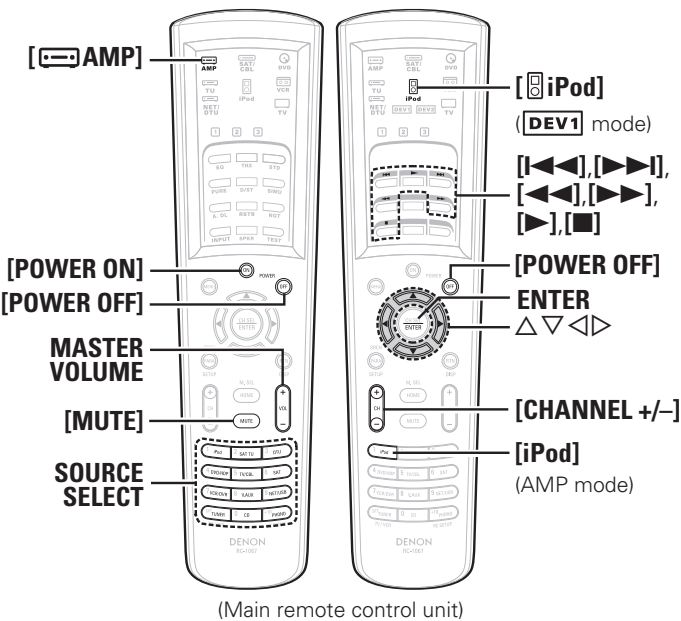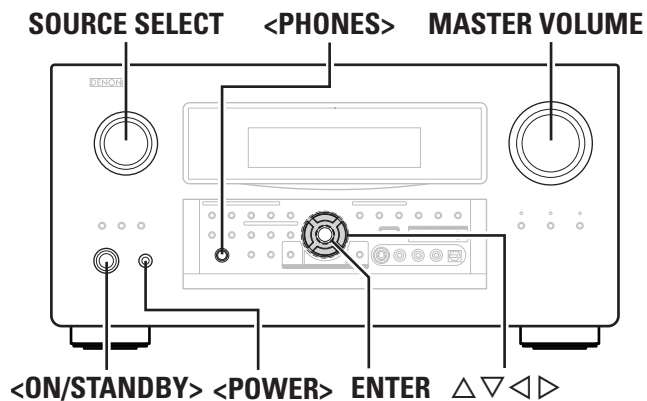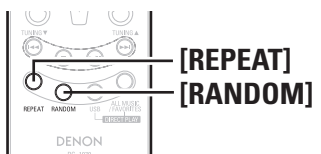
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SOURCE SELECT   <PHONES>   MASTER VOLUME

<ON/STANDBY> <POWER> ENTER △▽◁▷

[◻AMP]

[◻iPod]
(DEV1 mode)

[|◀◀],[▶▶|],
[◀◀],[▶▶],
[▶],[■]

[POWER ON]
[POWER OFF]

[POWER OFF]
ENTER
△▽◁▷

MASTER
VOLUME

[CHANNEL +/−]

[MUTE]

[iPod]
(AMP mode)

SOURCE
SELECT

(Main remote control unit)

[REPEAT]
[RANDOM]

(Sub remote control unit)

About the button names in these explanations
< > : Buttons on the main unit
[ ] : Buttons on the remote control unit
Button name only:
Buttons on the main unit and remote control unit

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Playback

Preparations

Turning the Power On

1 **Press <POWER>.**
The power indicator lights red and the power is set to the standby mode.

2 **Press <ON/STANDBY> or [POWER ON].**
The power indicator flashes green and the power turns on.

🖉

To operate the AVP-A1HD using the main remote control unit, set the remote control unit to the AMP mode (℞ page 66 "Remote Control Unit Operations").

Turning the Power Off

①Press **<ON/STANDBY>** or **[POWER OFF]**.
The power is set to the standby mode.
②Press **<POWER>**.
The power indicator turns off, and so does the power.

NOTE

Power continues to be supplied to some of the circuitry even when the power is in the standby mode. When leaving home for long periods of time or when traveling, either press **<POWER>** to turn off the power, or unplug the power cord from the power outlet.

Operations During Playback

Adjusting the Master Volume

Either turn <MASTER VOLUME> or press [MASTER VOLUME].

Turning Off the Sound Temporarily (Muting)

Press [MUTE].

🖉

To cancel, press **[MUTE]** again. Muting can also be canceled by adjusting the master volume.

Listening with Headphones

Plug the headphones into <PHONES>.
The sound from the pre-out connectors is automatically cut.

NOTE

Be careful not to set the volume too high when using headphones.

Playing Video and Audio Equipment

Basic Operation

1 **Prepare the equipment.**

①Load the DVD, CD or other software in the player.
(℞ See the operating instructions of the respective devices.)
②To play a video device, switch the monitor input.
(℞ See the monitor's operating instructions.)

2 **To operate using the main remote control unit, set the remote control unit to the AMP mode.**
(℞ page 66 "Remote Control Unit Operations")

3 **Use SOURCE SELECT to select the input source.**

GUI : **"Source Select"** (℞ page 42)

4 **Start playback.**
(℞ See the operating instructions of the respective devices.)

iPod® Playback

The music on an iPod can be played by using the Control Dock for iPod (ASD-1R, sold separately).
The operation can also be performed using the buttons on the main unit or remote control unit while watching the GUI menus.

Made for iPod — iPod is a trademark of Apple Inc., registered in the U.S. and other countries.

※ The iPod may only be used to copy or play contents that are not copyrighted or contents for which copying or playback is legally permitted for your private use as an individual. Be sure to comply with applicable copyright legislation.

Basic Operation

1 Make the necessary preparations.

① Set the iPod in the DENON Control Dock for iPod.
   (☞ See the Control Dock for iPod's operating instructions.)
② Assign the Control Dock for iPod's input.

GUI : **"Source Select"** – **"**(input source)**"** – **"Assign"**– **"iPod dock"** (☞ page 44)

2 Either turn <SOURCE SELECT> or press [iPod] (AMP mode) to select the input source assigned in step 1-② above.
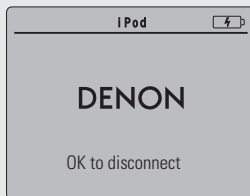
> iPod
>
> DENON
>
> OK to disconnect
>
> (iPod screen)

※ If the screens above are not displayed, the iPod may not be properly connected. Try connecting again.

GUI : **"Source Select"** – **"**(input source)**"** – **"Play"** (☞ page 43)

3 To operate using the main remote control unit, set the remote control unit to the iPod mode.
(☞ page 66 "Remote Control Unit Operations")

✎
• With the default settings, the iPod can be used connected to the VCR (iPod) connector.
• Use the RESTORER mode to expand the low and high frequency components of compressed audio files and achieve a richer sound. The default setting is "Mode3".
• Press <ON/STANDBY> or [POWER OFF] and set the AVP-A1HD's power to the standby mode before disconnecting the iPod. Also switch the input source to one to which the GUI menu "iPod dock" is not assigned before disconnecting the iPod.

NOTE
• Depending on the type of iPod and the software version, some functions may not operate.
• DENON will accept no responsibility whatsoever for any loss of iPod data.

Listening to Music

1 Use △▽ to select the menu, then press ENTER or ▷ to select the music file to be played.

2 Press ENTER or ▷.
Playback starts.

To pause
During playback, press ENTER or [▶].
Press again to resume playback.

Fast-forwarding or fast-reversing
During playback, either press and hold △ (to fast-reverse) or ▽ (to fast-forward), or press [◀◀] or [▶▶].

To cue to the beginning of a track
During playback, either press △ (to cue to the previous track) or ▽ (to cue to the next track), or press [I◀◀] or [▶▶I].

To stop
During playback, either press and hold ENTER or press [■].

Playing repeatedly
Press [CHANNEL –] or [REPEAT] on the sub remote control unit.

[Selectable items] All One OFF

GUI : **"Source Select"** – **"**(input source)**"** – **"Playback Mode (iPod)"** – **"Repeat"** (☞ page 43)

Shuffling playback
Press [CHANNEL +] or [RANDOM] on the sub remote control unit.

[Selectable items] Albums Songs OFF

GUI : **"Source Select"** – **"**(input source)**"** – **"Playback Mode (iPod)"** – **"Shuffle"** (☞ page 43)

Searching up or down pages
Press [SEARCH], then press ◁ (down) or ▷ (up).
To cancel, press △▽ or [SEARCH].

To switch between the Browse and Remote modes
Either press and hold [SEARCH].

✎
• The title name, artist name and album name can be checked by pressing <STATUS> during playback.
• On the AVP-A1HD, folder and file names can be displayed as titles. Any characters that cannot be displayed are replaced with " . (period)".
• The time for which the GUI are displayed can be set at GUI menu "Manual Setup" – "Option Setup" – "GUI" – "iPod" (☞ page 39).

$\triangle \triangledown \triangleleft \triangleright$ **ENTER**   **<STATUS>**

ENTER

$\triangle \triangledown \triangleleft \triangleright$

[SEARCH]

About the button names in these explanations

< > : Buttons on the main unit

[ ] : Buttons on the remote control unit

Button name only:

Buttons on the main unit and remote control unit
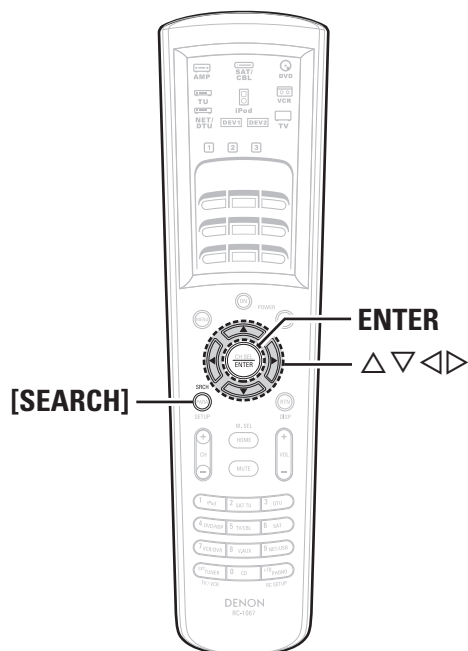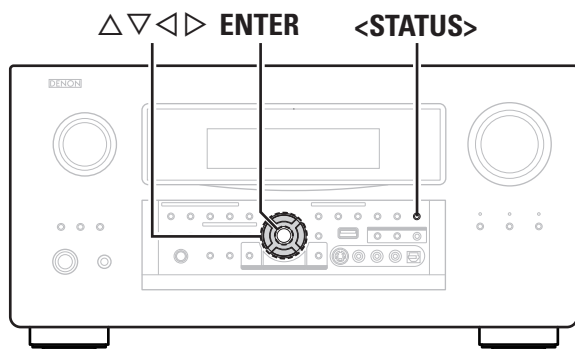
Viewing Still Pictures or Videos on the iPod

Photo and video data on the iPod can be viewed on the monitor. (Only for iPod equipped with slideshow or video functions.)

1 **Press and hold [SEARCH] to set the Remote mode.**
"Remote iPod" is displayed on the AVP-A1HD's display.

2 **Watching the iPod's screen, use $\triangle \triangledown$ to select "Photos" or "Videos".**

3 **Press ENTER until the image you want to view is displayed.**

✎

"TV Out" at the iPod's "Slideshow Settings" or "Video Settings" must be set to "On" in order to display the iPod's photo data or videos on the monitor. For details, see the iPod's operating instructions.

Playing Network Audio, USB Memory Devices

This procedure can be used to play Internet radio stations or music or still picture (JPEG) files stored on a computer or USB memory device.

❏ **About the Internet radio function**

• Internet radio refers to radio broadcasts distributed over the Internet. Internet radio stations from around the world can be tuned in.

The AVP-A1HD is equipped with the following Internet radio functions:

· Stations can be selected by genre and region.

· Up to 56 Internet radio stations can be preset.

· Internet radio stations in MP3 and WMA (Windows Media Audio) format can be listened to.

· Your favorite radio stations can be registered by accessing an exclusive DENON Internet radio URL from a Web browser on a computer.

※ The function is managed for individual users, so you must provide your MAC or e-mail address.

Exclusive URL: http://www.radiodenon.com

※ The radio station database service may be suspended without notice.

• The AVP-A1HD's Internet radio station list is created using a radio station database service (vTuner). This database service provides a list edited and created for the AVP-A1HD.

❏ **Media server**

This function lets you play music files and playlists (m3u, wpl) stored on a computer (media server) connected to the AVP-A1HD via a network.

With the AVP-A1HD's network audio playback function, connection to the server is possible using one of the technologies below.

· Windows Media Player Network Sharing Service

· Windows Media DRM10

〔Album art function〕

When a WMA (Windows Media Audio), MP3 or MPEG-4 AAC file includes album art data, the album art can be displayed while the music files are playing.

✎

For music files in WMA (Windows Media Audio) format, the album art is only played when using Windows Media Player ver. 11.

【Slide show function】

Still picture (JPEG) files stored in folders on a media server can be played as slide shows.
The time for which each picture is displayed can be set.

✎

When still picture (JPEG) files are played on the AVP-A1HD, they are played in the direction in which they are stored in the folder, so store in them in the direction in which you want them to play.

Installing Windows Media Player ver. 11
① If Windows XP Service Pack 2 has not yet been installed, either download it free of charge from Microsoft or install it via a Windows update installer.
② Download the latest version of Windows Media Player ver. 11, either directly from Microsoft or using a Windows update installer.
※ When using Windows Vista, there is no need to download a new version of Windows Media Player.

❏ **USB memory devices**

A USB memory device can be connected to the AVP-A1HD's USB port to play music and still picture (JPEG) files stored on the USB memory device.

· Only USB memory devices conforming to mass storage class and MTP (Media Transfer Protocol) standards can be played on the AVP-A1HD.
· The AVP-A1HD is compatible with USB memory devices in "FAT16" or "FAT32" format.

【Album art function】

When an MP3 music file includes album art data, the album art can be displayed while playing the file.

【Slide show function】

Still picture (JPEG) files stored on USB memory devices can be played as slide shows.
The time for which each picture is displayed can be set.

✎

When still picture (JPEG) files are played on the AVP-A1HD, they are played in the direction in which they are stored in the folder, so store in them in the direction in which you want them to play.

[Compatible formats]

	Internet radio	Media server※	USB※
WMA (Windows Media Audio)	○	○	○＊
MP3 (MPEG-1 Audio Layer-3)	○	○	○
WAV	–	○	○
MPEG-4 AAC	–	○＊	○＊
FLAC (Free Lossless Audio Codec)	–	○	○
JPEG	–	○	○

A server or server software compatible with distribution in the corresponding formats is required to play music files via a network.

＊ : Only files that are not protected by copyright can be played on the AVP-A1HD.
Contents downloaded from pay sites on the Internet are copyright protected. Also, files encoded in WMA format when ripped from a CD, etc., on a computer may be copyright protected, depending on the computer's settings.

※ Media server and USB
• The AVP-A1HD is compatible with MP3 ID3-Tag (Ver. 2) standards.
• The AVP-A1HD is compatible with WMA META tags.

[Playable formats]

	Sampling frequency	Bit rate	Extension
WMA (Windows Media Audio)	32/44.1/48 kHz	48~192 kbps	.wma
MP3 (MPEG-1 Audio Layer-3)	32/44.1/48 kHz	32~320 kbps	.mp3
WAV	32/44.1/48 kHz	–	.wav
MPEG-4 AAC	32/44.1/48 kHz	16~320 kbps	.aac/.m4a/.mp4
FLAC (Free Lossless Audio Codec)	32/44.1/48 kHz	–	.flac

WAV format Quantization bit rate: 16 bits.
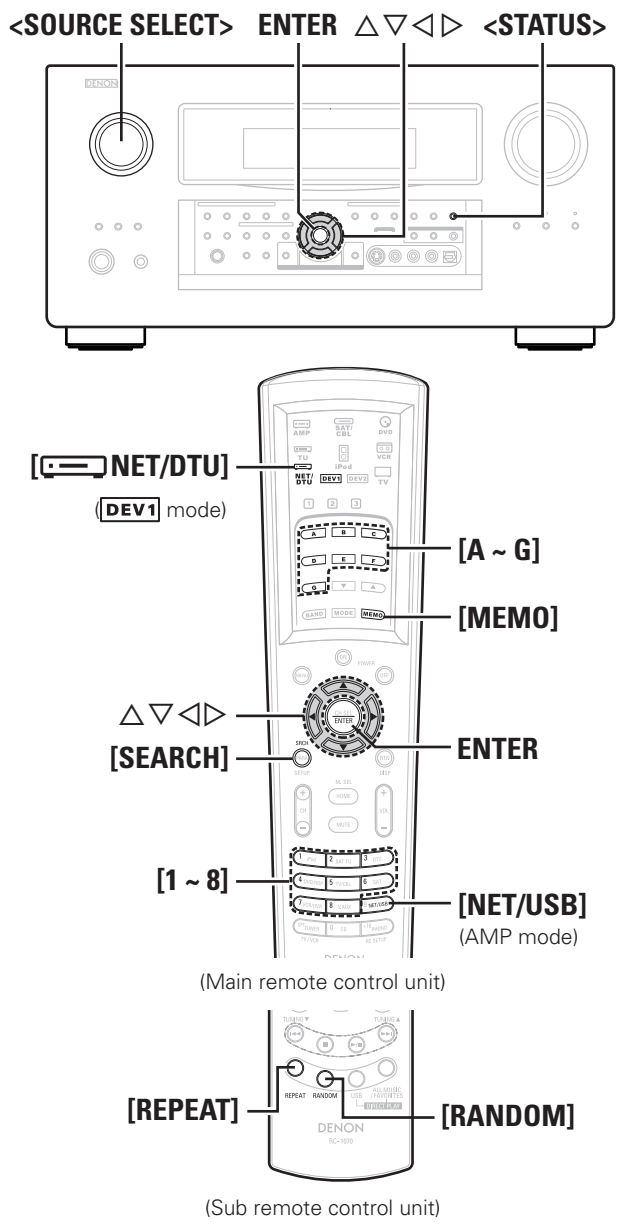
<SOURCE SELECT> ENTER △▽◁▷ <STATUS>

[⬚NET/DTU]
(**DEV1** mode)

[A ~ G]

[MEMO]

△▽◁▷

[SEARCH]

ENTER

[1 ~ 8]

[NET/USB]
(AMP mode)

(Main remote control unit)

[REPEAT]   **[RANDOM]**

(Sub remote control unit)

About the button names in these explanations
< > : Buttons on the main unit
[ ] : Buttons on the remote control unit
Button name only:
Buttons on the main unit and remote control unit

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Basic Operation

1 Make the necessary preparations.

① Check the network environment, then turn on the AVP-A1HD's power. (☞page 20 "Network Audio")
② If settings are required, make the network settings. (☞page 34 ~ 36 "Network Setup")
③ Prepare the computer. (☞Computer's operating instructions) Install "Windows Media Player ver. 11".

2 Either turn <SOURCE SELECT> or press [NET/USB] (AMP mode) to select "NET/USB".

GUI : "Source Select" –"NET/USB" –"Play"
(☞page 43)

3 To operate using the main remote control unit, set the remote control unit to the NET/DTU (DEV1) mode.
(☞page 66 "Remote Control Unit Operations")

4 Use △▽ to select the menu, then press ENTER or ▷ to select the file you want to play.

5 Press ENTER or ▷.
Playback starts.

Playing repeatedly
Press **[REPEAT]** on the sub remote control unit.

[Selectable items] All | One | OFF

GUI : "Source Select" – "NET/USB" – "Playback Mode" – "Repeat" (☞page 46)

Playing in random order
Press **[RANDOM]** on the sub remote control unit.

[Selectable items] ON | OFF

GUI : "Source Select" – "NET/USB" – "Playback Mode" – "Random" (☞page 46)

✎

The repeat mode and random mode can only be used when playing tracks recorded in USB/Media Server.

To pause
During playback, press **ENTER**.
Press again to resume playback.

To stop
During the play or pause mode, press and hold **ENTER**.

Searching up or down pages
Press **[SEARCH]**, then press ◁ (down) or ▷ (up).
To cancel, press △▽ or **[SEARCH]**.

Searching by first letter (Character search)
This operation is convenient for choosing items from the menu screens for Internet radio stations or files stored on the computer.
① When the menu screen is displayed, press **[SEARCH]** twice.
② Use ◁ ▷ to select the first letter you want to search for.
If there are multiple items starting with the selected letter, they are displayed in alphabetical order.
If it is not possible to search the list, "unsorted list." is displayed.
To cancel, press or △▽ or **[SEARCH]**.

✎

• Use the RESTORER mode to expand the low and high frequency components of compressed audio files and achieve a richer sound. The default setting is "Mode3".
• The time for which the GUI are displayed can be set at GUI menu "Manual Setup" – "Option Setup" – "GUI" – "NET/USB" (☞page 39).
• Use **<STATUS>** to switch between displaying the title name, artist name or album name.

Listening to Internet Radio

1 Use △▽ to select "Internet Radio", then press **ENTER** or ▷.

2 Use △▽ to select the item you want to play, then press **ENTER** or ▷.
The station list is displayed.

3 Use △▽ to select the station, then press **ENTER** or ▷.
Playback starts once buffering reaches "100%".

✎

• There are many Internet radio stations on the Internet, and the quality of the programs they broadcast as well as the bit rate of the tracks varies widely.
Generally, the higher the bit rate, the higher the sound quality, but depending on the communication lines and server traffic, the music or audio signals being streamed may be interrupted.
Inversely, lower bit rates mean a lower sound quality but less tendency for the sound to be interrupted.
• "Server Full" or "Connection Down" is displayed if the station is busy or not broadcasting.
• On the AVP-A1HD, folder and file names can be displayed as titles. Any characters that cannot be displayed are replaced with " . (period)".

❏ Recently Played Internet Radio Stations
Recently played internet radio stations can be selected from "Recently Played" in top menu.

1 Use △▽ to select "Recently Played", then press **ENTER** or ▷.

2 Use △▽ to select the item you want to play, then press **ENTER** or ▷.

NOTE

Up to 20 stations stored in "Recently Played".

Presetting Internet Radio Stations
Preset Internet radio stations can be selected directly.

1 While the Internet radio station you want to preset is playing, press **[MEMO]**.

2 Use △▽ to select "Preset", then press **ENTER**.

3 Press **[A ~ G]**, then press **[1 ~ 8]** to select the desired preset number.
The Internet radio station is now preset.

NOTE

If registered at a number that has already been preset, the previously registered setting is cleared.

❏ Listening to Preset Internet Radio Stations

Press [A ~ G], then press [1 ~ 8].
The AVP-A1HD automatically connects to the Internet and playback begins.

Registering Internet Radio Stations as Your Favorites
Favorites are listed at the top of the menu screen, so when a station is registered as a favorite it can be tuned in easily.

1 Press **[MEMO]** while the Internet radio station you want to register is playing.

2 Use △▽ to select "Favorites", then press **ENTER**.

3 Press ◁ to select "Yes".
The Internet radio station is registered.
If you do not want to register it, press ▷.

❏ Listening to Internet Radio Stations Registered in Your Favorites

1 Use △▽ to select "Favorites", then press **ENTER** or ▷.

2 Use △▽ to select the Internet radio station, then press **ENTER** or ▷.
The AVP-A1HD automatically connects to the Internet and playback begins.

❏ Clearing Internet Radio Stations from Your Favorites

1 Use △▽ to select "Favorites", then press **ENTER** or ▷.

2 Use △▽ to select the Internet radio station you want to clear, then press **[MEMO]**.

3 Press ◁ to select "Delete".
The selected Internet radio station is cleared.
To cancel the operation without clearing the station, press ▷.
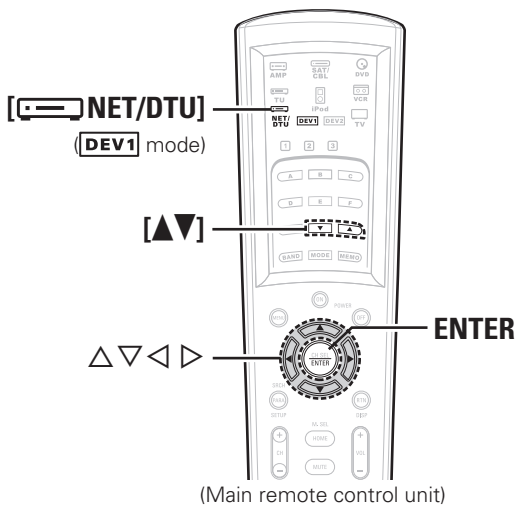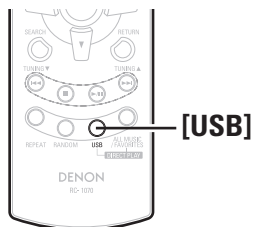
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△▽◁▷ **ENTER**

[⊂▭⊃NET/DTU]
(**DEV1** mode)

[▲▼]

ENTER

△▽◁▷

(Main remote control unit)

[USB]

(Sub remote control unit)

About the button names in these explanations
< > : Buttons on the main unit
[ ] : Buttons on the remote control unit
Button name only:
Buttons on the main unit and remote control unit

Playing Files Stored on a Computer
Use this procedure to play music files, image files or playlists.

1 Use △▽ to select "Media Server", then press **ENTER** or ▷.

2 Use △▽ to select the host name of the computer on which the music file you want to play is located, then press **ENTER** or ▷.

3 Use △▽ to select the search item or folder, then press **ENTER** or ▷.

4 Use △▽ to select the file, then press **ENTER** or ▷.
Playback starts once buffering reaches "100%".

Selecting tracks
During playback, either press △ (previous track) or ▽ (next track).

✐

• When playing still picture (JPEG) files, files can also be selected using the operation described below.
  During playback, either press **[▲]** (previous file) or **[▼]** (next file).
• Connections to the required system and specific settings must be made in order to play music files (☞ page 20).
• Before starting, you must launch the computer's server software and set the files as server contents. For details, see the operating instructions of your server software.
• Depending on the size of the still picture (JPEG) file, some time may be required for the file to be displayed.

Playing files that have been Preset or Registered in Your Favorites

Files can be preset, registered in your favorites and played using the same operations as for Internet radio stations.

NOTE

• Presettings are erased by overwriting them.
• When the operation described below is performed, the media server's database is updated and it may no longer be possible to play preset or favorite music files.
  • When you quit the media server and then restart it.
  • When music files are deleted or added on the media server.

Playing Files Stored on USB Memory Devices
Only USB memory devices conforming to mass storage class and MTP (Media Transfer Protocol) standards can be played on the AVP-A1HD.

Basic Operation

1 Make the necessary preparations.
• Set the USB port to be used.

GUI : "Source Select" – "NET/USB" – "Playback Mode" –
"USB Select" (☞ page 46)

• Connect the USB memory device to the set USB port.

2 Use △▽ to select "USB", then press **ENTER** or ▷.

3 Use △▽ to select the search item or folder, then press **ENTER** or ▷.

4 Use △▽ to select the file, then press **ENTER** or ▷.
Playback starts once buffering reaches "100%".

✐

• By default, the front panel's USB port will be used.
• Depending on the size of the still picture (JPEG) file, some time may be required for the file to be displayed.

Selecting tracks
During playback, either press △ (previous track) or ▽ (next track).

✐

• When playing still picture (JPEG) files, tracks can also be selected using the operation described below.
  During playback, either press **[▲]** (previous file) or **[▼]** (next file).
• If the USB memory device is divided into multiple partitions, only the top partition can be selected.
• The AVP-A1HD is compatible with MP3 files conforming to "MPEG-1 Audio Layer-3" standards.
• When **[USB]** is pressed, playback starts from the first track on the USB memory device.

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• The AVP-A1HD is equipped with two USB ports, one each on the front and rear panels. It is not possible to use the set with USB memory devices connected to both the ports at the same time. Select the USB port you want to use at the "Source Select" – "NET/USB" – "Playback Mode" – "USB Select" menu.

• DENON will accept no responsibility whatsoever for any loss or damage to data on USB memory devices when using the USB memory device connected to the AVP-A1HD.

• USB memory devices will not work via a USB hub.

• DENON does not guarantee that all USB memory devices will operate or receive power. When using a USB connection type portable hard disk of the type for which power can be supplied by connecting an AC adapter, we recommend using the AC adapter.

• It is not possible to connect and use a computer via the AVP-A1HD's USB port using a USB cable.

• The AVP-A1HD is not compatible with the iPod shuffle.

Operating the AVP-A1HD Using a Browser (Web control)

This function lets you operate the AVP-A1HD using Internet Explorer.

1 **Check the AVP-A1HD's IP address.**

GUI : **"Manual Setup"** – **"Network Setup"** – **"Network Information"** (☞ page 36)

2 **Input the AVP-A1HD's IP address in Internet Explorer.**

Example : "http://192.168.x.x/" (The "x" is digits.)

The AVP-A1HD can be operated in the same way as with regular Internet browsing.

To use the web control function, set the GUI menu "Manual Setup"– "Network Setup" – "Other" – "Power Saving" setting to "OFF" (☞ page 36).
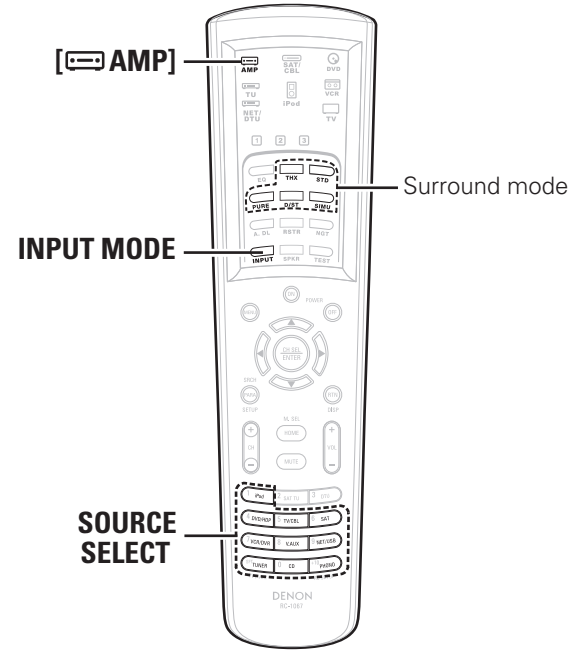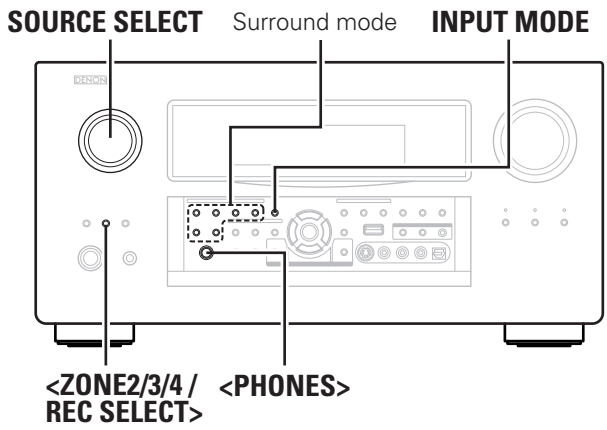
SOURCE SELECT   Surround mode   INPUT MODE

<ZONE2/3/4 /   <PHONES>
REC SELECT>

[⏛AMP]

Surround mode

INPUT MODE

SOURCE
SELECT

About the button names in these explanations
<   >   : Buttons on the main unit
[   ]   : Buttons on the remote control unit
Button name only:
    Buttons on the main unit and remote control unit

Other Operations and Functions

Other Operations

Playing Super Audio CD

1 **Assign "DENON LINK" with the "Digital" setting or assign "HDMI" with the "HDMI" setting (☞ page 43, 44).**

2 **Either turn <SOURCE SELECT> or press [SOURCE SELECT] to select the input source assigned in step 1.**
The " D.LINK " or " HDMI " indicator lights on the display.

3 **Select "AUTO" for the INPUT MODE (☞ page 45).**

4 **Select the surround mode (☞ page 46 ~ 48).**
We recommend playing in the DIRECT mode.

5 **Start playing the Super Audio CD.**
The " DSD " indicator lights on the display.
For operating instructions, refer to the respective equipment's operating instructions.

✐

• When playing DSD signals in the DIRECT or PURE DIRECT mode, the DSD signals are converted as such into analog signals. When playing in other surround modes, the DSD signals are first converted into PCM format, then into analog signals.
• "DSD DIRECT" is shown on the display when playing DSD 2-channel signals in the DIRECT mode. "DSD MULTI DIRECT" is shown on the display when playing DSD multi–channel signals in the DIRECT mode.
• The DSD signal may not be output depending on the equipment that is connected.For further details, refer to the user manual for the equipment being used.

Recording on an External Device (REC OUT mode)

You can listen to one program source while recording a different program source.

1 **Press <ZONE2/3/4 / REC SELECT>.**
"ZONE3 SOURCE" is shown on the display.

2 **Turn <SOURCE SELECT> until "RECOUT SOURCE" is displayed.**
The " REC " indicator lights.

ZONE3 SOURCE ←→ ZONE3 TUNER ←→ .... ←→ ZONE3 NET/USB

RECOUT NET/USB ←→ .... ←→ RECOUT SOURCE

3 **Turn <SOURCE SELECT> to choose the input source to be recorded.**

4 **Play the program source.**
For operating instructions, refer to the respective equipment's operating instructions.

5 **Start recording.**
For operating instructions, refer to the respective equipment's operating instructions.

✐

• To cancel, press **<ZONE2/3/4 / REC SELECT>**, then turn **<SOURCE SELECT>** until "ZONE3 SOURCE" is displayed.
• Make a test recording before starting the actual recording.
• Signals are only output to the analog REC OUT connectors when the digital signals input to the digital input connectors (OPTICAL/ COAXIAL) are PCM (2-channel) signals.
• Digital audio signals input to the DENON LINK or HDMI connectors are not output to the REC OUT connectors, so connect using the OPTICAL or COAXIAL connectors.
• Sources selected with the REC OUT mode are output from ZONE3 as well.
• In the REC OUT mode, the remote control unit's ZONE3 mode buttons cannot be operated.
• When the "Digital Out" setting is set to "ZONE4 Select", the OPTICAL4 output connector becomes the ZONE4 output. When using for recording, set to "Rec Select".
• Copyright protected network audio (Internet radio, media server and USB) signals cannot be output from the digital output connectors (OPTICAL).

NOTE

- Recordings you make are for your personal enjoyment and should not be used for other purposes without permission of the copyright holder.
- When "DENON LINK" is assigned at the GUI menu "Assign" setting, the PCM signals, network audio signals (Internet radio, media server and USB), input from the digital input connectors cannot be output from the analog REC OUT connectors.
- Input sources for which "Delete" is selected at "Source Delete" cannot be selected.

Dolby Headphone recording

When REC OUT mode is set to "SOURCE", with the AVP-A1HD it is possible to output signals encoded in the Dolby Headphone mode from the recording output terminal and record them on a separate recorder.

1 **The Dolby Headphone play mode is set when headphones are connected to <PHONES> during playback in the STANDARD (DOLBY/DTS Surround) mode.**

When this is done, signals encoded in the Dolby Headphone mode are automatically output from the recording output terminals (analog and digital) and can be recorded.

2 **Select the parameters and set the desired mode.**
Start recording.
Refer to the "Dolby Headphone" (☞page 47).

NOTE

Do not disconnect the headphones during recording.

Convenient Functions

HDMI Control Function

When connecting the AVP-A1HD to a television or player compatible with the HDMI control function, the following operations are possible.
- Turn power ON/OFF (Synchronize with television)
- Switch to sound output equipment (TV and AVP-A1HD)
- Adjust volume
- Switch input source

✎

- When using these functions set as follows: GUI menu "Manual Setup" – "HDMI Setup" – "HDMI Control" (☞page 31).
- When using these functions do not assign the "HDMI" to "TV/CBL".

Connections
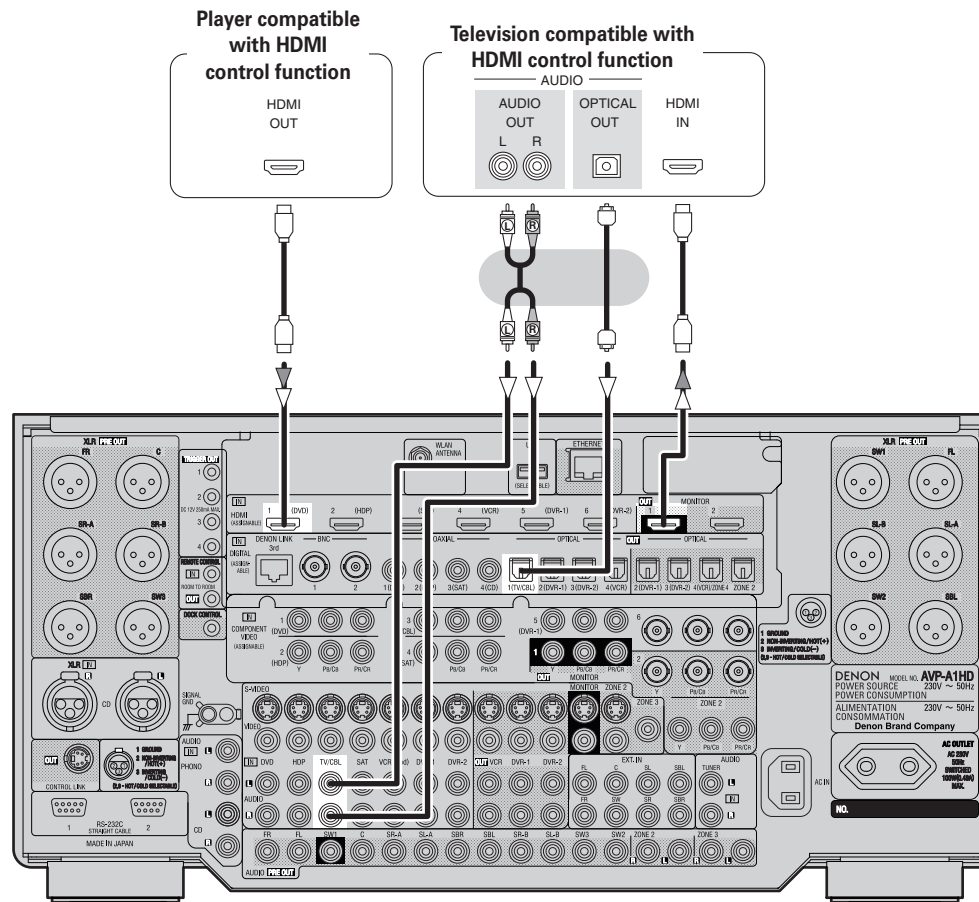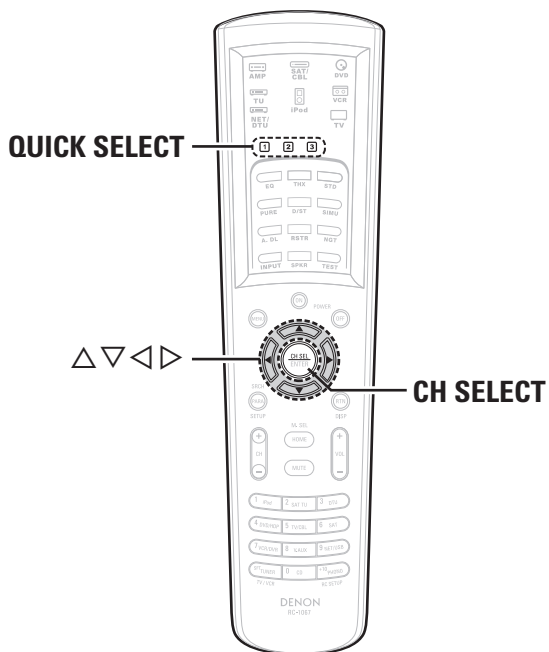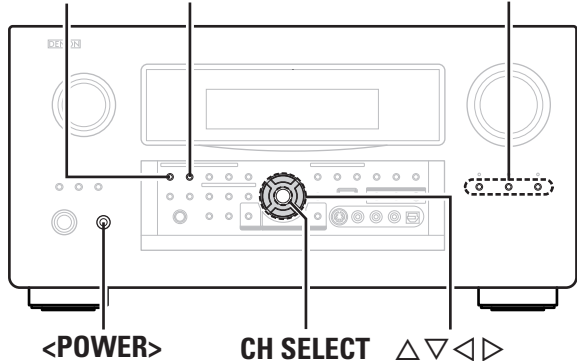
Player compatible with HDMI control function
HDMI OUT

Television compatible with HDMI control function
AUDIO
AUDIO OUT — L R
OPTICAL OUT
HDMI IN

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<STANDARD> <HOME THX CINEMA> QUICK SELECT

<POWER>

CH SELECT △▽◁▷

QUICK SELECT

△▽◁▷

CH SELECT

Operations

1 **Connect the HDMI to the AVP-A1HD with equipment compatible with the HDMI control function.**

2 **Put the power on for all the equipment connected to the HDMI.**

3 **Check the settings for all the equipment connected to the HDMI and make HDMI available to them.**

※ Please consult the operating instructions for the connected equipment to check the settings.

※ Operations 1 ~ 3 do not have to be repeated once started.

※ Carryout Operations 2 and 3 should any of the equipment be plugged out.

4 **Switch the television input to the HDMI connected to the AVP-A1HD.**

5 **Switch the AVP-A1HD input to the HDMI input source and check if the picture from the player is ok.**

6 **Put the television power on standby and check if the AVP-A1HD goes into standby.**

If the AVP-A1HD does not work please check the following.

• Is the GUI menu "Manual Setup" – "HDMI Setup" – "HDMI Control" – "Control" (☞ page 31) set to "ON"?

• Is the GUI menu "Manual Setup" – "HDMI Setup" – "HDMI Control" – "Control Monitor" (☞ page 31) set for the monitor output connected to television?

• Is the GUI menu "Manual Setup" – "HDMI Setup" – "HDMI Control" – "Power Off Control" (☞ page 31) set to "ON"?

• Is the control function used for the television HDMI properly set? (Check the television operating instructions for details.)

• Should any of the operations below be performed, the interlocking function may be reset, in which case, repeat Operation's 2 and 3.

• GUI menu "Source Select" – (input source) – "Assign" – "HDMI" (☞ page 43) setting has changed

• There is a change to the connection between the equipment and the HDMI, or an increase in equipment.

• Change of HDMI monitor output in AVP-A1HD setup.

About the button names in these explanations

< > : Buttons on the main unit

[ ] : Buttons on the remote control unit

Button name only:
Buttons on the main unit and remote control unit

Channel Level

You can adjust the channel level either according to the playback sources or to suit your taste, as described below.

1 Press CH SELECT.

2 Use △▽ or CH SELECT to select the speaker.
The speaker that can be set switches each time one of the buttons is pressed.

3 Use ◁ ▷ to adjust the volume.

※ "OFF" can be set by pressing ◁ when the subwoofer's volume is set to –12dB.

Fader Function

This function lets you adjust (fade) the sound from all the front or rear speakers at once.

1 Press CH SELECT.

2 Press △▽ or CH SELECT to select "Fader".

3 Use ◁ ▷ to adjust the volume of the speakers.
(◁: front, ▷: rear)

🖉

• The fader function does not affect the subwoofer.
• The fader can be adjusted until the volume of the speaker adjusted to the lowest value is –12 dB.

Quick Select Function

With this function, the currently playing input source, input mode, surround mode, room EQ settings and volume can be stored in the memory.

1 Set the input source, input mode, surround mode, room EQ settings and volume to the conditions you want to store.

2 Press and hold the desired QUICK SELECT.
Keep pressing the button until the quick select indicator lights.

[Quick Select Defaults]

	Input Source	Volume
Quick Select 1	DVD	–40 dB
Quick Select 2	TV/CBL	–40 dB
Quick Select 3	VCR	–40 dB

🖉

• To call out the settings, press **QUICK SELECT** at which the desired settings were stored.
• The Quick Select name can be changed (☞page 39).

NOTE

Input sources stored with the quick select function cannot be selected if they have been deleted at GUI menu "Manual Setup" – "Option Setup" – "Source Delete" (☞page 39). In this case, store them again.

Personal Memory Plus Function

This function sets the settings (input mode, surround mode, HDMI output mode, Picture Adjust, Audio Delay etc.) last selected for the individual input sources.
When you switch to an input source, the settings are automatically set to the ones that were set the last time that input source was used.

🖉

The surround parameters, tone control, room EQ settings and the volumes of the different speakers are stored for the individual surround modes.

Last Function Memory

This stores the settings as they were directly before the standby mode was set.
When the power is turned back on, the settings are restored to as they were directly before the standby mode was set.

Backup Memory

The various settings are backed up for about 1 week, even if the power is turned off or the power cord is disconnected.

Resetting the Microprocessor

Perform this procedure if the display is abnormal or if operations cannot be performed.
All settings are reset when the microcomputer is reset.

1 Turn off the power using <POWER>.

2 Press <POWER> while simultaneously pressing <STANDARD> and <HOME THX CINEMA>.

3 Once the display starts flashing at intervals of about 1 second, release the two buttons.

🖉

If in step 3 the display does not flash at intervals of about 1 second, start over from step 1.

Remote Control Unit Operations

Main Remote Control Unit

• On the main remote control unit, the display switches according to the device being operated and the mode.

• In modes other than iPod, the mode switches between "DEV1" and "DEV2" each time the [MODE SELECTOR] is pressed.

• In the AMP, NET/DTU (DEV1) and iPod modes, when the remote ID is set, the AVP-A1HD can be used independently even in an environment containing multiple DENON amplifiers.

Signal transmission indicator

[AMP]

[MODE SELECTOR]

[HOME]

[NUMBER]

[RC SETUP]
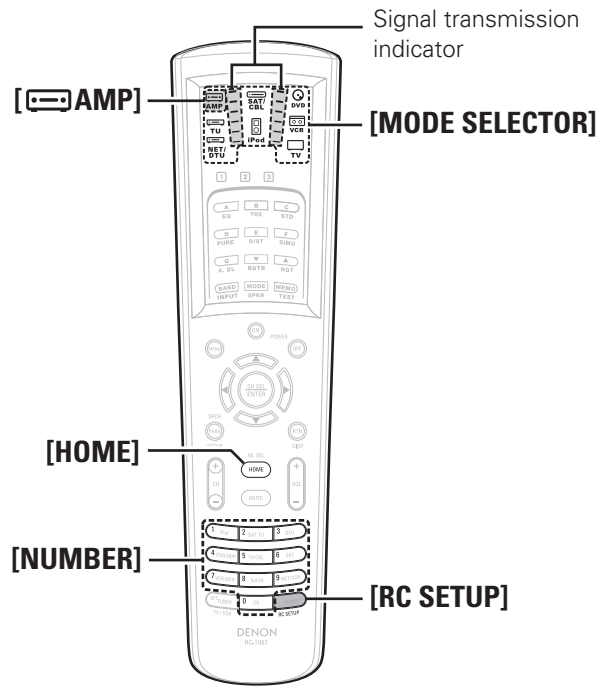
Depending on the model and year of manufacture of your equipment, some buttons may not operate.

NOTE

The device mode (" DEV1 " or " DEV2 ") cannot be changed while the setting is being made.

Operating DENON Audio Components

1 Press [MODE SELECTOR] for the component to be operated.

The indicator for the component to be operated flashes.

AMP : AMP / ZONE2 / ZONE3 / ZONE4 / SYSTEM CALL

iPod : iPod

TU : TUNER (FM/AM)

DVD : DVD player (recorder) / CD player (recorder)

NET/ DTU : NETWORK/USB / DIGITAL TUNER

VCR : VCR / TAPE

SAT/ CBL : Satellite Receiver / Cable TV

TV : TV

※ The mode switches each time [AMP] is pressed.

[AMP mode]　　**[ZONE2 mode]**　　**[ZONE3 mode]**

[SYSTEM CALL mode]　　**[ZONE4 mode]**
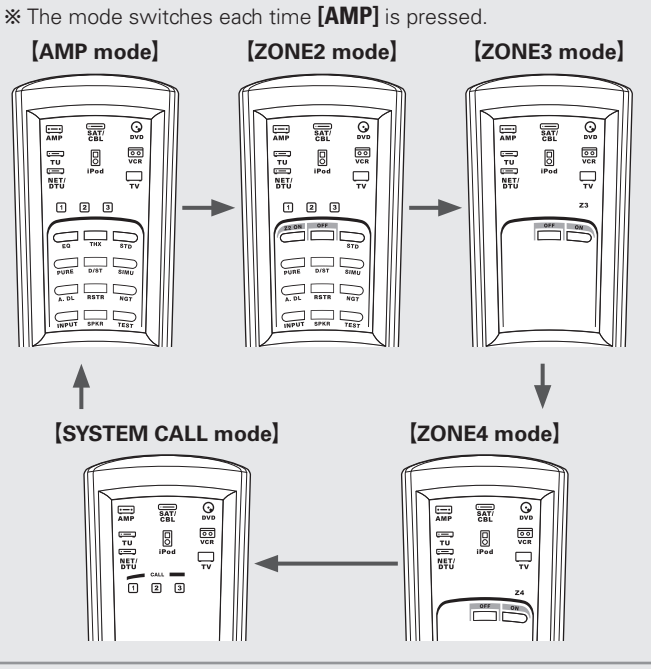
2 Operate the component.

※ For details, refer to the component's operating instructions.

[HOME] is used to return to the AMP mode (AMP, ZONE2, ZONE3, ZONE4 or SYSTEM CALL) when in any mode other than AMP.

Presetting

The included main remote control unit can be preset to operate devices of various brands.

1 Press [MODE SELECTOR] for the device you want to preset.

2 Press and hold in [RC SETUP] for at least 3 seconds.
The signal transmission indicator flashes twice.

3 Press [NUMBER] and input the 5-digit number of the brand of the component to be preset. The numbers are shown in the Preset Code Table (☞ End of the this manual).

When the code is registered, the signal transmission indicator flashes twice.

When the preset code is transmitted, the mode indicator for the component to which that code belongs flashes.

※ The input mode is canceled if no button is operated for 10 seconds.

Some brands have more than one preset code. If the component does not operate, try inputting a different code.

Operating Preset Components

1 Press [MODE SELECTOR] for the component to be operated.
The mode indicator of the device to be operated flashes.

2 Operate the component.

※ For details, refer to the component's operating instructions.

Functions of Buttons by Component

EL Display

[MODE SELECTOR]

[▶], [I◀◀ ▶▶I], [◀◀ ▶▶], [❚❚], [■], [SOURCE ON], [SOURCE OFF]

[MENU]

[SETUP/SEARCH]

[CH + / SHUFFLE], [CH – / REPEAT]

[ENTER]

[△ ▽ ◁▷]

[RETURN]

[0 ~ 9, +10]

Buttons

EL Display							
MODE SELECTOR	DVD				VCR		iPod
Device Mode	DEV1		DEV2		DEV1	DEV2	DEV1
Device operated	DVD (Default setting)	DVD Recorder	CD (Default setting)	CD Recorder	VCR	TAPE	iPod
▶	Playback	Playback	Playback	Playback	Playback	Playback	Playback/Pause
I◀◀ ▶▶I	Auto search (cue)	Auto search (cue)	Auto search (cue)	Auto search (cue)	Auto search (cue)	Auto search (cue)	Auto search (cue)
◀◀ ▶▶	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)	Manual search (fast-reverse/ fast-forward)
❚❚	Pause	Pause	Pause	Pause	Pause	Pause	–
■	Stop	Stop	Stop	Stop	Stop	Stop	Stop
SOURCE ON	Power on	Power on	–	–	Power on	–	–
SOURCE OFF	Power off	Power off	–	–	Power off	–	–
Buttons							
MENU	Menu/guide	Menu/guide	–	–	Menu/guide	–	Menu
△ ▽ ◁ ▷	Cursor	Cursor	–	–	Cursor	–	Cursor
ENTER	Enter setting	Enter setting	–	–	Enter setting	–	Enter
SETUP/SEARCH	Set up	Set up	–	–	Set up	–	Page forward screen / Browse/ Remote mode switching (Press and hold)
RETURN	Return	Return	–	–	Cancel	–	Return
CH + / SHUFFLE	–	–	–	–	Switch channels	–	1-track/album shuffle play
CH - / REPEAT	–	–	–	–	Switch channels	–	1-track/all-track repeat play
0 ~ 9, +10	Select track	Select track	Select track	Select track	–	–	–
Special Remarks	①, ②		①		①	①	–

【Special Remarks】
① Only one component can be preset for each mode. If a new code is preset, the previous code is automatically cleared.
② The names of the functions for the DVD remote control buttons differ from brand to brand. Check beforehand.

NOTE

• Preset a DVD player or DVD recorder for the "DVD" (DEV1) mode. Preset a CD player or CD recorder for the "DVD" (DEV2) mode.
• Preset a VCR for the "VCR" (DEV1) mode. Preset a tape deck for the "VCR" (DEV2) mode.

EL Display

[MODE SELECTOR]

[►], [I◄◄ ►►I], [◄◄ ►►], [II], [■], [SOURCE ON], [SOURCE OFF]

Buttons

[MENU] — [ENTER]
[△▽◁▷]
[SETUP] — [DISPLAY]
[CH +/–]
[0 ~ 9, +10]
[TV/VCR]

EL Display

[MODE SELECTOR]

[A ~ G], [▲▼], [BAND], [MODE], [MEMO]

[ENTER]
[△▽◁▷]
[SEARCH]
[CH +/–]
[0 ~ 9]
[SHIFT]

Buttons

EL Display				
MODE SELECTOR	TV		Satellite Receiver / Cable TV	
Device Mode	DEV1	DEV2	DEV1	DEV2
Device operated	TV (HITACHI)	TV (SONY)	SAT	SAT
►				
I◄◄ ►►I				
◄◄ ►►	Punch through	Punch through	Punch through	Punch through
II				
■				
SOURCE ON	Power on	Power on	Power on	Power on
SOURCE OFF	Power off	Power off	Power off	Power off
Buttons				
MENU	Menu/guide	Menu/guide	Menu/guide	Menu/guide
△ ▽ ◁ ▷	Cursor	Cursor	Cursor	Cursor
ENTER	Enter setting	Enter setting	Enter setting	Enter setting
SETUP	Set up	Set up	Set up	Set up
DISPLAY	Display	Display	Display	Display
CH + / –	Switch channels	Switch channels	Switch channels	Switch channels
0 ~ 9, +10	Channel selection	Channel selection	Channel selection	Channel selection
TV/VCR	Switch inputs	Switch inputs	–	–
Special Remarks	①, ③	①, ③	①, ③	①, ③

【Special Remarks】

① Only one component can be preset for each mode. If a new code is preset, the previous code is automatically cleared.

③ The CD, VCR or DVD buttons (one only set) can be assigned to the TV, satellite receiver and cable TV mode (☞page 70 "Punch Through Function").

EL Display			
MODE SELECTOR	TU	NET / DTU	
Device Mode	DEV1	DEV1	DEV2
Device operated	Analog tuner	NET / USB	DAB
A ~ G	Preset memory block selection	Preset memory block selection	–
▲ ▼	Tuning + / –	–	Channel selection
BAND	AM/FM switching	–	–
MODE	Switch search modes	–	Switch search modes
MEMO	Preset memory registration	Preset memory registration	–
Buttons			
△ ▽ ◁ ▷	–	Cursor	–
ENTER	–	Enter, Playback/Pause	–
SEARCH	RDS search	Search	Station order selection
CH + / –	Preset channel selection	Preset channel selection	Preset channel selection
0 ~ 9	Preset channel selection (1 ~ 8)	Preset channel selection (1 ~ 8)	Preset channel selection (1 ~ 8)
SHIFT	Switch memory block	–	Switch memory block

Signal transmission indicator

[⟷AMP]

[⟷NET/DTU]

[MODE SELECTOR]

[⬡iPod]

[NUMBER]

[RC SETUP]

MODE SELECTOR Remote ID	AMP (MAIN)	iPod	NET/DTU **DEV1** (Net Audio)
1 (Default)	81001	72815	62865
2	82001	72816	62837
3	83001	72817	62838
4	84001	72818	62839

NOTE

• When changing a setting, be sure to set the same remote ID as the AVP-A1HD's (☞ page 40).
• When changing the AMP mode's remote ID, also change the "iPod" and "NET/DTU" remote ID at the same time.

Setting the Remote ID

When using multiple DENON AV receivers in the same room, make this setting so that only the desired AV receiver operates.

1 **Press [AMP] to set the main remote control unit to the AMP mode.**

2 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

3 **Refer to the table at the right, and use [NUMBER] to input the 5-digit number corresponding to the remote ID to be changed.**
The signal transmission indicator flashes twice.

4 **Press [iPod] or [NET/DTU] to select the mode to be set.**

5 **Repeat steps 2 to 4 to set the remote IDs for all modes.**

Learning Function

If your AV devices are of a brand other than DENON or if they cannot be operated with the preset memory function, their remote control signals can be transfered to stored in the AVP-A1HD's main remote control unit.

1 **Press [MODE SELECTOR] for the device you want to set.**

2 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

3 **Press [9], [7] and [5], in that order.**
The signal transmission indicator flashes twice and the learning mode is set.

4 **Press the button to be set.**
The main remote control unit's display turns off.

※ If a button that cannot be learned is pressed, the signal transmission indicator lights but the signal is not learned.

5 **Point the main remote control units directly at each other and press and hold the button on the other device's remote control unit that you want to learn.**
Once learning is completed normally, the display lights and the signal transmission indicator flashes twice.

Other device's remote control unit

AVP-A1HD's main remote control unit (RC-1067)
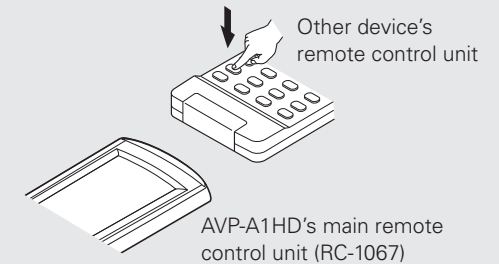
※ If you want to learn other buttons, repeat steps 4 and 5.
※ The mode can be switched by pressing [MODE SELECTOR].
※ The signal transmission indicator lights once for a long time if learning was not possible

6 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice and the setting is completed.

🖉

• With some remote control units, the signals cannot be learned or the device will not operate properly even when the signals have been learned. In this case, use the device's own remote control unit.
• Learned buttons have priority over the preset memory. If you no longer need the learned setting, reset the learning function (☞ page 71).

NOTE

• [HOME] cannot be learned.
• Do not learn any remote control signals at [RC SETUP].
• The AMP, ZONE2, ZONE3, ZONE4 and SYSTEM CALL modes cannot be learned.

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[⊂⊐AMP]

[MODE SELECTOR]

[SYSTEM CALL]

[POWER ON]

[CHANNEL+/–]

[NUMBER]

[RC SETUP]

[I◄◄], [►►I],
[►],
[◄◄], [►►],
[II], [■]
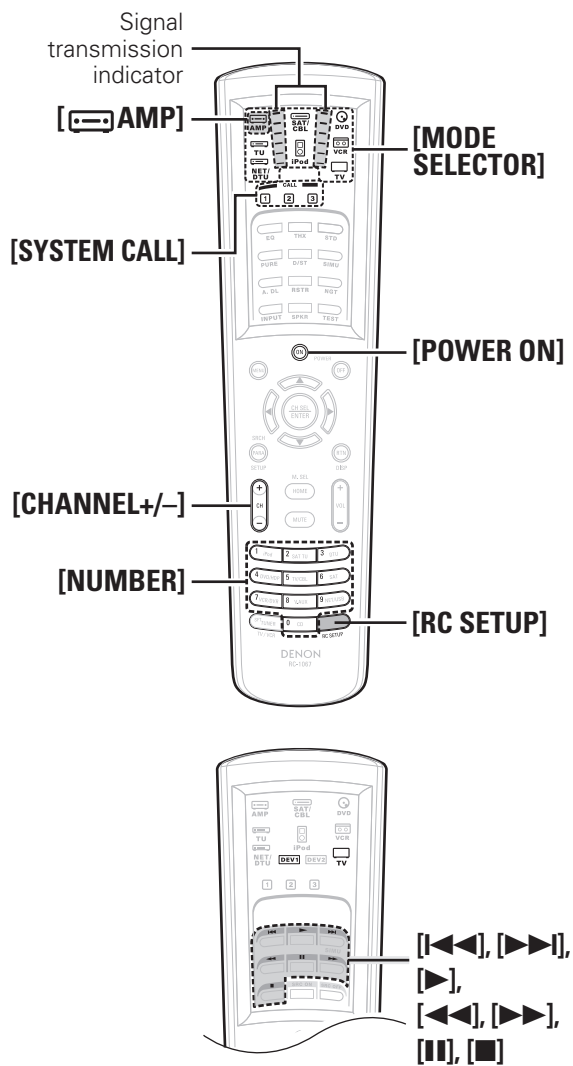
System Call Function

This function lets you register a series of operations at a single button.

For example, the amplifier can be turned on, the input source selected, the monitor's power turned on, the source device's power turned on and the play mode set all by pressing a single button.

Up to 32 signals each can be registered at **[SYSTEM CALL]** (**1**, **2** or **3**).

Registering

1 Press **[MODE SELECTOR]** for the device you want to register.

2 Press and hold in **[RC SETUP]** for at least 3 seconds.
The signal transmission indicator flashes twice.

3 Press **[9]**, **[7]** and **[8]**, in that order.
The signal transmission indicator flashes twice and the system call registration mode is set.

4 Press **[SYSTEM CALL]** (**1**, **2** or **3**) at which you want to register the signals.

5 Press the buttons you want to register in the same sequence as the operations you want to perform.
The signal transmission indicator lights when a button is pressed.
Example : Press **[POWER ON]**.
↓
Press **[MODE SELECTOR]** – **[DVD]**.
↓
Press **[►]**.
※ The mode can be switched by pressing **[MODE SELECTOR]**.
※ Perform the registration procedure for all the buttons you want to register.

6 Press and hold in **[RC SETUP]** for at least 3 seconds.
The signal transmission indicator flashes twice and the setting is completed.

Calling out

1 Press **[AMP]**, to select "SYSTEM CALL".

2 Press **[SYSTEM CALL]** (**1**, **2** or **3**) at which the signals were registered.
The registered signals are transmitted in the registered sequence.

Punch Through Function

CD, DVD or VCR mode buttons can be stored at unused TV or SAT/CBL mode buttons.

For example, when DVD mode buttons are assigned to the TV mode, the DVD mode operations can be performed while in the TV mode.

1 Press **[MODE SELECTOR]** for the device you want to punch through (CD, DVD or VCR).

2 Press and hold in **[RC SETUP]** for at least 3 seconds.
The signal transmission indicator flashes twice.

3 Press **[9]**, **[8]** and **[4]**, in that order.
The signal transmission indicator flashes twice and the punch through setting mode is set.

4 Press the button you want to punch through (**►**, **■**, **◄◄**, **►►**, **I◄◄**, **►►I** or **II**).

5 Press **[MODE SELECTOR]** for the device you want to punch through (TV or SAT/CBL).

6 Press and hold in **[RC SETUP]** for at least 3 seconds.
The signal transmission indicator flashes twice and the setting is completed.

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Setting the Time the Backlight Stays Lit

1 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

2 **Press [9], [7] and [3], in that order.**
The signal transmission indicator flashes twice and the backlight on time setting mode is set.

3 **Set the light on time.**
The signal transmission indicator flashes twice.

[Settable times] : **[1]** : 5 sec.
[2] : 10 sec. (Default)
[3] : 15 sec.
[4] : 20 sec.
[5] : 25 sec.

Adjusting the Backlight's Brightness
The display's brightness can be adjusted in 5 steps.
(Default: Step 3)

1 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

2 **Press [CHANNEL +] or [CHANNEL −].**
The display gets one step brighter when **[+]** is pressed.
The display gets one step darker when **[−]** is pressed.

3 **Press [RC SETUP] to complete the setting.**

Resetting the Main Remote Control Unit

Learning Function

[Resetting button by button]
1 **Press [MODE SELECTOR] for the device you want to reset.**

2 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

3 **Press [9], [7] and [6], in that order.**
The signal transmission indicator flashes twice.

4 **Press the button you want to reset twice.**
The signal transmission indicator flashes twice.

[Resetting by device mode]
1 **Press [MODE SELECTOR] for the device you want to reset.**

2 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

3 **Press [9], [7] and [6], in that order.**
The signal transmission indicator flashes twice.

4 **Press [MODE SELECTOR] for the device you want to reset twice.**
The signal transmission indicator flashes twice.

System call function
1 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

2 **Press [9], [7] and [8], in that order.**
The signal transmission indicator flashes twice.

3 **Press [SYSTEM CALL] (1, 2 or 3) you want to reset.**

4 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

Punch-through function
1 **Press [MODE SELECTOR] for the device you want to reset (TV or SAT/CBL).**

2 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

3 **Press [9], [8] and [4], in that order.**
The signal transmission indicator flashes twice.

4 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

All settings
1 **Press and hold in [RC SETUP] for at least 3 seconds.**
The signal transmission indicator flashes twice.

2 **Press [9], [8] and [1], in that order.**
The signal transmission indicator flashes 4 times.
All the settings are restored to their defaults.

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Sub Remote Control Unit Operations

• The sub remote control unit is equipped with frequently used buttons, so it can be used for simple remote control unit operations.

• The sub remote control unit can also be used for multi-zone, so you can use it to control the AVP-A1HD from other rooms.

• The operations listed below can be performed with the sub remote control unit.
  • Switching the input source
  • Adjusting the volume
  • iPod operations
  • NET/USB direct play
  • GUI menu and ZONE2 on-screen display operations
  • Zone power on/off

• It is not possible to operate devices other than the amplifier.

[ZONE SELECT]

[ZONE OFF] — **[ZONE ON]**

[SOURCE SELECT]

[CHANNEL +/–] — **[VOLUME +/–]**

[MUTE] — **[SHIFT]**

[MENU] — **[ENTER]**

[△▽◁▷] — **[RETURN]**

[SEARCH] — **[I◀◀ ▶▶I], [■], [▶/II], [TUNING ▲ ▼]**

[REPEAT] — **[ALL MUSIC], [FAVORITES]**

[RANDOM] — **[USB]**

Functions of Buttons by Component

Device operated	DVD, HDP, TV / CBL, DVR-1, DVR-2, VCR, V.AUX, SAT, TUNER, CD, PHONO			
Zone selection	M	Z2	Z3	Z4
ZONE SELECT	Zone operation mode selection			
ZONE OFF	Power turned off (※1)			
ZONE ON	Power turned on (※1)			
SOURCE SELECT	Input source selection (※2)			
VOLUME + / –	Adjustment of volume (※1)			–
MUTE	Muting (※1)			–
MENU	Selected zone menu			–
USB	※3			–
ALL MUSIC * (Media server only)	※4			–
FAVORITES *	※5			–

※1: Affects the currently selected zone.

※2: In ZONE4, it is not possible to select sources with no digital input signals ("PHONO", "iPod", etc.).
Network audio signals (Internet radio, media server, USB) can be played as long as they are not copyright-protected.

※3: The input source switches to "NET/USB" and the files on the USB memory device are played.

※4: The input source switches to "NET/USB" and the files in "All Music" on the media server are played.

※5: The input source switches to "NET/USB" and the files in "Favorites" are played.

*: Whether "All Music" or "Favorites" is selected depends on the "Direct Play" setting (☞page 46).

DIRECT PLAY button

• Playback is possible in the mode selected at GUI menu "Source Select" – "NET/USB" – "Playback Mode" – "Direct Play".
  FAVORITES: Playback starts from the first track registered in the favorites.
  ALL MUSIC: Playback starts from the first track registered in the "All Music" folder.

• When **[USB]** is pressed, playback starts from the first track on the USB memory device.

NOTE

When the media server is stopped or restarted, it may no longer be possible to play tracks stored in the favorites.

Device operated	NET / USB				iPod			
Zone selection	M	Z2	Z3	Z4	M	Z2	Z3	Z4
ZONE SELECT	Zone operation mode selection				Zone operation mode selection			
ZONE OFF	Power turned off (※1)				Power turned off (※1)			
ZONE ON	Power turned on (※1)				Power turned on (※1)			
SOURCE SELECT	Input source selection (※2)				Input source selection			–
CHANNEL + / –	Preset channel selection				–			
VOLUME + / –	Adjustment of volume (※1)			–	Adjustment of volume (※1)			–
MUTE	Muting (※1)			–	Muting (※1)			–
MENU	Selected zone menu			–	Selected zone menu			–
△ ▽ ◁ ▷	File operations			–	File operations			–
ENTER	File operations			–	File operations			–
SEARCH	Page forward screen / Character search			–	Page forward screen / Browse/Remote mode switching (press and hold)			–
RETURN	File operations			–	File operations			–
◄◄ ►►I, TUNING ▲ ▼	Track search				Track search			–
■	Stop				Stop			–
►/II	Play/pause				Play/pause			–
REPEAT	1-track/all-track repeat play (USB / Media server)				1-track/all-track repeat play			–
RANDOM	Random play (USB / Media server)				Song/album shuffle play			–
USB	※3				※3			–
ALL MUSIC * (Media server only)	※4				※4			–
FAVORITES *	※5				※5			–

※1: Affects the currently selected zone.
※2: In ZONE4, it is not possible to select sources with no digital input signals ("PHONO", "iPod", etc.).
　　Network audio signals (Internet radio, media server, USB) can be played as long as they are not copyright-protected.
※3: The input source switches to "NET/USB" and the files on the USB memory device are played.
※4: The input source switches to "NET/USB" and the files in "All Music" on the media server are played.
※5: The input source switches to "NET/USB" and the files in "Favorites" are played.
*:　Whether "All Music" or "Favorites" is selected depends on the "Direct Play" setting (☞page 46).

Getting Started

Connections

Setup

Playback

Remote Control

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Information

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Troubleshooting

Multi-zone indicator — **[ZONE SELECT]**

[ADVANCED SETUP]

[ZONE OFF]

[MENU]

[RANDOM]

[REPEAT]

[ALL MUSIC/FAVORITES]

[USB]

Switching Zones

Use this procedure to select the zone to be operated by the sub remote control unit.

1 **Press [ZONE SELECT].**
The currently selected multi-zone indicator lights.

2 **While the multi-zone indicator is light, press [ZONE SELECT] to select the zone to be operated.**
The currently selected multi-zone indicator lights.

Setting the Zone for Which the Sub Remote Control Unit is Used (ZONE SELECT LOCK Mode)

We recommend always using the sub remote control unit for the same room. When this is done, the unit can be set so that the zone does not switch when buttons are operated.

1 **Use the tip of a pen to press [ADVANCED SETUP].**
All the multi-zone indicators light.

2 **Select the multi-zone to be set.**
The selected multi-zone indicator lights.

① To set to "MAIN ZONE" : Press **[REPEAT]**.
② To set to "ZONE2" : Press **[RANDOM]**.
③ To set to "ZONE3" : Press **[USB]**.
④ To set to "ZONE4" : Press **[ALL MUSIC/FAVORITES]**.

3 **Use the tip of a pen to press [ADVANCED SETUP].**
The multi-zone indicator turns off.

To Cancel

1 **Use the tip of a pen to press [ADVANCED SETUP].**
The currently selected multi-zone indicator lights.

2 **Press [ZONE SELECT].**
All the multi-zone indicators light.

3 **Use the tip of a pen to press [ADVANCED SETUP].**
The multi-zone indicator turns off.

Setting the Remote ID

When using multiple DENON AV receivers in the same room, make this setting so that no AV receiver other than the desired one operates.

1 **While pressing [MENU], press [ADVANCED SETUP] with the tip of a pen.**
The multi-zone indicator corresponding to the currently selected remote ID flashes.

2 **Select the remote ID to be set.**

① To set to 1 : Press **[REPEAT]**.
The "M" indicator flashes.
② To set to 2 : Press **[RANDOM]**.
The "Z2" indicator flashes.
③ To set to 3 : Press **[USB]**.
The "Z3" indicator flashes.
④ To set to 4 : Press **[ALL MUSIC/FAVORITES]**.
The "Z4" indicator flashes.

3 **While pressing [MENU], press [ADVANCED SETUP] with the tip of a pen.**
The multi-zone indicator turns off.

NOTE

When changing a setting, be sure to set the same remote ID as the AVP-A1HD's (page 40).

Resetting the Settings

While pressing [ZONE OFF], press [ADVANCED SETUP] with the tip of a pen.
All the multi-zone indicators flash 4 times, then all the settings are restored to their defaults.

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Multi-Zone Connections and Operations

Multi-Zone Connections

• For ZONE2, it is necessary to set in sequence with the signal connected to either the power amplifier or bit stream amps.
  The amp should be the power amplifier in the case of ZONE3, and the bit-stream for ZONE4.
• If the signal inputted to ZONE2 is analog, change to PCM(2-channel) signal, and output it from ZONE2 optical output connectors.

	Connectors for audio output	Audio signals	Connectors for video output
ZONE2	ZONE2 PRE OUT	Stereo	ZONE2 VIDEO OUT, ZONE2 S-VIDEO OUT, ZONE2 COMPONENT VIDEO OUT
	ZONE2 OPTICAL OUT	Bit-stream	
ZONE3	ZONE3 PRE OUT	Stereo	ZONE3 VIDEO OUT
ZONE4	ZONE4 OPTICAL4 OUT	Bit-stream	–
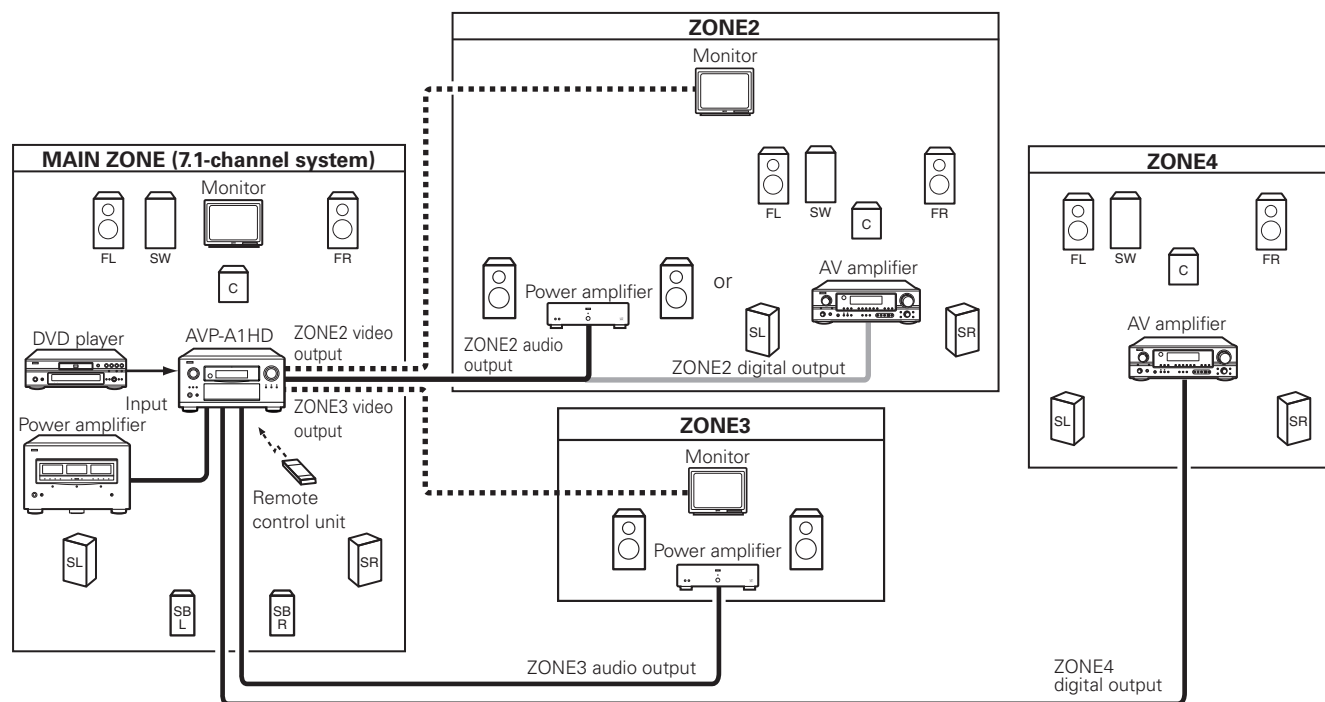
---------- : Video cable
———— : Audio cable

• When only using one speaker for ZONE2 or ZONE3, set to "Mono". In this case, the ZONE2 (ZONE3) monaural output is output from the ZONE2 (ZONE3) pre-out L and R connectors, so connect as desired.
• Separate power amplifiers are needed for ZONE2 and ZONE3.
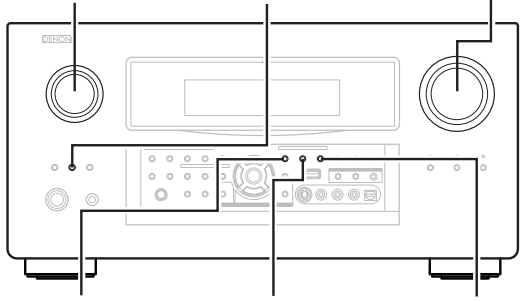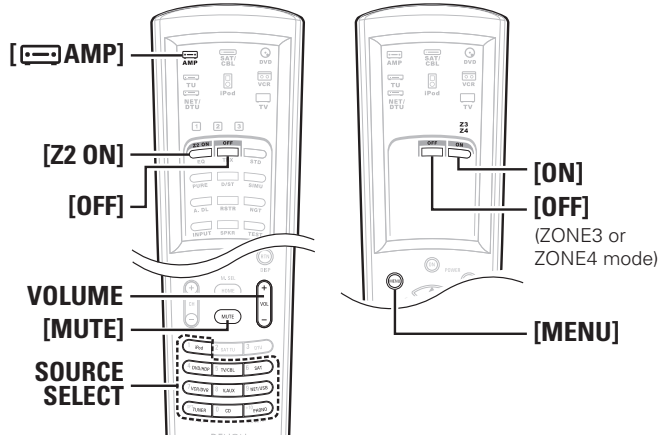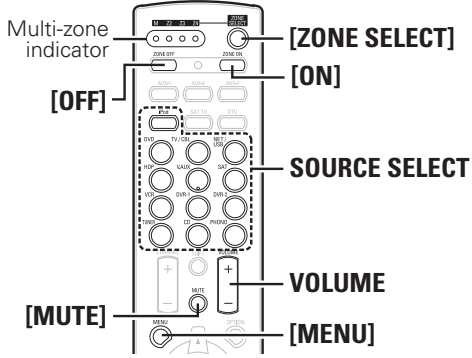
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SOURCE SELECT <ZONE2/3/4/ REC SELECT> VOLUME

<ZONE2 ON/OFF> <ZONE3 ON/OFF> <ZONE4 ON/OFF>

[⊞AMP]

[Z2 ON]

[OFF]

[ON]
[OFF]
(ZONE3 or
ZONE4 mode)

VOLUME
[MUTE]

[MENU]

SOURCE
SELECT

(Main remote control unit)

Multi-zone
indicator

[ZONE SELECT]
[ON]
[OFF]

SOURCE SELECT

VOLUME

[MUTE] [MENU]

(Sub remote control unit)

About the button names in these explanations
< > : Buttons on the main unit
[ ] : Buttons on the remote control unit
Button name only:
Buttons on the main unit and remote control unit

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Multi-Zone Operations

Turning the Power On and Off

【Operation on the main unit】
Press **<ZONE2 ON/OFF>**, **<ZONE3 ON/OFF>** or **<ZONE4 ON/OFF>** for the zone to be operated.
When the power turns on, the multi-zone indicator lights on the display.

【Operation on the remote control unit】
In the zone mode you want to operate, press **[ON]** or **[OFF]**.

Selecting the Input Source

【Operation on the main unit】
① Press **<ZONE2/3/4 / REC SELECT>** and select the zone to be adjusted.
② Turn **<SOURCE SELECT>**.

【Operation on the remote control unit】
In the zone mode you want to operate, press **[SOURCE SELECT]**.

Adjusting the Volume

【Operation on the main unit】
① Press **<ZONE2/3/4 / REC SELECT>** and select the zone to be adjusted.
② Turn **<VOLUME>** to adjust.

【Operation on the remote control unit】
In the zone mode whose volume you want to adjust, press **[VOLUME]**.

[Variable range] – – –   –70dB ~ –40dB ~ 18dB

✎

• The volume can be adjusted when GUI menu "Manual Setup" – "Zone Setup" – "(select the zone)" – "Volume Level" is set to "Variable". The volume can be increased up to the value set at GUI menu "Manual Setup" – "Zone Setup" – "(select the zone)" – "Volume Limit" (☞page 37).
• The volume for ZONE2 and ZONE3 can be adjusted with the remote control unit.

Turning off the Sound Temporarily

In the zone mode for which you want to mute the sound, press **[MUTE]**.
The sound is reduced to the level set at GUI menu "Manual Setup" – "Zone Setup" – "(select the zone)" – "Mute Level" (☞page 37).
To cancel, either adjust the volume or press **[MUTE]** again.
The setting is canceled when the zone's power is turned off.

✎

• The source selected for ZONE3 is also output from the recording output connectors.
• When the **[MENU]** is selected, it is possible to carryout "Zone Setup" looking at the on-screen display in ZONE2. Also, when the "OSD" is set as "ZONE2/ZONE3", the on-screen display comes on the ZONE2 monitor when ZONE3 has been operated so it is possible to operate it looking at this.

```
ZONE2 MENU

INPUT  :DVD
SIGNAL :ANALOG
VOL.   :-40dB

>Bass            ◄   0dB▮
 Treble          ◄   0dB▮
 HPF             ◄   OFF ▮
 Lch Lev.        ◄   0dB▮
↓Rch Lev.        ◄   0dB▮
```

```
ZONE2 MENU

↑
>Channel        ◄STEREO►
 Vol.Lev.       ◄  VAR  ►
 Vol.Limit      ◄  OFF  ►
 P.On Lev.         LAST►
 Mute Lev.      ◄  FULL►

↓
```
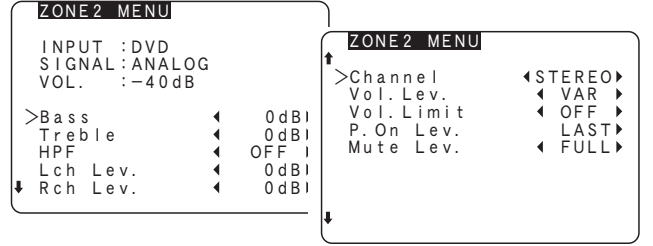
NOTE

• The digital signal from the digital input connectors (OPTICAL/COAXIAL) are output to the analog audio connectors in ZONE2 and ZONE3 in the case of PCM (2-channel) signals only.
• Digital audio signals input from the DENON LINK or HDMI connectors cannot be played in multi-zone.
• The digital output (OPTICAL) from ZONE2 and ZONE4 cannot be copyrighted network signals (internet radio, media server, and USB).
• When certain digital signals are being input, noise may be output from the ZONE2 and ZONE3 audio output connectors.

Other Information

About Speaker Installation

Surround back speakers

The THX Surround EX format adds new "Surround Back" (SB) channels to the conventional 5.1 channel system. This makes it easy to achieve sound positioned directly behind the listener, something that was previously difficult with sources designed for conventional multi surround speakers. In addition, the acoustic image extending between the sides and the rear is narrowed, thus greatly improving the expression of the surround signals for sounds moving from the sides to the back and from the front to the point directly behind the listening position.

Change of positioning and acoustic image with 5.1-channel systems

FL   SW   C   FR

SL ch   SR ch
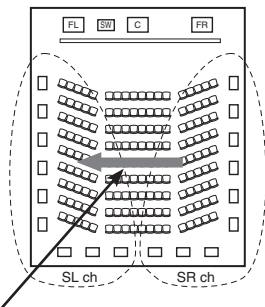
Movement of acoustic image from SR to SL

Change of positioning and acoustic image with 6.1-channel systems

FL   SW   C   FR

SL ch   SR ch

SB ch
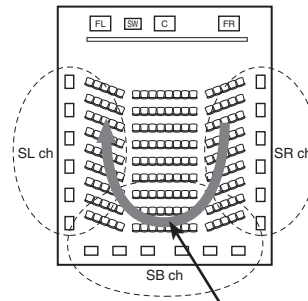
Movement of acoustic image from SR to SB to SL

In addition to sources recorded in 6.1-channels, the surround effect of conventional 2- to 5.1-channel sources can also be enhanced.

Speaker(s) for one or two channels are required in order to achieve a THX Surround EX system with the AVP-A1HD. Adding these, however, allows you to achieve stronger surround effects not only with sources recorded in THX Surround EX, but also with conventional 2- to 5.1 channel sources. The WIDE SCREEN mode is a mode for achieving surround sound with up to 7.1 channels using surround back speakers, for sources recorded in conventional Dolby Surround as well as Dolby Digital 5.1 channel and DTS Surround 5.1 channel sources. Furthermore, all the DENON original surround modes (☞ page 47 "DSP Simulation Playback") are compatible with 7.1 channel playback, so you can enjoy 7.1 channel sound with any signal source.

Number of surround back speakers

With THX Surround EX, the surround back channel consists of one channel of playback signals, but we recommend using two speakers. The modes that use the new ASA technology from THX (☞ page 80) are most effective when using two monopole type surround back speakers placed close together.
Using two speakers results in a smoother blend with the sound of the surround channels and better sound positioning of the surround back channel when listening from a position other than the center.

Placement of the surround left and right channels when using surround back speakers

Using surround back speakers greatly improves the positioning of the sound at the rear. Because of this, the surround left and right channels play an important role in achieving a smooth transition of the acoustic image from the front to the back. As shown on the diagram above, in a movie theater the surround signals are also produced from diagonally in front of the listeners, creating an acoustic image as if the sound were floating in space.
To achieve these effects, we recommend placing the speakers for the surround left and right channels slightly more towards the front than with conventional surround systems. Doing so sometimes increases the surround effect when playing conventional 5.1 channel sources in the THX Surround EX mode. Check the surround effects of the various modes before selecting the surround mode.

Examples of speaker layouts

Below we introduce examples of speaker layouts. Refer to these to arrange your speakers according to their type and how you want to use them.

[1] For THX surround EX systems (Using surround back speakers)

① **When mainly playing movies**
Recommended when your surround speakers are single or 2-way speakers.

Front speakers
Center speaker
Monitor
Subwoofer
60°
Surround speakers
60°
Surround back speakers

Surround speaker   Surround back speaker
Front speaker
60 to 90 cm
Point slightly downwards
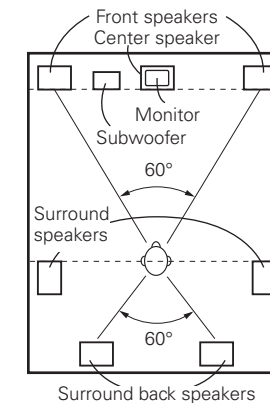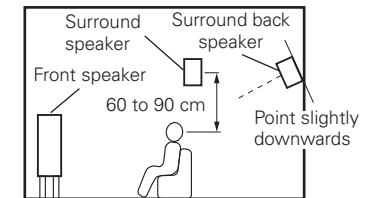
[As seen from above]   **[As seen from the side]**

② **Setting for primarily watching movies using diffusion type speakers for the surround speakers**

For the greatest sense of surround sound envelopment, diffuse radiation speakers such as bipolar (THX) types, or dipolar types, provide a wider dispersion than is possible to obtain from a direct radiating speaker (monopolar). Place these speakers at either side of the prime listening position, mounted above ear level.

Path of the surround sound from the speakers to the listening position
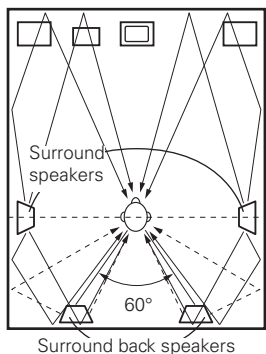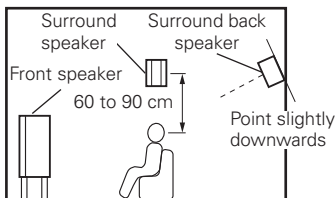
[As seen from above]   **[As seen from the side]**

③ **When playing movies and music**

To activate the appropriate speakers for movies and music, we suggest that during setup, choose Dolby Digital/DTS with THX and Surround Speakers A (the bipolar or dipolar speakers mounted at the sides of the listening position).

Choose Dolby Digital/DTS without THX and Surround Speakers B (the direct radiating speakers mounted at the rear corners of the listening room). Then, by simply activating the THX function (used during movie playback, the Surround A speakers are automatically activated. For multi-channel music listening (Dolby Digital or DTS music programs), turn off the THX enhancements by touching the THX button on the remote control, and the Surround B speakers will be automatically activated.

Example: Movie sources (Dolby, DTS Surround, etc.)

"THX" or "THX Cinema" mode … Speakers A

Music sources (DVD video, DTS CD, etc.)

"Dolby/DTS Surround" … Speakers B

The speakers can be switched at the touch of a button by turning HOME THX CINEMA on when playing movies and off when playing multi-channel music.
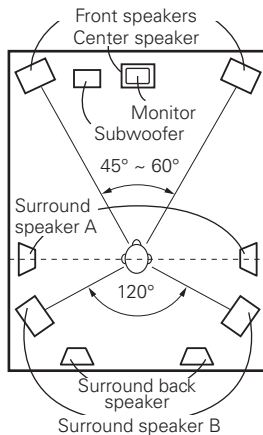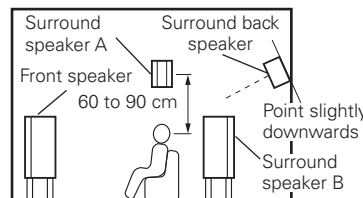
[As seen from above]   **[As seen from the side]**

[2] When not using surround back speakers
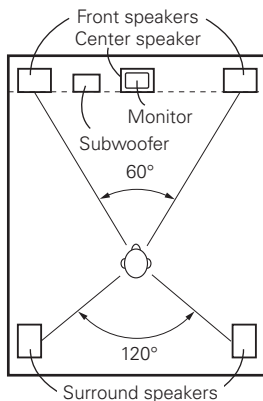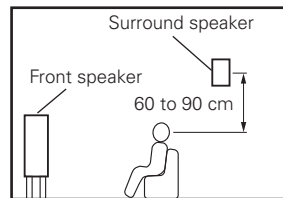
[As seen from above]   **[As seen from the side]**

Surround

The AVP-A1HD is equipped with a digital signal processing circuit that lets you play program sources in the surround mode to achieve the same sense of presence as in a movie theater.

Dolby Surround

Dolby Digital

Dolby Digital is a multichannel digital signal format developed by Dolby Laboratories.

A total of 5.1-channels are played: 3 front channels ("FL" , "FR" and "C"), 2 surround channels ("SL" and "SR") and the "LFE" channel for low frequencies.

Because of this, there is no crosstalk between channels and a realistic sound field with a "three-dimensional" feeling (sense of distance, movement and positioning) is achieved.

A real, overpowering sense of presence is achieved when playing movie sources in AV rooms as well.

Dolby Digital Plus

Dolby Digital Plus is an improved Dolby Digital signal format that is compatible with up to 7.1-channels of discrete digital sound and also improves sound quality thanks to extra data bit rate performance. It is upwardly compatible with conventional Dolby Digital, so it offers greater flexibility in response to the source signal and the conditions of the playback equipment.

Dolby TrueHD

Dolby TrueHD is a high definition audio technology developed by Dolby Laboratories, using lossless coding technology to faithfully reproduce the sound of the studio master.

This format is compatible with a maximum sampling frequency of 96 kHz and up to 7.1-channels, so it is used for applications particularly prioritizing sound quality.

Dolby Pro Logic Ⅱ

Dolby Pro Logic Ⅱ is a matrix decoding technology developed by Dolby Laboratories.

Regular music such as that on CDs is encoded into 5-channels to achieve an excellent surround effect.

The surround channel signals are converted into stereo and full band signals (with a frequency response of 20 Hz to 20 kHz or greater) to create a "three-dimensional" sound image offering a rich sense of presence for all stereo sources.

Dolby Pro Logic Ⅱx

Dolby Pro Logic Ⅱx is a further improved version of the Dolby Pro Logic Ⅱ matrix decoding technology.

Audio signals recorded in 2-channels are decoded to achieve a natural sound with up to 7.1-channels.

There are 3 modes: "Music" suited for playing music, "Cinema" suited for playing movies, and "Game" which is optimized for playing games.

Dolby Headphone

This is a three-dimensional sound technology developed jointly by Dolby Laboratories and Lake Technology Ltd. of Australia for achieving surround sound using regular headphones.

Previously, when using headphones all the sounds resonated inside the head and it was uncomfortable to listen with headphones for long periods of time. Dolby Headphone simulates speaker playback in a room and places the sound at the front or the sides, outside the head, to achieve a powerful sound like the sound of movie or home theaters. This technology is mainly for multichannel audio/video equipment with Dolby Digital or Dolby Pro Logic Surround decoding functions and works with a high performance digital signal processing (DSP) chip.

Dolby Headphone is effective not only for multichannel sources but also for stereo programs.

On the AVP-A1HD, it is possible to output signals encoded in the Dolby Headphone mode from the recording output terminal and record them on a separate recorder.

※ Sources recorded in Dolby Surround

Sources recorded in Dolby Surround are indicated with the following logo marks.

Dolby Surround support mark : ▯▯ DOLBY SURROUND

Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

DTS Surround

DTS Digital Surround

DTS Digital Surround is the standard digital surround format of DTS, Inc., compatible with a sampling frequency of 44.1 or 48 kHz and up to 5.1-channels of digital discrete surround sound.

DTS-HD High Resolution Audio

DTS-HD High Resolution Audio is an improved version of the conventional DTS, DTS-ES and DTS 96/24 signals formats, compatible with sampling frequencies of 96 or 48 kHz and up to 7.1-channels of discrete digital sound. High data bit rate performance provides high quality sound. This format is fully compatible with conventional products, including conventional DTS digital surround 5.1-channel data.

DTS-HD Master Audio

DTS-HD Master Audio is DTS, Inc's lossless audio format compatible with up to 96 kHz/7.1-channels. The lossless audio coding technology faithfully reproduces the sound of the studio master. It is fully compatible with conventional products, including conventional DTS digital surround 5.1-channel data.

DTS-ES™ Discrete 6.1

DTS-ES™ Discrete 6.1 is a 6.1-channel discrete digital audio format adding a surround back (SB) channel to the DTS digital surround sound. Decoding of conventional 5.1-channel audio signals is also possible according to the decoder.

DTS-ES™ Matrix 6.1

DTS-ES™ Matrix 6.1 is a 6.1-channel discrete digital audio format inserting a surround back (SB) channel to the DTS digital surround sound through matrix encoding. Decoding of conventional 5.1-channel audio signals is also possible according to the decoder.

DTS NEO:6™ Surround

DTS NEO:6™ is a matrix decoding technology for achieving 6.1-channel surround playback with 2-channel sources. It includes "DTS NEO:6 CINEMA" suited for playing movies and "DTS NEO:6 MUSIC" suited for playing music.

DTS 96/24

DTS 96/24 is a digital audio format enabling high sound quality playback in 5.1-channels with a sampling frequency of 96 kHz and 24 bit quantization on DVD-Video.

Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS is a registered trademark and the DTS logos, Symbol, DTS-HD and DTS-HD Master Audio are trademarks of DTS, Inc.© 1996-2007 DTS, Inc. All Rights Reserved.

Home THX Cinema Surround

THX is an exclusive set of standards and technologies established by the world-renowned film production company, Lucasfilm Ltd. THX grew from George Lucas' personal desire to make your experience of the film soundtrack, in both movie theaters and in your home theater, as faithful as possible to what the director intended.

Movie soundtracks are mixed in special movie theaters called dubbing stages and are designed to be played back in movie theaters with similar equipment and conditions. The soundtrack created for movie theaters is then transferred directly onto Laserdisc, VHS tape, DVD, etc., and is not changed for playback in a small home theater environment.

THX engineers developed patented technologies to accurately translate the sound from the movie theater environment into the home, correcting the tonal and spatial errors that occur. On the AVP-A1HD, when the Home THX Cinema mode is on, THX post-processing is automatically added after the Dolby Pro Logic, Dolby Digital or DTS decoder:

Re-EQ™ (Re-Equalization)

The tonal balance of a film soundtrack will be excessively bright and harsh when played back over audio equipment in the home because film soundtracks are designed to be played back in large movie theaters using very different professional equipment. Re-Equalization restores the correct tonal balance for listening to a movie soundtrack in a normal home environment.

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Timbre Matching™

The human ear changes our perception of a sound depending on the direction from which the sound is coming. In a movie theater, there is an array of surround speakers so that the surround information is all around you. In a home theater, only two speakers located to the side of your head are used. The Timbre Matching feature filters the information going to the surround speakers so that they more closely match the tonal characteristics of the sound coming from the front speakers. This ensures seamless panning between the front and surround speakers.

Adaptive Decorrelation™

In a movie theater, a large number of surround speakers help create an enveloping surround sound experience, while in a home theater there are usually only two speakers. This can make the surround speakers sound like headphones that lack spaciousness and envelopment. The surround sounds will also collapse into the closest speaker as you move away from the middle seating position. Adaptive Decorrelation slightly changes one surround channel's time and phase relationship with respect to the other surround channel. This expands the listening position and creates—with only two speakers—the same spacious surround experience as in a movie theater.

THX Ultra2™

Before any home theater component can be THX Ultra2 certified, it must incorporate all the features above and also pass a rigorous series of quality and performance tests. Only then can a product feature the THX Ultra2 logo, which is your guarantee that the Home Theater products you purchase will give you superb performance for many years to come. THX Ultra2 requirements cover every aspect of the product including power amplifier performance, pre-amplifier performance and operation, as well as hundreds of other parameters in both the digital and analog domain.
In addition to improvements to the power amplifier with respect to previous THX Ultra standards, three surround modes have been added: the THX Ultra2 Cinema mode, THX Music Mode and THX Games Mode.

THX Ultra2 Cinema

THX Ultra2 Cinema mode plays 5.1 movies using all 8 speakers giving you the best possible movie watching experience. In this mode, new THX processing blends the side surround speakers and back surround speakers providing the optimal mix of ambient and directional surround sounds.
DTS-ES (Matrix and 6.1 Discrete) and Dolby Digital Surround EX encoded soundtracks will be automatically detected in Ultra2 Cinema mode if the appropriate flag has been encoded.
Some Dolby Digital Surround EX soundtracks are missing the digital flag that allows automatic switching. If you know that the movie that you are watching is encoded in Surround EX, you can manually select the THX Surround EX playback mode, otherwise THX Ultra2 Cinema mode will apply processing to provide optimum replay.

THX Music Mode

For the replay of 5.1 multi-channel music the THX Music Mode should be selected. In this mode new THX processing is applied to the surround channels of all 5.1 encoded music sources such as DTS and Dolby Digital to provide a wide stable rear soundstage.

THX Games Mode

For the replay of stereo and multi-channel game audio the THX Games Mode should be selected. In this mode THX ASA processing is applied to the surround channels of all 5.1 and 2.0 encoded game sources such as analog, PCM, DTS and Dolby Digital. This accurately places all game audio surround information, providing a full 360 degree playback environment. THX Games Mode is unique as it gives you a smooth transition of audio in all points of the surround field.

ASA (Advanced Speaker Array)

ASA is a proprietary THX technology which processes the sound fed to 2 side and 2 back surround speakers to provide the optimal surround sound experience. When you set up your home theater system using all eight speaker outputs (Left, Center, Right, Surround Right, Surround Back Right, Surround Back Left, Surround Left and Subwoofer) placing the two Surround Back speakers close together facing the front of the room as shown in the diagram will provide the largest sweet spot. If for practical reasons you have to place the Surround Back speakers apart, you will need to go THX Audio Set-up screen and choose the setting that most closely corresponds to the speaker spacing, which will re-optimize the surround sound-field.
ASA is used in three new modes; THX Ultra2 Cinema, THX Music Mode and THX Games Mode.

Boundary Gain Compensation

If your chosen listening room layout (for practical or aesthetic reasons) results in the most of the listeners being close to the rear wall, the resulting bass level can be sufficiently reinforced by the boundary that the overall sound quality becomes "boomy". THX Ultra2 receivers and controllers contain the BGC (Boundary Gain Compensation) feature to provide an improved bass balance. BGC can be selected by choosing "THX Ultra2 Subwoofer–Yes" from the "Boundary Gain Compensation" section of the THX Audio setup menu.

THX™ Surround EX™

In 1999, a new surround system was launched simultaneously with the release of the movie "Star Wars Episode I". "Dolby Digital Surround EX" is a new movie sound track that greatly enhances the sense of spatial expression and the positioning of the surround channel sound. The result is 360 degrees of movement and moving sound effects that seem to pass right over the listener's head. This system was developed jointly by THX and Dolby Laboratories, fusing THX's idea of improving spatial expression and achieving a uniform 360 degree sound positioning with Dolby Laboratories' matrix encoding technology. Emphasis was placed on compatibility with the existing system Dolby Digital 5.1 channel, and the new "surround back (SB) channel" was added to achieve improvements over the conventional 5.1 channel system in terms of the positioning of the sound at the rear, the acoustic image of sound moving from the two sides to the back as well as sound moving from the front to the center rear with the multi surround speaker systems used in movie theaters, thereby enabling various types of surround sound. The surround back channel signal is a matrix-encoded signal inserted into both the Dolby Digital SL (surround left) and SR (surround right) channels. Upon playback, the signals are decoded by a high precision digital matrix decoder within the Dolby Digital decoder into the SL, SR and SB channels and output as 6.1 channels of signals. With the AVP-A1HD, the signals further undergo Home THX Cinema processing to achieve a THX Surround EX system. Even without the proper environment for playing the SB channel, Dolby Digital Surround EX signals are 100% compatible with existing 5.1 channel playback systems, so they can be played as such. In this case, the SB channel signal is produced as a monaural signal from both the SL and SR channels, so none of the signal components are missing. The effects specific to THX Surround EX (the sense of spatial expression and the positioning of the sound), however, are the same as with conventional 5.1 channel surround systems.

Audyssey

Audyssey MultEQ® XT

Audyssey MultEQ® XT is the first technology to properly measure sound information throughout a listening area, then combine this information to accurately represent the acoustical problems in the room. Based on these measurements, MultEQ XT calculates an equalization solution that corrects for both time and frequency response problems in every seat. Audyssey MultEQ XT not only corrects frequency response problem in a large listening area but also performs a fully automated surround system setup.

For a detailed description, see page 25.

Audyssey Dynamic EQ™

Audyssey Dynamic EQ solves the problem of deteriorating sound quality as volume is decreased by taking into account human perception and room acoustics. Dynamic EQ selects the best possible frequency response and surround levels moment-by-moment as volume is changed. The result is bass response, tonal balance and surround impression that remain constant despite changes in volume. This is the first technology to combine information from incoming source levels with actual output sound levels in the room, a pre-requisite for delivering a loudness correction solution. Audyssey Dynamic EQ works in tandem with Audyssey MultEQ to provide well-balanced sound for every listener at any volume level.

AUDYSSEY
MULTEQ XT
DYNAMIC EQ

Manufactured under license from Audyssey Laboratories. U.S. and foreign patents pending. Audyssey MultEQ® XT is a registered trademark of Audyssey Laboratories. Dynamic EQ™ is a trademark of Audyssey Laboratories.

For more information, visit www.audyssey.com.

HDCD®
(High Definition Compatible Digital®)

HDCD® is an encoding/decoding technology that greatly reduces the distortion that occurs upon digital recording while maintaining compatibility with the conventional CD format, thus expanding the dynamic range and achieving a high resolution.

Conventional CDs and HDCD compatible CDs are identified automatically to select the optimum digital processing.

HDCD®, HDCD®, High Definition Compatible Digital® and Microsoft® are either registered trademarks or trademarks of Microsoft Corporation, Inc. in the United States and/or other countries. HDCD system manufactured under license from Microsoft Corporation, Inc. This product is covered by one or more of the following: In the USA: 5,479,168, 5,638,074, 5,640,161, 5,808,574, 5,838,274, 5,854,600, 5,864,311, 5,872,531, and in Australia: 669114. Other patents pending.

DENON LINK

DENON LINK is a unique digital, balanced transfer type interface developed by DENON. It offers high speed, high quality transfer of digital audio data with low signal loss. It can be used together with DENON DVD players equipped with a special DENON LINK connector using a single cable to enable playback with high sound quality.

It allows digital transfer of the 192 kHz/24 bit 2-channel digital signals of DVD-Audio discs, PCM multi-channel signals, etc. Full-spec digital transfer of the audio contents of Super Audio CD is possible by connecting a player equipped for DENON LINK 3rd Edition.

Advanced AL24 Processing Multi channel

Equipped with "Advanced AL24 Processing" time axis region information volume expansion

In addition to the existing "AL24 Processing Plus" bit expansion technology, DENON has also developed "Advanced AL24 Processing" that dramatically improves information volume in the time axis region using high-speed signal detection and processing technology. In addition to expanding original 16-bit digital data to 24 bits, "Advanced AL24 Processing" uses data interpolation along the time axis or up-converted sampling to achieve natural interpolation without losing the original data. A digital filter is used to further expand adaptability and perform optimum filtering calculations for ringing-free pulse response, pulsive music data and attack sounds.

This results in the reproduction of such spatial information as the delicate nuances in the music, the positions of the performers, and the breadth, height, and depth of the concert hall. "Advanced AL24 Processing" is conducted for all channels and modes other than DSD DIRECT.

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HDMI
(High-Definition Multimedia Interface)

HDMI is a digital interface standard for next generation TVs based on DVI (Digital Visual Interface) standards and optimized for use in consumer equipment.

Non-compressed digital video and multi-channel audio signals are transmitted with a single connection.

HDMI is also compatible with HDCP (High-bandwidth Digital Contents Protection), a technology for protecting copyrights that encrypts digital video signals in the same was as with DVI.

Deep Color

Eliminates on-screen color banding, for smooth tonal transitions and subtle gradations between colors.

Enables increased contrast ratio.

Can represent many times more shades of gray between black and white.

At 30-bit pixel depth, a four times improvement would be the minimum, and the typical improvement would be eight times or more.

xvYCC

Next-generation "xvYCC" color space supports 1.8 times as many colors as existing HDTV signals.

Lets HDTVs display colors more accurately.

Enables displays with natural, vivid colors.

Lip Sync

Because consumer electronics devices are using increasingly complex digital signal processing to enhance the clarity and detail of the content, synchronization of video and audio in user devices has become a greater challenge and could potentially require complex end-user adjustments. HDMI 1.3 incorporates an automatic video/audio synching capability that allows devices to perform this synchronization automatically with total accuracy.

"HDMI", "HDMI logo" and "High-Definition Multimedia Interface" are trademarks or registered trademarks of HDMI Licensing LLC.

Surround Modes and Parameters

Surround Mode	Signals and adjustability in the different modes										
	Channel output					Parameter (default values are shown in parentheses)					
	Front L/R	Center	Surround L/R	Surround Back L/R	Subwoofer	D. COMP *1	DRC *2	LFE *3	AFDM *1	SB CH Out	Cinema EQ.
PURE DIRECT, DIRECT	○	×	×	×	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	×	×
DSD DIRECT	○	×	×	×	×	×	×	×	×	×	×
DSD MULTI DIRECT	○	◎	◎	◎	◎	×	×	○ (0 dB)	×	○	×
MULTI CH DIRECT	○	◎	◎	◎	◎	×	×	○ (0 dB)	○ (ON)	○	×
STEREO	○	×	×	×	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	×	×
EXT. IN	○	◎	◎	◎	◎	×	×	×	×	○ (NOTE6)	×
MULTI CH IN	○	◎	◎	◎	◎	×	×	○ (0 dB)	○ (ON)	○	×
WIDE SCREEN	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	○ (OFF)
HOME THX CINEMA (2ch)	○	◎	◎	◎	◎	×	×	×	×	○	×
HOME THX CINEMA (5.1ch)	○	◎	◎	◎	◎	×	×	○ (0 dB)	○ (ON)	○	×
DOLBY PRO LOGIC IIx	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	×	×	○	○ (NOTE1)
DOLBY PRO LOGIC II	○	◎	◎	×	◎	○ (OFF)	○ (Auto)	×	×	○	○ (NOTE2)
DTS NEO:6	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	×	×	○	○ (NOTE1)
DOLBY DIGITAL	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	○ (ON)	○	○ (OFF)
DTS SURROUND	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	○ (ON)	○	○ (OFF)
7CH STEREO	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
SUPER STADIUM	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
ROCK ARENA	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
JAZZ CLUB	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
CLASSIC CONCERT	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
MONO MOVIE	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
VIDEO GAME	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
MATRIX	○	◎	◎	◎	◎	○ (OFF)	○ (Auto)	○ (0 dB)	×	○	×
DOLBY HEADPHONE	○	×	×	×	×	×	×	×	×	×	×

○ : Signal / Adjustable

× : No signal / Not adjustable

◎ : Turned on or off by speaker configuration setting

NOTE1 : This parameter is availabe when the GUI menu "Parameter" – "Audio" – "Surround Parameters" – "Mode" is set to "Cinema" (☞page 48).

NOTE2 : This parameter is available when the GUI menu "Parameter" – "Audio" – "Surround Parameters" – "Mode" is set to "Cinema" or "Pro Logic" (☞page 48).

NOTE6 : This parameter can be used when GUI menu "Manual Setup"– "Audio Setup"– " EXT. IN Setup"– "Mode" is set to "DSP" (☞page 32)

NOTE:

*1 : When playing Dolby Digital and DTS signals.

*2 : When playing Dolby True HD signal.

*3 : When playing Dolby Digital, DTS, DVD-Audio and Super Audio CD.

Surround Mode	Signals and adjustability in the different modes																
	Parameter (default values are shown in parentheses)																
	Mode	Decoder	Room Size	Effect Level	Delay Time	Subwoofer	PRO LOGIC II/IIx MUSIC mode only			NEO:6 MUSIC mode only	EXT. IN only		Tone	Night Mode	Room EQ	Dynamic EQ*	RESTORER
							Panorama	Dimension	Center Width	Center Image	Subwoofer Att.	Input Channel					
PURE DIRECT, DIRECT	×	×	×	×	×	○	×	×	×	×	×	×	×	○ (OFF)	○ (NOTE5)	○ (NOTE5)	○
DSD DIRECT	×	×	×	×	×	○	×	×	×	×	×	×	×	×	×	×	×
DSD MULTI DIRECT	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
MULTI CH DIRECT	×	×	×	×	×	×	×	×	×	×	×	×	×	○ (OFF)	○ (NOTE5)	○ (NOTE5)	×
STEREO	×	×	×	×	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
EXT. IN	×	×	×	×	×	×	×	×	×	×	○	○ (NOTE6)	×	×	×	×	×
MULTI CH IN	×	×	×	×	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	×
WIDE SCREEN	×	×	×	○ (ON, 10)	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
HOME THX CINEMA (2ch)	○ (PLIIx C)	○	×	×	×	×	×	×	×	×	×	×	×	○ (OFF)	○ (OFF)	○ (OFF)	○
HOME THX CINEMA (5.1ch)	×	×	×	×	×	×	×	×	×	×	×	×	×	○ (OFF)	○ (OFF)	○ (OFF)	×
DOLBY PRO LOGIC IIx	○ (Cinema)	×	×	×	×	×	○ (OFF)	○ (3)	○ (3)	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
DOLBY PRO LOGIC II	○ (Cinema)	×	×	×	×	×	○ (OFF)	○ (3)	○ (3)	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
DTS NEO:6	○ (Cinema)	×	×	×	×	×	×	×	×	○ (0.3)	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
DOLBY DIGITAL	×	×	×	×	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	×
DTS SURROUND	×	×	×	×	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	×
7CH STEREO	×	×	×	×	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
SUPER STADIUM	×	×	○ (Medium)	○ (10)	×	×	×	×	×	×	×	×	○ (NOTE3)	○ (OFF)	○ (OFF)	○ (OFF)	○
ROCK ARENA	×	×	○ (Medium)	○ (10)	×	×	×	×	×	×	×	×	○ (NOTE4)	○ (OFF)	○ (OFF)	○ (OFF)	○
JAZZ CLUB	×	×	○ (Medium)	○ (10)	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
CLASSIC CONCERT	×	×	○ (Medium)	○ (10)	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
MONO MOVIE	×	×	○ (Medium)	○ (0)	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
VIDEO GAME	×	×	○ (Medium)	○ (10)	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
MATRIX	×	×	×	×	○ (30 ms)	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○
DOLBY HEADPHONE	×	○	×	×	×	×	×	×	×	×	×	×	○ (0 dB)	○ (OFF)	○ (OFF)	○ (OFF)	○

○ : Signal / Adjustable
× : No signal / Not adjustable
NOTE3 : BASS +6 dB, TREBLE 0 dB
NOTE4 : BASS +6 dB, TREBLE +4 dB
NOTE5 : Can be used according to the "Direct Mode" setting.
NOTE6 : "DSP" mode only
＊ : Can be set when GUI menu "Parameter" – "Audio" – "Room EQ" (☞page 51) is set to "Audyssey", "Audyssey Flat", "Audyssey Byp.L/R".

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Differences in Surround Mode Names Depending on the Input Signals

Surround mode	Note	ANALOG	LINEAR PCM / WAV	WMA (Windows Media Audio) / MP3 / MPEG-4 AAC / FLAC	DTS ES DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY DIGITAL EX (With Flag)	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL (5.1/5/4ch)	DOLBY DIGITAL (4/3ch)	DOLBY DIGITAL (2ch)	DVD-Audio (multi ch)	DVD-Audio (2ch)	DSD (multi ch)	DSD (2ch)
HOME THX CINEMA																	
ES DSCRT6.1 + THX	*1	×	×	×	◎	×	×	×	×	×	×	×	×	×	×	×	×
ES MTRX6.1 + THX	*1	×	×	×	×	◎	○	○	×	×	×	×	×	×	×	×	×
THX SURROUND EX	*1	×	×	×	×	×	×	×	◎	○	○	○	×	○	×	○	×
THX Ultra2 Cinema	*2	×	×	×	○	○	○	○	○	○	○	○	×	○	×	○	×
THX Music Mode	*2	×	×	×	○	○	○	○	○	○	○	○	×	○	×	○	×
THX Games Mode	*2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
THX Cinema		×	×	×	○	○	○	○	○	○	○	○	×	○	×	○	×
PLIIx C + THX	*3	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
PLII C + THX		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
DOLBY PL + THX		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
NEO:6 + THX		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
MULTI CH 7.1 + THX		×	×	×	×	×	×	×	×	×	×	×	×	○ (7.1)	×	×	×
MULTI CH 5.1 + THX		×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
STANDARD																	
DTS SURROUND																	
DTS ES DSCRT6.1	*1	×	×	×	● ◎	×	×	×	×	×	×	×	×	×	×	×	×
DTS ES MTRX6.1	*1	×	×	×	×	● ◎	×	×	×	×	×	×	×	×	×	×	×
DTS SURROUND		×	×	×	○	○	●	×	×	×	×	×	×	×	×	×	×
DTS 96/24		×	×	×	×	×	×	●	×	×	×	×	×	×	×	×	×
DTS + PLIIx CINEMA	*2	×	×	×	○	○	○	○	×	×	×	×	×	×	×	×	×
DTS + PLIIx MUSIC	*1	×	×	×	○	○	○	○	×	×	×	×	×	×	×	×	×
DTS + NEO:6	*1	×	×	×	×	○	○	○	×	×	×	×	×	×	×	×	×
DTS NEO:6 CINEMA		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
DTS NEO:6 MUSIC		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○

NOTE:
*1: This mode is not available when the surround back speaker setup is set to "None".
*2: This mode is not available when the surround back speaker setup is set to "1spkr" or "None".
*3: For input signals other than 2 channel signals, this mode cannot be selected when surround back speaker is set to "1spkr" or "None".

● : Mode selectable in initial status
◎ : Mode fixed when "AFDM" is "ON"
○ : Selectable mode
× : Non-selectable mode

Button		Note	Input signals															
						DTS				DOLBY DIGITAL					DVD-AUDIO		Super Audio CD	
Surround mode		Note	ANALOG	LINEAR PCM / WAV	WMA (Windows Media Audio) / MP3 / MPEG-4 AAC / FLAC	DTS ES DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY DIGITAL EX (With Flag)	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL (5.1/5/4ch)	DOLBY DIGITAL (4/3ch)	DOLBY DIGITAL (2ch)	DVD-Audio (multi ch)	DVD-Audio (2ch)	DSD (multi ch)	DSD (2ch)
STANDARD																		
	DOLBY SURROUND																	
	DOLBY DIGITAL EX	*1	×	×	×	×	×	×	×	○	○	○	○	×	×	×	×	×
	DOLBY DIGITAL		×	×	×	×	×	×	×	○	●	●	●	×	×	×	×	×
	DOLBY DIGITAL + PLIIx CINEMA	*2	×	×	×	×	×	×	×	● ◎	○	○	○	×	×	×	×	×
	DOLBY DIGITAL + PLIIx MUSIC	*1	×	×	×	×	×	×	×	○	○	○	○	×	×	×	×	×
	DOLBY PRO LOGIC IIx CINEMA		○	○	○	×	×	×	×	×	×	×	×	●	×	○	×	○
	DOLBY PRO LOGIC IIx MUSIC		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
	DOLBY PRO LOGIC IIx GAME		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
	DOLBY PRO LOGIC II CINEMA		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
	DOLBY PRO LOGIC II MUSIC		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
	DOLBY PRO LOGIC II GAME		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
	DOLBY PRO LOGIC		○	○	○	×	×	×	×	×	×	×	×	○	×	○	×	○
	DOLBY HEADPHONE	*4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	MULTI CH IN																	
	MULTI CH IN		×	×	×	×	×	×	×	×	×	×	×	×	●	×	●	×
	MULTI IN + PLIIx CINEMA	*2	×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
	MULTI IN + PLIIx MUSIC	*1	×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
	MULTI CH IN 7.1		×	×	×	×	×	×	×	×	×	×	×	×	● ◎ (7.1)	×	×	×
DIRECT																		
	DIRECT		○	○	○	○	○	○	○	○	○	○	○	○	×	○	×	○
	DSD DIRECT		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○
	DSD MULTI DIRECT		×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	×
	MULTI CH DIRECT		×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
	M DIRECT + PLIIx CINEMA	*2	×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
	M DIRECT + PLIIx MUSIC	*1	×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
	M DIRECT 7.1		×	×	×	×	×	×	×	×	×	×	×	×	○	×	×	×

NOTE:
*1: This mode is not available when the surround back speaker setup is set to "None".
*2: This mode is not available when the surround back speaker setup is set to "1spkr" or "None".
*4: You can select this when the headphone plug is inserted into the headphone jack.

● : Mode selectable in initial status
◎ : Mode fixed when "AFDM" is "ON"
○ : Selectable mode
× : Non-selectable mode

Button		Input signals															
					DTS				DOLBY DIGITAL					DVD-AUDIO		Super Audio CD	
Surround mode	Note	ANALOG	LINEAR PCM / WAV	WMA (Windows Media Audio) / MP3 / MPEG-4 AAC / FLAC	DTS ES DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY DIGITAL EX (With Flag)	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL (5.1/5/4ch)	DOLBY DIGITAL (4/3ch)	DOLBY DIGITAL (2ch)	DVD-Audio (multi ch)	DVD-Audio (2ch)	DSD (multi ch)	DSD (2ch)
PURE DIRECT																	
PURE DIRECT		○	○	○	○	○	○	○	○	○	○	○	○	×	○	×	○
DSD PURE DIRECT		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	○
DSD MULTI PURE		×	×	×	×	×	×	×	×	×	×	×	×	×	×	○	×
MULTI CH PURE DIRECT		×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
M PURE D + PLⅡx CINEMA	*2	×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
M PURE D + PLⅡx MUSIC	*1	×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×
M CH PURE DIRECT 7.1		×	×	×	×	×	×	×	×	×	×	×	×	○	×	×	×
DSP SIMULATION																	
7CH STEREO	*5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
WIDE SCREEN		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SUPER STADIUM		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
ROCK ARENA		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
JAZZ CLUB		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CLASSIC CONCERT		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
MONO MOVIE		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
VIDEO GAME		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
MATRIX		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
STEREO																	
STEREO		●	●	●	○	○	○	○	○	○	○	○	○	○	●	○	●

NOTE :
*1: This mode is not available when the surround back speaker setup is set to "None".
*2: This mode is not available when the surround back speaker setup is set to "1spkr" or "None".
*5: If the surround back speaker setup is set to "None" and when using headphones, then "5CH STEREO" is displayed.
  "9CH STEREO" is displayed when surround (A+B) and the surround back speaker are used.

● : Mode selectable in initial status
○ : Selectable mode
× : Non-selectable mode

About Networks

Windows Media Player Ver.11

This is a media player distributed free of charge by Microsoft Corporation.

It can be used to play playlists created with Windows Media Player ver. 11 as well as files in such formats as WMA, DRM WMA, MP3 and WAV.

vTuner

This is a free online contents server for Internet radio. Note that usage fees are included in upgrade costs.
For inquiries about this service, visit the vTuner site below.
vTuner website: http://www.radiodenon.com

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DLNA

• DLNA and DLNA CERTIFIED are trademarks and/or service marks of Digital Living Network Alliance.
• Some contents may not be compatible with other DLNA CERTIFIED™ products.

Windows Media DRM

A copyright-protected technology developed by Microsoft.

• Windows Vista and the Windows logo are trademarks of the Microsoft group of companies.
• The PlaysForSure logo, Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.
• Content providers are using the digital rights management technology for Windows Media contained in this device (WM-DRM) to protect the integrity of their content (Secure Content) so that their intellectual property, including copyright, in such content is not misappropriated. This device uses WM-DRM software to play Secure Content (WM-DRM Software). If the security of the WM-DRM Software in this device has been compromised, owners of Secure Content (Secure Content Owners) may request that Microsoft revoke the WM-DRM Software's right to acquire new licenses to copy, display and/or play Secure Content. Revocation does not alter the WM-DRM Software's ability to play unprotected content. A list of revoked WM-DRM Software is sent to your device whenever you download a license for Secure Content from the Internet or from a PC. Microsoft may, in conjunction with such license, also download revocation list onto your device on behalf of Secure Content Owners.

About Wireless LAN

Wi-Fi®

Wi-Fi Certification assures tested and proven interoperability by the Wi-Fi Alliance, a group certifying interoperability among wireless LAN devices.

IEEE 802.11b

This is one wireless LAN standard set by the 802 working group that establishes LAN technology standards at the IEEE (Institute of Electrical and Electronics Engineers) of the United States. It uses the 2.4 GHz band usable freely without a radio frequency license (ISM band), enabling communications at a maximum speed of 11 Mbps.

The value indicated above is the maximum theoretical value for the wireless LAN standard, and does not indicate the actual data transfer rate.

IEEE 802.11g

This is another wireless LAN standard set by the 802 working group that establishes LAN technology standards at the IEEE (Institute of Electrical and Electronics Engineers) of the United States, and is compatible with IEEE 802.11b. It also uses the 2.4 GHz band, but enables communications at a maximum speed of 54 Mbps.

The value indicated above is the maximum theoretical value for the wireless LAN standard, and does not indicate the actual data transfer rate.

Infrastructure Communications

"Infrastructure Communications" refers to networks using wireless LAN access points.
This function can be used to connect to the Internet or a wired LAN via a wireless LAN access point. Wireless LAN access points include wireless broadband routers.

Ad-hoc Communications

Signal transfer through wireless interconnection of computers is referred to as "ad hoc communications". With such ad hoc communications there is no connection to the Internet. Ad hoc communications are suited for establishing simple temporary networks.

Network Names (SSID: Security Set Identifier)

When forming wireless LAN networks, groups are formed to prevent interference, data theft, etc. This grouping is done by "SSID" or "Security Set Identifiers". For further security, a WEP key is set and signal transfer is not possible unless the SSID and WEP key match.

WEP Key (Network Key)

This is key information used for encrypting data when conducting data transfer. On the AVP-A1HD, the same WEP key is used for data encryption and decryption, so the same WEP key must be set on both devices in order for communications to be established between them.

WPA (Wi-Fi Protected Access)

This is a security standard established by the Wi-Fi Alliance. In addition to the conventional SSID (network name) and WEP key (network key), it also uses a user identification function and encrypting protocol for stronger security.

WPA2 (Wi-Fi Protected Access 2)

This is a new version of the WPA established by the Wi-Fi Alliance, compatible with more secure AES encryption.

WPA-PSK/WPA2-PSK (Pre-shared Key)

This is a simple authentication system for mutual authentication when a preset character string matches on the wireless LAN access point and client.

Passphrase

This refers to the code key used for WPA-PSK/WPA2-PSK authentication, a WPA authentication method.

TKIP (Temporal Key Integrity Protocol)

This is a network key used for WPA. The encryption algorithm is RC4, the same as for WEP, but the security level is increased by changing the network key used for encryption for each packet.

AES (Advanced Encryption Standard)

This is a next generation standard encryption method replacing the current DES and 3DES, and because of its high security it is expected to be applied widely to wireless LANs in the future. It uses the "Rijndael" algorithm developed by two Belgian cryptographers to divide the data into blocks of fixed lengths and encrypt each block. It supports data lengths of 128, 192 and 256 bits and key lengths of 128, 192 and 256 bits as well, offering extremely high encryption security.

Relationship Between Video Signals and Monitor Output

❏ MAIN ZONE

Video Convert		Input signal				Monitor output				Monitor output (when GUI menu displayed)			
		HDMI	COMPONENT	S-VIDEO	VIDEO	HDMI	COMPONENT	S-VIDEO	VIDEO	HDMI	COMPONENT	S-VIDEO	VIDEO
		×	×	×	×	※				※ *4	*4	*4	*4
		×	×	×	○	※ VIDEO*1	VIDEO*1	VIDEO*1 *5	VIDEO*1 *5	※ VIDEO*3	VIDEO*3	VIDEO*3	VIDEO*3
		×	×	○	×	※ S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	※ S-VIDEO*3	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		×	×	○	○	※ S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	※ S-VIDEO*3	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		×	○ (1080p)	×	×		COMPONENT	×	×	※ *4	*4	*4	*4
		×	○ (480p ~ 720p)	×	×	※ COMPONENT*1	COMPONENT*1	×	×	※ COMPONENT*3	COMPONENT*3	×	×
		×	○ (480i/576i)	×	×	※ COMPONENT*1	COMPONENT*1	COMPONENT*1	COMPONENT*1	※ COMPONENT*3	COMPONENT*3	COMPONENT*3	COMPONENT*3
		×	○ (1080p)	×	○	※ VIDEO*1	COMPONENT	VIDEO*1 *5	VIDEO*1 *5	※ VIDEO*3	VIDEO*3	VIDEO*3	VIDEO*3
		×	○ (480p ~ 720p)	×	○	※ COMPONENT*1	COMPONENT*1	×	VIDEO	※ COMPONENT*3	COMPONENT*3	×	VIDEO
		×	○ (480i/576i)	×	○	※ COMPONENT*1	COMPONENT*1	COMPONENT*1	COMPONENT*1	※ COMPONENT*3	COMPONENT*3	COMPONENT*3	COMPONENT*3
		×	○ (1080p)	○	×	※ S-VIDEO*1	COMPONENT	S-VIDEO*1	S-VIDEO*1	※ S-VIDEO*3	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		×	○ (480p ~ 720p)	○	×	※ COMPONENT*1	COMPONENT*1	S-VIDEO	S-VIDEO	※ COMPONENT*3	COMPONENT*3	S-VIDEO	S-VIDEO
		×	○ (480i/576i)	○	×	※ COMPONENT*1	COMPONENT*1	COMPONENT*1	COMPONENT*1	※ COMPONENT*3	COMPONENT*3	COMPONENT*3	COMPONENT*3
		×	○ (1080p)	○	○	※ S-VIDEO*1	COMPONENT	S-VIDEO*1	S-VIDEO*1	※ S-VIDEO*3	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		×	○ (480p ~ 720p)	○	○	※ COMPONENT*1	COMPONENT*1	S-VIDEO	S-VIDEO	※ COMPONENT*3	COMPONENT*3	S-VIDEO	S-VIDEO
		×	○ (480i/576i)	○	○	※ COMPONENT*1	COMPONENT*1	COMPONENT*1	COMPONENT*1	※ COMPONENT*3	COMPONENT*3	COMPONENT*3	COMPONENT*3
ON	With HDMI monitor	○	×	×	×	HDMI*2	×	×	×	HDMI*3	×	×	×
		○	×	×	○	HDMI*2	VIDEO*1	VIDEO*1 *5	VIDEO*1 *5	HDMI*3	VIDEO	VIDEO	VIDEO
		○	×	○	×	HDMI*2	S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	HDMI*3	S-VIDEO	S-VIDEO	S-VIDEO
		○	×	○	○	HDMI*2	S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	HDMI*3	S-VIDEO	S-VIDEO	S-VIDEO
		○	○ (1080p)	×	×	HDMI*2	COMPONENT	×	×	HDMI*3	COMPONENT	×	×
		○	○ (480p ~ 720p)	×	×	HDMI*2	COMPONENT*1	×	×	HDMI*3	COMPONENT	×	×
		○	○ (480i/576i)	×	×	HDMI*2	COMPONENT*1	COMPONENT*1	COMPONENT*1	HDMI*3	COMPONENT	COMPONENT	COMPONENT
		○	○ (1080p)	×	○	HDMI*2	COMPONENT	VIDEO*1 *5	VIDEO*1 *5	HDMI*3	COMPONENT	VIDEO	VIDEO
		○	○ (480p ~ 720p)	×	○	HDMI*2	COMPONENT*1	×	VIDEO	HDMI*3	COMPONENT	×	VIDEO
		○	○ (480i/576i)	×	○	HDMI*2	COMPONENT*1	COMPONENT*1	COMPONENT*1	HDMI*3	COMPONENT	COMPONENT	COMPONENT
		○	○ (1080p)	○	×	HDMI*2	COMPONENT	S-VIDEO*1	S-VIDEO*1	HDMI*3	COMPONENT	S-VIDEO	S-VIDEO
		○	○ (480p ~ 720p)	○	×	HDMI*2	COMPONENT*1	S-VIDEO	S-VIDEO	HDMI*3	COMPONENT	S-VIDEO	S-VIDEO
		○	○ (480i/576i)	○	×	HDMI*2	COMPONENT*1	COMPONENT*1	COMPONENT*1	HDMI*3	COMPONENT	COMPONENT	COMPONENT
		○	○ (1080p)	○	○	HDMI*2	COMPONENT	S-VIDEO*1	S-VIDEO*1	HDMI*3	COMPONENT	S-VIDEO	S-VIDEO
		○	○ (480p ~ 720p)	○	○	HDMI*2	COMPONENT*1	S-VIDEO	S-VIDEO	HDMI*3	COMPONENT	S-VIDEO	S-VIDEO
		○	○ (480i/576i)	○	○	HDMI*2	COMPONENT*1	COMPONENT*1	COMPONENT*1	HDMI*3	COMPONENT	COMPONENT	COMPONENT
	Without HDMI monitor or with HDMI monitor off	○	×	×	×	×				×	*4	*4	*4
		○	×	×	○	×	VIDEO*1	VIDEO*1 *5	VIDEO*1 *5	×	VIDEO*3	VIDEO*3	VIDEO*3
		○	×	○	×	×	S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	×	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		○	×	○	○	×	S-VIDEO*1	S-VIDEO*1	S-VIDEO*1	×	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		○	○ (1080p)	×	×	×	COMPONENT	×	×	×	*4	*4	*4
		○	○ (480p ~ 720p)	×	×	×	COMPONENT*1	×	×	×	COMPONENT*3	×	×
		○	○ (480i/576i)	×	×	×	COMPONENT*1	COMPONENT*1	COMPONENT*1	×	COMPONENT*3	COMPONENT*3	COMPONENT*3
		○	○ (1080p)	×	○	×	COMPONENT	VIDEO*1 *5	VIDEO*1 *5	×	VIDEO*3	VIDEO*3	VIDEO*3
		○	○ (480p ~ 720p)	×	○	×	COMPONENT*1	×	VIDEO	×	COMPONENT*3	×	VIDEO
		○	○ (480i/576i)	×	○	×	COMPONENT*1	COMPONENT*1	COMPONENT*1	×	COMPONENT*3	COMPONENT*3	COMPONENT*3
		○	○ (1080p)	○	×	×	COMPONENT	S-VIDEO*1	S-VIDEO*1	×	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		○	○ (480p ~ 720p)	○	×	×	COMPONENT*1	S-VIDEO	S-VIDEO	×	COMPONENT*3	S-VIDEO	S-VIDEO
		○	○ (480i/576i)	○	×	×	COMPONENT*1	COMPONENT*1	COMPONENT*1	×	COMPONENT*3	COMPONENT*3	COMPONENT*3
		○	○ (1080p)	○	○	×	COMPONENT	S-VIDEO*1	S-VIDEO*1	×	S-VIDEO*3	S-VIDEO*3	S-VIDEO*3
		○	○ (480p ~ 720p)	○	○	×	COMPONENT*1	S-VIDEO	S-VIDEO	×	COMPONENT*3	S-VIDEO	S-VIDEO
		○	○ (480i/576i)	○	○	×	COMPONENT*1	COMPONENT*1	COMPONENT*1	×	COMPONENT*3	COMPONENT*3	COMPONENT*3

○ : Signal present
× : No signal
480p ~ 720p : 480p / 576p / 1080i / 720p

× : No output
*1 : The "Picture Adjust" setting can be made ("Contrast", "Brightness", "Chroma Level", "Hue").
*2 : The "Picture Adjust" setting can be made ("DNR", "Enhancer", "Sharpness").
*3 : Superimposed over video signal
*4 : Only displayed when the **MENU** button is pressed
*5 : If the input signal is in SECAM format, it is converted to PAL for output

※ : Output according to "Resolution" setting (i/p Scaler : When "A to H" is set) (☞page 45).
▓ : Wallpaper or set background color displayed
▒ : Output according to "Resolution" setting (i/p Scaler : When "H to H" is set) (☞page 45).
░ : GUI menu not displayed

🖉

• The MAIN ZONE video conversion function is compatible with the following formats: NTSC, PAL, SECAM, NTSC4,43, PAL -N, PAL -M and PAL -60.
• When SECAM signals of video input are up-converted, the signals are output in PAL format from the S-Video connector.
• If the input signal is a component 1080p signal, up-converting to HDMI is not possible.
• The GUI menu display cannot be superimposed when xvYCC signals and component 1080p signal, computer's resolution (e.g. VGA) are input.

Video Convert	Input signal				Monitor output (Normally)				Monitor output (when GUI menu displayed)			
	HDMI	COMPONENT	S-VIDEO	VIDEO	HDMI	COMPONENT	S-VIDEO	VIDEO	HDMI	COMPONENT	S-VIDEO	VIDEO
OFF	×	×	×	×	×	×	×	×	○	○	○	○
	×	×	×	○	×	×	×	○ (VIDEO)	○	○	○	○
	×	×	○	×	×	×	○ (S-VIDEO)	×	○	○	○	○
	×	×	○	○	×	×	○ (S-VIDEO)	○ (VIDEO)	○	○	○	○
	×	○	×	×	×	○ (COMPONENT)	×	×	○	○	○	○
	×	○	×	○	×	○ (COMPONENT)	×	○ (VIDEO)	○	○	○	○
	×	○	○	×	×	○ (COMPONENT)	○ (S-VIDEO)	×	○	○	○	○
	×	○	○	○	×	○ (COMPONENT)	○ (S-VIDEO)	○ (VIDEO)	○	○	○	○
	○	×	×	×	○ (HDMI)	×	×	×	○ (HDMI)✱	×	×	×
	○	×	×	○	○ (HDMI)	×	×	○ (VIDEO)	○ (HDMI)✱	×	×	×
	○	×	○	×	○ (HDMI)	×	○ (S-VIDEO)	×	○ (HDMI)✱	×	×	×
	○	×	○	○	○ (HDMI)	×	○ (S-VIDEO)	○ (VIDEO)	○ (HDMI)✱	×	×	×
	○	○	×	×	○ (HDMI)	○ (COMPONENT)	×	×	○ (HDMI)✱	×	×	×
	○	○	×	○	○ (HDMI)	○ (COMPONENT)	×	○ (VIDEO)	○ (HDMI)✱	×	×	×
	○	○	○	×	○ (HDMI)	○ (COMPONENT)	○ (S-VIDEO)	×	○ (HDMI)✱	×	×	×
	○	○	○	○	○ (HDMI)	○ (COMPONENT)	○ (S-VIDEO)	○ (VIDEO)	○ (HDMI)✱	×	×	×

○ : Signal present
× : No signal

○ : Output present
× : No output
✱ : Superimposed over video signal

To display the GUI menu on an HDMI monitor, output with a resolution of 480p/576p.

❏ ZONE2

Video Convert	Input signal			Monitor output		
	COMPONENT	S-VIDEO	VIDEO	COMPONENT	S-VIDEO	VIDEO
ON	×	×	×	×	×	×
	×	×	○	○ (VIDEO)	○ (VIDEO)	○ (VIDEO)
	×	○	×	○ (S-VIDEO)	○ (S-VIDEO)	○ (S-VIDEO)
	×	○	○	○ (S-VIDEO)	○ (S-VIDEO)	○ (S-VIDEO)
	○ (1080p)	×	×	○ (COMPONENT)	×	×
	○ (480p ~ 720p)	×	×	○ (COMPONENT)	×	×
	○ (480i / 576i)	×	×	○ (COMPONENT)	○ (COMPONENT)	○ (COMPONENT)
	○ (1080p)	×	○	○ (COMPONENT)✱1	○ (VIDEO)	○ (VIDEO)
	○ (480p ~ 720p)	×	○	○ (COMPONENT)✱1	○ (VIDEO)	○ (VIDEO)
	○ (480i / 576i)	×	○	○ (COMPONENT)✱1	○ (COMPONENT)	○ (VIDEO)
	○ (1080p)	○	×	○ (COMPONENT)✱2	○ (S-VIDEO)	○ (S-VIDEO)
	○ (480p ~ 720p)	○	×	○ (COMPONENT)✱2	○ (S-VIDEO)	○ (S-VIDEO)
	○ (480i / 576i)	○	×	○ (COMPONENT)✱2	○ (S-VIDEO)	○ (S-VIDEO)
	○ (1080p)	○	○	○ (COMPONENT)✱2	○ (S-VIDEO)	○ (S-VIDEO)
	○ (480p ~ 720p)	○	○	○ (COMPONENT)✱2	○ (S-VIDEO)	○ (S-VIDEO)
	○ (480i / 576i)	○	○	○ (COMPONENT)✱2	○ (S-VIDEO)	○ (S-VIDEO)

○ : Output present
× : No output
✱1 : With On-screen display, the VIDEO signal is superimposed output.
✱2 : With On-screen display, the S-VIDEO signal is superimposed output.
COMPONENT :
    When you operate the **MENU** button, on-screen display is displayed.

Video Convert	S-VIDEO Monitor Out	Input signal			Monitor output		
		COMPONENT	S-VIDEO	VIDEO	COMPONENT	S-VIDEO	VIDEO
OFF	–	×	×	×	×	×	×
	–	×	×	○	×	×	○ (VIDEO)
	–	×	○	×	×	○ (S-VIDEO)	×
	Used	×	○	○	×	○ (S-VIDEO)	○ (VIDEO)*2
	Not used	×	○	○	×	–	○ (VIDEO)
	–	○	×	×	○ (COMPONENT)	×	×
	–	○	×	○	○ (COMPONENT)*1	×	○ (VIDEO)
	–	○	○	×	○ (COMPONENT)*2	○ (S-VIDEO)	×
	Used	○	○	○	○ (COMPONENT)*2	○ (S-VIDEO)	○ (VIDEO)*2
	Not used	○	○	○	○ (COMPONENT)*1	–	○ (VIDEO)

○ : Output present
× : No output
∗1 : With On-screen display, the VIDEO signal is superimposed output.
∗2 : With On-screen display, the S-VIDEO signal is superimposed output.

❏ ZONE3

Input signal		Monitor output
S-VIDEO	VIDEO	VIDEO
×	×	×
×	○	○ (VIDEO)
○	×	○ (S-VIDEO)
○	○	○ (S-VIDEO)
×	×	×
×	○	○ (VIDEO)
○	×	○ (S-VIDEO)
○	○	○ (S-VIDEO)

○ : Signal present
× : No signal

○ : Output present
× : No output

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Troubleshooting

If a problem should arise, first check the following:
1. **Are the connections correct?**
2. **Is the set being operated as described in the owner's manual?**
3. **Are the other components operating properly?**

If this unit does not operate properly, check the items listed in the table below. Should the problem persist, there may be a malfunction.

In this case, disconnect the power immediately and contact your store of purchase.

〖General〗

Symptom	Cause	Countermeasure	Page
Power does not turn on, or turns off directly after it was turned on.	• Connection of the power cord is faulty.	• Check that the power plugs are securely inserted into the AVP-A1HD's AC inlet and the wall power outlet.	22
No sound is produced from speakers.	• The connection with the input devices or power amp is faulty.	• Check the connections.	11
	• Device you want to play and set input source do not match.	• Select an appropriate input source.	42
	• Master volume is turned too low.	• Adjust the master volume to an appropriate level.	54
	• Mute mode is set.	• Cancel the mute mode.	54
	• Headphones are connected.	• Disconnect the headphones.	54
	• No digital signals are being input.	• Select an input source for which the digital input setting has been made.	42 ~ 44
	• The connectors to which the digital inputs are assigned and the settable input modes do not match.	• Set the input mode.	45
Display is off.	• The "Dimmer" setting is set to "OFF".	• Set to something other than "OFF".	41
	• The PURE DIRECT mode is set.	• Set a surround mode other than the PURE DIRECT mode.	48
"DOLBY DIGITAL" indicator does not appear on display.	• DVD player's digital audio output setting is not proper.	• Check the DVD player's audio output setting. For details, read the DVD player's operating instructions.	–

Symptom	Cause	Countermeasure	Page
Power turns off suddenly and power indicator flashes red.	• Set is damaged.	• Turn off the power and contact a DENON service center.	–

〖Remote Control Unit〗

Symptom	Cause	Countermeasure	Page
Set does not work properly when remote control unit operated.	• Batteries are worn.	• Replace with new batteries.	3, 4
	• You are operating outside of the specified range.	• Operate within the specified range.	4
	• Obstacle between main unit and remote control unit.	• Remove the obstacle.	–
	• The batteries are not inserted in the proper direction, as indicated by the polarity marks in the battery compartment.	• Insert the batteries in the proper direction, following the polarity marks in the battery compartment.	3, 4
	• The set's remote control sensor is exposed to strong light (direct sunlight, inverter type fluorescent bulb light, etc.).	• Move the set to a place in which the remote control sensor will not be exposed to strong light.	4
	• The remote ID of the main unit and remote control unit do not match.	• Set the same remote IDs for the main unit and remote control unit.	40, 69, 74

【Audio】

Symptom	Cause	Countermeasure	Page
No sound is produced from center speaker.	• You are playing a monaural source (TV, AM radio broadcast, etc.) in the "STANDARD" (Dolby/DTS Surround) or "HOME THX CINEMA" mode.	• The mode is set to something other than "STANDARD" (Dolby/DTS Surround) or "HOME THX CINEMA" .	46, 47
No sound is produced from surround speakers.	• The surround mode is set to "STEREO", "DIRECT" or "PURE DIRECT".	• Set to a surround playback mode.	46 ~ 48
No sound is produced from surround back speaker.	• Surround back speaker setting is set to "None".	• Set to something other than "None".	28
	• Surround mode not set to a mode for 6.1- or 7.1-channel playback.	• Select a surround playback mode.	46 ~ 48
No sound is produced from subwoofer.	• Subwoofer's power not turned on.	• Turn on the subwoofer's power.	–
	• The "Subwoofer" setting at "Speaker configuration" is set to "No".	• Set to "Yes".	28
	• The subwoofer is not properly connected.	• Check the connections.	11
	• The subwoofer's volume is turned off.	• Adjust the subwoofer's volume to an appropriate level.	–
No test tones are produced when main remote control unit's **TEST** button is pressed.	• Surround mode not set to "STANDARD" (Dolby/DTS Surround) or "HOME THX CINEMA" mode.	• Set to the "STANDARD" (Dolby/DTS Surround) or "HOME THX CINEMA" mode.	46, 47
DTS sound is not output.	• DVD player's audio output setting is not set to bitstream.	• Set the DVD player. For details, refer to the DVD player's operating instructions.	–
	• DVD player is not compatible with DTS sound playback.	• Use a DTS-compatible player.	–
	• The AVP-A1HD's "Decode Mode" setting is set to "PCM".	• Set to the "Auto" or "DTS" mode.	45
HDMI audio signals are not output from speakers.	• The "Manual Setup" – "HDMI Setup" – "Audio" setting is set to "TV".	• Set to "Amp".	31

Symptom	Cause	Countermeasure	Page
No sound is output from the monitor connected with HDMI connections.	• The "Manual Setup" – "HDMI Setup" – "Audio" setting is set to "Amp".	• Set to "TV".	31

【Video】

Symptom	Cause	Countermeasure	Page
The on-screen display does not appear.	• The format of the GUI and TV (PAL or NTSC) do not match.	• Match the format of the GUI and TV.	39
No picture appears.	• The connections between the AVP-A1HD and monitor are faulty.	• Check the connections.	12, 13
	• The monitor's input setting is wrong.	• Set properly.	–
	• PURE DIRECT mode is set.	• Cancel the PURE DIRECT mode.	48
	• The player is connected using the component input connectors, the monitor is connected using the video (yellow) or S-Video output connectors.	• High definition (1080i/720p) and progressive (480p/576p) video signals are not down-converted. Set the player to interlace (480i/576i) signals.	–
No picture appears with HDMI connections.	• The connections to the HDMI connectors are faulty.	• Check the connections.	12
	• HDMI input setting is improper.	• Check the HDMI input setting.	43
	• The monitor is not compatible with copyright protection (HDCP).	• Connect a monitor that is compatible with copyright protection (HDCP).	12
	• The HDMI format of the player and monitor do not match.	• Match the HDMI format of the player and monitor.	12
Picture cannot be recorded.	• Input source does not match recorder's video connection connector (video or S-Video).	• The video conversion function does not work for the REC OUT connectors. Match the input source and recorder connections.	16, 17
DVDs cannot be copied on a VCR.	–	• This is not a malfunction. Most movie software includes copy prevention signals and cannot be copied.	–

【iPod】

Symptom	Cause	Countermeasure	Page
iPod cannot be played.	• The input source assigned to "iPod dock" is not selected.	• Switch to the input source assigned at "iPod dock".	44
	• Cable is not properly connected.	• Reconnect.	14
	• Control Dock for iPod's AC adapter is not connected to power outlet.	• Plug the Control Dock for iPod's AC adapter into a power outlet.	–

【NET/USB】

Symptom	Cause	Countermeasure	Page
When a USB memory device is connected, "USB" is not displayed on the GUI menu.	• The set cannot recognize a USB memory device.	• Check the connection.	19
	• A USB memory device not conforming to mass storage class or MTP standards is connected.	• Connect a USB memory device conforming to mass storage class or MTP standards.	–
	• The set port and the connected port do not match.	• Connect to the port set at "USB Select".	46
	• A USB memory device that the set cannot recognize is connected.	• This is not a malfunction. DENON does not guarantee that all USB memory devices will operate or receive power.	–
	• USB memory device is connected via USB hub.	• Connect the USB memory device directly to the USB port.	–
Files on a USB memory device cannot be played.	• USB memory device is in format other than FAT16 or FAT32.	• Set the format to FAT16 or FAT32. For details, refer to the USB memory device's operating instructions.	–
	• USB memory device is divided into multiple partitions.	• When divided into multiple partitions, only files stored in the top partition can be played.	–
	• Files are stored in a non-compatible format.	• Record the files in a compatible format.	57
	• You are attempting to play a file that is copyright protected.	• Files that are copyright protected cannot be played on this set.	57
The file names are not displayed properly (".…", etc.).	• Characters that cannot be displayed are used.	• This is not a malfunction. On this set, characters that cannot be displayed are replaced with a " . (period)".	–

Symptom	Cause	Countermeasure	Page
Internet radio cannot be played.	• Ethernet cable is not properly connected or network is disconnected.	• Check the connection status.	20
	• Program is being broadcast in non-compatible format.	• Only Internet radio programs in MP3 and WMA can be played on this set.	56, 57
	• The computer's or router's firewall is activated.	• Check the computer's or router's firewall settings.	–
	• Radio station is not currently broadcasting.	• Choose a radio station that is currently broadcasting.	59
	• IP address is wrong.	• Check the set's IP address.	36
Files stored on a computer cannot be played.	• Files are stored in a non-compatible format.	• Record in a compatible format.	56, 57
	• You are attempting to play a file that is copyright protected.	• Files that are copyright protected cannot be played on this set.	56, 57
	• Set and computer are connected by USB cable.	• The set's USB port cannot be used for connection to a computer.	–
Server is not found, or it is not possible to connect to the server.	• The computer's or router's firewall is activated.	• Check the computer's or router's firewall settings.	–
	• Computer's power is not turned on.	• Turn on the power.	–
	• Server is not running.	• Launch the server.	–
	• Set's IP address is wrong.	• Check the set's IP address.	36
Cannot connect to preset or favorite radio stations.	• Radio station is not currently broadcasting.	• Wait a while before trying again.	–
	• Radio station is not currently in service.	• It is not possible to connect to radio stations that are no longer in service.	–
For some radio stations, "Server Full" or "Connection Down" is displayed and station cannot be connected to.	• Station is congested or not currently broadcasting.	• Wait a while before trying again.	–
Sound is broken during playback.	• Network's signal transfer speed is slow or communications lines or radio station is congested.	• This is not a malfunction. When playing broadcast data with a high bit rate, the sound may be broken, depending on the communications conditions.	–
Sound quality is poor or played sound is noisy.	• File being played has a low bit rate.	• This is not a malfunction.	–

【Wireless LAN】

Symptom	Cause	Countermeasure	Page
Cannot connect to network.	• The settings of the SSID and network key (WEP) are incorrect.	• Match the network settings with the AVP-A1HD's settings.	34, 35
	• The reception is poor and the signals cannot be received.	• Shorten the distance from the wireless LAN's access point, remove any obstacles and otherwise improve visibility, then try reconnecting. Also install away from microwave ovens and the access points of other networks.	–
	• There are multiple networks and the usable channels overlap.	• Set the access point's channel settings away from the channels used for other networks. Alternatively, connect using a network cable.	–
Played sound is interrupted or sound cannot be played.	• There are multiple networks and the usable channels overlap.	• Set the access point's channel settings away from the channels used for other networks. Alternatively, connect using a network cable.	–

Specifications

❏ Audio section
• **Analog**
Input sensitivity / Input impedance: RCA Pre output (unbalanced) : 200 mV / 47 kΩ/kohms
XLR Pre output (balanced)   : 400 mV / 100 kΩ/kohms
Frequency response: 10 Hz ~ 100 kHz +1, –3 dB (DIRECT mode)
S/N: 102 dB (IHF–A weighted, DIRECT mode)
Distortion: 0.005 % (20 Hz ~ 20 kHz) (DIRECT mode)
Rated output: RCA Pre output (unbalanced) : 1.2 V
XLR Pre output (balanced)   : 2.4 V

• **Digital**
D/A output: Rated output — 2 V (at 0 dB playback)
Total harmonic distortion — 0.005 % (1 kHz, at 0 dB)
Dynamic range — 110 dB
Digital input: Format — Digital audio interface
• **Phono equalizer (PHONO input — REC OUT)**
Input sensitivity: 2.5 mV
RIAA deviation: ±1 dB (20 Hz to 20 kHz)
S/N: 74 dB (A weighting, with 5 mV input)
Rated output: 150 mV
Distortion factor: 0.03 % (1 kHz, 3 V)

❏ Video section
• **Standard video connectors**
Input / output level and impedance: 1 Vp-p, 75 Ω/ohms
Frequency response: 5 Hz ~ 10 MHz — +0, –3 dB (when video convert set to "OFF")
• **S-Video connectors**
Input / output level and impedance: Y (brightness) signal — 1 Vp-p, 75 Ω/ohms
C (color) signal — 0.3 (PAL) / 0.286 (NTSC) Vp-p, 75 Ω/ohms
Frequency response: 5 Hz ~ 10 MHz — +0, –3 dB (when video convert set to "OFF")
• **Color component video connector**
Input / output level and impedance: Y (brightness) signal — 1 Vp-p, 75 Ω/ohms
P_B / C_B signal — 0.7 Vp-p, 75 Ω/ohms
P_R / C_R signal — 0.7 Vp-p, 75 Ω/ohms
Frequency response: 5 Hz ~ 100 MHz — +0, –3 dB (when video convert set to "OFF")

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❏ Wireless LAN

Network type (wireless LAN standards) :	Conforming to IEEE 802.11b
	Conforming to IEEE 802.11g
	(Conforming to Wi-Fi®) ✱
Transfer rate:	DS-SS: 11 / 5.5 / 2 / 1 Mbps (Automatic switching)
	OFDM: 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps (Automatic switching)
Security:	SSID (Network name)
	WEP key (network key) (64/128 bits)
	WPA-PSK (TKIP/AES)
	WPA2-PSK (TKIP/AES)
Used frequency range:	2,412 MHz ~ 2,472 MHz
No. of channels:	Conforming to IEEE 802.11b : 13ch (DS-SS) (Of which 1 channel used)
	Conforming to IEEE 802.11g : 13ch (OFDM) (Of which 1 channel used)

❏ General

Power supply:	AC 230 V, 50 Hz
Power consumption:	150 W
	0.3 W (Standby)
Maximum external dimensions:	434 (W) x 214 (H) x 485 (D) mm
Weight:	27.5 kg

❏ Main remote control unit (RC-1067)

Batteries:	LR6/AA Type (two batteries)
Maximum external dimensions:	63 (W) x 238 (H) x 31 (D) mm
Weight:	190 g (including batteries)

❏ Sub remote control unit (RC-1070)

Batteries:	R03/AAA Type (two batteries)
Maximum external dimensions:	49 (W) x 220 (H) x 24.5 (D) mm
Weight:	114 g (including batteries)

✱ : Wi-Fi® conformity indicates tested and proven interoperability by the "Wi-Fi Alliance", a group certifying interoperability among wireless LAN devices.

※ For purposes of improvement, specifications and design are subject to change without notice.

List of preset codes / Liste von voreingestellten Codes / Liste de codes préréglés / Lista dei codici pre-regolati / Lista de códigos pre-ajustados / Lijst van vooringestelde codes / Förteckning över förinställda koder

Denon Amp

D	Denon	81001, 82001, 83001, 84001

Denon Tuner

D	Denon (Analog)	52863, 52795, 52800, 52805

Denon Digital Tuner

D	Denon (NET)	62865, 62837, 62838, 62839

Denon iPod

D	Denon	72815, 72816, 72817, 72818

Cable

A	A-Mark	00008, 00144
	ABC	00237, 00003, 00008
	Accuphase	00003
	Acorn	00237
	Action	00237
	Active	00237
	ADB	01230
	Aichi Denshi	01512
	Americast	00899
	Amstrad	01222
	Archer	00237
	Auna	01230
	Austar	00276
B	BCC	00276
	Bell South	00899
	Bestlink	00303
	Birmingham Cable Communications	00276
	British Telecom	00003
C	Cable & Wireless	01068
	Century	00008
	Coship	01462
D	Daehan	00778
	Daeryung	01877, 00877, 00477, 00008
	Digeo	01187
	Director	00476
	DX Antenna	01500
E	Emerson	00303
	Encon	00008
F	Fosgate	00276
	Foxtel	01222
	France Telecom	00817
	Freebox	01482
	Fujitsu	01497
G	Galaxi	00008
	GE	00237, 00144
	Gehua	00476
	General Instrument	00476, 00810, 00276, 00003
	Gibralter	00003
	GNI	01466
	GoldStar	00144
H	Hitachi	00003, 00008
	Hongtian Jiangsu	01462
	Hwalin	00303
I	Insight	00476, 00810
J	Jerrold	00476, 00810, 00276, 00003
	Jiuzhou	01445
K	KNC	00008
L	LG	00144
M	Macab	00817
	Madritel	01230
	Maspro	01510
	Matav	01082
	Memorex	00000
	Mitsubishi	00003
	Motorola	01376, 00476, 00810, 00276, 01187
	MS	00303
N	NEC	01496
	Noos	00817
	Nova Vision	00008
	Novaplex	00008
	NTL	00276, 00003, 01060, 01068
O	Oak	00303
	Ono	01068
	Optus	00276, 01060
P	Pace	01877, 00877, 00237, 00008, 01060, 01068, 01577
	Panasonic	00000, 00008, 00144, 01488
	Paragon	00000, 00008, 00525
	Penney	00000
	Philips	01305, 00317, 00817
	Pioneer	01877, 00877, 00144, 00533, 01500
	Pulsar	00000
	PVP Stereo Visual Matrix	00003
Q	Quasar	00000
R	RadioShack	00303
	Regal	00276
	Runco	00000
S	Sagem	00817
	Salora	00000
	Samsung	00003, 00000, 00144, 00778, 00840, 01060, 01666
	Scientific Atlanta	01877, 00877, 00477, 00237, 00003, 00000, 00008, 01510
	Skyworth	01464
	Sony	01006, 01460
	Sprucer	00144
	Starcom	00003
	StarHub	00276
	Sumitomo	01500, 01504
	Supercable	00276
T	Taihan	00778
	TCL	01445
	Telewest	01068
	Time Warner cable	01877
	TongKook	00840
	Torx	00003
	Toshiba	00000, 01509
	Trans PX	00276, 00303
	TS	00003, 00303
U	United Cable	00276, 00003
	US Electronics	00276, 00003, 00008
V	Videoway	00000
	Visiopass	00817
Z	Zenith	00000, 00525, 00899

Cable/PVR Combination ※1

A	Americast	00899
D	Digeo	01187
F	Freebox	01482
G	General Instrument	00810
J	Jerrold	00810
M	Motorola	01376, 00810, 01187
P	Pace	01877, 00237
	Pioneer	01877, 00877
S	Scientific Atlanta	01877, 00877
	Sony	01006
	Supercable	00276
T	Time Warner cable	01877
Z	Zenith	00899

CD Player

A	Acoustic Research	40420
	Advantage	40032
	Aiwa	40157
	Arcam	40157
	Audio Research	40157
	Audiolab	40157
	Audiomeca	40157
	Audioton	40157
	AVI	40157
B	Balanced Audio Technology	40157
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	Bush	40388
C	Cairn	40157
	California Audio Labs	40029, 40303
	Cambridge	40157
	Cambridge Audio	40157
	Cambridge Soundworks	40157
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	CEC	40420
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D	Denon	40873, 40003, 40766, **[42867]** *, 42868
	DKK	40000
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	Dynamic Bass	40179
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G	Garrard	40393, 40420
	Genexxa	40000, 40032, 40037, 40179
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	Grundig	40157
H	Hafler	40173
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	Hitachi	40032
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	Integra	40101
J	Jerrold	40003
	JVC	40032, 40072
K	Kenwood	40681, 40000, 40029, 40157, 40028, 40037, 40036, 40190
	KLH	41318
	Krell	40157
L	Linn	40157
	Loewe	40157
	Luxman	40393
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	Marantz	40029, 40157
	Matsui	40157
	MCS	40029
	Memorex	40000, 40032, 40179, 40420, 40468
	Meridian	40157
	Micromega	40157
	Miro	40000
	Mission	40157
	Modulaire	40000, 40032, 40087, 40179, 40420, 40468
	MTC	40420
	Musical Fidelity	40393
	Myryad	40157
N	NAD	40000, 40721
	Naim	40157
	NSM	40157
O	Onkyo	40868, 40101
	Optimus	40000, 40032, 40037, 40087, 40179, 40393, 40420, 40468
	Orion	40393
P	Panasonic	40029, 40303, 40388, 40752
	Parasound	40420
	Penney	40029
	Philips	40157
	Pioneer	40032, 40101, 40468
	Polk Audio	40157
	Proceed	40420
	Proton	40157
Q	QED	40157
	Quad	40157
	Quasar	40029
R	Radiola	40157
	RadioShack	40000, 40032, 40179, 40420, 40468
	RCA	40032, 40053, 40179, 40420, 40468
	Realistic	40000, 40032, 40087, 40179, 40420, 40468
	Restek	40157
	Revox	40157
	Roksan	40420
	Rotel	40157, 40420
	Royal	40420
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	Saisho	40000
	Sansui	40000, 40157
	Sanyo	40000, 40087, 40179
	SAST	40157
	Sears	40179
	Sharp	40037
	Siemens	40157
	Silsonic	40036
	Simaudio	40157
	Sonic Frontiers	40157
	Sony	40490, 40000, 40100, 41364, 40185
	Sugden	40157
	Sylvania	40157
T	TAG McLaren	40157
	Tandy	40032

	Tascam	40393, 40420
	Teac	40490, 40393, 40420
	Technics	40029, 40303
	Techwood	40303
	Thomson	40053
	Thorens	40157
	Thule Audio	40157
	Tokai	40420
U	Universum	40157, 40053
V	Victor	40072
W	Wadia	40393
	Wards	40000, 40032, 40157, 40053, 40087, 40179
Y	Yamaha	40490, 40868, 40032, 40036
	Yorx	40000

CD Recorder

D	Denon	40766, 42868
J	JVC	40072
R	RCA	40053, 40420
S	Sony	40000, 40100, 41364
T	Teac	40420
	Thomson	40053

Tape Deck

A	Aiwa	20029, 20197, 20200, 21315
	Akai	20283, 20439
	Arcam	20076
	Audiolab	20029
C	Carver	20029
D	Denon	20076, 20371, 21311, **[22471]** *
F	Fisher	20074
G	Garrard	20308, 20309, 20375, 20439
	Genexxa	20439
	GoldStar	20375
	Grundig	20029, 20375
H	Harman/Kardon	20182, 20029, 21314
I	Inkel	20070, 20071, 20337
J	JVC	20244, 20273, 20274, 20303, 20304, 20310, 21309
K	Kenwood	20070, 20071, 20092, 20233, 20234, 21364
L	LG	20375
	Luxman	20308, 20309
M	Magnavox	20029
	Marantz	20029, 20009
	Memorex	20099
	Mitsubishi	20283, 20439
	Myryad	20029
O	Onkyo	20135, 20136, 20282
	Optimus	20027, 20220, 20337, 20439

	Orion	20308, 20309
P	Palladium	20375
	Panasonic	20229
	Philips	20029, 20229
	Phonotrend	20337
	Pioneer	20027, 20220, 20099, 20109, 21306, 21312
	Polk Audio	20029
R	Radiola	20029
	RCA	20027, 20220
	Revox	20029
S	Sansui	20029, 20009
	Sanyo	20074
	Sharp	20231, 20371
	Sherwood	20337
	Sonic	20375
	Sony	20243, 20170, 20291, 20234, 21313
T	TaeKwang	20439
	Tandberg	20109
	Teac	20280, 20283, 20289, 20308, 20309
	Technics	20229
	Technovox	20229
	Thorens	20029
U	Universum	20375, 20439
V	Victor	20244, 20273, 20274
W	Wards	20027, 20029
	Wharfedale	20439
Y	Yamaha	20097, 20094

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A	ABS	01272
	Accurian	01653
	Alienware	01272
C	CyberPower	01272
D	D-Link	01554
	Dgtec	01363
E	Epson	01563
G	Gateway	01272
H	Hewlett Packard	01272, 01267
	Howard Computers	01272
	HP	01272, 01267
	Hush	01272
I	iBUYPOWER	01272
L	LG	01415
	Linksys	01272, 01365
M	Media Center PC	01272
	Microsoft	01272, 01805
	Mind	01272
	Motorola	01363
N	Niveus Media	01272

	Northgate	01272
P	Packard Bell	01272
	Panasonic	01120
	Pioneer	01010
R	Ricavision	01272
S	Samsung	01190, 01490
	Sensory Science	01126
	Sharp	01010
	SMC	01456
	Sony	01272, 01324, 01364
	Stack 9	01272
	Sylvania	01563
	Systemax	01272
T	Tagar Systems	01272
	Toshiba	01272
	Touch	01272
V	Viewsonic	01272, 01329
	Vizio	01126
	Voodoo	01272
X	Xbox	01805
Z	ZT Group	01272

Satellite Receiver

A	@sat	01300
	@Sky	01334
	A-Mark	00345
	ABsat	00123, 00713
	ADB	00642, 01259, 01367, 01418, 01473, 01491
	AGS	00710
	Aiwa	01514
	Akai	00200
	Alba	00455, 00713, 01284, 01659, 01811
	Allsat	00200, 01043
	Alltech	00713
	Allvision	01232, 01334, 01412
	AlphaStar	00772
	Amitronica	00713
	Amstrad	00345, 00713, 00795, 00847, 00863, 00882, 01113, 01175, 01693, 01801
	Anglo	00713
	Ankaro	00713
	AntSat	01083
	Apollo	00455
	Arcon	01043, 01075
	Armstrong	00200
	Arnion	01300
	Asat	00200
	ASCI	01334
	ASLF	00713
	AssCom	00853

	Astacom	00710
	Aston	00142
	Astra	00713
	Astratec	01743
	Astro	00173, 00658, 01099, 01100, 01113
	Atlantic Telephone	01333
	Atsat	01300
	AtSky	01334
	Audioline	01672
	Aurora	00642, 00879, 01333, 01433
	Austar	00497, 00642, 00863, 00879, 01176, 01259
	Axiel	00710
	Axil	01457, 01659
	Axis	01111
B	B@ytronic	01412
	Beko	00455
	Bell ExpressVu	00775
	Big Sat	01457
	Black Diamond	01284
	Blaupunkt	00173
	Blue Sky	00713
	Boca	00713, 01232, 01366
	Boston	00710, 01251
	Brainwave	00658, 01672
	British Sky Broadcasting	00847, 01175, 01662, 01847
	Broco	00713
	BskyB	00847, 01175, 01662
	BT	00710, 01296
	Bubu Sat	00713
	Bush	01284, 01645, 01672, 01743, 01811
C	Canal	00853
	Canal Digital	00853, 01622
	Canal Satellite	00853, 01339, 01853
	Canal+	00853
	Centrex	01457
	CGV	01413, 01567
	Chaparral	00216
	Cherokee	00123, 00710
	Chess	00713, 01085, 01334, 01626
	Chili	01718
	CityCom	00299, 00394, 00818, 01075, 01176, 01232
	Classic	01672
	Clatronic	01413
	CNS	01367
	Comag	01232, 01366, 01412, 01413
	Condor	01700
	Conia	01695
	Contec	00394
	Continental Edison	01695

	Coship	01457
	Crossdigital	01109
	Crown	01284
	Cryptovision	00455, 00795
	Cyfra+	01076
	Cyrus	00200
D	D-box	00723, 00873, 01114
	Daewoo	00713, 01111, 01296, 01743
	Delfa	00863
	Deltasat	01075
	Dgtec	01542, 01631, 01242
	Digenius	00299
	Digiality	01685
	Digifusion	01645, 01743
	DigiLogic	01284
	DigiQuest	00863, 01300, 01457, 01473
	DigiSat	01232
	Digisky	01457
	DigitAll World	01227
	Digiturk	01076
	Digiwave	01631
	Dijam	01296
	DiPro	01367, 01543
	DirecTV	01377, 00392, 00566, 00639, 01639, 01142, 00247, 00749, 01749, 00724, 00819, 01856, 01076, 01108, 00099, 01109, 01414, 01442, 01609, 01392, 01640
	Discovery	00710
	Dish Network System	01505, 01005, 00775, 01775
	Dishpro	01505, 01005, 00775, 01775
	Distratel	01283, 01704
	DMT	01075
	DNT	00200
	Dream Multimedia	01237
	DSE	01375
	DSTV	00642, 00879, 01433
	Durabrand	01284
	DX Antenna	01530
E	Echostar	01505, 01005, 00775, 00455, 00610, 00713, 00853, 00871, 01086, 01200, 01323, 01409, 01418, 01473, 01775
	Einhell	00713
	Elap	00713, 01567
	Elsat	00713
	Elta	00200, 01659
	Emme Esse	00871
	Energy Sistem	01631
	Engel	00713, 01251
	EP Sat	00455
	Esat	00879
	Eurieult	00882

Brand	Code(s)
Eurocrypt	00455
EuroLine	01251
Europa	00863
Europhon	00299
Eurosky	00262, 00299
Eurostar	00818
Eutelsat	00713
Expressvu	00775, 01775
F Fenner	00713
Ferguson	00455, 01291, 01743
Finlandia	00455
Finlux	00455
Flair Mate	00713
FMD	01251, 01413, 01457
Force	01101
Fortec Star	01083
Foxtel	00455, 00497, 00795, 00879, 01162, 01176, 01356
Fracapro Planet	00871
Fracarro	00125, 00871
France Telecom	00871
Freesat	00882
FTE	00863
FTEmaximal	00713, 00863
Fuba	00173, 00262, 00299, 00394, 01214, 01251, 01801
Fugionkyo	00125
Funai	01377
G Galaxis	00853, 00863, 01101, 01111, 01557
Gardiner	00818
Garnet	01075
GbSAT	01214
GE	00392, 00566
Gecco	01412
General Instrument	00869
General Satellite	01176
GF Good Friends	01043
GF Star	01043
Globo	01251, 01334, 01412, 01429, 01626
GOD Digital	00200
GOI	00775, 01775
Gold Box	00853
Gold Vision	01631
Golden Interstar	01283
GoldStar	00394
Goodmans	00455, 01284, 01291
Gradiente	00887
Granada	00455
Grundig	00173, 00345, 00847, 00853, 00879, 01291
H Handan	01622
Hanseatic	01099, 01100
Hauppauge	01672
HB	01214, 01801
HDT	01159
Hills	01232
Hirschmann	00125, 00173, 00299, 00710, 00882, 01085, 01111, 01232, 01412
Hisense	01535
Hitachi	00749, 00819, 00455, 01250, 01284, 01518, 01523, 01525
Homecast	01214, 01680, 01700
Hornet	01300
Houston	00775
HTS	00775, 01775
Hughes Network Systems	01142, 00749, 01749, 01442
Humax	00863, 01176, 01225, 01406, 01427, 01675, 01743, 01790, 01915
Huth	01075
Hyundai	01075, 01159
I iCan	01367
ID Digital	01176
ILLUSION sat	01557, 01631
iLo	01535
Imperial	01334, 01429, 01672
Indovision	00887
Ingelen	00882
Innova	00099
Interstar	01214
InVideo	00871
ISkyB	00887
Italtel	00871
ITT Nokia	00455, 00723, 00873
J Jadeworld	00642
Jaeger	01334
Jerrold	00869
Jiuzhou	01450
JOK	00710
JVC	00775, 01507, 01531, 01775
K K-SAT	00713
Kamm	00713
Kaon	01300
KaTelco	01111
Kathrein	00123, 00173, 00200, 00249, 00394, 00442, 00480, 00504, 00658, 00713, 00818, 01221, 01416, 01561, 01567
Kennex	00125
Kenwood	00853
Klap	00710
Kocmoc TB	01333
Koscom	01043
Kosmos	00442, 01333
Kreiling	00249, 00658
Kreiselmeyer	00173
Kross	01695
L L&S Electronic	01043, 01334
Labgear	01296
LaSAT	00173, 00299
Lava	01631
Legend	01718
Legrand	01718
Lemon	01334
Lenco	00713
Lenoxx	01611
LG	01075, 01414
Lifesat	00299, 00713, 01043
Lodos	01284
Logik	01284
Logix	01075
Lorenzen	00299
Luxor	00345, 00873
M M Electronic	00818
M vision	01557
Magnavox	00724, 00722
Manata	00710, 00713
Manhattan	00455, 00710, 01083
Marantz	00200
Maspro	00173, 00713, 01530
Master's	00394
Matsui	00173, 00710, 01284, 01743
Maximum	01075, 01334, 01685
McIntosh	00869
MDS	01225
Mediabox	00853
Mediacom	01206
MediaSa	00853
Medion	00299, 00713, 01043, 01075, 01232, 01334, 01412, 01626
Medison	00713
Mega	00200
Memorex	00724
Metronic	00713, 00818, 01283, 01334, 01375, 01704
Metz	00173
MiCO	01811
Micro	00713
Micro Elektronic	00713
Micro Technology	00713
Micromaxx	00299
Microstar	01075
Microtec	00713
Mitsubishi	00749, 00455
Morgan's	00200, 00713, 01232, 01412
Motorola	00869, 00856, 01473
MTEC	01214
Muller	01695
Multibroadcast	00642, 00879
Multichoice	00642, 00879, 01333, 01433, 01559, 01560
Mx Onda	01659
Myryad	00200
Mysat	00713
MySky	01693, 01848, 01850
N NEC	01519
NEOTION	01334
Netgem	01322
Netsat	00099, 00887
Neuf TV	01322
Neuhaus	00713
Neuling	01232
Neusat	00713
Nevir	01659
Next Level	00869
Nikko	00200, 00713, 00723
Noda Electronic	01704
Nokia	00455, 00723, 00751, 00853, 00873, 01023, 01223, 01723
Nordmende	00455, 01611
O OctalTV	01505
Okano	00442
Omega	00887
Opentel	01232, 01412
Optex	00394, 00713, 01043, 01283, 01611
Optimus	00724
Optus	00879
Orbis	01232, 01334, 01412
Orbitech	01099, 01100
Origo	00497
OSAT	00345
P P/Sat	01232
Pace	00200, 00329, 00455, 00497, 00795, 00847, 00853, 00887, 01175, 01323, 01356, 01423, 01693, 01717, 01848, 01850
Pacific	01284, 01375
Packard Bell	01111
Packsat	00710
Palcom	00299, 01409
Panarex	01159
Panasat	00615, 00879, 01333, 01433
Panasonic	00247, 00701, 00455, 00847, 01304, 01404, 01508, 01526, 01527
Panda	00173, 00455
Pansat	01159
Patriot	00710
Paysat	00724
peeKTon	01457
Philips	01142, 00749, 01749, 00775, 00724, 00819, 01076, 00722, 00099, 00710, 00455, 00818, 00200, 00847, 00853, 00173, 01114, 00133, 01442, 01543, 01672
Phonotrend	00863, 01200
Pilotime	01339
Pino	01334
Pioneer	01142, 00329, 00853, 01308, 01442
Planet	00871
Plasmatic	00442
PMB	00713, 01611
Polytron	00394
Portland	01296
Preisner	00262, 01101, 01113, 01366
Premier	00723, 00853, 00873, 01429
Prima	00795
Primacom	01111
Primestar	00869
Profile	00710
Promax	00455
Proscan	00392, 00566
Proton	01535
Q QNS	01367, 01402, 01404
Quadral	00710
Quelle	00299
R Radiola	00200
RadioShack	00566, 00775, 00869
Radix	00394, 00882, 01113, 01317
RCA	00392, 00566, 01142, 00775, 00855, 00143, 01291, 01392, 01442
Rebox	01214
Regal	01251
RFT	00200
Roadstar	00713, 00853
Rollmaster	01413
Rover	00713
Rownsonic	01567
S SAB	01251
Saba	00710, 00820
Sabre	00455
Sagem	00820, 01114, 01253, 01307, 01690
Samsung	01377, 01142, 01276, 01108, 01109, 00853, 00863, 01206, 01442, 01458, 01570, 01609, 01700, 01916
Sat Control	01300
Sat Team	00713
SAT+	01409
Satec	00713
Satelco	01232
Satplus	01100

Brand	Code
Satstation	01083
Schaub Lorenz	01214
Schneider	00710, 01206, 01251
Schwaiger	00394, 00504, 00863, 01075, 01083, 01111, 01317, 01334, 01412, 01457
SCS	00299
Sedea Electronique	00125, 01206, 01283, 01626
SEG	01075, 01087, 01251, 01626
Seleco	00871
Septimo	01375
Serd	01412
Serino	00610
Servimat	01611
ServiSat	00713, 01251
Sharp	01517
Siemens	00173, 01334, 01429
Silva	00299
Skantin	00713
SKR	00713
SKY	00856, 00099, 00847, 00887, 01014, 01175, 01662, 01693, 01847, 01848, 01850
SKY Italia	00853, 01693, 01847, 01848
Sky Television	01014
Sky XL	01251, 01412
Sky+	01175
Skymaster	00713, 01075, 01085, 01200, 01334, 01409, 01567, 01611
Skymax	00200
Skyplus	01232, 01334, 01412
SkySat	00713
Skyvision	01334
SL	00299, 01672
SM Electronic	00713, 01200, 01409
Smart	00713, 00882, 01101, 01113, 01232, 01404, 01413
Sony	00639, 01639, 00455, 00847, 00853, 01524, 01558, 01640
Star	00887
Star Choice	00869
Star Trak	00772, 00869
Starland	00713
Starlite	00200
Stream	01847, 01848
Strong	00125, 00713, 00820, 00853, 00879, 01159, 01284, 01300, 01409, 01626
Sunkai	00123
Sunny	01300
Sunsat	00713
Sunstar	00642
Supernova	00887
SVA	01455
Systec	01334

	Brand	Code
T	Tantec	00455
	Tarbs	01225
	Tatung	00455
	TBoston	01659
	Teac	01225, 01227, 01251, 01322
	Tecatel	01200
	TechniSat	00262, 00455, 00863, 01099, 01100, 01195, 01197, 01322
	Technomate	01283, 01610
	Technosonic	01672
	Technotrend	01429
	Techwood	01284, 01626
	Tele System Electronic	01251, 01409, 01611, 01801
	Teleciel	01043
	TeleClub	01367
	Telefunken	00710
	Teleka	00262, 00442
	Telestar	01099, 01100, 01251, 01334, 01610, 01626
	Telesystem	01801
	Televes	00455, 01214, 01300, 01334
	Televisa	00887
	Telewire	01232
	Tevion	00713, 01409, 01622, 01672
	Thomson	00392, 00566, 00455, 00710, 00713, 00820, 00847, 00853, 01046, 01175, 01291, 01534, 01543, 01662
	Thorn	00455
	Tiny	01672
	Tioko	00394
	Tivo	01142, 01442
	Tokai	00200
	Tonna	00455, 00713, 01611
	Topfield	01206, 01208, 01545, 01783
	Toshiba	00749, 01749, 00790, 00819, 00455, 01285, 01501, 01516, 01530
	TPS	00820, 01253, 01307
	Triax	00200, 00713, 00853, 01113, 01227, 01251, 01291, 01296, 01626
	Trio	01075
	TT-micro	01429
	Turnsat	00713
	Twinner	00713, 01611
U	UEC	00879, 01162, 01333, 01356
	UltimateTV	01392, 01640
	Uniden	00724, 00722
	Unisat	00200
	United	01251
	Universum	00173, 00299, 01087, 01099, 01251
	US Digital	01535
	USDTV	01535

	Brand	Code
V	Variosat	00173
	Ventana	00200
	Vestel	01251
	VH Sat	00299
	Viasat	01682
	ViewSat	01232
	Visionic	00125, 01283
	VisionNet	01557
	Visiosat	00142, 00710, 00713, 01413, 01457, 01718
	Viva	00856
	Vivid	01162
	Voom	00869
	VTech	00818
W	Wavelength	01232, 01413
	Wewa	00455
	Wharfedale	01284
	Winbox	01801
	Wintel	00299
	Wisi	00173, 00299, 00455
	Worldsat	00123, 00710, 01214, 01251, 01543
X	Xcom	00123
	XMS	01075
	Xsat	00123, 00713, 00847, 01214, 01323
	Xtreme	01300
Y	Yakumo	01413
	Yamada	01718
	Yes	00887
Z	Zehnder	00394, 00504, 00818, 01075, 01232, 01251, 01334, 01412, 01413
	Zenith	00856, 01856
	Zeta Technology	00200
	Zodiac	01801

Satellite Receiver/ PVR Combination ※1, ※3

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	Brand	Code
A	@sat	01300
	Allvision	01412
	Amstrad	01175
	Atsat	01300
B	B@ytronic	01412
	British Sky Broadcasting	01175
	BskyB	01175, 01662
	Bush	01645
C	Canal Satellite	01339
	Comag	01412
D	Digifusion	01645
	DigiQuest	01300
	Digiturk	01076

	Brand	Code
	DirecTV	01377, 00392, 00639, 01142, 01076, 00099, 01392, 01442, 01640
	Dish Network System	01505, 00775
	Dishpro	01505, 00775
	DMT	01075
	Dream Multimedia	01237
E	Echostar	01505, 00775, 00610
	Expressvu	00775
F	Foxtel	01356
G	GbSAT	01214
	Gecco	01412
	Globo	01412
H	HDT	01159
	Hirschmann	01412
	Homecast	01680
	Hughes Network Systems	01142, 01442
	Humax	01176, 01427, 01675
	Huth	01075
	Hyundai	01075, 01159
K	Kaon	01300
	Kathrein	00249, 00658, 01221, 01561
L	LG	01075
M	Maximum	01334
	Mediacom	01206
	Medion	01412
	Microstar	01075
	Morgan's	01412
	Motorola	00869
	MTEC	01214
	Multichoice	01333, 01559, 01560
	MySky	01693, 01848, 01850
N	NEOTION	01334
	Nokia	01023
O	Opentel	01412
	Orbis	01412
P	Pace	01175, 01356, 01423, 01850
	Panasonic	01304
	Philips	01142, 00099, 01442
	Pilotime	01339
	Proscan	00392
R	Radix	01317
	RCA	01392
	Rebox	01214
S	Sagem	01253, 01307
	Samsung	01206, 01442, 01570, 01609
	Sat Control	01300
	Schneider	01206
	Schwaiger	01075, 01412
	Sedea Electronique	01206
	Serd	01412
	SKY	01175, 01693, 01848, 01850

	Brand	Code
	SKY Italia	01848
	Sky XL	01412
	Skymaster	01075
	Skyplus	01412
	Sony	00639, 01640
	Star Choice	00869
	Strong	01300
	Sunny	01300
T	TechniSat	01195, 01197
	Thomson	01175, 01534, 01662
	Topfield	01206, 01545, 01783
	TPS	01253, 01307
X	Xtreme	01300
Z	Zehnder	01075, 01412

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	Brand	Code
H	Hughes Network Systems	20739
P	Philips	20739
S	Samsung	20739

Television

	Brand	Code
1	888	10264
A	A-Mark	10047, 10054, 10009
	A.R. Systems	10037, 10352, 10374, 10455, 10556
	Accent	10009, 10037
	Accuscan	10047
	Accuscreen	10001
	Acoustic Research	11269
	Action	10030, 10650
	Acura	10009
	Addison	10092, 10108, 10653
	ADL	11217
	Admiral	10047, 10054, 10017, 10051, 10093, 10463, 10180, 10163, 10264, 10418
	Advent	10761, 10783, 10815, 10817, 10842, 10876, 11933
	Adventuri	10000
	Adyson	10217
	AEG	11163, 11556
	Agashi	10217, 10264
	Agna	10150
	Aiko	10092, 10009, 10035, 10037, 10217, 10264, 10361, 10371, 10433
	Aim	10706, 10037, 10455, 10805
	Aiwa	10264, 10701, 11904, 11911
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E	Elfunk	30713, 30884
	Emerson	30675, 31268
	ESA	31268
F	Ferguson	30695, 30713, 30884
	Funai	31268
G	Goodmans	30713
	Grandin	30713
	Grundig	30539, 30695
H	Hitachi	31247
I	Insignia	31268
J	JDV	31367
	JNC	31271
K	Konka	31192
L	Logik	30713, 30884
	Luker	31367
	Luxor	30713
M	Magnavox	31268
	Matsui	30713, 30884
	Maxim	31367
N	Naiko	31367
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	Neovia	31271
O	Orion	30695
P	Pacific	30695
	Panasonic	31490
	Philips	30539, 30854, 31260
R	RCA	31022
S	Saivod	31367
	Samsung	30899
	Sansui	30695
	Schneider	31367
	SEG	30713, 30884
	Sliding	31115
	Stevison	31367
	Sylvania	30630, 30675, 31268
T	Technica	31367
	Thomson	30551
	Toshiba	30695
U	United	30713, 30884, 31367
	Universum	30713
V	Vestel	30884

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A	Aiwa	11904, 11911
	America Action	10180
	Amstrad	10171
	Audiovox	10180
B	Beko	10486
	Black Diamond	11909

	Broksonic	10463, 11911
	Bush	11556
C	Curtis Mathes	10051
D	Daewoo	11909
E	Emerson	10236, 10463, 11909, 11911
F	Ferguson	10073, 10625
	Fidelity	10171
	Funai	11904
G	GE	10047, 10051, 10093, 11917, 11922
	GoldStar	10037
	Goodmans	10374, 11909
	Grundig	10037, 10195, 10556
H	Harley Davidson	11904
	Hinari	10036
	Hitachi	11904
I	Internal	11909
J	JVC	11923
L	LG	10178
	Lloyd's	11904
M	Magnavox	10054, 11904
	Memorex	10250
	Mitsubishi	10093, 10556, 11917
O	Orion	10463, 11911
P	Palsonic	11904
	Panasonic	10250, 10051
	Penney	10051
	Philips	10037, 10556
Q	Quasar	10250, 10051
R	Radiola	10556
	RadioShack	11904
	RCA	10047, 10051, 10093, 11917, 11922
S	Saba	10625
	Samsung	11959
	Sansui	10463, 11904, 11911
	Schneider	10037, 10556, 11904
	Sears	11904
	Sharp	10093, 11917
	Siemens	10037
	Sony	10000, 11505, 11904
	Sylvania	10054
	Symphonic	11904
T	Teac	10178, 10171
	Technics	10556
	Thomas	11904
	Thomson	10625
	Toshiba	11971
W	White Westinghouse	11909
Z	Zenith	11904, 11909, 11911

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	Akai	20352
	Alba	20352
	America Action	20278
	Amstrad	20000
	Audiovox	20278
B	Beko	20104
	Bestar	20278
	Blue Sky	20278, 20352, 20742
	BPL	20046
	Broksonic	20002, 20479, 21479
	Bush	20352, 20742
C	Citizen	20278, 21278
	Curtis Mathes	20035, 21035
D	Daewoo	20278, 20637, 21278
	Dantax	20352
E	Emerson	20002, 20278, 20479, 20637, 21278, 21479
F	Ferguson	20000, 20278
	Fidelity	20000
	Firstline	20278
	Funai	20000
G	GE	20060, 20035, 20048, 20240, 20807, 21035, 21060
	GoldStar	20037, 20480, 21237
	Goodmans	20278, 20352, 20637
	Grandin	20278, 20742
	Grundig	20081, 20347, 20352, 20742
H	Hanimex	20352
	Harley Davidson	20000
	Hinari	20352
	Hitachi	20000
	Hypson	20037
I	Internal	20278, 20637
J	JBL	20278
	JMB	20352
K	Kambrook	20037
	Kneissel	20278, 20352
L	LG	20037, 20480, 21237
	Lloyd's	20000
	Loewe	20037
M	Magnasonic	20278, 21278
	Magnavox	20081, 20000, 21781
	Magnin	20240
	Matsui	20352, 20742
	Medion	20352
	Memorex	20162, 20037, 21162, 21237, 21262
	MGA	20240
	Mitsubishi	20048, 20081, 20043, 20807
O	Optimus	20162, 21162, 21262
	Orion	20002, 20352, 20479, 20742, 21479
P	Pace	20352
	Pacific	20742

	Palsonic	20000
	Panasonic	20035, 20162, 21035, 21162, 21262
	Penney	20035, 20037, 20240, 21035, 21237
	Philips	20081
	Portland	20637
Q	Quasar	20035, 20162, 21035, 21162
R	Radiola	20081
	RadioShack	20000
	RCA	20060, 20035, 20048, 20240, 20807, 21035, 21060
S	Saba	20320
	Samsung	20240, 20432, 21014
	Sansui	20000, 20479, 21479
	Sanyo	20240
	Saville	20352
	Schneider	20081, 20000
	Sears	20037, 20000, 21237
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	Sharp	20037, 20048, 20807
	Shivaki	20037
	Siemens	20081
	Sinudyne	20352
	Sony	20032, 20000, 21232
	Supra	20348
	Sylvania	20081, 21781
	Symphonic	20000
T	Tatung	20352
	Teac	20037, 20000, 20637, 20642
	Technics	20081
	Technosonic	20352
	Telefunken	20278
	Thomas	20000
	Thomson	20278
	Toshiba	20352, 20432, 20845, 21145
U	United	20742
W	White Westinghouse	20278, 20637
Z	Zenith	20000, 20479, 20637, 21479

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T	Thomson	30551

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A	Akai	11903
B	Broksonic	11938
E	Emerson	11944
	ESA	11944
M	Magnavox	11944
P	Panasonic	11946, 11947
R	RCA	11953

S	Sharp	11917
	Sylvania	11944
	Symphonic	11944
T	Toshiba	11945

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S	Sharp	20807

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A	Akai	30899
E	Emerson	30821
	ESA	30821
M	Magnavox	30821
P	Panasonic	31362, 31462
R	RCA	31132
S	Sharp	30630
	Superscan	30821
	Sylvania	30821
	Symphonic	30821
T	Toshiba	31045

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	ABS	21972
	Admiral	20060, 20048, 20039, 20047, 20104, 20121, 20209, 20479
	Adventura	20037, 20240, 20000
	Aiko	20278
	Aim	20278, 20348, 20642
	Aiwa	20037, 20032, 20000, 20209, 20041, 20348, 20352, 20479, 20742, 21137
	Akai	20037, 20240, 20041, 20106, 20315, 20348, 20352, 20642
	Akura	20041
	Alba	20081, 20000, 20209, 20278, 20315, 20348, 20352
	Alienware	21972
	Allegro	20039, 21137
	Allorgan	20240
	Allstar	20081
	America Action	20278
	American High	20035, 20081
	Amoisonic	20479
	Amstrad	20000, 20278
	Anam	20162, 20037, 20240, 20278, 20226, 20480
	Anam National	20162, 20226, 21162, 21562
	Ansonic	20000
	Aristona	20081
	ASA	20037, 20081
	Asha	20240
	Astra	20035, 20240
	Asuka	20037, 20081, 20000, 20038

	Audiolab	20081
	Audiosonic	20278
	Audiovox	20037, 20278, 20038
	Avis	20000
	AVP	20000, 20352
	Awa	20037, 20043, 20278, 20642
B	Baird	20000, 20104, 20041, 20278, 20046, 20106
	Basic Line	20104, 20278, 20046
	Beaumark	20240
	Beko	20104
	Bell & Howell	20035, 20048, 20039, 20000, 20104, 20046, 20479
	Bestar	20278
	Black Diamond	20642
	Black Panther	20278
	Blaupunkt	20162, 20081, 20226
	Blue Sky	20037, 20209, 20278, 20348, 20352, 20480, 20642, 20742, 21137
	BPL	20046
	Brandt	20041, 20320
	Brandt Electronique	20041
	Brinkmann	20209, 20348
	Broksonic	20184, 20121, 20209, 20002, 20348, 20479, 21479
	Bush	20081, 20000, 20209, 20278, 20315, 20348, 20352, 20642, 20742
C	Calix	20037
	Candle	20037, 20038
	Canon	20035
	Capehart	20002
	Carena	20081, 20209
	Carrefour	20045
	Carrera	20240
	Carver	20035, 20081
	Casio	20000
	Cathay	20278
	CCE	20278
	CGE	20000, 20041
	Changhong	20048, 20081
	Cimline	20209
	Cineral	20278
	CineVision	21137
	Citizen	20035, 20037, 20240, 20000, 20209, 20278, 20479, 21278
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	Clatronic	20000, 21593
	Colortyme	20060, 20035, 20045, 20278
	Colt	20000
	Combitech	20352
	Condor	20278
	Craig	20037, 20047, 20240
	Criterion	20000

	Crosley	20035, 20081, 20000
	Crown	20037, 20278, 20480
	Curtis Mathes	20060, 20035, 20162, 20240, 20000, 20041, 20278, 20432, 21035
	Cybernex	20240
	CyberPower	21972
	Cyrus	20081
D	Daewoo	20037, 20045, 20104, 20209, 20278, 20046, 20352, 20637, 20642, 21137, 21278
	Dansai	20278
	Dantax	20352
	Daytron	20037, 20278
	De Graaf	20048, 20081, 20042, 20104, 20046
	Decca	20081, 20000, 20067, 20209, 20041, 20352
	Degraff	20048, 20081, 20042, 20104
	Deitron	20278
	Dell	21972
	Denon	20081, 20042
	Derwent	20041
	Diamant	20037
	Diamond	20348
	Digitor	20642
	DirecTV	20739
	Domland	20209
	DSE	20642
	Dual	20081, 20000, 20041, 20278, 20348
	Dumont	20081, 20000, 20104
	Durabrand	20039, 20038, 20642
	Dynatech	20240, 20000
E	Elbe	20278, 20038
	Electrohome	20060, 20037, 20240, 20000, 20043, 20209
	Electrophonic	20037
	Elin	20240
	Elta	20278
	Emerald	20184, 20121
	Emerex	20032
	Emerson	20035, 20037, 20184, 20039, 20240, 20045, 20000, 20121, 20043, 20209, 20002, 20278, 20348, 20479, 20637, 21278, 21479, 21593
	ESA	21137
	ESC	20240, 20278
	EuroLine	21593
F	Ferguson	20000, 20041, 20278, 20320, 20348
	Fidelity	20240, 20000, 20352, 20432
	Finlandia	20037, 20048, 20081, 20000, 20042, 20104, 20043, 20046, 20106, 20226
	Finlux	20081, 20000, 20042, 20104

	Firstline	20037, 20045, 20042, 20043, 20209, 20278, 20348, 20480, 21137
	Fisher	20039, 20047, 20000, 20104, 20046
	Flint	20209, 20348
	Fuji	20035, 20033
	Fujitsu	20037, 20045, 20000
	Fujitsu General	20037
	Funai	20037, 20000, 20278, 21593
G	Galaxi	20000
	Galaxis	20278
	Garrard	20000
	Gateway	21972
	GE	20060, 20035, 20048, 20240, 20000, 20226, 20320, 20807, 21035, 21060
	GEC	20081
	Gemini	20060
	General	20045
	General Technic	20348
	Genexxa	20037, 20000, 20104, 20278
	Go Video	20240, 20432, 20614, 21137
	GoldStar	20035, 20037, 20039, 20000, 20209, 20278, 20038, 20225, 20226, 20480, 21137, 21237
	Goodmans	20037, 20081, 20240, 20000, 20209, 20278, 20348, 20352, 20637, 20642, 20742
	GPX	20037
	Gradiente	20000
	Graetz	20240, 20104, 20041
	Granada	20035, 20037, 20048, 20081, 20240, 20000, 20042, 20104, 20046, 20226
	Grandin	20037, 20000, 20209, 20278, 20742
	Grundig	20081, 20226, 20320, 20347, 20348, 20352, 20742
H	Haaz	20348
	Hanimex	20352
	Hanseatic	20037, 20081, 20209, 20038
	Haojie	20240
	Harley Davidson	20000
	Harman/Kardon	20081, 20038
	Headquarter	20046
	Hewlett Packard	21972
	HI-Q	20035, 20047, 20000
	Hinari	20240, 20209, 20041, 20278, 20352
	Hisawa	20209, 20035
	Hischito	20045
	Hitachi	20035, 20037, 20081, 20240, 20045, 20000, 20042, 20041, 20046, 20089
	Hoeher	20278, 20642
	Hornyphon	20081
	Howard Computers	21972
	HP	21972

	Hughes Network Systems	20042, 20739
	Humax	20739
	Hush	21972
	Hypson	20037, 20000, 20209, 20278, 20352, 20480
	Hytek	20047, 20000
I	iBUYPOWER	21972
	Imperial	20000
	Ingersol	20240, 20209
	Interbuy	20037
	Interfunk	20081, 20104
	Internal	20278, 20637
	International	20037, 20278, 20642
	Intervision	20037, 20000, 20209, 20278, 20348
	Irradio	20037, 20081, 21137
	ITT	20240, 20104, 20041, 20046, 20106
	ITT Nokia	20240, 20104, 20041, 20106
	ITV	20037, 20278
J	Janeil	20240
	JBL	20278
	Jensen	20067, 20041
	JMB	20209, 20348, 20352, 20742
	Joyce	20000
	JVC	20184, 20081, 20045, 20067, 20041, 21162
K	Kambrook	20037
	Karcher	20081, 20278, 20642
	KEC	20037, 20278
	Kendo	20037, 20209, 20278, 20106, 20315, 20348, 20642
	Kenwood	20067, 20041, 20038, 20046
	KIC	20000
	Kimari	20047
	Kneissel	20037, 20209, 20278, 20348, 20352
	Kodak	20035, 20037
	Kolin	20043, 20041
	Kolster	20209
	KTV	20000
	Kuba	20047
	Kuba Electronic	20047
L	Lenco	20278
	LG	20037, 20240, 20045, 20000, 20042, 20209, 20278, 20038, 20225, 20480, 21137, 21237
	Lifetec	20209, 20348
	Linksys	21972
	Lloyd's	20240, 20000, 20038
	Loewe	21062, 20162, 20037, 20081, 21262, 21562
	Logik	20240, 20000, 20209, 20106
	Lumatron	20278, 21137
	Lunatron	21137

Brand	Code
Luxor	20048, 20047, 20104, 20043, 20046, 20106, 20315
LXI	20037, 20000, 20042, 20067
M M Electronic	20037, 20240, 20000, 20038
Magnadyne	20081
Magnasonic	20037, 20240, 20000, 20278, 21278
Magnavox	20035, 20037, 20048, 20039, 20081, 20240, 20000, 20226, 20618, 20642, 21593, 21781
Magnin	20240
Magnum	20642
Manesth	20081, 20045, 20209
Marantz	20035, 20081, 20209, 20038
Mark	20000, 20278
Marta	20037
Mastec	20642
Master's	20278
Matsui	20037, 20240, 20209, 20278, 20348, 20352, 20742
Matsushita	20035, 20162, 20081, 20226, 21162
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Mediator	20081
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MEI	20035
Memorex	20035, 20162, 20037, 20048, 20039, 20047, 20240, 20000, 20104, 20209, 20278, 20046, 20348, 20479, 21162, 21237, 21262
Metronic	20081
Metz	21062, 20162, 20037, 20081, 20226, 20347, 20836, 21162, 21262, 21562
MGA	20060, 20240, 20043
MGN Technology	20240
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Migros	20000
Mind	21972
Minolta	20042
Mitsubishi	20060, 20048, 20047, 20081, 20000, 20042, 20067, 20043, 20041, 20480, 20642, 20807
Motorola	20035, 20048
MTC	20240, 20000
MTX	20000
Multitec	20037
Multitech	20039, 20000
Murphy	20000
Myryad	20081
N NAD	20240, 20104
Naiko	20348, 20642
NAP	20039
National	20226
Nebula Electronics	20033
NEC	20035, 20037, 20048, 20104, 20067, 20041, 20278, 20038, 21137
Neckermann	20081, 20041
Nesco	20000
Neufunk	20209
Newave	20037
Nikkai	20278
Nikko	20037, 20278
Nikkodo	20037, 20278
Nishi	20240
Niveus Media	21972
Noblex	20240
Nokia	20048, 20081, 20240, 20042, 20104, 20041, 20278, 20046, 20106, 20315
Nordmende	20067, 20041, 20320
Northgate	21972
Nu-Tec	20209
O Oceanic	20048, 20081, 20000, 20104, 20041, 20046, 20106
Okano	20209, 20278, 20315, 20348
Olympus	20035, 20162, 20104, 20226
Onimax	20642
Onkyo	20222
Optimus	21062, 20035, 20162, 20037, 20048, 20047, 20240, 20000, 20104, 20432, 21162, 21262
Orion	20184, 20240, 20000, 20104, 20121, 20209, 20002, 20278, 20348, 20352, 20479, 20742, 21479
Orson	20000
Osaki	20037, 20000
Otake	20209
Otto Versand	20081
P Pace	20352
Pacific	20000, 20348, 20642, 20742
Packard Bell	21972
Palladium	20037, 20209, 20041, 20348
Palsonic	20000, 20642
Panama	20035
Panasonic	21062, 20035, 20162, 20000, 20225, 20226, 20614, 20616, 20836, 21035, 21162, 21262, 21562
Pathe Cinema	20043
Pathe Marconi	20041
Penney	20035, 20162, 20037, 20047, 20081, 20240, 20000, 20042, 20067, 20038, 21035, 21237
Pentax	20042
Perdio	20000, 20209
Philco	20035, 20081, 20000, 20209, 20038, 20226, 20479
Philips	20035, 20162, 20048, 20081, 20045, 20000, 20209, 20226, 20616, 20618, 20739, 21081, 21181
Phoenix	20278
Phonola	20081
Pilot	20037
Pioneer	20162, 20081, 20042, 20067
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Profitronic	20081, 20240
Proline	20000, 20278, 20320, 20642
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Protec	20000
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Pulsar	20039, 20240, 20278
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Q Qisheng	20060
Quarter	20046
Quartz	20035, 20047, 20046
Quasar	20035, 20162, 20002, 20278, 20226, 21035, 21162
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R Radialva	20037, 20048, 20081
Radiola	20081
Radionette	20037, 21137
RadioShack	20035, 20162, 20037, 20048, 20047, 20240, 20000, 20104, 20046, 21162
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Randex	20037
Rank	20041
Rank Arena	20041
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Realistic	20035, 20162, 20037, 20048, 20047, 20240, 20000, 20104, 20121, 20278, 20046, 21162
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Rio	21137
Roadstar	20037, 20081, 20240, 20278, 20038, 20742
Runco	20039
S Saba	20041, 20278, 20320
Saisho	20209, 20348
Salora	20104, 20043, 20046, 20106
Sampo	20037, 20048
Samsung	20060, 20240, 20045, 20000, 20038, 20432, 20739, 21014
Samtron	20240
Sanky	20048, 20039
Sansei	20048
Sansui	20240, 20000, 20067, 20209, 20041, 20002, 20106, 20348, 20479, 21479
Sanyo	20048, 20047, 20240, 20000, 20104, 20067, 20209, 20046, 20348, 20479, 21137
Saville	20240, 20278, 20352
SBR	20081
ScanSonic	20240
Schaub Lorenz	20000, 20104, 20041, 20106, 20315, 20348
Schneider	20037, 20081, 20240, 20000, 20042, 20278, 20348, 20352, 20642, 21137
Scott	20184, 20045, 20121, 20043
Sears	20060, 20035, 20162, 20037, 20048, 20039, 20047, 20033, 20045, 20000, 20042, 20104, 20067, 20043, 20209, 20041, 21237, 20046
Seaway	20278
SEG	20081, 20240, 20278, 20637, 20642
SEI	20081
Sei-Sinudyne	20081
Seleco	20037, 20041
Semp	20045
Sentra	20278
Sharp	20037, 20048, 20047, 20032, 20000, 20209, 20807
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Shintom	20039, 20240, 20000, 20104
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Siemens	20037, 20081, 20104, 20046, 20320, 20347
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Singer	20037, 20240, 20045, 20348
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Sunstar	20000
Suntronic	20000
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Susumu	20037
SV2000	20000
SVA	20000
Sylvania	20035, 20081, 20000, 20043, 21593, 21781
Symphonic	20240, 20000, 20002, 21593
Systemax	21972
T T+A	20162
Tagar Systems	21972
Taisho	20209
Tandberg	20278
Tandy	20000, 20104
Tashiko	20037, 20048, 20081, 20240, 20000
Tatung	20048, 20081, 20045, 20000, 20067, 20043, 20209, 20041, 20348, 20352
Tchibo	20348
TCM	20348
Teac	20037, 20000, 20067, 20041, 20278, 20637, 20642, 21593
Technics	20035, 20162, 20037, 20081, 20000, 20226, 21162
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Technosonic	20352
Teco	20035, 20037, 20048, 20041, 20038
Tedelex	20037, 20209, 20348, 20642
Teknika	20035, 20037, 20000
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Tensai	20037, 20000, 20278
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Thomson	20060, 20067, 20041, 20278, 20320
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Sony	31033, 31070, 31431, 31433, 31536	
Star Clusters	31227	
Sylvania	30675	
T Tangent	31321	
Targa	31227	
Teac	31227	
Techwood	31530	
Tevion	31227, 31347, 31730	
Thomson	30551	
Toshiba	31510	
U Universum	31227, 31530	
V Vestel	31530	
Victor	31597	
W Waltham	31530	
Y Yakumo	31056	
Yamada	31056, 31158	
Yamaha	30646	
Yukai	31730	
Z Zenith	30741	

DVD preset codes DVD-Voreinstellungscodes Codes préréglés DVD Codici di preselezione DVD Códigos de preajuste de DVD DVD-voorkeuzecodes Förinställda DVD-koder	32134		30490
DENON Model No. Modellnr Modéle numéro Modello No N° de modelo Modelnr Modellnr	DVD-550 DVD-700 DVD-900 DVD-1000 DVD-1400 DVD-1500 DVD-1710 DVD-1910 DVD-1930 DVD-2200 DVD-2800	DVD-2800II DVD-2900 DVD-2910 DVD-2930 DVD-3800 DVD-3910 DVD-3930 DVD-A11 DVD-A1 DVD-A1XV	DVD-800 DVD-1600 DVD-2000 DVD-2500 DVD-3000 DVD-3300

[ ]＊: Preset codes set upon shipment from the factory.
    : Sie Voreinstellungscodes wurden vor der Auslieferung werkseitig eingestellt.
    : Les codes préréglés diffèrent en fonctiom des livraison de l'usine.
    : I codici di presettaggio sono impostati in fabbrica prima della consegna.
    : Los códigos vienen preprogramados de fábrica.
    : Vooringestelde codes bij hey verlaten van de fabriek.
    : Förinställda koder har ställts in vid transporten från fabriken.

※1 : These preset codes can be recorded in the SAT/CBL mode.
    : Diese voreingestellten Codes können im SAT/CBL-Modus aufgenommen werden.
    : Ces codes de présélection peuvent être enregistrés en mode SAT/CBL.
    : I codici preimpostati possono essere registrati nel modo SAT/CBL.
    : Es posible guardar estos códigos preajustados en el modo SAT/CBL.
    : Deze voorkeuzecodes kunnen worden opgenomen in de SAT/CBL-modus.
    : Dessa förinställningskoder kan lagras i SAT/CBL-läget.

※2 : These preset codes can be recorded in the TV mode.
    : Diese voreingestellten Codes können im TV-Modus aufgenommen werden.
    : Ces codes de présélection peuvent être enregistrés en mode TV.
    : I codici preimpostati possono essere registrati nel modo TV.
    : Es posible guardar estos códigos preajustados en el modo TV.
    : Deze voorkeuzecodes kunnen worden opgenomen in de TV-modus.
    : Dessa förinställningskoder kan lagras i TV-läget.

※3 : These preset codes can be recorded in the VCR mode.
    : Diese voreingestellten Codes können im VCR-Modus aufgenommen werden.
    : Ces codes de présélection peuvent être enregistrés en mode VCR.
    : I codici preimpostati possono essere registrati nel modo VCR.
    : Es posible guardar estos códigos preajustados en el modo VCR.
    : Deze voorkeuzecodes kunnen worden opgenomen in de VCR-modus.
    : Dessa förinställningskoder kan lagras i VCR-läget.

※4 : These preset codes can be recorded in the DVD mode.
    : Diese voreingestellten Codes können im DVD-Modus aufgenommen werden.
    : Ces codes de présélection peuvent être enregistrés en mode DVD.
    : I codici preimpostati possono essere registrati nel modo DVD.
    : Es posible guardar estos códigos preajustados en el modo DVD.
    : Deze voorkeuzecodes kunnen worden opgenomen in de DVD-modus.
    : Dessa förinställningskoder kan lagras i DVD-läget.

DENON