

DENON

BLU-RAY DISC/DVD SURROUND RECEIVER

S-5BD

Owner's Manual

Bedienungsanleitung

Manuel de l'Utilisateur



- The operations described in this manual are based mainly on use of the remote control unit buttons.

The same operations can also be performed using the buttons with the same names on the main unit.

- Die in diesem Handbuch erläuterten Funktionen beziehen sich im Wesentlichen auf die Tasten der Fernbedienung. Dieselben Funktionen lassen sich aber auch über die gleichnamigen Tasten aktivieren, die sich direkt am Gerät befinden.

- Les opérations décrites dans ce manuel reposent principalement sur l'utilisation des touches de la télécommande.

Il est également possible d'effectuer ces opérations à l'aide des touches qui portent le même nom sur l'appareil principal.

Simple Version
Einfache Variante
Version simplifiée



Basic Version
Basisausführung
Version basique



Advanced Version
Anleitung für Fortgeschrittene
Version avancée



Information

"Part Names and Functions" (👉 page 64)

Informationen


"Bezeichnung der Teile und deren Funktionen" (👉 page 64)

Informations


"Nomenclature et fonctions" (👉 page 64)



SAFETY PRECAUTIONS



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



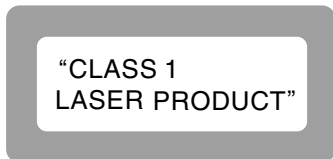
CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT



- ADVARSEL:** USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLING.
- VAROITUS!** LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄMTTÖMÄLLE LASERSÄTEILYLLE.
- WARNING:** OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.



ATTENZIONE: QUESTO APPARECCHIO E' DOTATO DI DISPOSITIVO OTTICO CON RAGGIO LASER. L'USO IMPROPRIO DELL'APPARECCHIO PUO' CAUSARE PERICOLOSE ESPOSIZIONI A RADIAZIONI!!

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
10. Only use attachments/accessories specified by the manufacturer.
11. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.



CAUTION:

To completely disconnect this product from the mains, disconnect the plug from the wall socket outlet. The mains plug is used to completely interrupt the power supply to the unit and must be within easy access by the user.

VORSICHT:

Um dieses Gerät vollständig von der Stromversorgung abzutrennen, ziehen Sie bitte den Stecker aus der Wandsteckdose. Der Netzstecker wird verwendet, um die Stromversorgung zum Gerät völlig zu unterbrechen; er muss für den Benutzer gut und einfach zu erreichen sein.

PRECAUTION:

Pour déconnecter complètement ce produit du courant secteur, débranchez la prise de la prise murale. La prise secteur est utilisée pour couper complètement l'alimentation de l'appareil et l'utilisateur doit pouvoir y accéder facilement.

ATTENZIONE:

Per scollegare completamente questo prodotto dalla rete di alimentazione elettrica, scollegare la spina dalla relativa presa a muro.

La spina di rete viene utilizzata per interrompere completamente l'alimentazione all'unità e deve essere facilmente accessibile all'utente.

PRECAUCIÓN:

Para desconectar completamente este producto de la alimentación eléctrica, desconecte el enchufe del enchufe de la pared.

El enchufe de la alimentación eléctrica se utiliza para interrumpir por completo el suministro de alimentación eléctrica a la unidad y debe de encontrarse en un lugar al que el usuario tenga fácil acceso.

WAARSCHUWING:

Om de voeding van dit product volledig te onderbreken moet de stekker uit het stopcontact worden getrokken.

De netstekker wordt gebruikt om de stroomtoevoer naar het toestel volledig te onderbreken en moet voor de gebruiker gemakkelijk bereikbaar zijn.

FÖRSIKTIHETSMÅTT:

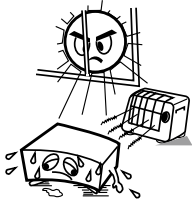
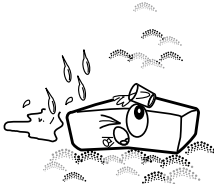
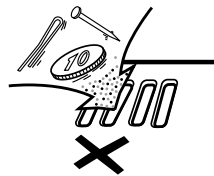

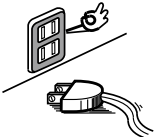




Koppla loss stickproppen från eluttaget för att helt skilja produkten från nätet.

Stickproppen används för att helt bryta strömförsörjningen till apparaten, och den måste vara lättillgänglig för användaren.

CAUTION:

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. THIS PRODUCT SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.

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

 <ul style="list-style-type: none"> • 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. 	 <ul style="list-style-type: none"> • 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. 	 <ul style="list-style-type: none"> • 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. 	<p>CAUTION:</p> <ul style="list-style-type: none"> • 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. <p>ACHTUNG:</p> <ul style="list-style-type: none"> • 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.
 <ul style="list-style-type: none"> • 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. • Maneggiare 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 nätkablen varsamt. Håll i kablarn när den kopplas från el-uttaget. 	 <ul style="list-style-type: none"> • 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 stopkontakt wanneer het apparaat gedurende een lange periode niet wordt gebruikt. • Koppla loss nätkablen om apparaten inte kommer att användas i lång tid. 	 <ul style="list-style-type: none"> • 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 verfverdunder met dit toestel in contact komen. • Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens hölje. 	<p>ATTENTION:</p> <ul style="list-style-type: none"> • 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. <p>ATTENZIONE:</p> <ul style="list-style-type: none"> • 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. <p>PRECAUCIÓN:</p> <ul style="list-style-type: none"> • 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 jarras.
 <ul style="list-style-type: none"> • 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. • Maneggiare 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 nätkablen varsamt. Håll i kablarn när den kopplas från el-uttaget. 	 <p>* (For apparatuses with ventilation holes)</p> <ul style="list-style-type: none"> • 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 geblokkeerd. • Täpp inte till ventilationsöppningarna. 	 <ul style="list-style-type: none"> • 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. 	<p>WAARSCHUWING:</p> <ul style="list-style-type: none"> • 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 milieuvorschriften 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. <p>OBSERVERA:</p> <ul style="list-style-type: none"> • 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. vasen, på apparaten.

• DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product, to which this declaration relates, is in conformity with the following standards: EN60065, EN55013, EN55020, EN61000-3-2 and EN61000-3-3. Following the provisions of Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC, the EC regulation 1275/2008 and its frame work Directive 2009/125/EC for Energy-related Products (ErP).

• ÜBEREINSTIMMUNGSERKLÄRUNG

Wir erklären unter unserer Verantwortung, daß dieses Produkt, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht: EN60065, EN55013, EN55020, EN61000-3-2 und EN61000-3-3. Following the provisions of low voltage directive 2006/95/EC and EMC directive 2004/108/EC, the EC regulation 1275/2008 and its frame work directive 2009/125/EC for energy-related products (ErP).

• DECLARATION DE CONFORMITE

Nous déclarons sous notre seule responsabilité que l'appareil, auquel se réfère cette déclaration, est conforme aux standards suivants: EN60065, EN55013, EN55020, EN61000-3-2 et EN61000-3-3.

Selon la directive 2006/95/EC concernant la basse tension et la directive CEM 2004/108/EC, la réglementation européenne 1275/2008 et la directive 2009/125/EC établissant un cadre de travail applicable aux produits liés à l'énergie (ErP).

• DICHIARAZIONE DI CONFORMITÀ

Dichiariamo con piena responsabilità che questo prodotto, al quale la nostra dichiarazione si riferisce, è conforme alle seguenti normative: EN60065, EN55013, EN55020, EN61000-3-2 e EN61000-3-3.

Facendo seguito alle disposizioni della direttiva sul basso voltaggio 2006/95/EC alla direttiva EMC 2004/108/EC, alla norma EC 1275/2008 e alla relativa legge quadro 2009/125/EC in materia di prodotti alimentati ad energia (ErP).

QUESTO PRODOTTO E' CONFORME
AL D.M. 28/08/95 N. 548

• DECLARACIÓN DE CONFORMIDAD

Declaramos bajo nuestra exclusiva responsabilidad que este producto al que hace referencia esta declaración, está conforme con los siguientes estándares:

EN60065, EN55013, EN55020, EN61000-3-2 y EN61000-3-3. De acuerdo con la directiva sobre baja tensión 2006/95/CE y la directiva sobre CEM 2004/108/CE, la normativa CE 1275/2008 y su directiva marco 2009/125/EC para productos relacionados con la energía (ErP).

• EENVORMIGHEIDSVKLAARING

Wij verklaren uitsluitend op onze verantwoordelijkheid dat dit product, waarop deze verklaring betrekking heeft, in overeenstemming is met de volgende normen:

EN60065, EN55013, EN55020, EN61000-3-2 en EN61000-3-3. Volgens de voorzieningen van lage spanningsrichtlijn 2006/95/EC en EMC-richtlijn 2004/108/EC, de EU-richtlijn 1275/2008 en de kaderrichtlijn 2009/125/EC voor energieverbruikende producten (ErP).

• ÖVERENSSTÄMMELSESINTYG

Härmed intygas helt på eget ansvar att denna produkt, vilken detta intyg avser, uppfyller följande standarder:

EN60065, EN55013, EN55020, EN61000-3-2 och EN61000-3-3. Uppfyller reglerna i lågspanningsdirektivet 2006/95/EC och EMC-direktivet 2004/108/EC, EU-förordningen 1275/2008 och ramverksdirektivet 2009/125/EC för energirelaterade produkter (ErP).

DENON EUROPE
Division of D&M Germany GmbH
An der Kleinbahn 18, Nettetal,
D-41334 Germany

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.

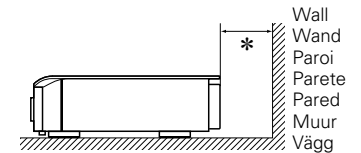
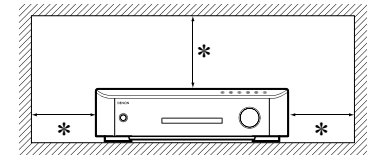
Batterier får absolut inte kastas i soporna eller brännas. Kassera dem enligt lokala bestämmelser för kemiskt avfall.

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



Pb

- ❑ **Cautions On Installation**
- Vorsichtshinweise zur Aufstellung**
- Précautions d'installation**
- Precauzioni sull'installazione**
- Emplazamiento de la Instalación**
- Voorzorgsmaatregelen bij de installatie**
- Försiktighet vid installationen**



Wall
Wand
Pariet
Parete
Pared
Muur
Vägg

- * **For proper heat dispersal, do not install this unit in a confined space, such as a bookcase or similar enclosure.**
 - More than 20 cm is recommended.
 - Do not place any other equipment on this unit.
- * **Stellen Sie das Gerät nicht an einem geschlossenen Ort, wie in einem Bücherregal oder einer ähnlichen Einrichtung auf, da dies eine ausreichende Belüftung des Geräts behindern könnte.**
 - Empfohlen wird über 20 cm.
 - Keine anderen Gegenstände auf das Gerät stellen.
- * **Pour permettre la dissipation de chaleur requise, n'installez pas cette unité dans un espace confiné tel qu'une bibliothèque ou un endroit similaire.**
 - Une distance de plus de 20 cm est recommandée.
 - Ne placez aucun matériel sur cet appareil.
- * **Per una dispersione adeguata del calore, non installare questa apparecchiatura in uno spazio ristretto, come ad esempio una libreria o simili.**
 - Si raccomanda una distanza superiore ai 20 cm.
 - Non posizionare alcun altro oggetto o dispositivo su questo dispositivo.
- * **Para la dispersión del calor adecuadamente, no instale este equipo en un lugar confinado tal como una librería o unidad similar.**
 - Se recomienda dejar más de 20 cm alrededor.
 - No coloque ningún otro equipo sobre la unidad.
- * **Plaats dit toestel niet in een kleine afgesloten ruimte, zoals een boekenkast e.d., omdat anders de warmte niet op gepaste wijze kan worden afgevoerd.**
 - Meer dan 20 cm is aanbevolen.
 - Plaats geen andere apparatuur op het toestel.
- * **För att tillförsäkra god värmeavledning får utrustningen inte installeras i instängda utrymmen, som t.ex. en bokhylla eller liknande.**
 - Mer än 20 cm rekommenderas.
 - Placera ingen annan utrustning ovanpå den här enheten.

Getting Started

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.

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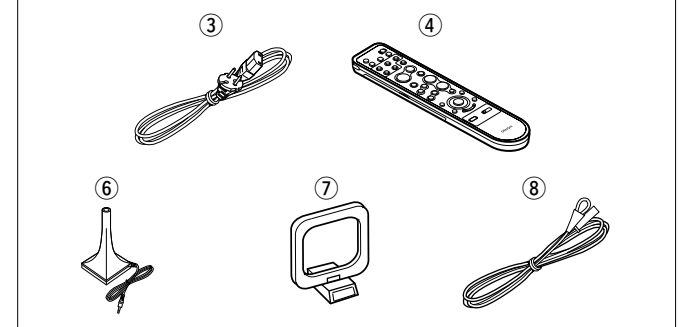
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License	End of this manual
List of preset codes	End of this manual

Accessories

Check that the following parts are supplied with the product.

① Owner's manual	1
② Service station list	1
③ Power cord (Cord length: Approx. 1.8 m)	1
④ Remote control unit (RC-1122)	1
⑤ R6/AA batteries	2
⑥ Setup microphone (DM-A409, Cord length: Approx. 7.6 m)	1
⑦ AM loop antenna	1
⑧ FM indoor antenna	1



Features

Audio and video engineering design of high-end components, premium HD audio & video quality

- Support for HD audio formats and latest surround formats
- DENON's original high-end Blu-ray Disc drive mechanism for faithful reading and accurate playback of high-definition A/V signals from Blu-ray Disc
- DENON craftsmanship, in assiduous pursuit of the ideal in A/V playback devices
- DENON's pure audio technologies
- Video technologies inherited from DENON's high-end components
- Advanced DENON technologies
AL24 Processing (☞ page 69) / Restorer (☞ page 26)

Speaker Flexibility

- Drivability of full-bandwidth speakers from 4 to 16 ohms
- 2.0/2.1-channel Dynamic Play Mode (☞ page 58), to automatically assign surround channel amplifiers to the front channel amplifiers

Digital Content Friendliness

- HDMI (v. 1.4 with Audio Return Channel) (☞ page 12 "About ARC Function")
- Front inputs for iPod, USB memory player, digital camcorder via HDMI, and SD card (☞ page 12 "Connecting an HDMI-Compatible Device", ☞ page 14 "Connecting an iPod or USB Memory Device to the USB Port")
- HDMI inputs for Set-top box and video games on back panel (☞ page 12 "Connecting an HDMI-Compatible Device")
- BD-Live support (Profile 2.0) (☞ page 21)
- Network music ready
Network music can be enjoyed via the DENON Networked Control Dock. (Requires separately-sold ASD-3N/3W/51N/51W.)

Advanced GUI (Graphical User Interface)

(☞ page 45)

Enables easy, intuitive operation.

First Setup function

(☞ page 6 "Audyssey™ Auto Setup")

This unit carefully measures and analyses your room's acoustics and your speakers' characteristics to ensure the optimum acoustic settings (**Audyssey MultEQ®**) (☞ page 53)).

Audyssey Dynamic Volume™ (☞ page 54) & Dynamic EQ™ (☞ page 53)

Dynamic Volume solves the problem of large variations in volume level between TV, movies and other content. Dynamic EQ solves the problem of deteriorating sound quality as volume is decreased.

One Touch Play function (☞ page 41)

The remote control unit includes a ONE TOUCH PLAY button that automatically turns on power to the TV, switches the TV's input line, and immediately starts the movie.

Automatic Sound Mode

Automatically switches to stereo sound when you're listening to a music source or to surround sound when you're enjoying video programs.

Plug 'n' Play

Starts playback immediately when an iPod or USB memory device is connected (☞ page 23 "Connect the iPod Directly to the USB Port to Play Back", ☞ page 24 "Playing a USB Memory Device").

Remote Control Unit with buttons designed for easy operation

Custom Install features

2 Source 2 Zone (☞ page 43 "Multi-zone Connections") / IR Remote in/out ports (☞ page 17 "REMOTE CONTROL Jacks") / AMX, Crestron third party serial control support with RS-232C port (☞ page 17 "RS-232C Connector") / 150mA Trigger output (☞ page 17 "TRIGGER OUT Jacks")

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.

• Image persistence (image burn-in)

Do not leave the still images of the disc menu, the unit menu, etc., displayed on the TV screen for long periods. This can result in image persistence (image burn-in) on the screen.

• About Condensation

If this unit is moved from a cold place to a warm place, or installed in a room subject to rapid temperature rise from a heater, etc., condensation (dew) may form on the internal parts of the unit (operating parts and lenses).

If used in this condition, this unit will not operate correctly and damage may result. If condensation is formed on the unit, leave this unit for 1 to 2 hours with the power off before use.

• 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

Be sure to remove a disc, turn off the power and unplug the power cord from the power outlet. Next, disconnect the connection cables to other system equipment before moving the unit.

• About Care

- Wipe the cabinet and control panel clean with a soft cloth.
- Follow the instructions when using a chemical cleaner.
- Benzene, paint thinner or other organic solvents as well as insecticide may cause material changes and discoloration if brought into contact with the unit, and should, therefore, not be used.

• Sufficiently ventilate the place of installation

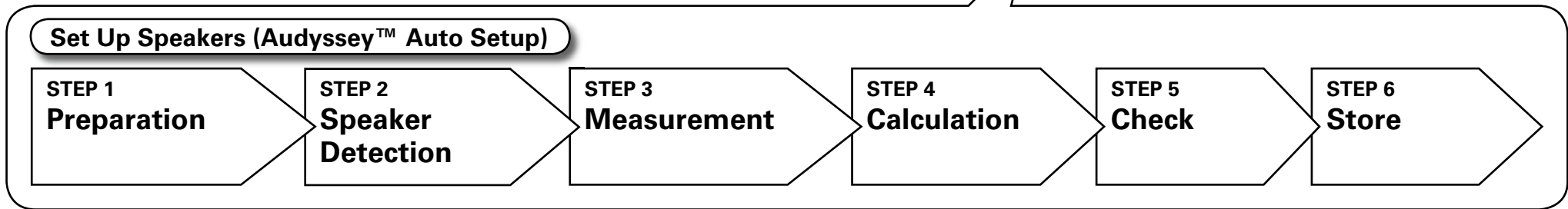
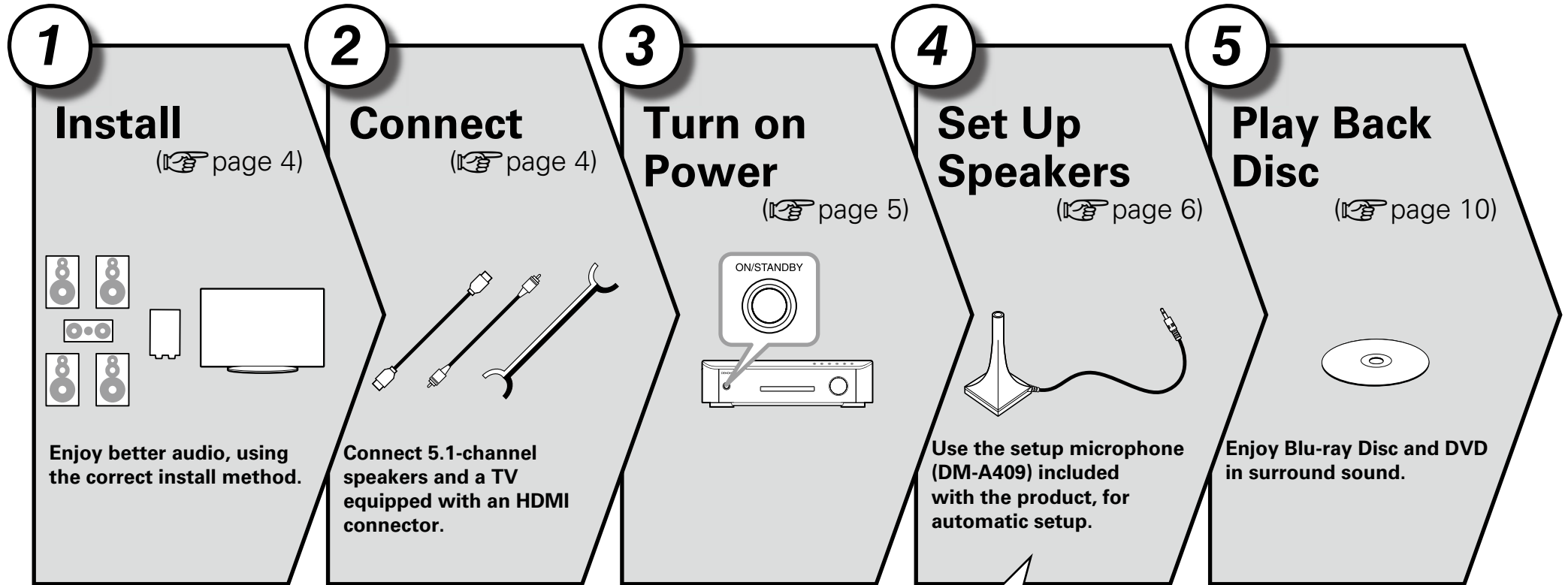
If the unit is left in a room full of the smoke from cigarettes, etc., for long periods of time, the surface of the optical pickup could get dirty, in which case it will not be able to read the signals properly.

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

Simple Version (Simple Setup Guide)

Here, we explain the entire setup procedure, from unboxing the unit to using it in a home theater. The "Simple Version" describes the installation, connection and setup methods for 5.1-channel speakers. See page 36 for the installation, connection and setup methods for speakers other than 5.1-channel speakers.

- ❑ Before connecting the unit, turn off the power to all devices.
- ❑ For operation of the connected devices, refer to the user manuals for each device.



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- Playback (Advanced)
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- GUI
- Remote Control
- Part Names
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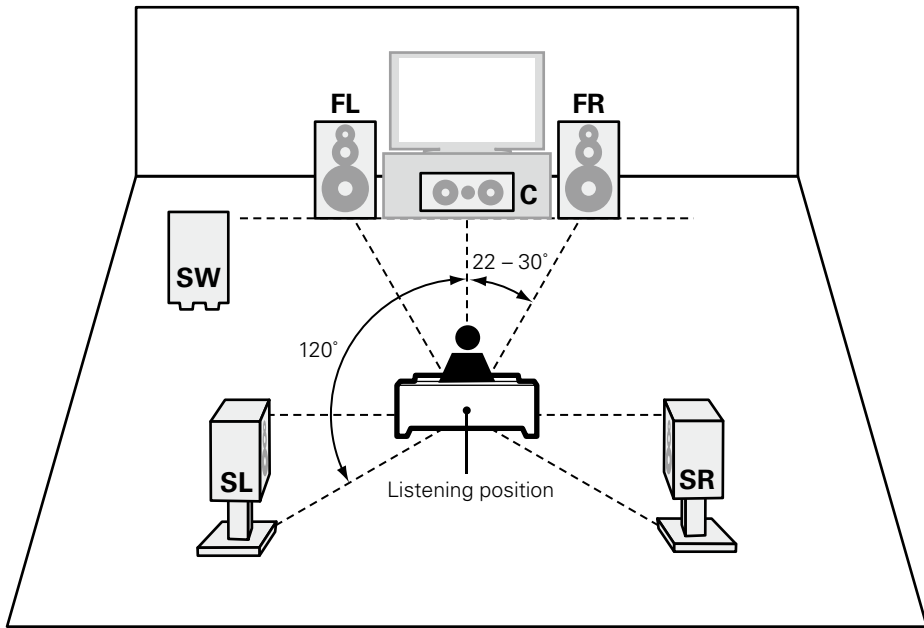
1 Install



2 Connect

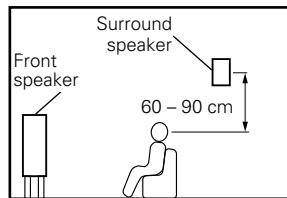


This unit can perform 2.0/2.1 to 7.1-channel surround playback. Here, we explain setup using the example of 5.1-channel speaker playback.

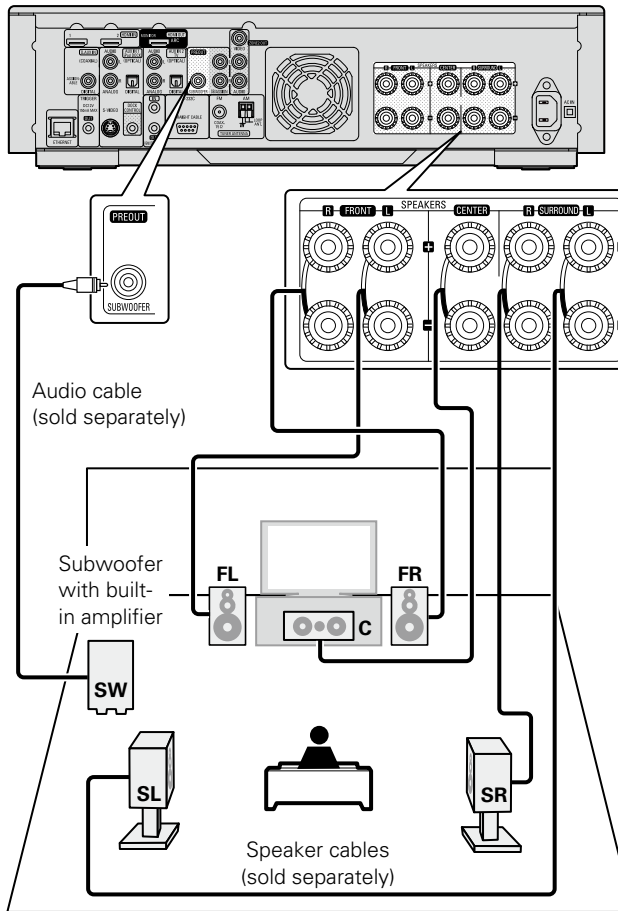


- FL** Front speaker (L)
- FR** Front speaker (R)
- C** Center speaker
- SW** Subwoofer
- SL** Surround speaker (L)
- SR** Surround speaker (R)

• Install the surround speakers in a position 60 to 90cm higher than ear level.



[Viewed from the side]



NOTE

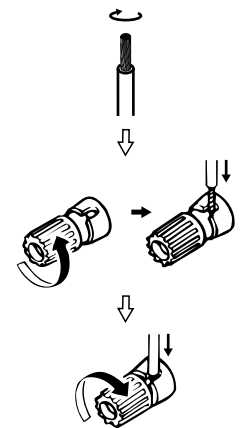
- Connect so that the speaker cable core wires do not protrude from the speaker terminal. The protection circuit may be activated if the core wires touch the rear panel or if the + and - sides touch each other (☞ page 76 "Protection Circuit").
- Never touch the speaker terminals while the power supply is connected. Doing so could result in electric shock.

Speakers

Carefully check the left (L) and right (R) channels and + (red) and - (black) polarities on the speakers being connected to this unit, and be sure to interconnect the channels and polarities correctly.

Connecting the speaker cables

Peel off about 10 mm of sheathing from the tip of the speaker cable, then either twist the core wire tightly or terminate it.

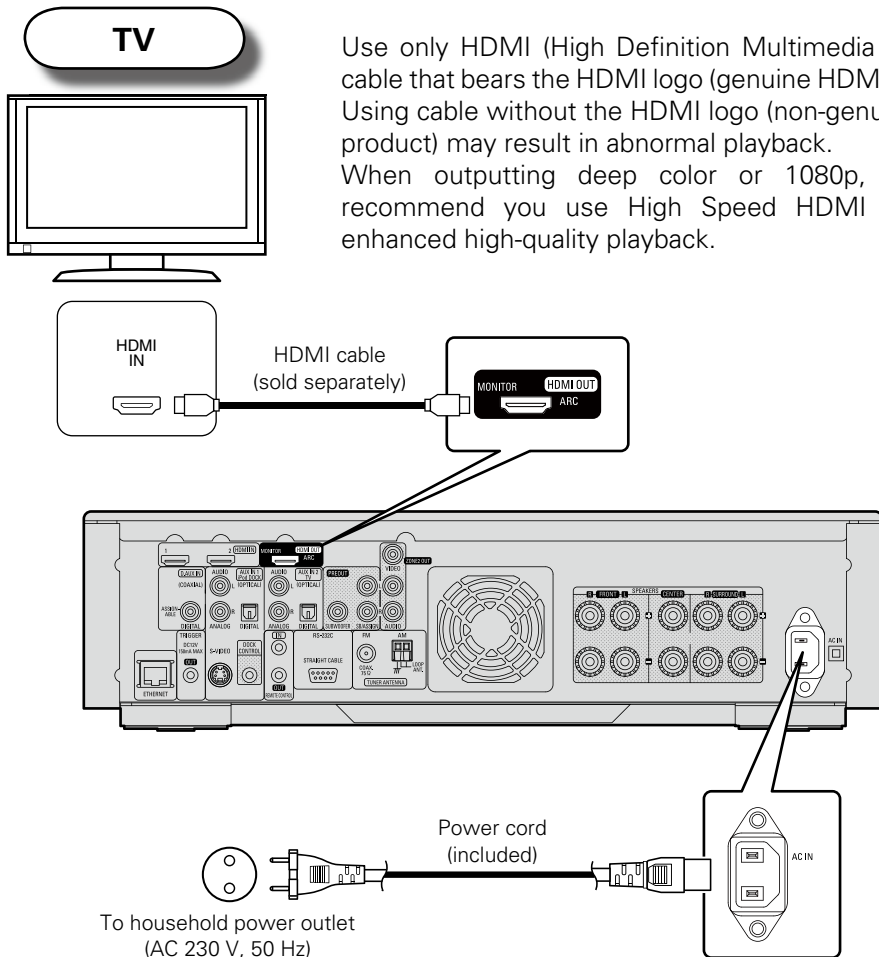


Speaker impedance

Front	4 - 16 Ω
Center	
Surround	

The "Simple Version" describes the installation, connection and setup methods for 5.1-channel speakers. See page 36 for the installation, connection and setup methods for speakers other than 5.1-channel speakers.

3 Turn on Power

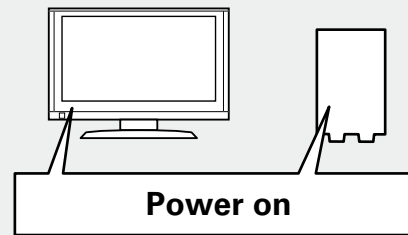


NOTE

- Do not plug in the power cord until all connections have been completed.
- Do not bundle power cords together with connection cables. Doing so can result in humming or noise.

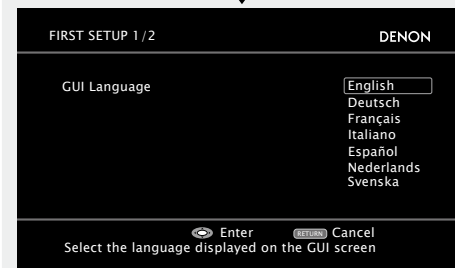
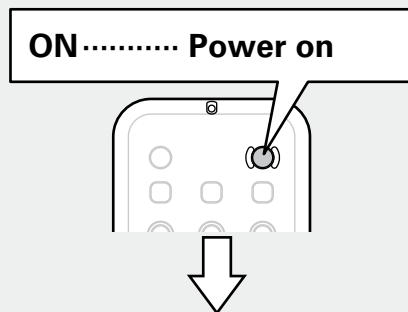
1 Turn on the TV and subwoofer power.

Change the TV input to the input of this unit.



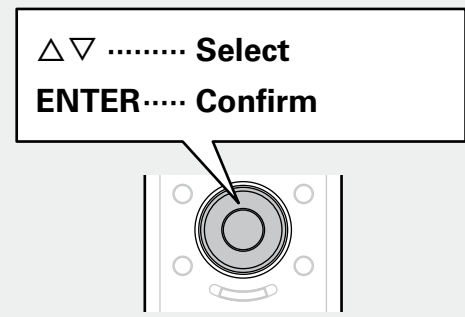
2 Press ON to turn on power to the unit.

- The power indicator lights blue.
- The "FIRST SETUP" screen is displayed on the TV.



3 Select your desired language from the on-screen list and press ENTER.

The "FIRST SETUP 2/2" screen is displayed.



❑ If "Cancel" is Selected

"Cancel setup?" is displayed on the GUI screen. If "Yes" is selected, "FIRST SETUP" closes. The GUI Language returns to the factory setting (English).

• **Continuing with speaker setup**
See "Set Up Speakers (Audyssey™ Auto Setup)" (page 6).

The title of the GUI screen will change from "FIRST SETUP" to "AUDYSSEY AUTO SETUP" at this point, but the operation method is the same.

• **Setting the GUI Language again**
Set the language using "Manual Setup" – "GUI Language" (page 59) on the GUI menu.



"FIRST SETUP" is a guide for items required for first setup after the power is first turned on. This screen is displayed when the power is first turned on.

NOTE

The "FIRST SETUP" screen will not appear if headphones are connected.

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4 Set Up Speakers (Audyssey™ Auto Setup)



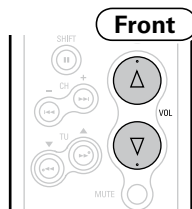
The acoustic characteristics of the connected speakers and listening room are measured and the optimum settings are made automatically. This is called “Audyssey Auto Setup”.

To perform measurement, place the setup microphone in multiple locations all around the listening area. For best results, we recommend you measure in six positions, as shown in the illustration (up to six positions).

- When performing Audyssey Auto Setup, MultEQ®/Dynamic EQ™/Dynamic Volume™ functions become active (☞ page 53).
- To set up the speakers manually, use “Manual Setup” – “Speaker Setup” (☞ page 55) on the GUI menu.

NOTE

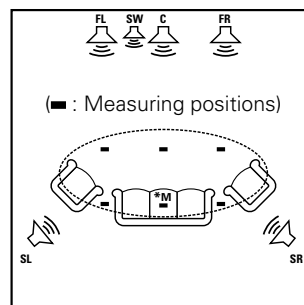
- Make the room as quiet as possible. Background noise can disrupt the room measurements. Close windows, silence cell phones, televisions, radios, air conditioners, fluorescent lights, home appliances, light dimmers, or other devices as measurements may be affected by these sounds.
- Cell phones should be placed away from all audio electronics during the measurement process as Radio Frequency Interference (RFI) may cause measurement disruptions (even if the cell phone is not in use).
- Do not unplug the setup microphone from the main unit until Audyssey Auto Setup is completed.
- 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.
- Loud test sounds may be played during Audyssey MultEQ automatic speaker setup. This is part of normal operation. If there is background noise in room, these test signals will increase in volume.
- Operating **VOLUME** during the measurements will cancel the measurements.
- Measurement cannot be performed when headphones are connected.



About Setup Microphone Placement

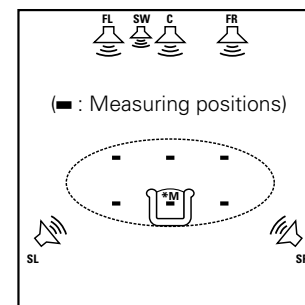
- Measurements are performed by placing the setup microphone successively at multiple positions throughout the entire listening area, as shown in **[Example ①]**. For best results, we recommend you measure in six positions, as shown in the illustration (up to six positions).
- Even if the listening environment is small as shown in **[Example ②]**, measuring at multiple points throughout the listening environment results in more effective correction.

[Example ①]



FL Front speaker (L)
FR Front speaker (R)
C Center speaker

[Example ②]



SW Subwoofer
SL Surround speaker (L)
SR Surround speaker (R)

□ About the Main Listening Position (*M)

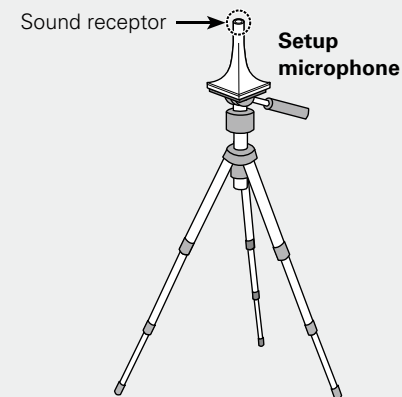
The main listening position is the position where listeners would normally sit or where one would normally sit alone within the listening environment. Audyssey MultEQ uses the measurements from this position to calculate speaker distance, level, polarity, and the optimum crossover value for the subwoofer.

1

Prepare the Setup Microphone

Mount the setup microphone on a tripod or stand and place it in the main listening position.

When placing the setup microphone, adjust the height of the sound receptor part to the level of the listener's ear.



NOTE

- Do not hold the setup microphone in your hand during measurements.
- Avoid placing the setup microphone close to a seat back or wall as sound reflections may give inaccurate results.

2 Set Up the Subwoofer

If using a subwoofer capable of the following adjustments, set up the subwoofer as shown below.

- ❑ **When using a subwoofer with a direct mode**
Set the direct mode to “On” and disable the volume adjustment and crossover frequency setting.
- ❑ **When using a subwoofer without a direct mode**
Make the following settings:
 - **Volume** : “12 o’clock position”
 - **Crossover frequency** : “Maximum/Highest Frequency”
 - **Low pass filter** : “Off”
 - **Standby mode** : “Off”

3 Connect the setup microphone to the SETUP MIC jack of this unit.

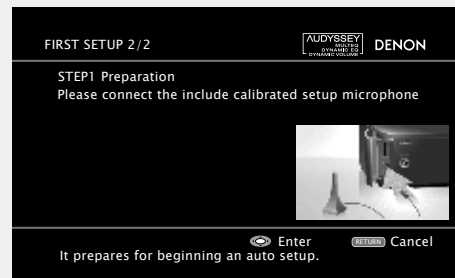
❑ If “Cancel” is Selected

“Cancel setup?” is displayed on the GUI screen. If “Yes” is selected, “FIRST SETUP” closes.

- **Setting up the speakers again**
Repeat the operation from step 3 of **STEP1 Preparation**.

The title of the GUI screen will change from “FIRST SETUP” to “AUDYSSEY AUTO SETUP” at this point, but the operation method is the same.

STEP 1 Preparation



When the setup microphone is connected, the following screen is displayed.



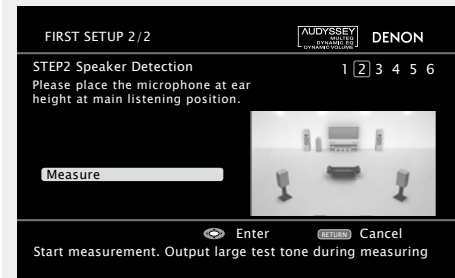
When setting up speakers other than 5.1-channel speakers, select “Speaker Assign”. When the “Speaker Assign” setup screen appears, perform the operations in Step 2 and 3 of “Set Up Speakers” (page 38).

4 Select “Auto Setup Start” and then press ENTER.

STEP 2 Speaker Detection

5 Select “Measure” and then press ENTER.

When measuring begins, a test tone is output from each speaker.
When measuring ends, the speaker detection results are displayed.



6 Select “Next → Measurement” and then press ENTER.

NOTE

If “Caution!” is displayed:

Go to “Error Messages” (page 9), check any related items, and perform the necessary procedures.

If the problem is resolved, return and restart “Audyssey Auto Setup”.

❑ When Performing Audyssey Auto Setup Over Again

Press Δ / ∇ to select “Retry”, and then press **ENTER**.

❑ When Measuring has Stopped

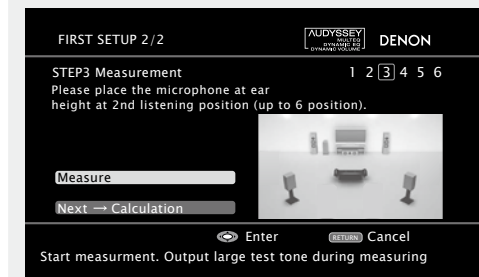
Press **RETURN**, and the “Cancel setup?” prompt is displayed.

Press \triangleleft / \triangleright and select “Yes”, then press **ENTER**.

STEP 3 Measurement

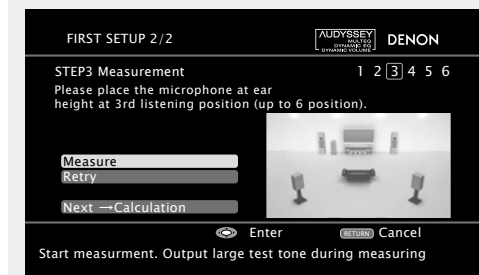
7 Move the setup microphone to position 2, select “Measure”, and then press ENTER.

The measurement of the second position starts. Measurements can be made in up to six positions.



8 Repeat step 7, measuring positions 3 to 6.

When measurement of position 6 is completed, a “Measurements finished.” message is displayed.



If you want to omit measurements from the next point onward, select “Next → Calculation”. (Go to page 8 **STEP4 Calculation**)

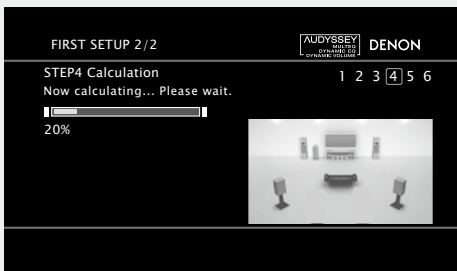


Set Up Speakers (Audyssey™ Auto Setup)

STEP 4
Calculation

9 On the **STEP3** screen, select “Next → Calculation”, and then press **ENTER**.

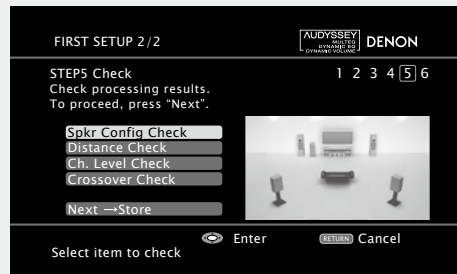
Measuring results are analyzed, and the frequency response of each speaker in the listening room is determined.



- Analysis takes several minutes to complete. The time required for this analysis depends on the number of speakers connected. The more connected speakers there are, the longer it takes to perform analysis.

STEP 5
Check

10 Select the item you want to check, and then press **ENTER**.

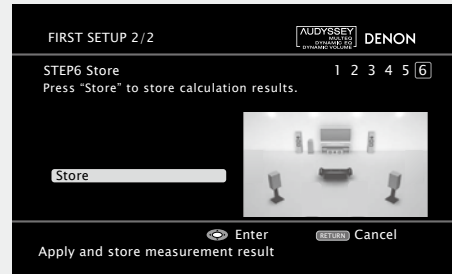


- Subwoofers may measure a greater reported distance than the actual distance due to added electrical delay common in subwoofers.
- If you want to check another item, press **RETURN**.

11 Select “Next → Store” and then press **ENTER**.

STEP 6
Store

12 Press **ENTER**.
Save the measuring results.

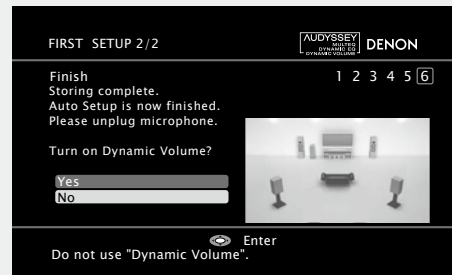


- The save operation takes about 30 seconds to complete.

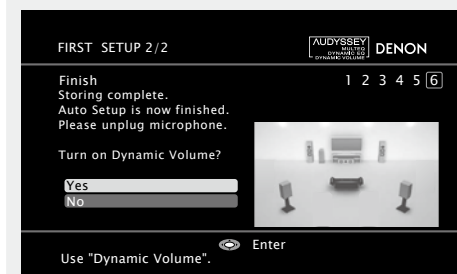
NOTE

During saving of measuring results, be sure not to turn off the power.

13 When the following screen is displayed, unplug the setup microphone from the unit’s **SETUP MIC** jack.



14 Set Dynamic Volume.



- For details of Dynamic Volume settings, see page 54.

When turning Dynamic Volume on

- Select “Yes”, and then press **ENTER**. This completes speaker setup.

When turning Dynamic Volume off

- Select “No”, and then press **ENTER**. The MultEQ default settings are displayed.
- Press **ENTER** to exit.



- For details of MultEQ settings, see page 53.

NOTE

After performing Audyssey Auto Setup, do not change the speaker connections or subwoofer volume. In event of a change, perform Audyssey Auto Setup again.



Error Messages

An error message is displayed if Audyssey™ Auto Setup could not be completed due to speaker placement, the measurement environment, etc. If this happens, check the relevant items, be sure to take the necessary measures, then perform Audyssey Auto Setup over again.

NOTE

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

Examples	Error details	Measures
<p style="text-align: center;">Caution!</p> <p style="text-align: center;">No microphone or speaker</p>	<ul style="list-style-type: none"> • The connected setup microphone is broken, or a device other than the supplied setup microphone is connected. • Not all speakers could be detected. • The front L speaker was not properly detected. 	<ul style="list-style-type: none"> • Connect the included setup microphone to the SETUP MIC jack of this unit. • Check the speaker connections.
<p style="text-align: center;">Caution!</p> <p style="text-align: center;">Ambient noise is too high or Level is too low</p>	<ul style="list-style-type: none"> • There is 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. 	<ul style="list-style-type: none"> • Either turn off any device generating noise or move it away. • Perform again when the surroundings are quieter. • Check the speaker installation and the direction in which the speakers are facing. • Adjust the subwoofer's volume.
<p style="text-align: center;">Caution!</p> <p style="text-align: center;">Front R None</p>	<ul style="list-style-type: none"> • The displayed speaker could not be detected. 	<ul style="list-style-type: none"> • Check the connections of the displayed speaker.
<p style="text-align: center;">Caution!</p> <p style="text-align: center;">Front L Phase</p>	<ul style="list-style-type: none"> • The displayed is connected with the polarities reversed. 	<ul style="list-style-type: none"> • Check the polarities of the displayed speaker. • For some speakers, this error message may be displayed even if the speaker is properly connected. If you are sure the connection is correct, press $\Delta \nabla$ to select "Skip", then press ENTER.

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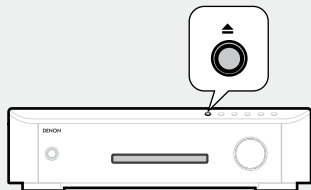
Troubleshooting

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5 Play Back Disc

1 Insert a disc.
 • Press on the main unit to open/close the disc tray.



• Insert the disc with the side you want to play facing down.

2 Make the various settings for playback on the disc menu.

..... Select
ENTER Confirm

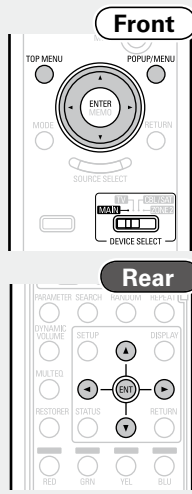


• You can make the following settings on the disc menu. (Settable items vary depending on the disc.)

- Subtitle language
- Audio language
- Audio format etc.

• During playback, press **TOP MENU** or **POPUP/MENU** to display the menu.

If the menu continues, press to get to the next part.



3 Select the playback title or chapter from the top menu for playback.

..... Select
ENTER Playback

NOTE

When playing back a high-quality signal such as Dolby TrueHD, Dolby Digital Plus, or DTS-HD, set the "BD Audio Mode" (page 60) to "HD Audio Output".

OFF Standby

..... Playback

..... Stop

..... Pause/Still

..... Forward-Skip

..... Reverse-Skip

..... Forward-Search

..... Reverse-Search

..... Volume up

..... Volume down

MUTE Muting

When Power is Switched to Standby

Press **OFF**.

[Power indicator status in standby mode]

- Normal standby : Off
- When "HDMI Control" is set to "ON" : Red
- When "Quick Start Mode" is set to "ON" : Red

NOTE

During power standby, a slight amount of power is consumed. To totally cut off the power, remove the power cord from the power outlet.

ONE TOUCH PLAY

Turns on this unit and the TV, and disc playback starts automatically.

To use this function you need to set up this unit in advance. For details of setup, see the following items.

- "One Touch Play Function" (page 41)
- "HDMI Control Function" (page 41)

Other operations

- Random Playback (page 31)
- Repeat Playback (page 31)
- Switching Audio (page 32)
- Switching the Angle (page 32)
- Changing the Subtitles and Subtitle Style (page 33)
- Surround Mode (page 33)
- Looking for Specific Sections Using the Search Modes (page 39)
- Setting Locations to Play Back Again (Marker Function) (page 40)

Basic Version

Here, we explain the connections and basic operation methods for this unit.

- Connections
- Playback (Basic Operation/Surround Mode)

☐ Refer to the pages indicated below for information on connecting and playing back the various media and external devices.

Audio and Video	Connection	Playback
Blu-ray Disc	–	☞ page 20
DVD-Video	–	☞ page 20
CD	–	☞ page 21, 25
Set-Top Box (Satellite Tuner or Cable TV)	☞ page 12, 15	–
Digital Camcorder	☞ page 12	–
Game Device	☞ page 12	–
Control Dock for iPod	☞ page 14	☞ page 22
BD-LIVE	☞ page 16	–
Audio		
TV Audio	☞ page 13	–
iPod®	☞ page 14	☞ page 23
USB Memory Device	☞ page 14	☞ page 24
SD Memory Card	☞ page 64	☞ page 25
Radio	☞ page 15	☞ page 27
Others		
Update the Unit Software	☞ page 16	☞ page 48
External Control Device	☞ page 17	–

For speaker and TV connections, see page 4, 5.

Connections

- Connect this unit as follows before using. Make connections according to the equipment you are connecting.
- Some settings of this unit may be necessary depending on the connection method. Check each connection item for more information.
- Select the cables (sold separately) according to the components being connected.

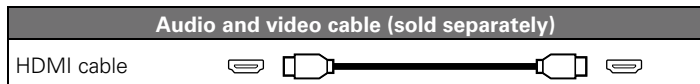
NOTE

- 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 being connected.
- 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 noise.

Connecting an HDMI-Compatible Device

You can connect up to three HDMI-compatible devices to the unit.

▣ Cables Used for Connections



- This interface allows transfer of digital video signals and digital audio signals over a single HDMI cable.

▣ About HDMI Cables

- 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).
- When a device supporting Deep Color signal transfer is connected, use a cable compatible with HDMI version 1.3a.
- When outputting Deep Color or 1080p, etc., we recommend you use High Speed HDMI cable for enhanced high-quality playback.
- This unit supports “Deep Color” and “x.v.Color”. For details about “Deep Color” and “x.v.Color”, see page 74, 76.

Copyright protection system

In order to play back digital video and audio such as BD-Video or DVD-Video via HDMI connection, both this unit and TV need to support the copyright protection system known as HDCP (High-bandwidth Digital Content Protection System). HDCP is copyright protection technology comprised of data encryption and authentication of the connected AV device. This unit supports HDCP.

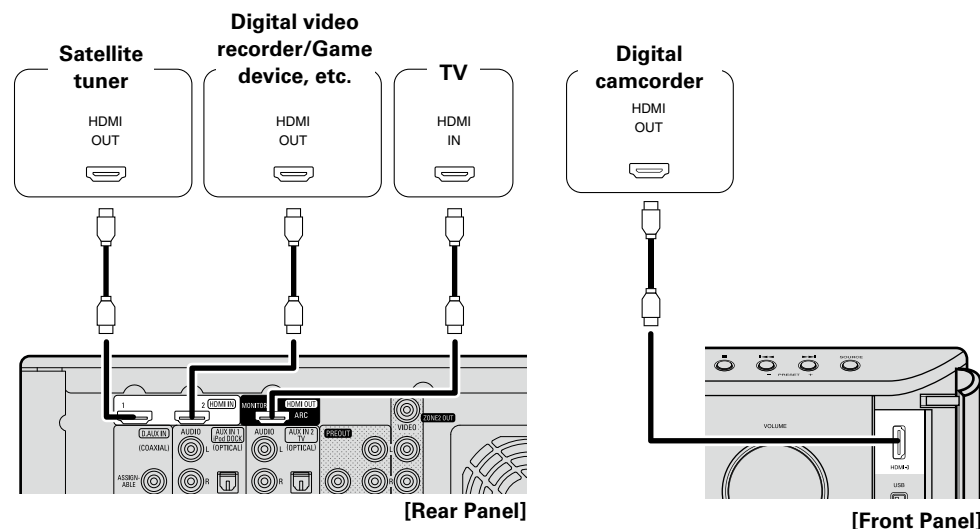
- If a device that does not support HDCP is connected, video and audio are not output correctly. Read the owner’s manual of your television for more information.

▣ About ARC (Audio Return Channel) Function

The Audio Return Channel in HDMI 1.4 enables a TV, via a single HDMI cable, to send audio data “upstream” to this unit, increasing user flexibility and eliminating the need for any separate S/PDIF audio connection.



- To enable the ARC function, set “HDMI Control” to “ON” (page 57).
- Connect using a cable compatible with HDMI 1.4.



By connecting to a device with an HDMI control function, you can use the unit to operate an external device, or use an external device to operate the unit (page 41 “HDMI Control Function”).

NOTE

- If the GUI menu “HDMI Audio Out” setting (page 57) is set to “Amp”, the sound may be interrupted when the TV’s power is turned off.
- Audio signal input may not be supported depending on the HDMI compatible TV (projector, etc.) being used.
When this unit is connected to this kind of device, audio signals are not output from the HDMI connector.

Required Settings for HDMI Connection

Settings can only be made when the input source is "BD/SD".

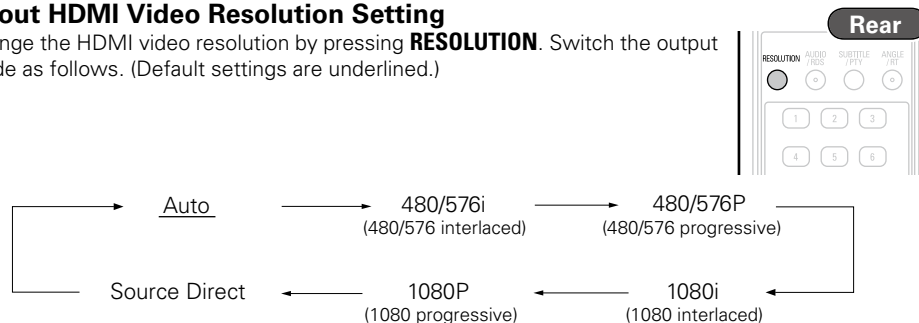
Set as necessary. For details, see the respective reference pages.

Make the Video Output Signal Setting for the Connected Television

"Video Setup" (page 46)

About HDMI Video Resolution Setting

- Change the HDMI video resolution by pressing **RESOLUTION**. Switch the output mode as follows. (Default settings are underlined.)



- If the HDMI resolution is not set to "Auto", set it to correspond with the resolution of your television.

NOTE

When ZONE2 is powered on, the HDMI video resolution in the MAIN ZONE switches automatically according to the input signal. When this happens, it is not possible to switch to a different video resolution, even by pressing **RESOLUTION**. (See page 43 for information on ZONE2).

Connecting a TV

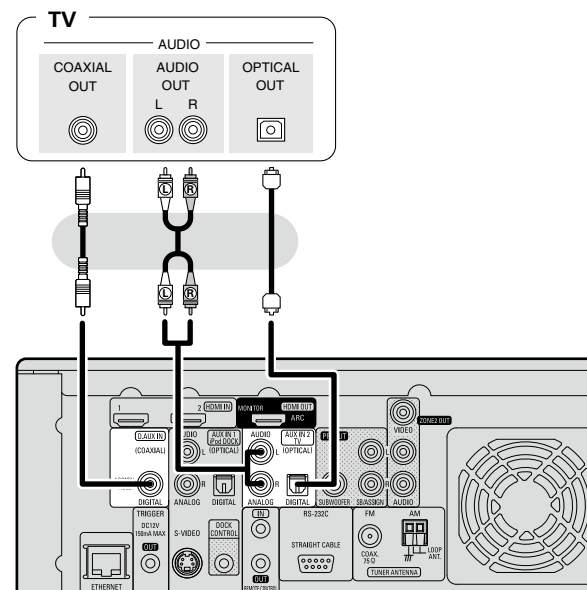
- You can listen to TV audio only.
- Select the terminal to use and connect the device.
- For instructions on HDMI connections, see "Connecting an HDMI-Compatible Device" on page 12.



This connection is not required when a TV compatible with the ARC function (Audio Return Channel (HDMI1.4 standard function)) is connected to this unit via an HDMI connection. For details, see "About ARC (Audio Return Channel) Function" (page 12) or refer to the instruction manual for your TV.

Cables Used for Connections

Audio cables (sold separately)	
Audio cable	(White) (Red)
Coaxial digital cable	(Orange)
Optical cable	



When using a coaxial digital cable for the digital audio connection, set "Manual Setup" – "Audio Setup" – "COAX Input Assign" on the GUI menu (page 58) to "AUX2".

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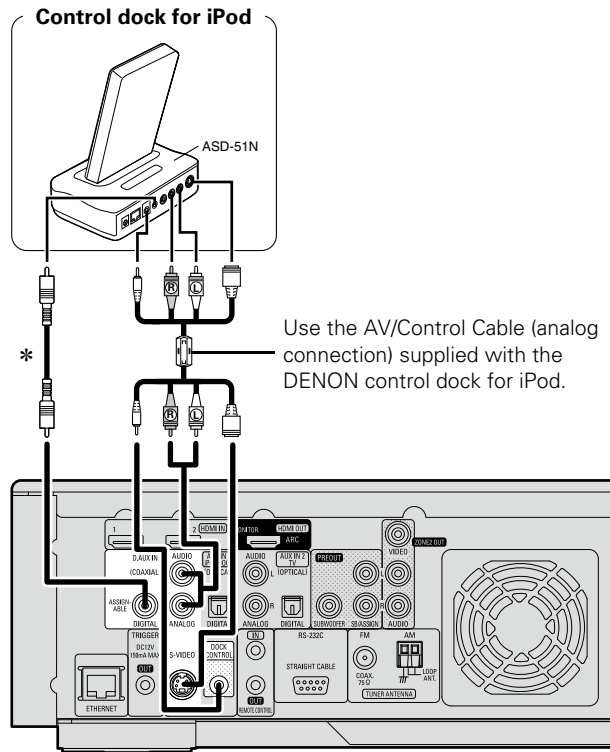
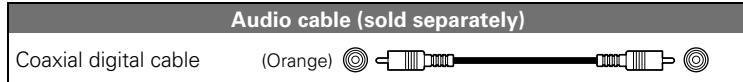
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Connecting a Control Dock for iPod

- Connect the Control Dock for iPod to the unit to enjoy video and music stored on an iPod.
- For the Control Dock for iPod, use ASD-11R/3N/3W/51N/51W made by DENON (sold separately).
- For instructions on the control dock for iPod settings, refer to the control dock for iPod's operating instructions.

▣ Cables Used for Connections



* When connecting to the Digital audio output connector of ASD-51N / 51W, set "Manual Setup" – "Audio Setup" – "COAX Input Assign" (page 58) on the GUI menu to "AUX1".



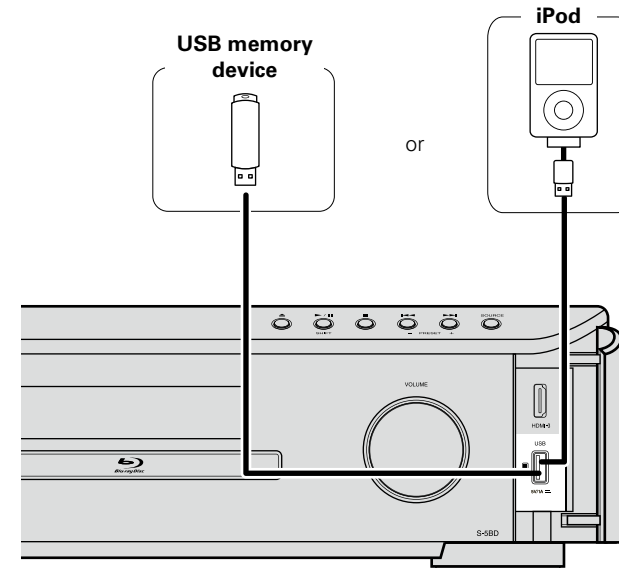
You can also connect the iPod you are using directly to the USB port of this unit (page 14 "Connecting an iPod or USB Memory Device to the USB Port").

Connecting an iPod or USB Memory Device to the USB Port

When you connect an iPod or USB memory device to the USB port, you can enjoy music, stored on the iPod or USB memory device.

▣ Cables Used for Connections

To connect an iPod to this unit, use the USB cable supplied with the iPod.



- When you want to playback a video file stored on an iPod, use the DENON control dock for iPod (ASD-11R/3N/3W/51N/51W, sold separately) (page 14 "Connecting a Control Dock for iPod").
- This unit supports audio playback from the iPod (fifth generation or later), iPod nano, iPod classic, and iPod touch (it is not compatible with iPod shuffle). For details, check the Web.
- DENON does not guarantee that all USB memory devices will operate or receive power. When using a portable USB connection type HDD of the kind to which an AC adapter can be connected to supply power, use the AC adapter.

NOTE

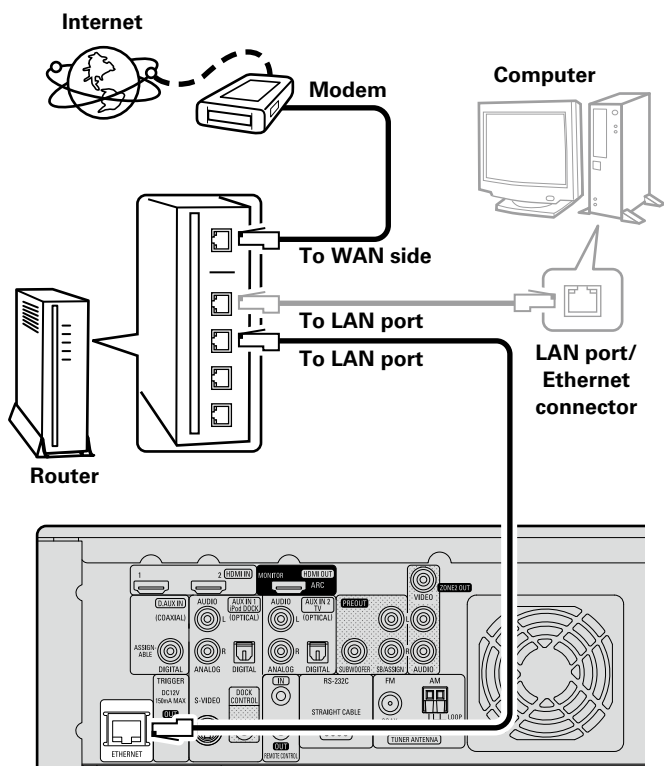
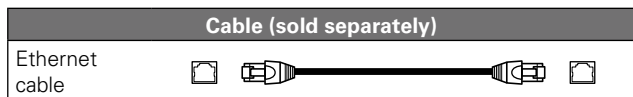
- USB memory devices will not work via a USB hub.
- It is not possible to connect and use a computer via the USB port of this unit using a USB cable.

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Connecting to the Network

- You can use a disc which offers BD-LIVE function by connecting the unit to the Internet (☞ page 21).
- You can update by downloading the latest firmware from the DENON website.
For more information, on the GUI menu, select “Other Setup” – “Firmware Update” (☞ page 48).
- See “Network Setup” on the GUI menu (☞ page 47) for more information on network setting.

❑ Cables Used for Connections



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

Required system

❑ Broadband Internet Connection

❑ Modem

Device that connects to the broadband circuit and conducts communications on the Internet.
A type that is integrated with a router is also available.

❑ Router

- When using this unit, we recommend you use a router equipped with the following functions:
 - Built-in DHCP 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.

❑ Ethernet Cable (CAT-5 or Greater Recommended)

- Use for wired LAN.
- Use only shielded STP or ScTP LAN cable which is available at retailer.
- Some flat type Ethernet cables are easily affected by noise.
We recommend using a normal type cable.



- If you have an Internet provider contract for a line on which network settings are made manually, make the settings at “Network Setup” (☞ page 47).
- With this unit, it is possible to use the DHCP and Auto IP functions to make the network settings automatically.
- When using this unit with the broadband router’s DHCP function enabled, this unit automatically performs the IP address setting and other settings.
When using this unit connected to a network with no DHCP function, make the settings for the IP address, etc., at “Network Setup” (☞ page 47).
- When setting manually, check the setting contents with the network administrator.

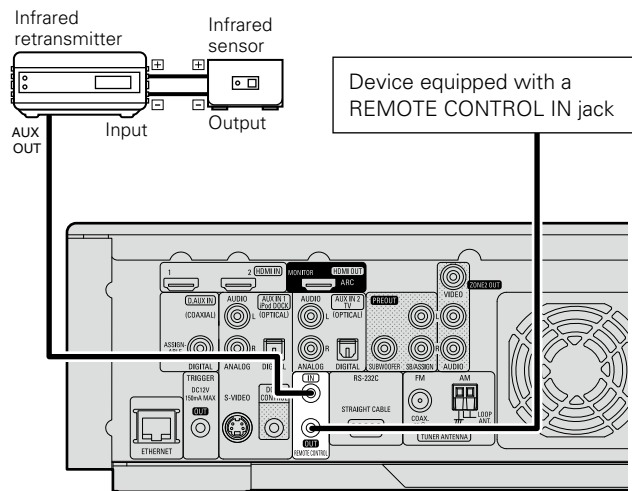
NOTE

- 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.
- DENON assumes no responsibility whatsoever for any communication errors or troubles resulting from customer’s network environment or connected devices.
- This unit is not compatible with PPPoE. A PPPoE-compatible router is required if you have a contract for a type of line set by PPPoE.
- Do not connect an ETHERNET connector directly to the LAN port/ Ethernet connector on your computer.

Connecting an External Control Device

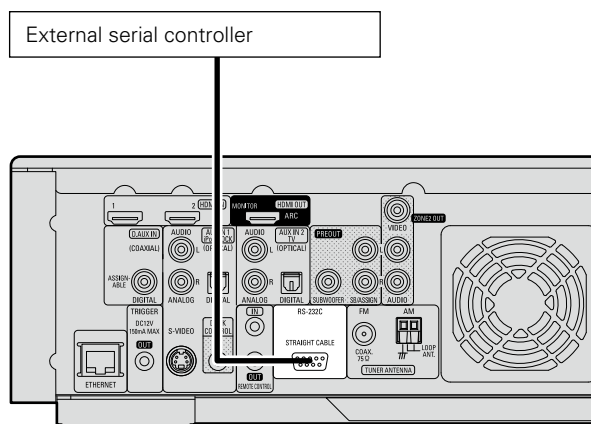
REMOTE CONTROL Jacks

If this unit is installed in a location that is out of range of the signal from the remote control unit, you can still operate the unit and the devices connected to it by using a commercially available IR receiver. You can also use it to remotely control ZONE2 (another room).



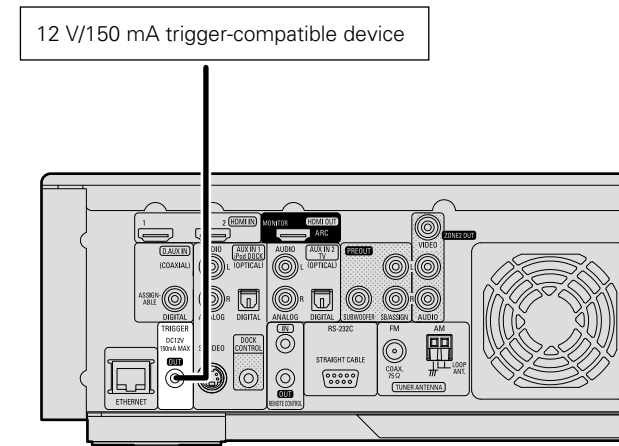
RS-232C Connector


By connecting an external serial controller, you can control all sorts of household electrical devices (including lights, electric curtains, and air conditioning units) in addition to your audio and video devices.



TRIGGER OUT Jacks

When a device with TRIGGER IN jack is connected, the connected device's power on/standby can be controlled through linked operation to this unit. The TRIGGER OUT jack outputs a maximum 12 V/150 mA electrical signal.



 Set to change the conditions for linked operation via the TRIGGER OUT jack.
"Trigger Out" (📖 page 58)

NOTE
 If the permissible trigger input level for the connected device is larger than 12V/150mA, or has shorted, the TRIGGER OUT jack cannot be used.
 In this case, turn off the power to the unit, and disconnect it.

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Playback (Basic)

- ❑ About Playback Information (👉 page 18)
- ❑ Playable Media (👉 page 19)
- ❑ Selecting the Input Source (👉 page 20)

- ❑ Playing Blu-ray Disc and DVD-Video (👉 page 20)
- ❑ Playing CD (👉 page 21)
- ❑ Playing an iPod® (👉 page 22)
- ❑ Playing a USB Memory Device (👉 page 24)
- ❑ Playing Files (👉 page 25)
- ❑ Tuning in Radio Stations (👉 page 27)

❑ Basic Operation (👉 page 30)

Surround Mode (👉 page 33)

Playback (Advanced) (👉 page 39)

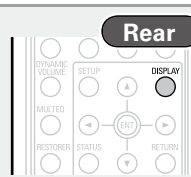
About Playback Information

Displays playback information on the information bar and media player screen.

Press DISPLAY.

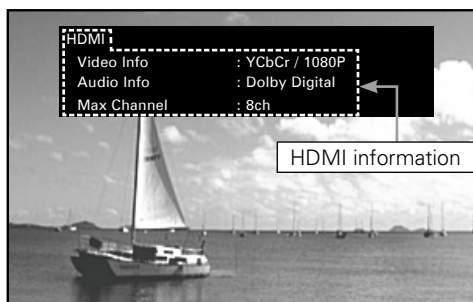
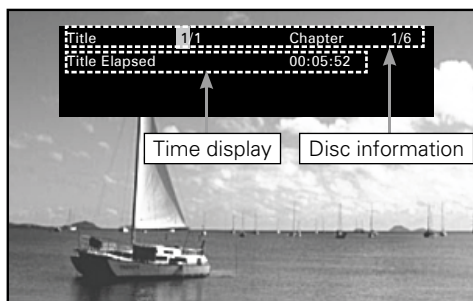
Each time the button is pressed, it switches to the next playback information.

- To erase display, press **DISPLAY** until it goes away.



Displayed content differs depending on the media being played back. Also, the information displayed during playback and stop differs.

Information Bar Display



NOTE

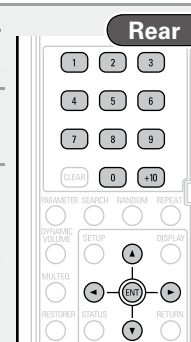
- The (prohibited mark) may appear on the top right of the TV screen during an operation. This means that the operation being conducted is prohibited.
- Depending on the disc, certain operations may not be as described in this manual. Check each disc owner's manual for more information.
- During playback of a 2-layered disc, pictures may stop momentarily. This happens when the first layer switches to the second layer. This is not a malfunction.

Search Using Information Bar

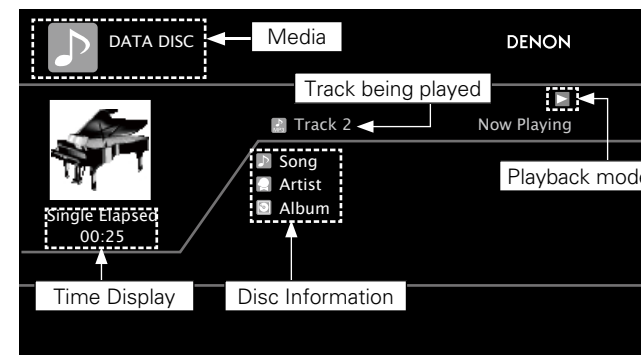
In the orange color cursor area, when you enter the number that you wish to search, that location is searched. There are 2 search modes, "Title search" and "Chapter search".

- 1** Use $\Delta \nabla \triangleleft \triangleright$ to move the cursor to the item that you wish to search.
- 2** Use 0 – 9 and +10 to enter a value.
- 3** Press **ENTER**.
Search is executed and playback begins.

- If the input number information is not on the disc, the current playback display reappears.



Media Player Display



Playable Media

Discs

Playable discs	Playable formats/modes	Playable region codes	Category type
BD-Video *1, *2		Include region 	
DVD-Video *1, *2		Include region 	
DVD-R, DVD+R		Video mode, AVCHD format	
DVD-RW, DVD+RW	 		
CD		-	
CD-R			
CD-RW			

- *1 BD-Video/DVD-Video discs may not operate as described in this manual due to menu structure.
- *2 The Blu-ray Disc player and BD-Video disc, and DVD player and DVD-Video disc each have their region codes (code assigned for each region). Playback is not possible if the codes do not match.

The following discs will not play back on this unit.

- BD-RE Ver1.0 (BD disc with cartridge)
- BD-ROM/BD-R/BD-RE discs containing recorded movie, still image, audio, etc., files
- BD-R/BD-RE in which BDMV/BDAV is recorded
- HD DVD / DVD-RAM / DVD-Audio
- CDV (Only the audio part can be played)
- CD-G (Only the audio signals can be output)
- Non-standard CD (CD with copy protection, etc.)
- Unauthorised disc (Pirated disc)
- Disc with recording area less than 55 mm in diameter
- Video Single Disc (VSD) / CVD / Video CD / Super Video CD / Compact Disc-Interactive (CD-I) / Photo CDs / Super Audio CD

NOTE

- A disc may not be accessible or play back incorrectly due to audio and video interruptions, etc., depending on the recording conditions when recorded with a Blu-ray Disc recorder or DVD recorder.
- Unfinalised DVD-R/-RW/+R/+RW, and CD-R/-RW discs may not play back. Finalise discs before playing.

Files

Playable files (Extension)	File specification	Category type
 MP3 (.mp3)	<ul style="list-style-type: none"> • Sampling frequency: 44.1 kHz, 48 kHz • Bit rate: 64 kbps – 320 kbps (144 kbps non-compatible) • Audio type: MPEG 1 Audio Layer 3 	
 WMA (.wma) *	<ul style="list-style-type: none"> • Sampling frequency: 44.1 kHz, 48 kHz • Bit rate: 48 kbps – 192 kbps • Audio type: WMA Version 9 	
 AAC (.m4a) *	<ul style="list-style-type: none"> • Sampling frequency: 44.1 kHz, 48 kHz • Bit rate: 64 kbps – 192 kbps (Variable Bit Rate non compatible) • Audio type: AAC 	
 LPCM (.wav)	<ul style="list-style-type: none"> • Sampling frequency: 44.1 kHz, 48 kHz • Bit length: 16 bit • Number of channels: 2 ch 	
 JPEG (.jpg/.jpeg)	<ul style="list-style-type: none"> • Maximum resolution: 4,096 x 4,096 pixels • Minimum resolution: 32 x 32 pixels • Maximum file size: 12 MB 	
 DivX (.avi/.divx)	<ul style="list-style-type: none"> • Compatible versions: Up to DivX® 6 • Maximum size: 2 GB 	

* This unit cannot play back files recorded under DRM (Digital Rights Management) other than DivX® files.

NOTE

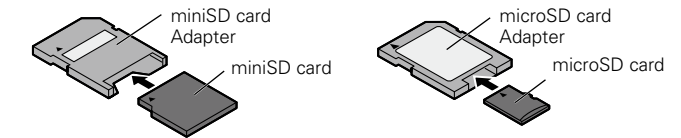
- The abovementioned file type may also fail to play back depending on conditions at the time of recording.
- If characters not supported on the menu screen are included in a file name, title, artist name or album title, those are not displayed correctly.
- JPEG format images stored in progressive format cannot be played back.

SD Memory Cards

Playable cards	Playable files	Category type
SD memory card (8 MB – 2 GB)	 • Data recorded for BD BONUS VIEW or BD-LIVE use.	
SDHC memory card *1 (4 GB)		
miniSD card *2 (8 MB – 2 GB)		
microSD card *2 (8 MB – 2 GB)		

*1 This unit supports SD memory card with FAT16 file system, and SDHC memory card with FAT32 file system.

*2 For miniSD card and microSD card adapter is necessary.



NOTE

- This unit is not compatible with the miniSDHC card or microSDHC card.
- Insert or remove a SD memory card while the power is in standby. If you insert a SD memory card while the power is ON, the SD memory card may not be read.

USB Memory Devices

Standard	Playable files	Category type
USB Mass Storage Class *		

* This unit is compatible with USB memory devices in "FAT16" or "FAT32" format.

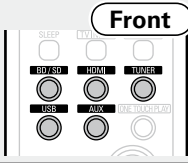
The icons show the category of content applicable to each operation.



Selecting the Input Source

Press the input source select button (BD/SD, HDMI, TUNER, USB, AUX) to be played back.

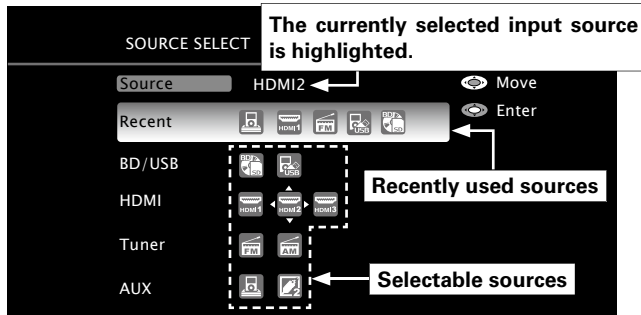
The desired input source can be selected directly.



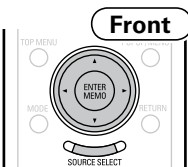
You can also use the following operation to select an input source.

Using the "Source Select" Menu

- Press **SOURCE SELECT**.
Display the "SOURCE SELECT" menu.



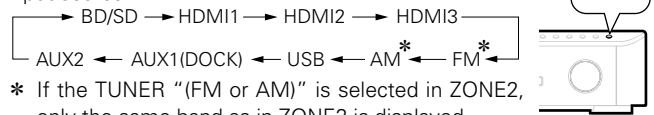
- Use $\Delta \nabla \triangleleft \triangleright$ to select the input source icon, then press **ENTER**.
The input source is set and the source selection menu is turned off.



- is displayed when using a Control dock for iPod.
- When using with an iPod connected directly to the USB port of this unit, select "USB" for the input source.
- To turn off the source selection menu without selecting an input source, press **SOURCE SELECT** again.

Using the Button on the Main Unit

Press **SOURCE**.
Each time the button is pressed, it switches to the next input source.



* If the TUNER "(FM or AM)" is selected in ZONE2, only the same band as in ZONE2 is displayed.

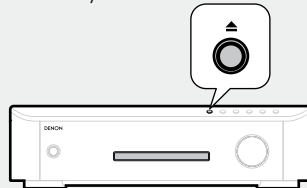
Playing Blu-ray Disc and DVD-Video



- Prepare for playback.**
 - Turn on the TV and subwoofer power.
 - Change the TV input to the input of this unit.

- Press **ON** to turn on power to the unit.

- Insert a disc.
 - Press \blacktriangle on the main unit to open/close the disc tray.

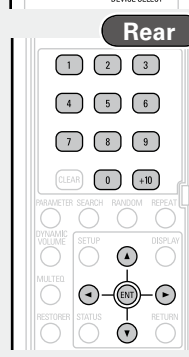
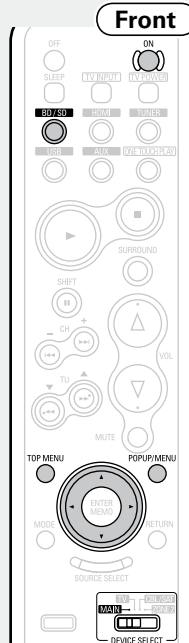


- When the disc tray opens, the input source automatically switches to "BD/SD" and the unit enters "Disc Mode".
- If a disc is already inserted in the disc tray, switch to "Disc Mode" by selecting **BD/SD**.

- Make the various settings for playback on the disc menu.

$\Delta \nabla \triangleleft \triangleright$ Select
ENTER Confirm

- You can make the following settings on the disc menu. (Settable items vary depending on the disc.)
 - Subtitle language
 - Audio language
 - Audio format etc.
- During DVD-Video playback, press **TOP MENU** or **POPUP/MENU** to display the menu. If the menu continues, press $\Delta \nabla \triangleleft \triangleright$ to get to the next part.



- Press $\Delta \nabla \triangleleft \triangleright$ in the Top Menu screen to select the title or chapter.

- If you use **1 - 9, +10** to select the chapter or title, you can start playback.



With Blu-ray Disc, depending on the disc, you can select title and chapter from the popup menu.

- Press **ENTER**.
Playback starts.

- Adjusting the Master Volume** (page 30)
Press **VOL $\blacktriangle \blacktriangledown$** .
- Stop Playback (Resume Function)** (page 30)
Press **■**.
- Pause Playback** (page 30)
Press **⏸**.
- Step-by-Step Playback** (page 30)
During pause, press **⏮**.
- Fast Forward/Fast Reverse Playback** (page 31)
During playback, press **⏩**.
- Slow Forward/Slow Reverse Playback** (page 31)
During pause, press **⏪**.
- Skipping to the Chapter** (page 31)
During playback, press **⏮** or $\Delta \nabla$.
- Repeat Playback** (page 31)
Press **REPEAT**.
- Switching Audio** (page 32)
During playback of a Primary Audio/Secondary Audio title, press **AUDIO/RDS**.

NOTE

When playing back a high-quality signal such as Dolby TrueHD, Dolby Digital Plus, or DTS-HD, set the "BD Audio Mode" (page 60) to "HD Audio Output".



Enjoying BD-LIVE Features

While playing back a disc compatible with BD-LIVE, you can connect to the BD-LIVE site for Blu-ray Discs via the Internet and display special features and caption information not available on the disc.

- The functions that can be used with BD-LIVE differ from disc to disc.
- For details on the functions and how to operate them, see the individual disc's on-screen displays and explanations.
- To play back a BD-LIVE-compatible Blu-ray Disc, you should first install an SD memory card in this unit.



- To use BD-LIVE functions, connect this unit to the Internet and make the settings described below, as necessary:

Connections : "Connecting to the Network" (page 16)

Settings : "Network Setup" (page 47)

- Depending on your network environment, in some cases time may be required to connect to the network or connection may not be possible.

NOTE

Do not remove the SD memory card from this unit while playing a BD-LIVE compatible disc.

NOTE for SD memory card

- Insert or remove a SD memory card while the power is in standby. If you insert a SD memory card while the power is ON, the SD memory card may not be read.
- Use an SD memory card with a capacity of 1 GB or greater. Also, the SD memory card must be formatted on this unit (page 48).
- Remove the write protection of a SD memory card.

Playing BD-Video Compatible with Bonus View

With a disc that is compatible with bonus view (picture-in-picture), besides the main video (primary video) stored on the disc, you can play back the video director's commentary and simultaneously ongoing sub-story, as well as sub-video such as alternative camera angle (secondary video).

- The playback method, etc., is determined by the disc, and varies depending on the disc.
- For details on the functions and how to operate them, see the individual disc's on-screen displays and explanations.
- Some Blu-ray Discs use SD memory cards as the recording memory for Bonus View playback. You should install an SD memory card before using these discs.

Press **MODE** and Δ / ∇ to select the secondary video you want to play back.

Off \rightarrow 1/X \rightarrow 2/X \rightarrow X/X

Off Does not display secondary video.

1/X * Displays the first secondary video.

2/X * Displays the second secondary video.

X/X * Displays the X th secondary video.

* "X" is the number of Secondary Videos recorded and differs depending on the disc.

Main video
(primary video)

Sub video
(secondary video)



[Example] Bonus view

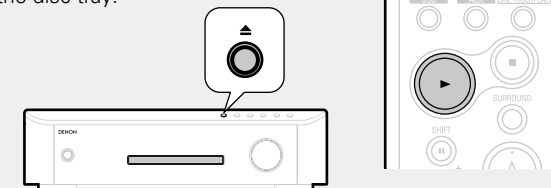
Playing CD



- 1 Prepare for playback.**
Turn on the subwoofer power.

- 2 Press ON to turn on power to the unit.**

- 3 Insert a disc.**
 - Press \blacktriangle on the main unit to open/close the disc tray.



- When the disc tray opens, the input source automatically switches to "BD/SD" and the unit enters "Disc Mode".
- If a disc is already inserted in the disc tray, switch to "Disc Mode" by selecting **BD/SD**.

- 4 Press \blacktriangleright .**
Playback starts.

- Adjusting the Master Volume** (page 30)
Press **VOL \blacktriangle / \blacktriangledown** .
- Stop Playback** (page 30)
Press **■**.
- Pause Playback** (page 30)
Press **II**.
- Fast Forward/Fast Reverse Playback** (page 31)
During playback, press **⏩/⏪**.
- Skipping to the Track** (page 31)
During playback, press **⏮/⏭** or Δ / ∇ .
- Random Playback** (page 31)
During stop, press **RANDOM**.
- Repeat Playback** (page 31)
Press **REPEAT**.



Playing an iPod®

There are two methods for iPod playback.

- ① **Use the DENON Control dock for iPod to play back.**
You can play back both video and audio.
- ② **Connect the iPod directly to the USB port to play back.**
You can play back audio only.

① Use the DENON Control Dock for iPod to Play Back



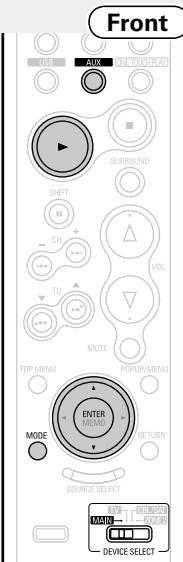
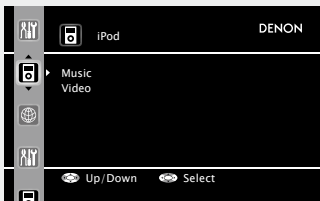
DENON Control dock for iPod usable on this unit
 • ASD-11R/ASD-3N/ASD-3W/ASD-51N/ASD-51W

Listening to Music on an iPod®

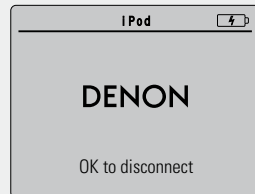
1 Prepare for playback.

Connect the DENON control dock for iPod to this unit (☞ page 14 "Connecting a Control Dock for iPod").

2 Press AUX to select "DOCK".



- When communication between this unit and the iPod is completed, the following connection screen is displayed on the iPod.



- If the connections screen is not displayed, the iPod may not be properly connected. Reconnect it.

3 Press MODE to select the display mode.

- There are two modes for display the contents recorded on the iPod.

Browse mode Display iPod information on the TV screen.

- * With the display of this unit, only English letters and numbers can be displayed. Any characters that cannot be displayed are replaced with " * ".

Remote mode Display iPod information on the iPod screen.

- * "Remote Dock" is displayed on the display of this unit.

	Display mode	Browse mode	Remote mode
Playable files	Music file	✓	✓
	Photo file		✓ *
	Video file	✓	✓ *
Active buttons	Remote control unit (This unit)	✓	✓
	iPod®		✓

- * Video may not be output, depending on the combination of ASD-11R/3N/3W/51N/51W DENON control dock for iPod and iPod.

4 Use Δ∇ to select the item, then press ENTER to select the file to be played.

5 Press ▶.

Playback starts.

- ☐ **Adjusting the Master Volume** (☞ page 30)
Press **VOL ▲▼**.

- ☐ **Stop Playback** (☞ page 30)
Press **■**.

- ☐ **Pause Playback** (☞ page 30)
Press **⏸** or **ENTER**.

- ☐ **Fast Forward/Fast Reverse Playback** (☞ page 31)
During playback, press **⏩⏩**.

- ☐ **Skipping to the Track** (☞ page 31)
During playback, press **⏮⏮** or **Δ∇**.

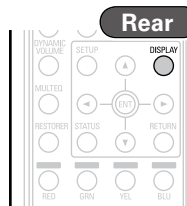
- ☐ **Repeat Playback** (☞ page 31)
Press **REPEAT**.

- ☐ **Shuffling Playback** (☞ page 24)

- ☐ **Switching the Display Page** (☞ page 24)
Press **SEARCH**, then press **◀** (previous page) or **▶** (next page). (only ASD-11R)
Press **⏮** (previous page) or **⏭** (next page). (ASD-3N / 3W / 51N / 51W)

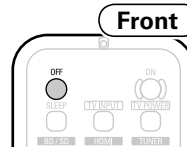


- To play back compressed audio with extended bass or treble reproduction, we recommend playback in RESTORER mode (☞ page 26). The default setting is "Mode 3".
- In Browse mode, press **DISPLAY** during playback to check the title name, artist name, and album name.



NOTE

- Press **OFF** and set this unit's power to the standby mode before disconnecting the iPod. Also switch the input source to one to which the menu "AUX1" is not assigned before disconnecting the iPod.
- Depending on the type of iPod and the software version, some functions may not operate.
- Note that DENON will accept no responsibility whatsoever for any problems arising with the data on an iPod when using this unit in conjunction with the iPod.



Video



Audio

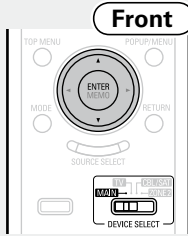


Photo

Viewing Videos on an iPod® in the Browse Mode

When an iPod equipped with a video function is connected to a DENON ASD-11R control dock for iPod, image files can be played in the browse mode.

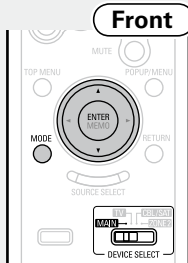
- 1 Use Δ / ∇ to select “Videos”, then press **ENTER**.
- 2 Use Δ / ∇ to select the search item or folder, then press **ENTER**.
- 3 Use Δ / ∇ to select the video file, then press **ENTER**. Playback starts.



Viewing Photos and Videos on an iPod® in the Remote Mode

This unit can play back on a TV screen photos and data stored on an iPod equipped with a slide show or video function.

- 1 Press **MODE** to set the Remote mode. “Remote Dock” is displayed on the display of this unit.
- 2 Watching the iPod’s screen, use Δ / ∇ to select “Photos” or “Videos”.
 - Depending on the iPod used, you may need to operate the iPod unit directly.
- 3 Press **ENTER** until the image you want to view is displayed.



“TV Out” at the iPod’s “Slide show 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.

NOTE

Video may not be output, depending on the combination of ASD-11R / 3N / 3W / 51N / 51W DENON control dock for iPod and iPod.

2 Connect the iPod Directly to the USB Port to Play Back

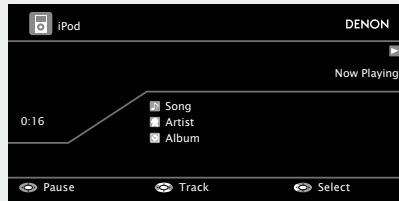


You can use the USB cable provided with the iPod® to connect the iPod with the unit’s USB port and enjoy music stored on the iPod.

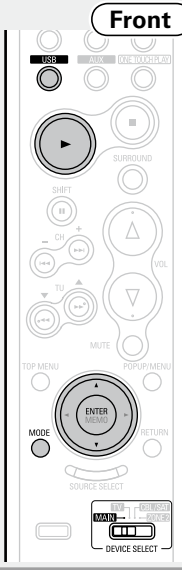
- This unit supports audio playback from the iPod (fifth generation or later), iPod nano, iPod classic, and iPod touch (it is not compatible with iPod shuffle).

- 1 Connect the iPod to the USB port (☞ page 14 “Connecting an iPod or USB Memory Device to the USB Port”).

Playback starts automatically.



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



- 2 Press **MODE** to select the display mode.

- There are two modes for display the contents recorded on the iPod.

Browse mode Display iPod information on the TV screen.

- * With the display of this unit, only English letters and numbers and certain symbols can be displayed. Any characters that cannot be displayed are replaced with “*”.

Remote mode Display iPod information on the iPod screen.

- * “Remote iPod” is displayed on the display of this unit.
- The Remote mode is not supported on fifth generation iPods or iPod nanos.

Display mode		Browse mode	Remote mode
Playable files	Music file	✓	✓
	Video file		✓ *
Active buttons	Remote control unit (This unit)	✓	✓
	iPod®		✓

* Only the sound is played.

- 3 Use Δ / ∇ to select the item, then press **ENTER** to select the file to be played.
- 4 Press **▶**. Playback starts.

- Adjusting the Master Volume** (☞ page 30)
Press **VOL ▲▼**.
- Stop Playback** (☞ page 30)
Press **■**.
- Pause Playback** (☞ page 30)
Press **||** or **ENTER**.
- Fast Forward/Fast Reverse Playback** (☞ page 31)
During playback, press **◀▶▶▶**.
- Skipping to the Track** (☞ page 31)
During playback, press **◀◀▶▶▶** or Δ / ∇ .
- Repeat Playback** (☞ page 31)
Press **REPEAT**.
- Shuffling Playback** (☞ page 24)
Press **RANDOM**.

The icons show the category of content applicable to each operation.



Video



Audio



Photo

For details of the media corresponding to each icon, see “Playable Media” (☞ page 19).

Getting Started

Simple Version

Connections

Playback (Basic)

Settings

Playback (Advanced)

Multi-zone

GUI

Remote Control

Part Names

Other Information

Troubleshooting

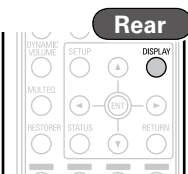
Spec.

Index

Playing an iPod®



- To play back compressed audio with extended bass or treble reproduction, we recommend playback in RESTORER mode (☞ page 26). The default setting is “Mode 3”.
- In Browse mode, press **DISPLAY** during playback to check the title name, artist name, and album name.



NOTE

- Depending on the type of iPod and the software version, some functions may not operate.
- Note that DENON will accept no responsibility whatsoever for any problems arising with the data on an iPod when using this unit in conjunction with the iPod.
- It is not possible to playback LPCM files recorded on an iPod.



“Made for iPod” means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

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 content that are not copyrighted or content for which copying or playback is legally permitted for your private use as an individual. Be sure to comply with applicable copyright legislation.

Shuffling Playback



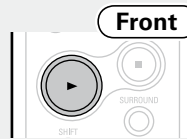
1 During playback, press **RANDOM**.
 is displayed on the screen.

- The mode is switched each time the button is pressed.



Display	Setting contents
Songs	Shuffle songs.
Albums	Shuffle albums.
OFF	Cancel shuffle mode.

2 Press **▶**.
 Playback starts.

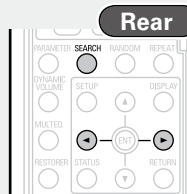


Switching the Display Page



Press **SEARCH**, then press **◀** (previous page) or **▶** (next page).

- To cancel, press **SEARCH**.

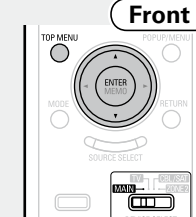
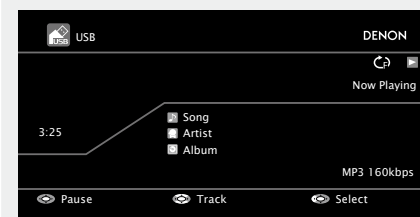


Playing a USB Memory Device



Playing back music files recorded on a USB memory device.

1 Connect the USB memory device to the USB port (☞ page 14 “Connecting an iPod or USB Memory Device to the USB Port”). Playback starts automatically.



2 Press **TOP MENU**, select the folder or file you want to play back using **△**/**▽** and press **ENTER**.

- Adjusting the Master Volume** (☞ page 30)
Press **VOL ▲▼**.
- Stop Playback** (☞ page 30)
Press **■**.
- Pause Playback** (☞ page 30)
Press **⏸** or **ENTER**.
- Fast Forward / Fast Reverse Playback** (☞ page 31)
During playback, press **⏩**/**⏪**.
- Skipping to the File** (☞ page 31)
During playback, press **⏮**/**⏭** or **△**/**▽**.
- Repeat Playback** (☞ page 31)
Press **REPEAT**.
- Random Playback** (☞ page 31)
Press **RANDOM**.
- Switching the Display Page** (☞ page 24)



To play back compressed audio with extended bass or treble reproduction, we recommend playback in RESTORER mode (☞ page 26). The default setting is “Mode 3”.

NOTE

- Note that DENON will accept no responsibility whatsoever for any problems arising with the data on a USB memory device when using this unit in conjunction with the USB memory device.
- It is not possible to play back LPCM, JPEG or DivX files recorded on a USB memory device.



Video



Audio



Photo

Playing Files

The limits on the number of folders and files that can be displayed by this unit are as follows.

Maximum Number of Playable Files and Folder

Item	Media	Disc or SD memory card	USB memory device
Number of folder directory levels		8 levels	8 levels
Number of folders		999	2000
Number of files		9999	6000

- The limited number includes the root folder.

Maximum Number of Text Display Characters

Item	Media	Disc or SD memory card	USB memory device
File name, Folder name		32	64
Artist name, title, etc.		60	64

- Text more than one line is scroll displayed.
- If characters not supported on the menu screen are included in a file name, title, artist name or album title, those are not displayed correctly.

Playing File



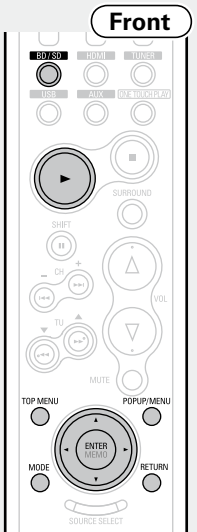
1 Press BD/SD to select "Disc Mode" or "SD Mode".

- Disc Mode** When playing back files stored on a DVD or CD.
- SD Mode** When playing back files stored on an SD memory card.

2 Load media.

The file browser screen will appear.

- See "Inserting a Disc" (page 67) and "SD CARD slot" (page 64) for how to load media.
- When file browser screen does not appear, press **POPUP/MENU**.

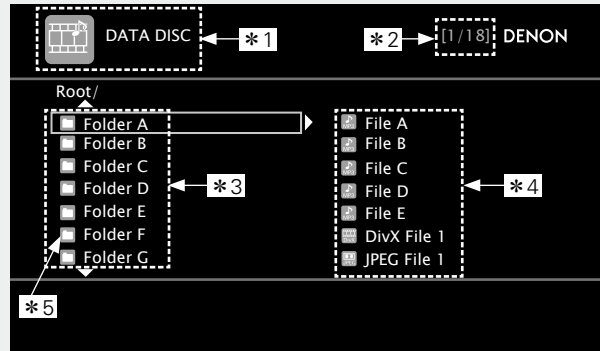


3 Press MODE to select a playback mode.

- Disc** Plays back all files in the media.
- Folder** Plays back files in the selected folder. is displayed in the playback mode indicator.

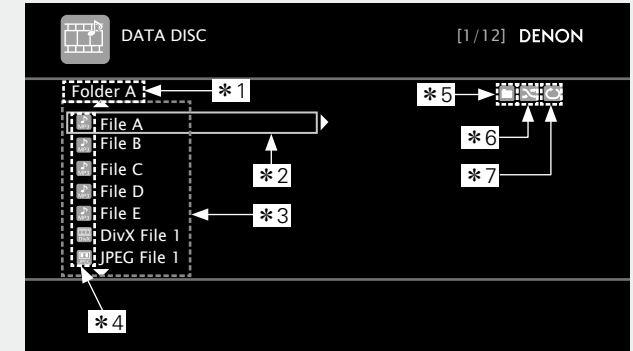
4 Select a folder of the data to be played back and press ENTER.

- $\Delta \nabla \leftarrow \rightarrow$ Display screen selection
- RETURN** To next level up
- ENTER** To next level down
- TOP MENU** To the top level



- * 1 Media currently playing back
- * 2 Selected folder number/Total number of folders
- * 3 Current level folder or file list
- * 4 Files inside selected folder
- * 5 Folder icon

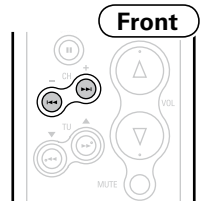
5 Use $\Delta \nabla$ to select a file, and press ENTER to play back.



- * 1 Current level folder name
- * 2 Selected file
- * 3 File for playback
- * 4 File types
- * 5 Folder mode
- * 6 Random playback mode
- * 7 Repeat playback mode

Switching the Display Page

- Press \rightarrow to display the next page.
- Press \leftarrow to display the previous page.



- For playable media and files, see "Playable Media" (page 19).
- To play back compressed audio with extended bass or treble reproduction, we recommend playback in RESTORER mode (page 26). The default setting is "Mode 3".

NOTE

This unit cannot play back an SD memory card containing video recorded with a digital camcorder.

The icons show the category of content applicable to each operation.



Video



Audio



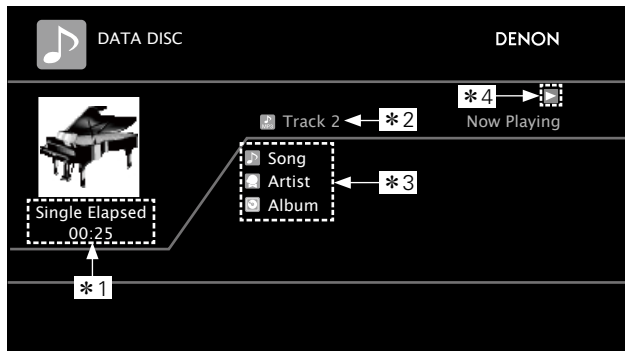
Photo

For details of the media corresponding to each icon, see "Playable Media" (page 19).

- Getting Started
- Simple Version
- Connections
- Playback (Basic)
- Settings
- Playback (Advanced)
- Multi-Zone
- GUI
- Remote Control
- Part Names
- Other Information
- Troubleshooting
- Spec.
- Index

Playing Files

Display during Playback of Music Files



- *1 Elapsed time or remaining time
- *2 Track number during playback
- *3 File name/Artist name/Album title
- *4 Playback mode display

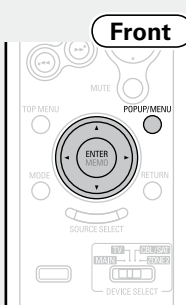
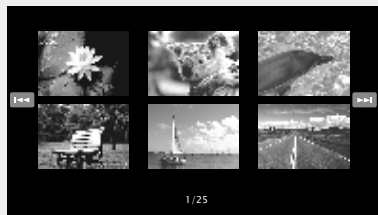
Playing JPEG File (Photo)



Slide show playback of JPEG format photo files stored on CD-R/-RW, DVD-R/-RW/+R/+RW disc and SD memory card.

1 Press **POPUP/MENU** while the file browser screen is displayed.

The thumbnail screen will appear.



- Pressing **POPUP/MENU** while the thumbnail screen is displayed returns you to the file browser screen.

2 Use **△▽◀▶** to select photos.

3 Press **ENTER**.
Display selected photo on full screen.



- Set the photo display time on the GUI menu with: "Display Setup" – "Slide Show Time" (page 48).
- With a large photo file, the display time may be longer than the set time.

❑ **Changing the Photo being Played Back**

Press **◀▶**.

- Before playback, or display of next photo.

❑ **Pausing the Display**

Press **II**.

- To cancel pause, press **▶**.

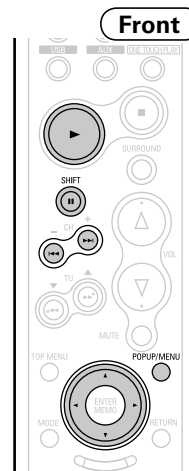
❑ **Changing the Photo Orientation**

During pause, press **△▽◀▶**.

- △▽.....180° rotation
- ◀.....Rotate 90° left
- ▶.....Rotate 90° right

❑ **Returning to Thumbnail Display Screen**

Press **POPUP/MENU**.



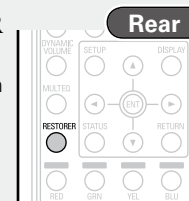
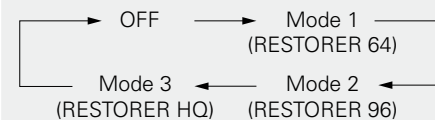
Playback by Restoring Compressed Audio to a State Close to the Pre-Compression State (RESTORER)



Compressed audio formats such 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.

Press **RESTORER** to select **RESTORER mode**.

※ The mode is switched each time the button is pressed.



- OFF** Do not use RESTORER.
- Mode 1** (RESTORER 64) Optimized mode for compressed sources with very weak highs.
- Mode 2** (RESTORER 96) Apply suitable bass and treble boost for all compressed sources.
- Mode 3** (RESTORER HQ) Optimized mode for compressed sources with normal highs.



- This item can be set with analog signals or when a PCM signal (fs = 44.1/48 kHz) is input.
- The default setting is "Mode 3" for discs with recorded data files, SD memory cards, iPod Dock, and USB. All other settings are set to "OFF" by default.
- When set to something other than "OFF", **RSTR** is displayed.



Video



Audio



Photo

Tuning in Radio Stations

Listening to FM/AM Broadcasts

1 Press **TUNER** to select “FM” or “AM”.

FM When listening to an FM broadcast.

AM When listening to an AM broadcast.

2 Tune in the desired broadcast station.

1 To tune in automatically (Auto Tuning)

Press **MODE** to light the “AUTO” indicator on the display, then use **TU ▲** or **TU ▼** to select the station you want to hear.

• To cancel Auto tuning, press **TU ▲** or **TU ▼**.

2 To tune in manually (Manual Tuning)

Press **MODE** to turn off the display’s “AUTO” indicator, then use **TU ▲** or **TU ▼** to select the station you want to hear.



❑ **Adjusting the Master Volume** (page 30)

Press **VOL ▲▼**.



- If the desired station cannot be tuned in with auto tuning, tune it in manually.
- When tuning in stations manually, press and hold **TU ▲** or **TU ▼** to change frequencies continuously.

Presetting Radio Stations (Manual Preset)

Your favorite broadcast stations can be preset so that you can tune them in easily. Up to 56 stations can be preset. Multicasts can also be preset.

• Stations can be preset automatically at “Auto Preset” (page 50). If “Auto Preset” is performed after performing “Manual Preset”, the “Manual Preset” settings will be overwritten.

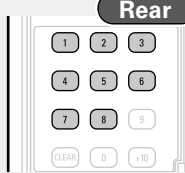
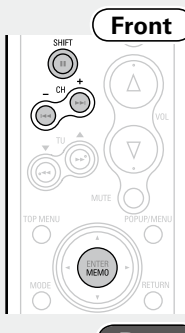
1 Tune in the broadcast station you want to preset.

2 Press **MEMO**.

3 Press **SHIFT** to select the block (A to G) in which the channel (1 to 8 per a block) is to be preset, then press **CHANNEL +, –** or **1 – 8** to select the preset number.

4 Press **MEMO** again to complete the setting.

To preset other stations, repeat steps 1 to 4.



❑ **Default Settings**

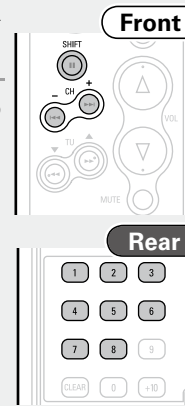
Block (A – G) and Channel (1 – 8)	Default Settings
A1 – A8	87.5 / 89.1 / 98.1 / 108.0 / 90.1 / 90.1 / 90.1 / 90.1 MHz
B1 – B8	522 / 603 / 999 / 1404 / 1611 kHz, 90.1 / 90.1 / 90.1 MHz
C1 – C8	90.1 MHz
D1 – D8	90.1 MHz
E1 – E8	90.1 MHz
F1 – F8	90.1 MHz
G1 – G8	90.1 MHz

❑ **Specify a Name for the Preset Broadcast Station (Preset Name)** (page 50)

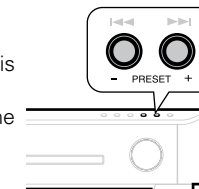
Listening to Preset Stations

1 Press **SHIFT** to select the memory block.

2 Press **CHANNEL +, –** or **1 – 8** to select the desired preset channel.



You can also operate via the main unit. In this case, perform the following operations. Press **PRESET +** or **PRESET –** to select the preset radio station.



Direct Frequency Tuning

You can enter the receiving frequency directly to tune in.

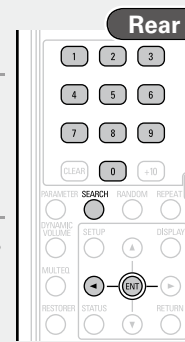
1 Press **SEARCH**.

2 Input frequencies using **0 – 9**.

• If **◀** is pressed, the immediately preceding input is cancelled.

3 When setting is completed, press **ENTER**.

The preset frequency is tuned in.



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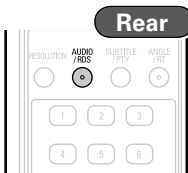
Tuning in Radio Stations

RDS (Radio Data System)

RDS (works only on the FM band) is a broadcasting service which allows a station to send additional information along with the regular radio program signal.

NOTE

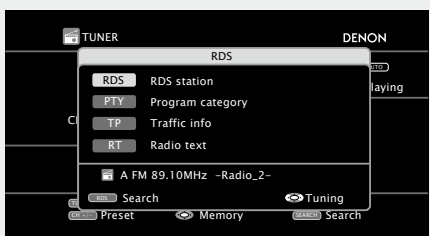
The operations described as follows using **AUDIO/RDS** will not function in areas in which there are no RDS broadcasts.



RDS Search

Use this function to automatically tune to FM stations that provide the RDS service.

1 Press **AUDIO/RDS** to select "RDS".



2 Press **<>**.

The search for RDS stations begins automatically.

- If no RDS stations are found with the above operation, all the reception bands are searched.
- When a broadcast station is found, that station's name appears on the display.
- If no RDS station is found when all the frequencies have been searched, "NO RDS" is displayed.



If you press **<>** within 5 seconds after the broadcast station name is shown on the display, you can search for a different station.

Program Type (PTY)

PTY identifies the type of RDS program. The program types and their displays are as follows:

NEWS	News	WEATHER	Weather
AFFAIRS	Current Affairs	FINANCE	Finance
INFO	Information	CHILDREN	Children's program
SPORT	Sports	SOCIAL	Social Affairs
EDUCATE	Education	RELIGION	Religion
DRAMA	Drama	PHONE IN	Phone In
CULTURE	Culture	TRAVEL	Travel
SCIENCE	Science	LEISURE	Leisure
VARIED	Varied	JAZZ	Jazz Music
POP M	Pop Music	COUNTRY	Country Music
ROCK M	Rock Music	NATION M	National Music
EASY M	Easy Listening Music	OLDIES	Oldies Music
LIGHT M	Light Classical	FOLK M	Folk Music
CLASSICS	Serious Classical	DOCUMENT	Documentary
OTHER M	Other Music		

PTY Search

Use this function to find RDS stations broadcasting a designated program type (PTY).

1 Press **AUDIO/RDS** twice to select "PTY".



2 Watching the display, press **SUBTITLE/PTY** to call out the desired program type.

3 Press **<>**.

PTY search begins automatically.

- If there is no station broadcasting the designated program type with the above operation, all the reception bands are searched.
- The station name is displayed on the display after searching stops.
- If no station broadcasting the designated program type is found when all the frequencies have been searched, "NO PROGRAMME" is displayed.



If you press **<>** within 5 seconds after the broadcast station name is shown on the display, you can search for a different station.

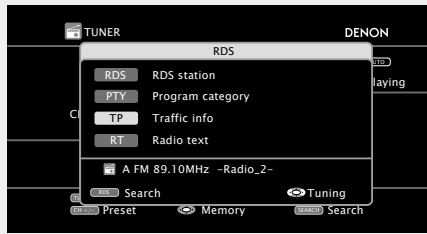
Traffic Program (TP)

TP identifies programs that carry traffic announcements. This allows you to easily find out the latest traffic conditions in your area before leaving home.

TP Search

Use this function to find RDS stations broadcasting traffic programs (TP stations).

1 Press **AUDIO/RDS** three times to select **“TP”**.



2 Press **◀▶**.

TP search begins automatically.

- If no TP station is found with the above operation, all the reception bands are searched.
- The station name is displayed on the display after searching stops.
- If no other TP station is found when all the frequencies have been searched, “NO PROGRAMME” is displayed.



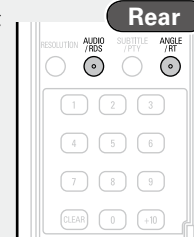
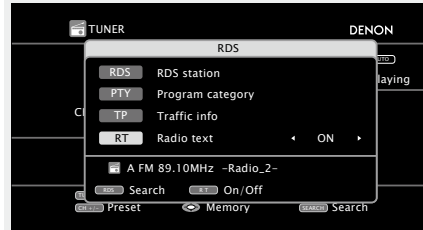
If you press **◀▶** within 5 seconds after the broadcast station name is shown on the display, you can search for a different station.

Radio Text (RT)

RT allows RDS stations to send text messages that appear on the display.

“RT” appears on the display when radio text data is received.

Press **AUDIO/RDS** four times to select **“RT”**.



- While receiving an RDS broadcast station, the text data broadcast from the station is displayed.
- If no text data is being broadcast, “NO TEXT DATA” is displayed.

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Playback (Basic) (👉 page 18)

- Adjusting the Master Volume** (👉 page 30)
- Stop Playback** (👉 page 30)
- Pause Playback** (👉 page 30)
- Step-by-Step Playback** (👉 page 30)
- Fast Forward/Fast Reverse Playback** (👉 page 31)
- Slow Forward/Slow Reverse Playback** (👉 page 31)
- Skipping to the Chapter/Track/File** (👉 page 31)
- Random Playback** (👉 page 31)
- Repeat Playback** (👉 page 31)
- Switching Audio** (👉 page 32)
- Switching the Angle** (👉 page 32)
- Changing the Subtitles and Subtitle Style** (👉 page 33)

Surround Mode (👉 page 33)

Playback (Advanced) (👉 page 39)

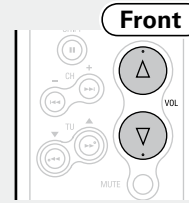
Adjusting the Master Volume



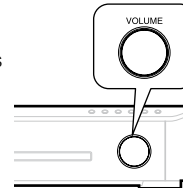
Press **VOL ▲▼** to adjust the volume.

[Variable range] **0 - 99**

- The variable range differs according to the input signal and channel level setting.



You can also operate via the main unit. In this case, perform the following operations. Use **VOLUME** to adjust the volume.

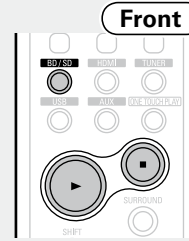


Stop Playback



During playback, press **■**.

Playback stops.



About Resume Function



When playback is stopped, the stop position is memorized.

- The **▶** indicator flashes on the display. When playing back data from the stop position, press **▶** while stop by the resume function.

To Cancel the Resume Function

Perform one of the following operations.

- During stop, press **■**.
- Change the playback media mode with **BD/SD**.
- Open the disc tray.
- Remove the SD memory card.



- The resume function remains valid even when the standby mode is set. For DivX[®] files, however, the resume function is cancelled even when the standby mode is set.
- The resume function is cancelled when the power is turned off by unplugging the power cord.

NOTE

- The resume function does not work with menu playback or BD-J (Blu-ray Disc Java) compatible disc.

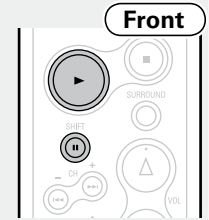
Pause Playback



During playback, press **⏸**.

The **⏸** indicator will light on the display.

- Resume normal playback by pressing **▶**.



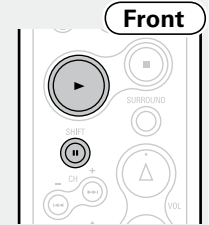
Step-by-Step Playback



During pause, press **⏮**.

The disc advances frame by frame each time the button is pressed.

- Resume normal playback by pressing **▶**.



NOTE

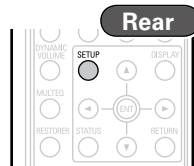
Step-by-step reverse playback is not available with this unit.



Performance of the following operations can sometimes result in video discontinuities.

- Pause Playback
- Step-by-Step Playback
- Slow Forward/Slow Reverse Playback

If this happens, stop playback, then press **SETUP** and on the GUI menu switch "Display Setup" - "Still Mode" to "Field" (👉 page 48).



Video



Audio



Photo

Fast Forward/Fast Reverse Playback

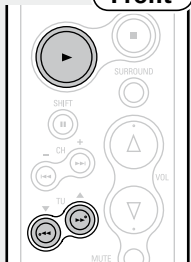


During playback, press ◀◀ or ▶▶.

- The fast forward/fast reverse speed changes each time the button is pressed.
- Speed varies with the disc and file.

- Resume normal playback by pressing ▶.

Front



NOTE

- You cannot fast forward/fast reverse across files or tracks during program or random playback.
- Fast forward/fast reverse may be disabled with some DivX® files.
- Audio is not output during fast forward/fast reverse of a Blu-ray Disc or DVD.

Slow Forward/Slow Reverse Playback

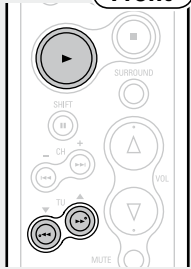


During pause, press ◀◀ or ▶▶.

The speed changes each time the button is pressed.

- The speed of the slow reverse playback is not switched.
- Resume normal playback by pressing ▶.

Front



Audio is not output during slow forward/slow reverse playback.

Skipping to the Chapter/Track/File



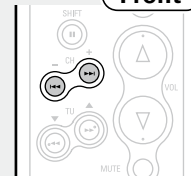
During playback, press ◀◀◀ or ▶▶▶.

◀◀◀ Playback begins from the start of the chapter/track/file being played.

▶▶▶ Playback begins from the start of the next chapter/track/file.

- Continue pressing and skip to the chapter/track/file with just the number of times pressed.

Front



NOTE

Skipping to the start of a title may be prohibited depending on the disc.

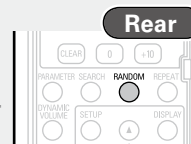
Random Playback



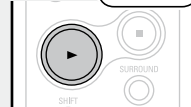
1 During stop, press **RANDOM**.
The "RAND" lights on the display and is displayed on the screen.

2 Press ▶.
Playback starts.

Rear



Front



Resuming Normal Playback

During stop, press **RANDOM**.

NOTE

Random playback may not be enabled depending on the disc.

Repeat Playback

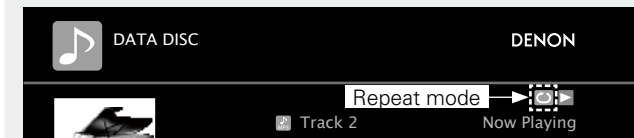


1 Press **REPEAT**.

The repeat mode icon is displayed at the top of the screen.

- The repeat mode changes each time the button is pressed.

Rear



[About Repeat Mode]

Settable repeat modes vary depending on the disc or file you are playing back.

Contents				Repeat mode display
Mode				
Chapter repeat	✓			
Track repeat		✓	✓	
Title repeat	✓			
All repeat		✓	✓	
Folder repeat		✓*		

* Only when playing back files in a USB memory device

Resuming Normal Playback

Press **REPEAT**.

NOTE

- Some repeat modes may not be accessible depending on the disc.
- Depending on the disc, even when set to repeat playback, the disc may not return to the start of title or chapter, and may advance to the next scene.
- There is no "Off" setting in the USB memory device repeat mode.



Video



Audio



Photo

Basic Operation

Switching Audio



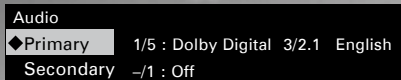
With discs and files that have multiple audio track recording, you can change the audio during playback.

With Blu-ray Disc, you can set sub-track audio such as interactive audio and audio commentary, etc., with "Secondary".

Switching a Blu-ray Disc's Primary Audio/Secondary Audio

1 During playback of a Primary Audio/Secondary Audio title, press AUDIO/RDS.

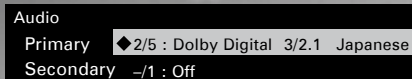
The audio number currently being played is displayed.



2 Press Δ / ∇ , select "Primary" or "Secondary", and then press ENTER.

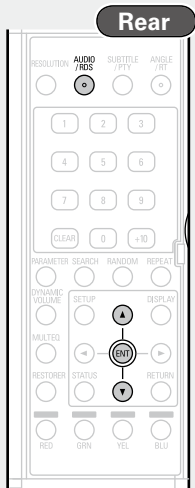
- If multiple audio items are recorded, "the current audio number/number of recorded audio items" is displayed.
- When "BD Audio Mode" is set to "HD Audio Output" (page 60), "Secondary" audio is not output.

3 Select your desired audio language with Δ / ∇ .



4 Press AUDIO/RDS.

The setup screen disappears.

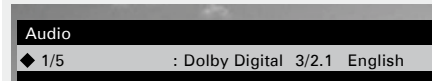


- Depending on the disc, audio switching may be restricted to operation of the disc menu. In this case, switch the audio on the disc menu.
- Be sure to set "BD Audio Mode" to "Mix Audio Output" (page 60) for playing back secondary audio.
- Depending on the Blu-ray Disc, even if picture-in-picture playback is set to "Off", Secondary Audio only may be output.

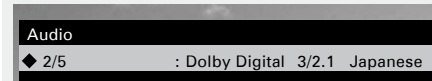
Audio Switching (Media Other than Blu-ray Disc)

1 During playback, press AUDIO/RDS.

The audio number currently being played is displayed.



2 Use Δ / ∇ to select audio.



3 Press AUDIO/RDS.

The setup screen disappears.



For DivX® files, "—" is displayed when the audio is not "MP3" or "Dolby Digital".

NOTE

- Audio switching may vary depending on the playback media used.
- With DTS-CD (5.1 music disc), you cannot switch audio modes.

Switching the Angle



During playback of a Blu-ray Disc or DVD-Video recorded with several camera angles, you can change the angle.

1 During playback, press ANGLE/RT.

The angle number currently being played is displayed.



2 Use Δ / ∇ to select angle.



3 Press ANGLE/RT.

The setup screen disappears.



NOTE

Angle changing may be restricted, depending on the disc.



Video



Audio



Photo

Changing the Subtitles and Subtitle Style



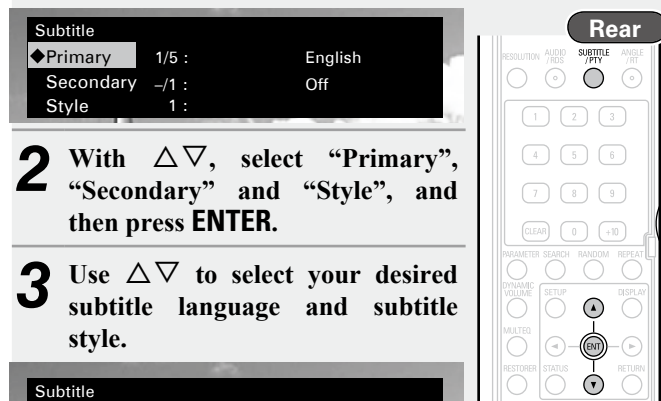
During playback of a disc or file with recorded subtitles, you can switch subtitle on/off as well as subtitle language.

With Blu-ray Disc, you can change the style of displayed subtitles.

Switching a Blu-ray Disc's Primary Subtitle/ Secondary Subtitle and Subtitle Style

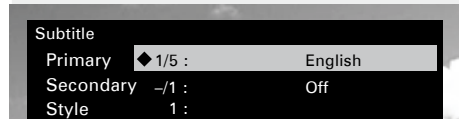
1 During playback, press SUBTITLE/PTY.

The subtitle number currently being played is displayed.



2 With Δ / ∇ , select "Primary", "Secondary" and "Style", and then press ENTER.

3 Use Δ / ∇ to select your desired subtitle language and subtitle style.



4 Press SUBTITLE/PTY.

The setup screen disappears.

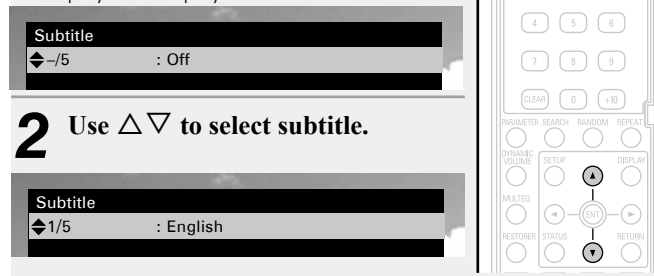


- If a disc does not include subtitles and subtitle style, "Not Available" is displayed.
- Depending on the disc, subtitle switching may be restricted to operation of the disc menu. In this case, switch the subtitles on the disc menu.

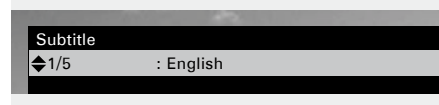
Selecting DVD-Video and DivX® File Subtitle

1 During playback, press SUBTITLE/PTY.

The subtitle number currently being played is displayed.



2 Use Δ / ∇ to select subtitle.



NOTE

With a DivX® file, the currently playing subtitle number and number of recorded subtitles are displayed, the language option is not displayed.

Surround Mode

You can select surround mode to enjoy surround playback with your favorite acoustic field effects.



Surround mode setting items will vary depending on the combination of speakers connected and input signals.

Playing Back Surround Sound Using 2.0-channel or 2.1-channel Speakers

When your speaker system is 2.0-channel or 2.1-channel, you can select one of the following modes.

1 Playing the source (☞ page 20).

2 Press SURROUND to select the surround mode.

STEREO

This is the mode for playing stereo. If the input signal is multi-channel, down-mix to 2.1-channel or 2-channel.

DOLBY VS REFERENCE

This is the standard mode for Dolby Virtual Speaker.

DOLBY VS WIDE

This mode emphasizes a wide feel.

3 Press PARAMETER to select a mode aligned with the source.

Cinema

This mode is suited for movie sources.

Music

This mode is suited for music sources.

- You cannot perform this operation if the input signal is multi-channel, or if the surround mode is "STEREO".



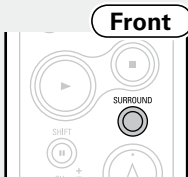
Surround Playback Using more than 2.1-channel Speakers

The selectable surround modes depend on the following:

- Format of the audio signals being input
- Number of channels of the audio signals being input
- The set speaker assignment (👉 page 55)

1 Playing the source (👉 page 20).

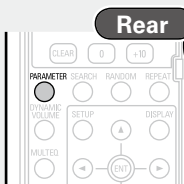
2 Press SURROUND to select the surround mode.



- STEREO** This is the mode for playing stereo. Sound is output from the front left and right speakers and subwoofer.
- *** This mode is for surround playback aligned with the source.
- MULTI CH STEREO** This is an original DENON surround mode. This mode is for enjoying stereo sound from all speakers.
- ROCK ARENA** This is an original DENON surround mode. This mode is for enjoying the atmosphere of a live concert in an arena.
- JAZZ CLUB** This is an original DENON surround mode. This mode is for enjoying the atmosphere of a live concert in a jazz club.

* The displayed surround mode changes depending on factors such as the input signal and speaker settings (👉 page 71).

3 [When “*” was selected in Step 2] Press PARAMETER to select a mode aligned with the source.



- The modes that can be selected depend on the input source being played.

When Performing Surround Playback for a 2-channel Source

- DOLBY PLII Cinema** *1 The signals are decoded in DOLBY PLII for surround playback. This mode is suited for movie sources.
 - DOLBY PLII Music** *1 The signals are decoded in DOLBY PLII for surround playback. This mode is suited for music sources.
 - DOLBY PLII Game** *1 The signals are decoded in DOLBY PLII for surround playback. This mode is suited for games.
 - DTS NEO:6 Cinema** The signals are decoded in DTS NEO:6 for surround playback. This mode is suited for movie sources.
 - DTS NEO:6 Music** The signals are decoded in DTS NEO:6 for surround playback. This mode is suited for music sources.
 - DOLBY PLIIz Height** *2 The signals are decoded in DOLBY PLIIz for surround playback. This is the Front Height playback mode. You can select this when the “Front Height” setting is “ON” (👉 page 51).
- *1 When the two conditions below are satisfied, signals are decoded in DOLBY PLIIx for surround playback. In this case, the display shows “DOLBY PLIIx”.
- Set “Speaker Assign” to “5.1CH + Surround Back” (👉 page 55).
 - Set “Speaker Configuration” – “Surround Back” to something other than “None” (👉 page 56).
- *2 You can select this when the following 3 conditions are satisfied.
- Set “Speaker Assign” to “5.1CH + Front Height” (👉 page 55).
 - Set “Speaker Configuration” – “Front Height” to something other than “None” (👉 page 56).
 - Set “Front Height” to “ON” (👉 page 51).

When the Multi-channel Source is Surround Playback

When the “Speaker Assign” setting on the GUI menu is “5.1CH + Surround Back”, you can select the parameters.

- Depending on the input signal, there may be signals that you cannot select.

[Displaying the Currently Playing Surround Mode]

Input signal	Display
DOLBY DIGITAL (other than 2ch)/ DOLBY DIGITAL EX	DOLBY DIGITAL
	DOLBY DIGITAL EX
DOLBY DIGITAL Plus	DOLBY DIGITAL+PLIIx CINEMA
	DOLBY DIGITAL+PLIIx MUSIC
	DOLBY DIGITAL+PLIIz HEIGHT * 1
	DOLBY DIGITAL+ +EX
DOLBY TrueHD	DOLBY DIGITAL+ + PLIIx CINEMA
	DOLBY DIGITAL+ + PLIIx MUSIC
	DOLBY DIGITAL+ + PLIIz HEIGHT * 1
	DOLBY TrueHD
DTS (5.1ch)/ DTS-ES Discrete 6.1/ DTS-ES Matrix 6.1/ DTS 96/24	DOLBY TrueHD+EX
	DOLBY TrueHD+PLIIx CINEMA
	DOLBY TrueHD+PLIIx MUSIC
	DOLBY TrueHD+PLIIz HEIGHT * 1
DTS-HD	DTS SURROUND
	DTS+PLIIx CINEMA
	DTS+PLIIx MUSIC
	DTS+PLIIz HEIGHT * 1
PCM (multi ch)	DTS+NEO:6
	DTS ES MTRX6.1 * 2
	DTS ES DSCRT6.1 * 3
	DTS 96/24 * 4
DTS-HD	DTS-HD HI RES
	DTS-HD MSTR
	DTS-HD+NEO:6
	DTS-HD+PLIIx CINEMA
	DTS-HD+PLIIx MUSIC
DTS EXPRESS	DTS-HD+PLIIz HEIGHT * 1
	DTS EXPRESS
	MULTI CH IN
MULTI IN+PLIIz HEIGHT * 1	MULTI CH IN 7.1

- * 1 You can select this when the “Speaker Assign” setting on the GUI menu is “5.1CH + Front Height” (👉 page 55).
- * 2 This is displayed when the input signal is “DTS-ES Matrix 6.1” and this unit’s “AFDM” setting is set to “ON” (👉 page 51).
- * 3 This is displayed when the input signal is “DTS-ES Discrete 6.1”.
- * 4 This is displayed when the input signal is “DTS 96/24”.



For details, see page 70.

Advanced Version



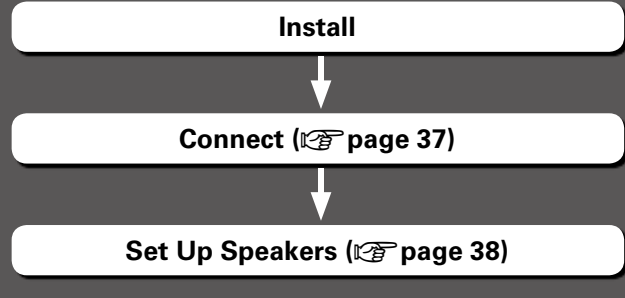
Here, we explain functions and operations that let you make better use of this unit.

- **Settings for Speakers Other Than 5.1-channel**
- **Playback (Advanced)**
- **Playback (Multi-zone Function) in ZONE2 (Separate Room)**
- **How to Make Detailed Settings**
- **Operating the Connected Devices by Remote Control Unit**

Settings for Speakers Other Than 5.1-channel

Here we describe the installation, connection and setup methods for speakers other than 5.1-channel speakers. For the installation, connection and setup methods for 5.1-channel speakers, see "Simple Version" (☞ page 3).

□ Procedure for speaker settings

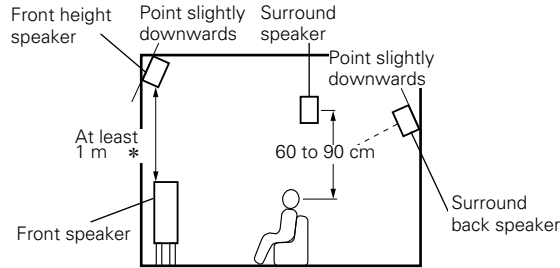


Install

This unit is compatible with Dolby Pro Logic IIz (☞ page 75), which offers an even wider and deeper surround sensation. When using Dolby Pro Logic IIz, install front height speakers.



Install the surround back speakers in a position 60 to 90cm higher than ear level.



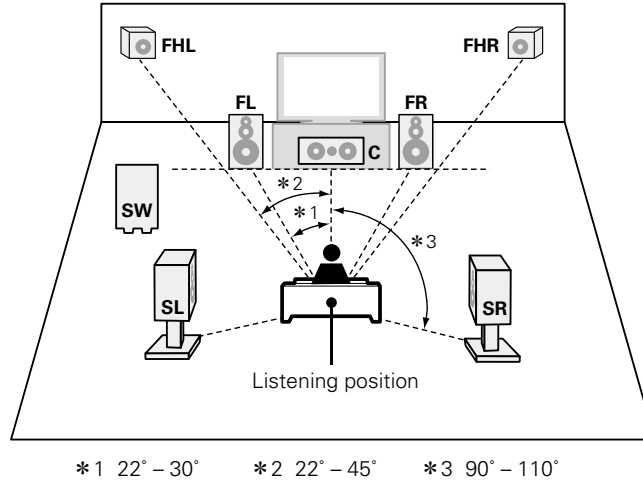
[Viewed from the side]

* Recommended for Dolby Pro Logic IIz

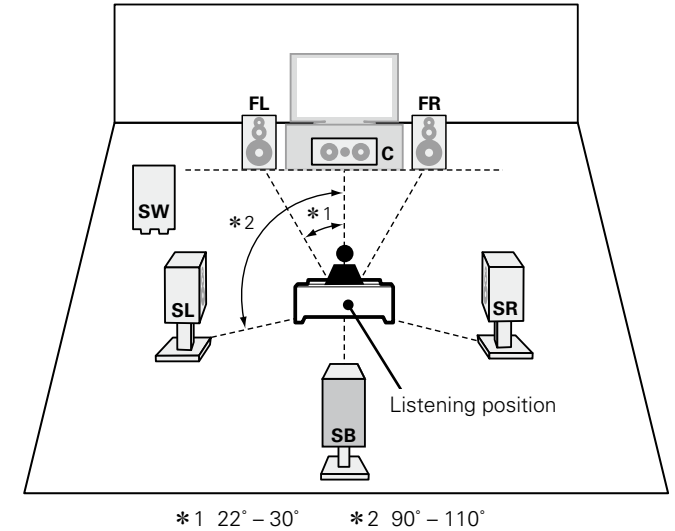
NOTE

It is not possible to use the surround back speakers and front height speakers simultaneously.

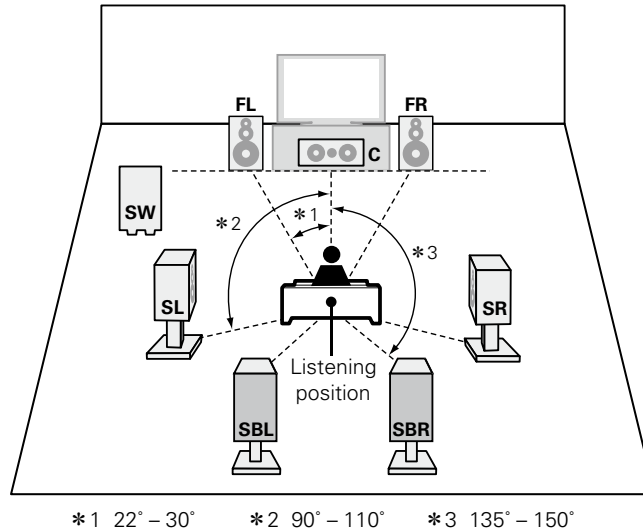
□ When 7.1ch (Front Height Speaker) Installed



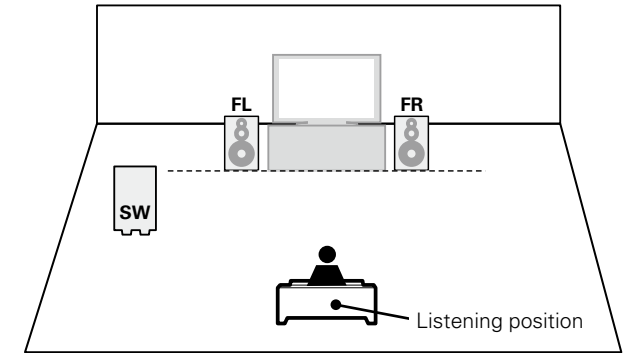
□ When 6.1ch (Surround Back Speaker) Installed



□ When 7.1ch (Surround Back Speaker) Installed



□ When 2.1ch Installed



- FL Front speaker (L)
- FR Front speaker (R)
- C Center speaker
- SW Subwoofer
- SL Surround speaker (L)
- SR Surround speaker (R)

- SBL Surround back speaker (L)
- SBR Surround back speaker (R)
- FHL Front height speaker (L)
- FHR Front height speaker (R)

Connect

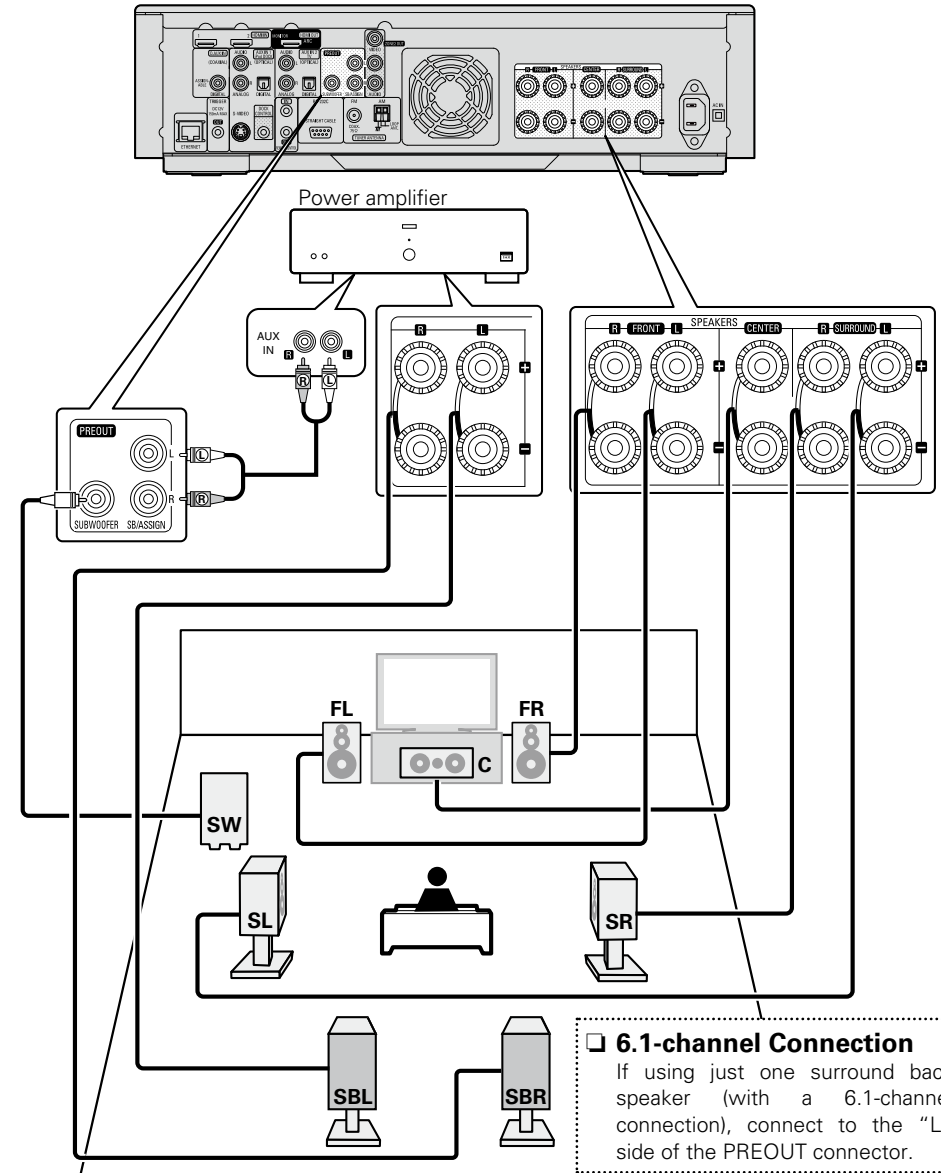
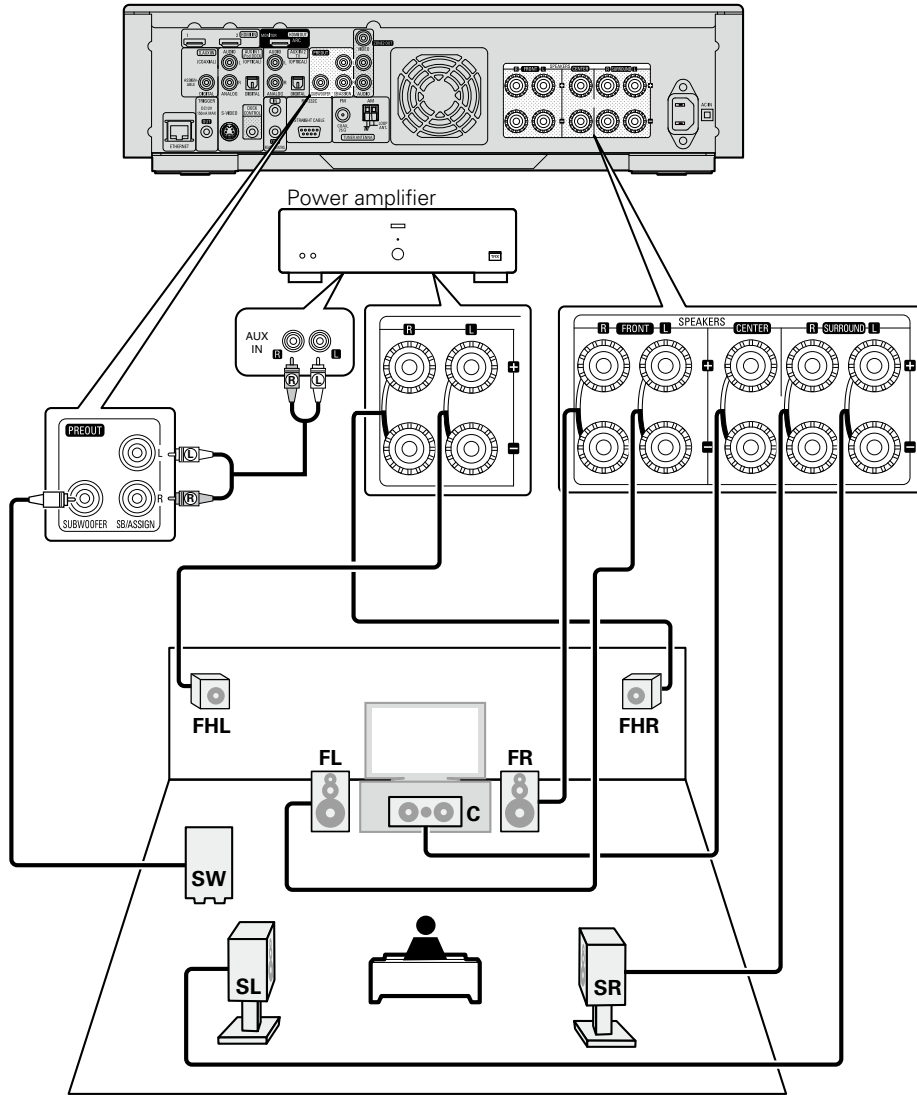
- For the method of connecting 5.1-channel speakers, see page 4.
- For the method of connecting the TV, see page 5.

7.1-channel (Front Height Speaker) Connection

- A power amplifier (sold separately) is required for this connection.
- For 7.1-channel (Front height speaker) playback, set "Speaker Assign" in "Set Up Speakers" (page 38) to "5.1CH + Front Height".

7.1-channel/6.1-channel (Surround Back Speaker) Connection

- A power amplifier (sold separately) is required for this connection.
- For 7.1-channel (Surround back speaker) playback, set "Speaker Assign" in "Set Up Speakers" (page 38) to "5.1CH + Surround Back".

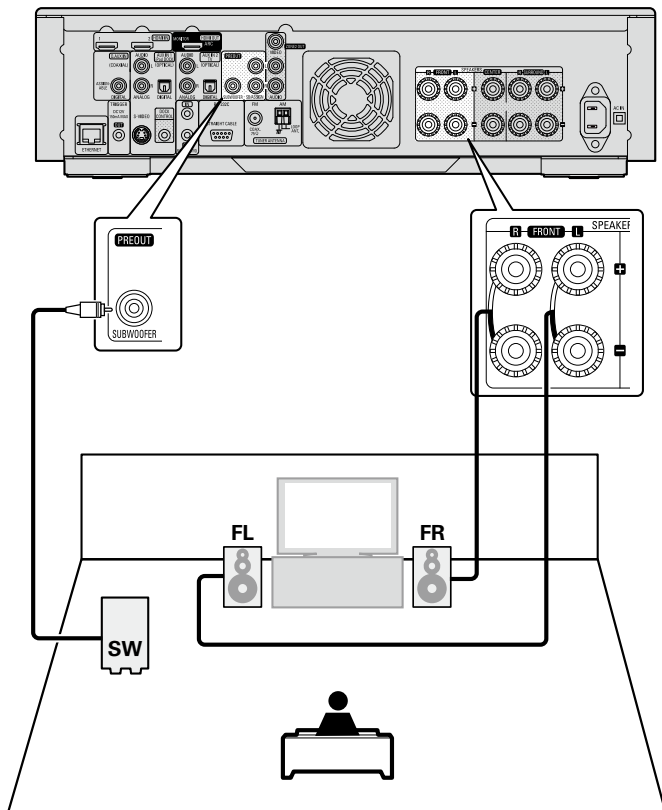


6.1-channel Connection
 If using just one surround back speaker (with a 6.1-channel connection), connect to the "L" side of the PREOUT connector.

- Getting Started
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- Settings (Advanced)
- Playback (Advanced)
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- GUI
- Remote Control
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Connect

2.1-channel Connection



NOTE

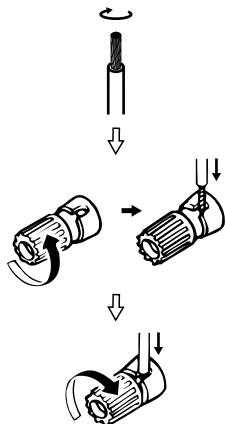
- Connect so that the speaker cable core wires do not protrude from the speaker terminal. The protection circuit may be activated if the core wires touch the rear panel or if the + and - sides touch each other (page 76 "Protection Circuit").
- Never touch the speaker terminals while the power supply is connected. Doing so could result in electric shock.

Speakers

Carefully check the left (L) and right (R) channels and + (red) and - (black) polarities on the speakers being connected to this unit, and be sure to interconnect the channels and polarities correctly.

Connecting the speaker cables

Peel off about 10 mm of sheathing from the tip of the speaker cable, then either twist the core wire tightly or terminate it.



Speaker impedance

Front	4 - 16 Ω
Center	
Surround	

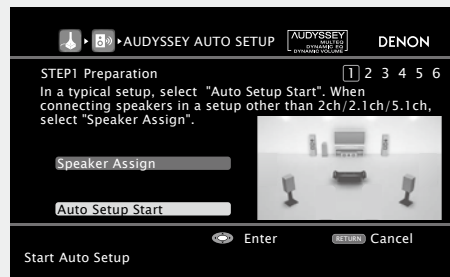
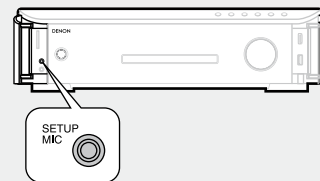
Set Up Speakers

Here we describe how to set up speakers other than 5.1-channel speakers. For the method of setting up 5.1-channel speakers, see "Simple Version", "4 Set Up Speakers (Audyssey™ Auto Setup)" (page 6).

First install and connect the speakers to this unit.

1 Connect the setup microphone.

The following screen is displayed.



2 Select "Speaker Assign" and then press ENTER.



3 Select the configuration of the connected speakers, and then press ENTER.



- 5.1CH** Connect 5.1-channel speakers.
- 2.0CH/2.1CH** Connect the front speakers and subwoofer only.
- 5.1CH + Surround Back** Connect the surround back speakers to the PRE OUT connectors.
- 5.1CH + Front Height** Connect the front height speakers to the PRE OUT connectors.

4 Select "Auto Setup Start" and then press ENTER. Proceed to page 7 "STEP1 Preparation" Step 4.

NOTE

- The "FIRST SETUP" screen is displayed only when the power is first turned on after purchase.
- After performing Audyssey Auto Setup, do not change the speaker connections or subwoofer volume. In event of a change, perform Audyssey Auto Setup again.



Playback (Advanced)

Advanced Operation

Playback (Basic) (👉 page 18)

Basic Operation (👉 page 30)

Surround Mode (👉 page 33)

❑ Looking for Specific Sections Using the Search Modes (👉 page 39)

❑ Setting Locations to Play Back Again (Marker Function) (👉 page 40)

❑ HDMI Control Function (👉 page 41)

❑ One Touch Play Function (👉 page 41)

❑ Sleep Timer Function (👉 page 42)

❑ Various Memory Functions (👉 page 42)

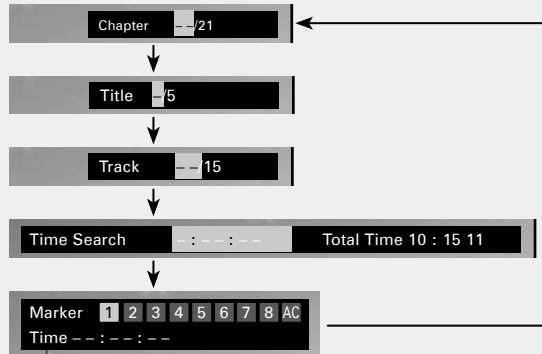
Looking for Specific Sections Using the Search Modes



1 During playback, press SEARCH, and then search mode.

The search mode setting bar is displayed at the top of the screen.

- The search mode changes each time the button is pressed.



[Content compatible with Search mode]

	Contents		
Search mode			
Chapter search	✓		
Title search	✓		
Track search	✓*1	✓	✓
Time search	✓*2	✓*2	
Marker search *3	✓		

- *1 Only compatible with DivX files.
- *2 Not compatible with DivX files.

*3 About Marker Search

Plays back from your selected marker number.

You will need to set the marker function before using marker search.



When the entry mode for chapter/title/track search continues for about 5 seconds with no operation, it is cancelled.

2 Conducting search condition entry or setting on the search mode setting bar.

Search specified location on completion of entry.

- 0 - 9, +10**..... Number entry
- ENTER**..... Finalizes number
- < >**..... Marker number selection
- ENTER**..... Finalizes the marker number or plays back
- CLEAR**..... Marker number cancel



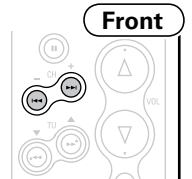
- Entering numbers
 Entering 3 **3, ENTER ***
 Entering 26 **2, 6, ENTER *** or **+10, +10, 6**
 Entering 138 **1, 3, 8, ENTER ***

* Depending on number of recorded songs or chapters, you don't need to use **ENTER**.

• Time search corresponds with title and track playback time. It is not compatible chapter playback time.

NOTE

- Search mode does not operate during random playback. Use **⏮**, **⏭** to cue.
- Search mode may not operate depending on the disc.



Video



Audio



Photo

Advanced Operation

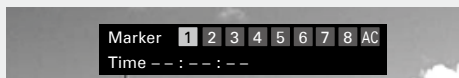
Setting Locations to Play Back Again (Marker Function)



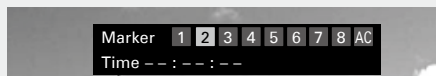
You can attach a marker to a location you want to view or hear again, so that playback begins at that location.

1 During playback, press **SEARCH** until “Marker” is displayed on the screen.

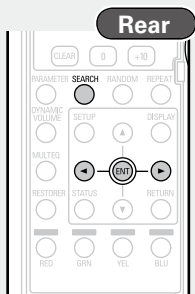
The search mode setting bar is displayed at the top of the screen.



2 Use **◀▶** to select the number.



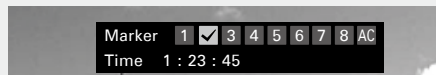
- Numbers you have already set will be displayed as ✓.



3 Press **ENTER** at the location you want to memorize.

The location is registered for the selected marker number.

- The elapsed playing time at the set location is displayed.



To Play Back Memorized Locations

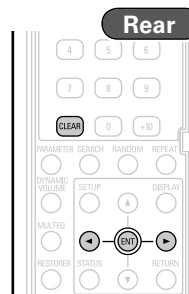
Use **◀▶** to select the marker number, then press **ENTER**.

To Erase Markers

Select the number you want to erase, and then press **CLEAR**.

To Erase All Markers

Select “AC” and press **ENTER**.



NOTE

- Subtitles may not appear depending on the locations you have memorized.
- The markers you have set will be erased if you turn the power to standby or eject the disc.
- The marker function does not operate across titles.



Convenient Functions

HDMI Control Function

When you make an HDMI connection with a TV compatible with this unit and HDMI control functions, you can perform the following operations by setting the HDMI control function of each device.

- The unit power off can be linked to the TV power off step.**
When you set "Output audio from amp" in the TV audio output setup operation, you can switch the amp power on.
- You can switch audio output devices with a TV operation.**
- You can adjust the unit volume in the TV volume adjustment operation.**
- You can switch the unit input source through linkage to TV input switching.**
- When playing the player, the unit input function switches to the function of that player.**

NOTE

- When "HDMI Control" is set to "ON", it consumes more standby power.
- The HDMI control function controls operations of a TV that is compatible with the HDMI control function. Make sure that the TV and HDMI are connected when you perform HDMI control.
- Some functions may not operate depending on the connected TV. Check the owner's manual of each device for details beforehand.
- When "HDMI Setup" – "HDMI Control" – "Power Off Control" on the GUI menu is set to "OFF" (☞ page 57), this unit is not set to standby even if the connected device is in the standby mode.
- When connection changes are implemented, such as adding connections to HDMI devices, linked operations may be initialized. In this case, you will need to reconfigure the settings.

1 Set the HDMI output connector corresponding with the HDMI control function.

On the GUI menu, set "Manual Setup" – "HDMI Setup" – "HDMI Control" (☞ page 57).

2 Turn the power on for all the equipment connected by HDMI cable.

3 Set the HDMI control function for all equipment connected by HDMI cable.

Set "HDMI Control" – "Control" (☞ page 57) to "ON".

- Please consult the operating instructions for the connected equipment to check the settings.
- Carry out steps 1 and 2 should any of the equipment be unplugged.

4 Switch the television input to the HDMI input connected to this unit.

5 Switch the unit input to the HDMI input source and check if the picture from the player is ok.

6 When you turn the TV's power to standby, check that the power of this unit also goes to standby.



If the HDMI control function does not operate properly, check the following points.

- Is the TV compatible with the HDMI control function?
- Is the "HDMI Control" – "Control" (☞ page 57) set to "ON"?
- Is the "Power Off Control" (☞ page 57) set to "ON"?
- Are the HDMI control function settings of all equipment correct? (Step 3)

One Touch Play Function

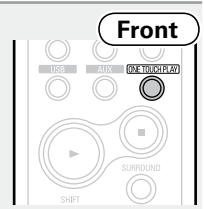
When this unit is in standby mode and contains a disc, the following sequence of playback operations can be performed automatically simply by pressing **ONE TOUCH PLAY**.

- This unit and TV turn on.
- This unit's input source switches to "BD/SD".
- The TV input switches to this unit's input.
- Disc playback starts.

Setting Requirements

- To use this function, connect this unit and the TV with an HDMI cable and turn on the HDMI control function on both devices.
- Set "Manual Setup" – "HDMI Setup" – "HDMI Control" (☞ page 57) on the GUI menu on this unit to "ON".

Press **ONE TOUCH PLAY**.



NOTE

The One touch play function will not operate if another device is connected between this unit and the TV. Connect this unit directly to the TV.

Convenient Functions

Sleep Timer Function

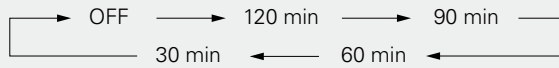
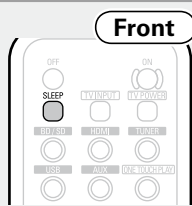
The power automatically goes into standby once the set time has elapsed.

This is convenient for playing sources while going to sleep.

Press SLEEP and display the time you want to set.

The **SLEEP** indicator on the display lights.

- The time switches as shown below each time **SLEEP** is pressed.



To Cancel the Sleep Timer

Press **SLEEP** to set "OFF".

The **SLEEP** indicator on the display turns off.

NOTE

- If the sleep timer is activated while ZONE2 is in operation, the ZONE2 power switches to OFF along with the MAIN ZONE power.
- The sleep timer setting is canceled if this unit's power is set to standby or turned off.

Various Memory Functions

Personal Memory Plus Function

This function sets the settings (input mode, surround mode, MultEQ®, Dynamic EQ™, Dynamic Volume™, audio delay etc.) last selected for the individual input sources.

Last Function Memory

This function stores the settings which were made before going into the standby mode.

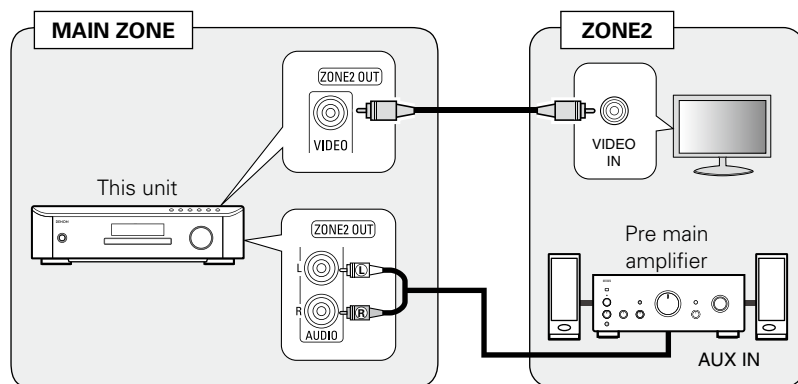
When the power is turned back on, the settings are restored.

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Playback (Multi-zone Function) in ZONE2 (Separate Room)

- You can operate this unit so as to enjoy audio and video in a room (ZONE2) other than the MAIN ZONE (room where the unit is located).
- You can simultaneously play back the same source in both the MAIN ZONE and ZONE2. You can also play back separate sources in the MAIN ZONE and ZONE2.

Multi-zone Connections



- See “REMOTE CONTROL Jacks” (page 17) for connection information concerning remote control operation in ZONE2.

Audio and video Signals which can be Output in ZONE2

Audio

- Audio from a disc or SD memory card played back on this unit
A multichannel source is converted to a 2-channel downmix signal and output.
- Analog audio input to this unit
- Audio of a device connected to the USB port
- Control dock for iPod (analog audio)

Video

- Video from a disc or SD memory card played back on this unit
- Video input to this unit from a Control dock for iPod



We recommend using high quality pin-plug cables for audio and video connections in order to prevent noise.

NOTE

- Audio and video input to this unit via HDMI is not output.
- The GUI menu screen is not output.
- DENON control dock for iPod ASD-11R switches to Browse Mode and cannot be operated.
- The following media and sources cannot be played back simultaneously in the MAIN ZONE and ZONE2.
 - Disc (BD/DVD/CD) and SD memory card
 - FM and AM

Playback

1 Turn on the pre main amplifier for ZONE2.

2 Switch **DEVICE SELECT** to “ZONE2”.

The remote control unit switches to the operating mode for ZONE2.

3 Press **ON** to turn on the ZONE2 power.

The **Z2** indicator on the display lights.

- Also press input source select button when in standby mode, the power turns on.
- When **OFF** is pressed, ZONE2 turns off.

NOTE

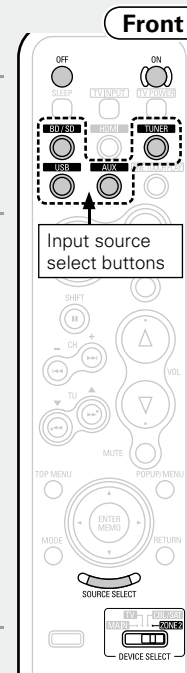
When ZONE2 is powered on, the HDMI video resolution in the MAIN ZONE switches automatically according to the input signal. When this happens, it is not possible to switch to a different video resolution, even by pressing **RESOLUTION**.

4 Press input source select button.

The audio/video signal of the selected source is output to ZONE2.

- To switch the source output to ZONE2 to the source playing back at the MAIN ZONE, press **SOURCE SELECT**.

5 Adjust the volume of the pre main amplifier for ZONE2.



How to Make Detailed Settings

Menu Map

The GUI menu consists of a "BD/DVD SETUP" for performing video-related settings, and an "AMP/SPK SETUP" for audio-related settings. The "BD/DVD SETUP" is displayed only when the input source is "BD/SD".

For the method of GUI menu operation, see page 45.

BD/DVD SETUP



Language Setup (page 46)

Set the language used for playback dialogs, subtitles, and menus.

- Dialog
- Subtitle
- Disc Menus



Ratings (page 47)

Set Blu-ray Disc or DVD parental lock or display DivX® registration codes.

- Password
- BD Rating Level
- DVD Rating Level
- Rating Country Code
- DivX Registration



Display Setup (page 48)

Set display-related items.

- Still Mode
- Slide Show Time
- Captions



Video Setup (page 46)

Set the video output signal according to the connected TV.

- TV Aspect
- Progressive Mode
- Auto Format
- Deep Color



Network Setup (page 47)

Set to connect to the Internet.

- DHCP
- Proxy
- IP Address
- MAC Address



Other Setup (page 48)

Set other items.

- Disc Layer
- Information
- BD Data Utility
- Firmware Update

AMP/SPK SETUP



Source Select (page 49)

Use this to make settings related to playing input sources.

- Input Mode
- Decode Mode
- Rename
- Auto Preset
- Preset Name



Auto Setup (page 54)

Makes the optimum speaker settings and corrects for the acoustic characteristics of the room.

- Audyssey Auto Setup
- Parameter Check



Information (page 59)

Show information about receiver settings, input signals, etc.

- Status
- Audio Input Signal
- HDMI Information
- Auto Surround Mode
- Preset Channel



Audio Adjust (page 50)

Adjust various audio parameters.

- Surround Parameters
- Tone
- Audyssey Settings
- Audio Delay



Manual Setup (page 55)

Use this to make various types of detailed settings.

- Speaker Setup
- HDMI Setup
- Audio Setup
- Option Setup
- GUI Language

GUI Menu Operation

1 Press SETUP and select the menu for the settings you want to make.
The GUI menu is displayed on the TV screen.

• The menus that can be displayed differ depending on the selected input source.

□ **When the input source is "BD/SD"**



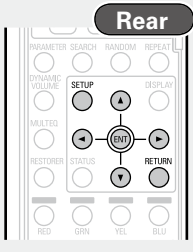
□ **When the input source is not "BD/SD"**



2 Press Δ ∇ \triangleright to select the menu to be set or operated.

• To return to the previous item, press \triangleleft or RETURN.

3 Press ENTER to enter the setting.



□ **Exiting the GUI Menu**

Press **SETUP** until the GUI menu disappears.

NOTE

You must use the GUI menu to make settings or operate while a disc or SD memory card is not inserted. In cases in which the resume function is activated, you may not make correct settings.

Example of GUI Mark at 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.



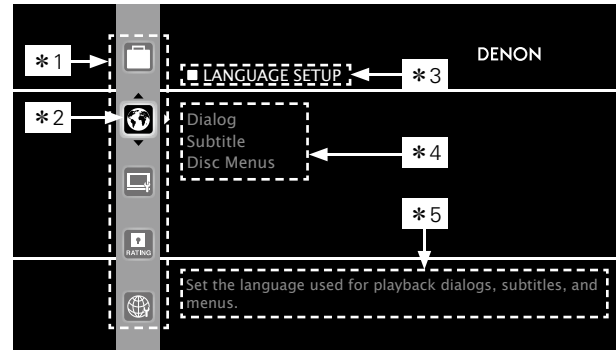
Manual Setup



Examples of GUI Menu Screen Displays

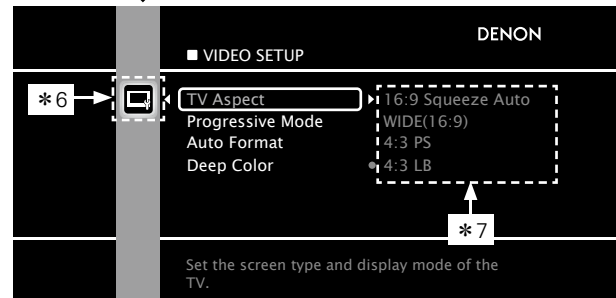
Typical examples are described below.

(Example 1) Menu Selection Screen (Top Menu)



- *1 List of GUI menu setup icons
- *2 Currently selected setup icon
- *3 Currently selected setup item
- *4 List of currently selected setup subcategory
- *5 Guide text for the currently selected setup item

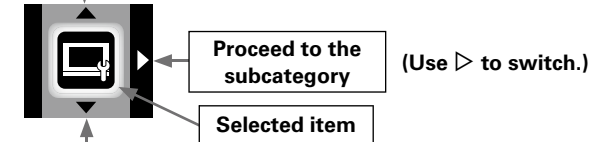
Press ∇ to select and then press \triangleright .
(Or press ENTER.)



- *6 Selected setup icon
- *7 Options of the selected setup item

□ **Icon**

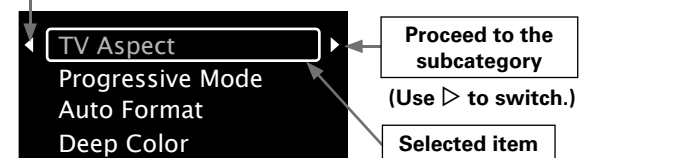
Switch the selected item (Use Δ or ENTER to switch.)



Switch the selected item (Use ∇ to switch.)

□ **List**

Returns to the previous item (Use \triangleleft or RETURN to switch.)



• Switch the selected item using Δ ∇ .



Text colors of selected items of the GUI menu are as follows:

- White : These items can be selected.
- Gray : These items cannot be selected.

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Language Setup



Default settings are underlined.

Set the language used for playback dialogs, subtitles, and menus.

Setting items	Setting details
Dialog Set the dialog language used to play Blu-ray Discs or DVDs.	<p>Original : Plays the dialog selected at the top in the language menu stored in the disc.</p> <p>English / French / Spanish / German / Japanese / Italian / Swedish / Dutch / Russian / Chinese / Korean / Danish / Finnish / Norwegian / Icelandic / Hungarian / Romanian / Turkish / Greek / Irish / Portuguese / Polish / Czech / Slovak / Bulgarian</p> <p>Others : Enter the language code. Refer to "Language Code List" (page 72), use 0 – 9 to input the language code, then press ENTER to set.</p> 
Subtitle Set the subtitle language used to play Blu-ray Discs or DVDs.	<p>Off : Do not display subtitles.</p> <p>English / French / Spanish / German / Japanese / Italian / Swedish / Dutch / Russian / Chinese / Korean / Danish / Finnish / Norwegian / Icelandic / Hungarian / Romanian / Turkish / Greek / Irish / Portuguese / Polish / Czech / Slovak / Bulgarian</p> <p>Others : Enter the language code. Refer to "Language Code List" (page 72), use 0 – 9 to input the language code, then press ENTER to set.</p>
Disc Menus Set the language used for Blu-ray Disc or DVD menus.	<p>English / French / Spanish / German / Japanese / Italian / Swedish / Dutch / Russian / Chinese / Korean / Danish / Finnish / Norwegian / Icelandic / Hungarian / Romanian / Turkish / Greek / Irish / Portuguese / Polish / Czech / Slovak / Bulgarian</p> <p>Others : Enter the language code. Refer to "Language Code List" (page 72), use 0 – 9 to input the language code, then press ENTER to set.</p>

NOTE

The setting may not be active depending on the disc.

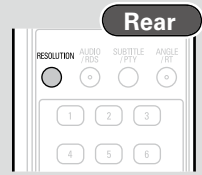


Video Setup



Default settings are underlined>.

Set the video output signal according to the connected TV.

Setting items	Setting details
TV Aspect (Aspect ratio) Set the screen type and display mode of the TV.	<p>16:9 Squeeze Auto : Output to a wide screen TV. For 4:3 video, display in the center of the screen without changing the aspect ratio.</p> <p>WIDE (16:9) : Output to a wide screen TV.</p> <p>4:3 PS : Output to a 4:3 TV. For wide video, trim the left and right side of the image and display in 4:3 aspect ratio. *1</p> <p>4:3 LB : Output to a 4:3 TV. Display all of the wide video. *2</p>
Progressive Mode Set an appropriate progressive conversion mode for the source video material.	<p>Auto : Detect the type of video material and automatically switch the mode. Normally, this setting is used.</p> <p>Video1 : Select when video appears unnatural in Auto or Video2 mode.</p> <p>Video2 : Select when video appears unnatural in Auto or Video1 mode.</p>
Auto Format Set the content of HDMI video output resolution item "Auto" (page 13) with RESOLUTION .	<p>Max Res. : Output data using the maximum resolution that can be handled by the connected TV.</p> <p>Panel Res. : Output data using the maximum resolution of the panel of the connected TV.</p> 
Deep Color Extends the degree of color depth in the HDMI video signal (number of colors used), to play back more natural colors without color fringing.	<p>Auto : Deep Color is automatically output when the connected HDMI device supports Deep Color.</p> <p>Off : Do not output Deep Color.</p>

*1 Depending on the video content, even though you set the 4:3 PS (Pan Scan), the content may be output in 4:3 LB (Letter Box).

*2 Only valid for content recorded in 480i/576i.



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



Return to previous menu




Ratings



Default settings are underlined.

Set Blu-ray Disc or DVD parental lock or display DivX® registration codes.

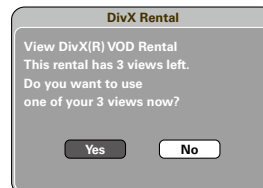
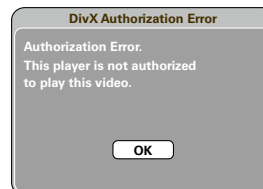
Setting items	Setting details
Password Sets the password for changing the parental control level and parental control country code of Blu-ray Disc and DVD.	Change : Change the password. Use 0 – 9 to enter a password and then press ENTER to finalize it. The default setting is “0000”. To clear the entered password, press CLEAR . 
BD Rating Level Set the parental level for playing Blu-ray Disc.	Level 0 – 254 : Set the age allowed to play back media. Restricts playback of discs with relevant parental control. No Limit : Do not restrict playing of Blu-ray Discs.
DVD Rating Level Set the parental level for playing DVD.	Lock All : Restrict playing of all DVDs. Level1 – 8 : Set the parental level for playing DVD. No Limit : Do not restrict playing of DVDs.
Rating Country Code Sets the standard country parental control. Apply the parental level of the set country.	Argentina / Australia / Austria / Belgium / Brazil / Canada / Chile / China / Denmark / Finland / France / <u>Germany</u> / Hong Kong / India / Indonesia / Italy / Japan / Korea, Republic of / Malaysia / Mexico / Netherlands / New Zealand / Norway / Pakistan / Philippines / Portugal / Russian Federation / Singapore / Spain / Switzerland / Sweden / Taiwan / Thailand / United Kingdom / United States / Colombia / Greece / Ireland / Luxembourg / Poland Others : Inputs the country code. Refer to “Country Code List” (page 73) and, with the virtual keyboard, use 0 – 9 and ENTER to input the country code. To clear the entered country code, press CLEAR .
DivX Registration Display the DivX® registration code.	Show Code : Display the DivX® registration code. The registration code is used when using the DivX® Video-on-Demand (VOD) service.

About DivX® Video-on-Demand (VOD)

When you purchase or rent a DivX® file through the official site of DivX® Video-On-Demand (VOD) services, this unit's registration code is required. A DivX® VOD file recorded with a different code from this unit's registration code cannot be played back.

Some DivX® VOD files are restricted with limited playable times. If your DivX® VOD file has such a limit, the number of playable times is displayed on the DivX® VOD display screen.

Use \triangleleft \triangleright to select “Yes” if you want to play back the file, or to select “No” if you do not want to play it back. The press **ENTER** to confirm the selection.





Network Setup



Default settings are underlined>.

Set to connect to the Internet.

You can use a disc which offers BD-LIVE function by connecting the unit to the Internet (page 21). To obtain update support for this unit, you can download the latest firmware from our website. Make a network connect beforehand according to “Connecting to the Network” (page 16).

Setting items	Setting details
DHCP Set how to perform network configuration, automatically or manually. 	[On] : Automatically configure the network by the DHCP function. [Off] : When connecting to a network, which does not have the DHCP function, manually configure the following network settings. For the details of the settings, confirm with the provider or network administrator. Use 0 – 9 to enter a value and then press ENTER to finalize it. <ul style="list-style-type: none"> • IP Address : Manually set the IP address of this unit. • Subnet Mask : If the xDSL modem or terminal adaptor is directly connected to this unit, enter the subnet mask notified by the provider usually in a document. Usually, “255.255.255.0” is set. • Default Gateway : If the device is connected to a gateway (router), enter its IP address. • Primary DNS : Enter the primary DNS. • Secondary DNS : Enter the secondary DNS.
Proxy Set to connect to the Internet via a proxy server.	[Off] : Do not use a proxy server. [On (Address)] : Set to connect to the Internet via a proxy server. Use the address to specify the proxy server. Use 0 – 9 to enter the address and then press ENTER to finalize it. <ul style="list-style-type: none"> • Port : Use 0 – 9 to enter a port number and then press ENTER to finalize it. • On (Name) : Set to connect to the Internet via a proxy server. Specify the proxy server using the domain name. Input the domain name with the virtual keyboard, using \triangle ∇ \triangleleft \triangleright and ENTER. • Port : Use 0 – 9 to enter a port number and then press ENTER to finalize it.
IP Address This unit's IP address is displayed.	 If the IP address cannot be obtained or is not set, “...” is displayed. In that case, check that the connection and network configuration is correct.
MAC Address Displays the MAC address of this unit.	

Remote control operation buttons

SETUP



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



Return to previous menu



Display Setup



Default settings are underlined.

Set display-related items.

Setting items	Setting details
Still Mode Set image quality during pause.	<u>Automatic</u> : Display automatically using “Field” or “Frame” per the still image information. Field : Set when there is a blurred image when “Automatic” image display is set. Frame : Set to display non moving images in high resolution.
Slide Show Time Sets the display time of JPEG files.	<u>3 – 5 – 100sec</u> : This sets the display time per frame of a JPEG file during slideshow playback.
Captions This setting output a subtitles signal to a closed caption decoder (sold separately).	<u>On</u> : Output the closed caption (subtitle) signal. <u>Off</u> : Do not output the closed caption (subtitle) signal.



Other Setup



Default settings are underlined.

Set other items.

Setting items	Setting details
Disc Layer Sets the layer to play back in a hybrid disc.	<u>BD</u> : Plays back the Blu-ray Disc layer. DVD : Plays back the DVD layer.
Information Displays the license for the IPA font used by this product.	[Font License] <u>Japanese (Original)</u> : Displays in Japanese. The font used in this product’s GUI menu screen conforms to IPA font specifications. See the following URL for the IPA font license agreement. http://ipafont.ipa.go.jp/enduser_license.html
BD Data Utility Erases data on SD memory card, and initializes cards.	[BD Data Erase] : Erases both internal memory and SD memory card storage. • <u>No</u> • Yes [Initialize SD Card] : Initialize the SD memory card to be used for the Bonus View and BD-LIVE function. • <u>No</u> • Yes

Setting items	Setting details
BD Data Utility (Continued)	NOTE <ul style="list-style-type: none"> • Insert or remove a SD memory card while the power is in standby. If you insert a SD memory card while the power is ON, the SD memory card may not be read. • The SD memory card used for the Bonus View function must have a capacity of 1 GB or greater. Also the SD memory card must be initialized on this unit. • This operation will delete all the data. Do not perform this operation when an SD memory card containing MP3 or JPEG data is inserted.
Firmware Update Update the firmware of the unit via the Internet.	Check for Update : Check if the latest firmware exists. You can also check approximately how long it will take to complete an update. Start : Starts firmware update. When updating starts, the power indicator lights red and the GUI screen is shut down. During update, a rough remaining time is indicated on the display. When updating is complete the power indicator lights green and normal status is resumed.
NOTE “Firmware Update” cannot be selected when there is a disc in the disc tray.	Cautions on “Firmware Update” <ul style="list-style-type: none"> • In order to use this functions, you must have the correct system requirements and settings for a broadband Internet connection (page 16). • Do not turn off the power until updating is completed. • Information regarding the “Firmware Update” function 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 procedure to be completed. • Once updating starts, normal operations on this unit cannot be performed until updating is completed. In addition, the unit’s GUI menu settings may be initialized. • In the event of an update error during update or upgrade, turn the power of this unit off and then on again. “Update retry” appears on the display and update restarts from the point at which update failed. If the error continues despite this, check the network environment.

SETUP



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



Return to previous menu



Source Select



Perform settings related to input source playback.

- You do not have to change the settings to use the unit. Make settings when needed.

Items that can be Set with the Source Select Procedure

Input Mode page 49

Decode Mode page 49

Rename page 49

Auto Preset page 50

Preset Name page 50

Important Information

About the Display of Input Sources

In this section, the configurable input sources for each item are shown as follows.

BD/SD HDMI1 HDMI2 HDMI3 FM AM USB AUX1 AUX2

To perform the following settings, select the input source and then select the items you want to set. **[To select the input source]** Use Δ / ∇ to select the input source and press \triangleright .

Input Mode



Default settings are underlined.

The input modes available for selection may vary depending on the input source.

Setting items	Setting details
Input Mode Set the audio input modes for the AUX1/2. AUX1 AUX2	Auto : Automatically detect input signal and perform playback. Digital : Play only signals from digital input. Analog : Play only signals from analog input. When digital signals are 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.

Decode Mode



Default settings are underlined.

Set the decode mode for input source.

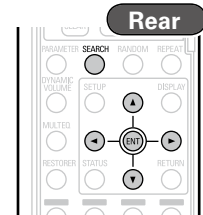
Setting items	Setting details
Decode Mode Set the decode mode for input source. BD/SD HDMI1 HDMI2 HDMI3 AUX1 AUX2	Auto : Detect type of digital input signal and decode and play automatically. PCM : Decode and play only PCM input signals. DTS : Decode and play only DTS input signals. Normally set this mode to "Auto". Set "PCM" and "DTS" when inputting the corresponding input signal.

Rename



Change the display name of the selected input source.

Setting items	Setting details
Rename <ul style="list-style-type: none"> Change the display name of the selected input source. BD/SD HDMI1 HDMI2 HDMI3 FM AM USB AUX1 AUX2 <ul style="list-style-type: none"> When the input source is HDMI1, HDMI2, HDMI3, AUX1, or AUX2, you can change the displayed icon. 	<ol style="list-style-type: none"> Press \triangleright or ENTER. Press \triangleleft \triangleright, align the cursor to the icon to be changed, and press ENTER. <ul style="list-style-type: none"> At this time, the input source name is also automatically changed. To change the input source name, press Δ/∇ to change the characters, and press ENTER. <ul style="list-style-type: none"> Up to eight characters can be input. The input character type can be switched by pressing SEARCH while the display name is being changed. The types of characters that can be input are as shown below. Repeat steps 2 and 3 to change the display name.
Default Reset all settings to factory default.	No Yes



[Upper case characters] ABCDEFGHIJKLMNOPQRSTUVWXYZ
[Lower case characters] abcdefghijklmnopqrstuvwxyz
[Symbols] ! # % & ' () * + , - . / : ; < = " > ? @ [\]
[Numbers] 0123456789 (Space)

Remote control operation buttons



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN




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Source Select

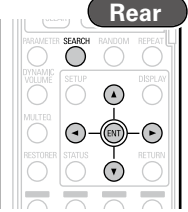
Auto Preset 

Use the auto preset function to program radio stations.

Setting items	Setting details
Start Start the auto preset process. <div style="border: 1px solid black; padding: 2px; display: inline-block;">FM</div>	 If an FM station cannot be preset automatically, select the desired station by tuning it in manually, then preset it manually. <div style="border: 1px solid black; padding: 2px; display: inline-block; background-color: #f0f0f0;">NOTE</div> If "Auto Preset" is performed after performing "Manual Preset" (👉 page 27), the "Manual Preset" settings will be overwritten.

Preset Name 

Assign name to a preset memory.

Setting items	Setting details
A1 – G8 Select the preset channel. <div style="display: flex; gap: 10px;"> <div style="border: 1px solid black; padding: 2px 5px;">FM</div> <div style="border: 1px solid black; padding: 2px 5px;">AM</div> </div>	<ol style="list-style-type: none"> Press ▷ or ENTER. Use ◀▶ to set the cursor to the character you want to change. Use △▽ to change the character, then press ENTER. <ul style="list-style-type: none"> Up to eight characters can be input. The input character type can be switched by pressing SEARCH while the display name is being changed. The types of characters that can be input are as shown below. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>[Upper case characters] ABCDEFGHIJKLMNOPQRSTUVWXYZ</p> <p>[Lower case characters] abcdefghijklmnopqrstuvwxyz</p> <p>[Symbols] ! # % & ' () * + , - . / : ; < = " > ? @ [\]</p> <p>[Numbers] 0 1 2 3 4 5 6 7 8 9 (Space)</p> </div>  Repeat steps 2 and 3 to change the display name.
Default Reset all settings to factory default.	No Yes



Audio Adjust 

The sound being played in the surround mode can be adjusted to your liking. The items (parameters) that can be adjusted depend on the signal being input and the currently set surround mode. For details on the adjustable parameters, see "Surround Modes and Audio Adjust" (👉 page 70).

Items that can be Set with the Audio Adjust Procedure

Surround Parameters 👉 page 50

Tone 👉 page 52


Audyssey Settings 👉 page 53

Audio Delay 👉 page 54






Surround Parameters 


Default settings are underlined.

Adjust surround sound parameters. It may not be possible to set this item depending on the input signal.

Setting items	Setting details
DOLBY VS Mode Select the Dolby Virtual Speaker mode.	REF : This is the standard Dolby Virtual Speaker mode. WIDE : This mode creates the sense of a wider sound.
Mode Set the play modes for the different surround modes.	<input type="checkbox"/> In the PLIIx or PLIi Mode Cinema : Surround sound mode optimized for movie sources. Music : Surround sound mode optimized for music sources. Game : Surround sound mode optimized for games. Pro Logic : Dolby Pro Logic playback mode (PLIi mode only). <input type="checkbox"/> In the PLIiz Mode Height : Dolby PLIiz Height playback mode. <input type="checkbox"/> In the DTS NEO:6 Mode Cinema : Surround sound mode optimized for movie sources. Music : Surround sound mode optimized for music sources.
	 <ul style="list-style-type: none"> When "Surround Parameters" – "Front Height" (👉 page 51) is set to "ON", the "Height" mode is set automatically. The "Music" mode is also effective for movie sources including a lot of stereo music.



Setting items	Setting details
Cinema EQ Soften the treble range of movie soundtracks for better understanding.	ON OFF
DRC Compress dynamic range (difference between loud and soft sounds).	OFF : Dynamic range compression always off. Low / Middle / High : These set the compression level. Auto : Automatic dynamic range compression on/off control according to source. This can be set in the Dolby TrueHD mode.
D.COMP Compress dynamic range (difference between loud and soft sounds).	OFF : Turn dynamic range compression off. Low / Middle / High : These set the compression level.
LFE Adjust the low-frequency effects level (LFE).	-10dB - 0dB  For proper playback of the different sources, we recommend setting to the values below. • Dolby Digital sources : "0dB" • DTS movie sources : "0dB" • DTS music sources : "-10dB"
Center Image Assign center channel signal to front left and right channels for wider sound.	0.0 - 1.0 (0.3)  Only DTS NEO:6 MUSIC mode
Panorama Assign front L/R signal also to surround channels for wider sound.	OFF ON  Only Dolby PLII/PLIIx MUSIC mode
Dimension Shift sound image center to front or rear to adjust playback balance.	0 - 6 (3)  Only Dolby PLII/PLIIx MUSIC mode
Center Width Assign center channel signal to front left and right channels for wider sound.	0 - 7 (3)  Only Dolby PLII/PLIIx MUSIC mode

Setting items	Setting details
Front Height Set the Dolby PLIIz Height mode to ON or OFF. When "Speaker Assign" is set to "5.1CH + Front Height", you can stop the front height speaker output.	ON : Audio is output from the front height speaker. OFF : Audio is not output from the front height speaker. NOTE • "Front Height" is not displayed with the settings listed below. • When the "Speaker Assign" setting (🔧 page 55) is set to something other than "5.1CH + Front Height". • When the "Speaker Configuration" - "Front Height" setting (🔧 page 56) is set to "None". • "Front Height" cannot be set if the HD Audio source being played includes a front height channel. In this case, the Front height channel is played back without decoding in PLIIz mode, using the input signal.
AFDM (Auto flag detect mode) Detect the source's surround back channel signal and set the optimum surround mode automatically.	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 "Surround Back" 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 "Surround Back" to "MTRX ON" or "PLIIx CINEMA". NOTE If the setting in "Speaker Configuration" - "Surround Back" (🔧 page 56) is "None", "Surround Back" is not displayed.

Remote control operation buttons

SETUP



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



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Audio Adjust

Setting items	Setting details
<p>Surround Back Sets the method of generating of the surround back channel.</p>	<p><input type="checkbox"/> For 2-channel Sources OFF : No signal is played from the surround back channels. ON : The surround back channel is used.</p> <p><input type="checkbox"/> For Multi-channel Sources Set the decoding method for the surround back channel. DSCRT ON : Play the surround back signals included in the 7.1-channel source. MTRX ON : Generate and play the surround back signals from the surround channel signals. ES MTRX*1 : Generate and play the surround back signals from the surround channel signals of the DTS source. ES DSCRT*2 : Play the surround back signals included in the 6.1-channel DTS source. PLIIx CINEMA*3 : Generate and play the surround back signals by decoding the signals in the Dolby Pro Logic IIx Cinema mode. PLIIx MUSIC : Generate and play the surround back signals by decoding the signals in the Dolby Pro Logic IIx Music mode. OFF : Do not play the surround back channel.</p> <p>*1 This can be selected when playing DTS sources. *2 This can be selected when playing DTS sources including a signal to identify discrete 6.1-channel signals. *3 This can be selected when "Speaker Configuration" – "Surround Back" (page 56) is set to "2spkr".</p> <p> If the source being played contains a surround back signal, the decoder type is automatically selected by the AFDM function. Set "AFDM" to "OFF" to switch to your preferred decoder.</p> <p>NOTE If the setting in "Speaker Configuration" – "Surround Back" (page 56) is "None", "Surround Back" is not displayed.</p>
<p>Default Restore all the surround parameter settings to their defaults.</p>	<p>Yes No</p>

Tone



Default settings are underlined.

Adjust the tonal quality of the sound.

Setting items	Setting details
<p>Tone Control Set the tone control function to ON and OFF.</p>	<p>ON : Allow tone adjustment (bass, treble). OFF : Playback without tone adjustment.</p> <p> "Tone Control" can be set when "Dynamic EQ" (page 53) is set to "OFF".</p>
<p>Bass Adjust low frequency range (bass).</p>	<p>-6dB – +6dB</p> <p> "Bass" can be set when "Tone Control" is set to "ON".</p>
<p>Treble Adjust high frequency range (treble).</p>	<p>-6dB – +6dB</p> <p> "Treble" can be set when "Tone Control" is set to "ON".</p>



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



Return to previous menu

Audyssey Settings



Default settings are underlined.

Set MultEQ®, Dynamic EQ™ and Dynamic Volume™. These can be selected after Audyssey Auto Setup has been performed. For additional information on Audyssey technology, please see page 74.

NOTE

If you have not performed Auto Setup, or if you change the speaker settings after performing Auto Setup, you may not be able to select Dynamic EQ/Dynamic Volume, and “Run Audyssey” may be displayed. In this case, either perform Audyssey Auto Setup over again or perform “Restore” (page 54) to return to the settings after Audyssey Auto Setup was run.

Setting items	Setting details
<p>MultEQ Select one equalizer from three modes. MultEQ corrects both time and frequency response problems in the listening area based on Audyssey Auto Setup calibration. MultEQ is the prerequisite function for Dynamic EQ and Dynamic Volume. If “MultEQ” is set to “OFF” when “Dynamic EQ” or “Dynamic Volume” is set to “ON”, “Dynamic EQ” and “Dynamic Volume” are automatically set to “OFF”.</p>	<p>Audyssey : Optimize the 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. OFF : Turn “MultEQ” equalizer off.</p> <p> • “Audyssey”, “Audyssey Byp. L/R” and “Audyssey Flat” can be selected after Audyssey Auto Setup has been performed. “Audyssey” is automatically selected after performing Audyssey Auto Setup. “When “Audyssey”, “Audyssey Byp. L/R” or “Audyssey Flat” is selected, lights.</p> <p>• After running Audyssey Auto Setup, if the Speaker Configuration, Distance, Channel Level, and Crossover Frequency have changed without increasing the number of speakers measured, only lights.</p> <p>• If “Dynamic EQ” or “Dynamic Volume” is set to “ON” when “MultEQ” is set to “OFF”, “MultEQ” is automatically set to “Audyssey”.</p> <p>• You can also press MULTEQ to set this item.</p> <div style="text-align: right; margin-top: 10px;"> <p>Rear</p> </div>
	<p>NOTE When using headphones, “MultEQ” is automatically set to “OFF”.</p>

Setting items	Setting details
<p>Dynamic EQ™ Solve the problem of deteriorating sound quality as volume is decreased by taking into account human perception and room acoustics.</p>	<p>ON : Use Dynamic EQ. OFF : Do not use Dynamic EQ.</p> <p> • After performing “Audyssey Auto Setup”, the “Dynamic EQ” setting automatically becomes “ON”. is displayed when set to “ON”.</p> <p>• When “MultEQ” is set to “OFF”, “Dynamic EQ” is automatically set to “OFF”.</p> <p>• If “Dynamic Volume” is set to “ON”, “Dynamic EQ” is automatically set to “ON”.</p> <p>• When you set “Dynamic EQ” to “ON”, “Tone Control” is switched “OFF”.</p>
<p>Reference Level Offset Audyssey Dynamic EQ is referenced to the standard film mix level. It makes adjustments to maintain the reference response and surround envelopment when the volume is turned down from 0 dB. However, film reference level is not always used in music or other non-film content. Dynamic EQ Reference Level Offset provides three offsets from the film level reference (5 dB, 10 dB, and 15 dB) that can be selected when the mix level of the content is not within the standard.</p>	<p>0dB (Film Ref) : This is the default setting and should be used when listening to movies. 5dB : Select this setting for content that has a very wide dynamic range, such as classical music. 10dB : Select this setting for jazz or other music that has a wider dynamic range. This setting should also be selected for TV content as that is usually mixed at 10 dB below film reference. 15dB : Select this setting for pop/rock music or other program material that is mixed at very high listening levels and has a compressed dynamic range.</p> <p> Setting is enabled when “Dynamic EQ” is “ON”.</p>

Remote control operation buttons



SETUP
Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



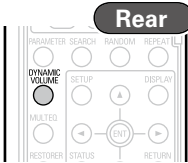



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Audio Adjust

Setting items	Setting details
<p>Dynamic Volume™ Solve the problem of large variations in volume level between TV, movies and other content (between quiet passages and loud passages, etc.) by automatically adjusting to the user's preferred volume setting.</p>	<p>ON : Use "Dynamic Volume". Dynamic Volume effect will be at the level of the "Setting". OFF : Do not use "Dynamic Volume".</p> <p>  is displayed when set to "ON".</p> <ul style="list-style-type: none"> When "MultEQ" is set to "OFF", "Dynamic Volume" is automatically set to "OFF". You can also press DYNAMIC VOLUME to set this item.  <pre> graph LR A[Dynamic EQ : ON / Dynamic Volume : OFF] --> B[Dynamic EQ : OFF / Dynamic Volume : OFF] B --> C[Dynamic EQ : ON / Dynamic Volume : ON] C --> A </pre>
<p>Setting Set "Dynamic Volume" equalizer effect.</p>	<p>Midnight : High setting affects volume the most, causing all sounds to be of equal loudness. Evening : Middle setting prevents loud and soft sounds from being much louder and softer respectively than average sounds. Day : Low setting provides the least adjustments to the loudest and softest of sounds.</p> <p> "Setting" can be set when "Dynamic Volume" is set to "ON".</p>

Audio Delay




Default settings are underlined.

While viewing video, manually adjust the time to delay audio output.

Setting details

0ms – 200ms

 Store "Audio Delay" for each input source.



Auto Setup



Setting items	Setting details
<p>Audyssey™ Auto Setup Analyzes the acoustic characteristics of the listening point measured with the supplied setup microphone and automatically makes the optimum output settings for each speaker to match the environment of the listening room.</p>	<p>For details, see "Set Up Speakers (Audyssey™ Auto Setup)" (📖 page 6) and "Setting for Speakers Other Than 5.1-channel" (📖 page 36).</p>
<p>Parameter Check Enables you to check the measurement results and equalizer characteristics after Audyssey Auto Setup.</p>	<p>Speaker Config. Check : Check the speaker configuration. Distance Check : Check the distance. Channel Level Check : Check the channel level. Crossover Freq. Check : Check the crossover frequency. EQ Check : Check MultEQ parameters. Restore : Restore auto setup measurement result.</p>



SETUP
Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



Return to previous menu



Manual Setup



Set when changing Audyssey™ Auto Setup settings, or when changing the audio, video, display or other settings.

- If you change the speaker settings after performing Audyssey Auto Setup, it will not be possible to set MultEQ®, Dynamic EQ™ and Dynamic Volume™ (page 53, 54).
- Can be used without changing the settings. Please set if necessary.

Items that can be Set with the Manual Setup Procedure



Speaker Setup page 55



HDMI Setup page 57



Audio Setup page 58



Option Setup page 58



GUI Language page 59




Speaker Setup



Default settings are underlined.

Perform this operation when manually setting the speakers, or when the changing the setting content in "FIRST SETUP" (Audyssey Auto Setup).

Setting items	Setting details
<p>Speaker Assign Set the speakers connected to this unit. By performing this setting, you can shorten the automatic detection time for the speakers during "FIRST SETUP" (Audyssey Auto Setup).</p>	<p>5.1CH : Set when using 5.1-channel (Front/Center/Surround/Subwoofer) speakers. 5.1CH / 2.1CH : Set when only using front speakers and a subwoofer. 5.1CH + Surround Back : Set when using the 5.1-channel speaker and surround back speaker. 5.1CH + Front Height : Set when using 5.1-channel speakers and front height speakers.  Connect the surround back speakers or front height speakers to the PRE OUT SURR. BACK connector (page 37).</p>
<p>Speaker Configuration Select speaker configuration and size (bass reproduction capability).</p> <p>NOTE Do not use the outward shape of the speaker to determine selection of a "Large" or "Small" speaker. Instead, use the frequencies set in "Crossover Frequency" (page 57) as the standard for determining bass reproduction capability.</p>	<p>Front : Set the front speaker size. <ul style="list-style-type: none"> • Large : Use a large speaker that can adequately play back low frequencies. • Small : Use a small speaker that has inadequate playback capacity for low frequencies. Center : Set the presence and size of the center speaker. <ul style="list-style-type: none"> • Large : Use a large speaker that can adequately play back low frequencies. • Small : Use a small speaker that has inadequate playback capacity for low frequencies. • None : Select when a center speaker is not connected. Subwoofer : Set the presence of a subwoofer. <ul style="list-style-type: none"> • Yes : Use a subwoofer. • No : Select when a subwoofer is not connected. Surround : Set the presence and size of the surround speakers. <ul style="list-style-type: none"> • Large : Use a large speaker that can adequately play back low frequencies. • Small : Use a small speaker that has inadequate playback capacity for low frequencies. • None : Select when the surround speakers are not connected. </p>

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Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



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Setting items	Setting details
Speaker Configuration (Continued)	<p>Surround Back : Set the presence, size and number of surround back speakers.</p> <ul style="list-style-type: none"> • Large : Use a large speaker that can adequately play back low frequencies. • Small : Use a small speaker that has inadequate playback capacity for low frequencies. • None : Select when the surround back speakers are not connected. <p>• 2spkr : Use two surround back speakers.</p> <p>• 1spkr : Use only one surround back speaker. When you select this setting, connect the surround back speaker to the left (L) channel.</p> <p> Even when the "Surround Back" setting is other than "None", sound may not be emitted from the surround back speaker, depending on the playback source. In this case, make "Surround Parameters" – "Surround Back" setting other than "OFF" (page 52).</p> <p>NOTE When the "Speaker Assign" setting (page 55) is other than "5.1CH + Surround Back", you cannot make the "Surround Back" setting.</p> <p>Front Height : Set the presence and size of the front height speakers.</p> <ul style="list-style-type: none"> • Large : Use a large speaker that can adequately play back low frequencies. • Small : Use a small speaker that has inadequate playback capacity for low frequencies. • None : Select when the front height speakers are not connected. <p>NOTE When the "Speaker Assign" setting (page 55) is other than "5.1CH + Front Height", you cannot make the "Front Height" setting.</p>
Bass Setting Set subwoofer and LFE signal range playback.	<p>Subwoofer Mode : Select low range signals to be reproduced by subwoofer.</p> <ul style="list-style-type: none"> • LFE : The low range signal of the channel set to "Small" speaker size is added to the LFE signal output from the subwoofer. • LFE+Main : The low range signal of all channels is added to the LFE signal output from the subwoofer. <p> This item can be set when "Speaker Configuration" – "Subwoofer" (page 55) is set to "Yes".</p> <ul style="list-style-type: none"> • 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.

Setting items	Setting details
Bass Setting (Continued)	<p>LPF for LFE : Set LFE signal playback range.</p> <ul style="list-style-type: none"> • 80Hz / 90Hz / 100Hz / 110Hz / 120Hz / 150Hz / 200Hz / 250Hz <p> "LPF for LFE" can be set when "Speaker Configuration" – "Subwoofer" (page 55) is set to "Yes".</p>
Distance Set distance from listening position to speakers. Measure beforehand the distance from the listening position to each speaker.	<p>Meters / Feet : Set the unit of distance.</p> <p>Step : Set the minimum variable width of the distance.</p> <ul style="list-style-type: none"> • 0.1m / 0.01m • 1ft / 0.1ft <p>Default : Reset all distance settings to factory default.</p> <ul style="list-style-type: none"> • Yes • No <p> When you select "Default" and press ENTER, the "Return all settings to the default?" prompt is displayed. Select either "Yes" or "No", and press ENTER.</p> <p>Front L / Front R / Center / Subwoofer / Surround L / Surround R / Surround Back L* / Surround Back R* / Front Height L / Front Height R : Select the speaker.</p> <p>* When the "Speaker Configuration" – "Surround Back" setting (page 56) is set to "1spkr", "Surround Back" is displayed.</p> <ul style="list-style-type: none"> • 0.00m – 18.00m / 0.0ft – 60.0ft : Set the distance. <p> The speakers that can be selected differ depending on the "Speaker Assign" (page 55) and "Speaker Configuration" (page 55, 56) settings.</p> <ul style="list-style-type: none"> • Default settings : Front/Center/Subwoofer/Front Height : 3.60 m (12.0 ft) Surround/Surround Back : 3.00 m (10.0 ft) • Set the difference in the distance between the speakers to less than 6.0 meters (20 feet). <p>NOTE Speakers set to "None" in "Speaker Configuration" (page 55, 56) are not displayed.</p>



Setting items	Setting details
<p>Channel Level Set the volume of the test tone to be the same when it is output from each speaker.</p>	<p>Test Tone : Output test tone.</p> <ul style="list-style-type: none"> • Front L / Front Height L / Center / Front Height R / Front R / Surround R / Surround Back R * / Surround Back L * / Surround L / Subwoofer : Select the speaker. * When the "Speaker Configuration" – "Surround Back" setting (🔧 page 56) is set to "1spkr", "Surround Back" is displayed. • -12dB – +12dB (0dB) : Adjust the volume. <p>🔧 When ◀ is pressed while the subwoofer volume is set to "-12 dB", the "Subwoofer" setting switches to "OFF".</p> <p>NOTE</p> <ul style="list-style-type: none"> • Speakers set to "None" in the "Speaker Configuration" (🔧 page 55, 56) settings are not displayed. • When using surround speakers, be sure to adjust the volume of the different speakers. • When a headphones jack is inserted in the PHONES terminal of this unit, the "Channel Level" is not displayed. <p>Default : Reset all channel level settings to factory default.</p> <ul style="list-style-type: none"> • Yes • No
<p>Crossover Frequency Set the maximum frequency of the bass signal output from each channel to the subwoofer. Set the Crossover Frequency to suit the bass reproduction capability of the speaker being used.</p>	<p>40Hz / 60Hz / 80Hz / 90Hz / 100Hz / 110Hz / 120Hz / 150Hz / 200Hz / 250Hz : Set the crossover frequency.</p> <p>Advanced : Specify crossover frequency for each speaker.</p> <ul style="list-style-type: none"> • Front / Center / Surround / Surround Back / Front Height : Select the speaker. • 40Hz / 60Hz / 80Hz / 90Hz / 100Hz / 110Hz / 120Hz / 150Hz / 200Hz / 250Hz : Set the crossover frequency. <p>🔧</p> <ul style="list-style-type: none"> • Crossover frequency can be set when the "Speaker Configuration" – "Subwoofer" (🔧 page 55) setting is "Yes", or when you have a speaker that is set to "Small". • Always set the crossover frequency to "80Hz". When using small speakers, however, we recommend setting the crossover frequency to a higher frequency. • The speakers that can be set when "Advanced" is selected differ according to the "Subwoofer Mode" setting (🔧 page 56). <ul style="list-style-type: none"> • When "LFE" is selected, speakers set to "Small" at "Speaker Configuration" can be set. If the speakers are set to "Large", "Full Band" is displayed and the setting cannot be made. • If set to "LFE+Main", this setting can be made regardless of the speaker size.



HDMI Setup



Default settings are underlined.

Make settings for HDMI video/audio output.

Setting items	Setting details
<p>HDMI Audio Out Select HDMI audio output device. This can be set when the input source on the unit is "BD/SD", "HDMI1", "HDMI2" or "HDMI3".</p>	<p>Amp : Plays back using the speakers. TV : Plays back on the TV.</p> <p>🔧 When the HDMI control function is activated, priority is given to the TV audio setting (🔧 page 41 "HDMI Control Function").</p>
<p>HDMI Control You can link operations with devices connected to HDMI and compatible with HDMI Control.</p> <p>🔧</p> <ul style="list-style-type: none"> • Please consult the operating instructions for each connected component to check the settings. • Refer to "HDMI Control Function" (🔧 page 41) for more information about the HDMI control function. <p>NOTE</p> <ul style="list-style-type: none"> • The HDMI control function controls operations of a TV that is compatible with the HDMI control function. Make sure that the TV and HDMI are connected when you perform HDMI control. • If the "Control" settings have been changed, always reset the power to connected devices after the change. 	<p>Control</p> <ul style="list-style-type: none"> • ON : Use HDMI control function. • OFF : Do not use HDMI control function. <p>🔧 When a device that is not compatible with the HDMI control function is connected, set "Control" to "OFF".</p> <p>NOTE</p> <ul style="list-style-type: none"> • When "Control" is set to "ON", it consumes more standby power. If you are not using this unit for an extended period, it is recommended that you unplug the power cord from the power outlet. • "HDMI Control" does not work when the power to the equipment is off. Either turn power on or set to standby. <p>Standby Source : Sets the HDMI input source to put into standby when the power is on.</p> <ul style="list-style-type: none"> • Last : This item is set at the last-used input source. • HDMI1 / HDMI2 / HDMI3 : Put the respective input source into standby. <p>🔧 "Standby Source" can be set when "Control" is set to "ON".</p> <p>Power Off Control : Links the power standby of this unit to external equipment.</p> <ul style="list-style-type: none"> • ON • OFF <p>🔧 "Power Off Control" can be set when "Control" is set to "ON".</p>

Remote control operation buttons

SETUP



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



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Audio Setup



Default settings are underlined.

Set the audio input and output.

Setting items	Setting details
COAX Input Assign Assign coaxial digital connector.	<p>OFF : Do not assign coaxial digital connector.</p> <p>AUX1 : Sets to the digital audio input connector for AUX1.</p> <p>AUX2 : Sets to the digital audio input connector for AUX2.</p> <p>NOTE</p> <p>When set to "AUX1" or "AUX2", priority is given to output of COAXIAL input signals over analog or OPTICAL input signals.</p>
Dynamic Play Mode When playing back on a 2.0/2.1-channel setup, the unused surround channels (amps) are used together with the front channels (amps) to give improved sound quality.	<p>AUTO : Automatically ON when parallel drive possible.</p> <p>OFF : Parallel drive is not performed.</p>



Option Setup



Default settings are underlined.

Make various other settings.

Setting items	Setting details
Volume Control Set the MAIN ZONE (room where the unit is located) volume setting.	<p>Volume Limit : Make a setting for maximum volume.</p> <ul style="list-style-type: none"> • OFF : Do not set a maximum volume. • 60 / 70 / 80 <p>Power On Level : Define the volume setting that is active when the power is turned on.</p> <ul style="list-style-type: none"> • Last : Use the memorized setting from the last session. • 0 - 99 : The volume is adjusted to the set level.
GUI Make GUI related settings.	<p>Screensaver : Make screensaver settings.</p> <ul style="list-style-type: none"> • ON : If is no operation is performed for approximately three minutes while the GUI menu or iPod playback screen is displayed, a screen saver is activated. When you press $\Delta \nabla \triangleleft \triangleright$, the screen saver is cancelled and the screen before that screen saver started is displayed. • OFF : Screen saver is not activated.

Setting items	Setting details
GUI (Continued)	<p>Text : Display the details of operation when switching surround mode, input mode, etc.</p> <ul style="list-style-type: none"> • ON • OFF <p>Master Volume : Display the master volume during adjustment.</p> <ul style="list-style-type: none"> • Bottom : Display at the bottom. • Top : Display at the top. • OFF : Turn display off. <p> When the master volume display is hard to see when superimposed on movie subtitles, set to "Top".</p>
Quick Start Mode Make Quick Mode settings.	<p>ON : Start up time is faster but power consumption during standby is higher.</p> <p>OFF : Turn off Quick Mode.</p>
Remote Preset Codes By registering the preset codes in the supplied remote control unit, you can operate a TV, satellite tuner or cable TV made by other manufacturers.	<ol style="list-style-type: none"> 1. Select the device you want to register using $\Delta \nabla$ and press ENTER to confirm. 2. Select the first letter of the manufacturer's name using $\Delta \nabla$ and press ENTER to confirm. 3. Select the manufacturer's name using $\Delta \nabla$ and press ENTER to confirm. 4. The procedures for registering remote control codes and remote control preset registration are displayed. <p></p> <ul style="list-style-type: none"> • Some devices you want to register may have more than one preset code. In this case, after registering the preset code, try operating the device with the remote control unit to check that it is working properly. • For details on operating devices with the remote control unit after registering the preset code, see "Operating Components" (page 61).
Trigger Out Select the condition for activating Trigger Out for the input source, surround mode, etc. See "TRIGGER OUT Jacks" (page 17) for more information on trigger out.	<p>When Setting for Zone (MAIN ZONE/ZONE2): Trigger out is activated through linkage to the power of the zone set to "ON".</p> <p>When Setting for Input Source: Activate trigger out when the input source set to "ON" is selected.</p> <p> Active for the zone set to "ON" with "When Setting for Zone".</p> <p>When Setting for Surround Mode: Activate trigger out when the surround mode set to "ON" is selected.</p> <p> Active when the "MAIN ZONE" set to "ON" with "When Setting for Zone" is selected, and when the input source set to "ON" with "When Setting for Input Source" is selected.</p> <ul style="list-style-type: none"> • ON : Activate trigger on this mode. • --- : Do not activate trigger on this mode.



SETUP
 Display the menu
 Cancel the menu



Move the cursor
 (Up/Down/Left/Right)





Confirm the setting

RETURN



Return to previous menu

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Setting items	Setting details
Dimmer Sensor Detects the level of brightness around the unit and automatically adjusts the brightness of the display accordingly.	ON : Automatically adjusts the brightness of the unit's display. OFF : Does not automatically adjust the brightness of the unit's display.
Dimmer Adjust the display brightness of this unit.	Bright : Normal display brightness. Dim : Reduced display brightness. Dark : Very low display brightness. OFF : Turns the display off.  "Dimmer" can be set when "Dimmer Sensor" is set to "OFF".
Setup Lock Protect settings from inadvertent change.	ON OFF  When canceling the setting, set "Setup Lock" to "OFF". <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">NOTE</div> 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 settings. <ul style="list-style-type: none"> · GUI menu operations · RESTORER · Audio Delay · Dynamic EQ™ · Dynamic Volume™ · Audio Adjust · MultEQ®



GUI Language



Default settings are underlined.

Set the language for display on the GUI screen.

Setting details



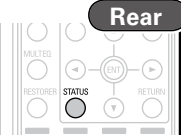

English / Deutsch / Français / Italiano / Español / Nederlands / Svenska



Information



Show information about receiver settings, input signals, etc.

Items	Setting details
 Status Show information about current settings.	<input type="checkbox"/> MAIN ZONE This item shows information about settings for MAIN ZONE. The information displayed differs according to the input source. Select Source / Name / Surround Mode / Input Mode / Decode Mode / Digital <input type="checkbox"/> ZONE2 This item shows information about settings for multi-zone. Power / Select Source
 Audio Input Signal Show information about audio input signals.	Surround Mode : The currently set surround mode. Signal : The input signal type. fs : The input signal's sampling frequency. Format : The number of channels in the input signal (front, surround, LFE). Offset : The dialogue normalization correction value. Flag : This is displayed when inputting signals including a surround back channel. "MATRIX" is displayed with Dolby Digital EX and DTS-ES Matrix signals, "DISCRETE" with DTS-ES Discrete signals. <div style="border: 1px solid gray; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">Dialogue normalization function</p> <p>This function is automatically activated when playing Dolby Digital sources. It automatically corrects the standard signal level for individual program sources. The correction value can be checked using the STATUS.</p> <div style="display: flex; align-items: center;">  <div style="border: 1px solid gray; padding: 5px; text-align: center;"> Dial.Norm Offset - 4dB </div> </div> <p>The figure is the correction value when the standard level is corrected.</p> </div>
 HDMI Information Show information about HDMI input/output signals and monitor.	Signal Info. Resolution / Color Space / Pixel Depth Monitor Interface / Supported resol.

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Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



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Items	Setting details
 Auto Surround Mode Show information about auto surround mode settings.	Analog/PCM 2ch / Digital 2ch / Digital 5.1ch / Multi ch
 Preset Channel Show information about preset channels.	This item can be checked when the input source is set to FM AM . A / B / C / D / E / F / G A1 - A8 / B1 - B8 / C1 - C8 / D1 - D8 / E1 - E8 / F1 - F8 / G1 - G8

Setting Various Modes

When the input source of this unit is "BD/SD", you can switch the following modes and change the settings from the menu displayed on the screen.

1 Press **MODE**.

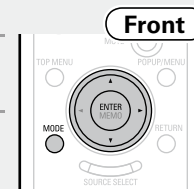
Displays the currently settable menu.



Play Mode	Disc
BD Audio Mode	Mix Audio Output
File filter	All

- The display content changes depending on the media being played back.

2 Select the setting item using Δ ∇ , and then press **ENTER** or \blacktriangleright .

3 Use Δ ∇ to select a setting and use **ENTER** to change the setting.



Setting items	Setting details
BD Audio Mode Switch Blu-ray Disc audio playback mode.	HD Audio Output : Can view by outputting high quality signals such as Dolby TrueHD, Dolby Digital Plus, or DTS-HD as its high sound quality bitstream. Cannot listen to interactive or secondary audio. Mix Audio Output : Outputs a mix of primary audio/interactive audio/secondary audio.  In the case of Dolby TrueHD, Dolby Digital Plus and DTS-HD audio playback, set to "HD Audio Output". NOTE When "Mix Audio Output" is set and DTS-HD audio signals are played, only the DTS digital surround stream of the DTS-HD audio stream is decoded and output.
File filter Selects the file format you want to play back from among the files mixed on a disc.	All : Plays back MP3/WMA/AAC/LPCM/JPEG/DivX [®] files. Audio : Plays back MP3/WMA/AAC/LPCM files. Picture : Plays back JPEG files. Video : Plays back DivX [®] files. Audio & Picture : Plays back MP3/WMA/AAC/LPCM/JPEG files.  This operation is effective only when playback is stopped.
Play Mode Selects the file Play mode.	Disc : Plays back all files in the media. Folder : Plays back files in the selected folder.



Display the menu
Cancel the menu



Move the cursor
(Up/Down/Left/Right)



Confirm the setting

RETURN



Return to previous menu

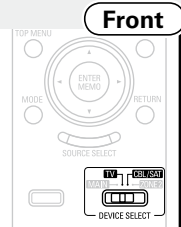
Operating the Connected Devices by Remote Control Unit

Registering the supplied preset codes in the remote control unit enables you to operate devices made by other manufacturers.

Registering Preset Codes

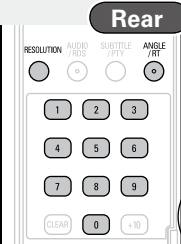
1 Set **DEVICE SELECT** to the component to be registered.

- TV** TV
- CBL/SAT** Satellite tuner or cable TV



2 Press **RESOLUTION** and **ANGLE/RT** at the same time.

The signal transmission indicator starts flashing.



3 Press **0 - 9** and input the 3-digit number of the brand of the component to be preset. The numbers are shown in the Preset Code Table (End of this manual).

4 To store the codes of another component in the memory, repeat steps 1 to 4.



- You can also register the preset codes from the GUI menu using “Manual Setup” – “Option Setup” – “Remote Preset Codes” (page 58).
- Some manufacturers use more than one type of remote control code. Refer to the included list of preset codes to change the number and verify correct operation.
- The preset memory can be set for one component only among the following: CBL/SAT.

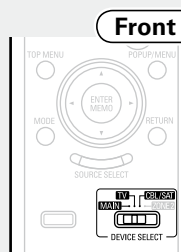
NOTE

Depending on the model and year of manufacture of your equipment, some buttons may not operate.

Operating Components

1 Set **DEVICE SELECT** to the component you want to operate.

- MAIN** Main unit (including operation of an iPod, Control dock for iPod, USB memory device or SD memory card connected to this unit)
- TV** TV
- CBL/SAT** Satellite tuner or cable TV



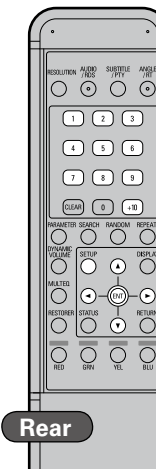
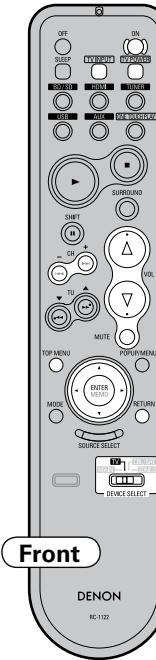
2 Operate the component.

- For details, refer to the component’s operating instructions.

NOTE

Depending on the model and year of manufacture, this function cannot be used for some models, even if they are of makes listed in the list of preset codes.

TV Operation



Front	
DEVICE SELECT	 DEVICE SELECT
ON	Power on/Standby
TV INPUT	Switch TV input
TV POWER	TV power on/off
CH + -	Switch channels (+, -)
VOLUME ▲▼	▲ : TV Volume (+) ▼ : TV Volume (-)
MUTE	TV mute
TOP MENU	Menu
△▽◀▶	Cursor operation
ENTER	Enter setting
RETURN	Return
Rear	
1 - 9	Channels
SETUP	Setup
Default setting (Preset code)	HITACHI (014)
Special Remarks	①

[Special Remarks]

- ① Only one device can be set in the preset memory for each mode. When a new preset code is registered, the existing code is automatically erased.

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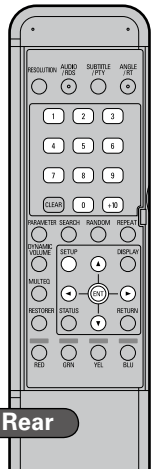
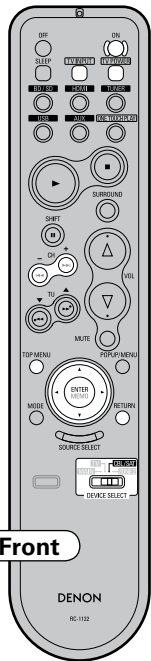
Troubleshooting

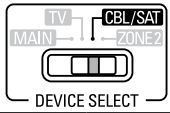
Spec.

Index

Operating Components

Set-Top Box (Satellite Tuner/Cable TV) Operation



Front		
DEVICE SELECT		
ON	Power on/Standby	
TV INPUT	Switch TV input	
TV POWER	TV power on/off	
CH + -	Switch channels (+, -)	
TOP MENU	Menu	
△▽◀▶	Cursor operation	
ENTER	Enter setting	
RETURN	Return	
Rear		
0 - 9, +10	Channels	
SETUP	Setup	
Default setting (Preset code)	Satellite Tuner	
	Cable TV	ABC (009)
Special Remarks	①	

[Special Remarks]

- ① Only one device can be set in the preset memory for each mode. When a new preset code is registered, the existing code is automatically erased.

Information

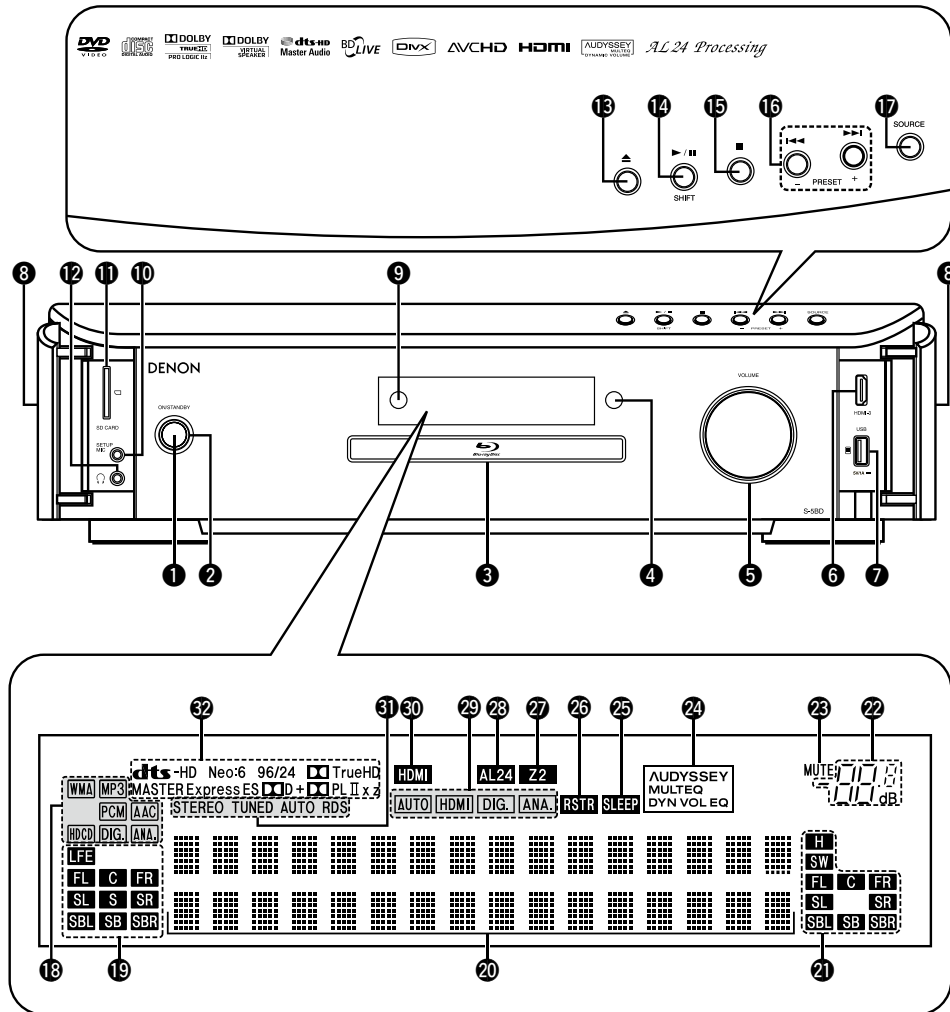
Here, we list various information related to this unit.
Please refer to this information as needed.

- **Part Names and Functions**
- **Other Information**
- **Troubleshooting**
- **Specifications**
- **Index**

Part Names and Functions

Front Panel / Top Panel / Display

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



Front Panel

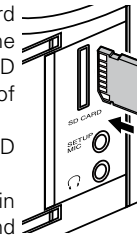
- 1 Power operation button (ON/STANDBY)** (5)
Turns power to this unit on and off (standby).
- 2 Power indicator** (5)
- 3 Disc tray** (10)
- 4 Dimmer sensor** (59)
- 5 VOLUME control knob** (30)
- 6 HDMI-3 input connector** (12)
- 7 USB (iPod) port** (14)
- 8 Door** (79)

NOTE

Be careful not to catch your finger in the door.

- 9 Remote control sensor** (67)
- 10 SETUP MIC jack** (7, 38)
- 11 SD CARD slot**

- Position the SD memory card so that the label side is on the right, and insert into the SD CARD slot, in the direction of the arrow.
- Insert the card straight into SD CARD slot until it clicks.
- To remove the card, push it in the direction of insertion, and then release to eject.



12 Headphones jack

When the headphones are plugged into this jack, audio will no longer be output from the connected speakers or from the PRE OUT connectors.

NOTE

To prevent hearing loss, do not raise the volume level excessively when using headphones.

Top Panel

- 13 Disc tray open/close button (▲)** (10)
- 14 Play/Pause button (▶/||)** (21, 30, 31)
SHIFT button (27)
- 15 Stop button (■)** (30)
- 16 Revers-skip/Forward-skip buttons (◀◀, ▶▶)** (31)
PRESET +, - buttons (27)
- 17 SOURCE button** (20)



When power is in standby mode, press **13** and **14** to turn the power on.

Display

- 18 Playback format indicators**
- 19 Input signal channel indicators**
These light when digital signals are input.
- 20 Information display**
The input source name, surround mode, setting values and other information are displayed here.
- 21 Output signal channel indicators**
The channel currently being played back is displayed.
- 22 Master volume indicator**
- 23 MUTE indicator**
This lights when the mute mode is selected.

24 AUDYSSEY MULTEQ® indicators

Lighting is as follows, depending on the setting of "Dynamic EQ" (☞ page 53) and "Dynamic Volume" (☞ page 54).

AUDYSSEY MULTEQ DYN VOL	When "Dynamic EQ" and "Dynamic Volume" are "ON".
AUDYSSEY MULTEQ DYN EQ	When "Dynamic EQ" is "ON" and "Dynamic Volume" is "OFF".
AUDYSSEY MULTEQ	When "Dynamic EQ" and "Dynamic Volume" are "OFF".

25 SLEEP indicator

This lights when the sleep mode is selected.

26 RESTORER indicator

This lights when the RESTORER mode is selected (☞ page 26).

27 ZONE2 indicators

This lights up when ZONE2 (separate room) power is turned on.

28 AL24 indicator

This lights when AL24 Processing (☞ page 69) is activated.

29 Input mode indicators

Set the audio input modes for the different input sources (☞ page 49).

30 HDMI indicator

This lights when playing using HDMI connections.

31 Tuner reception mode indicators

These light according to the reception conditions when the input source is set to "TUNER".

STEREO: In the FM mode, these light when receiving analog stereo broadcasts.

TUNED: Lights when the broadcast is properly tuned in.

AUTO: These light when in the auto tuning mode.

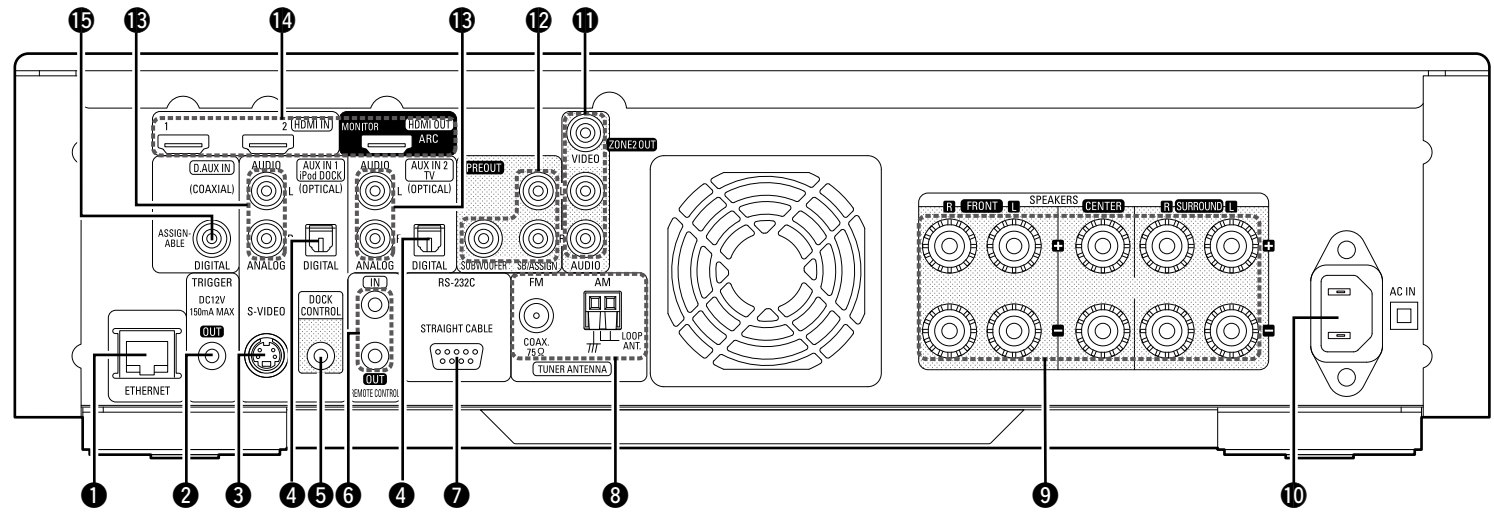
RDS: These light when receiving RDS broadcasts.

32 Decoder indicators

These light when the respective decoders are operating.

Rear Panel

See the page indicated in parentheses ().



- 1** ETHERNET connector (16)
- 2** TRIGGER OUT jack (17)
- 3** S-VIDEO connector (14)
- 4** OPTICAL connector (13, 15)
- 5** DOCK CONTROL jack (14)
- 6** REMOTE CONTROL jacks (17)
- 7** RS-232C connector (17)
- 8** FM/AM antenna terminals (15)
- 9** Speaker terminals (4, 37)
- 10** AC inlet (AC IN) (5)
- 11** ZONE2 OUT connectors (43)
- 12** PREOUT connectors (37)
- 13** Analog audio connectors (13 – 15)
- 14** HDMI connectors (12)
- 15** COAXIAL connector (13 – 15)



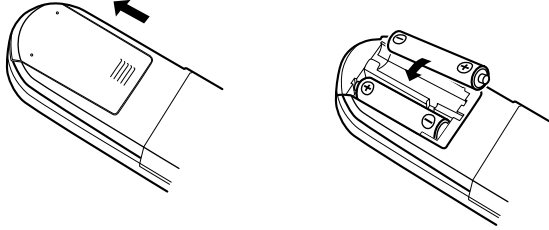
When using the COAXIAL connector, set "Manual Setup" – "Audio Setup" – "COAX Input Assign" (☞ page 58) on the GUI menu to "AUX1" or "AUX2".

NOTE

- Do not touch the inner pins of the connectors on the rear panel. Electrostatic discharge may cause permanent damage to the unit.
- Do not put your finger or foreign object in the fan opening. Doing so could cause injury or unit failure.

Inserting the Batteries

- Slide the rear lid in the direction of the arrow and remove it.
- Load the two batteries properly as indicated by the marks in the battery compartment.



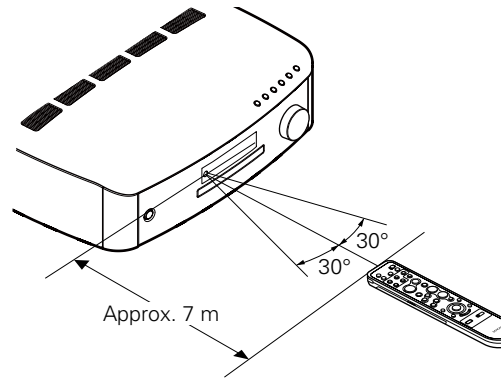
- Put the rear cover back on.

NOTE

- Insert the specified batteries in the remote control unit.
- Replace the batteries with new ones if the set does not operate even when the remote control unit is operated close to the unit. (The supplied batteries are only for verifying operation.)
- When inserting the batteries, be sure to do so in the proper direction, following the ⊕ and ⊖ marks in the battery compartment.
- To prevent damage or leakage of battery fluid:
 - Do not use a new battery together with an old one.
 - Do not use two different types of batteries.
 - Do not attempt to charge dry batteries.
 - Do not short-circuit, disassemble, heat or dispose of batteries in flames.
- If the battery fluid should leak, carefully wipe the fluid off the inside of the battery compartment and insert new batteries.
- Remove the batteries from the remote control unit if it will not be in use for long periods.
- Used batteries should be disposed of in accordance with the local regulations regarding battery disposal.

Operating Range of the Remote Control Unit

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



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.

Inserting a Disc

- Set the disc with the labeled side facing up.
- Make sure the disc tray is fully open when inserting the disc.
- Place the disc horizontally in the tray, aligned with the tray guide.



If a disc that cannot be played is loaded or the disc is loaded up-sidedown, "NO DISC" is displayed on the player's display.

NOTE

- Only load one disc at a time. Loading two or more discs can damage the unit or scratch the discs.
- Do not use cracked or warped discs or discs that have been repaired with adhesive, etc.
- Do not use discs on which the sticky part of cellophane tape or labels is exposed or on which there are traces of where labels have been removed. Such discs can get caught inside the player and damage it.
- Do not use discs with special shapes, as they could damage the player.



- Do not push the disc tray in by hand when the power is turned off. Doing so could damage the set.

Other Information

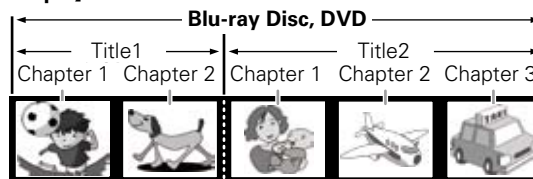
- ❑ **About Discs and Files** (👉 page 68)
- ❑ **About Handling of Media** (👉 page 68)
- ❑ **Cleaning Discs** (👉 page 68)
- ❑ **About Copyright** (👉 page 69)
- ❑ **AL24 Processing** (👉 page 69)
- ❑ **Trademark Information** (👉 page 69)
- ❑ **Surround** (👉 page 70)
- ❑ **Language Code List** (👉 page 72)
- ❑ **Country Code List** (👉 page 73)
- ❑ **Explanation of Terms** (👉 page 74)

About Discs and Files

❑ **BD-Video, DVD-Video**

BD-Video/DVD-Video discs are divided into several large sections (titles) and small sections (chapter). These sections are all allotted numbers, called the title numbers and chapter numbers.

[Example]



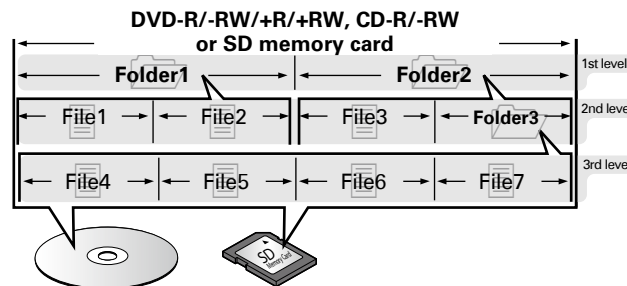
❑ **CD**

CDs are divided into several sections (tracks). These sections are all allotted numbers, called the track numbers.



❑ **File**

MP3/WMA/AAC/LPCM/JPEG/DivX® files recorded on DVD-R/+R/+RW, CD-R/-RW and SD memory card are divided into large segments (folders) and small segments (files). Files are stored in folders, and folders can be placed for storage in a hierarchy. This unit can recognize up to 8 hierarchies of folder.



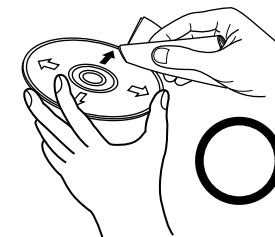
When writing MP3/WMA/AAC/JPEG/DivX® files on a CD-R/-RW disc, set the writing software's format to "ISO9660". The files may not play properly if they are recorded in other formats. For details, refer to the instructions of your writing software.

About Handling of Media

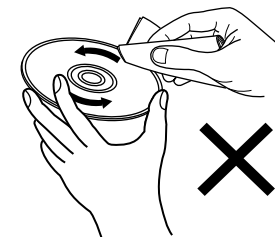
- Do not get fingerprints, oil or dirt on discs.
- Take special care not to scratch discs when removing them from their cases.
- Do not bend or heat discs.
- Do not enlarge the hole at the center.
- Do not write on the labeled (printed) surface with ball-point pens, pencils, etc., or stick new labels on discs.
- Water droplets may form on discs if they are moved suddenly from a cold place (outdoors for example) to a warm place, but do not try to dry them off using a hairdryer, etc.
- Do not eject an SD memory card or turn off this unit's power while the card content is in playback. This may result in malfunction or loss of the card's data.
- Do not attempt to open or modify SD memory cards.
- SD memory cards and files can be damaged by static electricity. Do not touch the metal contacts of an SD memory card with your fingers.
- Do not use warped SD memory cards.
- After use, be sure to remove any disc or SD memory card, and store it in its proper card case, to avoid dust, scratches and deformation.
- Do not store discs in the following places:
 1. Places exposed to direct sunlight for long periods of time
 2. Dusty or humid places
 3. Places exposed to heat from heating appliances, etc.

Cleaning Discs

- If there are fingerprints or dirt on discs, wipe them off before using the disc.
- Use a commercially available disc cleaning set or a soft cloth to clean discs.



Gently wipe the disc from the inside towards the outside.



Do not wipe with a circular motion.

NOTE

If buttons on the front or rear are pressed strongly, the button on the opposite side will be activated too.

About Copyright

- Unauthorised copying, broadcasting, public performance and lending of discs are prohibited.
- This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorised by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorised by Macrovision. Reverse engineering or disassembly is prohibited.
- Portions of this product are protected under copyright law and provided under license by ARIS/SOLANA/4C.

AL24 Processing


AL24 Processing has inherited the technology of the original ALPHA Processing that was used in DENON's highly-successful reference-class audio components.




AL24 Processing further reduces quantization distortion and represents the ultimate analog waveform reproduction technology designed to support the higher numbers of bits and higher sampling.

AL24 Processing senses the nature of the digital data being input and interpolates the data so that it faithfully replicates the original analog waveform. AL24 processing operates when CD, MP3 or WMA data is inputted.

Trademark Information

This product uses the following technologies:

	DVD is a trademark of the DVD Format / Logo licensing Corporation.
	Manufactured under license from Dolby Laboratories. Dolby, Pro Logic and the double-D symbol (DD) are trademarks of Dolby Laboratories.
	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; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & 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. © 1996-2008 DTS, Inc. All Rights Reserved.
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	SDHC logo is a trademark.

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Surround

This unit 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.

Surround Modes and Audio Adjust

Surround Mode (☞ page 33)	Signals and adjustability in the different modes					
	Channel output					
	Front L/R	Center	Surround L/R	Surround Back L/R	Subwoofer	Front Height L/R
STEREO	○				○	
DOLBY PRO LOGIC IIz	○	○	○		○	○
DOLBY PRO LOGIC IIx	○	○	○	○	○	
DOLBY PRO LOGIC II	○	○	○		○	
DTS NEO:6	○	○	○	○	○	
DOLBY DIGITAL	○	○	○	○	○	○ (NOTE1)
DOLBY DIGITAL Plus	○	○	○	○	○	○ (NOTE1)
DOLBY TrueHD	○	○	○	○	○	○ (NOTE1)
DTS SURROUND	○	○	○	○	○	○ (NOTE1)
DTS 96/24	○	○	○	○	○	○ (NOTE1)
DTS-HD	○	○	○	○	○	○ (NOTE1)
DTS EXPRESS	○	○	○	○	○	○ (NOTE1)
MULTI CH STEREO	○	○	○	○	○	○
ROCK ARENA	○	○	○	○	○	○
JAZZ CLUB	○	○	○	○	○	○
DOLBY VIRTUAL SPEAKER	○				○	

- Signal/Adjustable
- ◎ Turned on or off by speaker configuration setting

NOTE1 This parameter is available when the "Front Height" is set to "ON" (☞ page 51).

NOTE2 This parameter is available when the "Mode" is set to "Cinema" (☞ page 34).

NOTE3 This parameter is available when the "Mode" is set to "Cinema" or "ProLogic" (☞ page 34).

NOTE4 BASS +6 dB, TREBLE +4 dB

NOTE :

- * 1 When playing Dolby TrueHD signal.
- * 2 When playing Dolby Digital and DTS signals.

Surround Mode (☞ page 33)	Signals and adjustability in the different modes																
	Audio Adjust (default values are shown in parentheses) (☞ page 50)																
	Mode	Cinema EQ.	DRC * 1	D. COMP * 2	LFE * 2	NEO:6 MUSIC mode only			PRO LOGIC II/IIx MUSIC mode only		Front Height	AFDM * 2	Surround Back	Tone Control	MultEQ	Dynamic EQ	Dynamic Volume
						Center Image	Panorama	Dimension	Center Width	Dimension							
STEREO			○ (Auto)	○ (OFF)	○ (0 dB)								○ (OFF)	○ (OFF)	○	○	
DOLBY PRO LOGIC IIz	○ (Height)	○ (OFF)	○ (Auto)	○ (OFF)	○ (0 dB)					○			○ (OFF)	○ (OFF)	○	○	
DOLBY PRO LOGIC IIx	○ (Cinema)	○ (NOTE2)	○ (Auto)	○ (OFF)				○ (OFF)	○ (3)	○ (3)		○	○ (OFF)	○ (OFF)	○	○	
DOLBY PRO LOGIC II	○ (Cinema)	○ (NOTE3)	○ (Auto)	○ (OFF)				○ (OFF)	○ (3)	○ (3)		○	○ (OFF)	○ (OFF)	○	○	
DTS NEO:6	○ (Cinema)	○ (NOTE2)		○ (OFF)		○ (0.3)						○	○ (OFF)	○ (OFF)	○	○	
DOLBY DIGITAL		○ (OFF)		○ (OFF)	○ (0 dB)					○	○ (ON)	○	○ (OFF)	○ (OFF)	○	○	
DOLBY DIGITAL Plus		○ (OFF)		○ (OFF)	○ (0 dB)					○	○ (ON)	○	○ (OFF)	○ (OFF)	○	○	
DOLBY TrueHD		○ (OFF)	○ (Auto)		○ (0 dB)					○	○ (ON)	○	○ (OFF)	○ (OFF)	○	○	
DTS SURROUND		○ (OFF)		○ (OFF)	○ (0 dB)					○	○ (ON)	○	○ (OFF)	○ (OFF)	○	○	
DTS 96/24		○ (OFF)		○ (OFF)	○ (0 dB)					○	○ (ON)	○	○ (OFF)	○ (OFF)	○	○	
DTS-HD		○ (OFF)		○ (OFF)	○ (0 dB)					○	○ (ON)	○	○ (OFF)	○ (OFF)	○	○	
DTS EXPRESS		○ (OFF)		○ (OFF)	○ (0 dB)					○	○ (ON)	○	○ (OFF)	○ (OFF)	○	○	
MULTI CH STEREO				○ (OFF)	○ (0 dB)							○	○ (OFF)	○ (OFF)	○	○	
ROCK ARENA				○ (OFF)	○ (0 dB)							○	○ (NOTE4)	○ (OFF)	○	○	
JAZZ CLUB				○ (OFF)	○ (0 dB)							○	○ (OFF)	○ (OFF)	○	○	
DOLBY VIRTUAL SPEAKER			○ (Auto)	○ (OFF)	○ (0 dB)								○ (OFF)	○ (OFF)	○	○	

Types of Input Signals, and Corresponding Surround Modes

Operation Buttons		Input Signal Types and Formats																			
Surround Mode (page 33)	Note	ANALOG	LINEAR PCM/WAV	WMA (Windows Media Audio)/MP3/MPEG-4 AAC/FLAC	DTS-HD		DTS					DOLBY		DOLBY DIGITAL					MULTI CH PCM		
					DTS-HD Master Audio	DTS-HD High Resolution Audio	DTS EXPRESS	DTS ES DSCRT (With Flag)	DTS ES MTRX (With Flag)	DTS (5.1ch)	DTS 96/24	DOLBY TrueHD	DOLBY DIGITAL Plus	DOLBY DIGITAL EX (With Flag)	DOLBY DIGITAL EX (With no Flag)	DOLBY DIGITAL (5.1/5/4ch)	DOLBY DIGITAL (4/3ch)	DOLBY DIGITAL (2ch)	PCM (multi ch)	PCM (2ch)	
SURROUND button																					
DTS SURROUND																					
DTS-HD MSTR						●															
DTS-HD HI RES							●														
DTS ES DSCRT6.1	* 1								●◎												
DTS ES MTRX6.1	* 1								●◎												
DTS SURROUND									○	○	●										
DTS 96/24												●									
DTS (-HD) + PLIIx CINEMA	* 2					○	○	○	○	○	○	○									
DTS (-HD) + PLIIx MUSIC	* 1					○	○	○	○	○	○	○									
DTS (-HD) + PLIIz HEIGHT	* 3					○	○	○	○	○	○	○									
DTS EXPRESS								●													
DTS (-HD) + NEO:6	* 1					○	○	○		○	○	○									
DTS NEO:6 CINEMA		○	○	○															○		○
DTS NEO:6 MUSIC		○	○	○															○		○
DOLBY SURROUND																					
DOLBY TrueHD													●								
DOLBY DIGITAL+														●							
DOLBY DIGITAL EX	* 1														○	○	○	○			
DOLBY (D+) (HD) +EX	* 1												○	○							
DOLBY DIGITAL															○	●	●	●			
DOLBY (D) (D+) (HD) +PLIIx CINEMA	* 2												○	○	●◎	○	○	○			
DOLBY (D) (D+) (HD) +PLIIx MUSIC	* 1												○	○	○	○	○	○			
DOLBY (D) (D+) (HD) +PLIIz HEIGHT	* 3												○	○	○	○	○	○			
DOLBY PRO LOGIC IIz HEIGHT	* 3	○	○	○															○		○
DOLBY PRO LOGIC IIx CINEMA	* 1	○	○	○															○		○
DOLBY PRO LOGIC IIx MUSIC	* 1	○	○	○															○		○
DOLBY PRO LOGIC IIx GAME	* 1	○	○	○															○		○
DOLBY PRO LOGIC II CINEMA		○	○	○															○		○
DOLBY PRO LOGIC II MUSIC		○	○	○															○		○
DOLBY PRO LOGIC II GAME		○	○	○															○		○
DOLBY PRO LOGIC		○	○	○															○		○
DOLBY VIRTUAL SPEAKER REFERENCE	* 4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
DOLBY VIRTUAL SPEAKER WIDE	* 4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
MULTI CH STEREO		○	○	○																	
ROCK ARENA		○	○	○																	
JAZZ CLUB		○	○	○																	
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".
- * 3 This mode is not available when the front height speaker setup is set to "None".
- * 4 This mode is available when the speaker setting is "2ch/2.1ch".

- Mode selectable in initial status
- ◎ Mode fixed when "AFDM" is "ON"
- Selectable mode

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Language	Code
A Abkhazian	4748
Afar	4747
Afrikaans	4752
Albanian	6563
Amharic	4759
Arabic	4764
Armenian	5471
Assamese	4765
Aymara	4771
Azerbaijani	4772
B Bashkir	4847
Basque	5167
Bengali; Bangla	4860
Bhutani	5072
Bihari	4854
Bislama	4855
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Romanian	6461
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T Tagalog	6658
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V Vietnamese	6855
Volapuk	6861
W Welsh	4971
Wolof	6961
X Xhosa	7054
Y Yiddish	5655
Yoruba	7161
Z Zulu	7267

Country Code List

Country	Code	Country	Code	Country	Code	Country	Code	Country	Code
A AFGHANISTAN	AF	CROATIA	HR	J JAMAICA	JM	NIGERIA	NG	SYRIAN ARAB REPUBLIC	SY
ÅLAND ISLANDS	AX	CUBA	CU	JERSEY	JE	NIUE	NU	T TAJIKISTAN	TJ
ALBANIA	AL	CYPRUS	CY	JORDAN	JO	NORFOLK ISLAND	NF	TANZANIA, UNITED	TZ
ALGERIA	DZ	CZECH REPUBLIC	CZ	K KAZAKHSTAN	KZ	NORTHERN MARIANA	MP	REPUBLIC OF	
AMERICAN SAMOA	AS	D DJIBOUTI	DJ	KENYA	KE	ISLANDS		TIMOR-LESTE	TL
ANDORRA	AD	DOMINICA	DM	KIRIBATI	KI	O OMAN	OM	TOGO	TG
ANGOLA	AO	DOMINICAN REPUBLIC	DO	KOREA, DEMOCRATIC	KP	P PALAU	PW	TOKELAU	TK
ANGUILLA	AI	E ECUADOR	EC	PEOPLE'S REPUBLIC OF		PALESTINIAN TERRITORY,	PS	TONGA	TO
ANTARCTICA	AQ	EGYPT	EG	KUWAIT	KW	OCCUPIED		TRINIDAD AND TOBAGO	TT
ANTIGUA AND BARBUDA	AG	EL SALVADOR	SV	KYRGYZSTAN	KG	PANAMA	PA	TUNISIA	TN
ARMENIA	AM	EQUATORIAL GUINEA	GQ	LAO PEOPLE'S	LA	PAPUA NEW GUINEA	PG	TURKEY	TR
ARUBA	AW	ERITREA	ER	DEMOCRATIC REPUBLIC		PARAGUAY	PY	TURKMENISTAN	TM
B BAHAMAS	BS	ESTONIA	EE	LATVIA	LV	PERU	PE	TURKS AND CAICOS	TC
BAHRAIN	BH	ETHIOPIA	ET	LEBANON	LB	PITCAIRN	PN	ISLANDS	
BANGLADESH	BD	F FALKLAND ISLANDS	FK	LESOTHO	LS	PUERTO RICO	PR	TUVALU	TV
BARBADOS	BB	(MALVINAS)		LIBERIA	LR	Q QATAR	QA	U UGANDA	UG
BELARUS	BY	FAROE ISLANDS	FO	LIBYAN ARAB JAMAHIRIYA	LY	R RÉUNION	RE	UKRAINE	UA
BELIZE	BZ	FIJI	FJ	LIECHTENSTEIN	LI	ROMANIA	RO	UNITED ARAB EMIRATES	AE
BENIN	BJ	FRENCH GUIANA	GF	LITHUANIA	LT	RWANDA	RW	UNITED STATES MINOR	UM
BERMUDA	BM	FRENCH POLYNESIA	PF	M MACAO	MO	S SAINT BARTHÉLEMY	BL	OUTLYING ISLANDS	
BHUTAN	BT	FRENCH SOUTHERN	TF	MACEDONIA, THE FORMER	MK	SAINT HELENA	SH	URUGUAY	UY
BOLIVIA	BO	TERRITORIES		YUGOSLAV REPUBLIC OF		SAINT KITTS AND NEVIS	KN	UZBEKISTAN	UZ
BOSNIA AND		G GABON	GA	MADAGASCAR	MG	SAINT LUCIA	LC	V VANUATU	VU
HERZEGOVINA	BA	GAMBIA	GM	MALAWI	MW	SAINT MARTIN	MF	VATICAN CITY STATE	VA
BOTSWANA	BW	GEORGIA	GE	MALDIVES	MV	SAINT PIERRE AND	PM	VENEZUELA	VE
BOUVET ISLAND	BV	GHANA	GH	MALI	ML	MIQUELON		VIET NAM	VN
BRITISH INDIAN OCEAN		GIBRALTAR	GI	MALTA	MT	SAINT VINCENT AND THE	VC	VIRGIN ISLANDS, BRITISH	VG
TERRITORY	IO	GREENLAND	GL	MARSHALL ISLANDS	MH	GRENADINES		VIRGIN ISLANDS, U.S.	VI
BRUNEI DARUSSALAM	BN	GRENADA	GD	MARTINIQUE	MQ	SAMOA	WS	W WALLIS AND FUTUNA	WF
BULGARIA	BG	GUADELOUPE	GP	MAURITANIA	MR	SAN MARINO	SM	WESTERN SAHARA	EH
BURKINA FASO	BF	GUAM	GU	MAURITIUS	MU	SAO TOME AND PRINCIPE	ST	Y YEMEN	YE
BURUNDI	BI	GUATEMALA	GT	MAYOTTE	YT	SAUDI ARABIA	SA	Z ZAMBIA	ZM
C CAMBODIA	KH	GUERNSEY	GG	MICRONESIA, FEDERATED	FM	SENEGAL	SN	ZIMBABWE	ZW
CAMEROON	CM	GUINEA	GN	STATES OF		SERBIA	RS		
CAPE VERDE	CV	GUINEA-BISSAU	GW	MOLDOVA	MD	SEYCHELLES	SC		
CAYMAN ISLANDS	KY	GUYANA	GY	MONACO	MC	SIERRA LEONE	SL		
CENTRAL AFRICAN		H HAITI	HT	MONGOLIA	MN	SLOVAKIA	SK		
REPUBLIC	CF	HEARD ISLAND AND	HM	MONTENEGRO	ME	SLOVENIA	SI		
CHAD	TD	MCDONALD ISLANDS		MONTSERRAT	MS	SOLOMON ISLANDS	SB		
CHRISTMAS ISLAND	CX	HOLY SEE (VATICAN CITY	VA	MOROCCO	MA	SOMALIA	SO		
COCOS (KEELING) ISLANDS	CC	STATE)		MOZAMBIQUE	MZ	SOUTH AFRICA	ZA		
COMOROS	KM	HONDURAS	HN	MYANMAR	MM	SOUTH GEORGIA AND			
CONGO	CG	HUNGARY	HU	NAMIBIA	NA	THE SOUTH SANDWICH	GS		
CONGO, THE DEMOCRATIC		I ICELAND	IS	NAURU	NR	ISLANDS			
REPUBLIC OF THE	CD	IRAN, ISLAMIC REPUBLIC	IR	NEPAL	NP	SRI LANKA	LK		
COOK ISLANDS	CK	OF		NETHERLANDS ANTILLES	AN	SUDAN	SD		
COSTA RICA	CR	IRAQ	IQ	NEW CALEDONIA	NC	SURINAME	SR		
CÔTE D'IVOIRE	CI	ISLE OF MAN	IM	NICARAGUA	NI	SVALBARD AND JAN	SJ		
		ISRAEL	IL	NIGER	NE	MAYEN			

Explanation of Terms

Numerics

4:3 LB (letterbox)

When a wide (16:9) disc is played back by connecting a 4:3 TV and this unit, this function plays back the image with black area at the top and bottom.

4:3 PS (pan scan)

When a wide (16:9) disc is played back by connecting a 4:3 TV and this unit, this function cuts left and right of the played back image to the 4:3 size according to the disc's control information.

A

AAC (Advanced Audio Coding)

This is an internationally standardized audio data compression scheme. It has a compression ratio 1.4 times higher than the "MP3 audio compression scheme adopted for "MPEG-1.

Aspect ratio

This is the length and width ratio of the TV screen. The conventional TV's screen ratio is 4:3 and the wide screen TV's screen ratio is 16:9.

Audio commentary

This is an audio program included as a bonus feature in a DVD-Video or BD-Video. It uses a multi-audio function to provide an audio explanation or commentary by members of the crew or director, etc. to accompany the video.

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. Audyssey Dynamic EQ works in tandem with Audyssey MultEQ® to provide well-balanced sound for every listener at any volume level.

Audyssey Dynamic Volume™

Audyssey Dynamic Volume solves the problem of large variations in volume level between television programs, commercials, and between the soft and loud passages of movies. Audyssey Dynamic EQ is integrated into Dynamic Volume so that as the playback volume is adjusted automatically, the perceived bass response, tonal balance, surround impression, and dialog clarity remain the same.

Audyssey MultEQ®

Audyssey MultEQ is a room equalization solution that calibrates any audio system so that it can achieve optimum performance for every listener in a large listening area. Based on several room measurements, MultEQ calculates an equalization solution that corrects for both time and frequency response problems in the listening area and also performs a fully automated surround system setup.

AVCHD (Advanced Video Codec High Definition)

This is a high-definition digital camera (HD) standard using high-efficiency encoding technology for recording high-definition Hi-Vision signals to various media.

B

BD-J (Blu-ray Disc Java)

With BD-Videos, there are fun software with more interactive functions (games) using Java applications.

BD-LIVE

This unit can be connected to the Internet to enjoy a number of features, including additional contents such as special videos or subtitles, network games, etc.

Bit rate

This expresses the read amount per 1 second of video/audio data recorded in a disc.

Blu-ray Disc

This is one-side 1 layer disc having 25 GB capacity and can record high vision video movie and games.

Bonus View

Special images for BD-Videos. It includes comment of the movie director, simultaneously developing sub-story, and images from different angles.

C

Chapter

This is a break intended by a producer who organizes the title of Blu-ray Disc or DVD-Video. The chapter search function searches the beginning of this break.

D

Deep Color

This technology allows expression of more number of colors than the conventional 8 bits and can reproduce colors close to natural ones without color streak.

DHCP (Dynamic Host Configuration Protocol)

This mechanism automatically perform network configuration such as IP address for network devices including the unit, PC, and broadband router.

DivX

This is a video codec (video compression/decompression software) developed by DivX, Inc. The compression technology is based on "MPEG-4 Part 2" (known as "MPEG-4 ASP"). It allows a long video to be compressed into a small file while maintaining a high-quality image. It is available in the free "DivX" version or the paid "DivX PRO" version.

Dolby Digital

Dolby Digital is a multi-channel 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 realistic, powerful sense of presence is achieved when playing movie sources in AV rooms as well.

Dolby Digital EX

Dolby Digital EX is a 6.1-channel surround format proposed by Dolby Laboratories that allows users to enjoy in their homes the "DOLBY DIGITAL SURROUND EX" audio format jointly developed by Dolby Laboratories and Lucas Films.

The 6.1 channels of sound, including surround back channels, provide improved sound positioning and expression of space.

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 g matrix decoding technology. Audio signals recorded in 2 channels are decoded to achieve a natural sound with up to 7.1 channels. There are three modes: "Music" suited for playing music, "Cinema" suited for playing movies, and "Game" which is optimized for playing games.

Dolby Pro Logic IIz

Dolby Pro Logic IIz introduces a new dimension to Home Entertainment through the addition of a pair of front height channels. Compatible with stereo, 5.1-channel and 7.1-channel content, Dolby Pro Logic IIz provides enhanced spaciousness, depth and dimension to movies, concert video and video game playback while maintaining the full integrity of the source mix.

Dolby Pro Logic IIz identifies and decodes spatial cues that occur naturally in all content, directing this information to the front height channels, complementing the performance of left and right surround sound speakers. Content that is encoded with Dolby Pro Logic IIz height channel information can be even more revealing, with perceptually discrete height channel information bringing an exciting new dimension to home entertainment.

Dolby Pro Logic IIz, with front height channels is also an ideal alternative for households that cannot support the placement of back surround speakers of a typical 7.1-channel system but may have bookshelf space available to support the addition of height speakers.

Dolby Virtual Speaker

This is technology from Dolby Laboratories.

It is a surround system using just two speakers to create the effect of surround sound, with sound even coming from behind you as if it was a 5.1-channel system.

Downmix

This function converts the number of channels of surround audio to less number of channels and plays back.

DTS

This is an abbreviation of Digital Theater System, which is a digital audio system developed by DTS. When playing back audio by connecting this system with a device such as DTS amplifier, accurate sound field position and realistic sound effect as if you are in a movie theater can be obtained.

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.

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-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 Express

DTS Express is an audio format supporting low bit rates (max. 5.1 channels, 24 to 256 kbps).

Manufactured under license under U.S. Patent #: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,212,872; 7,333,929; 7,392,195; 7,272,567 & 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. © 1996-2008 DTS, Inc. All Rights Reserved.

DTS-HD

This audio technology provides higher sound quality and enhanced functionality than the conventional DTS and is adopted as an optional audio for Blu-ray Disc. This technology supports multi-channel, high data transfer speed, high sampling frequency, and lossless audio playback. Maximum 7.1-channels are supported in Blu-ray Disc.

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 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.

Dynamic range

The difference between the maximum undistorted sound level and the minimum sound level that is discernible above the noise emitted by the device.

F**Finalise**

This is processing that enables playing back of disc of BD/DVD/CD, which was recorded using a recorder, by other players.

H**HDCP**

When transmitting digital signals between devices, this copyright protection technology encrypts the signals to prevent content from being copied without authorization.

HDMI

This is an abbreviation of High-Definition Multimedia Interface, which is an AV digital interface that can be connected to a TV or amplifier. Video signal and audio signal can be connected using 1 cable.

I**Interlacing (interlaced scanning)**

This conventional method used to project images on a TV displays 1 frame of image in half and half, respectively as 2 fields.

Interactive audio

Audio such as click sound that is generated during operation and is recorded in the title of BD-Videos.

J**JPEG (Joint Photo graphic Experts Group)**

This is a still picture data compression standard. Its ability to reduce the size of a file with relatively little deterioration in image quality means that it is widely used for storing images in video cameras, etc.

L**LFE**

This is an abbreviation of Low Frequency Effect, which is an output channel that emphasizes low frequency effect sound. Surround audio is intensified by outputting 20 Hz to 120 Hz deep bass.

Linear PCM

This signal is uncompressed PCM (Pulse Code Modulation) signal. This is the same system as the CD audio but this uses 192 kHz, 96 kHz, and 48 kHz sampling frequencies in Blu-ray Disc or DVD and provides higher sound quality than CD.

M**MPEG (MPEG AudioPlayer 3)**

This is an internationally standardized audio data compression scheme, using the "MPEG-1" video compression standard. It compresses the data volume to about one eleventh its original size while maintaining sound quality equivalent to a music CD.

MPEG (Moving Picture Experts Group), MPEG-2, MPEG-4

These are the names for digital compression format standards used for the encoding of video and audio. Video standards include "MPEG-1 Video", "MPEG-2 Video", "MPEG-4 Visual", "MPEG-4 AVC". Audio standards include "MPEG-1 Audio", "MPEG-2 Audio", "MPEG-4 AAC".

Multi-zone

This is a function for sharing audio and video from an AV device across several rooms.

For example, you could have 5.1-channel surround playing in the MAIN ZONE (the room in which this unit is located) and video and audio from an iPod in ZONE2 (another room).

P

Picture-in-picture

This BD-Video function allows you to view making or commentary scenes in the secondary video while viewing the main story in the primary video.

Popup menu

This menu recorded in Blu-ray Disc software. While playing back a Blu-ray Disc, this menu can be displayed on the front of the screen and can be operated.

Primary audio

This audio signal is recorded in the main story in BD-Video.

Progressive (sequential scanning)

This is a scanning system of video signal that displays 1 frame of video as one image. Compared to the interlace system, this system provides images with less flickering and bleeding.

Protection Circuit

This is a function to prevent damage to components within the power supply when an abnormality such as an overload or excess voltage occurs for any reason.

In this unit, the power indicator blinks and the unit enters standby mode when an abnormality occurs.

R

Rating

Depending on the age of the viewer, this function restricts playing back of BD-Video or DVD-Video. This unit can be set to restrict viewing in 0 to 254 level for BD-Video, and 1 to 8 level for DVD-Video.

Region code

This code indicates country or region where the Blu-ray Disc or DVD-Video can be played back.

S

Sampling frequency

Sampling involves taking a reading of a sound wave (analog signal) at regular intervals and expressing the height of the wave at each reading in digitized format (producing a digital signal).

The number of readings taken in one second is called the "sampling frequency". The larger the value, the closer the reproduced sound is to the original.

Secondary audio

This is audio signals of comment of movie director and other data recorded in the bonus view of BD-Video.

T

Title

This is the unit of content that consists of chapters of Blu-ray Disc or DVD-Video. Some Blu-ray Disc or DVD-Video may include multiple titles.

W

WMA (Windows Media Audio)

This is audio compression technology developed by Microsoft Corporation.

WMA data can be encoded using Windows Media® Player Ver.7, 7.1, Windows Media® Player for Windows® XP and Windows Media® Player 9 Series.

To encode WMA files, only use applications authorized by Microsoft Corporation. If you use an unauthorized application, the file may not work properly.

X

x.v.Color

This function lets HDTVs display colors more accurately. It enables display with natural, vivid colors. "x.v.Color" is a Sony registered trademark.

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/Solution	Page
Power does not turn on.	• Check whether the power plug is correctly inserted into the power outlet.	5
	• Check whether the power cord is correctly inserted into the AC inlet.	5
	• The protection circuit is active. Disconnect the power plug from the electric outlet, wait 5 to 10 seconds and then insert it back into the outlet.	5
Display is off.	• Set "Dimmer" on the GUI menu to something other than "OFF".	59
The power indicator is blinking red in intervals of approximately 2 seconds.	• The temperature inside the unit has risen. Please turn off power once, and re-apply the power after the temperature has fallen sufficiently.	–
	• Please re-install this unit in a place having good ventilation.	–
The power indicator is blinking red in intervals of approximately 0.5 seconds.	• Please use speakers which have the specified impedance.	4
	• The speaker cable has shorted (is touching). Firmly twist the core wire in the speaker cable, and then re-connect it to the speaker terminal.	4
After turning on the power, the power indicator is blinking red in intervals of approximately 0.5 seconds.	• The unit amplifier circuit has failed. Turn off the power and please contact the DENON service adviser.	–
Set does not operate properly.	• Reset the microprocessor.	79
The power turns off or the input source suddenly switches for no reason.	• When "HDMI Control" – "Control" on the GUI menu is set to "ON", operation of this unit is linked to the operation of the TV.	57

[Audio]

Symptom	Cause/Solution	Page
Audio is not output.	<ul style="list-style-type: none"> • Check the connections for all devices. • Check the speaker connections. • Check whether the audio device power is turned on. • Adjust the master volume. • Cancel the mute mode. • Select a suitable input source. • Select a suitable input mode. • Disconnect the headphones. No sound is output from the speakers or the PRE OUT connectors when headphones are connected. 	12 4, 37 5 30 10, 66 20 49 64
No sound is produced from surround back speaker.	• Set "Speaker Assign" on the GUI menu to "5.1CH + Surround Back".	55
	• Set "Speaker Configuration" – "Surround Back" on the GUI menu to something other than "None".	56
	• Set "Surround Parameters" – "Surround Back" on the GUI menu to something other than "OFF".	52
	• Set the surround mode to something other than "STEREO".	33
No sound is produced from front height speaker.	• Set "Audio Adjust" – "Surround Parameters" – "Front Height" on the GUI menu to "ON".	51
	• Set "Manual Setup" – "Speaker Setup" – "Speaker Assign" on the GUI menu to "5.1CH + Front Height".	55
No sound is produced from subwoofer.	• Check the subwoofer connections.	4
	• Turn on the subwoofer's power.	–
	• Set "Subwoofer" on the GUI menu to "Yes".	55
DTS sound is not output.	• Set "Decode Mode" on the GUI menu to "Auto" or "DTS".	49
Dolby TrueHD, DTS-HD, Dolby Digital Plus audio is not output.	• Make HDMI connections.	12
HD audio is not output.	• Set "BD Audio Mode" on the MODE menu to "HD Audio Output".	60
Audio input to the COAXIAL connector is not output.	• Set "Manual Setup" – "Audio Setup" – "COAX Input Assign" on the GUI menu to "AUX1" or "AUX2".	58
Audio input to the OPTICAL connector is not output.	• Set "Source Select" – "Input Mode" on the GUI menu to "Auto" or "Digital".	49
	• Set "Manual Setup" – "Audio Setup" – "COAX Input Assign" on the GUI menu to "OFF".	58

[Video]

Symptom	Cause/Solution	Page
No picture appears.	<ul style="list-style-type: none"> • Check the TV connection. • Set the TV input correctly. 	12, 13 –
No picture appears, the picture is disrupted, or the Blu-ray disc or DVD video picture appears in black and white.	• The picture may be slightly disturbed directly after fast-forwarding or reversing. This is not a malfunction.	31
	• Discs not compatible with this unit, or discs with different region codes, cannot be played back. The region codes compatible with this unit include "B" for BD-Video and "2" or "ALL" for DVD video.	19
Picture quality has deteriorated.	When ZONE2 is powered on, the HDMI video resolution in the MAIN ZONE switches automatically according to the input signal.	13, 43

[HDMI]

Symptom	Cause/Solution	Page
No audio is output with HDMI connection.	• Check the connection of the HDMI connectors.	12
	• When outputting HDMI audio from the speakers, set "HDMI Audio Out" on the GUI menu to "AMP".	57
	• When outputting HDMI audio from a TV, set "HDMI Audio Out" on the GUI menu to "TV".	57
No video is output with HDMI connection.	• Check the connection of the HDMI connectors.	12
	• Set the input source to match the connected HDMI connector.	20
	• Check whether the TV is compatible with copyright protection (HDCP). If connected to a device not compatible with HDCP, video will not be output correctly.	–
	• Check whether the HDMI video resolution set in this unit is compatible with the TV resolution. If set to "Auto", this unit sets it automatically.	13
When the following operations are performed on devices compatible with HDMI control, the same operations occur on this unit.	• Set "HDMI Control" – "Control" on the GUI menu to "OFF". To operate power only for each device, set "Power Off Control" to "OFF".	57
<ul style="list-style-type: none"> • Power ON/OFF • Switching audio output devices • Adjust volume • Switch input source 		

Getting Started
Simple Version
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[Blu-ray Disc]

Symptom	Cause/Solution	Page
Picture freezes momentarily during playback.	<ul style="list-style-type: none"> The disc may not play back correctly if it is scratched or dirty. Either clean the disc or replace it. There may be a problem with the recorded disc. 	–
Playback does not start even when ► is pressed, or starts but stops immediately.	<ul style="list-style-type: none"> Check whether there is condensation on the inside of the unit or disc. If there is condensation, turn off the power and let the unit stand for 1 to 2 hours. 	2
	<ul style="list-style-type: none"> The disc may not play back correctly if it is scratched or dirty. Either clean the disc or replace it. 	68
	<ul style="list-style-type: none"> Check whether the disc has been inserted upside down. Insert the disc so that the recording surface to be played back faces downward. Check whether a disc that cannot be played back on this unit has been inserted. 	67 19
Subtitles are not displayed.	<ul style="list-style-type: none"> Subtitles cannot be displayed for BD-Video, DVD-Video or DivX® files that do not contain subtitles. 	32
	<ul style="list-style-type: none"> Check whether the subtitles setting is set to "OFF". 	46
Wallpaper is not displayed even after the disc has been removed.	<ul style="list-style-type: none"> An internal error may have occurred in the unit. Set the power to standby, wait awhile, then turn the power back on. 	–
Button operation does not work. The unit fails to operate.	<ul style="list-style-type: none"> Operations may not be permitted by the disc. Refer to the instructions of the disc. 	67
	<ul style="list-style-type: none"> The protection circuit is active. In this case, disconnect the power plug from the electric outlet, wait 5 to 10 seconds and then insert it back into the outlet. 	76
The unit fails to read the disc.	<ul style="list-style-type: none"> The pickup lens may be dirty. Use a commercially available lens cleaner to clean the laser pickup. Avoid use of cleaners equipped with brushes, since they may scratch the lens. 	–
Angle does not switch.	<ul style="list-style-type: none"> If a BD-Video or DVD-Video does not record multiple angles, angle cannot be switched. Also, multiple angles may be recorded for specific scenes. 	32
Playback does not start when the title is selected.	<ul style="list-style-type: none"> Playback may be prohibited by the viewing restriction setting. Check "Ratings" on the GUI menu. 	47
The password for rating level has been forgotten.	<ul style="list-style-type: none"> Reset the microprocessor. 	79

[Radio]

Symptom	Cause/Solution	Page
Reception fails, or there is a lot of noise or distortion.	<ul style="list-style-type: none"> Change the antenna orientation or position. 	15
	<ul style="list-style-type: none"> Separate the AM loop antenna from the unit. 	15
	<ul style="list-style-type: none"> Use an FM outdoor antenna. 	15
	<ul style="list-style-type: none"> Separate the antenna from other connection cables. 	15

[SD memory card]

Symptom	Cause/Solution	Page
Unable to play back bonus view.	<ul style="list-style-type: none"> Check that capacity on the SD memory card is 1 GB or more. 	19
	<ul style="list-style-type: none"> Initialize the SD memory card on this unit. 	48
	<ul style="list-style-type: none"> Was the SD memory card mounted while the power was turned on? Mount the SD memory card while in Standby state. 	19
SD memory card cannot be read.	<ul style="list-style-type: none"> An incompatible SD memory card may have been inserted, or the recording format may not be compatible with the unit, preventing recognition. 	19

[USB memory device]

Symptom	Cause/Solution	Page
When a USB memory device is connected, "USB" is not displayed on the GUI menu.	<ul style="list-style-type: none"> The set cannot recognize a USB memory device. Check the connection. 	14
	<ul style="list-style-type: none"> A USB memory device not conforming to mass storage class is connected. Connect a USB memory device conforming to mass storage class. 	19
	<ul style="list-style-type: none"> A USB memory device cannot be connected via a USB hub. 	14
Files on a USB memory device cannot be played.	<ul style="list-style-type: none"> Set the USB memory device format to "FAT16" or "FAT32". For details, refer to the USB memory device's operating instructions. 	19
	<ul style="list-style-type: none"> If the USB memory device is divided into multiple partitions, only files stored in the top partition can be played. 	–
	<ul style="list-style-type: none"> The file is recorded in an incompatible format. Please record it in a compatible format. This unit cannot play back files covered by copyright protection. 	19 12
The sound quality is poor or there is noise during playback.	<ul style="list-style-type: none"> The file being played back has a low bit rate. 	–
"Connection Error" is displayed.	<ul style="list-style-type: none"> Unable to communicate properly. Turn off the power to this unit, unplug the USB memory device and then plug it back in. 	–
"Communication Error" is displayed.	<ul style="list-style-type: none"> The USB memory device is not responding. Turn off the power to this unit, unplug the USB memory device and then plug it back in. 	–
"Overcurrent" is displayed.	<ul style="list-style-type: none"> The USB memory device is consuming too much power. When using a USB portable hard disk that can be powered by an AC adapter, connect its AC adapter. 	–

[iPod]

Symptom	Cause/Solution	Page
iPod cannot be played.	<ul style="list-style-type: none"> • Check the iPod connections. • Plug the control dock for iPod's AC adapter into a power outlet. • Switch the input source to "AUX1". • If using an iPod connected to the USB terminal, incompatible iPod types cannot be played back. 	14 – 20 14
The file names are not displayed properly ("...", etc.).	<ul style="list-style-type: none"> • Characters that cannot be displayed on this unit are replaced by "*". 	22
"Connection Error" is displayed.	<ul style="list-style-type: none"> • Unable to communicate properly. Turn off the power to this unit, disconnect the iPod and then reconnect it. 	–
"Not Support" is displayed.	<ul style="list-style-type: none"> • The iPod connected to the unit is not compatible. Please make sure the iPod you are connecting is compatible. • The software version of the connected iPod is an old one. Please update to the latest version. 	14 –
"Communication Error" is displayed.	<ul style="list-style-type: none"> • The iPod is not responding. Turn off the power to this unit, disconnect the iPod and then reconnect it. 	–

[Remote Control Unit]

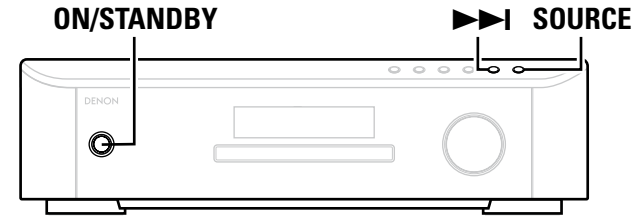
Symptom	Cause/Solution	Page
The set cannot be operated with the remote control unit.	• Batteries are worn out. Replace with new batteries.	67
	• Operate the remote control unit within a distance of about 7 m from this unit and at an angle of within 30°.	67
	• Remove any obstacle between this unit and the remote control unit.	–
	• Insert the batteries in the proper direction, checking the ⊕ and ⊖ marks.	67
	• 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.	–
	• Set the remote control unit's device selection switch properly.	61

NOTE

- Some function may not be used in some operation status and this is not failure of the unit. Read the description in this Owner's Manual for details on correct operations.
- The volume may differ from disc to disc. This is due to the differences in how the signals are recorded on the disc, and is not a malfunction.
- Some functions are prohibited on some discs.

Resetting the Microprocessor

Perform this procedure if the display is abnormal or if operations cannot be performed. When the microprocessor is reset, all the settings are reset to their default values.



1 During standby, press **ON/STANDBY** while pressing **▶▶** and **SOURCE** simultaneously.

2 Once the display starts flashing at intervals of about 1 second, release the two buttons.

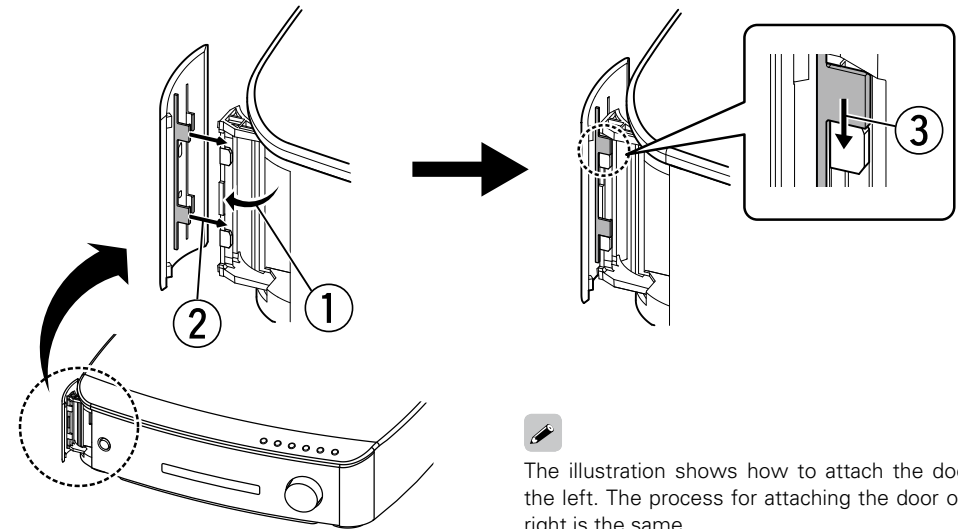
After "INITIALIZED" is displayed on the screen, the "FIRST SETUP" screen is displayed automatically.



If in step 2 the display does not flash at intervals of about 1 second, start over from step 1.

Attaching the Door

If the door on the front panel comes off, reattach it as shown below.



The illustration shows how to attach the door on the left. The process for attaching the door on the right is the same.

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Specifications

□ Audio Section

• Power amplifier

Rated output:

Front:

75 W + 75 W (1 kHz, 4 Ω, T.H.D. 0.7 %)

Center:

75 W (1 kHz, 4 Ω, T.H.D. 0.7 %)

Surround:

75 W + 75 W (1 kHz, 4 Ω, T.H.D. 0.7 %)

Front, Center, Surround : 4 – 16 Ω

Output connectors:

• Analog

Input sensitivity/Input impedance:

160 mV/47 kΩ

• Digital

Digital input:

Format — Digital audio interface

□ Video Section

• S-Video connectors

Input/output level and impedance:

Y (brightness) signal — 1 V_{p-p}, 75 Ω

C (color) signal — 0.3 (PAL)/0.286 (NTSC) V_{p-p}, 75 Ω

Frequency response:

5 Hz – 6 MHz — +0, –3 dB

□ Tuner section

[FM]

[AM]

Reception frequency range:

87.50 MHz – 108.00 MHz

522 kHz – 1611 kHz

Receiving sensitivity:

1.5 μV / 75 Ω

20 μV

FM stereo separation:

35 dB (1 kHz)

□ Applicable Discs/Memory Cards :

BD-Video discs :

12 cm 1 side 1 layer, 12 cm 1 side 2 layers

DVD-Video discs :

12 cm 1 side 1 layer, 12 cm 1 side 2 layers/

12 cm 2 sides 2 layers (1 side 1 layer)

8 cm 1 side 1 layer, 8 cm 1 side 2 layers/

8 cm 2 sides 2 layers (1 side 1 layer)

Compact Discs (CD-DA) :

12 cm / 8 cm discs

Memory cards :

SD memory card/SDHC memory card/miniSD card/microSD card

□ General

Power supply:

AC 230 V, 50 Hz

Power consumption:

110 W

0.3 W (Normal standby)

Maximum external dimensions:

With the doors closed

434 (W) x 119 (H) x 365 (D) mm

With the doors open

445 (W) x 119 (H) x 365 (D) mm

Weight:

7.8 kg

□ Remote Control Unit (RC-1122)

Batteries:

R6/AA Type (two batteries)

Maximum external dimensions:

52 (W) x 243 (H) x 21 (D) mm

Weight:

175 g (including batteries)

For purposes of improvement, specifications and design are subject to change without notice.

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□ Exhibit-A

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This software is the work of Tom Lane, Philip Gladstone, Jim Boucher, Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi, Guido Vollbeding, Ge' Weijers, and other members of the Independent JPEG Group.

IJG is not affiliated with the official ISO JPEG standards committee.

DOCUMENTATION ROADMAP

This file contains the following sections:

OVERVIEW	General description of JPEG and the IJG software.
LEGAL ISSUES	Copyright, lack of warranty, terms of distribution.
REFERENCES	Where to learn more about JPEG.
ARCHIVE LOCATIONS	Where to find newer versions of this software.
RELATED SOFTWARE	Other stuff you should get.
FILE FORMAT WARS	Software "not" to get.
TO DO	Plans for future IJG releases.

Other documentation files in the distribution are:

User documentation:

install.doc	How to configure and install the IJG software.
usage.doc	Usage instructions for cjpeg, djpeg, jpegtran, rdjpgcom, and wrjpgcom.
*.1	Unix-style man pages for programs (same info as usage.doc).
wizard.doc	Advanced usage instructions for JPEG wizards only.
change.log	Version-to-version change highlights.
Programmer and internal documentation:	
libjpeg.doc	How to use the JPEG library in your own programs.
example.c	Sample code for calling the JPEG library.
structure.doc	Overview of the JPEG library's internal structure.
filelist.doc	Road map of IJG files.
coderrules.doc	Coding style rules — please read if you contribute code.

Please read at least the files install.doc and usage.doc. Useful information can also be found in the JPEG FAQ (Frequently Asked Questions) article. See ARCHIVE LOCATIONS below to find out where to obtain the FAQ article.

If you want to understand how the JPEG code works, we suggest reading one or more of the REFERENCES, then looking at the documentation files (in roughly the order listed) before diving into the code.

OVERVIEW

This package contains C software to implement JPEG image compression and decompression. JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is intended for compressing "real-world" scenes; line drawings, cartoons and other non-realistic images are not its strong suit. JPEG is lossy, meaning that the output image is not exactly identical to the input image. Hence you must not use JPEG if you have to have identical output bits. However, on typical photographic images, very good compression levels can be obtained with no visible change, and remarkably high compression levels are possible if you can tolerate a low-quality image. For more details, see the references, or just experiment with various compression settings.

This software implements JPEG baseline, extended-sequential, and progressive compression processes. Provision is made for supporting all variants of these processes, although some uncommon parameter settings aren't implemented yet.

For legal reasons, we are not distributing code for the arithmetic-coding

variants of JPEG; see LEGAL ISSUES. We have made no provision for supporting the hierarchical or lossless processes defined in the standard. We provide a set of library routines for reading and writing JPEG image files, plus two sample applications "cjpeg" and "djpeg", which use the library to perform conversion between JPEG and some other popular image file formats.

The library is intended to be reused in other applications.

In order to support file conversion and viewing software, we have included considerable functionality beyond the bare JPEG coding/decoding capability; for example, the color quantization modules are not strictly part of JPEG decoding, but they are essential for output to colormapped file formats or colormapped displays. These extra functions can be compiled out of the library if not required for a particular application. We have also included "jpegtran", a utility for lossless transcoding between different JPEG processes, and "rdjpgcom" and "wrjpgcom", two simple applications for inserting and extracting textual comments in JFIF files.

The emphasis in designing this software has been on achieving portability and flexibility, while also making it fast enough to be useful. In particular, the software is not intended to be read as a tutorial on JPEG. (See the REFERENCES section for introductory material.) Rather, it is intended to be reliable, portable, industrial-strength code. We do not claim to have achieved that goal in every aspect of the software, but we strive for it.

We welcome the use of this software as a component of commercial

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The Unix configuration script "configure" was produced with GNU Autoconf.

It is copyright by the Free Software Foundation but is freely distributable.

The same holds for its supporting scripts (config.guess, config.sub, ltconfig, ltmain.sh). Another support script, install-sh, is copyright by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software.

(Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.)

So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files.

To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been

simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

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REFERENCES

We highly recommend reading one or more of these references before trying to understand the innards of the JPEG software.

The best short technical introduction to the JPEG compression algorithm is

Wallace, Gregory K. "The JPEG Still Picture Compression Standard", Communications of the ACM, April 1991 (vol. 34 no. 4), pp. 30-44.

(Adjacent articles in that issue discuss MPEG motion picture compression, applications of JPEG, and related topics.) If you don't have the CACM issue handy, a PostScript file containing a revised version of Wallace's article is available at <ftp://ftp.uu.net/graphics/jpeg/wallace.ps.gz>. The file (actually a preprint for an article that appeared in IEEE Trans. Consumer Electronics) omits the sample images that appeared in CACM, but it includes corrections and some added material. Note: the Wallace article is copyright ACM and IEEE, and it may not be used for commercial purposes.

A somewhat less technical, more leisurely introduction to JPEG can be found in "The Data Compression Book" by Mark Nelson and Jean-loup Gailly, published by M&T Books (New York), 2nd ed. 1996, ISBN 1-55851-434-1. This book provides good explanations and example C code for a multitude of compression methods including JPEG. It is an excellent source if you are comfortable reading C code but don't know much about data compression in general. The book's JPEG sample code is far from industrial-strength, but when you are ready to look at a full implementation, you've got one here...

The best full description of JPEG is the textbook "JPEG Still Image Data Compression Standard" by William B. Pennebaker and Joan L. Mitchell, published by Van Nostrand Reinhold, 1993, ISBN 0-442-01272-1. Price US\$59.95, 638 pp.

The book includes the complete text of the ISO JPEG standards (DIS 10918-1 and draft DIS 10918-2).

This is by far the most complete exposition of JPEG in existence, and we highly recommend it.

The JPEG standard itself is not available electronically; you must order a paper copy through ISO or ITU. (Unless you feel a need to own a certified official copy, we recommend buying the Pennebaker and Mitchell book instead; it's much cheaper and includes a great deal of useful explanatory material.)

In the USA, copies of the standard may be ordered from ANSI Sales at (212) 642-4900, or from Global Engineering Documents at (800) 854-7179. (ANSI doesn't take credit card orders, but Global does.)

It's not cheap: as of 1992, ANSI was charging \$95 for Part 1 and \$47 for Part 2, plus 7% shipping/handling. The standard is divided into two parts, Part 1 being the actual specification, while Part 2 covers compliance testing methods. Part 1 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 1: Requirements and guidelines" and has document numbers ISO/IEC IS 10918-1, ITU-T T.81. Part 2 is titled "Digital Compression and Coding of Continuous-tone Still Images, Part 2: Compliance testing" and has document numbers ISO/IEC IS 10918-2, ITU-T T.83.

Some extensions to the original JPEG standard are defined in JPEG Part 3, a newer ISO standard numbered ISO/IEC IS 10918-3 and ITU-T T.84. IJG currently does not support any Part 3 extensions.

The JPEG standard does not specify all details of an interchangeable file format. For the omitted details we follow the "JFIF" conventions, revision 1.02. A copy of the JFIF spec is available from:

Literature Department
C-Cube Microsystems, Inc.
1778 McCarthy Blvd.
Milpitas, CA 95035
phone (408) 944-6300, fax (408) 944-6314

A PostScript version of this document is available by FTP at <ftp://ftp.uu.net/graphics/jpeg/jfif.ps.gz>. There is also a plain text version at <ftp://ftp.uu.net/graphics/jpeg/jfif.txt.gz>, but it is missing the figures.

The TIFF 6.0 file format specification can be obtained by FTP from <ftp://ftp.sgi.com/graphics/tiff/TIFF6.ps.gz>. The JPEG incorporation scheme found in the TIFF 6.0 spec of 3-June-92 has a number of serious problems.

IJG does not recommend use of the TIFF 6.0 design (TIFF Compression tag 6).

Instead, we recommend the JPEG design proposed by TIFF Technical Note #2 (Compression tag 7). Copies of this Note can be obtained from <ftp.sgi.com> or from <ftp://ftp.uu.net/graphics/jpeg/>. It is expected that the next revision of the TIFF spec will replace the 6.0 JPEG design with the Note's design.

Although IJG's own code does not support TIFF/JPEG, the free libtiff library uses our library to implement TIFF/JPEG per the Note. libtiff is available from <ftp://ftp.sgi.com/graphics/tiff/>.

ARCHIVE LOCATIONS

The "official" archive site for this software is <ftp.uu.net> (Internet address 192.48.96.9). The most recent released version can always be found there in directory <graphics/jpeg>. This particular version will be archived as <ftp://ftp.uu.net/graphics/jpeg/jpegsrc.v6b.tar.gz>.

If you don't have direct Internet access, UUNET's archives are also available via UUCP; contact help@uunet.uu.net for information on retrieving files that way.

Numerous Internet sites maintain copies of the UUNET files. However, only <ftp.uu.net> is guaranteed to have the latest official version.

You can also obtain this software in DOS-compatible "zip" archive format from the SimTel archives (<ftp://ftp.simtel.net/pub/simtelnet/msdos/graphics/>), or on CompuServe in the Graphics Support forum (GO CIS:GRAPHSUP), library 12 "JPEG Tools". Again, these versions may sometimes lag behind the <ftp.uu.net> release.

The JPEG FAQ (Frequently Asked Questions) article is a useful source of general information about JPEG. It is updated constantly and therefore is not included in this distribution. The FAQ is posted every two weeks to Usenet newsgroups <comp.graphics.misc>, <news.answers>, and other groups.

It is available on the World Wide Web at <http://www.faqs.org/faqs/jpeg-faq/> and other news.answers archive sites, including the official news.answers archive at <rtfm.mit.edu>: <ftp://rtfm.mit.edu/pub/usenet/news.answers/jpeg-faq/>.

If you don't have Web or FTP access, send e-mail to mail-server@rtfm.mit.edu with body

```
send usenet/news.answers/jpeg-faq/part1
send usenet/news.answers/jpeg-faq/part2
```

RELATED SOFTWARE

Numerous viewing and image manipulation programs now support JPEG. (Quite a few of them use this library to do so.) The JPEG FAQ described above lists some of the more popular free and shareware viewers, and tells where to obtain them on Internet.

If you are on a Unix machine, we highly recommend Jef Poskanzer's free PBMPPLUS software, which provides many useful operations on PPM-format image files. In particular, it can convert PPM images to and from a wide range of other formats, thus making cjpeg/djpeg considerably more useful. The latest version is distributed by the NetPBM group, and is available from numerous sites, notably <ftp://wuarhive.wustl.edu/graphics/graphics/packages/NetPBM/>.

Unfortunately PBMPPLUS/NETPBM is not nearly as portable as the IJG software is; you are likely to have difficulty making it work on any non-Unix machine.

A different free JPEG implementation, written by the PVRG group at Stanford,

is available from <ftp://havefun.stanford.edu/pub/jpeg/>. This program is designed for research and experimentation rather than production use; it is slower, harder to use, and less portable than the IJG code, but it is easier to read and modify. Also, the PVRG code supports lossless JPEG, which we do not. (On the other hand, it doesn't do progressive JPEG.)

FILE FORMAT WARS

Some JPEG programs produce files that are not compatible with our library.

The root of the problem is that the ISO JPEG committee failed to specify a concrete file format. Some vendors "filled in the blanks" on their own, creating proprietary formats that no one else could read. (For example, none of the early commercial JPEG implementations for the Macintosh were able to exchange compressed files.)

The file format we have adopted is called JFIF (see REFERENCES). This format has been agreed to by a number of major commercial JPEG vendors, and it has become the de facto standard. JFIF is a minimal or "low end" representation.

We recommend the use of TIFF/JPEG (TIFF revision 6.0 as modified

by TIFF Technical Note #2) for “high end” applications that need to record a lot of additional data about an image. TIFF/JPEG is fairly new and not yet widely supported, unfortunately. The upcoming JPEG Part 3 standard defines a file format called SPIFF.

SPIFF is interoperable with JFIF, in the sense that most JFIF decoders should be able to read the most common variant of SPIFF. SPIFF has some technical advantages over JFIF, but its major claim to fame is simply that it is an official standard rather than an informal one. At this point it is unclear whether SPIFF will supersede JFIF or whether JFIF will remain the de-facto standard. IJG intends to support SPIFF once the standard is frozen, but we have not decided whether it should become our default output format or not.

(In any case, our decoder will remain capable of reading JFIF indefinitely.)

Various proprietary file formats incorporating JPEG compression also exist.

We have little or no sympathy for the existence of these formats. Indeed, one of the original reasons for developing this free software was to help force convergence on common, open format standards for JPEG files. Don't use a proprietary file format!

TO DO

The major thrust for v7 will probably be improvement of visual quality.

The current method for scaling the quantization tables is known not to be very good at low Q values. We also intend to investigate block boundary smoothing, “poor man's variable quantization”, and other means of improving quality-vs-file-size performance without sacrificing compatibility.

In future versions, we are considering supporting some of the upcoming JPEG Part 3 extensions — principally, variable quantization and the SPIFF file format.

As always, speeding things up is of great interest.

Please send bug reports, offers of help, etc. to jpeg-info@uunet.uu.net.

❑ Exhibit-F

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A “png_get_copyright” function is available, for convenient use in “about” boxes and the like: `printf(“%s”,png_get_copyright(NULL));`

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Glenn Randers-Pehrson

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August 15, 2004

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Discusses general use and applications of FreeType, as well as future and wanted additions to the library and distribution.

If you are looking for support, start in this list if you haven't found anything to help you in the documentation.

- devel@freetype.org

Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

- <http://www.freetype.org>

Holds the current FreeType web page, which will allow you to download our latest development version and read online documentation.

You can also contact us individually at:

David Turner <david.turner@freetype.org>

Robert Wilhelm <robert.wilhelm@freetype.org>

Werner Lemberg <werner.lemberg@freetype.org>

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Acknowledgments

Appreciation Time!!!! There are far too many people to try to thank them all; many people have contributed to the development of Kerberos V5. This is only a partial listing....

Thanks to Kevin Coffman and the CITI group at the University of Michigan for providing patches for implementing RPCSEC_GSS authentication in the RPC library.

Thanks to Derrick Schommer for reporting multiple memory leaks.

Thanks to Quanah Gibson-Mount of Stanford University for helping exercise the thread support code.

Thanks to Michael Tautschnig for reporting the heap buffer overflow in the password history mechanism. [MITKRB5-SA-2004-004]

Thanks to Wyllys Ingersoll for finding a buffer-size problem in the RPCSEC_GSS implementation.

Thanks to the members of the Kerberos V5 development team at MIT, both past and present: Danilo Almeida, Jeffrey Altman, Jay Berkenbilt, Richard Basch, Mitch Berger, John Carr, Don Davis, Alexandra Ellwood, Nancy Gilman, Matt Hancher, Sam Hartman, Paul Hill, Marc Horowitz, Eva Jacobus, Miroslav Jurisic, Barry Jaspan, Geoffrey King, John Kohl, Peter Litwack, Scott McGuire, Kevin Mitchell, Cliff Neuman, Paul Park, Ezra Peisach, Chris Provenzano, Ken Raeburn, Jon Rochlis, Jeff Schiller, Jen Selby, Brad Thompson, Harry Tsai, Ted Ts'o, Marshall Vale, Tom Yu.

Very special thanks go to Marshall Vale, our departing team leader.

Over the past few years, Marshall has been extremely valuable to us as mentor, advisor, manager, and friend. Marshall's devotion as a champion of Kerberos has helped our team immensely through many trials and hardships. We will miss him tremendously, and we wish him the best in his future endeavors.

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[]*: Preset codes set upon shipment from the factory.

[]*: Sie Voreinstellungs-codes wurden vor der Auslieferung werkseitig eingestellt.

[]*: Les codes pré-réglés diffèrent en fonction des livraisons de l'usine.

[]*: I codici di presettaggio sono impostati in fabbrica prima della consegna.

[]*: Los códigos vienen preprogramados de fábrica.

[]*: Vooringestelde codes bij levering verlaten van de fabriek.

[]*: Förinställda koder har ställts in vid transporten från fabriken.







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Printed in China 5411 10393 001D