ONKYO

Grand Integra

Instruction Manual

Grand Integra A-G10

Integrated Stereo Amplifier

• Congratulations on your purchase of the ONKYO A-G10 Integrated Amplifier. • Please read this manual thoroughly before making connections and turning power on.
• Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new A-G10. • Please retain this manual for future reference.

CONTENTS

res

h Power Output
A-G10 delivers 135 watts of clean, continuous power per channel into 8 ohms with no more than a remarkably low 0.008% total onic distortion. Its ability to drive low impedance loads is truly outstanding: dynamic power is rated at 2 x 460 watts into 2 ohms.

rsized Power Supply Block for Effortless Drive of Low Impedance Loads
aithfully amplify any music signal and provide the abundant power reserves required to faithfully reproduce today's wide dynamic e digital sources—these were the goals in the minds of the Onkyo engineers who developed the A-G10. To achieve them they employed the finest quality components in the A-G10's power supply block, the foundation on which this amplifier's impressive performance uilt. Five separate windings on the secondary side of the massive main power transformer provide independent voltages for each ie separate analog circuit blocks. The digital block of the D/A converter employs a separate power transformer. Finally, the left and t channel rectifier blocks feature high speed switching diodes and a total of eight high current split chemical capacitors.

dular Construction Separates Principle Circuit Blocks
of the four principle circuit blocks of the A-G10 are isolated as far as possible from the others in order to keep electromagnetic ference to a minimum. The massive left and right channel power supply blocks are located as close to the output jacks as possible heavily shielded. The Opto-Driven D/A converter and digital processing blocks are located in the opposite side of the chassis from power supply and both encased in separate copper plated, electro-magnetically shielded cases.

n 18-Bit D/A Converters with Opto-Drive'
t-in D/A converters mean that users can route digital output from CD and DAT players directly into the A-G10. Both optical and trical input jacks are provided on the rear panel for this purpose. To convert the digital input into the purest, most distortion free ic signal possible, the A-G10's dual 18-bit D/A converters are both equipped with Opto-Drive. Separate converters for the left and t channels eliminate phase shifting which can muddy the sound —especially in the high frequencies. 18-bit D/A conversion provides er linearity and higher resolution than 16-bit systems: benefits which are most apparent with delicate low level signals.

o-Drive' Power Amplifier Circuitry
A-G10 employs Onkyo's exclusive Opto-Drive in the crucial differential amplifier stage for a music signal free of distortion caused lectromagnetic interference.

rtant safeguards

NING"
UCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT THIS APPLIANCE TO RAIN OR MOISTURE."

TION
UCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. ERVICING TO QUALIFIED SERVICE PERSONNEL."

odels having power cord with a polarized plug.
TION: TO PREVENT ELECTRIC SHOCK DO NOT USE OLARIZED) PLUG WITH AN EXTENSION CORD, RE-LE OR OTHER OUTLET UNLESS THE BLADES CAN BE NSERTED TO PREVENT BLADE EXPOSURE.

FOR POWER CORDS WITHOUT PLUGS (FOR BRITISH MODELS)

- Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.
- IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:
  Blue: Neutral
  Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

llowing precautions to obtain troublefree perform-
years.

es subject to direct sunlight or extremely high or low
es.

ıp or dusty places and places directly affected by
from the speakers. In particular, avoid placing the
above one of the speakers.

table locations and high places from which the unit

ı – The unit should be situated so that its location
ı does not interfere with proper ventilation. For ex-
ı unit should not be placed on a bed, sofa, rug of
face that could block the ventilation openings or
a built-in installation, such as a bookcase or cabinet,
impede the flow of air through the ventilation

ıe unit should be situated away from heat sources
diators, heat registers, or other appliances (including
) that produce heat.

of the internal parts should be performed only by
ervice personnel.

· Care should be taken so that objects do not fall and
ı not spilled into the enclosure through the openings.

lequiring Service – The unit should be serviced by
ervice personnel when:
wer supply cord or the plug has been damaged; or
ı have fallen or liquid has been spilled into the unit;

it has been exposed to rain; or
it does not appear to operate normally or exhibits a
change in performance; or
it has been dropped or the enclosure damaged.

– The user should not attempt to service the unit
et described in the operating instructions. All other
should be referred to qualfied service personnel.

atus complies with requirements of EEC directive
C.

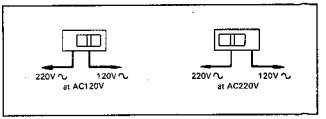
Precautions

1. **Warranty Card**
   The serial number is written on the rear panel of this unit. Copy the serial number and model number onto your warranty card and keep it in a safe place.
2. **Recording Copyright**
   Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.
3. **AC Fuse**
   The fuse is located inside the chassis and is not user serviceable. If power does not come on, contact your Onkyo dealer.
4. **Care**
   From time to time you should wipe off the front and rear panels and the cabinet with a silicon or other soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.
5. **Power**
   WARNING
   BEFORE TURNING ON POWER FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.

- Some models are designed for use only with the power supply voltage of the region where they are sold.

European models (except U.K.):	AC220V, 50Hz
Canadian models:	AC120V, 60Hz
U.K. & Australian models:	AC 240V, 50Hz
Worldwide models:	120 and 220V switchable, 50/60Hz

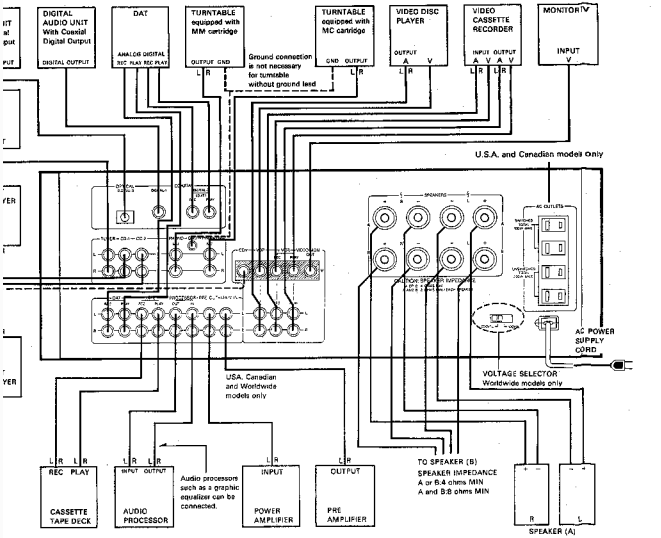
- **Voltage Selector (Rear Panel)**
  Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on. Voltage is changed by sliding the groove in the switch with a screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on. Models without a voltage selector can only be used in areas where the power supply is the same as that of the unit.



n connections

ug in the power cord until all connections have been made.

pair of input or output jacks, the lower jack (marked R)
ds to the right channel, and the upper jack (marked L)
l channel. When jacks on other equipment or connection
e color-coded, the color red usually corresponds to the
nnel (Red = Right). The video jacks, indicated with V,
rovided. A video component should be connected here.
pin plugged into the input pin jack should not be inserted
her pin jack. (This might cause malfunction.)



ıle Connections

a turntable which uses an MM cartridge to the PHONO
ıs, and one which uses an MC cartridge to the PHONO
s. Be sure to connect the ground (earth) lead wire from
able to the ground terminal (GND). Lack of proper ground
on will cause hum. Also observe the following precautions.
the turntable on a firm shelf or desk free from vibrations
ecially those generated by the speaker systems). If the
able is permitted to pick up such vibrations, not only will
nit's performance suffer, but distortion in the bass range
owling noise in the speakers may also occur.
k the turntable instruction manual for any other precautions.
oud noises that occur when connecting and disconnecting
urntable leads could damage the speakers. Always turn the
er switch off before making connections.

Tuner Connections

Connect an FM/AM tuner to the tuner input jacks. Be sure the left and right channels are connected properly.

Compact Disc Player Connections

Connect a compact disc player to the CD-1 or CD-2 input jacks. When using a CDV, connect the video output to the CDV jack. Be sure the left and right channels are connected properly.

Tape Deck Connections

Two tape decks can be connected at once to this unit. "DAT" jacks can also be used for tape deck connections. Connect the tape deck output leads to the PLAY jacks and the tape deck input leads to the REC jacks of this unit. For more details, refer to your tape deck owner's manual.

cks
an be attached for use with a sound processor such qualizer.

onent Connections
component with input and output capabilities, such setta recorder (VCR), you have to make connections of leads: input and output, each set consisting of audio l right leads, and a visual signal lead. Connect the ft lead of your VCR to the VCR REC L jacks of this o right lead to the VCR REC R jacks, and the video the VCR REC V jack. Likewise, connect the audio id of your VCR to the VCR PLAY L jack of this unit, put right lead to the VCR PLAY R jack, and the video) the VCR PLAY V jack.
component with output capability only, you will make with one set of leads. Connect the audio output left ideo component, such as a video disc player (VDP), jack, the audio output right lead to the VDP R, and put lead to the VDP V jack.

nake all these connections, be sure to observe the ne audio signal leads, and not to mix the video signal he audio signal leads.

Connection
set can be connected to the VIDEO MONI. OUT jack.

ks
wer amplifier to these jacks when you are using this mplifier.

ks (U.S.A., Canadian and Worldwide models

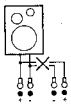
amplifier to these jacks when you are using this unit nplifier.

Digital Signals
quipped with four digital jacks: one optical input, two s, and one coaxial output. The digital output of a CD ner, etc. can be connected to jacks labelled DIGITAL

vice, always connect digital output to PLAY of DIG- and digital input to REC of DIGITAL 2 (DAT). Analog put must always be connected to DAT REC and DAT nection is not performed as described above, oscillation lems may occur.
s which are input to DIGITAL 1 or DIGITAL 3 will rtput to the DIGITAL 2 (DAT) REC jacks.

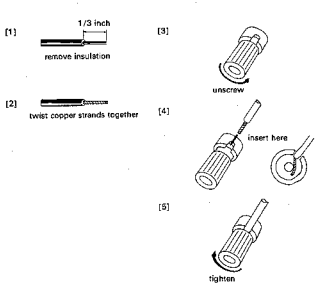
this unit's optical digital input jack is of standard K type, only optical cables with connectors of the ape can be used.
cal digital input jack is covered with a protective move this cap before connecting the cable, but leave on if this jack is not in use.
of connecting coaxial input/output of digital signals, re to properly distance the cables from the other Noise may be generated when certain types of devices nected.

nnections
cting speakers, proper polarity is important. Always (+) terminal (red) on the amplifier to the (+) terminal er and the (−) terminal (black) on the amplifier to the on the speaker. Two separate pairs of speaker systems nected to this unit at once.
impedance of each speaker system connected to this be at least 4 ohms. (A or B−4 ohms min., A and B−8 .)
ng only one speaker or when you wish to listen to the single speaker should never be connected in both the right and left channel terminals at once.



- Do not use unnecessarily long or extremely thin speaker leads. If the DC resistance of the speaker leads is too high, the damping factor will decrease.

Connecting Speaker Cables
1. Remove about 1/3 inch of insulation from the end of the speaker cable.
2. Twist the exposed copper strands together tightly.
3. Unscrew the speaker terminal part way by turning it counter-clockwise.
4. Insert the exposed copper portion of the cable all the way into the opening in the speaker terminal. Insert the copper strands in the same direction as that in which the screw is turned. If they are inserted in the reverse direction, they will come out when the screw is tightened.
5. Tighten the terminal screw by turning it clockwise.
6. Check to make sure that none of the uninsulated copper portion of the cable is exposed.



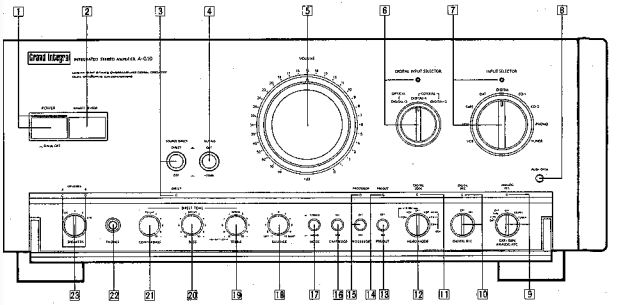
CAUTION:
When using banana plugs, make sure the speaker terminal screws are screwed in firmly before inserting banana plugs.

AC Outlets (U.S.A. and Canadian models only)
- **UNSWITCHED:**
  These outlets are not switched on and off by the power switch on the front panel. Capacity is total 200 watts.
- **SWITCHED:**
  These outlets are switched on and off by the power switch on the front panel. Capacity is total 100 watts.

Precautions When Setting
When using this set in conjunction with a television, if the television is too close to this unit, or if the antenna cable is too close to the cable used with this set, irregularities such as uneven coloring or a striped pattern may develop. If this happens, separate the set from the television, or put more distance between the antenna cable and the cable used with this set.

panel facilities

NOTE:
There are minor differences in features and specifications depending on area. Read this manual carefully to operate the model you have purchased correctly.



er Switch (POWER) and Indicator
once to turn power on and once again to turn power
An orange band over the power switch indicates power

ote Control Sensor
sensor receives the remote control signals.

ce Direct Switch (SOURCE DIRECT) and Indicator
switch can be used to change the performance source
ted with the input selector switch.

CT(■): The volume of the source selected by the input selector switch is input directly into the main amp by the source volume control. At this time the signal will bypass the tone control, muting, balance, mode, processor, and absolute phase* circuits. The indicator lights.

▬): The tone control, muting, balance, mode, processor, and absolute phase* of the performance can be altered for the source selected with the input selector switch.

bsolute phase" is a capacity included on U.S.A., Canadian
d Worldwide models.

ing Switch (MUTING)
the source direct switch is off, setting this switch to the
B (▬) position reduces the sound volume to about 1/10
dB) of its full capacity. This makes low-volume adjustment
r to perform.

me Control Knob (VOLUME)
clockwise to increase the volume.
operation can be handled by remote control, using the
nal RC-AV20M Onkyo programmable remote control.
remote control is equipped with Onkyo remote control
s in the memory. Set the switch at the desired position
se. For details, please refer to the instruction manual for
C-AV20M.
the USA, Canadian and worldwide models, this operation
o possible through remote control by using the RC-126A
te controller included with the unit.
his volume control uses the Variable Tone Boosting Sys-
m.

About the Variable Tone Boosting System
This unit is designed to gradually reduce the effect of the tone controls (contrabass, bass and treble) as the volume exceeds a certain level. The variable boosting system gradually reduces the boosting effect of the contrabass 21 and bass 20 and treble 19 controls when one or all of these controls is turned beyond (to the right) the center defeat position and the volume control 5 is turned beyond the 15 graduation (the 12: 00 position). When the volume is turned all the way up, the frequency response will be flat again. Volume settings below the 15 graduation have no effect on the tone controls. Also, bass and treble control settings below (to the left of) the center defeat position are not altered by the volume level.

6 Digital Input Selector Switch and Indicator (DIGITAL INPUT SELECTOR)
When the input selector switch 7 is set to DIGITAL, this indicator lights, and the unit can be set to the digital source of your choice.

COAXIAL
- DIGITAL 1: Audio component connected to the DIGITAL 1 jack.
- DIGITAL 2: DAT connected to the DIGITAL 2 (DAT) jacks.

OPTICAL
- DIGITAL 3: Audio component connected to the DIGITAL 3 jack.

7 Input Selector Switch (INPUT SELECTOR) and Indicator
When this switch is set to DIGITAL, the digital input selector indicator lights. At any other time, the input selector indicator lights. Set this switch to the source of your choice.

- VCR: Video source with output and input capabilities connected to the VCR jacks.
- VDP: Video source with the output capability only connected to the VDP jacks.
- TAPE: Tape deck connected to the TAPE jacks.
- DAT: Tape deck connected to the DAT jacks.
- DIGITAL: Playback of the device selected with the digital input selector switch and connected to the DIGITAL 1 ~ 3 jacks.

Compact disc player connected to the CD-1 jacks.
Compact disc player connected to the CD-2 jacks.
Turntable connected to the PHONO MM or MC jacks.
Tuner connected to the TUNER jacks.

tton (PUSH OPEN)
his button opens the lower door.

lecording Source Selector Switch
.PE ANALOG REC)
APE can be selected by the recording source selector

DAT/ APE: Use either of these settings for tape dubbing operations depending on which deck is being used for playback and which is being used for recording. For details, refer to the Operations section.
When not recording or dubbing.
Recording from the source selected by the input selector switch [7].
Recording from the tuner.

lecording Source Selector Switch
L REC)
The source selected with the digital input selector switch [6] is output through the DIGITAL-2 REC jacks. Set to this position when not recording digitally.

.ock Indicator (DIGITAL LOCK)
ator shows that a digital signal is being input. Ac- o the sampling frequency of the digital signal, the light ge color as follows: 32kHz (orange), 44.1kHz (green), ed).

lode Switch (VIDEO MODE)
control, you can select a VCR recording source and ackground Video) source.

The picture of the unit connected to the CDV jack and sound from the source selected by the input selector switch [7] can be recorded on a video cassette recorder when connected to the VCR jacks.
Sends the audio and visual signal from the video component connected to the VDP jacks to the video cassette recorder connected to the VCR jacks for recording.
Set to this position for normal operations other than audio/visual recording, dubbing or BGV (Background Video) playback.
The picture of a video unit connected to the VDP jack can be used as a BGV.
The picture of a VCR connected to the VCR jack can be used as a BGV.
The picture of a CDV player connected to the CDV jack can be used as a BGV.

to the "BGV PLAYBACK" section on page 8 for details.

)pean and Australian models

Out On/Off Switch (PRE OUT) and Indicator
s is set to ON (▬), the signal is output to the PRE s, and the indicator lights. Use this when using a nnected to the PRE OUT jacks.

- **For USA, Canadian and Worldwide models**

[15] Amp Selector Switch (PRE/MAIN)
Setting this to SEPARATE (▬) separates the pre-amp section from the power amp section, allowing either to be used individually.

[16] Absolute Phase Indicator
This allows you to reverse the phase using the accessory RC-126A remote controller. Press the ABSOLUTE PHASE button on the remote controller. Normally the indicator is lighted. If the phase is reversed, the indicator goes out.

[17] Processor On/Off Switch (PROCESSOR) and Indicator
When this switch is set to ON (▬), the indicator lights, and units connected to the PROCESSOR jacks are enabled for use. At this time, because the signal of the source selected by the input selector switch [7] is being output through the PROCESSOR OUT jack, a graphic equalizer may be used if connected to the PROCESSOR jacks.

[18] Cartridge Selector Switch (CARTRIDGE)
Set this to match the type of cartridge being used. Always reduce the volume before switching cartridges.
MC (■): Turntable using an MC cartridge.
MM (▬): Turntable using an MM cartridge.
Confirm that the turntable is connected correctly to the matching cartridge. Use the PHONO MM jacks and set to the MM position when a step-up transformer is being used with a turntable equipped with an MC cartridge.

[19] Mode Selector Switch (MODE)
STEREO (■): Position for normal stereo listening.
MONO (▬): Both right and left channel signals are sent to each speaker. Position for listening to monaural recordings or when adjusting the balance control.

[20] Balance Control Knob (BALANCE)
Adjust to control the relative volume level of the left and right speakers or headphones.

[21] Treble Control Knob (TREBLE)
Turn right to boost or left to attenuate treble. In the DEFEAT position, the treble tone control circuitry is completely bypassed. When turned to the extreme left (−10), the treble control acts as a high cut filter to eliminate scratches, hissing and other high frequency noise.

[22] Bass Control Knob (BASS)
Turn right to boost or left to attenuate bass. In the DEFEAT position, the bass tone control circuitry is completely bypassed.

[23] Contrabass Control Knob (CONTRABASS)
From the DEFEAT position, turn right to boost ultra low frequencies.

[24] Headphone Jack (PHONES)
Stereo headphones with a standard binaural plug can be connected here.

[25] Speaker Selector Switch (SPEAKERS)and Indicator
This unit can drive two pairs of speaker systems at once. Use this selector to activate either or both speaker systems connected to the rear panel speaker terminals. In the OFF position, sound is heard only through the headphones.
OFF: All speakers off—only headphones operate.
A: Speakers A
B: Speakers B
A + B: Both speaker systems A and B.

NOTE:
When the protective circuitry is operating normally the indicator will be lighted. Also, the indicator will light a few seconds after power is turned on.

tions

ll components to the rear panel jacks as shown in the nnections section and set the front panel controls in the e setting to hear the desired program source.

tandby Mode

ny positions of front panel controls and switches serve ting point for all operating modes.

rce Direct Switch — as desired
ing Switch — OFF
ume Control Knob — minimum (all the way to the left)
ital Input Selector Switch — as desired
t Selector Switch — as desired
log Recording Source Selector Switch — OFF
ital Recording Source Selector Switch — OFF
e Mode Switch — OFF
: OUT Jack On/Off Switch (European and Australian els)
Selected in accordance with connections.
e Selector Switch (USA, Canadian and worldwide els)
Selected in accordance with connections.
essor On/Off Switch — OFF
ridge Selector Switch
Set to the type of cartridge being used.
de Selector Switch — STEREO
nce Control Knob — Center
le Control Knob — DEFEAT
s Control Knob — DEFEAT
trabass Control Knob — DEFEAT
aker Selector Switch
Selected in accordance with connections.
ver Switch — ON

to a compact disc

input selector switch [7] in the CD-1 or CD-2 position.
CD player for playback.

to a record

input selector switch [7] in the PHONO position.
cartridge selector switch [16] to the type of cartridge using.
turntable for playback.

to a broadcast

input selector switch [7] in the TUNER position.
tuner to receive the broadcast that you want to listen

to a tape deck

decks can be connected to this unit at once.
leck connected to the TAPE jacks is to be heard, set the elector switch [7] in the TAPE position. To listen to the onnected to the DAT jacks, set the input selector switch he DAT position.
tape deck for playback.

deo Equipment

input selector switch [7] in the VDP position to use a lisc player or television tuner connected to the VDP jacks.
input selector switch [7] in the VCR position to use a ape recorder connected to the VCR jacks.
video equipment for playback.
nitor or TV set with video input jacks is connected to the MONI. OUT jack, visual reproduction is also possible.

to a device connected to the DIGITAL jacks

input selector switch [7] to the DIGITAL position.
digital input selector switch to the desired position.
listening to a device connected to the DIGITAL-1 jacks, to DIGITAL-1, and likewise for DIGITAL-2 and DIGI-

may be generated when a device is operated, depending device being used. There may also be instances where

the sound is interrupted by static electricity, or by noise from a refrigerator or fluorescent light. These are not considered malfunctions.

NOTES:

- After turning the power on, it takes a few seconds before the indicator lights and sound is produced.
- Rotate the volume control knob slowly to find the optimum volume setting.
- Please refer to pages 5 and 6, "Front panel facilities," and adjust the sound quality to your own satisfaction, using the tone control knobs. If necessary, you can also use the balance control knob [18] and mode selector switch [17] for fine tuning.
- When the source direct switch [3] is set to the DIRECT (■) position, MODE, BALANCE, TREBLE, BASS, CONTRABASS, MUTING, PROCESSOR, and ABSOLUTE PHASE are not effective.

Recording on the Tape Deck or DAT from the Program Source

1. Set the SOURCE position of the analog recording source selector switch [9].
2. Select the desired recording source with the input selector switch [7]. For a digital source, select the source using the digital input selector switch.
3. Begin tape deck or DAT recording operations.
4. Begin program source performance.

- Be careful not to change the input selector switch or recording source selector switch while recording.

NOTES:

- When the recording source selector switch is in the SOURCE position, if DAT is selected with the input selector switch, the recording signal will not be output from the DAT jack. Likewise, if TAPE is selected, the recording signal will not be output from the TAPE jacks. (If DIGITAL2 (DAT) is selected, the recording signal will not be output from the DAT jack.)
- Because the recording monitor cannot be used with this unit when the recording source selector switch is in the SOURCE position, please use headphones in the DAT or tape deck.

Recording from the Tuner to the DAT or Tape Deck

1. Place the analog recording source selector switch [9] in the TUNER position.
2. Begin tuner performance.
3. Begin DAT or tape deck recording operation.

- Be careful not to change the recording source selector switch.
- By setting the input selector switch to another position during recording, it is possible to listen to a different source.
- If you are using a three-head tape deck, setting the input selector switch to DAT or TAPE enables you to monitor the recording conditions.

Tape-to-Tape Duplicating

When two tape decks are connected at once to this unit, a tape can be copied from one deck to the other.

1. To copy a pre-recorded tape from tape deck 1 (connected to the rear panel DAT jacks) to tape deck 2 (connected to the TAPE jacks):
   Place the analog recording source selector switch [9] in the DAT ▶ TAPE position and put tape deck 2 in the recording mode and tape deck 1 in the playback mode. If tape deck 2 is a 3-head deck, the just-recorded signal can be monitored by setting the input selector switch in the TAPE position. To monitor the signal from tape deck 1 before it has been recorded, set the input selector switch in the DAT position.
2. To copy from tape deck 2 (connected to the TAPE jacks) to tape deck 1 (connected to the DAT jacks):
   Place the analog recording source selector switch [9] in the TAPE ▶ DAT position and put tape deck 1 in the recording mode and tape deck 2 in the playback mode. If tape deck 1 is a 3-head deck, the just-recorded signal can be monitored by setting the input selector switch in the DAT position.

) dubbing, a source other than TAPE or DAT can be
d to by changing the setting of the input selector
.

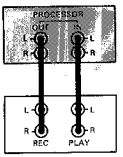
DAT Digital Recording

gital input/output is connected to this unit, DAT digital
n be done if the digital signal is directly input to DAT.
put selector switch [7] in the DIGITAL position.
gital recording source selector switch [10] in the ON

gital input selector switch [8] in the desired position.
e unit being recorded from is connected to the DIGI-
k, set the digital input selector switch [6] in the DI-
position, and when the unit is connected to the DI-
jack, select DIGITAL-3.)
T recording operation.
ogram source performance.
l not to change the input selector switch, digital input
witch, or digital recording source selector switch while
.

ording can be done only by connecting the recording
ts with the DIGITAL-1 or DIGITAL-3. Also, it is not
record digitally from CD players. For more details,
r to the DAT operations manual.

OCESSOR jacks for simultaneous monitoring
g done with a 3-head type tape deck. (See il-
r connections.)



ource direct switch in the OFF (▬) position.
rocessor on/off switch in the ON (▬) position.
e source with the input selector or digital input selector.
pe deck recording operation.
ogram source performance.
eous monitoring of a recording is possible by setting
monitor switch on the tape deck to the TAPE position.
ul not to change the source direct switch, processor
witch and input selector switch while recording.
eous monitoring of a recording is not possible with a
ape deck or a DAT, but connection is possible. Do not
both audio and digital output at the same time, as this
se vibration.

from Units Connected to the CDV Jack onto
e Recorders

ideo mode switch in the VCR REC-CDV position. The
which the sound of the CDV player is connected should
ted with the input selector switch [7] (CD, DIGITAL-1,
-2, DIGITAL-3, etc). Be careful not to change the input
switch while recording.
deo cassette recorder recording operations.
CDV player.

VDP to VCR Recording

1. Select the VCR REC-VDP position on the video mode switch.
2. Start the VCR unit, in the recording mode, connected to the VCR jacks.
3. Then start recording by activating the video component connected to the VDP jacks.

- To monitor the video program being recorded, on the monitor TV set, set the input selector switch in the VCR or VDP position. If you want to listen to an audio program while recording a video program, select the desired source by simply setting the input selector switch in the corresponding source.

BGV PLAYBACK (Background Video)

With this unit, you can play back programs on a monitor from a video component connected to the VDP or VCR jacks while playing your turntable, tuner, CD or tape decks.
In this example, you can play back a video program on a monitor by selecting the VCR REC-CDV or VDP video mode switch [12] while listening to the CD player.

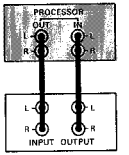
1. Select the desired audio component with the input selector switch [7].
2. Select the desired video component by adjusting the video mode switch [12] to either the BGV-VCR, VDP or CDV position.

NOTES:

- When the video mode switch is set on VCR REC-VDP or VCR REC-CDV, the video signal from the VCR is sent to the monitor regardless of the input selector switch position [7], therefore the playback signal of VCR is not interrupted even if the input selector switch [7] is turned to the VDP position.
- If there is no display from the VDP or CDV on the monitor in these positions, be sure that both input and output leads are correctly connected between the video components and amplifier, all components are turned on and the VCR is not in playback mode. More importantly, make sure that your VCR is capable of sending out an input signal.

Using a Mixing Console or Graphic Equalizer

Connect this unit's PROCESSOR OUT jack with the graphic equalizer's INPUT jack, and this unit's PROCESSOR IN jack with the graphic equalizer's OUTPUT jack.



Equalizing Audio and Video Source Performance

1. Select the desired listening source with the input selector switch [7].
2. Set the source direct switch [3] in the OFF(▬) position.
3. Set the processor on/off switch in the ON (▬) position.
4. Begin performance.

- At this time, tone control, muting, mode, and balance functions can be adjusted from this unit.

NOTE:

When recording something that has been sent through an equalizer, use an equalizer which is equipped with equalizing recording capacity.

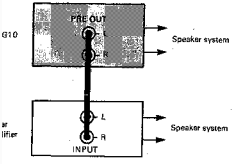
sing this unit connected to another amplifier

ethod of use differs depending on the area. Please read
truction manual carefully.

European and Australian models

Power Amplifier

ou want to direct sound to the speakers of a power amplifier,
processor, or another device, connect the PRE OUT jacks
nit to the input jacks of that unit.



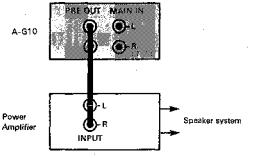
ne Pre-Out on/off switch in the ON (▬) position.
am source selection as well as adjustment of the volume,
control, balance, mode, and muting can be handled through
nit.

this unit, the pre-amp and power amp sections cannot
sed independently of each other.
n connecting another unit to the PRE OUT section of
device, do not connect the output of that unit to this
ce, as vibration may be generated.

- **For USA, Canadian and Woldwide models**

Using a Power Amplifier

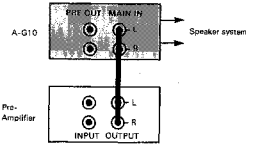
When using this unit as a pre-amplifier, connect the PRE OUT jacks of this unit to the input jacks of the power amplifier.



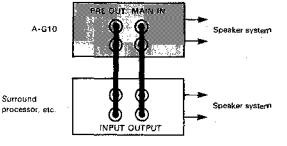
1. Set the amp selector switch to the SEPARATE (▬) position.
- If you leave the switch in the CONNECT position, sound will be output from the speakers connected to this unit.
2. Program source selection as well as adjustment of the volume, tone control, balance, mode, and muting can be handled through this unit.

Using a Pre-Amplifier

When using this unit as a power amplifier, connect the MAIN IN jacks of this unit to the output jacks of the pre-amplifier.



1. Set the amp selector switch to the SEPARATE (▬) position.
2. Set the speaker selector switch to the desired position.
- With this unit, the pre-amp and power amp sections can be used independently of each other. When using the surround processor and other built-in functions of the power amp, connect the PRE OUT jacks of this unit with the input jacks of the other unit, and the MAIN IN jacks of this unit to the output jacks of the other unit. The sound can be enjoyed from the speakers of the connected device. In this case, set the amp selector switch to the SEPARATE (▬) position.



ıe remote control transmitter
.A, Canadian and Worldwide

ıte control transmitter is powered by two batteries.
ıing this unit for the first time, insert the two batteries
!) as shown in the diagram.
battery life is about one year. This period may be shorter
ıg on the frequency of use and environment (temper-
l humidity) in which the remote control transmitter is

ıote control transmitter does not operate even though
ıel controls function normally, the batteries should be
Use only batteries listed in the following chart.

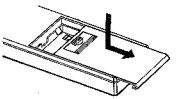
Type	Voltage	Size
Manga-nese	1.5V	AA R6 UM-3

leave an expired battery in the case as it may leak
age the battery case.
nserting the batteries, be sure the (+) and (−) ends
perly aligned.
use nickel-cadmium (rechargeable) batteries.
use one specified (manganese) battery and one al-
battery at the same time.
e both batteries at once; do not use one old and one
ttery together.

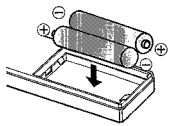
ır Battery Replacement

ıe unit out of its wooden case.

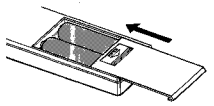
essing down on the battery cover on the back of the
ıcontroller, slide the cover in the direction of the arrow.



e two batteries that came with the transmitter or two
listed in the table. Load them with the + and − ends
s shown in the diagram.

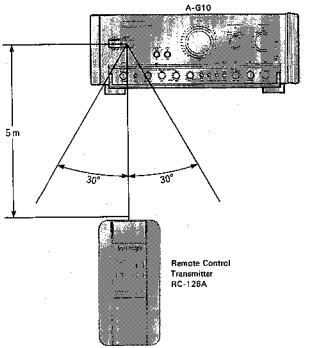


e battery cover back in place.



Functions for remote control only

- **Volume Keys (▲ UP, ▼ DOWN)**
  This key has the same function as that of the volume control knob [5]. The volume level can be adjusted by pressing the UP or DOWN key, with the volume control knob rotating simultaneously.
- **Absolute Phase Key (ABSOLUTE PHASE)**
  This function is accessible only through the remote controller. When this key is pressed, the absolute phase indicator goes out, and the phase is reversed.



- Precautions

1. Remove the batteries if the remote control transmitter is not going to be used for a long time.
2. The batteries of the remote control transmitter must be replaced periodically.
3. This unit uses infrared rays. Therefore, commands may not be received properly if the front panel of this unit is exposed to bright light. To prevent this from occurring, place this unit so that it is not directly exposed to bright light.
4. If this unit is placed inside an audio rack behind a glass door, the door should not have colored glass or have any decorations on it, since this could shorten the range or prevent commands from being received.
5. Use of other infrared remote control devices in the same room may cause interference.
6. The transmitter operates up to a distance of about five meters (16 feet). The transmitting window must always be pointed at the reception window when a command is sent to the A-G10.
7. If this remote control transmitter does not operate properly, confirm that the batteries are not dead. If the problem persists, contact your Onkyo Service Center.

NOTE:

In some cases, the remote control function may be unusable because of external noise or a temporary power interruption. Try turning the power off and waiting at least 3 seconds before turning it on again.

leshooting guide

10 fails to function normally, first check the following points before contacting your Onkyo dealer. If the problem is not solved through the following list, unplug the power cord and contact your Onkyo authorized service center.

Problem	Cause	Remedy
r.	• Power cord is not correctly plugged into AC outlet. • Power switch is not set to ON position.	• Plug the power cord into the AC outlet properly. • When power is taken from another preamplifier, also set the amplifier power switch to ON.
) but no sound.	• Bad connections.	• Check input leads, speaker leads, pin plugs, etc.
r frequency noise.	• Poor or no input ground. • Poor or no phono motor ground.	• Check outer conductor of input plugs. • Check for proper ground connection.
when the volume is turned up.	• Turntable and speakers are too close together.	• Move them farther apart.
scratchy sound. High range is	• Stylus of pick-up is worn. • Stylus is dirty. • Treble control is too high.	• Replace. • Clean. • Turn treble control down.

cations

ER AMPLIFIER SECTION

r Output: **135 watts per channel, min RMS. at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.008% Total harmonic distortion.**
2 x 240 Watts an 4 ohms, 1 kHz (DIN)
2 x 155 Watts an 8 ohms, 1 kHz (DIN)

nic Power: 460 watts 2 ohms, 310 watts 4 ohms

Harmonic Distortion: 0.008% at rated power
0.008% at 1 watt output

odulation Distortion: 0.005% at rated power

ng Factor: 150 at 8 ohms

ncy Response: CD, Tuner: 2 Hz–50 kHz (+0, −1 dB)

to Noise (IHF-A): SOURCE DIRECT: 104 dB

LIZER AMPLIFIER SECTION

Overload: Phono (MM): 210 mV RMS. at 1 kHZ, 0.005% THD.
Phono (MC): 9.3 mV RMS. at 1 kHZ

Deviation: Phono (MM): ±0.2 dB, 20 Hz – 20 kHz

to Noise (IHF-A): Phono (MM): 89 dB(5 mV input)
Phono (MC): 85 dB (0.5 mV input)

Harmonic Distortion (2V output) (MM): 0.003%

CONVERTER SECTION

onversion: 18 bit with eight-times over sampling

ing Frequency: 32, 44.1, 48 kHz

ncy Response: 2 Hz – 20 kHz

to Noise Ratio: 110 dB

nic Range: 103 dB

Harmonic Distortion: 0.0015% (at 1 kHz)

t level: 2 Vrms

ALL CHARACTERISTICS

Sensitivity/ Impedance: Phono (MC): 110 µV/100 ohms
CD: 150 mV/50 kohms
Tape Play: 150 mV/50 kohms
VCR Play: 150 mV/50 kohms
VDP Play: 150 mV/50 kohms
PROCESSOR IN: 150 mV/50 kohms
MAIN IN (USA, Canadian and Worldwide models): 1V/20 kohms

Output Level/Impedance: Tape Rec: 150 mV/470 ohms (Phono)
PROCESSOR OUT 150 mV/470 ohms (Phono)
Pre Out: 1 V/1 kohm

Digital Input: COAXIAL: 0.5 Vp-p/75 ohms
OPTICAL: −17.5 ~ −27 dBm (Biphase)

Digital Output: COAXIAL: 0.5 Vp-p/75 ohms

Tone Control (Vol −20 dB): CONTRABASS: +10 dB at 20 Hz
BASS: ±10 dB at 20 Hz
TREBLE: ±8 dB at 20 kHz

High Cut: 6 kHz (6 dB/Octave) (TREBLE min.)

Muting: −20 dB

Power Supply: European models (except U.K.): AC 220V, 50Hz
Canadian models: AC 120V, 60Hz
U.K. & Australian models: AC 240V, 50Hz
Worldwide models: AC 120 and 220V switchable, 50/60Hz

Dimensions: 477(W) x 183(H) x 483(D) mm 18-3/4"x7-3/16"x17-13/16"

Weight: 30 kg, 66.1 lbs.