



C-600f
Control Amplifier

Owner's Manual

LUXMAN

The lightning flash with arrowhead, 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 RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

To prevent the risk of electric shock, do not remove cover or back plate. No user serviceable parts inside.

IMPORTANT SAFETY INSTRUCTIONS!

PLEASE READ THEM BEFORE OPERATING THIS EQUIPMENT.

1. Read these instructions.
2. Heed all warnings.
3. Follow all instructions.
4. Do not use this apparatus near water.
5. Clean only with a dry cloth.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
9. Only use attachments/accessories specified by the manufacturer.
10. Unplug this apparatus during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as 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.
12. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases or beverages, are placed on the equipment.
13. To completely disconnect this equipment from the AC mains, disconnect the power supply cord plug from the AC socket.
14. The power supply cord should be kept in good condition, if it gets chewed up by a pet, it should be replaced.

LUXMAN

Thank You

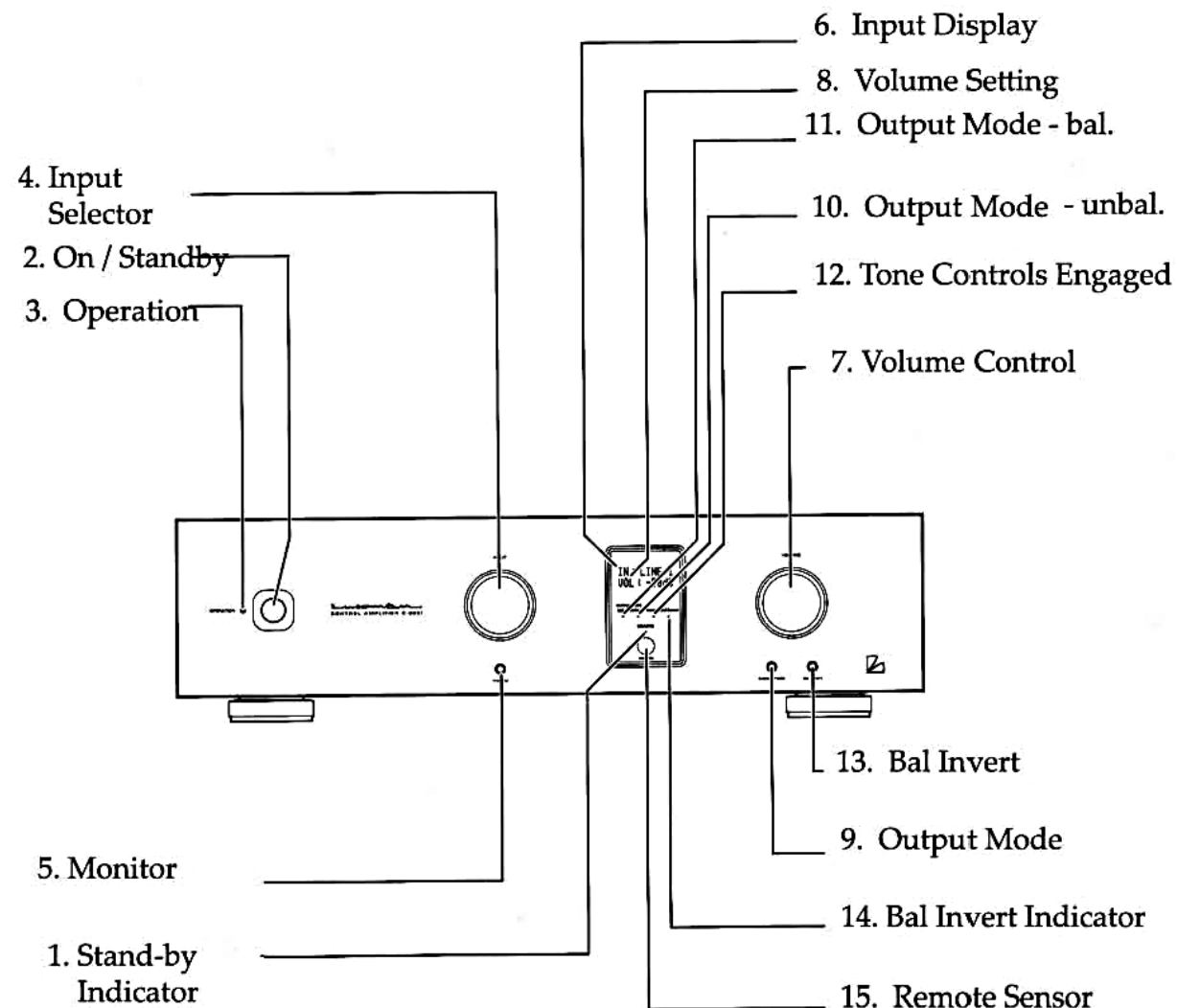
Your decision to purchase this Luxman C-600f Control Amplifier singles you out as one of the most discriminating music listeners. Luxman have been hand-crafting exquisite audio reproducing equipment in Japan since 1925. Luxman's relentless dedication to *Quality* is your assurance that you will receive many years of musical enjoyment from this unit.

Please take a short time to read the information in this manual. We want you to be as familiar as possible with all the features and functions of your new Luxman.

Contents

Important Safety Instructions	Page 3
Contents	4
Front Panel Controls	5 – 6
Rear Panel Inputs & Outputs	7 - 8
Remote Control Layout	9 - 11
Balance Control (Preset)	12
Preset Index	13
Tone Controls	14
Tone Controls Index	15
Remote Control (batteries)	16
Installation	17
Connections	18 - 20
Home Theater Processor connection	20
Subwoofer connection	20
Block Diagram - General	21
Block Diagram – LECUA 1000 WM	22
Block Diagram – REGULATOR, POWER SUPPLY	23
Specifications	24
Warranty	25 - 26
Luxman Worldwide Contacts	28.

Front Panel Controls



1. **STAND-BY INDICATOR**, glows yellow while in stand-by.
2. **POWER STAND-BY / ON**, push button turns the C-600f either ON or OFF (stand-by).
3. **POWER INDICATOR**; LED blinks gently initially to show that it is warming up, will shine constantly once the C-600f is fully operational.
The legend *Warming Up* will be displayed meanwhile.
4. **INPUT SELECTOR**; select any one of the eight music signal sources, either from this knob on the front panel or from the remote control.
5. **MONITOR**, engages the tape circuit. The display will show which input is now active. e.g. LINE-5 or MONITOR.
6. **INPUT SELECTOR INDICATOR**; the illuminated display makes it easy to view the selected music source even from a distance.
7. **VOLUME CONTROL**; adjust the Volume Control for the desired listening level. The VOLUME control adjusts the overall loudness of the signals being fed to the loudspeakers. It is fully electronic and can also be adjusted from the remote control handset. The VOLUME control does not affect recordings made using the Tape outputs.

Front Panel Controls

8. **VOLUME DISPLAY**, the illuminated display makes it easy to view the gain setting even from a distance.
9. **OUTPUT MODE** cycles between modes: UNBAL → BAL → BOTH → UNBAL →
10. **OUTPUT MODE – Unbal**. The blue LED shows that the unbalanced output is active.
11. **OUTPUT MODE – Bal**. The blue LED shows that the balanced output is active.
12. **TONE** The blue LED on the front panel underneath Line Input and the Volume Setting shows that the tone controls are active and in circuit.
13. **BAL INVERT**. Allows one to invert the phase of the balanced inputs.
14. **BAL INVERT INDICATOR**; The blue LED shows that the phase is inverted.
15. **REMOTE SENSOR** receives commands from the Remote Control. There must be a clear line-of-sight path from the remote control to this window; if that path is obstructed, the remote control may not work.

NOTE: *Direct sunlight or very bright ambient lighting may affect the operating range and angle for the remote control handset.*

Rear Panel Controls

22. Balanced Outputs

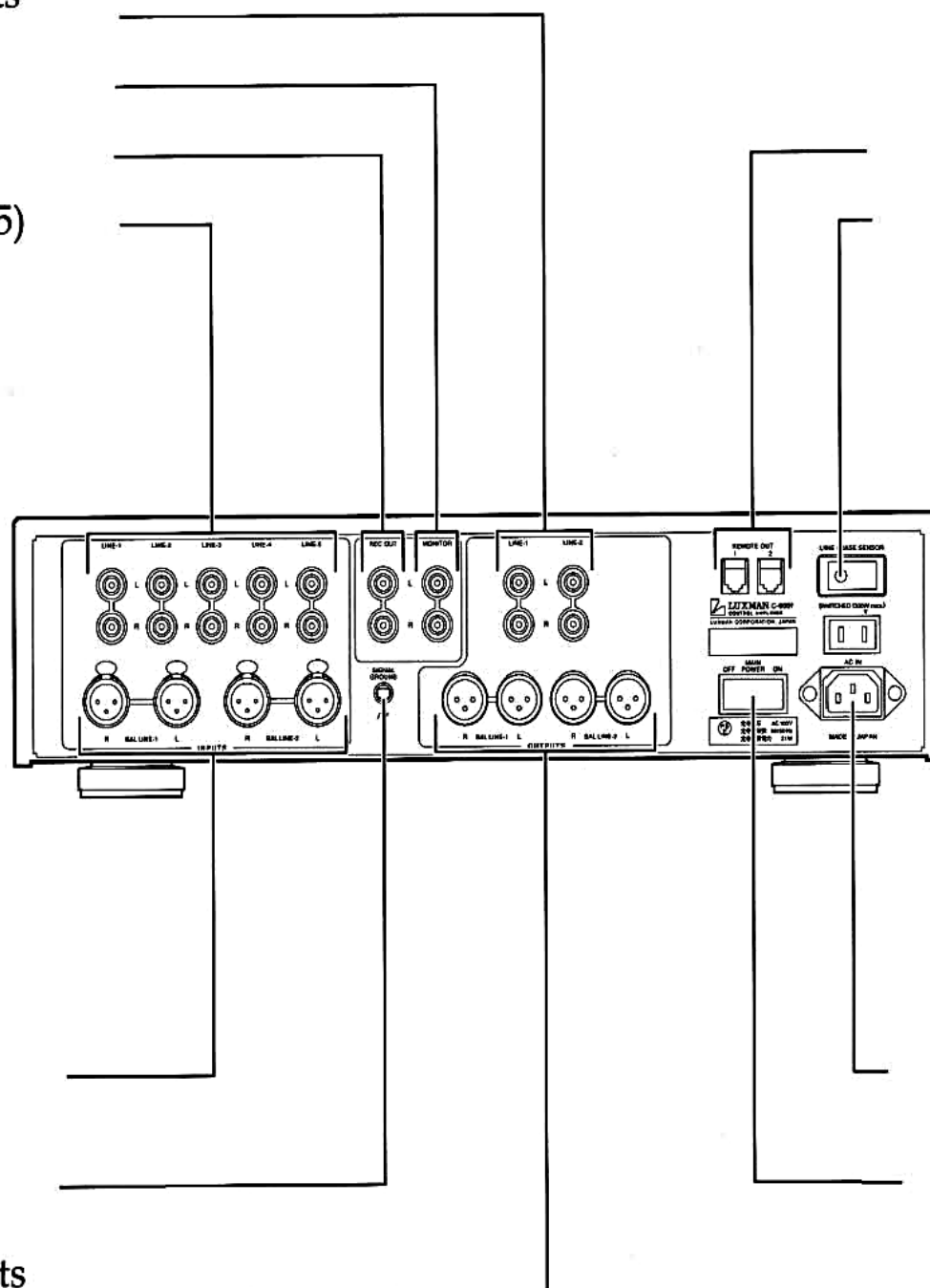
24. Tape Monitor

25. REC Out

20. Inputs (Line 1 - 5)

19. Remote (Trigger)

17. Line Phase Sensor



21. Balanced Inputs

26. Ground Post

23. Balanced Outputs

16. AC Inlet

18. Main Power

16. **AC INLET** Connect the L-550A power cord to a live AC outlet. Refer to information on the back panel to determine the correct voltage.
17. **LINE PHASE SENSOR.** Here is a clever device found on the back of almost every Luxman powered product. You press the button and it will check the phase of the electricity it is receiving. If the AC outlet in the wall is incorrectly wired, meaning the live and neutral are swapped, a red LED will turn on to warn you. You only need to press it once, when you are installing a product to check that everything is in order. It's a simple mistake, that occurs often, and one that can undermine your listening enjoyment.

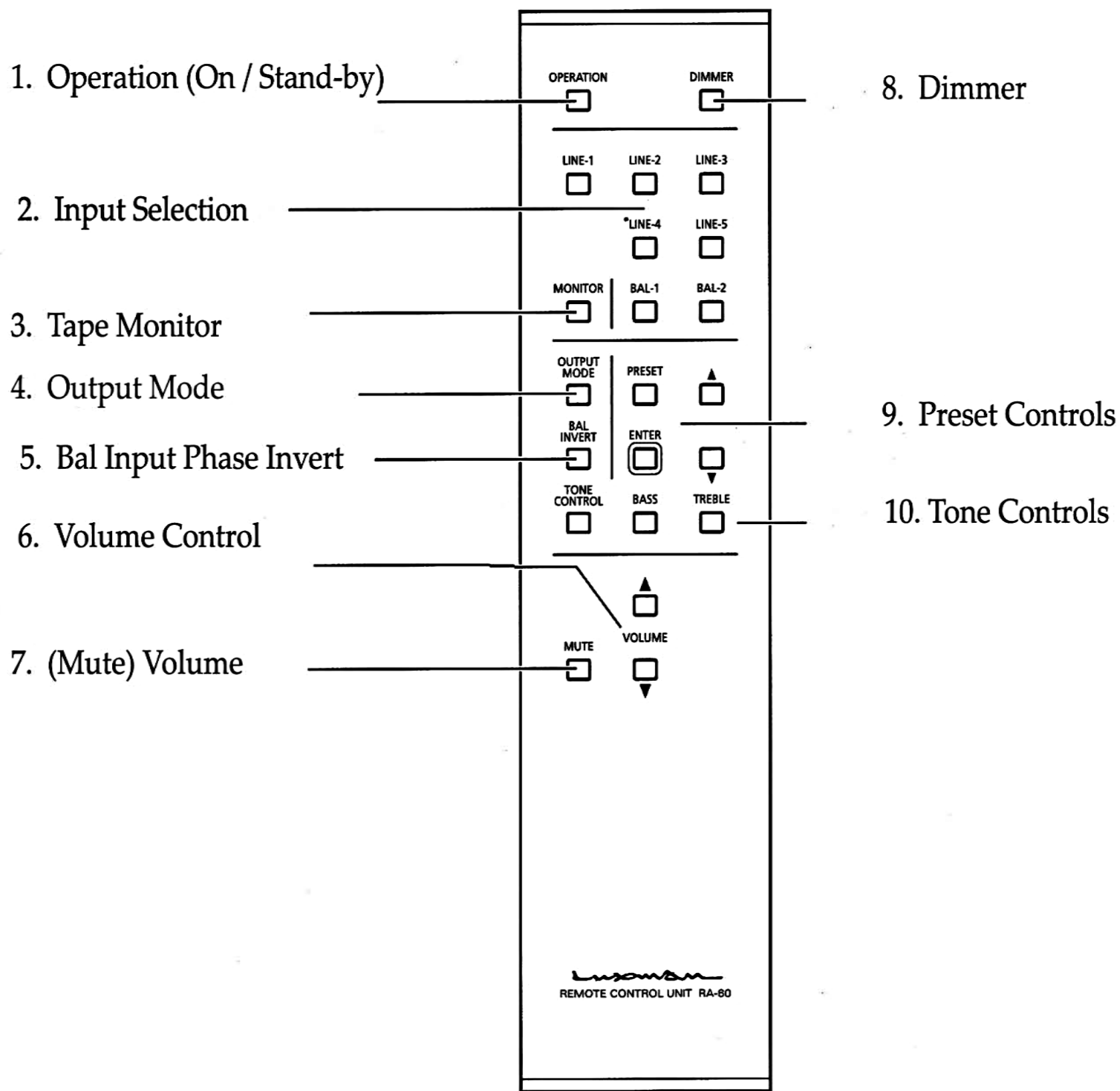
Rear Panel Controls

18. **MAIN POWER Switch.** If you are not using your C-600f for an extended period of time and want to turn off the power completely. The remote control will not be able to activate the control amplifier.
19. **REMOTE TRIGGER.** Generates a 12 volt DC trigger signal which will activate a LUXMAN B-1000f, M-800A or M-600A. It toggles between Stand-By and Operate. Uses a simple RJ-11 connector (normally used for the phone lines).
20. **INPUTS, Line 1 – 5** These inputs accept the stereo output signal from CD, SACD, DVD-Audio, Tuner (XM, Sirius).
21. **BALANCED INPUTS 1 – 2.** These inputs accept the stereo output signal from CD, SACD, DVD-Audio, or Tuner.

The balanced input is desirable for minimizing earth loop generated mains hum and ripple, or high frequency interference, if a noise problem occurs.
22. **UNBALANCED OUTPUTS** need to be connected to an outboard amplifier(s).
23. **BALANCED OUTPUTS** need to be connected to an outboard amplifier(s).
24. **TAPE MONITOR** is a tape recorder input. Allows you to listen to what was recorded onto the tape recorder, cassette recorder, or even a CD recorder.
25. **REC OUT** Allows you to send out the signal that you are receiving from a different source such as Phono or CD so that you can record it onto a cassette or CD recorder.
26. **GROUND POST.** Accepts a ground wire from an external phono stage.

This terminal does not have to be used, but you may connect it to a suitable ground on an amplifier for example, which under some circumstances will reduce hum and ripple.

Remote Control



Remote Control

1. **Operation** (On / Stand-by) push button turns the L-550A either ON or OFF (stand-by).

The muting circuit operates for about 60 seconds after the power is turned on, until the circuitry stabilizes. No sound is heard during this period.

While the unit is warming up, you will see the legend:

WARMING UP

2. **Input Selection**; select any one of the eight music signal sources, either from the rotary selector on the front panel or from the remote control. The front panel display will show the Input Selected on the top line, with the Volume setting underneath, as in:

IN : LINE -1
VOL : -71 dB

While the balanced inputs will look like this:

IN : BAL. -1
VOL : -71 dB

3. **Monitor**, engages the tape circuit. The display will show which input is now active. e.g. LINE -5 or MONITOR.

This feature was developed so that one could playback a recording shortly after it was made.

4. **Output Mode** cycles between modes: UNBAL → BAL → BOTH → UNBAL → .The blue LEDs will illuminate which outputs are active on the front panel display.

5. **Bal Input Phase Invert**; this will invert the phase from where it is set. The blue LED shows that the phase is inverted.

6. **Volume Control**; adjust the Volume Control for the desired listening level. The VOLUME control adjusts the overall loudness of the signals being fed to the loudspeakers.

Remote Control

It is motor driven and can be adjusted from the remote control handset. The VOLUME control does not affect recordings made using the Tape output (REC OUT) but will affect the signal going to the Pre-amplifier output (Pre Out).

IN : BAL. -1
VOL: --dB

At this setting the volume is turned off. You can raise the volume using the ▲ volume button.

You should acquire the habit of lowering the volume, when changing between inputs or before playing a record.

7. **Mute (Volume).** Press the MUTE Button to temporarily lower the sound to the speakers. Mute mode is indicated by the active Legend flashing.

MUTE

Press MUTE again to restore sound. Mute does not affect recordings made using the Tape outputs (REC OUT) but will affect the signal going to the Preamplifier output (Pre Out).

8. **Dimmer** (Display) Cycles through four levels of intensity:

Normal → Dim → Dimmest → Display Off → Normal.

9. **Preset** Cycles through three controls: LR Balance → BAL Phase → REC Out → LR Balance

BALANCE Control will adjust the Balance between the Left and Right channels. Plus or minus 8 dB.

PRESET - Balance

- i. Press PRESET once, LR Balance will appear.
- ii. Press ENTER once,

L-CH	R-CH
0 dB	0 dB

- iii. Use the ▼ button to lower by 1 dB increments. To raise, press ▲ each time for 1 dB increments.
- iv. Press ENTER once, to lock the setting.

BAL PHASE (Phase Selection for the Balanced Inputs and Outputs)

- i. Press PRESET twice, BAL PHASE will appear.
- ii. Press ENTER once for IN: BAL-1, Press ENTER twice for IN: BAL -2
- iii. Using the ▼ or ▲ buttons, you can now toggle between +3 , -2 or -3 , 2+
- iv. In the USA, most balanced products use Pin 2+. While Luxman use Pin 3 +.
- v. Press PRESET to exit.
- vi. The two balanced inputs can be set individually.
- vii. The phase on the balanced outputs can similarly be adjusted by pressing ENTER three times, you will see

BAL OUT
3- , 2+

- viii. Using the ▼ or ▲ buttons, you can now toggle between +3 , -2 or -3 , 2+

REC OUT

- i. Press PRESET three times, REC OUT will appear.
- ii. Press ENTER once.
- iii. Using the ▼ or ▲ buttons, you can now toggle between ON and OFF.
- iv. Press PRESET once to lock the setting.

PRESET Index

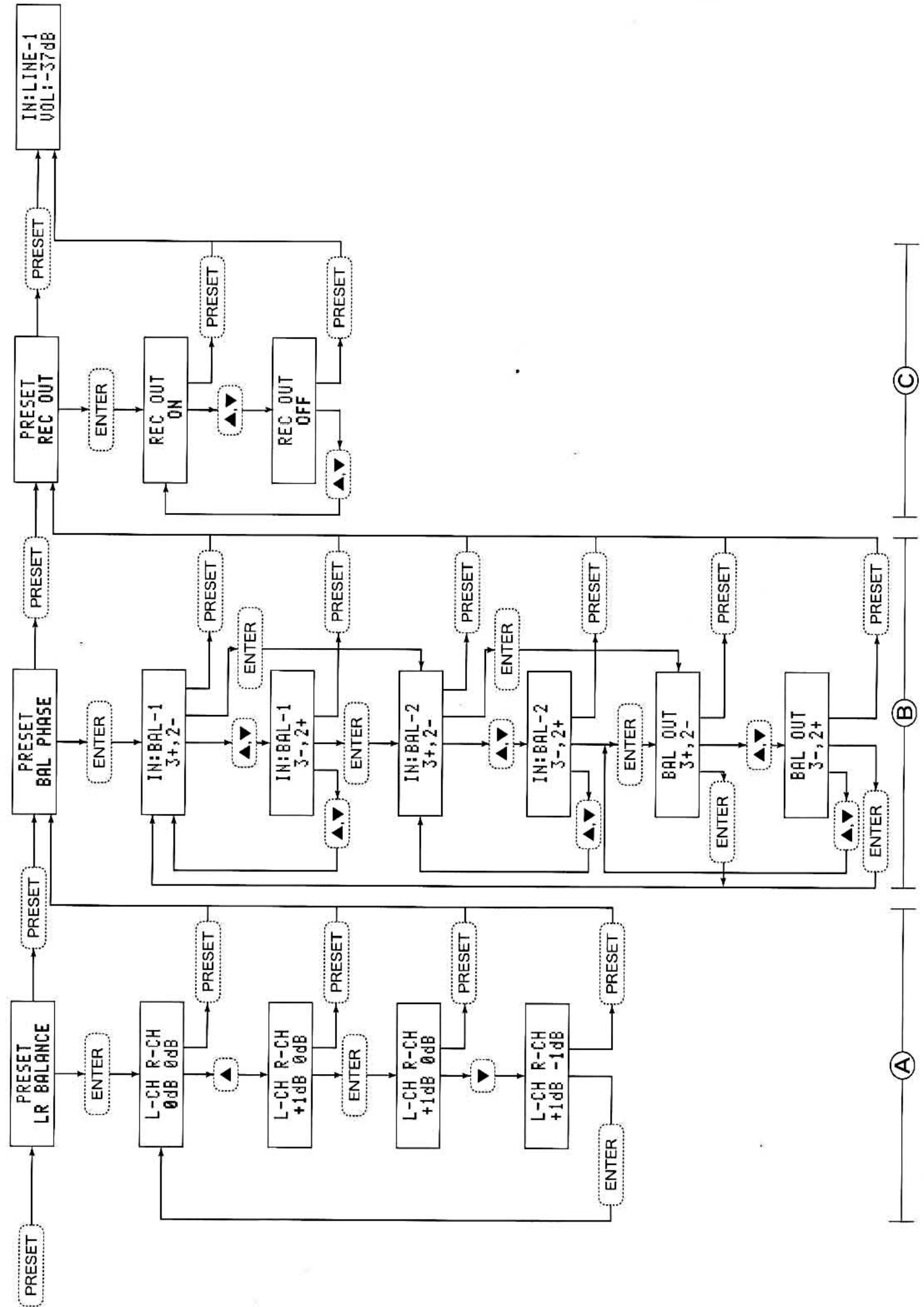


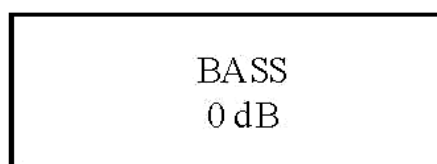
图 1

Tone Controls

10. Tone Controls

To activate the tone controls,

- i. Press BASS once.



Use the ▼ button to lower by 1 dB increments. To raise, press ▲ each time for a 1 dB incremental increase.

- iii. Press ENTER once, to lock the setting.
- iv. You may access this tone control setting by pressing the TONE CONTROL button. A corresponding blue LED will appear on the front panel if the tone controls are engaged.

To disengage the tone controls, you simply press TONE CONTROL again.

(Treble) will raise or lower by 8dB, at a frequency of 10 KHz. Both Left and Right Channels are affected. This is very useful for taming some harsh sounding CDs. The Tone controls do not affect recordings made using the Tape outputs but will affect the signal going to the Pre-amp output (Pre Out).

The C-600f is probably the only high-end preamp currently in the market to offer tone controls adjustable from the listening position, via the remote control – ideal for listening to stunning performances such as Carlos Kleiber's performance of the Brahms Fourth Symphony. This legendary 1980 performance has long been praised for its performance, though criticized for its sonics. The massed violins play in the highest register and if played back at a realistic level, the violin's brightness and glare can be unpleasant. From the comfort of your listening chair, you can reduce the treble intensity and relax & enjoy this remarkable performance. For normal recordings, the tone controls can be disengaged from the audio circuit.

(Bass) will raise or lower by approximately 8dB, at a frequency of 100 Hz. Both Left and Right Channels are affected. The Tone controls do not affect recordings made using the Tape outputs but will affect the signal going to the Pre-amp output (Pre Out). If you find your loudspeakers are not able to reproduce excessive bass as found on some Reggae or Hip Hop albums, especially when played at loud volume, offers you the ability to spare your loudspeakers' woofers

Note: *You might also use the Tone Controls for room acoustics' correction. They are in effect two band, simplified room equalization controls.*

Tone Controls Index

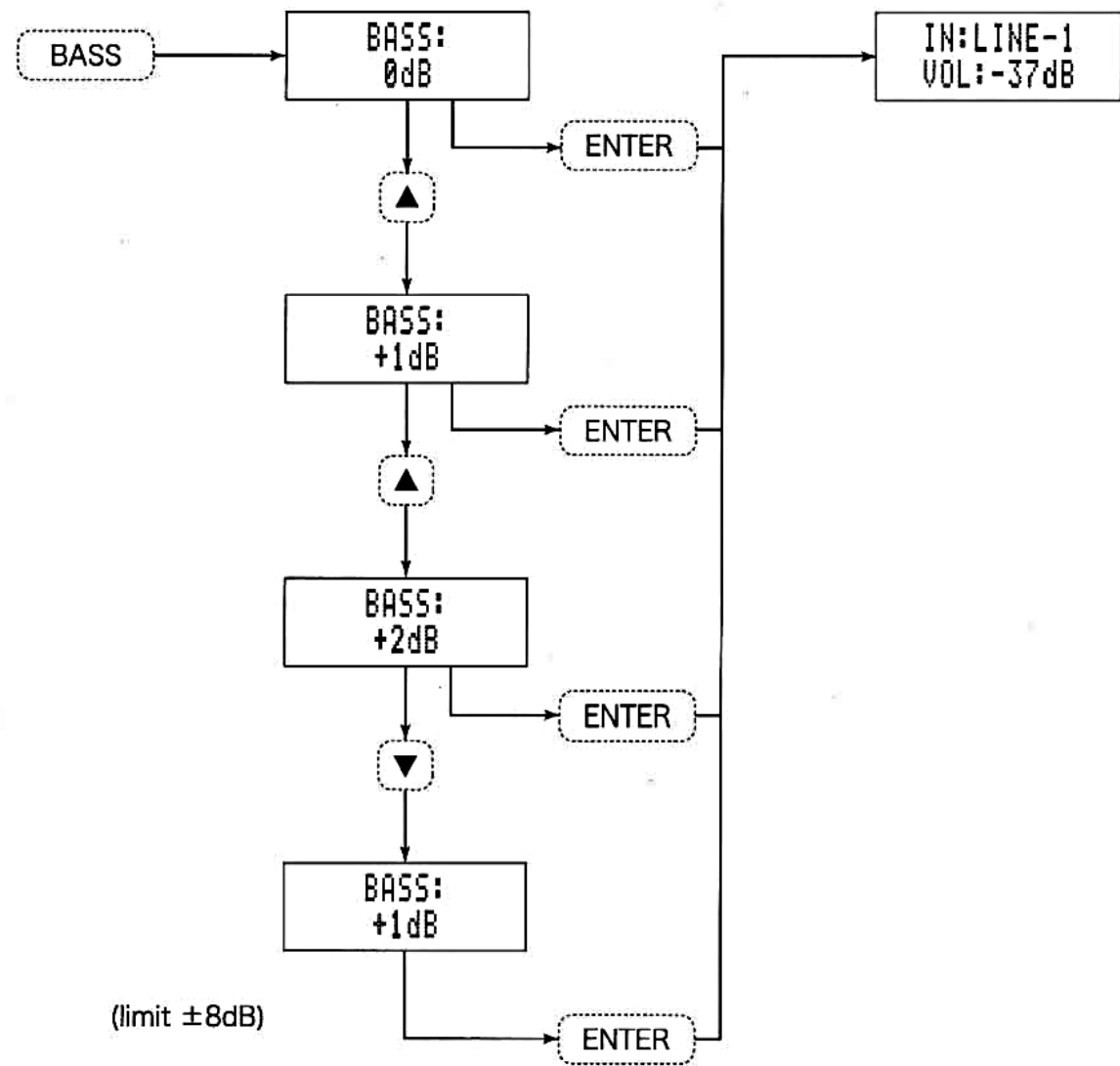


图 2

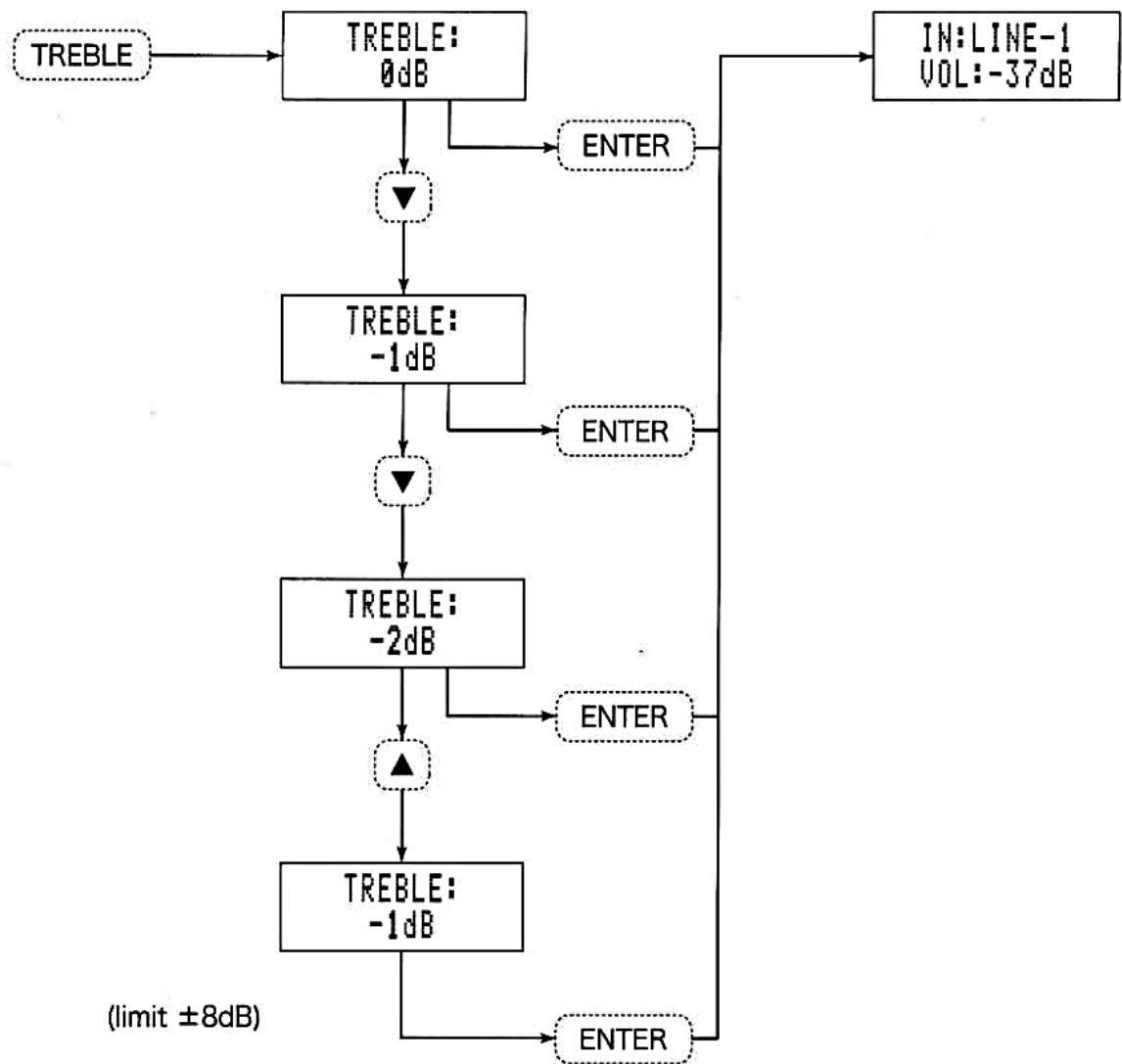
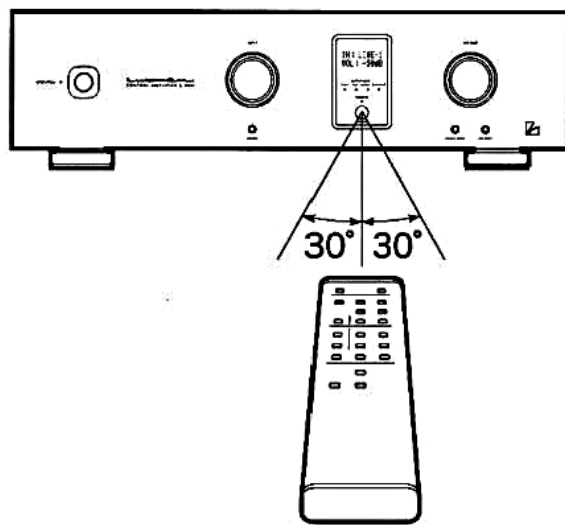


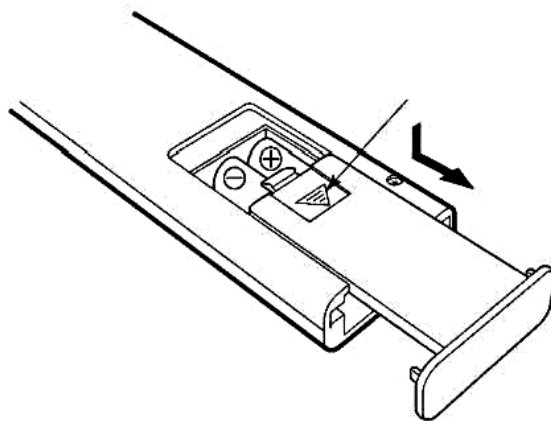
图 3

Remote Control



THE REMOTE CONTROL'S RANGE is approximately 16' or 5 meters, within a 30 degree window.

NOTE: Direct sunlight or very bright ambient lighting may affect the operating range and angle for the remote control handset



BATTERY REPLACEMENT. The battery well is easily accessed by sliding back the lower rear cover. Two good quality AA batteries will need to be replaced approx. once a year.

Installation

The C-600f can be placed upright on a table or shelf, standing on its four feet. It also can be custom installed in piece of furniture or cabinet of your choice.

Always provide adequate ventilation for your C-600f. Cool operation ensures the longest possible operating life for any electronic instrument. Do not install the C-600f directly above a heat generating component such as a high powered amplifier. If all the components are installed in a single cabinet, a quiet running ventilation fan should be utilized to maintain all the system components at the coolest temperature.

Allow at least 2' above the control amplifier, 2" all around.

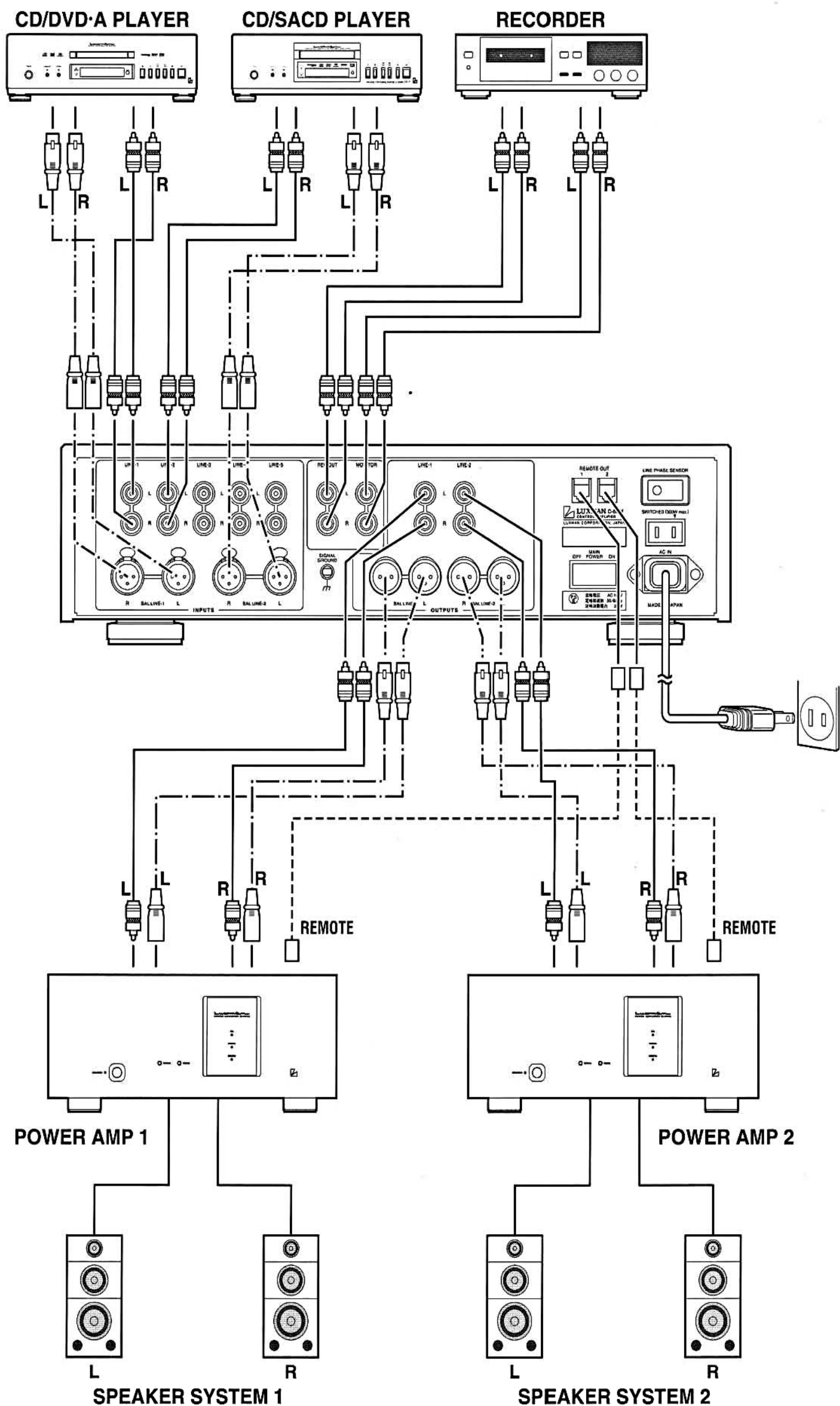
SINGLE ENDED INPUT & OUTPUT CONFIGURATION (LINE -1)

INPUT	LINE -1	
OUTPUT MODE	UNBALANCE	
VOLUME	-36dB	
BAL INVERT	INVERT	
TONE CONTROL	OFF	
BASS	+2dB	
TREBLE	-1dB	
MONITOR	OFF	
REC OUT	OFF	
LR BALANCE	L-CH:0dB, R-CH: 0dB	
BAL PHASE	IN:BAL -1: 2+, 3-	scroll for next function
	BAL OUT: 2-, 3+	
MUTE	OFF	
DIMMER	MAX	

BALANCED INPUT & OUTPUT CONFIGURATION (BAL -1)

INPUT	BAL -1	
OUTPUT MODE	BALANCE	
VOLUME	-36dB	
BAL INVERT	INVERT	
TONE CONTROL	OFF	
BASS	+2dB	
TREBLE	-1dB	
MONITOR	OFF	
REC OUT	OFF	
LR BALANCE	L-CH:0dB, R-CH: 0dB	
BAL PHASE	IN:BAL -1: 2+, 3-	scroll for next function
	BAL OUT: 2-, 3+	
MUTE	OFF	
DIMMER	MAX	

Connections



Connections

Now you are ready to take advantage of Luxman's long standing tradition of excellence in the C-600f Control Amplifier. The C-600f's reproduction is sonically transparent and absolutely accurate.

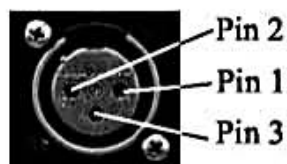
CD, DVD, SACD, TUNER connection Input for a CD or other line-level signal source. Use a twin RCA-to-RCA lead to connect the CD player's left and right 'Audio Outputs' to this input. The L-590A only accepts analogue signals from your CD player.

PHONO (Record Player)

You will need to connect the output from your phono cartridge to an outboard phono stage (such as the E-1, E, 200 or EQ-88 + MT-88 + OPEQ-88), then connect the output of the phono stage to an input on the C-600f. If you hear a lot of hum, you will most likely need to run a copper cable between the record player's chassis to the phono stage and possibly to the SIGNAL GROUND (No.21).

Balanced Connection Pin Out

Please refer to **BAL Phase** on Page 12 for details on how to change the phase for each input individually.



□ normal

1. Ground
2. Cold -
3. Hot +

▢ reverse

1. Ground
2. Hot +
3. Cold -

In the USA, most balanced products use Pin 2 = Hot or +.

NOTE: Always turn the amplifier off before connecting or disconnecting cables from the **Output** sockets.

Connections

TAPE RECORDER CONNECTION.

When any source is selected, its signal is also fed directly to any tape machine connected to the REC OUT for recording. If you want to connect the C-600f to a tape recorder; you should connect the REC OUT from the C-600f to the INPUT of your tape/cassette recorder. Then connect the OUTPUT of your tape recorder to the C-600f's MONITOR sockets.

SUBWOOFER CONNECTION

Quite often there are two ways to connect one or two subwoofer(s) to one's system. Speaker output (High Level) or Line Level.

Speaker (High Level) Connection

Simply connect a speaker cable either to the Speaker Terminals and then to the Speaker terminal INPUT on the Subwoofer. Or alternatively connect an additional speaker cable to the speaker's binding post and the other end to the Subwoofer's Speaker terminal INPUT.

Please ensure that you do not invert the phase by mixing the Left and Right Channel connections. Best to run one cable at a time and connect Left to Left at each end, then repeat the process for the Right channel.

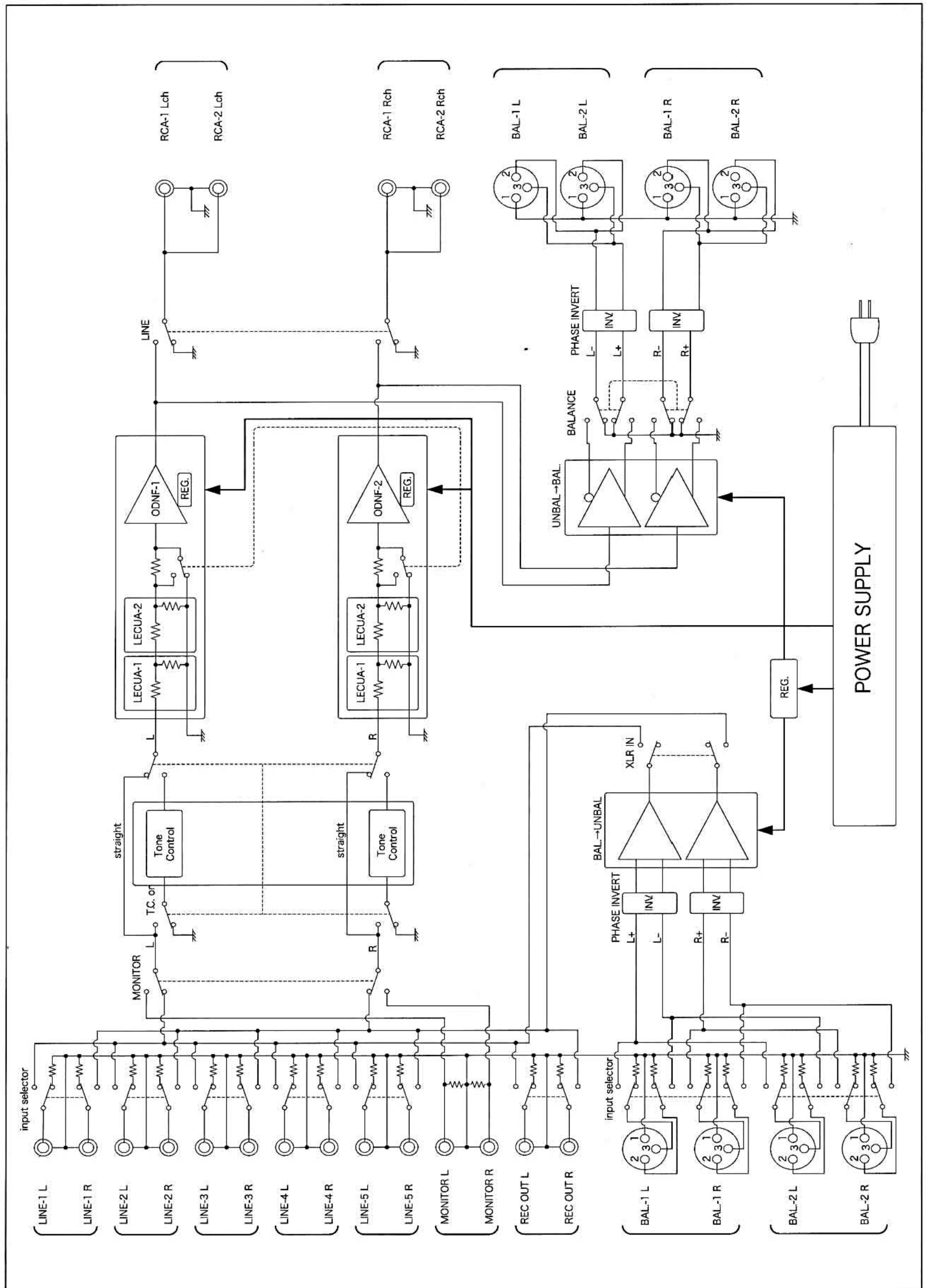
Preampfier (Line Level) Connection

1. Connect the L female RCA (white) end of your interconnect cable to the C-600f's L OUTPUT and connect the other end to the L INPUT on your subwoofer.
2. Ditto for the R channel (red), repeat as above.

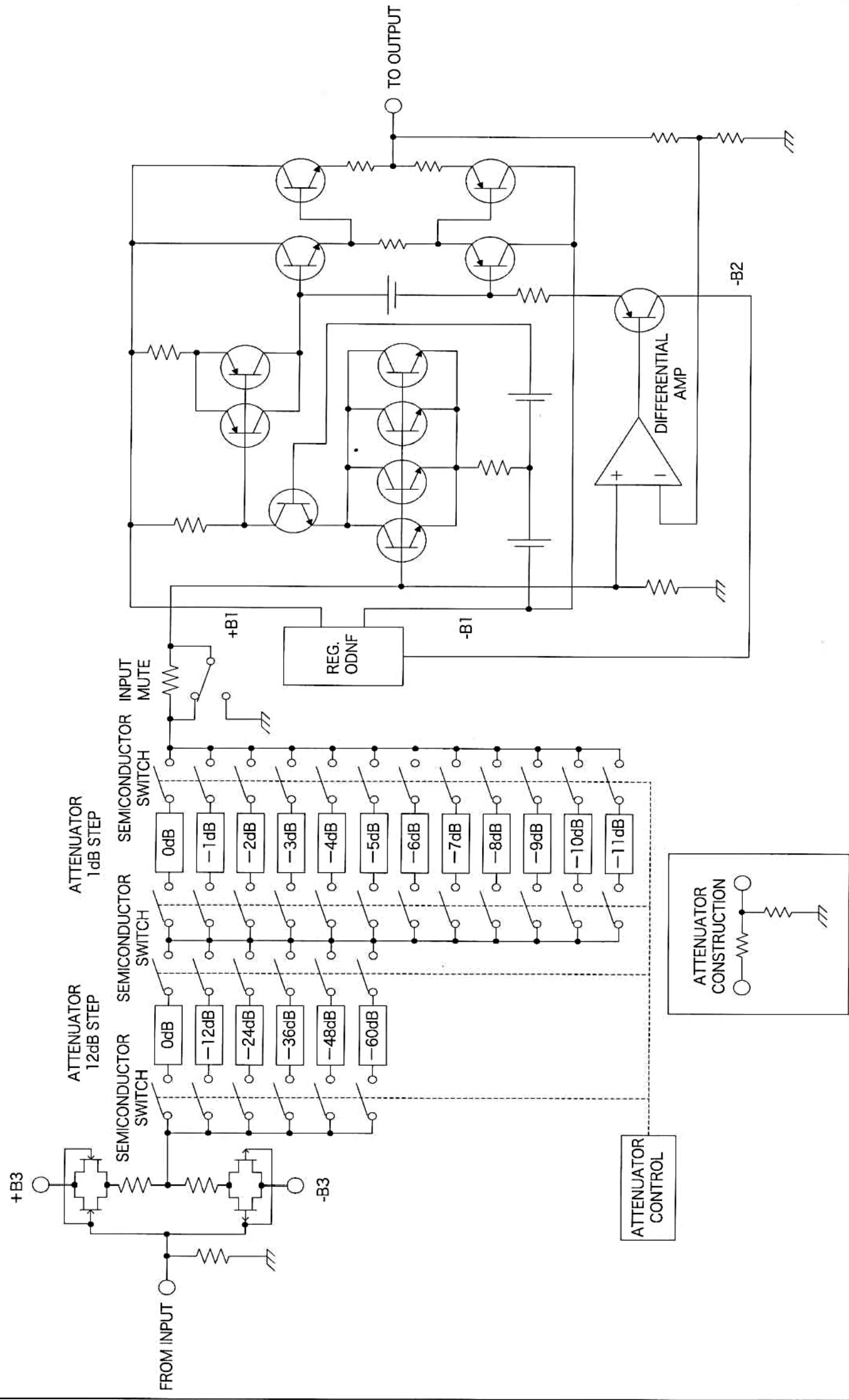
HOME THEATER PROCESSOR

In the situation where you would like your C-600f to drive the front Left and Right speakers of your Home Theater audio system and still be able to enjoy stereo CDs & LPs played through the C-600f.

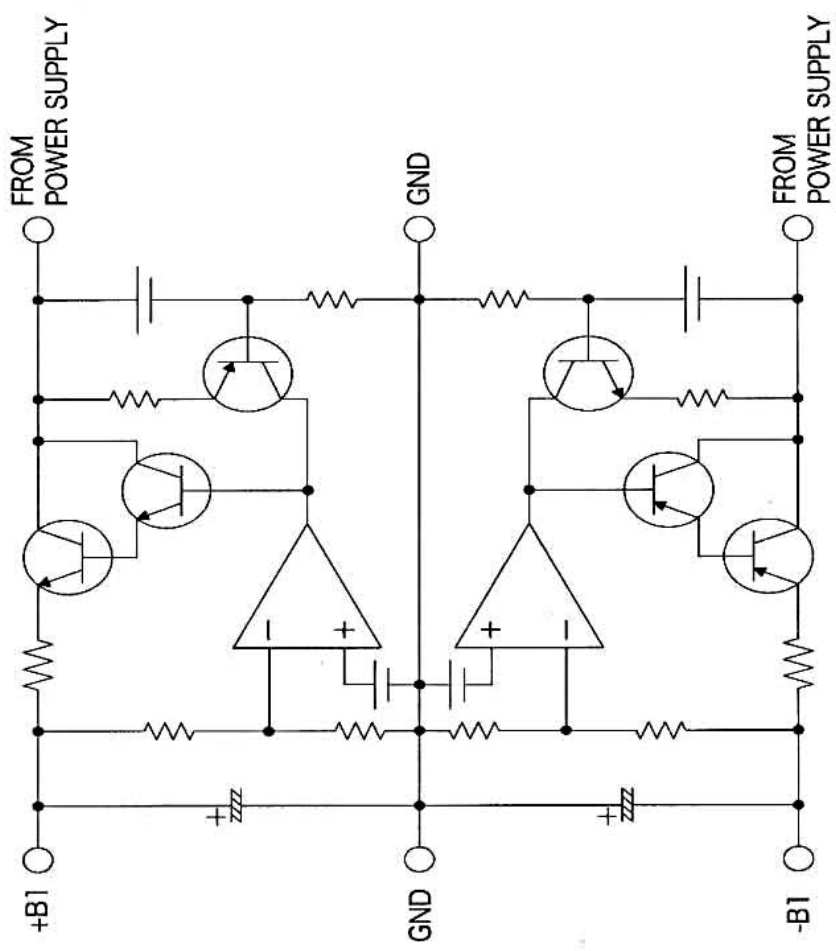
1. Connect an RCA cable from the Output of you HT Processor, this will connect to the **REC-IN** of the C-600f.
2. Select the **REC-** input on your Luxman control amplifier by pressing the **Monitor** switch
3. Set the volume control to -21 dB. (actual Unity Gain is -11 dB)
4. Now calibrate the output volume of your Home Theater Processor to have an equal amplitude measurement from all your multi-channel speakers as measured at the central listening position.
5. When you are finished with the Home Theater and want to listen to music again, simply turn the volume back down to -50 dB and change inputs.
6. You should acquire the habit of lowering the volume, when changing between inputs or before playing a record.



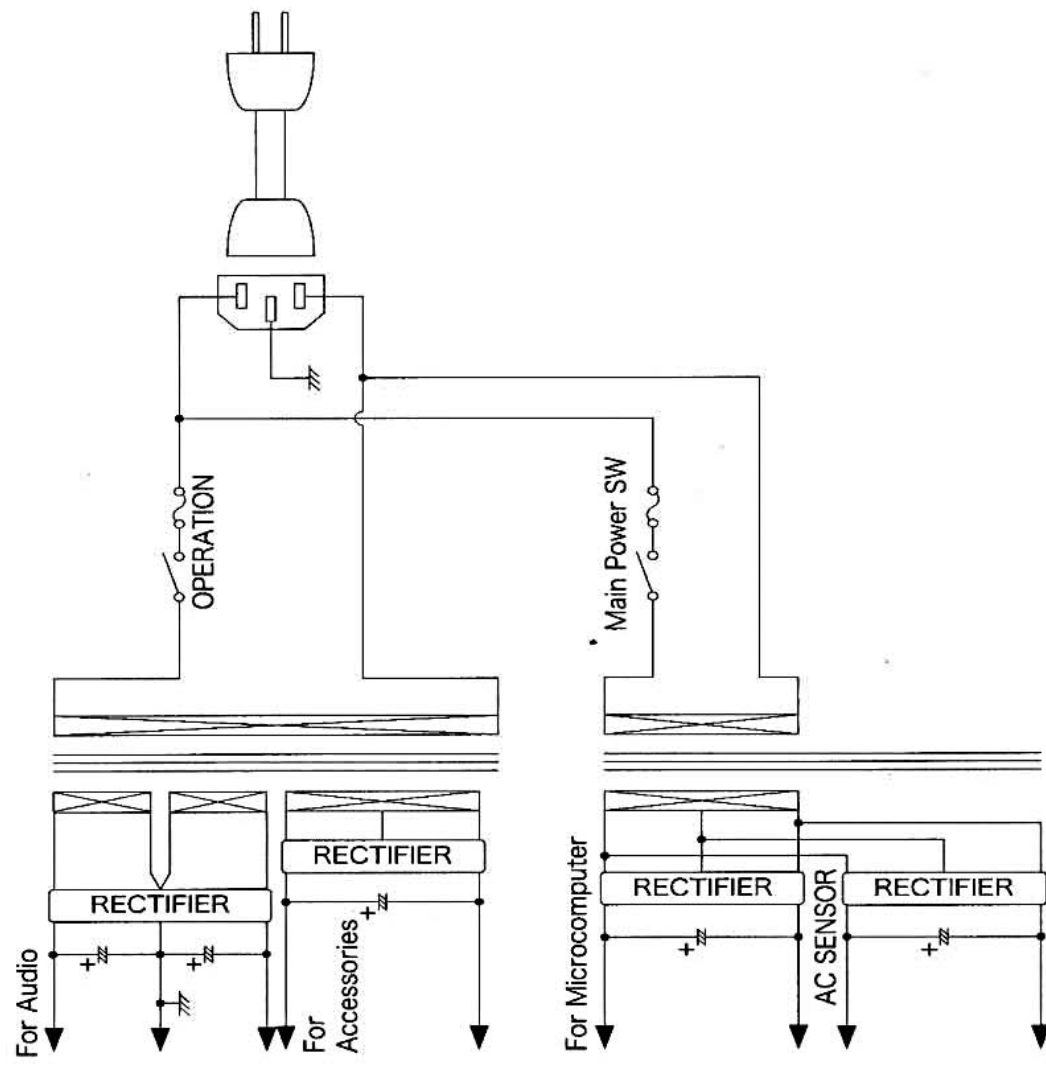
LECUA1000—WM (ATTENUATOR + AMP) / EACH CHANNEL



REGULATOR FOR AMP



POWER SUPPLY



C-600f Specifications



Input Sensitivity / Input Impedance	Single-ended / mV/47.5K 300 ohms, Balanced / mV/67.0K 300 Ω
Output / Output Impedance	Single-ended / rated 1 V/564 Ω maximum 5.8 V, Balanced / rated 1 V/600 Ω maximum 6.2 V
Total Harmonic Distortion	Single-ended / 0.009% (20 Hz ~ 20KHz), Balanced / 0.018% (20 Hz ~ 20KHz)
Frequency Response	20 Hz to 20KHz (+0, - 0.1dB), 5Hz to 116KHz (+0, - 3.0dB)
S / N Ratio	Single-ended / 123 dB (A-IHF), Balanced / 120 dB (A-IHF)
Input	5 x RCA Single-ended, 2 x XLR Balanced inputs
Output	2 x RCA Single-ended, 2 x XLR Balanced outputs
Auxiliary Equipment	<p>Front Panel Stand-by / Operate Switch, Input Selector Volume Control and monitor switch, Output Mode & Balanced Invert.</p> <p>Rear Panel Main power switch and signal ground post Remote Output RJ-11 (two) Phase-line sensor, AC inlet.</p> <p>Remote Control Stand-by / Operate Switch, Input Selector functions Volume up / down, mute, output mode, phase invert, balance, Display Dimmer, preset controls, tone controls, REC output</p>
Power Consumption	21 W (Normal Operation), 2.3 W (Standby)
Dimensions, Weight	440 (W) x 117 (H) x 407 mm (D), 29 lbs (13.0Kg)
Accessories Supplied	Remote Control (RA-60), power cables (JPA-10000)

Warranty

TERMS AND CONDITIONS

1. **LIMITED WARRANTY**
Luxman warrants the product designated herein to be free of manufacturing defects in material and workmanship, subject to the conditions hereinafter set forth, for a period of three (3) years from the date of purchase by the original purchaser or no later than five (5) years from the date of shipment to the authorized Luxman dealer, whichever comes first, excepting vacuum tubes which are warranted for 90 days only (See 6).
2. **CONDITIONS**
This Warranty is subject to the following conditions and limitations. The Warranty is void and inapplicable if the product has been used or handled other than in accordance with the instructions in the owner's manual, abused, or misused, damaged by accident or neglect or in being transported, or the defect is due to the product being repaired or tampered with by anyone other than Luxman or an authorized Luxman repair center. The product must be packed and returned to Luxman or an authorized Luxman repair center by the customer at his or her sole expense. Luxman will pay return freight of its choice. A RETURNED PRODUCT MUST BE ACCOMPANIED BY A WRITTEN DESCRIPTION OF THE DEFECT AND A PHOTOCOPY OF THE ORIGINAL PURCHASE RECEIPT. This receipt must clearly list model and serial number, the date of purchase, the name and address of the purchaser and authorized dealer and the price paid by the purchaser. Luxman reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any product without notice or obligation to any person.
3. **REMEDY**
In the event the above product fails to meet the above Warranty and the above conditions have been met, the purchaser's sole remedy under this Limited Warranty shall be to return the product to Luxman or an authorized Luxman repair center where the defect will be rectified without charge for parts or labor, except vacuum tubes (See 6).
4. **LIMITED TO ORIGINAL PURCHASER**
This Warranty is for the sole benefit of the original purchaser of the covered product and shall not be transferred to a subsequent purchaser of the product.
5. **DURATION OF WARRANTY**
This Warranty expires on the third anniversary of the date of purchase or no later than the fifth anniversary of the date of shipment to the authorized Luxman dealer, whichever comes first.
6. **VACUUM TUBES**
Vacuum tubes are warranted for the original 90-day period only.
7. **DEMONSTRATION EQUIPMENT**
Equipment used by an authorized dealer for demonstration purposes is warranted to be free of manufacturing defects in materials and workmanship for a period of three (3) years from the date of shipment to the dealer. Vacuum tubes are warranted for 90 days.

Warranty contd.

After the first year, demo equipment needing warranty service must be packed and returned to Luxman Service Center by the dealer at his sole expense. Luxman will pay return freight of its choice. A returned product must be accompanied by a written description of the defect on an LUXMAN RETURNED GOODS AUTHORIZATION form. Dealer-owned demonstration equipment sold at retail within three (3) years of date of shipment to the dealer is warranted to the first retail customer to be free of manufacturing defects in materials and workmanship for the duration of the 3-Year Limited Warranty remaining (as measured from the date of shipment of the equipment to the dealer). Vacuum tubes are not warranted for any period under these conditions of sale. In the event warranty service is needed under these conditions, the owner of the equipment must provide a copy of his purchase receipt, fulfilling the requirements described under "2. Conditions" above. The product must be packed and returned to Luxman or an authorized Luxman repair center by the customer at his or her sole expense. Luxman will pay return freight of its choice.

8. MISCELLANEOUS

ANY IMPLIED WARRANTIES RELATING TO THE ABOVE PRODUCT SHALL BE LIMITED TO THE DURATION OF THIS WARRANTY. THE WARRANTY DOES NOT EXTEND TO ANY INCIDENTAL OR CONSEQUENTIAL COSTS OR DAMAGES TO THE PURCHASER. Some states do not allow limitations on how long an implied warranty lasts or exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

9. US WARRANTOR

Inquiries regarding the above Limited Warranty may be sent to the following address: On A Higher Note, PO Box 698, San Juan Capistrano, CA 92693.



www.luxman.co.jp

Luxman, Japan

Luxman World Wide
phone (852) 3109 7383
fax (852) 3585 1213
info@LUXMAN.hk

www.luxman-audio.de

Germany
phone (0)5921.78849.27
fax (0)5921.78849.28
info@tcg-gmbh.de

www.luxman.pl

Poland
phone 012 265 02 85
poczta@luxman.pl

Sweden
phone + 46 477 31270
fax + 46 477 31838
k-nilsson@telia.com

www.luxman-audio.co.uk

United Kingdom
phone +44(0)1900 813064
fax +44(0)1900 818060
select.audio@tiscali.co.uk

www.luxman.us

United States
phone (1) 949 488 3004
fax (1) 949 488 3284
info@onahighernote.com