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LF-1 and LF-2 Subwoofer Systems

OPERATING INSTRUCTIONS

ALTEC LANSING

Introduction

The ALTEC LANSING LF-1 and LF-2 Subwoofer Systems are designed to operate only in the low frequency range where your main hi-fi loudspeakers begin to 'roll off' or operate inefficiently. Many hi-fi systems begin to lose the lower bass frequencies below 80 Hz. Accordingly, the LF-1 and LF-2 Systems provide that vital missing dimension of low frequency sound that occurs within the range of 20 Hz to 80 Hz.

The LF-1 Subwoofer System is an attractively styled table that contains the rugged sub-bass loudspeaker and associated controls. Power for the system is supplied from your hi-fi receiver/ amplifier.

The LF-2 Subwoofer System is similar to the LF-1, but is an 'active' system. It is supplied with a separate power amplifier, and thus does not drain power from your hi-fi receiver/amplifier.

Specifications and components subject to change without notice. Overall performance will be maintained or improved.

Installation of LF-1 Subwoofer System

Wiring connections for this system are shown in Figure 1. To facilitate installation, the special 6-conductor wiring strip leading from the subwoofer system is color coded. Connect the red, yellow, green and violet wires from the LF-1 to your receiver/amplifier as shown in Figure 1. If it is necessary to extend the orange and blue wires to reach your speakers, use the supplied wire nuts to join with your existing speaker cables.

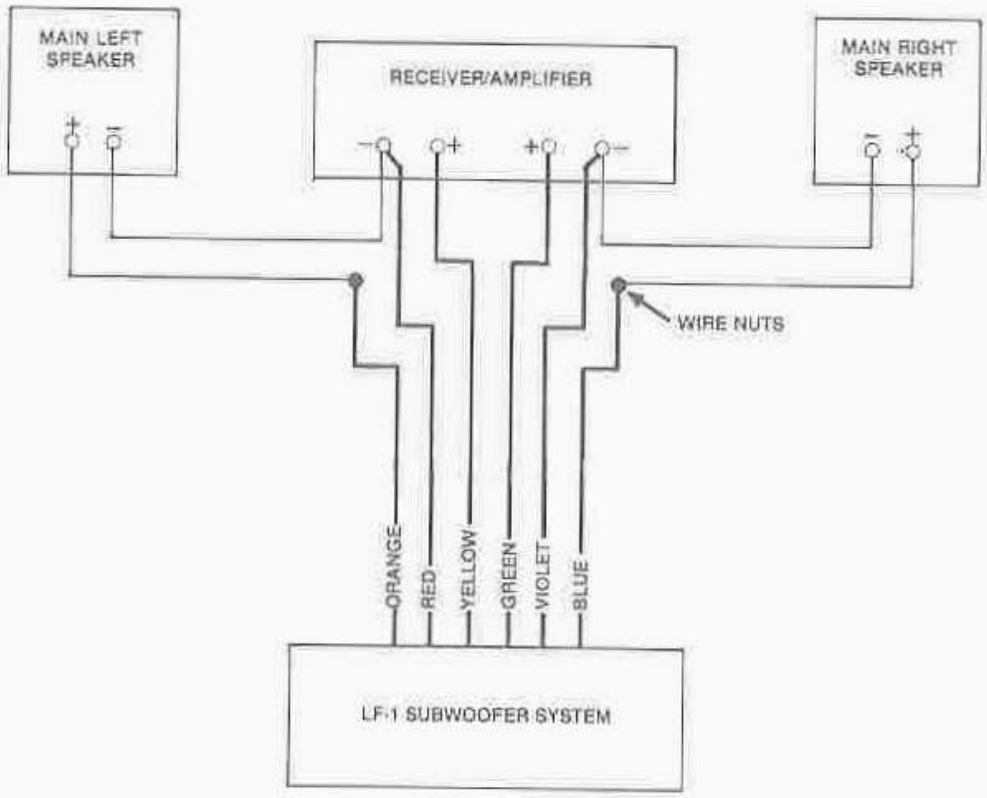
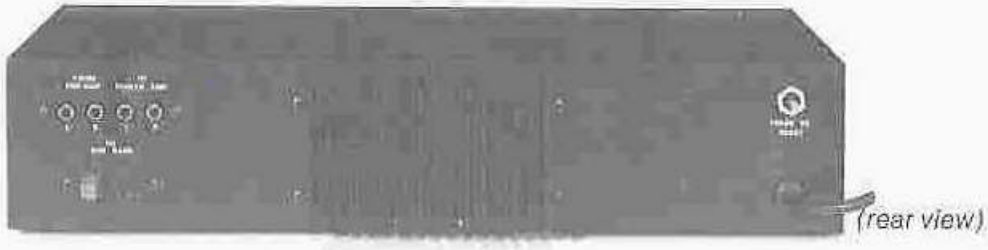


Figure 1. Wiring Connections for LF-1 Subwoofer System

Installation of LF-2 Subwoofer System

Wiring connections for this system are shown in Figure 2. The LF-2 Low Frequency Control System module may be conveniently placed with your tuner and power amplifier units. You may use 18-gauge, stranded, insulated wire (standard lamp cord wire works fine) to connect the control unit to the LF-2 Subwoofer System. If the wire run should be longer than 30 feet, use 16-gauge (or larger) stranded wire, to prevent loss of power between the control unit and the subwoofer system. Use the supplied wire nuts to join these two wires.



(rear view)

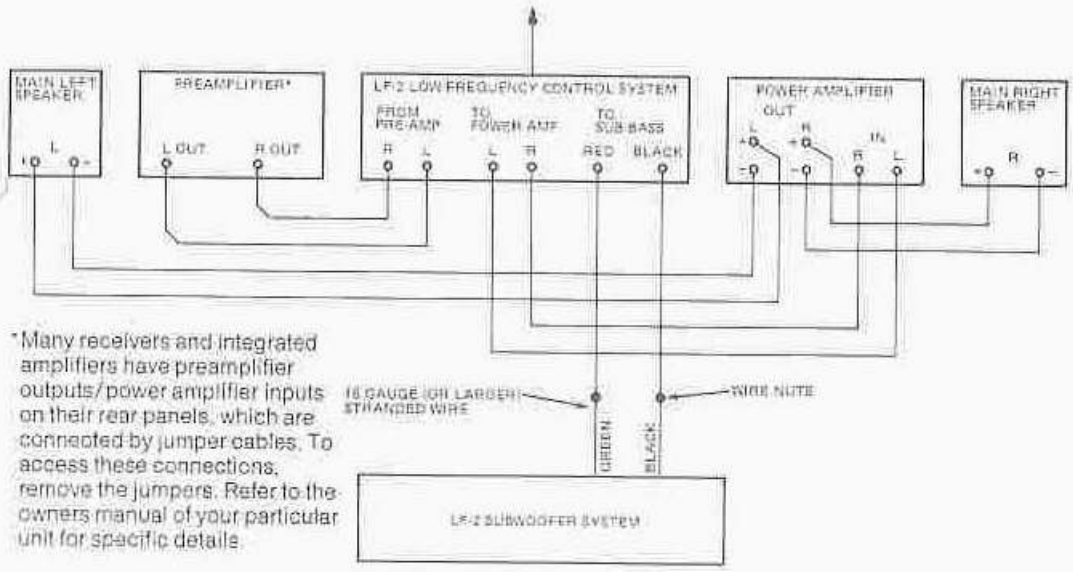


Figure 2. Wiring Connections for LF-2 Subwoofer System

Operation of LF-1 Subwoofer System

1. Connect the LF-1 Subwoofer into your hi-fi system as described in the **installation** section.
2. Operate your hi-fi system, playing music with lots of low bass.
3. Locate the bank of LEVEL pushbuttons on the LF-1 Subwoofer System and press the pushbutton designated '0'. This pushbutton places your subwoofer and main speakers in the maximum efficiency mode.
4. Check that the BYPASS pushbutton is in the outward position. This switch is a 'press-to-operate' and 'press-to-release' pushbutton.

As you listen to your system, you may wish to turn the subwoofer system on and off to experience the effect of added low frequency sound. To do this, press the BYPASS pushbutton to the inward position; this bypasses the crossover network and subwoofer, allowing your main speakers to operate over their full normal frequency range. Return the subwoofer to operation by again pressing the BYPASS pushbutton, releasing it to the outward position.

If you wish to increase the level of low frequency sound, select one of the MAINS LEVEL pushbuttons (−3, −6, or −9); these pushbuttons **decrease the main speakers sound level** in increments of 3 dB, with respect to the subwoofer. If you wish to decrease the level of low frequency sound, select one of the three SUB BASS LEVEL pushbuttons (−3, −6, or −9); these pushbuttons decrease the low frequency sound level in increments of 3 dB, with respect to the main speakers.

NOTE

Press only one LEVEL pushbutton at a time. Although it is possible to press two or more pushbuttons to the depressed position at one time, do not abuse the system in this manner.

The overload indicators of the subwoofer system are provided to warn against overload conditions. If the LEFT CHANNEL OVERLOAD indicator illuminates, your left main speaker and subwoofer are receiving too much power. If the RIGHT CHANNEL OVERLOAD indicator illuminates, your right main speaker and subwoofer are receiving too much power. If either overload indicator illuminates, reduce the volume of your amplifier/ receiver until the indication of overload is extinguished. The overload indicators are part of an automatic protection circuit. An illumination of either indicator is accompanied by approximately 10 dB attenuation in the corresponding channel.

Operation of LF-2 Subwoofer System

1. Connect the LF-2 Subwoofer into your hi-fi system as described in the **installation** section. On the LF-2 LOW FREQUENCY CONTROL SYSTEM, set controls as follows:

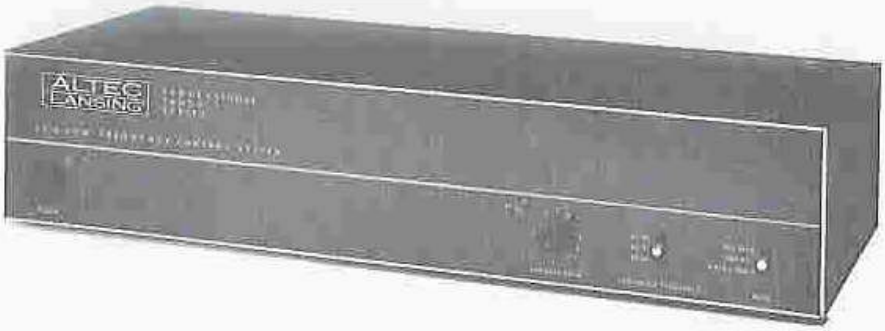
   POWER switch ..... 'on' (upper portion of switch depressed)
   SUB-BASS DRIVE switch ..... fully counterclockwise to '0'
   CROSSOVER
   FREQUENCY switch .....80 Hz
   MODE switch ..... NORMAL

2. Operate your hi-fi system, playing music with lots of low bass.
3. Slowly increase setting of SUB-BASS DRIVE control until the desired listening level for low frequency sound is attained. Observe the OVERLOAD indicator located on the sub-woofer; if the indicator illuminates, reduce setting of the SUB-BASS DRIVE control. The overload indicator is part of an automatic protection circuit. Its illumination is accompanied by 10 dB of attenuation in the subwoofer.

   NOTE

   An overload (PK) indicator also is located on the LF-2 LOW FREQUENCY CONTROL SYSTEM. If this indicator illuminates, reduce the volume of your amplifier/receiver or the SUB-BASS DRIVE control until the indicator is extinguished.

4. Experiment with various settings of SUB-BASS DRIVE control, CROSSOVER FREQUENCY switch, and MODE switch until the most desirable effects are achieved. Refer to the following table for more detailed description of operating options provided by these controls.



POWER switch and Indicator Lamp

Turns on the power to the LF-2 Low Frequency Control System. Push the rocker switch upward to turn on the power, and downward to turn off the power. The Indicator Lamp illuminates while the power is on.

SUB-BASS DRIVE control

Adjusts the volume of the sub-bass loudspeaker. Turn the control clockwise to increase volume.

PK Indicator

Illuminates if excessive signal level causes the LF-2 amplifier to 'clip' the signal, which results in sound distortion. If the PK indicator illuminates, or too frequently flashes on and off, lower the signal level by reducing the volume of your amplifier/receiver or SUB-BASS DRIVE control until the indicator is extinguished.

CROSSOVER FREQUENCY switch

Selects low frequency range of the sub-bass loudspeaker. Frequency ranges for the various switch positions are as follows:

Switch Position	Frequency Range
40 Hz	20 Hz to 40 Hz
60 Hz	20 Hz to 60 Hz
80 Hz	20 Hz to 80 Hz

While operating your hi-fi system with plenty of low bass in the music, move the switch to various positions and select the low frequency range that seems to be best for your particular system. If in doubt as to which switch position sounds best, use the 80 Hz switch position.

MODE switch

Selects the mode of operation for your LF-2 Low Frequency Control System. With the switch at the MAINS ONLY position, the LF-2 Low Frequency Control System is disconnected from your hi-fi system; the main speakers operate in the usual full range frequency mode. With the switch at the NORMAL position, the sub-bass loudspeaker operates over the frequency range selected by the CROSSOVER FREQUENCY switch; the main speakers operate over the sound frequency range **above** the selected low frequency range. With the switch at the DBL BASS position, the sub-bass loudspeaker operates over the frequency range selected by the CROSSOVER FREQUENCY switch, and the main speakers operate in the usual **full range** frequency mode; thus the selected low frequency range receives a 'double-boost' from all speakers.

Service Instructions

CAUTION

No user-serviceable parts inside. Hazardous voltage may be encountered within the chassis. Service information contained on this page is for use only by factory authorized warranty stations and qualified service personnel.

100V, 200V, 220V, 240V, 50/60 Hz Power Connections

Export equipment requires restrapping of the power transformer primary for voltages other than 120V, 50/60 Hz. To change primary power operating voltage of the unit, refer to the conversion chart of Table I and proceed as follows:

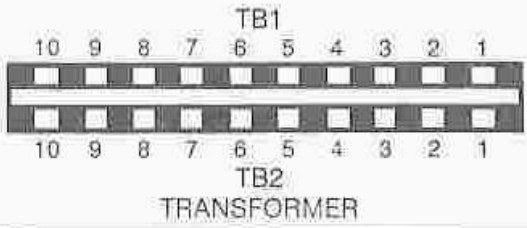
1. Remove screws securing top cover of chassis. Set aside cover.
2. Locate terminal block TB1/TB2 within the chassis.
3. Referring to Table I, disconnect leads of transformer from terminal block TB1/TB2 and reconnect leads in accordance with terminal designations that correspond to the desired operating voltage. Pull each wire firmly to disengage push-on terminal connector. Press each connector firmly to snap in place.
4. Select the appropriate voltage rating label from the voltage rating label strip supplied with the unit. Affix label over previous voltage rating designation on chassis.
5. Install top cover and secure with screws previously removed.

Table I. Primary Power Conversion Chart for 100V, 120V, 200V, 220V, and 240V 50/60 Hz Operation

Transformer Leads	100V	120V	200V	220V	240V
Black	TB2-3	TB2-3	TB2-9	TB2-6	TB2-6
White	TB1-6	TB2-9	TB1-6	TB1-6	TB1-10
Brown	TB2-9	TB1-6	TB1-10	TB1-10	TB1-6
Black/white	TB2-4	TB2-4	TB2-3	TB2-3	TB2-3
White/green	TB1-7	TB2-10	TB2-10	TB2-10	TB2-10
Brown/white	TB2-8	TB1-7	TB2-6	TB2-7	TB2-7

PERMANENT AC POWER CONNECTIONS*

AC Cord (white)	TB2-1
Circuit Breaker	TB1-1
Power Switch	TB1-3
Power Switch	TB1-5
Capacitor C1	TB1-2
Capacitor C1	TB2-2



*Do not make any wiring changes of these wire connections when altering the amplifier for a different primary operating voltage.