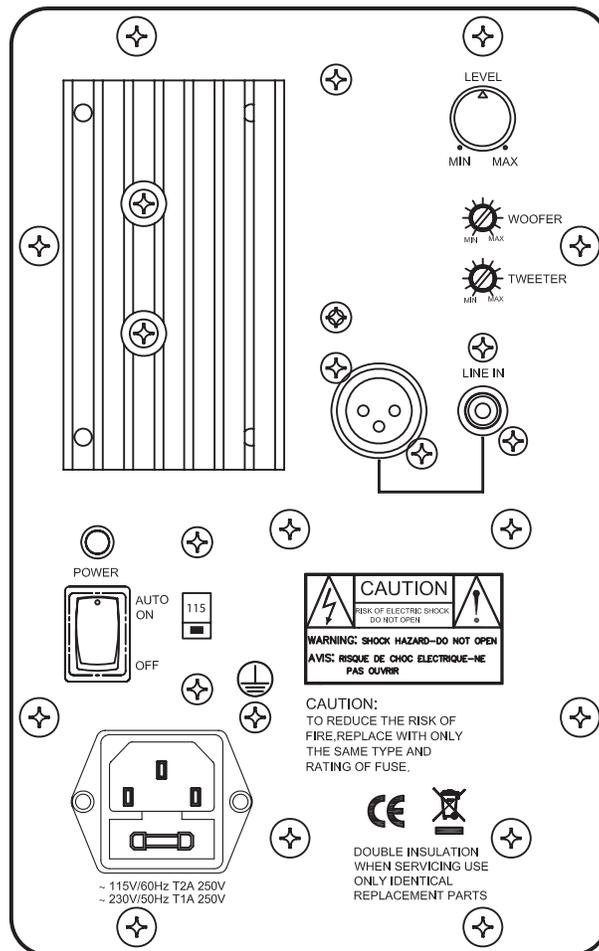




# 80 Watt Bi-Amplifier MCA3545



# User Manual

**Thank you for purchasing the MCA3545 Bi-Amplifier. It was designed and built to provide years of high quality sound reproduction when used in active 2-way loudspeakers for music playback, computer sound systems, and home theater applications. The amplifier includes features like user selectable high pass and low pass filters, independent high and low frequency level controls, rugged independent LM3886TF output devices, and comprehensive internal protection against shorted speaker loads, thermal faults, and overload conditions.**

**Features:**

- User selectable high and low frequency crossover points
- Independent LM3886TF output devices
- Master level control
- Independent high and low level controls
- Switchable 3dB low frequency boost
- 24dB / octave high pass and low pass filters
- Balanced and unbalanced line level input
- Thermal, overload and fuse protection circuitry
- Auto On/Off stand-by circuit
- Operates on 115V or 230V

**Front Panel Controls/Connections**

**1. Power Status LED**

The power LED illuminates when the power switch is in the ON position. After 20 minutes of no signal the unit will go into stand-by mode and the LED will dim.

**2. Power Switch (Off/Auto On)**

The amplifier is manually turned ON or OFF via this switch. When in stand-by mode, (no signal present) the current draw and heat generated is very low, therefore it can be left in the ON position indefinitely. The unit will go into stand-by mode if no signal is present for 20 minutes.

**3. Voltage Selector Switch**

This switch allows the user to select 115V or 230V operation. The unit is set at the factory for 115V operation. When operating at 230V be sure to change the fuse to a slow blow 1A, 250V type fuse.

**4. IEC Power Jack**

This unit features a grounded IEC type power jack. This allows the user to change the power cord depending on the country and voltage used. The IEC jack also houses the fuse holder which uses 5mm x 20mm, slow blow 250V type fuse. The unit is set at the factory for 115V operation and is supplied with a USA type power cord and a 2A slow blow 250V fuse.

**5. Level Control**

This is the “master” level control that adjusts the overall output level (both high and low level simultaneously) of the amplifier.

**6. Woofer Control**

Independently adjusts low frequency output level, to the woofer only. Adjustment range is 0~+5dB.

**7. Tweeter Control**

Independently adjusts high frequency output level, to the tweeter only. Adjustment range is 0 ~ +3dB .

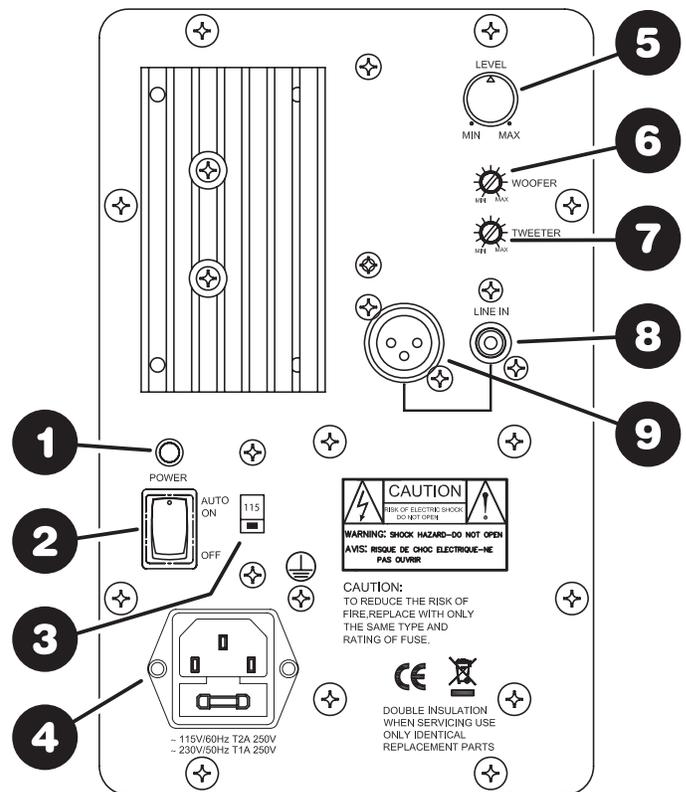
**NOTE:** Independent woofer and tweeter adjustments allow precise speaker component balancing, compensating for different levels in program material and varying room acoustics.

**8. RCA Input**

RCA connection accepts standard 1Vp-p line level signal. This is the unbalanced line level input for connection to standard consumer grade equipment and audio equipment commonly used in home applications

**9. XLR Input**

This is the balanced line level input for connection to mixing consoles and other professional type audio equipment commonly used in studio applications



**Output Connections**

**Speaker Outputs**

There are two sets of speaker outputs located on the rear (PC board side) of the amplifier module. Each color coded red (+) and black (-). The black or negative wire features a .110" push on connector and the red or positive wire uses a .187" push on connector .Output connections listed below assume you are facing the rear of the amplifier module (PC board side), with the power transformer located to the left. Loads on each output lead must have a nominal impedance of 8 ohm or higher.

**Tweeter**

This output connection is located on the far right side of the main amplifier PC board. Note the red and black leads are connected to corresponding tabs on the PC board labeled T+ and T - .

**Woofer**

This output connection is located towards the middle left side of the main amplifier PC board, approximately 2-1/2" from the left edge of the board. Note the red and black leads are connected to corresponding tabs on the PC board labeled W+ and W - .

## Jumper Settings

The MCA3545 has user selectable high and low frequency crossover points which make the amplifier extremely versatile. The unit has 5 crossover points that feature 24dB / octave slope and are selected using jumper type connectors. Fig 1 shows location of crossover points on the preamp board along with the proper method of connecting the jumpers.

**Note:** The factory setting is 3.8KHz for both the tweeter and woofer circuits. Both the high (Tweeter) and low frequency (Woofer) crossover circuits have their own jumpers. This makes it possible for the user to select different crossover points for the “tweeter” verses the “woofer” circuits. The “tweeter” connections are always the two left pins for each crossover point.

**Note:** Only one crossover point should be selected for each circuit (tweeter or woofer).

## Low Frequency Boost

The low frequency circuit also features a switchable boost setting. The boost circuit adds roughly 3dB of gain throughout the low frequency range. Because of this the crossover points for each setting are higher when the boost is activated.

**Note:** The factory setting for the boost circuit is “OFF”. When activating the boost both “Boost” jumpers must be in the “ON” position. The boost circuit only effects the low frequency response.

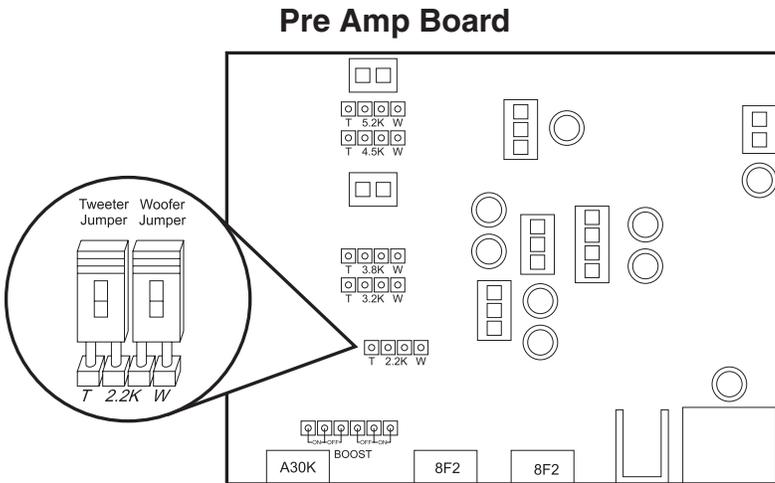
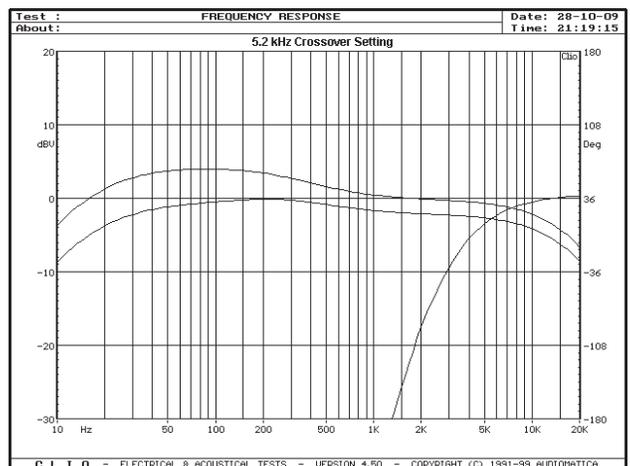
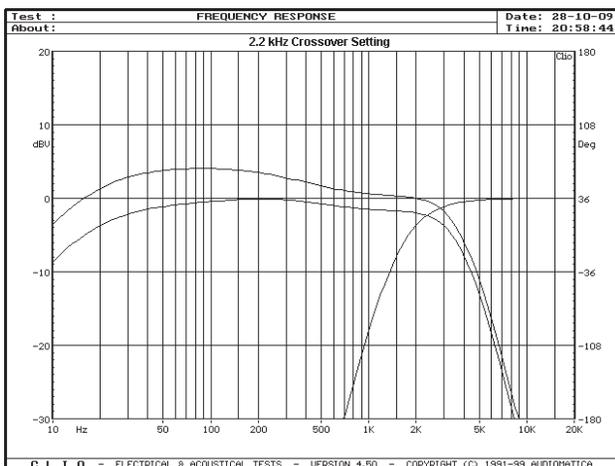
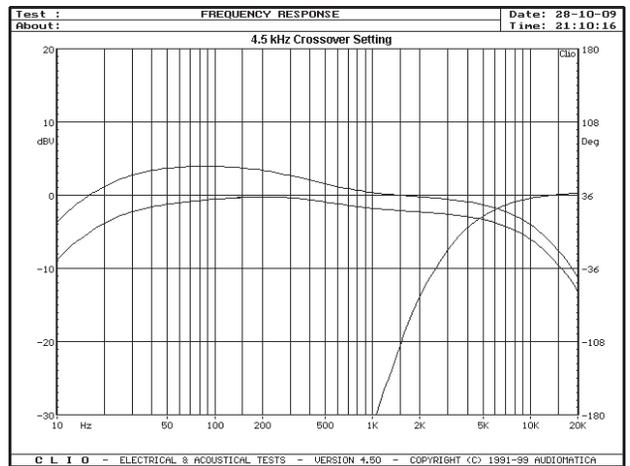
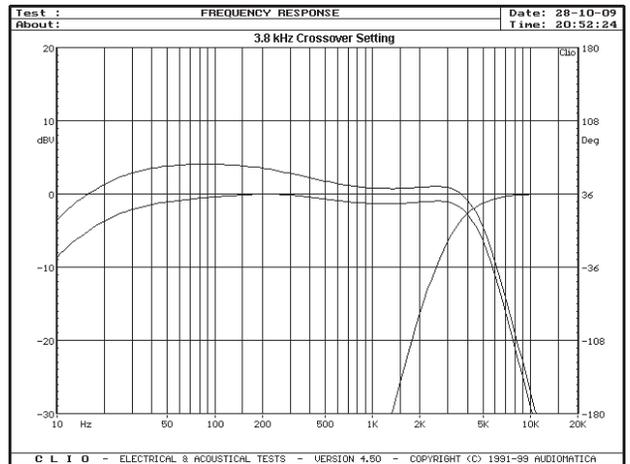
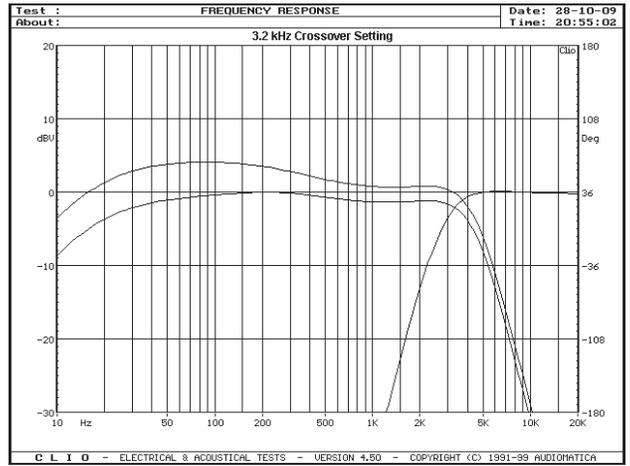


Fig. 1

## Frequency Response Graphs

These graphs show the frequency response of each crossover point for both the low frequency (woofer) and high frequency (tweeter). Each graph also shows the effect of the “boost” circuit for each low frequency crossover point. **Note:** As you can see from the graphs the crossover points are higher when the boost circuit is activated.



## Specifications

### High Frequency Section

Speaker Impedance: 8 ohm  
Power Output: 35W RMS @ 8ohm  
Frequency response: 2.2KHz-20KHz  
THD: Less than 0.05% @ rated power  
S/N Ratio: Greater than 83dB at rated power

### Low Frequency Section

Speaker Impedance: 8 ohm  
Power Output: 45W RMS @ 8ohm  
Frequency response: 15Hz-5.2KHz  
THD: Less than 0.05% @ rated power  
S/N Ratio: Greater than 83dB at rated power  
Bass Boost: 3dB from 20Hz ~ 200Hz

### General

Crossover Slope: 24dB / octave low pass and high pass filters  
Crossover Points 2.2KHz, 3.2KHz, 3.8KHz, 4.5KHz, 5.2KHz,  
Input sensitivity: 1000mV p-p  
Power Requirements: 115AC, 60Hz or 230V, 50Hz  
Power Stand-By: 0.7W consumption  
Overall Dimensions: 8 5/8" (H) x 5 3/8" (W) x 4-1/2" (D)  
Required Opening: 7 3/4" (H) x 4 5/8" (W), 3-1/4" (D)

### Warranty Information

Dayton Audio® products are constructed by industry experts, and are thoroughly tested before shipment. Dayton Audio® products are warranted for the period of one year. This warranty is limited to manufacturer defects, either in materials or workmanship. Dayton Audio® is not responsible for any consequential or inconsequential damage to any other unit or component or the cost for installation or extraction of any component of the audio system. In the rare case of a product failure, please contact your place of purchase or call our Customer Support Department at (937) 743-8248.

### Warranty Limitations

There are no other warranties, either express or implied, which extend the foregoing, and there are no warranties of merchantability or fitness for any particular purpose. The warranty will not cover incidental or consequential damage due to defective or improper use of products. This includes but is not limited to burnt voice coils, overheating, bent frames, holes in the cone, or broken lead wires.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Non-Warranty Service: If non-warranty service is required, the product may be sent to the Company for repair/replacement, transportation prepaid, by calling (937) 743-8248 for details, complete instructions, and service fee charges.