



DOD

SR835 Crossover

Owner's Manual

 A Harman International Company



These symbols are internationally accepted symbols that warn of potential hazards with electrical products. The lightning flash means that there are dangerous voltages present within the unit. The exclamation point indicates that it is necessary for the user to refer to the owners manual.

These symbols warn that there are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service.

Disconnect the unit during storms to prevent damage.

U.K. Mains Plug Warning

A molded mains plug that has been cut off from the cord is unsafe. Discard the mains plug at a suitable facility. **Never under any circumstances should you insert a damaged or cut mains plug into a 13 amp power socket.** Do not use the mains plug without the fuse cover in place. Replacement fuse covers can be obtained from your local retailer. Replacement fuses are 13 amps and **MUST** be ASTA approved to BS1362.

Safety Instructions

Notice for customers if your unit is equipped with a power cord.

Warning: This appliance must be earthed.

The cores in the mains lead are colored in accordance with the following code:

Green and Yellow - Earth Blue - Neutral

Brown - Live

As colors of the cores in the mains lead of this appliance may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

- The core which is colored green and yellow must be connected to the terminal in the plug marked with the letter E, or with the earth symbol, or colored green, or green and yellow.
- The core which is colored blue must be connected to the terminal marked N, or colored black.
- The core which is colored brown must be connected to the terminal marked L, or colored red.

This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. If the attachment plug needs to be changed, refer servicing to qualified service personnel who should refer to the table below. The green/yellow wire shall be connected directly to the units chassis.

CONDUCTOR		WIRE COLOR	
		Normal	Alt
L	LIVE	BROWN	BLACK
N	NEUTRAL	BLUE	WHITE
E	EARTH GND	GREEN/YEL	GREEN

Warning: If the ground plug is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultaneously.

Warning

For your protection, please read the following:

Water and Moisture: Appliances should not be used near water (e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.) Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

Power Sources: The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

Grounding or Polarization: Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

Power Cord Protection: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Servicing: To reduce the risk of fire or electrical shock, the user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

For units equipped with externally accessible fuse receptacle: Replace fuse with same type and rating only.

Electromagnetic Compatibility

Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.
- Use only shielded interconnecting cables.
- Operation of this unit within significant electromagnetic fields should be avoided.

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INTRODUCTION

Congratulations, and thank you for your purchase of the DOD SR835 Crossover. The SR835 is a high quality sound reinforcement tool capable of providing your PA or sound reinforcement system with speaker protection and the increased clarity and efficiency that results when bi-amping, or tri-amping.

So what is bi-amping, and tri-amping? A bi-amped system means you are using two power amps to drive separate ranges of frequencies. The crossover is doing a two way split, separating the high frequencies from the low frequencies and directing the two ranges to different outputs. One amp receives the low frequencies, and powers your bass speakers. The other power amp receives the high frequencies and powering the horns, or high frequency speakers. Tri-amping uses three power amps because the crossover is separating the lows, mids, and highs from each other.

The SR835 is capable of 2 way splits (bi-amp) in stereo, and three way splits (tri-amp) in mono. The SR835 uses Butterworth state variable filters providing an 18 dB per octave slope for the selected crossover frequency. This means that if you have selected the crossover frequency to be 500Hz for instance, the signal coming out of the low frequency output will lose 18 dB of signal for every octave above 500 Hz. Likewise, the high frequency output will lose 18 dB of signal for every octave below 500 Hz.

This Owner's Manual is your guide to understanding how to get the most out of the SR835. Please read it carefully and familiarize yourself with the controls on the SR835. By doing so, you will be assured to increase the overall efficiency of your system for years to come.

Your SR835 was carefully assembled and packaged at the factory. Before continuing any further, please make sure the following items have been included:

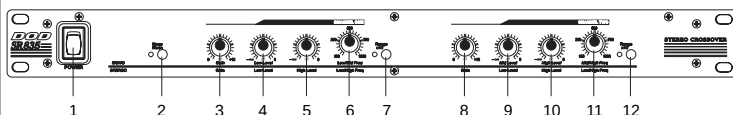
- I SR835**
- I Owners Manual**
- I Warranty Card**
- I Detachable Power Cord**

Please take a moment to fill out the warranty card. It is your safe guard in the unlikely event that your unit requires servicing. Please save all packing materials and use these materials to return the product if servicing is required.

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FRONT PANEL



1. Power Switch - Used to engage or disengage the power to the SR835.

2. Mono/Stereo Switch - This switch configures the SR835 as two independent channels of 2 way splits, or one channel with a 3 way split. When the switch is in and the LED is lit, the SR835 is in Mono mode.

3. Gain - This is the input level for Channel 1 in Stereo mode, and is the master input level in Mono mode.

4. Low Level - This knob controls the volume for the low frequency output in both Stereo and Mono modes.

5. High Level - This knob controls the volume for the Channel 1 high frequency output in Stereo mode, and has no function in Mono mode.

6. Frequency - This knob sets the crossover frequency separating the lows from the mids in Mono mode, and the lows from the highs for Channel 1 in Stereo mode.

7. Range Switch - When depressed, this switch will multiply the selected crossover frequency by 10. The LED will light indicating that the markings on the Frequency knob (6) should be multiplied by 10.

8. Channel 2 Gain - This is the input level for Channel 2 in Stereo mode. In Mono mode this knob has no function.

9. Low/Mid Level - This knob controls the volume for the Channel 2 low frequency output in Stereo mode, and the mid-range frequency output volume in Mono mode.

10. High Level - This knob controls the volume for the Channel 2 high frequency output in Stereo mode, and the high frequency output in Mono mode.

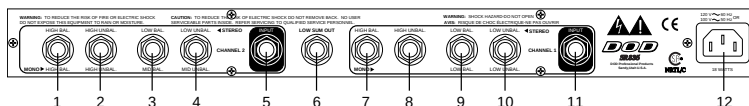
11. Frequency - This knob sets the crossover frequency separating the mids from the highs in Mono mode, and the lows from the highs for Channel 2 in Stereo mode.

12. Range Switch - When depressed, this switch will multiply the selected crossover frequency by 10. The LED will light indicating that the markings on the Frequency knob (11) should be multiplied by 10.

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REAR PANEL



1. High Bal - This is a TRS balanced output for the high frequencies in both Mono mode and Channel 2 in Stereo mode.

2. High Unbal - This is an unbalanced out put for the high frequencies in both Mono mode and Channel 2 in Stereo mode.

3. Low/Mid Bal - This is a TRS balanced low frequency output for Channel 2 in Stereo mode and a TRS balanced mid range frequency output in Mono mode.

4. Low/Mid Unbal - This is an unbalanced low frequency output for Channel 2 in Stereo mode and an unbalanced mid range frequency output in Mono mode.

5. Channel 2 Input - This is a TRS balanced input for Channel 2 in stereo mode. This jack has no function in Mono mode.

6. Low Sum Output - This is a mono output containing the sum of Channel 1 and Channel 2 low frequencies.

7. High Bal - This is a TRS balanced high frequency output for Channel 1 in Stereo mode. This jack has no function in Mono mode.

8. High Unbal - This is an unbalanced high frequency output for Channel 1 in Stereo mode. This jack has no function in Mono mode.

9. Low Bal - This is a TRS balanced low frequency output in both Mono mode and Channel 1 in Stereo mode.

10. Low Unbal - This is an unbalanced low frequency output in both Mono mode and Channel 1 in Stereo mode.

11. Channel 1 Input - This is a TRS balanced input for Channel 1 in stereo mode and the master input in mono mode.

12. Power Receptacle - Connect the provided power cord from this receptacle to an AC outlet.

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INSTALLATION

Install the crossover in a rack with the provided rack screws. Route the AC power cord to a convenient power outlet away from audio lines. The unit may be turned on and off using the front panel power switch. Since the units draw a relatively small amount of current during idle, they can be left on continuously.

DOD crossovers generate very little heat during operation and thus do not need to be specially ventilated or cooled. The units should not, however, be subjected to high temperatures for extended periods. Although the unit's chassis is shielded against radio frequency and electromagnetic interference, extremely high RF and EMI fields should be avoided.

ATTENTION: Use only one Channel output connector for each frequency range at a time. Using the balanced and unbalanced outputs for the same frequency range at the same time can unbalance balanced lines, cause phase cancellation, short a conductor to ground, or cause damage to other equipment connected to the crossover.

FOR BALANCED 1/4 " TRS PHONE PLUG CONNECTION - Wire the connectors as follows:

Phone Plug	Connection
tip	: high
ring	: low
sleeve	: ground

FOR 1/4" MONO PHONE PLUG CONNECTION:

Phone Plug	Connection
tip	: high
sleeve	: ground

Once the crossover has been installed and adjusted for the required cross frequencies, and levels, an optional security panel can be installed to keep unauthorized persons from changing settings.

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BI-AMP APPLICATIONS

For bi amp applications, the SR835 must be set to the Stereo mode regardless of whether you are running in stereo or mono. The Stereo mode configures the SR835 as two individual channels, each providing a two way split. If you are running your sound system in stereo, both channels would be used: one for the left, and one for the right. If you are running in mono, only one of these channels would be used but the SR835 would still be set to Stereo mode in order to achieve a two way split. The following procedure outlines the steps for running a bi-amped system in mono. Begin these steps with the power to the SR835 turned off.

1. Make sure the Mono Mode switch on the front panel of the SR835 is in the "out" position. The LED next to this switch should be off.
2. Turn the Channel I Gain knob to 0 (fully counterclockwise).
3. Set the Channel I Low and High Level knobs to - infinity (fully counterclockwise clockwise).
4. Connect from the output of the mixer or source signal to the Channel I input of the SR835.
5. Connect from the Channel I Low Bal (for balanced lines), or Low Unbal (for unbalanced lines) to the input of the power amp driving the bass speakers.
6. Connect from the Channel I High Bal (for balanced lines), or High Unbal (for unbalanced lines) to the input of the power amp driving the horns or high frequency speakers.
7. Consult the manufacturers specifications for your speakers to determine the proper crossover frequency. This will usually be listed as the frequency response or frequency range of your high frequency speakers or horns. Set the Channel I Frequency knob slightly higher than the lowest specified frequency.

Note: The markings on the SR835 Frequency knob range from 100 Hz. to 1000 Hz.. The push button switch to the left of the Frequency knob will multiply these frequencies by 10 extending the range from 1000 Hz. to 10,000 Hz..

8. Apply power to your mixer, then to the SR835, and finally to your power amps.

Begin sending signal through the system. Gradually turn up the High Level first and confirm correct wiring. Turn up the Low Level to balance the tonality. Adjust the Gain knob for appropriate signal strength.

Note: This procedure will also apply to Stereo bi-amping. Simply repeat steps 2 through 7 for Channel 2.

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TRI-AMP APPLICATIONS

For tri amp applications, the SR835 must be set to the Mono mode. The Mono mode configures the SR835 as one channels providing a three way split. If you are running your sound system in stereo, you would need two SR835s in order to run a Stereo tri amp configuration. The following procedure outlines the steps for running a tri amp system. Begin with the power turned off.

1. Make sure the Mono Mode switch on the front panel of the SR835 is in the "in" position. The LED next to this switch should be on.
 2. Turn the Channel 1 Gain knob to 0 (fully counterclockwise).
 3. Set the Channel 1 Low and the Channel 2 Mid and High Level knobs to - infinity (fully counterclockwise).
 4. Connect from the output of the mixer or source signal to the Channel 1 input of the SR835.
 5. Connect from the Channel 1 Low Bal (for balanced lines), or Low Unbal (for unbalanced lines) to the input of the power amp used to drive the bass speakers.
 6. Connect from the Channel 2 Mid Bal (for balanced lines), or Mid Unbal (for unbalanced lines) to the input of the power amp used to drive the mid range speakers.
 7. Connect from the Channel 2 High Bal (for balanced lines), or High Unbal (for unbalanced lines) to the input of the power amp used to drive the horns or high frequency speakers.
 8. Consult the manufacturers specifications for your speakers to determine the proper crossover frequency for your mid range speakers. This will usually be listed as the frequency response or frequency range. Set the Channel 1 Frequency knob slightly higher than the lowest specified frequency for the mid range speakers.
 9. Consult the manufacturers specifications for your speakers to determine the proper crossover frequency for your high frequency speakers or horns. This will usually be listed as the frequency response or frequency range. Set the Channel 2 Frequency knob slightly higher than the lowest specified frequency.
- Note:** The markings on the SR835 Frequency knobs range from 100 Hz. to 1000 Hz.. The push button switch to the left of the Frequency knob will multiply these frequencies by 10 extending the range from 1000 Hz. to 10,000 Hz..
10. Apply power to your mixer, then to the SR835, and finally to your power amps.

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Begin sending signal through the system. Gradually increase the High, then Mid, and finally Low Levels in order checking for correct wiring. Then balance the tonality of the source signal. You may also need to increase the Gain if a stronger signal is required.

STEREO USING A MONO SUB-WOOFER

The setup procedure is the same as for the stereo bi amp application, except that instead of connecting both low frequency outputs, connect only the Low Frequency Sum output to the low frequency amplifier. Set both Channel 1 and Channel 2 Low Level controls to the same level to ensure that both controls contribute the same amount of signal to the Low Frequency Sum output.

MAINTENANCE AND SERVICING

There are NO user serviceable parts inside the units. Opening the chassis will void the warranty. All service and repair must be performed by the factory or an authorized service center for the warranty to remain in service.

Should a problem arise with the equalizer, please contact your authorized DOD Electronics dealer for return/repair procedures.

SPECIFICATIONS

Frequency Response: 10Hz. to 22kHz +0/-0.5 dB.

THD+Noise: Less than 0.006%.

Signal-To-Noise Ratio: Greater than -90 dB

Filter Type: 18 dB/octave Butterworth state-variable filters.

Crossover Frequencies -

Stereo: LOW/HIGH: 100 Hz to 10 kHz in two ranges. -

Mono: LOW/MID 100 Hz to 10 kHz in two ranges. MID/HIGH 100 Hz to 10 kHz in two ranges.

Input Impedance: 20 k Ω unbalanced, 40 K Ω balanced.

Maximum Input Level: +21 dBu (ref.: 0.775 Vrms).

Output Impedance: 51 Ω unbalanced/102 Ω balanced.

Maximum Output Level: +21 dBu (ref.: 0.775 Vrms).

Dimensions: 19"(L) x 5"(W) x 1.75"(H).

Weight: 4.38 lbs.



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DOD WARRANTY

1. The warranty registration card must be mailed within ten days after purchase date to validate this warranty.
2. DOD warrants this product, when used solely within the U.S., to be free from defects in material and workmanship under normal use and service.
3. DOD Electronics liability under this warranty is limited to repairing or replacing defective materials that show evidence of defect, provided the product is returned through the original dealer, where all parts and labor will be covered up to a period of three (3) years. The company shall not be responsible for any consequential damage as a result of the products use in any circuit or assembly.
4. Proof of date of purchase is considered to be the burden of the consumer.
5. DOD reserves the right to make changes in design or make improvements upon this product without incurring any obligation to install the same on PRODUCTS PREVIOUSLY MANUFACTURED.
6. The foregoing is in lieu of all other warranties, either expressed or implied, and DOD neither assumes nor authorizes any person to assume for it any obligation or liability in connection with the sale of this product. In no event shall DOD or its dealers be liable for special or consequential damages or from any delay in the performance of this warranty due to causes beyond their control.

DECLARATION OF CONFORMITY

Manufacturer's Name: DOD Electronics Corporation

Manufacturer's Address: 8760 S. Sandy Parkway
Sandy, Utah 84070, USA

declares that the products:

Product Name: SR835

Product Options: All

conform to the following product specifications:

Safety: EN 60065 (1993)
IEC65 (1985) with Amendments 1,2,3

EMC: EN 55013 (1990)
EN 55020 (1991)

Supplementary Information:

The products herewith comply with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC as amended by directive 93/68/EEC.

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