CARLSBRO

INSTRUOTION GUIDE

SHERWOOD SIGNATURE / CLASSIC

Electro Acoustic Guitar Combo

INTRODUCTION

Thank you for purchasing a Carlsbro Sherwood guitar amplifier. With care it will provide many years of reliable service. In order to obtain the best from the unit, please take a little time to read this guide thoroughly.

The Sherwood is a versatile twin channel amplifier primarily designed for the acoustic guitarist. Channel one features an ultra-high impedance input suitable for all types of acoustic and electric guitar; whereas channel two has a low impedance balanced input (suitable for a microphone) and high impedance unbalanced input (suitable for a tape recorder or drum machine output). Both the Signature and Classic feature a new design, high fidelity power amplifier with switchable high frequency horn for crystal clear, natural reproduction of the acoustic guitar's warm and bright sound.

One of the principal features of your Sherwood amplifier is the phase invert facility. When recording acoustic guitar, the best sounds are often obtained when a microphone is used in conjunction with the guitar's pickup. However, when two sound sources from the same instrument are mixed, radically different results can be obtained depending upon the phase relationship between them. By providing a phase invert facility, the Sherwood enables you to select an in or out of phase sound for your recordings.

MAIN FEATURES

- Ultra-high impedance input suitable for piezo transducers, passive and active acoustic and electric guitars
- Phase inversion switch for feedback cancellation and phase correction when recording with microphones
- Powerful active three band EQ with parametric mid control (channel 1)
- Balanced XLR line output
- Switchable high frequency horn
- Inputs for high (unbalanced) and low (balanced) impedance microphones and other sound sources (channel 2)
- Variable reverb for each channel (Sherwood Classic)
- Selectable reverb for each channel (Signature)
- Versatile three band active EQ on channel 2 (Sherwood Classic)
- Effects loop

UNPACKING AND INSPECTION

After unpacking the unit please inspect it carefully. If the unit appears to have been damaged during transit, return it to the dealer from whom it was purchased in its original packaging.

Carlsbro Electronics Limited can not accept any responsibility for damage to any product caused by the use of non-approved packing.

GENERAL INFORMATION

Voltage Requirements

The unit is factory set to operate from the nominal mains voltage stated on the rear panel.

For 230V the working range is:

207V to 253V 50-60Hz AC

For 115V the working range is:

104V to 126V 50-60Hz AC

The mains lead supplied should be plugged into the 3 pin IEC mains socket located on the rear panel of the equipment. If the AC mains plug fitted to the lead supplied with this equipment is not suitable for your type of AC outlet sockets, it should be changed to an AC mains lead, complete with moulded plug, to the appropriate type. If this is not possible, the plug should be cut off and a correct one fitted to suit the AC outlet.

PLEASE NOTE:

THE SEVERED PLUG MUST BE DESTROYED TO AVOID A POSSIBLE SHOCK HAZARD SHOULD IT BE INSERTED INTO AN AC MAINS SOCKET ELSEWHERE.

Care must be taken in wiring the plug and the following colour code must be strictly observed:

GREEN & YELLOW	: EARTH
BROWN	: LIVE
BLUE	: NEUTRAL

IMPORTANT: THIS UNIT MUST BE EARTHED!

Fuse Replacement

Should the mains fuse need replacing, it is located on the rear panel below the IEC mains power input socket.

Before replacing the fuse:

FIRST DISCONNECT THE AMPLIFIER FROM THE MAINS SUPPLY

and then replace the fuse with the same type and rating stated on the rear panel.

Power On Indicator

The LED power indicator on the front panel will glow immediately the amplifier is supplied with the correct AC mains voltage and switched on. When switched off, the LED will extinguish gradually.

Front Panel Facilities

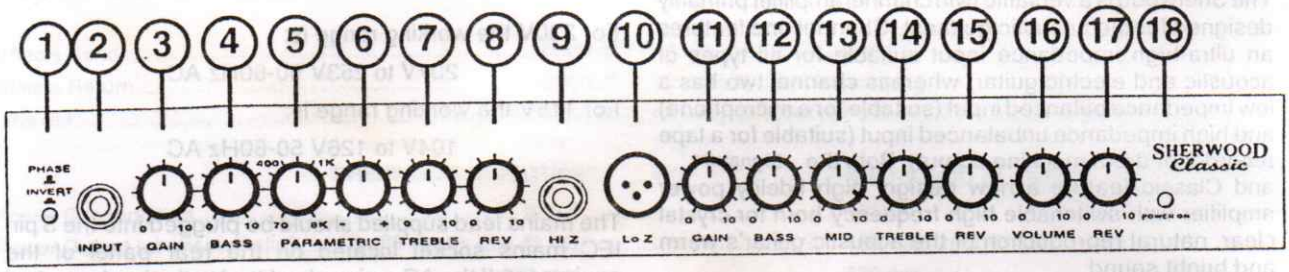
1) PHASE INVERSION SWITCH: Depressing this switch inverts the phase of the input to the amplifier. By inverting the phase of the amplifier, any acoustic feedback from the amp back to the guitar can be minimised (dependent upon the distance of the player from the amp). Try this switch in both positions to discover the one that enables the maximum volume before feedback occurs.

2) INPUT: This is an ultra-high impedance input equally suited to piezo transducers, passive pickups, electric guitars and guitars with an onboard battery powered pre-amp.

10) LOW Z: This is a balanced XLR input suited to low impedance microphones. The wiring convention is as follows: pin 1 = screen, pin 2 = anti phase, pin 3 = phase.

11) GAIN: This control sets the input gain of channel 2. Adjust the gain (in conjunction with the master volume control) for a clean, undistorted sound with the minimum of background noise.

12) BASS: This control determines the low frequency content of the sound.



3) GAIN: Sets the input gain of channel 1. Adjust this knob in conjunction with the main volume and tone controls to give a reasonable volume level without distortion.

4) BASS: This control determines the amount of bass in the sound.

5) FREQUENCY: This control sets the frequency at which the mid control operates. It can be adjusted from the lowest 'E' a guitar can produce (about 80Hz) right up to 8KHz (to enhance the higher harmonics for a more 'sparkling' sound).

6) CUT/BOOST: Determines the amount of cut or boost at the frequency selected by control (5). Use these two controls together to obtain the best sound. Note that dramatic settings will sound unrealistic and that cut generally sounds more natural than boost.

7) TREBLE: This control determines the amount of treble in the sound.

8) REVERB: This control determines the amount of reverb required for channel 1. On the Signature, this switch selects the reverb effect for channel 1.

9) HI Z: This is a high impedance unbalanced input suitable for connection to high Z microphones, tape machines or a drum machine output.

13) MID (CLASSIC ONLY): This control determines the amount of mid-range in the sound of channel 2. Setting this control slightly below its halfway point should increase the clarity of channel 2 when used for vocals.

14) TREBLE: This control determines the high frequency content of the sound.

15) REVERB: This control determines the amount of reverb required for channel 2. On the Signature, this switch selects the reverb effect for channel 2.

16) MASTER VOLUME: This is the amplifier's main volume control. Adjust the master volume in conjunction with the individual channel gain controls for a clear, undistorted sound with the minimum of background noise. Always ensure that the volume control is set to '0' when switching the amplifier on or off.

17) MASTER REVERB: This control sets the overall amount of reverb in the sound. On the Sherwood Classic, start off by setting this control to its halfway point and adjust the individual channel reverb controls for a moderate sound. Should the amount of reverb available be insufficient, increase the setting of the master reverb.

18) POWER ON LED: This red LED will illuminate when the unit is supplied with the correct AC mains voltage and switched on.

Rear Panel Facilities

1) POWER SWITCH: This switch turns the AC mains power to the unit on and off.

NOTE: Always set the master volume control to '0' or minimum before switching the unit on or off.

5) LINE OUT: This is a balanced XLR line level output suitable for connection to a mixing desk, PA or recording setup.



2) IEC INPUT SOCKET: Connect the supplied IEC mains lead here. Should the mains fuse need replacing, it is located below the mains input. Replace the fuse only with one of the same type and rating.

NOTE: ALWAYS DISCONNECT THE UNIT FROM THE MAINS SUPPLY **BEFORE** CHANGING THE FUSE.

3) SEND AND (4) RETURN: Connect any effects processor (such as reverb, delay, chorus etc) between the effects send and return sockets. The signal level that appears at the send socket can be adjusted by the individual channel input gain controls.

6) FOOT SWITCH: Connecting a Carlsbro FSE-2 type foot switch to this socket will enable the reverb effect to be remotely switched on and off.

7) HORN SELECT: This switch selects the built in high frequency horn. When selected, the sound will be brighter with a more 'sparkling' high frequency content suitable for acoustic guitars and vocals. You may wish to turn the horn off if using the amplifier with an electric guitar for a warmer, more traditional sound.

Electro-Acoustic Techniques

There are several types of electro-acoustic guitar: those with pickups and/or piezo transducers, those with a battery powered pre-amplifier or simple passive transducers. The Sherwood has been designed with all of these guitars in mind, including conventional electric guitars.

Because of the construction of an acoustic guitar, there are several panel and body resonances which, when vibrated by the strings, amplify their sound and give the guitar its familiar timbre. When the guitar is electrified, however, these resonances become frequencies at which the guitar is prone to acoustic feedback from the speaker of the amplifier. The Sherwood amplifier is provided with two simple means of minimising this effect. By 'finding' the frequency of the feedback using the mid sweep control and then cutting the response at this frequency using the parametric mid control, a single frequency of feedback can be eliminated.

Feedback occurs when sound from the amplifier arrives at the guitar in phase with the vibration of the strings or body. The frequency of feedback is dependent upon the distance of the guitar from the amplifier - by moving half a wavelength of the feedback frequency, that feedback can be eliminated! The phase inversion switch is provided to aid with feedback elimination in this manner. It is not important to understand why this helps; simply try the switch in both positions each time you use the amp (or move the guitar) and use the one that sounds best. When using the guitar close to the amplifier, you may find that the amp sounds different dependent upon whether you have the switch in or out. This is not the case: what you are hearing is the sum (or difference) of the amplifier's output and the guitar's actual acoustic sound.

Technical Specifications

CHANNEL 1:

Input impedance	>10MΩ (AC boot-strapped input stage)
Sensitivity (gain at max)	35mV rms (nominal for full power output at 1KHz)
Bass	±14dB @ 70Hz (shelving) 80Hz — 8KHz
Cut/Boost	±20dB (2nd order bandpass, Q=1)
Treble	±14dB @ 15KHz (shelving)

CHANNEL 2:

Input impedance (Hi Z)	100KΩ
Input impedance (Lo Z)	1K5Ω unbalanced 3KΩ balanced
Sensitivity (gain at max)	1.2mV rms (Lo Z), 8.8mV rms (Hi Z) (nominal for full power at 1KHz)
Bass	±12dB @ 100Hz (shelving)
Mid	±10dB @ 350Hz (1st order bandpass, (Sherwood Classic only))
Treble	±12dB @ 10KHz (shelving)

Effects Send	0dBu (0.775V rms) @ 100Ω (nominal)
Effects Return	0dBu (0.775V rms) @ 100KΩ (nominal)
Line out	0dBu (0.775V rms) @ 100Ω per side (XLR balanced output)

	SHERWOOD SIGNATURE	SHERWOOD CLASSIC
Power Consumption	93VA	161VA
Power Output (at onset of clip)	85 watts rms @ 4Ω	100 watts rms @ 4Ω
Width	490 mm	520 mm
Height	475 mm	550 mm
Depth	275 mm	305 mm
Weight	16 kg	21 kg

Carlsbro Electronics Limited are constantly seeking ways to improve the specification, design and production of its equipment and alterations take place continually. Whilst every effort has been made to produce up to date literature, the specifications listed should not be regarded as an accurate guide to specifications of the current unit. Carlsbro Electronics Limited reserve the right to alter the specifications without prior notice.

SERVICE

All possible care has been taken to ensure every CARLSBRO product is satisfactory and reliable. Each unit has been thoroughly examined and tested before leaving the factory. If correctly used for the purpose for which it was designed, it will give good service for many years. In the case of a technical problem, please go through the following procedure:

(a) Contact the dealer from whom the unit was purchased and describe the symptoms of the fault. The dealer should be the specialist in your area best able to service your equipment and may be able to resolve your problem immediately.

(b) If it is necessary to return the equipment to the national distributor for your country, it is most important that you use the original packaging in order to protect the unit from physical damage. CARLSBRO or the distributor cannot be held responsible for damage to the unit if it is not properly packaged. Include a note with the unit giving details of the symptoms of the problem and give your name and address.

The unit does not contain any user serviceable parts. Always consult your dealer first if any problem arises, or write directly to your CARLSBRO distributor quoting the serial number and date of purchase of the equipment.

SPARES

In order to maintain the appearance and maximise the value of the product, CARLSBRO produce a wide range of spares and accessories. All items can be purchased through your local dealer, or in the event of difficulty by contacting the Sales office at the address below.

COMPLIANCE

Products relating to this guide are designed to comply with the following standards:

BSEN50082-1:1992

BSEN55013:1990

BSEN60065

CE

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