

FLEX 15™

Owner's Manual

Revision 1.0

Description

The FLEX 15 is a 15 watt (Triode) or 25 watt (Ultralinear) vacuum tube guitar amplifier. The circuit configuration is Class A single-ended. There are 2 channels and an effects loop, all footswitchable. The tube-buffered effects loop is both series and parallel with send and return level controls and a wet/dry mix control.

Inputs and Outputs

INPUT: This ¼" jack is used to connect to a guitar or the output of an effects pedal.

SPEAKERS: These three ¼" jacks are used to connect to a speaker cabinet. The Rock Block can drive speakers of 4, 8 or 16 ohms impedance. Only one speaker jack should be used at a time.

SEND: This ¼" jack is used to connect to the input of effects pedals or rackmount effects.

RETURN: This ¼" jack is used to connect to the output of effects pedals or rackmount effects. If no cable is connected to the RETURN jack then the SEND is internally connected to the RETURN.

FOOTSWITCH: This ¼" jack is used to connect to the dual footswitch box. The footswitches control the channel selection and the effects loop.

AC POWER: This jack is used to connect a 3-prong power cord.

Controls

POWER: This is the ON/OFF power switch. Push to the up position to powerup the tube heater supply.

STANDBY: This is the Standby switch. Push to the up position to powerup the amp.

GAIN: These knobs are used to control the gain of the preamp for each channel.

BRIGHT: These knobs are used to boost the upper treble response for each channel.

CHANNEL: This switch is used to select the channel. It is nonfunctional if the footswitch is connected.

BASS FREQ: These 3-way switches are used to set the bass rolloff frequency for each channel.

BASS LEVEL: This knob is used to set the bass level for both channels.

BOOST: This 3-way switch is used to boost the gain of the amplifier for both channels.

MID (CH1): This 3-way switch is used to set the mid frequency level for channel 1.

MID (CH2): This 5-position rotary switch is used to set the mid frequency level for channel 2.

TREBLE: This knob is used to set the treble frequency level for both channels..

EFFECTS LOOP: This switch is used to enable/disable the effects loop. It is nonfunctional if the footswitch is connected.

VOL: These knobs are used to set the master volume for each channel.

SEND: This knob is used to set the level for the SEND output.

RETURN: This knob is used to set the level for the RETURN input.

MIX: This knob is used to control the amount of the effects loop signal mixed into the direct signal.

OUTPUT POWER: This switch is used to select the maximum output power (5W or 15W). In 5W mode only 1 output tube is used. The 4 ohm speaker jack should not be used in the 5 watt mode.

TRIODE/UL: This switch is used to select the operating mode of the output tubes – Triode or Ultralinear. The maximum output power is 15W for Triode mode and 25W for Ultralinear mode.

Operating Instructions

Connect the guitar or effects pedal to the INPUT jack using a guitar cable with a ¼" mono plug. Also connect a speaker cabinet to the SPEAKER jack using a speaker cable with a ¼" mono plug. If a speaker cable is connected to the SPEAKER jack, then a speaker must be connected to the speaker cable to avoid possible damage to the amplifier.

Turn on the amplifier with the POWER switch. After about 30 seconds toggle the Standby switch to PLAY. When turning off the amp reverse the turn-on sequence.

For a clean guitar sound: Turn the VOL knob maximum clockwise. Set the BOOST switch to the left (minimum) position. Adjust the GAIN knob for maximum volume without distortion. Adjust the BASS switch and TONE knobs to taste.

For a "bluesy" or "crunchy" guitar sound: Turn the VOL knob maximum clockwise. Set the BOOST switch to either the left or center position. Adjust the GAIN knob for the desired amount of distortion.

For a "hi-gain" or "lead" guitar sound: Turn the VOL knob maximum clockwise. Set the BOOST switch to either the center or right position. Adjust the GAIN knob for the desired amount of distortion, sustain and feedback.

For reduced volume with high gain: Turn the VOL knob counter-clockwise. This will reduce the overall volume of the amplifier. The distortion will transition from output tube to preamp tube distortion as the volume is reduced.

Using the Effects Loop

The Effects Loop is panel or foot switchable and is both series and parallel type. When the MIX knob is turned to the right (WET) the loop is series. As the MIX knob is turned to the left (DRY) the loop combines the Dry and Wet signal (Parallel mode).

To set the Effects loop Send and Return levels:

If pedals are used in the Effects Loop set the SEND knob to 12 o'clock and the RETURN knob to Max.

If rackmount effects are used in the Effects Loop set the SEND knob to Max and the RETURN knob to 12 o'clock.

The Effects Loop can be used as a Boost or Attenuator by connecting nothing to the SEND and RETURN and adjusting the SEND and RETURN knobs to the desired Boost or Attenuation. When the Effects Loop is engaged the Boost or Attenuation will occur.

Vacuum Tube Selection

Make sure that the vacuum tube pins are straight before inserting the tubes into the sockets. Apply a slight pressure but do not force the tubes into the sockets or damage to the sockets may result.

The best vacuum tube to use for the preamp (V1) is an ECC83 (12AX7) or 5751, and the best tube for the preamp/driver (V2) is an ECC81 (12AT7). For the effects loop tube (V3), an ECC81 (12AT7) works best. For the power tubes (V4,V5,V6) 6L6GCs or EL34s are recommended. 6550s, KT66 or KT88s can also be used. No re-biasing is required and different types of power tubes can be used together. When the OUTPUT POWER switch is set to the 5 Watt position only the power tube in the V6 position is activated.

Specifications

	Switch Settings	Clean	Max
Output Power	15W / UL 15W / TRIODE 5W / UL 5W / TRIODE	25W 15W 7W 5W	50W 30W 14W 10W
Speaker impedance	4, 8, 16 ohms		
Input impedance	770K ohms (IN and RETURN)		
Output impedance	2K ohms (SEND jack)		

Warranty and Repair

The warranty period is 2 years. If during the first 2 years your FLEX 15 needs repair, Surprise Sound Lab will repair or replace it at no charge. The vacuum tubes are guaranteed for 90 days. The owner will be responsible for shipping charges. Any problems due to misuse, abuse or modification will not be covered under the warranty. Any repairs outside of the warranty will be performed by Surprise Sound Lab for a reasonable fee. Please email info@surprisesoundlab.com for any repair requests.

Tips for using your FLEX 15

Generally keep the VOL control at maximum for output tube overdrive. However, for high GAIN settings, reducing the VOL by about 1/3 to 1/2 will provide more TONE control.

Decreasing the BASS FREQ setting as you increase the BOOST and GAIN settings will produce the best distortion.

Only use as much GAIN as needed for the desired distortion and sustain to avoid unpleasant distortion.

For high GAIN settings bridge pickups seem to work especially well.

Recommended Settings:

Generally keep the VOL control at maximum for output tube overdrive.

<u>Guitar</u>	<u>Style</u>	<u>Pickup</u>	<u>GAIN</u>	<u>BOOST</u>	<u>BASS</u>
Strat	Clean	any	11 o'clock	min	max
Strat	Blues	any	2 o'clock	min	mid
Strat	Rock	bridge	1 o'clock	mid	mid
Strat	Heavy	bridge	2 o'clock	max	min
Les Paul	Clean	any	8 o'clock	min	mid
Les Paul	Blues	any	12 o'clock	min	mid
Les Paul	Rock	bridge	11 o'clock	mid	min
Les Paul	Heavy	bridge	1 o'clock	max	min