

PRINCETON CHORUS OWNER'S MANUAL

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The Fender PRINCETON CHORUS amplifier presents the player with the best value of any amplifier in its price class. The PRINCETON CHORUS is much more than a portable Gain Switching Amplifier. Besides its basic complement of VOLUME, TREBLE, MID, BASS & REVERB this amplifier offers a selectable *Overdrive* channel with features that make it virtually, a Two Channel amplifier! The *Overdrive* channel features Exclusive Fender Pre & De-Emphasis Distortion circuitry plus a unique *distortion-activated* Limiter which provides dynamic interactive control over the distortion characteristic. In addition, a *true stereo* chorus circuit utilizing two 25-watt power amplifiers gives this amp that lush stereo chorus sound. The Fender PRINCETON CHORUS is one of the most "*Expressive*" amplifiers ever made.

Fender Pre & De-Emphasis Distortion is based on unique Pre and Post clipper voicing filters designed to simulate the preamp tone settings and speaker output of an overdriven tube amplifier. You get the *searing smooth* highs backed by *deep* punch that stack amps are known for. The MID BOOST switch provides a second pre-emphasis voice and the PRESENCE control provides continuous variation of the high frequency content in the de-emphasis voicing.

The LIMITER is a new feature which will provide gain compression at the onset of distortion and can be used to dial in the exact degree of distortion without sacrificing sustain. This effect is particularly dramatic at **high GAIN settings**. At high LIMITER and GAIN settings a very dynamic effect can be achieved by varying pick attack. (i.e.: The harder you pick, the cleaner the note. Also *harmonic content will* increase as notes are allowed to sustain. High output pickups with the instrument tone control turned down can achieve reverse envelope, backwards tape effects and many other sounds.)

The extended range three band equalization circuitry is post overdrive and can be used to further modify the overall sound of the amp.

In addition to convenience features like All *Front Panel Mounted Controls and Jacks*, the **PRINCETON CHORUS** features a detachable footswitch for selecting the Overdrive Mode and for activating the stereo chorus circuitry. These functions are multiplexed over a standard 1/4 inch phone plug for ease of connection or extension of the footswitch to remote pedal boards. The versatility of the PRINCETON CHORUS is greatly expanded by the individual mono and true stereo EFFECTS LOOPS. These patch points allow for a wide variety of external effects connection schemes and amplifier slaving configurations. They also provide for direct connection to recording and sound reinforcement mixers. The HEADPHONE jack automatically mutes the speakers in addition to driving standard Stereo or Mono headphones and can also be used as a line out.

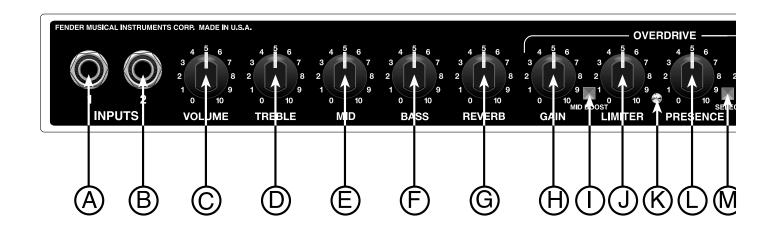
Last, but definitely not least, the Fender PRINCETON CHORUS packs a new stereo power amp section that is based on a radically underdamped design that interacts with the speakers in much the same way as a tube amplifier does, producing sparkle and punch with an increase in apparent loudness and power that defies comparison to other similarly rated units. These amps are LOUD, and the Fender Special Design 10 inch speakers can reliably put it out, night after night.

The selection of a Fender amplifier will reward you with years of quality music in a wide range of controlled sounds. This manual is designed to familiarize you with the equipment and to acquaint you with its many fine features. Read it carefully so that you will benefit from all the features as soon as you start using the amplifier.

The built-in quality of a Fender amplifier is the result of over three and a half decades of dedication in the combined skills of research and development by our engineers and musicians.

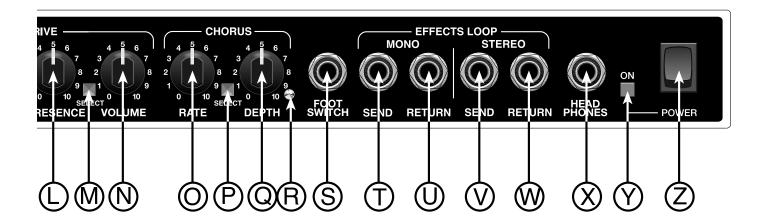
That is why we say, proudly... FENDER, The Sound That Creates Legends.

WARNING: TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE AMPLIFIER TO RAIN OR MOISTURE.



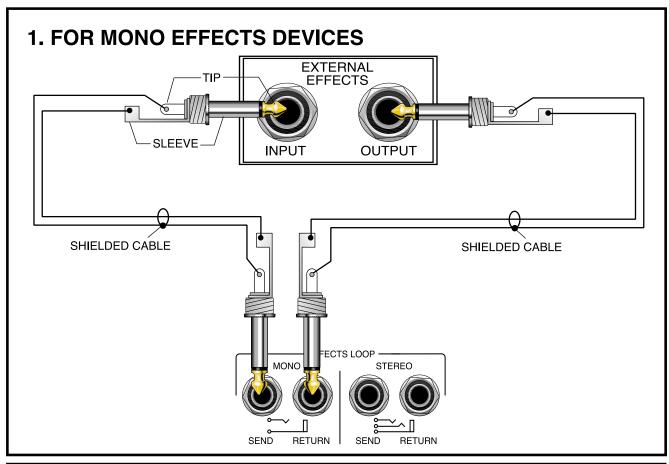
PRINCETON CHORUS FRONT PANEL FUNCTIONS

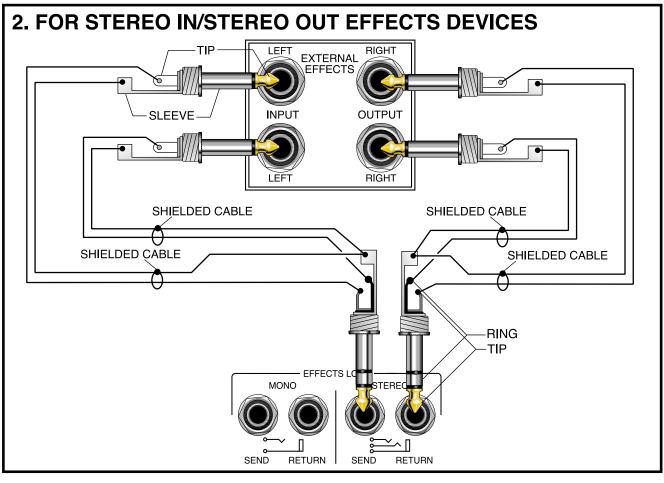
- A. INPUT 1-A high impedance, high sensitivity plug-in connection for instruments,
- **B. INPUT 2-Plug-in** connection for instruments. This input exhibits a lower input impedance and sensitivity than INPUT 1 and is useful with active preamp guitars, and will provide a darker tone with passive guitars. Both inputs are identical when used simultaneously.
- C. VOLUME-Adjusts the overall loudness when not in the OVERDRIVE mode. (SEE: M. SELECT and S. FOOTSWITCH).
- D. TREBLE-Adjusts the amount of boost (accentuation) or cut (attenuation) in the high frequency range.
- **E.** MID-Adjusts the amount of boost or cut in the mid frequency range.
- **F. BASS-**Adjusts the amount of boost or cut in the low frequency range.
- G. REVERB-Adjusts the overall amount of reverberated signal mixed with the original dry signal.
- **H. GAIN-**Adjusts the amount of preamp amplification while in the *OVERDRIVE* mode. Cleaner sound is achieved at lower gain settings, high gain settings will produce more sustain and distortion. This control works in conjunction with the N. OVERDRIVE-VOLUME control to set the overall loudness at the output.
- **I. MID-BOOST**-Activates a special pre-emphasis filter which accentuates mid-range frequencies.
- J. LIMITER-Adjusts the amount of compression at high GAIN settings. The compression is activated by distortion in the preamp, therefore it is not as noticeable at low gain settings.
- **K. OVERDRIVE INDICATOR-**This LED is illuminated when in the overdrive mode.
- **L. PRESENCE** -Adjusts the amount of boost or cut in the upper high frequency range while in the *OVERDRIVE* mode. This control occurs post preamp distortion and is useful in adjusting the distortion characteristic from brash, to smooth.
- M. SELECT-Activates the OVERDRIVE Mode. NOTE: This switch disables the Channel Select Footswitch and the C. VOLUME control.
- **N. VOLUME-**Adjusts the overall loudness while in the *OVERDRIVE* mode.
- O. RATE-Adjusts the sweep rate of the chorus generating circuitry. A lower number corresponds to a slower rate of sweep.
- P. SELECT- Activates the stereo CHORUS mode. NOTE: This switch disables the Chorus Select Footswitch.
- Q. DEPTH-Adjusts the intensity of the chorus effect. A lower setting will introduce a subtle yet distinct effect whereas a higher setting will create a more dramatic effect. With both the 0. RATE and DEPTH controls set midway or higher, a variety of vibrato/tremolo type effects can be achieved.
- **R. CHORUS INDICATOR-This** LED is illuminated when the stereo chorus is active. The intensity of the LED is modulated by the chorus sweep LFO to give a visual indication of the sweep rate.
- **S. FOOTSWITCH-** Plug-in connection for remote footswitch to activate the *OVERDRIVE* mode and to switch the stereo *CHORUS* on and off. For proper operation of the footswitch, both M. OVERDRIVE SELECT and P. CHORUS SELECT switches should be out. **NOTE:** Any good quality patch cord will work with the remote footswitch, however a speaker grade cord is preferable to a coax guitar cord when it's available.

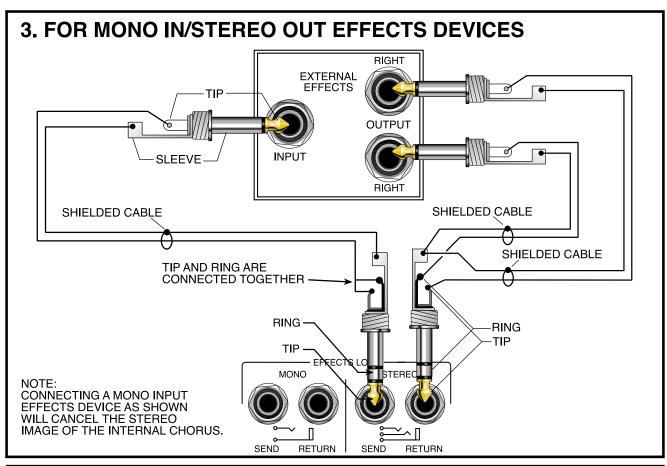


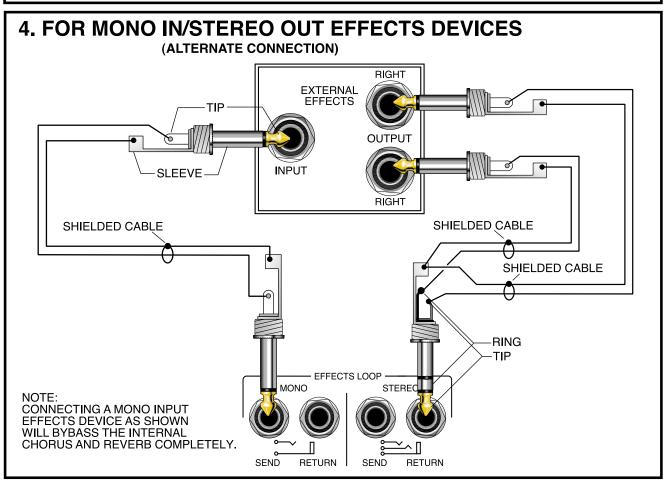
- T. EFFECTS LOOP MONO SEND-This jack provides an unbalanced mono output signal from the preamp at a point before the internal effects circuits (REVERB & CHORUS). This output can be used in conjunction with the U. MONO RETURN as a patch point for mono effects devices. (SEE: EFFECTS LOOP CONNECTION DIAGRAMS). The MONO SEND can also be used to feed recording and sound reinforcement mixers a dry signal. (For a signal with internal REVERB and/or CHORUS, use the V. STEREO SEND jack.) Additionally this output can be used to drive another PRINCETON CHORUS as a slave amp. This is done by connecting a standard guitar cord from the MONO SEND jack of the master amplifier to the MONO RETURN jack of the slave.
- U. EFFECTS LOOP MONO RETURN -This unbalanced jack inputs signal to the stereo chorus and reverb generating circuitry, which drives the stereo power amp section. It automatically disconnects the preamp signal when used. This is useful when using the Mono Effect Loop option or when using the PRINCETON CHORUS as a slave amplifier for a mono signal source. The REVERB & CHORUS are active in the slave so that a stereo image will be generated if the chorus is used. NOTE: In order to function properly, a dummy plug or an extra guitar cord must be inserted into B. INPUT 2 of the slave amp with its VOLUME controls turned down.
- V. EFFECTS LOOP STEREO SEND-This jack provides an unbalanced stereo output from the preamp, reverb and chorus circuits of the PRINCETON CHORUS. This output can be used in conjunction with the W. STEREO RETURN as a patch point for stereo effects devices. (SEE: EFFECTS LOOP CONNECTION DIAGRAMS). The Stereo Effects Loop jacks are standard 1/4 inch Tip-Ring-Sleeve types, with the left channel signal on the tip and the right channel signal on the ring. This send can also be used to feed a stereo signal to two channels of a recording or sound reinforcement mixer. Additionally this output can be used to drive another PRINCETON CHORUS as a slave amp. This is done by connecting a shielded stereo cord from the STEREO SEND jack of the master amplifier to the STEREO RETURN of the slave.
- **W. EFFECTS LOOP STEREO RETURN-This** stereo jack inputs signal directly to the left and right power amps. It automatically disconnects the preamp, reverb and chorus circuitry when used. This is useful when using the PRINCETON CHORUS as a slave amplifier for a stereo signal source.
- X. HEADPHONES-This jack provides an output to standard stereo headphones for private listening. NOTE: Use of this jack automatically disables the main speakers. CAUTION: Prolonged listening at high levels may be hazardous to your hearing! This jack can also be used as an unbalanced stereo line output, which is post effects-loops, by using a standard Tip-Ring-Sleeve 1/4 inch phone plug connection. (Mono plugs may be used at this jack for headphones or a line out, but the sound quality of the internal CHORUS, if used, may be degraded slightly. If a mono plug must be used at this jack, it is suggested that a stereo plug with Tip and Ring connected together be inserted at the V. STEREO SEND jack. This will restore the lush quality of the internal CHORUS.
- Y. POWER INDICATOR-When this indicator is illuminated the PRINCETON CHORUS is receiving power,
- Z. POWER SWITCH-Turns AC power ON and OFF. When the switch is OFF the amplifier is completely shut down.

PRINCETON CHORUS--EFFECTS LOOP CONNECTION DIAGRAMS









LINE CORD - This amplifier is equipped with a grounding type supply cord to reduce the possibility of leakage current. Be sure to connect it to a grounded receptacle. Operation from an ungrounded (two pronged) AC receptacle requires a three to two contact grounding type adapter. Be sure to connect the adapter's grounding lead to a good earth ground. **DO NOT ALTER THE AC PLUG.**

VINYL CARE- The exclusive Fender vinyl covering on your cabinet has been especially designed for years of lasting beauty. A very light soapy solution on a sponge may be used to remove dirt and residue that may accumulate in the grain. Be careful not to let any liquid come in contact with operating surfaces. DO NOT have the amplifier plugged into the power outlet when cleaning.

Troubleshooter's Checklist

If the amp is set up but does not function, check the following items:

- -Is the amp power cord properly plugged into an electrical outlet?
- -Is there power at the outlet?
- -Are the speakers properly connected to the amplifier?
- -Are all the control knobs turned up above four?
- -Is the volume control on the instrument turned up?
- -Is your instrument properly plugged into the amplifier? (Eliminate any effect pedals and try another guitar cord.)

If, after checking all of the above, the system is still not performing correctly, consult your Fender Service Dealer.

PRINCETON CHORUS SPECIFICATIONS

PART NUMBER: 22-5700

DIMENSIONS: Height: 17-1/2" (44 cm)

Width: 22-3/8" (57 cm)
Depth: 10-3/16" (26 cm)

WEIGHT: 38 lbs. (17.2 kg)

INPUT IMPEDANCE: INPUT 1 only-1 meg Ohm. INPUT 2-131k Ohm.

NOMINAL LEVEL: INPUT 1 only-100mv., INPUT 2-200mv.

POWER OUTPUT: 25.5 Watts R.M.S. per channel = 51 Watts R.M.S.

RATED LOAD IMPEDANCE: 8 Ohms per channel.

MONO EFFECTS LOOP: Nominal Level: -10dBv.

Send Output Impedance: 1k Ohm. Return Input Impedance: 25k Ohm.

STEREO EFFECTS LOOP: Nominal Level: -10dBv.

Send Output Impedance: 1k Ohm. Return Input Impedance: 150k Ohm.

(Specifications for each channel Left on Tip, Right on Ring)

POWER REQUIREMENTS: 120 Volts AC 60 Hz., 1.2 Amps Max., 145 Watts Max.

SPEAKER COMPLEMENT: Two 8 Ohm Fender Special Design 10 inch (P.N. 029753) speakers.

SOUND: "TUBE or not TUBE!"