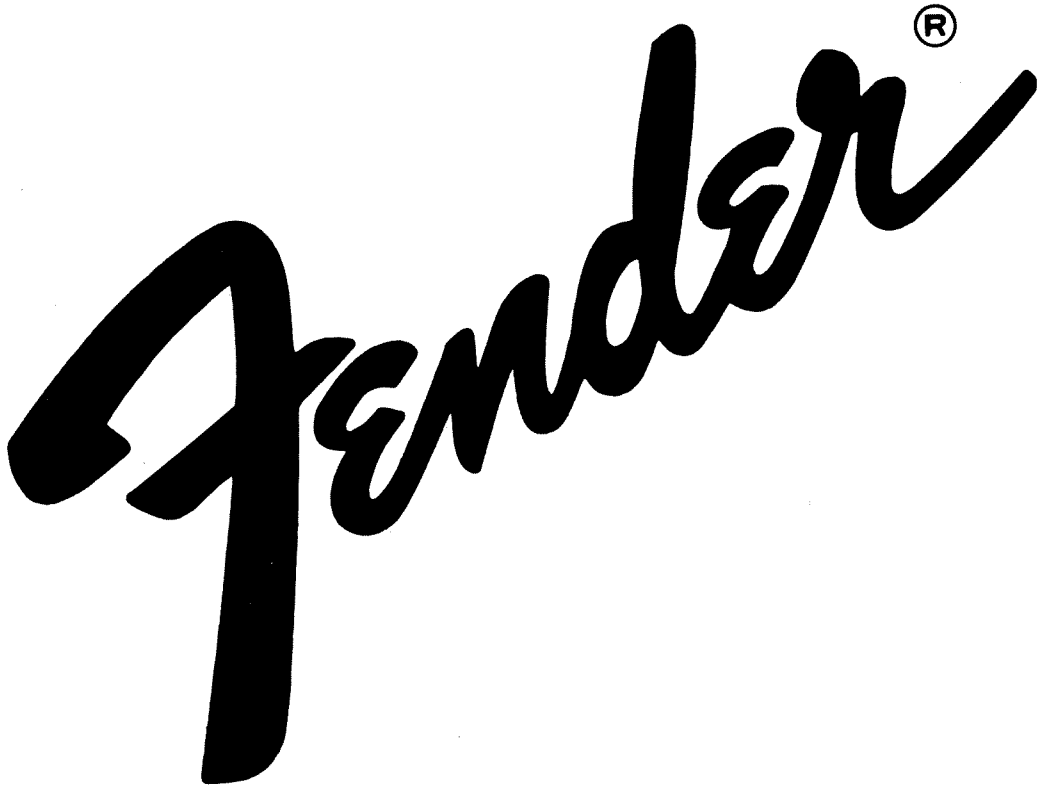


POWER CHORUS
OWNER'S MANUAL

P/N 033172

POWER CHORUS OWNER'S MANUAL

Your Fender POWER CHORUS amplifier is the direct result of an ambitious project undertaken by Fender R&D, Manufacturing, and Marketing personnel in which the goal was to bring to the working musician a straight-ahead reliable amplifier combined with the inherent tonal flexibility of a studio quality Stereo Chorus. The POWER CHORUS offers the dependability of total Solid State circuitry and more tonality than most tube amplifiers, at half the cost. The extremely versatile, yet simple to operate preamp, features innovations such as TEM™ *DISTORTION, DSM™ CHORUSING, THREE FOOTSWITCHABLE PRESET SOUNDS, TRI-MODE INPUTS, PRE AND POST DISTORTION EQ WITH THE EXCLUSIVE FENDER CONTOUR CONTROL, A MONO AND A STEREO EFFECTS LOOP,* coupled with FENDER'S *CURRENT IMPULSE-POWER* amplifier technology. Altogether this will *"Let Your Fingers Do The Talkin'"* once you plug in and turn on your POWER CHORUS.

Channel 1 is the traditional clean channel with the addition of a MID-CUT switch which is useful in obtaining vintage and jazz tones. The second channel is set up with GAIN & VOLUME controls for obtaining distortion textures and includes an additional footswitchable BOOST control providing a second gain preset primarily used for lead work. Fender's TEM™ *(TUBE EMULATION)* distortion processor gives you the warm harmonic overtones and sustain of vacuum tubes without the microphonics, reliability and cost hassles. Channel 2 not only features the traditional Fender Treble, Mid, Bass, Mid-Boost *PRE-EQUALIZER* but uses a CONTOUR control in addition to a PRESENCE control for *POST DISTORTION EQUALIZATION.* The CONTOUR control in conjunction with the TILT switch will allow you to fine tune the distortion characteristics of your POWER CHORUS from a bone-crushing stack-amp to a miked up Super Champ. Check it out!

Your Fender POWER CHORUS AMP features the exclusive DSM Stereo Chorus which provides low noise, studio quality chorusing, and provides transparent yet full texturing to your sound. Gone is the familiar telltale periodic swoosh and pitch bend characteristic of cheap chorus pedals. DSM™ *(DUAL SWEEP MODULATION)* technology virtually eliminates this by randomizing the stereo signal to simulate the unpredictable pitch variations found in true double-tracking. The left and right output signals are derived through a matrix which provides both "dry" and "wet" signal content in both channels resulting in greater bandwidth and ease of studio or stage miking.

Special effects will interface to the POWER CHORUS Mono Effects Loop easily and with no guesswork on levels. Simply set the three position LEVEL SELECT switch to match up to the latest digital delay or your old favorite battery powered effect pedals. The unique GAIN OFFSET control can be used to fine tune the effects loop level allowing optimum signal to noise performance with any effect. A second Stereo Effects Loop is provided for total flexibility and allows the use of stereo effects with the true stereo internal power amplifier. The effects loop can also be used as a direct send to recording and sound reinforcement mixers or to additional amps as slaves for increased power.

The POWER CHORUS features a detachable footswitch for selecting the Overdrive and Boost Modes, the Stereo Chorus Mode, and for switching the *three-spring* Reverb On and Off. 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 POWER CHORUS also features exclusive Fender *Tri-Mode* inputs which provide standard independent *Dual-Channel* operation, *Switching-Channel* operation, or *Parallel-Channel* operation. A new twist has been added to the *Dual-Channel & Parallel-Channel* modes in that the front panel select switches and footswitch *remain active* allowing you to switch in Channel Two (and its Boost function) *in addition* to the Channel One setting.

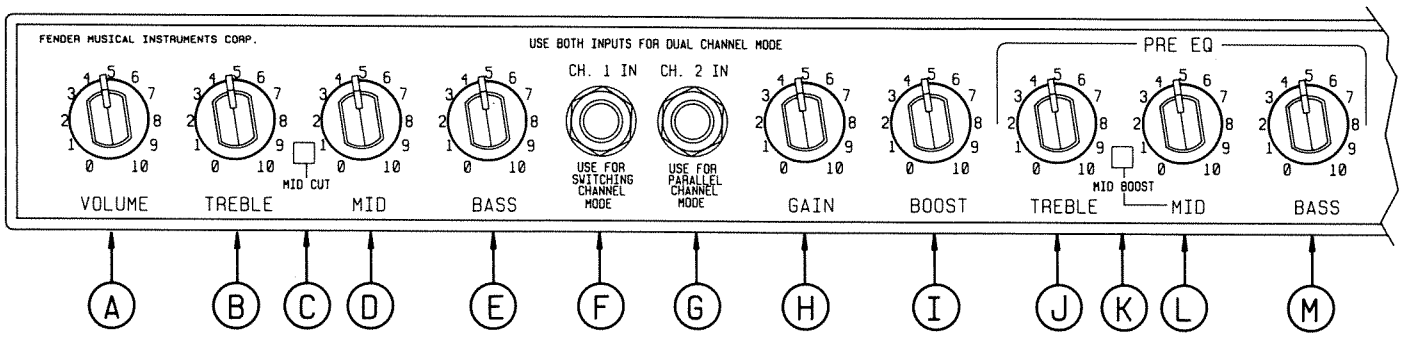
Last, but definitely not least, the Fender POWER CHORUS packs two new power amps utilizing Fender CIP™ *(CURRENT IMPULSE POWER)* technology and is based on a radically underdamped design that interacts with the speaker in much the same way as a tube amplifier does, producing sparkle and punch with an increase in apparent loudness and power that defies comparison to other similarly rated units. These amps are LOUD, and the Fender Special Design 12 inch speakers can reliably put it out, time after time.

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.



POWER CHORUS FRONT PANEL FUNCTIONS

A. VOLUME: Adjusts the overall loudness of Channel One.

B. TREBLE: Adjusts the amount of boost (accentuation) or cut (attenuation) in the high frequency range of Channel One.

C. MID-CUT: Reduces upper midrange response of Channel One.

D. MID: Adjusts the amount of boost or cut in the mid frequency range of Channel One.

E. BASS: Adjusts the amount of boost or cut in the low frequency range of Channel One.

F. CHANNEL 1 INPUT: Plug-in connection for instruments. When this input is used alone with nothing plugged into the Channel 2 input, the amplifier is in the *Channel-Switching* mode. The remote footswitch or front panel SELECT switch will route the input signal to either Channel 1 or Channel 2 as indicated by the Red and Green channel indicator LEDS under "STATUS". When this input is used in addition to an instrument plugged into the Channel 2 input, the amplifier is in the *Dual-Channel* mode, i.e. Channel 1 instruments go through Channel 1 and Channel 2 instruments go through Channel 2. (See G. CHANNEL 2 INPUT.)

G. CHANNEL 2 INPUT: Plug-in connection for instruments. When this input is used alone with nothing plugged into the Channel 1 input, the amplifier is in the *Parallel-Channel* mode. The input signal is routed to both Channel 1 and Channel 2 simultaneously, allowing a mix of the two channels to be achieved. When this input is used in addition to an instrument plugged into the Channel 1 input, the amplifier is in the *Dual-Channel* mode, i.e. Channel 1 instruments go through Channel 1 and Channel 2 instruments go through Channel 2. (NOTE: The remote footswitch or front panel SELECT switch will still switch Channel 2 and its BOOST function On and Off as indicated by the front panel LED's under "STATUS".)

H. GAIN: Adjusts the amount of amplification in the Channel 2 preamp. Cleaner sound is achieved at lower gain settings, high gain settings will produce more sustain and distortion. This control works in conjunction with the Channel 2 VOLUME control to set the overall loudness at the output.

I. BOOST: Adjusts the amount of amplification in the Channel 2 preamp. When activated by the remote footswitch or front panel switch this control will provide additional gain to that which is already preset by the GAIN control. If the GAIN control is set to maximum, the BOOST control will have less effect. Normally set the BOOST control to a higher setting than the GAIN for maximum effect.

(NOTE: Controls J, K, L & M all occur pre-distortion and are useful in voicing the instrument. They behave much like traditional Fender tone controls.)

J. TREBLE: Adjusts the amount of boost or cut in the high frequency range of Channel Two.

K. MID-BOOST: Increases upper midrange response of Channel Two.

L. MID: Adjusts the amount of boost or cut in the mid frequency range of Channel Two.

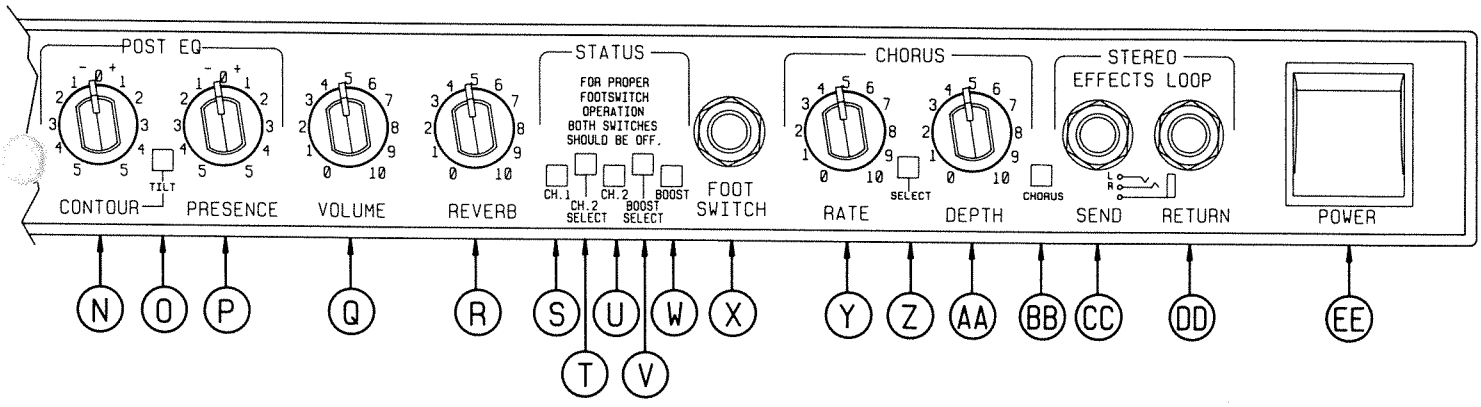
M. BASS: Adjusts the amount of boost or cut in the low frequency range of Channel Two.

(NOTE: Controls N, O, & P all occur post-distortion and are useful as a means of equalizing the distortion characteristic of the amplifier.)

N. CONTOUR: Adjusts the tone without affecting the signal level. Used in conjunction with the TILT switch and PRESENCE control to set the overall tone of Channel Two. (See O. and *TILT & CONTOUR PICTORIAL).*

O. TILT: Selects the operating mode of the CONTOUR control. With the button out (Off), the CONTOUR on +5 will boost mids and cut lows and highs and on -5 will cut mids and boost lows and highs. With the button in (On), the CONTOUR on +5 will boost lows and cut highs and on -5 will cut lows and boost highs.

P. PRESENCE: Adjusts the amount of boost or cut in the upper high frequency range of Channel Two.



Q. VOLUME: Adjusts the overall loudness of Channel Two.

R. REVERB: Adjusts the amount of reverberated signal mixed with the original dry signal. *NOTE: This control is disabled by the Reverb On/Off footswitch in the OFF POSITION.*

S. CHANNEL 1 INDICATOR: This Red LED is illuminated when Channel One is on.

T. CHANNEL 2 SELECT: Activates the Channel 2 preamp. *NOTE: This switch overrides the SELECT footswitch.*

U. CHANNEL 2 INDICATOR: This Green LED is illuminated when Channel 2 is on.

V. BOOST SELECT: Activates the *Boost* function and simultaneously activates Channel 2 if it has been off. (See T. CHANNEL 2 SELECT.) *NOTE: This switch overrides the front panel SELECT switch and the SELECT & BOOST footswitches.*

W. BOOST INDICATOR: This Yellow LED is illuminated when the BOOST control is enabled.

X. FOOTSWITCH: Plug-in connection for the remote four-way footswitch. The CHANNEL SELECT switch will toggle Channel 2 On and Off. The REVERB switch will toggle the reverb On and Off. The CHORUS switch will toggle the stereo chorus On and Off. The BOOST switch will toggle the boost function On and Off and also activate Channel 2 if it has been off. The footswitch CHANNEL SELECT LED indicator will illuminate when Channel 2 is selected by the footswitch, this is useful while in the boost mode to let you know whether Channel 2 will stay on when you exit the boost mode. i.e.: This allows you to switch between Channel 1 and Channel 2, Channel 1 and Boost, or Channel 2 and Boost with one switch actuation. *NOTE: The front panel BOOST, SELECT, and CHORUS SELECT switches override the footswitch. THEY SHOULD BE OFF FOR PROPER FOOTSWITCH OPERATION. 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.*

Y. RATE: Adjusts the sweep rate of the chorus generating circuitry. A lower number corresponds to a slower rate of sweep.

Z. SELECT: Activates the stereo CHORUS mode. *NOTE: This switch disables the Chorus Select Footswitch.*

AA. 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 Y. RATE and DEPTH controls set midway or higher, a variety of vibrato/tremolo type effects can be achieved. *NOTE: By setting this control to 10 the DSM function is reduced and more traditional chorus pedal sounds can be achieved.*

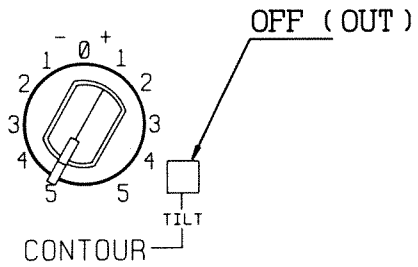
BB. CHORUS INDICATOR: This LED is illuminated when the Stereo Chorus is active. The color of the LED is modulated red & green by the chorus sweep LFO to give a visual indication of the sweep rate.

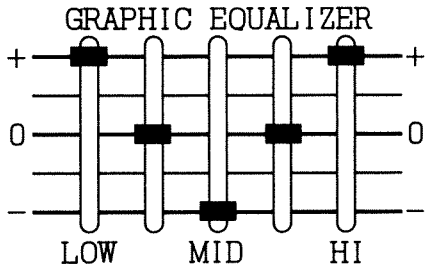
CC. EFFECTS LOOP STEREO SEND: This jack provides an unbalanced stereo output from the preamp, and includes Reverb and Chorus signals. This output can be used in conjunction with the DD. STEREO RETURN as a patch point for stereo effects devices. (SEE EFFECTS LOOP CONNECTION DIAGRAM page.)
The Stereo Effects 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 POWER 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.

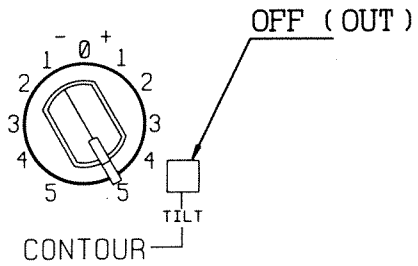
DD. EFFECTS LOOP STEREO RETURN: This stereo jack inputs signal directly to the left and right power amps. It automatically disconnects the preamp, Reverb and Chorus circuitry when used. This is useful when using the POWER CHORUS as a slave amplifier for a *stereo* signal source.

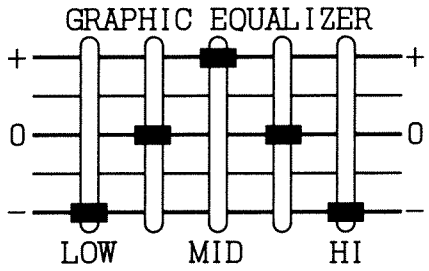
EE. POWER SWITCH: Turns AC power ON and OFF. When the switch is OFF the amplifier is completely shut down.

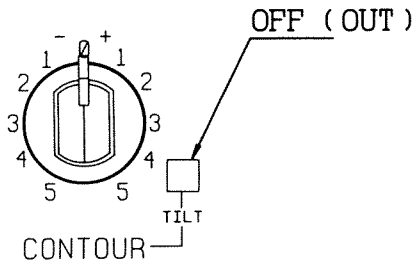
TILT AND CONTOUR PICTORIAL

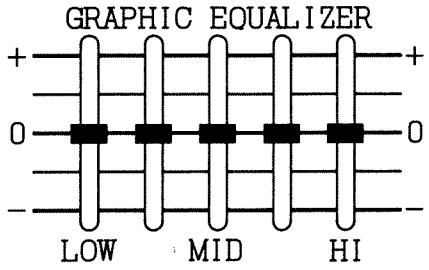


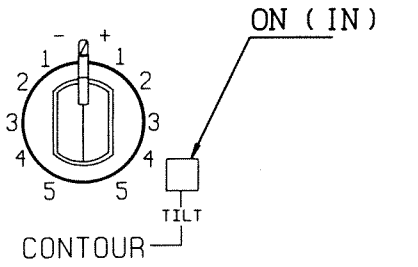


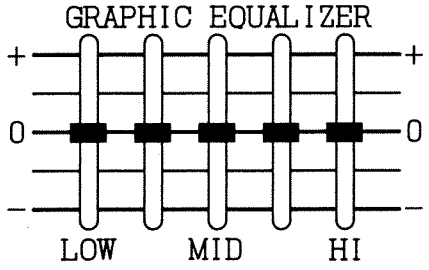


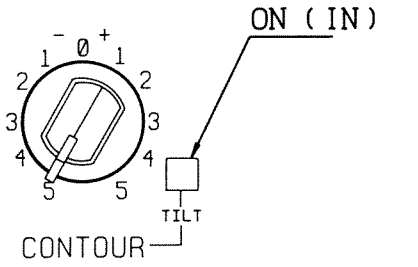


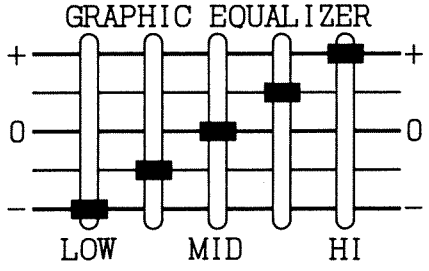


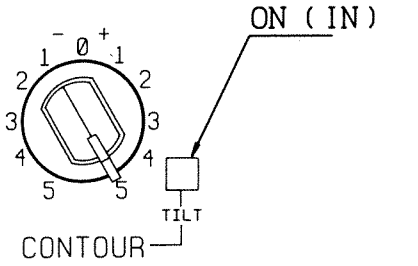


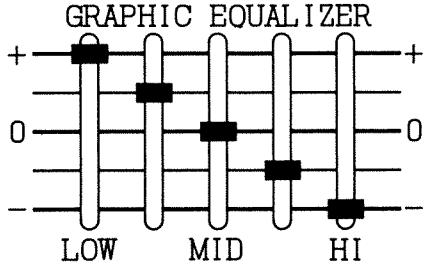






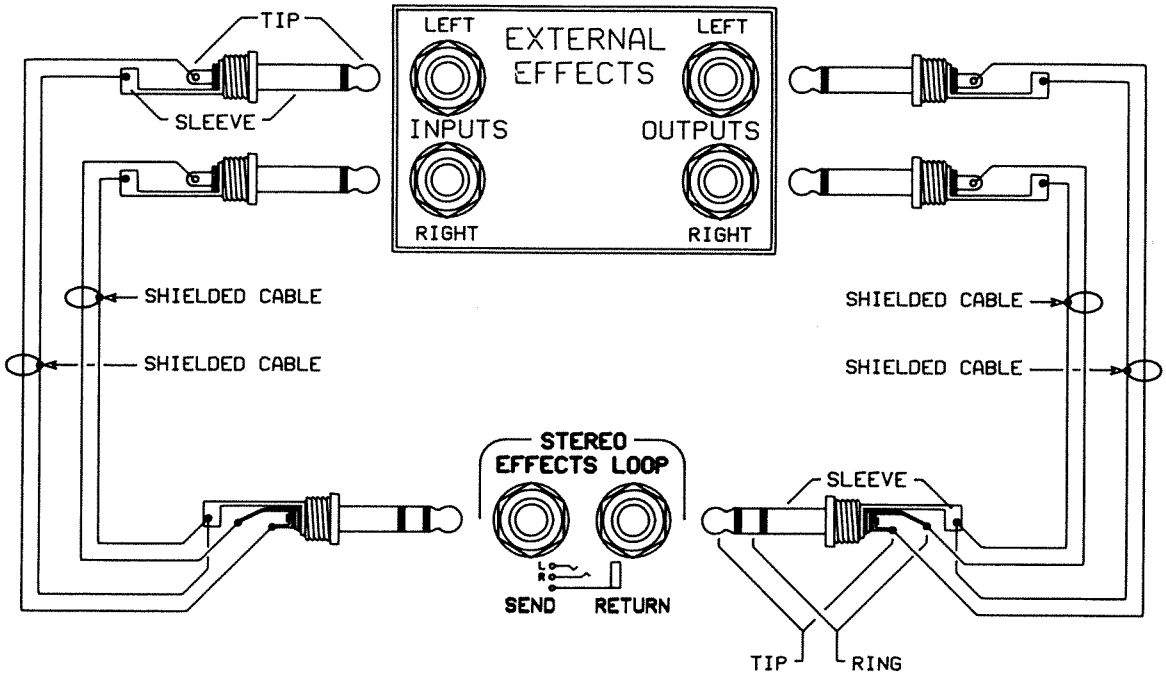




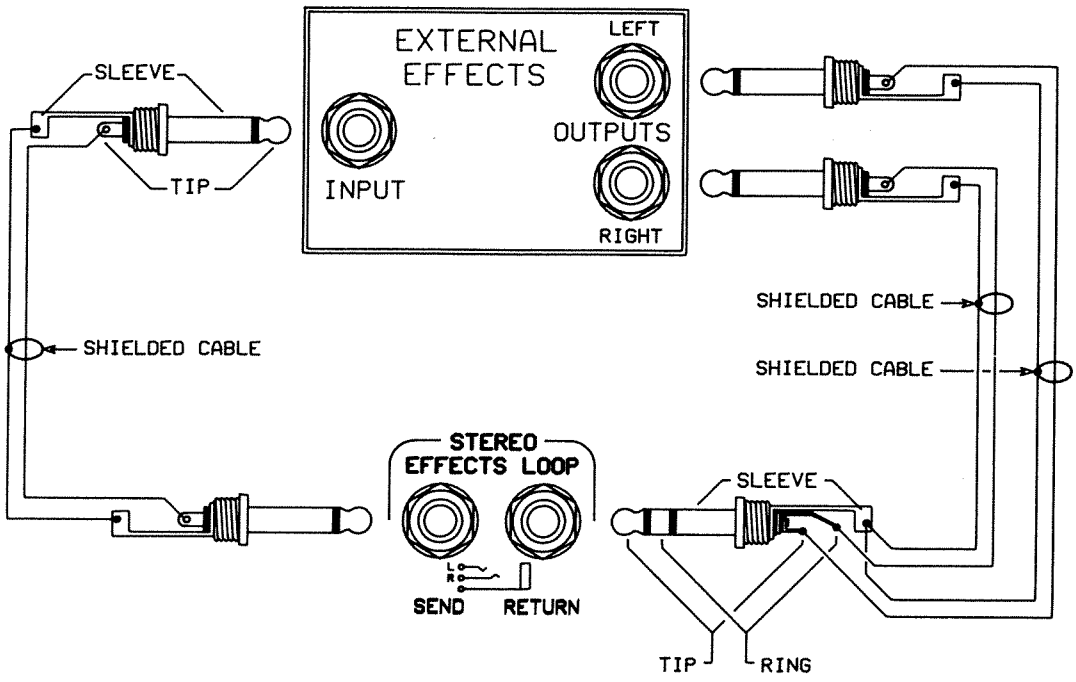


POWER CHORUS—EFFECTS LOOP CONNECTION DIAGRAM

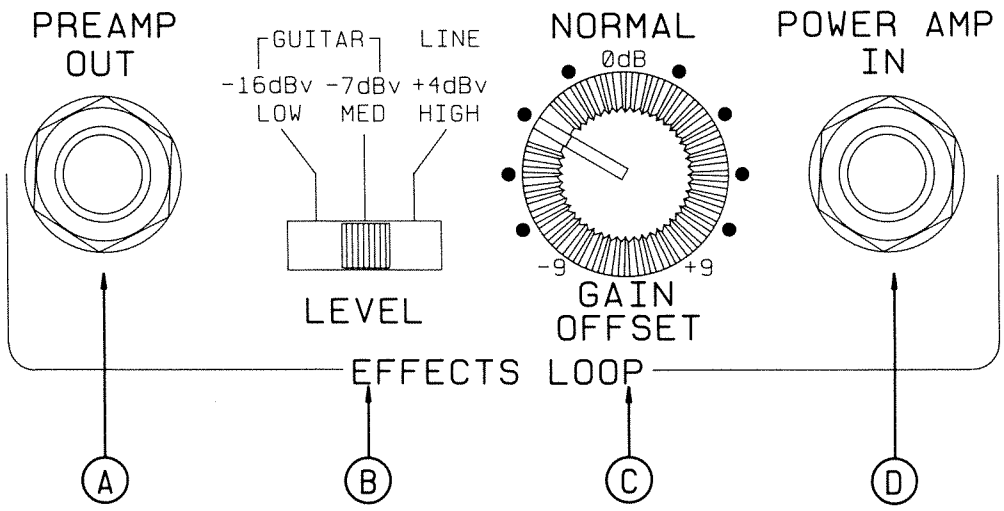
1. FOR STEREO IN/STEREO OUT EFFECTS DEVICES



2. FOR MONO IN/STEREO OUT EFFECTS DEVICES



FOR MONO IN/MONO OUT EFFECTS DEVICES, USE THE MONO EFFECTS LOOP LOCATED ON THE REAR PANEL.



POWER CHORUS REAR PANEL FUNCTIONS

A. PREAMP OUT: This jack provides an unbalanced output signal from the preamp. The nominal level of this signal is set by the LOOP LEVEL switch. (See B). This output can be used in conjunction with the POWER AMP IN jack as a patch point for effect units. This signal can also be used to feed recording and sound reinforcement mixers or to drive other POWER CHORUS amplifiers as slaves. This is done by connecting a standard guitar cord from the PREAMP OUT jack of the master amplifier to the POWER AMP IN jack of the slave. Effects units can also be inserted between the master and slave amplifiers to create a true stereo image. (This jack occurs POST-pre-amp & reverb and PRE-chorus and power amps.)

B. LOOP LEVEL: Selects the nominal operating level of the PREAMP OUT, & POWER AMP IN jacks. When using the effects loop option this switch should be set to the highest possible level for best low noise performance. This is done by first *setting the GAIN OFFSET control to NORMAL/0dB (See C.)* and the LOOP LEVEL switch to LOW/16dBv, second set the front panel amplifier operating controls for normal playing levels, then patch in the desired effect units. (If the effect units have gain and/or output controls, set these for *"unity gain"* through the effect unit, this is verified by alternately plugging-in and unplugging the effect unit output from the POWER AMP IN jack and listening for any change in volume. When the effect unit is set for *"unity gain"* there will be no noticeable change in level. With some effects it may be necessary to do this in the bypass mode of the effect.) If the effect cannot be adjusted for *"unity gain"* adjust the GAIN OFFSET control (See C.). Next set the LOOP LEVEL switch to the highest setting that will allow clean, distortion free operation of the effect unit. Now with the effect in the bypass mode once again check for *"unity gain"* with the procedure outlined above. If the effect unit is clipping on loud passages the switch should be set to the next lower setting. *NOTE: When slaving amps the LOOP LEVEL switch & GAIN OFFSET on all amplifiers should be set to the same position.*

C. GAIN OFFSET: Adjusts the sensitivity of the POWER AMP IN jack + & – 9dB to compensate for gain or loss through the effects loop. The proper control setting is determined using the procedure described above for setting the LOOP LEVEL switch for *"unity gain"*. While alternately plugging-in and unplugging the effect unit from the POWER AMP IN jack if there is an increase in volume upon plugging in, adjust the GAIN OFFSET counterclockwise for *"unity gain"*, alternatively if there is a loss of volume adjust the control clockwise for *"unity gain"*.

D. POWER AMP IN: This jack inputs signal directly to the stereo chorus which then drives the stereo effects loop and the stereo power amps. It automatically disconnects the preamp signal when used. This input is a *"Balanced"* Tip-Ring-Sleeve jack which can be used with stereo or mono quarter-inch phone plugs for *"Balanced"* or *"Unbalanced"* operation. Balanced operation will help reduce ground-loop noise. Its nominal sensitivity is set by the LOOP LEVEL switch and the GAIN OFFSET control (See B. and C.). The chorus will remain active in the slave so that a stereo image can be generated if desired. *NOTE: In order for the chorus to function properly, a dummy plug or an extra guitar cord must be inserted into either F.) Channel 1 input or the G.) Channel 2 input of the slave amp to un-mute the chorus in that amp.*

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 adaptor. Be sure to connect the adaptor'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

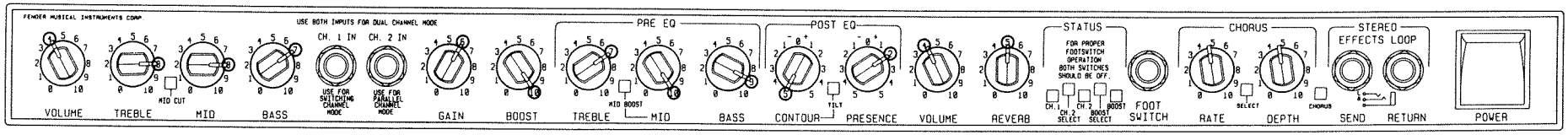
If the amp is set up but does not function, check the following items:

- Is the amp power cord properly plugged into an electrical outlet?
- Is there power at the outlet?
- Is the speaker 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.

POWER CHORUS SAMPLE SETTINGS

CLASSIC TWIN

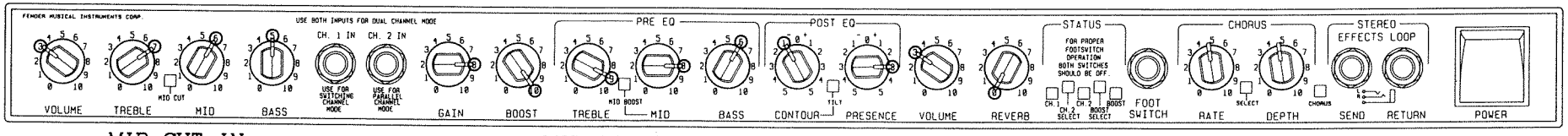


MID CUT OUT

POWER BUZZ

MID BOOST OUT TILT OUT

BASSMAN

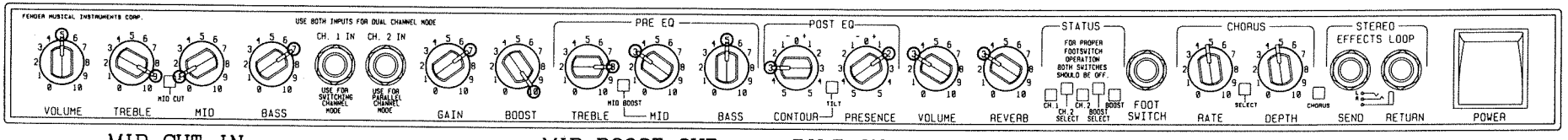


MID CUT IN

SCREAMING LEAD

MID BOOST IN TILT OUT

HOLLOW PUNCH

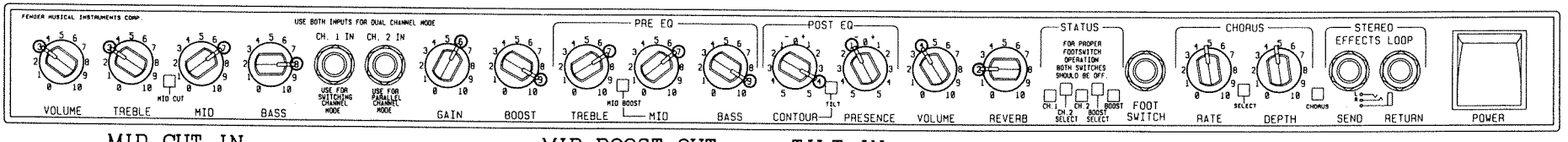


MID CUT IN

BRITE LEAD

MID BOOST OUT TILT IN

MELLOW

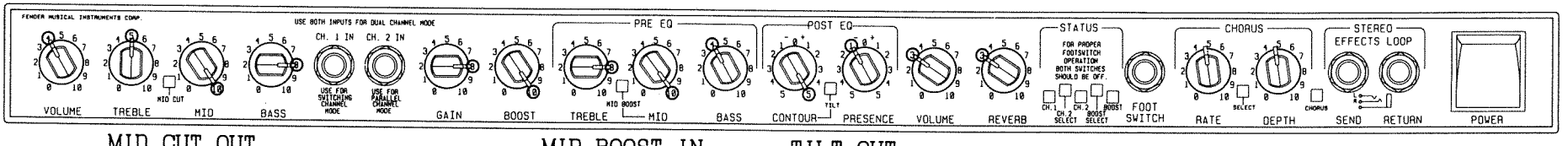


MID CUT IN

DARK LEAD

MID BOOST OUT TILT IN

FAT RHYTHM



MID CUT OUT

HONK

MID BOOST IN TILT OUT

POWER CHORUS SPECIFICATIONS

INPUT IMPEDANCE: Greater than 510K Ohm.

NOMINAL LEVEL: 100 mv.

POWER OUTPUT: 130 Watts R.M.S., (65 Watts R.M.S. Per Channel).

RATED LOAD IMPEDANCE: 8 Ohms Per Channel.

MONO EFFECTS LOOP: Nominal Level—Switch selectable (-16dBv, -7dBv, or +4dBv)
Output Impedance less than 1.2k Ohm.
Input Impedance greater than 85k Ohm.

STEREO EFFECTS LOOP: Nominal Level -10dBv.
Output Impedance—1k Ohm.
Input Impedance—94k Ohm.
(Specifications for each channel—Left on Tip,
Right on Ring).

POWER REQUIREMENTS: 120 Volts AC 60 Hz. 3.33 Amps Max., 400 Watts Max.

PART NUMBER: 22-5800

HEIGHT: 18-1/2" (47cm)

WIDTH: 26-1/8" (66cm)

DEPTH: 10-1/4" (26cm)

WEIGHT: 48 lbs. (21.8kg)

SPEAKER COMPLEMENT: Two 8 Ohm Fender Special Design 12 inch (P.N. 025923) speakers.

SOUND: *"RATHER LARGE".*