

Fender[®]

T H E S O U N D T H A T C R E A T E S L E G E N D S

RAD

Owner's Manual

P/N 040203

RAD

The Fender **RAD** Amplifier represents years of research and development by Fender's engineers and countless musicians. The four basic preset push-button sounds programmed into the **RAD** range from Classic Fender Clean to Mega-metal Screaming Overdrive Distortion.

Each of the four pre-programmed sounds can be further modified by Fender's exclusive "CONTOUR" control. The internal circuitry provides midrange "tone shaping" that will continuously vary your sound from smooth and bluesy to a punchy honk or all the way to 10 for the ultimate overdrive.

The Overdrive circuit used for the "CRUNCH" and "LEAD" presets incorporates Fender's innovative "smooth clipping" circuit. This circuit concept is designed to simulate the way tubes clip and produce the overdrive distortion sound so popular with musicians today. The exclusive V.G.S. (Variable Gain Structure) design causes the gain structure of

the amplifier to be completely re-arranged for each preset sound. The V.G.S. design allows for the correct gain setting, and overall equalization curve to maximize each preset sound.

The 25 watt power amplifier section of the **RAD** utilizes Fender's "Clean Comp" compressor to assure a clean clear sound when the "BRIGHT" and "FULL" presets are selected. Don't be fooled, this 25 watt amplifier is loud; crank it up and be amazed.

A number of professional features have been added to the **RAD** like PREAMP OUT & POWER AMP IN Jacks which can be used as an Effects Loop. The PREAMP OUT is connected to the input of your effect (chorus, digital delay, digital reverb, etc.) and the output from the effect is returned to the POWER AMP IN. The PREAMP OUT can also be used to connect your **RAD** directly to a recording console or sound reinforcement mixer. The HEADPHONE jack automatically

mutes the speaker in addition to driving Stereo or Mono headphones. The HEADPHONE jack can also be used as another line level output.

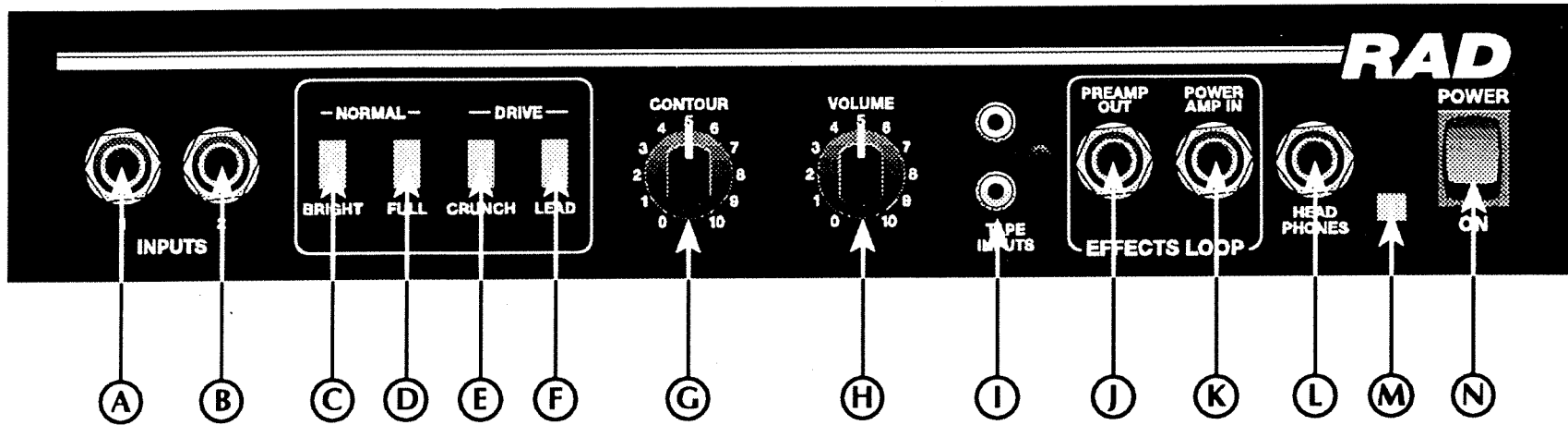
The selection of a Fender amplifier will reward you with years of quality music in a wide range of sonic possibilities. This manual is designed to familiarize you with the features and functions of your **RAD** amplifier. Read this manual carefully so you will benefit from these features as soon as you start using your new Fender amplifier.

The built-in quality of a Fender amplifier is the result of over four decades of dedication in the combined skills of the Fender design team.

That's why we proudly say.....
FENDER, *the sound that creates legends.*

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

RAD 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 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.

(Note: Selection of either of the following preset buttons C,D,E, or F will release the previously selected preset button.)


- C. NORMAL/BRIGHT-** Activates the BRIGHT preset in NORMAL mode for a clear, undistorted sound with a mild boost in the upper mid and high frequency range. Useful for adding brilliance to a guitar with humbucking pick-ups. This is

the classic Fender clean sound ideal for a crisp rhythm guitar part.

- D. NORMAL/FULL-** Activates the FULL preset in NORMAL mode. Also used for clean playing, this preset features a flatter frequency response than the BRIGHT preset resulting in a fuller guitar sound. Great preset for a mellower jazz sound.

RAD FRONT PANEL FUNCTIONS

- E. DRIVE/CRUNCH-** Activates the CRUNCH preset in the DRIVE mode, useful for semi-distorted rhythm or lead playing. This preset rearranges the gain structure of the amplifier in order to provide more gain for generating distortion without a large increase in apparent loudness. It also automatically switches in special "soft clipping" circuitry to emulate the sound of the most popular tube amplifiers on the market today.
- F. DRIVE/LEAD-** Activates the LEAD preset in the DRIVE mode, useful for full out lead playing and "metal" power chords with lots of sustain. This preset further modifies the gain structure of the amplifier and also activates the "soft clipping" circuitry.
- G. CONTOUR-** Adjusts the overall tone quality of all presets without affecting the signal level. Low CONTOUR settings will provide boost/emphasis in the midrange frequencies where as a higher setting (7 or above) will notch the midrange to produce sounds characteristic of most "metal" music when in the DRIVE modes.
- H. VOLUME-** Adjusts the overall loudness of the amplifier. (*Note: this control does not affect the volume of the TAPE INPUTS (Item J).*)
- I. TAPE INPUTS-** Plug-in connection for any line level (500mV) stereo or mono signal. This signal is mixed into the power amp along with the instrument signal from the preamp. It has fixed gain and is unaffected by any of the front panel controls; however the signal will be affected by any device inserted between the PREAMP OUT (Item K) and the POWER AMP IN (Item L). It is useful for patching in a CD or Tape Player, rhythm machine or other signal source to be used as an accompaniment for practice or performance. The output level control of the external signal source is used to control its own volume while the front panel VOLUME (item H) control is used for the instrument in order to obtain a balance.
- J. PREAMP OUT-** This jack provides an unbalanced output signal from the preamp and TAPE INPUTS (Item J). This output can be used in conjunction with the POWER AMP IN (Item L) jack as a patch point for effects units (i.e. as an EFFECTS LOOP). This signal can also be used to feed recording and sound reinforcement mixers or to drive other amplifiers as slaves. This is done by connecting a standard guitar cord from the PREAMP OUT jack of the master amplifier to the POWER IN jack of the slave.



K. POWER AMP IN- This unbalanced jack inputs signal directly to the power amp. It automatically disconnects the preamp signal when used. This is useful when using the effects loop option or using the **RAD** as a slave amp.

L. HEADPHONES- This jack provides an output to standard stereo or mono headphones for private listening. **NOTE: Use of this jack automatically disables the main speaker.**
CAUTION: Prolonged listening at high levels may be hazardous to your hearing!
This jack can also be used as an unbalanced line output, which is post effects loop, by using either a stereo or mono 1/4 inch phone plug connection.

M. POWER INDICATOR- When this indicator is illuminated the **HOT** is receiving power.

N. POWER SWITCH- Turns AC power On and OFF. When the switch is OFF the amplifier is completely shut down.

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.**

FABRIC CARE

The exclusive Fender fabric 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 on the surfaces. Be careful not to let any liquid come in contact with the 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:

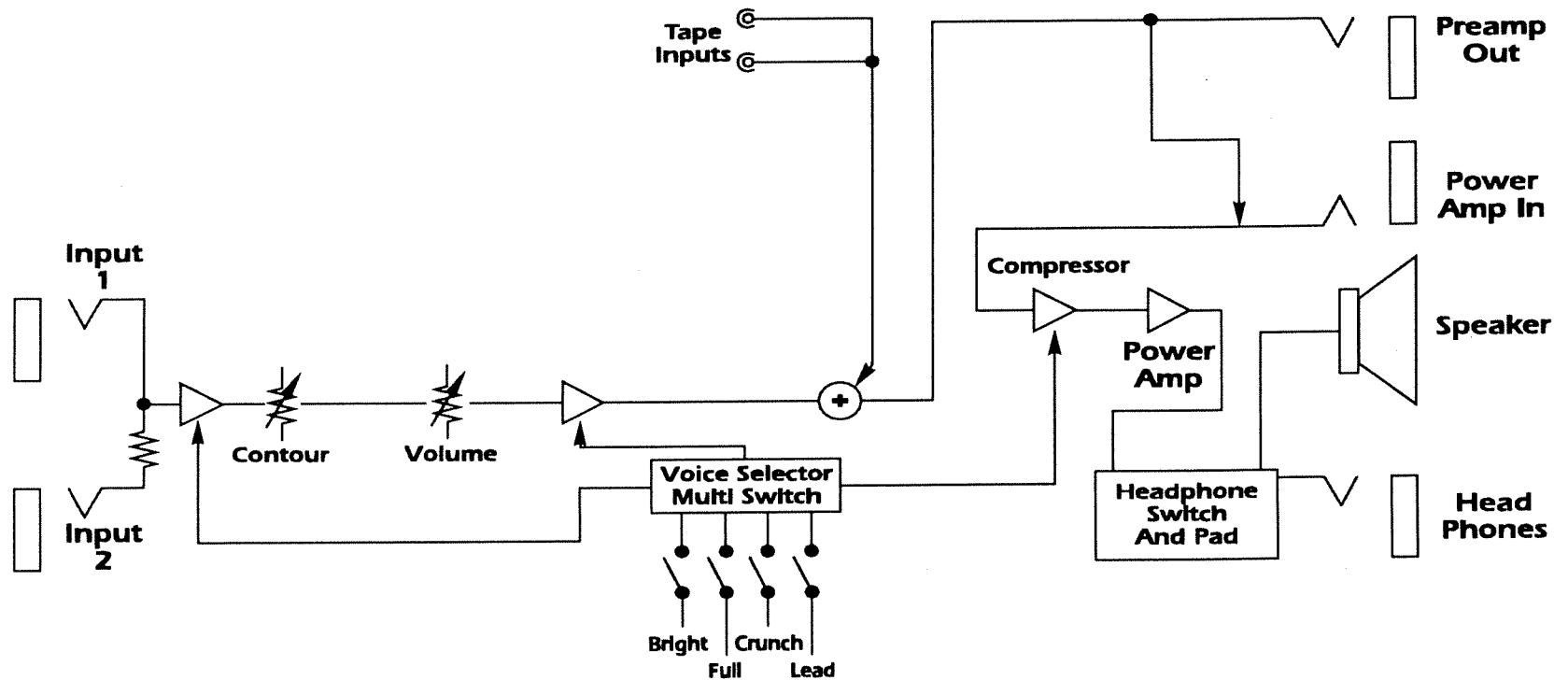
- Is the amp power cord properly plugged into an electrical outlet?
- Is there power at the outlet?
- Is the speaker properly connected to the amplifier?
- Are all the control knobs turned up above four?
- Is the volume control on the instrument turned up?
- Is your instrument properly plugged into the amplifier? (Eliminate any effects 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.

RAD SPECIFICATIONS

PART NUMBER:		22-6000	
DIMENSIONS:	Height:	14-1/4"	(36cm)
	Width:	15"	(38cm)
	Depth:	7-3/4"	(20cm)
WEIGHT:		20 lbs.	(9.1 kg)
INPUT IMPEDANCE:	INPUT 1:	only – 490k Ohm	
	INPUT 2:	2-87k Ohm	
NOMINAL LEVEL:	INPUT 1:	only – 100mv	
	INPUT 2:	200mv	
POWER OUTPUT:		20 watts R.M.S.	
RATED LOAD IMPEDANCE:		8 Ohms	
TAPE INPUTS INPUT IMPEDANCE:		68k Ohms	
EFFECTS LOOP:	Nominal level:	10dBv	
	Output Impedance:	1k Ohm	
	Input Impedance:	37k Ohm	
POWER REQUIREMENTS:		120 Volts AC, 60 Hz., .63 Amps Max., 75 Watts Max.	
SPEAKER COMPLEMENT:		One 8 Ohm Fender Special Design 8 inch speaker (P/N 036232).	
SOUND:		"Kicks @\$!!!"	

RAD BLOCK DIAGRAM



A PRODUCT OF:
FENDER MUSICAL INSTRUMENTS CORP.,
BREA, CA 92621