



JAZZ CLASSIC®

WARNING
TO PREVENT ELECTRICAL SHOCK OR FIRE HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. BEFORE USING THIS APPLIANCE, READ BACK COVER FOR FURTHER WARNINGS.

OPERATING GUIDE



GENERAL DESCRIPTION

The Jazz Classic® produces 210 watts RMS into a 4 ohm load and features many new ideas which our R & D program has designed to enhance the warmth and smooth operating characteristics normally found only with tube amplifiers. The Jazz Classic® also features our Gain Block™, which consists of three controls: Pre Gain, Saturation™ and Post Gain. This Gain Block allows the player total control of the overall texture of harmonic content and overload characteristics by varying the amount of drive of the Pre Gain and the Saturation control and finally, adjusting the Post Gain to the desired output level. The combination of the input dynamics, Saturation effect, and the extremely effective equalization circuit enables the Jazz Classic® to quite literally simulate almost any guitar sound available from any amp, old or new. This unit also features a second normal channel that is footswitch selectable and incorporates our unique automatic switching circuitry now being copied by so many of our competitors. In addition to the above, we have included our 15" Black Widow®/Super Structure™ loudspeaker whose characteristics have been carefully matched to complement the frequency response, power output, and damping factor of the power amplifier.

Since the Jazz Classic® is an extremely powerful single unit amplifier, we have included our patented Distortion Detection Technique (DDT™). As applied to this particular amp, this DDT feature will allow the power amp to operate at optimum levels without distortion. When distortion is utilized within the Gain Block, however, the DDT circuit allows the preamp to generate the warm tube-like harmonics **without** the harshness created by the power amp.

FRONT PANEL

INPUTS (A)

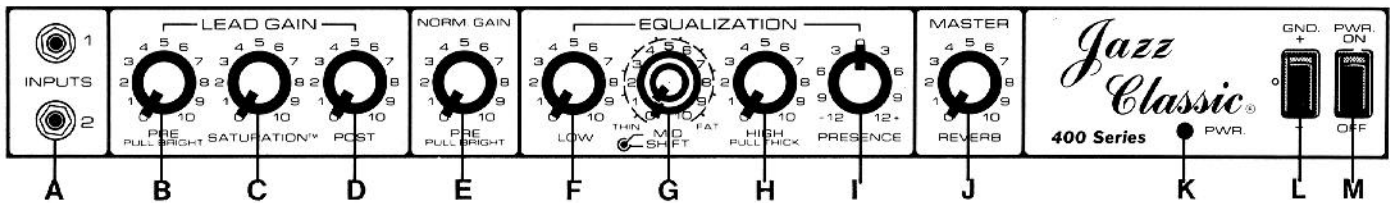
The new Jazz Classic® has two input jacks, each having different sensitivities and a unique arrangement allowing the gain of both jacks to be equalized when instruments are plugged into both inputs. The high gain jack (1) is the input normally used for most instruments and has considerably more sensitivity than the low gain jack (2). The low gain jack is 6 dB less sensitive than the high gain input and should be used when the signal from your instrument is very hot and premature overloading of the input is detected. Many times the (2) or low gain input should be used when extremely hot signals are available from other preamps such as effects devices, etc.

GAIN BLOCK™ SECTION

The Jazz Classic® has been designed utilizing our new Gain Block signal processing front end. The provisions of the three interacting controls listed below allow total control of the amp's gain structure (dynamics), harmonic content, overload texture, and output level. Each of the three control functions must be understood and adequate experimentation time must be spent in order to fully utilize the potential of this unique and innovative Gain Block circuitry.

PRE GAIN/PULL BRIGHT CONTROL (B)

The pre gain control for the lead Gain Block determines the input level and functions similar to any typical channel gain control. This control should be operated with sufficient gain to drive the Saturation control for the smooth, compressed, tube-type overload. Please be aware that this control exhibits an audio taper and develops approximately ¼ gain at the 12 o'clock position with the balance being obtained as the control is rotated clockwise. After adjusting the post gain to its approximate mid point position, the pre gain control should be set once again to your personal taste for your particular style of music. This control features a pull switch for extra brightness when the knob is pulled outward slightly. Saturation generally sounds better without the bright feature activated.



SATURATION™ CONTROL (C)

The Saturation control is a function of the preamp circuitry and very closely simulates warm tube-type, harmonic overload. This control creates preamp overload and works in conjunction with the pre and post gain controls in the lead Gain Block. When using Saturation, the pre gain control should be adjusted properly to adequately drive the Saturation circuitry. A very low setting of the pre gain control doesn't usually produce the necessary drive for Saturation but the overall effect is determined by the input signal of the instrument patched in. The gain/compression effect of Saturation is increased with clockwise rotation and decreased with counterclockwise setting of the control. A full counterclockwise (0) setting will result in no Saturation.

POST GAIN CONTROL (D)

The post gain control regulates the overall gain (sensitivity) and system noise of the lead Gain Block and is conventional in operation. The post control may be used exactly like any other master gain control. Settings of 5 or less will reduce lead gain block levels and simultaneously reduce noise levels generally required for smaller club performances and studio applications. Settings of 6 and above will allow maximum power output reserve from the Jazz Classic's 210 watt RMS power amplifier section while the automatic DDT feature will prevent power amplifier clipping, thereby reducing the possibility of loudspeaker damage and the associated harsh distortion sounds usually associated with power amplifier breakup. NOTE: The normal channel gain control is not affected by the post gain control when the normal channel is footswitch selected.

NORMAL GAIN/PULL BRIGHT CONTROL (E)

The normal gain control determines the overall level of the normal channel. This channel is accessible only with the remote footswitch. The normal channel gain is **unaffected** by the post (master) gain and works independently for a clean sound when no distortion is desired. When the normal channel is selected, the **pull thick feature** is defeated and EQ controls function normally. Notice also that **Saturation** is not functional with the normal channel. The **normal** channel gain also includes a **pull bright** feature for additional bite or edge on the high frequencies when the control knob is pulled.

LOW FREQUENCY CONTROL (F)

The low frequency control adjusts the tonality for the amount of smoothness and offers extended bandwidth on the low end of the tonal range. Care should be taken to not overboost with this control to avoid muddiness and loss of headroom in the power amp. Extreme overboosting of bass frequencies tends to distract from the projection capability of the amplifier and confuses material which should be heard for lead guitar lines.

MID SHIFT CONTROL (G)

The vital mid frequencies are controlled by this unique concentric (stacked) system of potentiometers. **Please be aware that mid frequencies contribute, to a large degree, to the overall tone color of the guitar in all forms of music.** Although this is a new type of system for controlling the mids, it should present no problem in operation. The inner (top) control determines the **amount** of mid frequencies. Rotating this control clockwise increases the mids for a greater degree of "fat" tonalities while counterclockwise rotation will cause the overall tone color to become "thin." The outer (bottom) control allows the player to "passively" shift the band at which the mid frequencies will operate. After experimenting with these controls, the player will be able to determine "where" and "how much" of the midrange tonalities best suit his/her playing style and technique.

HIGH/PULL THICK (H)

The high EQ control is similar in operation to a typical passive treble control and varies response of the high end at frequencies below the effect of the presence control. The pull switch on the high control activates the "thick" midrange boosted tonality which is very popular with rock players. Notice that the bass and mid controls have little effect when pull thick is activated.

PRESENCE CONTROL (I)

The presence is an active high frequency EQ with cut and boost capability. This control may be used similarly to a bright boost for the upper range of frequencies when additional bite is desired.

MASTER REVERB CONTROL (J)

The master reverb control determines the desired amount of reverberation from the internal reverb system. Clockwise rotation increases the reverb effect and counterclockwise decreases the effect.

PILOT LED (K)

The pilot LED indicates when the unit is receiving electrical supply from the mains and is operational.

GROUND LIFT SWITCH (L)

This switch is the three-position type with the center position completely removing the internal grounding capacitor. This switch is the three-position type with the center position completely removing the internal grounding capacitor from the circuit. This position is normally recommended for situations where the AC power receptacle is known to contain a properly grounded third wire. If properly grounded AC mains supply is not available, suitable ground lift adaptor should be used. The (+ and -) positions are used to ground the amplifier properly when only two-wire services are available. One of these positions will yield the lowest amount of residual hum or "popping" when the instrument is touched. NOTE: This switch is not functional on 220/240 volt units.

POWER SWITCH (M)

This AC power switch is the conventional rocker-type that indicates off at the bottom and on at the top.

REAR PANEL

PREAMP OUTPUT/POWER AMP INPUT (N)

To allow in-line patching of battery- or AC-powered effects and signal processors, we have incorporated a simple out/in jack on the back panel. The out/in jack (post EQ) is a ¼" ring/tip/sleeve configuration where the tip portion of the jack serves as the preamp output while the ring acts as the power amp input or return. The sleeve is ground. A typical patch for this out/in jack would be to utilize a "Y" cord and connect the output portion of the "Y" to the **input** of the device. The return portion of the "Y" is then connected to the **output** of the device which will return the processed signal to the Jazz Classic®. Shielded cable must be used.

LINE OUT (O)

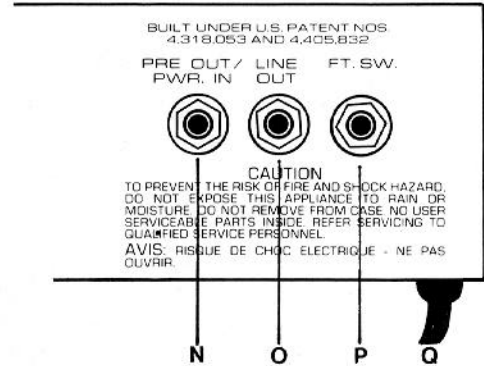
Same as the preamp output, except the signal has been **frequency compensated** to eliminate the undesirable effect of overboosting highs or lows when patching to recording or sound reinforcement consoles. Shielded cable must be used.

REMOTE SWITCH JACK (P)

The remote switch jack is of the two-circuit/stereo type, featuring ring-tip-sleeve construction. One circuit of this jack controls Automix™ channel switching functions enabling selection of either the lead or normal channel, while the other controls the reverberation signal. Remote switching is accomplished through the use of the supplied Automix footswitch, which is conventional in function and should present no operational difficulty. Please note when plugging in the Automix footswitch to be sure and insert the plug all the way (second click) into the jack. Failure to insert the plug all the way will not allow full function of the footswitch.

LINE CORD (Q)

For your safety we have incorporated a 3-wire line (mains) cable on the bottom of the chassis with proper grounding facilities. It is not advisable to remove the ground pin under any circumstances. If it is necessary to use the amplifier without proper grounding facilities, suitable grounding adapters should be used. Much less noise and greatly reduced shock hazard exists when the unit is operated with the proper grounded receptacles.



SET UP AND OPERATING INSTRUCTIONS

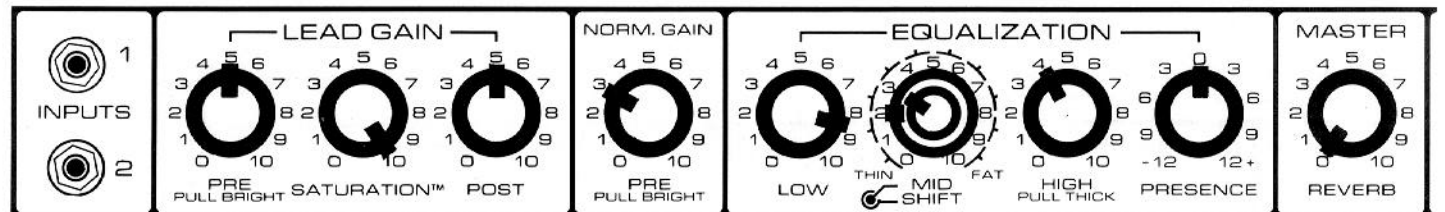
The procedure for arriving at optimum control settings with any particular guitar and equalization characteristics are as follows:

1. Plug into the high or low gain input jack.
2. Set the post gain control around mid point.
3. Set the pre gain control somewhere in the middle of its range.
4. Adjust the Saturation™ control for the desired amount of gain/compressed clipping.
5. Readjust the pre gain control to assure adequate drive.
6. Readjust the post gain control just below the point at which the power amp/speaker reaches the clipping point and adds its own harmonics to the predistorted signal. This setting is readily noticeable since the additional harmonics are audible when the power amp reaches its maximum output level and will not necessarily be pleasing to the ear.

SPECIAL NOTE:

THE **NORMAL** CHANNEL CAN ONLY BE SELECTED WITH THE FOOTSWITCH. ALSO, THE **NORMAL CHANNEL GAIN CONTROL IS NOT AFFECTED BY THE POST GAIN** AND IS THE **SINGLE DETERMINING ELEMENT FOR THE LEVEL OF THE NORMAL CHANNEL**. WHEN THE FOOTSWITCH IS USED TO SELECT BETWEEN THE **SATURATED LEAD CHANNEL AND THE CLEAN NORMAL CHANNEL**, THE **PULL THICK** FEATURE DROPS OUT (IS DEFEATED IF IT HAS BEEN SELECTED). AS MENTIONED, THE POST CONTROL **DOES NOT AFFECT THE NORMAL CHANNEL**. THIS SWITCHING ARRANGEMENT ALLOWS THE PLAYER TO PRESET THE BALANCE BETWEEN THE PRE GAIN, SATURATION, AND POST GAIN OF THE LEAD GAIN BLOCK FOR ANY DESIRED OVERLOAD AND LEVEL, AND SWITCH BACK TO THE NORMAL CHANNEL FOR A TOTALLY CLEAN SOUND WITHOUT INTERFERENCE OF THOSE TWO CONDITIONS.

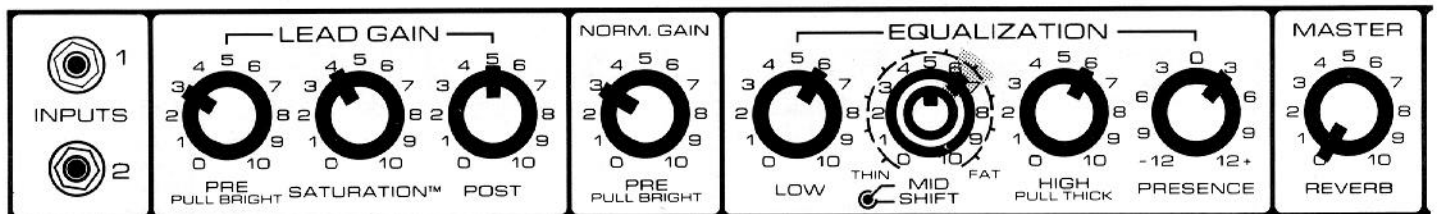
The tone settings given are general and will vary according to type of guitar, type and gauges of strings, type of pickup, and type of pick.



JAZZ ROCK

ACTIVATE

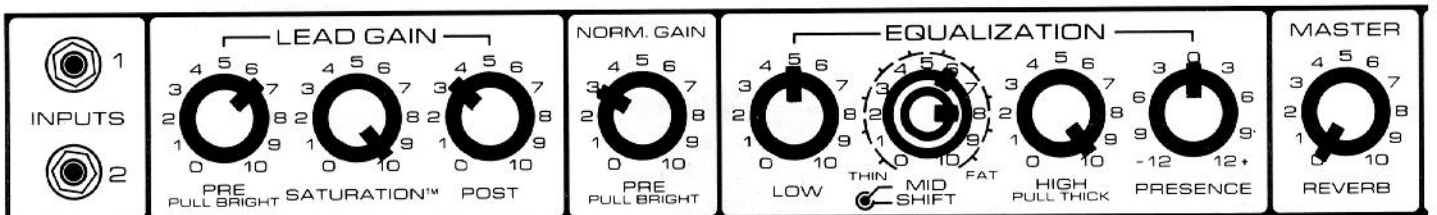
ADJUST TO TASTE



SHIFT SETTING
VARIABLE

ADJUST TO TASTE

SOFT SATURATION™/COUNTRY ROCK



ADJUST TO TASTE

MAXIMUM SATURATION™/RHYTHM & BLUES

JAZZ CLASSIC® SPECIFICATIONS:

POWER AMPLIFIER SECTION:

RATED POWER & LOAD:

210 W RMS into 4 ohms with DDT™ compression

POWER @ CLIPPING (Typically):

5% THD, 1 kHz, 120 VAC line

130 W RMS into 8 ohms

220 W RMS into 4 ohms

2 ohms not recommended

FREQUENCY RESPONSE:

+0, -1 dB, 20 Hz to 20 kHz @ 200 W RMS into 4 ohms

TOTAL HARMONIC DISTORTION:

Less than 0.2%, 100 mW to 200 W RMS, 20 Hz to 10 kHz, 4 ohms (typically below 0.1%)

DDT™ DYNAMIC RANGE:

Greater than 20 dB

DDT™ MAXIMUM THD:

Below 0.5% THD for 6 dB overload

Below 1% THD for 20 dB overload

HUM & NOISE:

Greater than 95 dB below rated power

POWER CONSUMPTION (Domestic):

600 watts, 50/60 Hz, 120 VAC

PREAMP SECTION:

THE FOLLOWING SPECS ARE MEASURED AT 1 kHz WITH THE CONTROLS PRESET AS FOLLOWS:

Lead Gain/Pull Bright Off (In)
Saturation at 0
Post Gain at 10
Normal Pre Gain at 0
Normal Gain/Pull Bright Off (In)
Low & High EQ at 10
Mid EQ at 0
Shift at 5
Pull Thick Off (In)
Presence at 0 dB
Reverb at 0

Nominal Levels are with Pre Gain at 5
Minimum Levels are with Pre Gain at 10

PREAMP/JACK A INPUT:

Impedance: High Z, 220K ohms

Nominal Input Level: -28 dBV, 40 mV RMS

Minimum Input Level: -46 dBV, 5 mV RMS

Maximum Input Level: +4 dBV, 1.5 V RMS

PREAMP/JACK B INPUT:

Impedance: High Z, 44K ohms

Nominal Input Level: -22 dBV, 80 mV RMS

Minimum Input Level: -40 dBV, 10 mV RMS

Maximum Input Level: +10 dBV, 3 V RMS

LINE OUTPUT (Frequency Compensated):

Load Impedance: 600 ohms or greater

Nominal Output: -10 dBV, 300 mV RMS

Maximum Output: +10 dBV, 3 V RMS into 50K ohms
dBm, 2 V RMS into 600 ohms

PREAMP OUTPUT (Full Range):

Load Impedance: 1K ohms or greater

Nominal Output: 0 dBV, 1 V RMS

POWER AMP INPUT:

Impedance: High Z, 22K ohms

Designed Input Level: 0 dBV, 1 V RMS

(Switching jack providing preamp output to power amp input connection when not used)

SYSTEM HUM & NOISE AT NOMINAL INPUT LEVEL:

20 Hz to 20 kHz unweighted; 72 dB below rated power

EQUALIZATION:

Special Low, Mid & High passive-type EQ with Mid Shift (Thin/Fat) circuitry & Pull Thick

PRESENCE:

+/-12 dB @ 5 kHz; Shelving (Active)

PULL BRIGHT:

+6 dB @ 2 kHz

AUTOMIX™ FEATURES:

Reverb Function defeated with Footswitch

Normal Channel only operational with Footswitch

Pull Thick & Post Gain defeated in Normal Channel

DANGER
EXPOSURE TO EXTREMELY HIGH NOISE LEVELS MAY CAUSE A PERMANENT HEARING LOSS. INDIVIDUALS VARY CONSIDERABLY IN SUSCEPTIBILITY TO NOISE INDUCED HEARING LOSS, BUT NEARLY EVERYONE WILL LOSE SOME HEARING IF EXPOSED TO SUFFICIENTLY INTENSE NOISE FOR A SUFFICIENT TIME.
THE U.S. GOVERNMENT'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) HAS SPECIFIED THE FOLLOWING PERMISSIBLE NOISE LEVEL EXPOSURES:

DURATION PER DAY IN HOURS	SOUND LEVEL dBA, SLOW RESPONSE
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
3/4	110
1/2 or less	115

ACCORDING TO OSHA, ANY EXPOSURE IN EXCESS OF THE ABOVE PERMISSIBLE LIMITS COULD RESULT IN SOME HEARING LOSS.
EAR PLUGS OR PROTECTORS IN THE EAR CANALS OR OVER THE EARS MUST BE WORN WHEN OPERATING THIS AMPLIFICATION SYSTEM IN ORDER TO PREVENT A PERMANENT HEARING LOSS IF EXPOSURES IN EXCESS OF THE LIMITS SET FORTH ABOVE TO INSURE AGAINST POTENTIALLY DANGEROUS EXPOSURE TO HIGH SOUND PRESSURE LEVELS. IT IS RECOMMENDED THAT ALL PERSONS EXPOSED TO EQUIPMENT CAPABLE OF PRODUCING HIGH SOUND PRESSURE LEVELS SUCH AS THIS AMPLIFICATION SYSTEM BE PROTECTED BY HEARING PROTECTORS WHILE THIS UNIT IS IN OPERATION.

CAUTION
THIS AMPLIFIER HAS BEEN DESIGNED AND CONSTRUCTED TO PROVIDE ADEQUATE POWER RESERVE FOR PLAYING MODERN MUSIC WHICH MAY REQUIRE OCCASIONAL PEAK POWER. TO HANDLE OCCASIONAL PEAK POWER, ADEQUATE POWER "HEADROOM" HAS BEEN DESIGNED INTO THIS SYSTEM. EXTENDED OPERATION AT ABSOLUTE MAXIMUM POWER LEVELS IS NOT RECOMMENDED SINCE THIS COULD DAMAGE THE ASSOCIATED LOUDESPEAKER SYSTEM. PLEASE BE AWARE THAT MAXIMUM POWER CAN BE OBTAINED WITH VERY LOW SETTINGS OF THE GAIN CONTROLS IF THE INPUT SIGNAL IS VERY STRONG.

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be retained for future reference.
3. Obey all cautions in the operating instructions and on the back of the unit.
4. All operating instructions should be followed.
5. This product should not be used near water, i.e. a bathtub, sink, swimming pool, wet basement, etc.
6. This product should be located so that its position does not interfere with its proper ventilation. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
7. This product should not be placed near a source of heat such as a stove, heater, radiator or another heat producing amplifier.
8. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
9. Never break off the ground pin on the power supply cord. For more information on grounding, write for our free booklet "Shock Hazard and Grounding".
10. Power supply cords should always be handled carefully. Never walk or place equipment on power supply cords. Periodically check cords for cuts or signs of stress, especially at the plug and the point where the cord exits the unit.
11. The power supply cord should be unplugged when the unit is to be unused for long periods of time.
12. Metal parts can be cleaned with a damp rag. The vinyl covering used on some units can be cleaned with a damp rag, or an ammonia based household cleaner if necessary.
13. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation holes or any other openings.
14. This unit should be checked by a qualified service technician if:
A. The power supply cord or plug has been damaged.
B. Anything has fallen or been spilled into the unit.
C. The unit does not operate correctly.
D. The unit has been dropped or the enclosure damaged.
15. The user should not attempt to service this equipment. All service work should be done by a qualified service technician.

