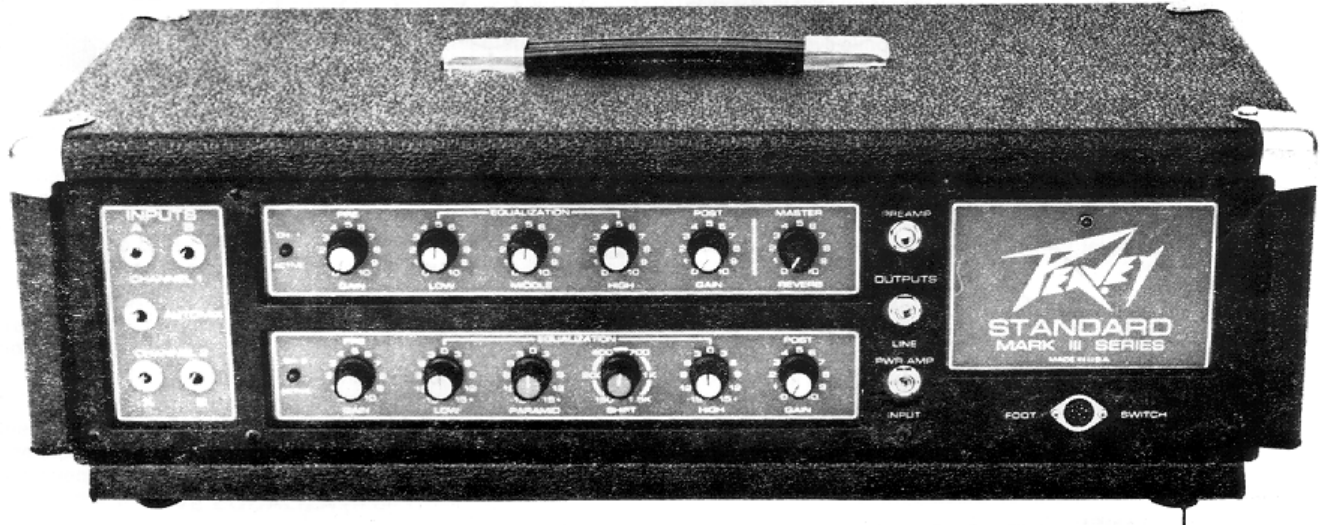


Mark III Series  
**STANDARD**  
OPERATING GUIDE



## GENERAL DESCRIPTION

Peavey's ongoing market research continues to show the need for a medium powered (130 Watts) instrument amplifier capable of extremely wide range and featuring adequate control facilities and functions to handle most performance applications. This new amplifier is the fourth generation of "Standard" series amplifiers. The original idea was to produce a "gutsy, no frills" amplifier and this latest version certainly fills that requirement. The Mark III Standard utilizes dual channels, each with different equalization characteristics, improved AUTOMIX circuitry, improved reverberation and a patch panel to allow use of various sound accessories. We feel our new Standard will continue to set the "standard" in medium powered instrument amplifiers.

Our new AUTOMIX circuitry is made possible by the use of the latest analog switching CMOS devices. The action of the AUTOMIX circuitry is indicated by each channel's LED activity indicator.

The signal processor/preamp feeds our recently developed 260D module which has been specially designed to include certain damping, overload, and sustain characteristics to allow simulation of smooth overload dynamics of the tube type (valve) amplifiers. Four extremely heavy-duty output devices are bolted to a massive aluminum heatsink to insure durability under severe playing conditions. The 260D module incorporates advanced short circuit and thermal overload protection in order to virtually eliminate the possibility of damage through misuse or accident.

The Standard features two preamp channels, each voiced differently. Channel 2 has Peavey's exclusive pre and post gain controls and is complemented by a new equalization system featuring PARAMID mid equalization. (Parametric equalizer with a fixed "Q" or bandwidth.) The low and high end EQ is controlled by active "shelving type" equalizers since these type circuits extend to the extremes of low and high frequencies as opposed to the "peak/dip" characteristics of a PARAMID circuit. The vital mid range frequencies actually set the character of the instrument's sound and our versatile PARAMID middle circuitry enables control of these vital frequencies.

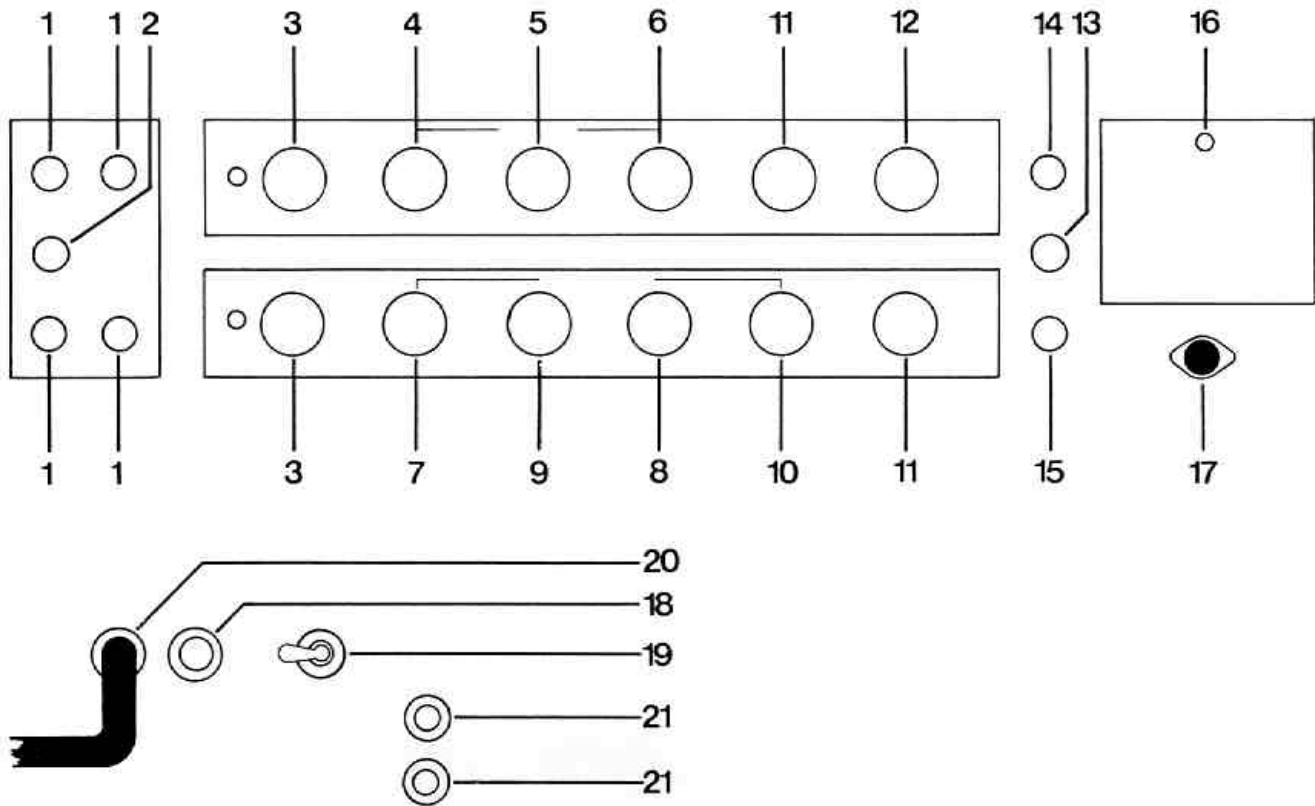
Channel 1 features our usual pre and post gain controls, along with more conventional passive equalization circuitry. Three-band equalization allows an extremely wide range and is included to allow a distinctly different tonal characteristic than Channel 2's active low and high/PARAMID mid range circuitry.

The Standard's AUTOMIX function has been recently redesigned around the latest in analog switching circuitry and includes LED activity indicators to indicate the channels in use. (PLEASE NOTE: LED'S ARE INACTIVE UNTIL AN INSTRUMENT IS PLUGGED INTO THE AUTOMIX JACK.)

A full patch panel has been included to enable patching effects devices "in line" and also to provide a frequency compensated low impedance output to drive recording or P.A. consoles directly without need of a "direct box" or other amp/mixer interface device.

Overall, the Standard is Peavey's latest offering in medium powered musical instrument amplifiers and will provide almost any tonal coloring with proper control settings.

**WARNING: To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture.**



## FRONT PANEL

### INPUT JACKS A AND B (1)

The Standard features both a high gain (A) and a low gain (B) (-6 dB) input to enable it to accept signals of varying levels and also to facilitate using two instruments into either channel. The high gain (A) input is the one normally used. If the output signal from your instrument or its associated electronics is overloading the high gain (A) input, then the low gain (B) input should be used. Because of the unique switching circuitry, A and B inputs automatically are gain balanced when two instruments are inserted into both A and B.

#### NOTE:

THE AUTOMIX JACK IS A SPECIAL SWITCHING JACK THAT HAS A DOUBLE DETENT, I.E., OR TWO POSITIONS. TO ACHIEVE PROPER OPERATION, THE INPUT PLUG MUST BE INSERTED ALL THE WAY OR TO THE SECOND CLICK. PROPER INSERTION OF THE INSTRUMENT'S INPUT PLUG WILL BE INDICATED BY ILLUMINATION OF EITHER OR BOTH AUTOMIX LED ACTIVE CHANNEL INDICATORS.

### AUTOMIX JACK (2)

The AUTOMIX circuit was pioneered by Peavey several years ago in order to enable the use of both channels of the amplifier. It used to be common to play through one channel only while the other channel was not used. Our AUTOMIX circuitry enables the player to utilize the **full** capability of this amplifier by allowing either or both channels to be used during a performance. The switching function is controlled by the remote footswitch which is supplied as standard equipment with the amplifier. The AUTOMIX effect is activated when your input plug is **fully inserted** into the AUTOMIX jack and is accompanied by illumination of one or both LED's. Our improved circuitry has provided post gain controls for both channels which are actually master volume controls for the respective channels enabling sensitivity and dynamics to be **independently** adjusted in each channel with the selection of either or both channels accomplished by the AUTOMIX circuitry and its remote footswitch.

The remote footswitch features a "Selector" button, which enables alternate selection of **either** Channel 1 **or** Channel 2. The "Combiner" button operates to lock the two channels together and **defeats** the "Selector" button. Obviously, when the "Combiner" button is activated, both channels are in the circuit as indicated by their LED indicators. When in the combined mode, the "Selector" button is inoperative since the combined mode must functionally override the select mode to operate both channels simultaneously. To reactivate the select mode, depress the "Combiner" button once.

### PRE GAIN CONTROLS (3)

The pre gain controls determine the amount of gain produced in the input preamp. Please understand that this control determines the **sensitivity** and **not the power** output of the amplifier. The control settings, in no way, can be related to the power the amp is delivering to the speakers because of a number of other factors such as the input signal amplitude, setting of the post gain controls, etc.

### EQUALIZATION

The equalization circuitry of the Standard is extremely versatile, as well as reasonably simple to operate. Channel 2 features the latest active circuitry, while Channel 1 is designed around the most effective conventional passive circuitry. Because we have included parametric middle equalization, some knowledge and operating experience is necessary to obtain maximum benefit from this versatile feature.

## **CHANNEL ONE EQUALIZATION**

### **LOW EQUALIZATION CONTROL (4)**

The low equalization control determines the low frequency emphasis and is capable of substantially more effect than many of the more conventional passive tonal networks. For this reason, the control will tend to make the amp sound "bassy" at high settings. We have designed the circuitry to provide more tonal variation to allow you a greater range of variable tonalities.

### **MIDDLE EQUALIZATION CONTROL (5)**

The middle equalization control is located in Channel 1, and can be used to tailor the relative levels of the vital mid range frequencies. Experimentation with this middle control will show that it is very effective and enables the "voicing" of Channel 1 to be changed significantly because of its advanced circuit design.

### **HIGH EQUALIZATION CONTROL (6)**

The high equalization control sets the amount of high end boost available and its effect is dramatic. Overboosting of the highs is generally not desirable since it tends to cause a strident sound, as well as tending to emphasize residual preamp noise. Our equalization circuit is very effective and experimentation will allow the user to achieve almost any tonal coloring desired and will prove the versatility of this circuitry.

## **CHANNEL TWO EQUALIZATION**

### **LOW ACTIVE EQUALIZATION CONTROL (7)**

The Channel 2 low equalization control is of the active shelving type capable of producing either a boost or a cut of the low frequencies. Vertical (straight up or 12:00 o'clock) settings produce a flat response, while counter-clockwise settings produce a cut, and clockwise settings produce a boost. It should be noted that because this circuit is active, significant amounts of boost are available. One should avoid overboosting the lows since this will tend to require excessive amounts of power from the amplifier and might tend to cause excessive overdrive at lower output levels because of the greater power requirement for low frequencies.

### **"PARAMID" MIDDLE EQUALIZATION**

Our PARAMID equalizer is capable of two distinct equalization functions: (1) It features the ability to vary the center frequency of its action over a considerable range; (2) A second control determines whether the selected frequency is either boosted or cut and by how much.

(1) **SHIFT CONTROL: (8)** This control determines the center frequency of the peak or notch.

(2) **PARAMID CONTROL: (9)** The PARAMID control operates very similar to the low and high equalization controls since in the vertical (straight up or 12:00 o'clock) position, no effect is produced, while counter-clockwise settings produce a cutting effect and clockwise settings produce a boosting effect. Care should be taken not to overboost since this effectively increases the gain at the selected frequency and could overdrive the power amp and/or speaker, as well as increase the residual noise.

### **HIGH ACTIVE EQUALIZATION CONTROL (10)**

The Channel 2 high equalization control is of the active shelving type, capable of producing either a boost or cut of the high frequencies. Its operation is similar to the low and parametric mode controls in that a vertical (straight up or 12:00 o'clock) position produces a flat response, while counter-clockwise positions yield cut and clockwise settings yield boost. It's a good idea to avoid extreme boosting of high frequencies since this tends to encourage emphasis of residual preamp noise and also tends to make the amp sound strident and unduly emphasize string noises, etc.

## **POST GAIN CONTROLS (11)**

The post gain controls are the "master gain" controls for the respective channels. The action of these controls is conventional and experimentation will illustrate their function. Please be aware that extremely low settings of the post gain controls will require extremely high settings of the pre gain controls with subsequent loss of dynamic range in the input preamp. This may be desirable in some situations to create overload or distortion effects in the input circuitry. The post gain controls allow the user to match levels and dynamic overload of **each** channel **separately** allowing much more effective use of the AUTOMIX function.

## **REVERB (12)**

To allow additional flexibility, the new reverb system in the Standard is arranged in such a way that it works on both channels. Any signal coming from the post gain control of either channel is sent to the reverb drive circuitry, which in turn drives the reverb spring. The signal return is amplified and remixed with the clear signals of both channels and is applied to the power amplifier which drives the loudspeaker.

The reverb control determines the amount of gain in the reverb return amplifier. Because of the extremely strong reverb drive system, you will find that adequate reverb can be obtained at relatively low reverb settings. We have provided significantly more pickup reverb gain in order to enable deep reverb effects that might be desirable from time-to-time, especially when using the reverb for coloration. (When the external footswitch is plugged into the front panel, the reverb return signal can be turned off or on by the remote switch.)

## **LINE OUT (13)**

Many attempts have been made over the years to patch the preamp circuitry of musical instrument amplifiers directly into recording or sound reinforcement mixing consoles. Most of these attempts have been unsuccessful and have resulted in players and soundmen having to utilize various forms of what is popularly referred to as a "direct box" which, of course, means further complications, expense, etc. Most previous attempts at patching signals out of musical instrument amplifiers have ignored a very basic fact...generally poor frequency response from the musical instrument amplifier's speaker system. Most amp manufacturers have compensated for the speaker's poor top end frequency response by building in some degree of high frequency boost in order to satisfy the player. While this built-in high frequency boost is indeed good for increasing the response from the system, it tends to cause excessive residual noise, as well as "strident" or "screechy" tonality in the "direct" preamp output signal. Our line output has a built-in compensation circuit that very closely matches the rolloff characteristic of a speaker system in order to produce an output signal that corresponds very closely to what's being heard from the speaker system. There is also a rolloff of the extreme low frequencies to avoid overload of the associated console by the "sub" bass signals. This very important feature should prove very helpful in eliminating the need for direct boxes and micing of musical instrument amplifiers. The signals from the line output jacks are low impedance (600 Ohms) unbalanced at a signal level of 1.5 Volts RMS.

## **PREAMP OUT (14)/POWER AMP IN (15)**

To allow "in line" patching of the various accessories, we have included a system of preamp out/power amp in jacks on the front panel. The preamp out is the straight preamp signal which is the sum of the outputs of the two channels plus reverb. The output level is approximately 1.5 Volts RMS and is a relatively low (600 Ohms) output impedance. The preamp out signal is connected through a switching contact to the power amp input jack and normally the preamp out is internally connected to the

power amp's input. This circuit allows basically two modes of operation. When signal is taken from the preamp output, signal is also delivered to the internal power amplifier. If access to the internal power amplifier is needed or if some accessory device such as a noise gate, delay line, etc., is to be patched "in line", then the **preamp output** signal must be connected to the **auxiliary unit's input**, while the **auxiliary unit's output** must be connected to the **power amp input** with shielded cables, thereby placing the auxiliary unit in series or "in line" with the normal signal path. Additional booster amp/speaker combinations should be patched using the preamp output. With this unique patching facility, many interesting effects can be accomplished.

#### PILOT LED (16)

The pilot LED indicates when the electrical supply is switched on and is actually delivering power to the amplifier.

#### AUTOMIX REMOTE SWITCH SOCKET (17)

The remote switch socket is the standard "DIN" type and serves as the amp connection for the **supplied** remote footswitch. Please note that the "DIN" plug has an indentation that must be mated with the matching indentation in the footswitch receptacle on the front panel. This keying action allows the footswitch to be connected only in the proper manner. If the plug is forced or undue pressure is exerted on the shell or pins, damage could result to the footswitch plug or the chassis mounted socket. As with any precision device, reasonable care should be exercised.

#### REAR PANEL

#### FUSE (18)

The fuse is located within the cap of the fuseholder and must be replaced with one of the proper type and value if it should fail. It is necessary that the proper type and value fuse be used in order to avoid damage to the equipment and to prevent voiding the warranty. If your unit repeatedly blows fuses, it should be taken to a qualified service center for repair.

#### POWER SWITCH (19)

On domestic units, the power switch is of the three-position type with the center position being "OFF". This switch has two "ON" positions, one of which is used to ground the amplifier properly. One of the "ON" positions will yield the lowest amount of residual hum or "popping" when the instrument is touched and this is the position that should be used.

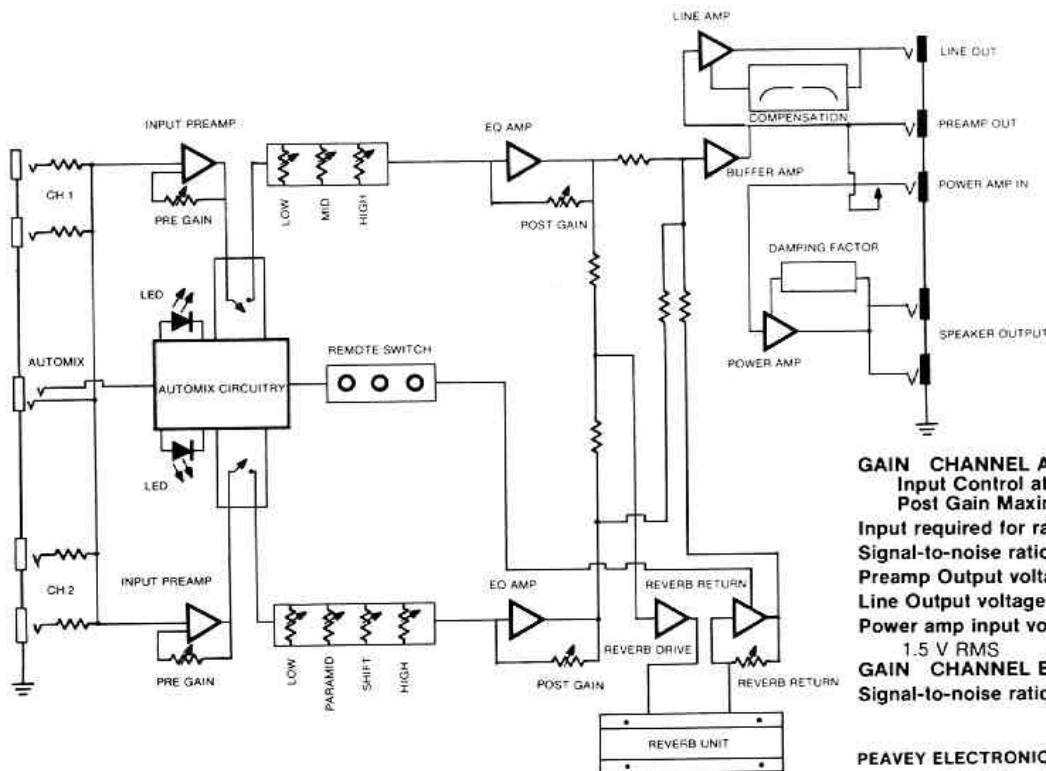
On export models, we utilize a simple on/off switch that does not have multiple "ON" positions since the grounding (earthing) conditions vary with the different electrical systems of the United States versus other nations.

#### LINE CORD (20)

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

#### SPEAKER OUTPUTS (21)

The speaker output jacks are wired in parallel and are of the standard 1/4" type. Both the output jacks are wired in parallel and either or both may be used when connecting your speaker system. The 260D module has been optimized for a 4-Ohm load but has adequate performance to drive loads both above and below the recommended 4-Ohm impedance. Extreme care should be used when operating a unit at below 4 Ohms since lower load impedances tend to overload the power amplifier and may cause premature activation of the power amp's short circuit protection system and/or thermal fault protection circuitry. This power amplifier is designed with a relatively low damping factor in order to duplicate the sound quality of that of a tube amplifier. As such, certain speaker systems will tend to sound different in this amplifier than in conventional solid-state amplifiers. You will find significantly improved high end response, as well as a more "punchy" low end sound so characteristically found in tube amps.



**GAIN CHANNEL A**  
 Input Control at 12:00 o'clock position  
 Post Gain Maximum: Gain at 1.0 kHz 57 dB  
 Input required for rated output: 15 mV RMS  
 Signal-to-noise ratio: 71 dB  
 Preamp Output voltage at rated power out: 1.5 V RMS  
 Line Output voltage at rated power out: 1.5 V RMS  
 Power amp input voltage required for rated power output:  
 1.5 V RMS  
**GAIN CHANNEL B** 55 dB  
 Signal-to-noise ratio: 73 dB



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