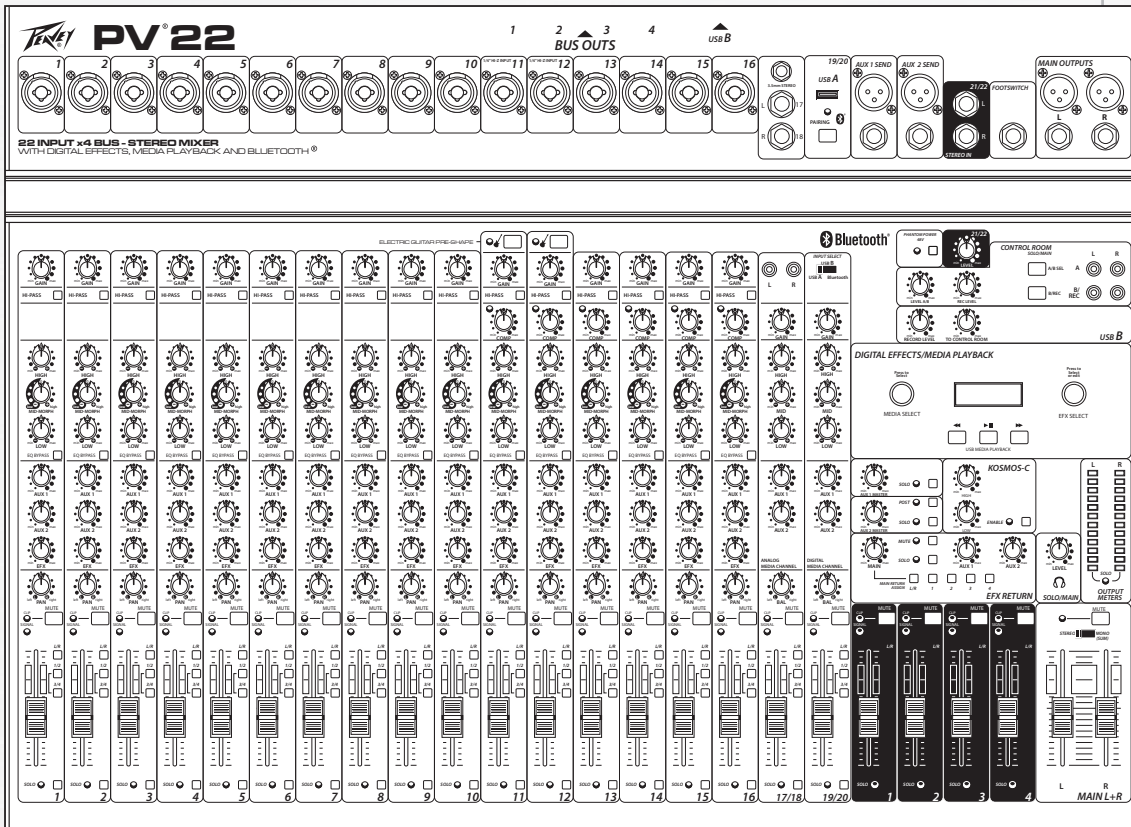




# PV<sup>®</sup>22

## Compact Mixer



## Operating Manual

# ENGLISH

## PV<sup>®</sup>22

Compact Mixer

Congratulations on purchasing the Peavey PV<sup>®</sup>22 Compact Mixer. The PV<sup>®</sup>22 is a studio-quality mixing console designed to meet diverse needs while occupying a small space. This is the perfect console for small venue performances or home recording environments. PV 22 features built-in DSP effects that are useful in real-world recording and sound reinforcement, while parameter controls allow you to tailor each effect to meet your needs.

The PV22 includes 16 channels of Silencer™ mic preamps, a stereo channel, media channel with Bluetooth wireless input, high quality digital effects with LCD display, streaming USB out, MP3 playback via USB A input, Peavey's exclusive Kosmos audio enhancement, 48 volt phantom power, dual selectable control room outputs, 6 channels of compression, two channels of on board selectable guitar preamp, 3-band EQ per channel with bypass, channel mute buttons, aux sends, signal clip indicators, and a stereo master LED meter bridge. This amazingly versatile mixer is at home both in the studio as well as live applications. Its modern features such as Bluetooth allow seamless connection to almost any "smart" device. Additionally, the PV 22 can stream audio directly to a PC. MP3 playback is also available, just plug a flash drive with MP3 files on it into the USB A port and use the LCD to select and playback music. The PV series Solo feature allows the user to listen to individual channels via headphone or control room outputs and the EQ bypass allows the user to compare the EQ'd signal to the original signal with the push of a button. 6 Channels of compression keep signals with difficult levels under control, and Peavey's exclusive guitar-shape adjusts the EQ and preamp specifically for guitar. Hi pass filters on every channel remove unwanted rumble and noise, and balanced AUX, Groups and Master outputs ensure a clean noise free signal to your powered speakers or power amplifier. The all new PV series non-powered mixers represent the pinnacle of performance and value.

Please read this guide carefully to ensure your personal safety as well as the safety of your equipment.

### FEATURES:

- 16 Combination 1/4" and XLR low noise mic preamps
- Stereo 1/4", RCA or 3.5mm input channel
- Bluetooth wireless connectivity
- 3-band EQ on all channels
- 16 Channels of Peavey's Exclusive Mid-Morph
- 150 Hz hi-pass switch on all mic inputs
- LED clip and signal present indication
- Individual channel mutes
- EQ Bypass per mic channel
- On board studio quality digital effects with individual channel control
- Effects and playback LCD display
- Two Aux Sends, one selectable pre/post fader.
- Precision 60 mm faders
- Dual selectable control room outputs / Record out with independent level
- Global 48V phantom power
- Main stereo, Aux and Group outputs with balanced 1/4" and XLR connectors
- Rugged console design
- 6 channels of built-in compression
- Stereo pan control per channel
- On-board USB-A, MP3, and WAV playback
- Kosmos -C bass and treble enhancement
- Channel 21/22 stereo return/input
- Individual Solo function
- Stereo USB-B streaming audio in and out
- High quality master LED meter bridge
- Master mute
- Studio quality headphone output
- Peavey's exclusive on-board 1 Meg guitar input



Installation Note: This unit must have the following clearances from any combustible surface: top: 8", sides: 12", back: 12"

## PV22 Front Panel (channels 1 - 16)

### 1 MIC/LINE INPUT (CH.1-16)

This combination input jack accepts a 1/4" or XLR balanced plug. The XLR balanced input is optimized for a microphone or other low impedance source. The 1/4" input is a TRS balanced type, and also accepts ordinary TS guitar cables.

### 2 GAIN

The Input Gain control is used to establish proper gain structure in the channel. For best results, use the Solo system (18) to monitor the channel while you set the gain. The goal is maximum gain without distortion. Both the main LED meters (during Solo) and the channel's Signal/Clip indicator (15) can be used for adjusting gain. If the clip LED (15) comes on and remains lit, try reducing the gain.

### 3 150 Hz HI PASS FILTER

The hi pass filter has a corner frequency of 150 Hz. When engaged, it can improve clarity by removing low frequencies that make a mix sound muddy. This feature is especially useful when playing outside on a windy day or on a hollow-sounding, noisy stage. These kinds of ambient noises can rob your sound system of power. Engaging this switch will remove those frequencies from the system and restore power where needed.

### 4 COMPRESSION CONTROL (Channels 11-16)

Adjusting this knob clockwise lowers the threshold of the compressor, thereby increasing the amount of compression. The compressor ratio is in the 4:1 range, varying with signal levels and the amount of compression. This is useful for controlling peak levels from live sources, and has been designed to subtly tame the levels of live vocals without noticeable artifacts.

### 5 Compressor LED

This LED illuminates when the compressor is actively compressing a signal. \*not featured on channels 1-10.

### 6 Hi EQ

This active tone control (shelving type: ±15 dB) varies the level of the high frequency range.

### 7 MID-MORPH EQ (CH. 1-16)

Where most mid-range controls work at just one frequency, the Mid-Morph works at two. When turned counterclockwise, it cuts at 250Hz to reduce frequencies that muddy the sound. When turned clockwise, it boosts at 4kHz to add intelligibility to vocals. Either way, improved vocal or instrument definition can be achieved.

### 8 Low EQ

This active tone control (shelving type: ±15 dB) varies the level of the low frequency range. Caution: Excessive low frequency boost causes greater power consumption and increases the possibility of speaker damage.

### 9 EQ BYPASS

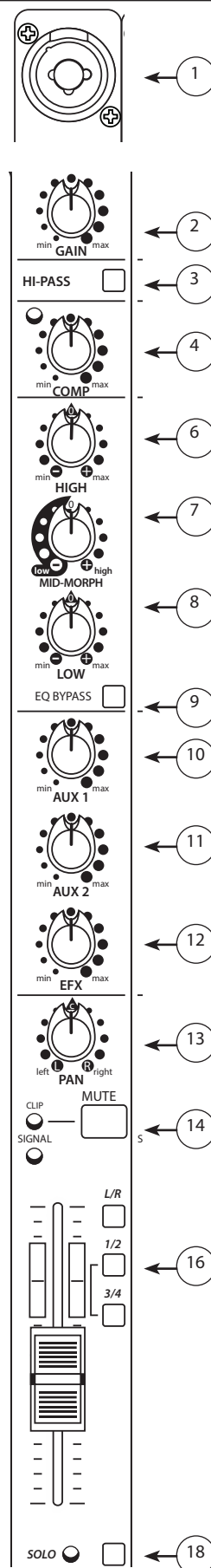
Engaging this button bypasses the equalization of the channel, allowing you to easily hear the effect of the EQ settings.

### 10 AUX SEND 1

This control adjusts the level of the channel signal sent to the Aux 1 output. The signal is taken before the channel level (17) but after the channel EQ, meaning that changes to the EQ settings will affect the aux mix, but changes to the channel level control won't. Typical use for the Aux bus is to feed stage monitors, when used in a live performance, or to feed headphone amplifiers in a recording situation.

### 11 AUX SEND 2

This control adjusts the level of the channel signal sent to the Aux 2 output. This signal can be sourced either pre-fader or post fader. The pre-fader signal would be taken before the channel level fader (17), but after the channel EQ. The post-fader signal would be taken after the channel level fader (17),



## PV22 Front Panel (channels 1-16)

### 12 EFX SEND

This control adjusts the level of the channel signal added to the effects mix. The signal is sent to the internal effects processor. Turning the knob to the left (min) will turn off effects on the associated channel, while turning the knob to the right will increase the amount of the selected effect. The effects send signal is taken after the channel level fader (17) so that adjustments made to the fader will also affect the send level.

### 13 PAN CONTROL

This knob controls the placement of the signal in the stereo field. When rotated completely counterclockwise, the signal is present only on the left channel; when rotated completely clockwise, only in the right channel. This control functions as a balance control to adjust the relative level of the left and right signals on stereo channels 17/18 and 19/20. (Note 1/4" inputs on ch 17/18 and 21/22 are mono unless both are connected, then they switch to stereo)

### 14 MUTE SWITCH

Pressing this switch will silence the channel signal going to the main mix, aux sends, groups and effects. The mute switch will not affect the signal sent to the solo system.

### 15 CLIP/MUTE and SIGNAL LEDs

This red LED normally indicates that the channel signal level is near clipping (distortion), but it also lights when mute is engaged. The clip indicator circuit monitors the signal after the gain control, after the EQ, and after the main level; because clipping can be caused by high settings of any of these controls. It illuminates at +15 dBu with a static signal (test tone), and corresponds to audible clipping with a highly dynamic signal (i.e. piano). When lit, it warns that the gain or EQ boost should be reduced. When it lights, roughly 5 dB of headroom remains. An optimized setting of input gain + EQ will result in this LED flashing briefly on the loudest peaks. The green signal LED indicates there is signal present in the channel.

### 16 ASSIGNMENT SWITCHES L/R, GROUP 1/2, GROUP 3/4

These switches assign the post-fader, post-pan signal to the corresponding L/R, Group 1/2 or Group 3/4 bus. The PAN control (13) can then be used to determine how much signal is being sent to each SUB group.

### 17 CHANNEL LEVEL FADER

This is the channel's output control, which sets the signal level sent to the left and right mix, groups and the effects send control. The gain is 0 dB (unity gain) when set to the center mark inside the rectangular graphic. 10 dB of boost is available at the max gain setting. Normal operation is to start with this knob at the center mark, and set the input gain and EQ with the source playing such that normal levels are seen at the signal /clip LED's and the main meter array. As additional sources are added, it is normal to move this fader down slightly to prevent overdriving the main mix bus.

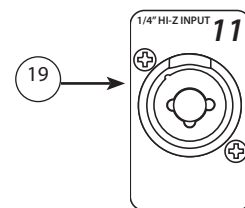
### 18 SOLO SWITCH AND LED

When the Solo switch is engaged, the yellow LED lights, as does the yellow Solo LED under the main L/R meter array in the master section, indicating that the Solo system is now active. The Solo system is a separate mix bus that routes the soloed channel(s) at unity gain to the level meters for precise input level setting, and to the control room monitor and headphone outputs for critical listening to the selected source(s). When the Solo system is active, the complete mix will no longer be heard through the control room or headphones; only the soloed channel(s).

## PV22 Front Panel (channels 11-12)

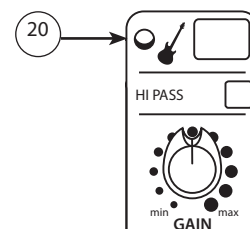
### 19 MIC/LINE INPUT

This input is the same as channels 1-10 unless Guitar Shape is pressed. When ELECTRIC GUITAR PRE-SHAPE is on, the 1/4" input changes to a high impedance (1 Meg $\Omega$ ), like a 12AX7 vacuum tube guitar amplifier input.



### 20 ELECTRIC GUITAR PRE-SHAPE

Engaging this button optimizes the on board equalization for electric guitar.



# PV22 Front Panel (channels 17, 18, 19 and 20)

## 22 3.5mm STEREO INPUT

The 3.5mm input to channel 17/18 accepts a stereo input from the output of an MP3 player, CD player, tape deck or other similar device. This input is optimized for portable handheld devices and therefore has very high sensitivity.

## 23 STEREO INPUTS

Channels 17 and 18 also feature 1/4" inputs. If only one jack is used, it behaves as a mono source with a pan control. When both jacks are connected, these connections serve as a stereo source with a balance control; 17 is Left and 18 is Right.

## 24 USB MEDIA JACK

A-type USB connector that a removable data storage device can be connected to playback music

### USB PLAYBACK:

The mixer can read up to 1000 folders on a USB drive, and up to 500 music files (.MP3, .WAV, or .AIF) per folder. The drive can have more, but anything above these numbers will be ignored. Additionally, folders and songs are read in the order they were written, not sorted alphabetically, or by date, etc.

For USB playback, slide the input selection switch (27) to the USB A position. The bottom of the LCD display will say "Insert USB drive". Insert your USB drive into the USB Media Jack (24) at the top of channel 19/20. Wait 4-5 seconds for the Media Player to enter "Folder Navigation Mode". In this mode, you can scroll through a list of all folders on the USB drive.

The display will show:

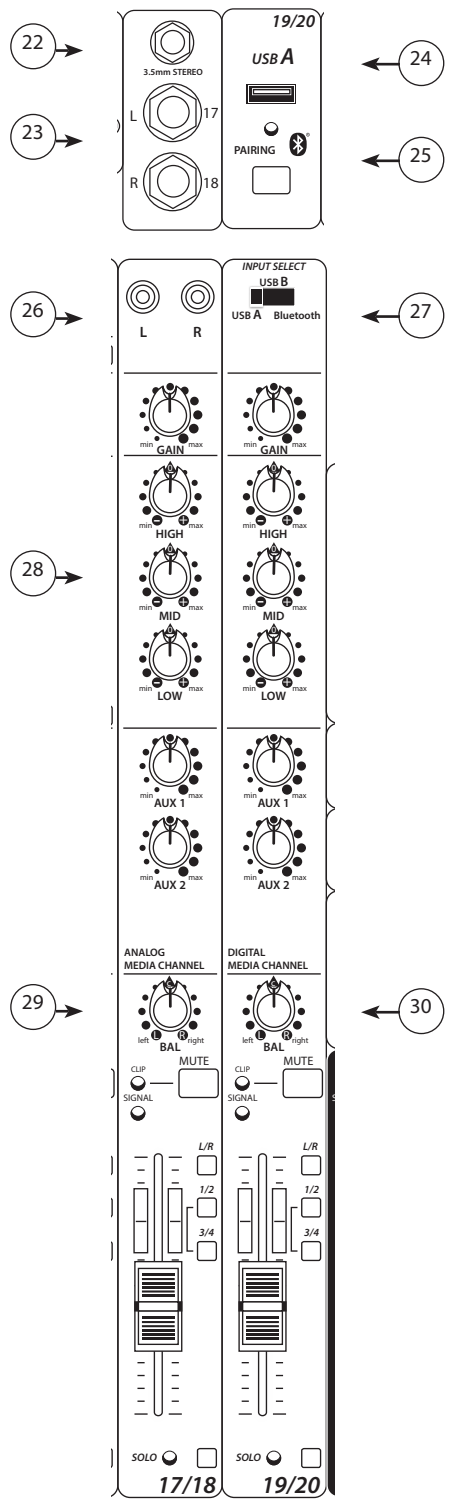
- all FOLDERS root
- <ROOT>

This signifies that the left encoder (Media) will scroll through all folders in order. The right encoder (EFX) will scroll through root folders – those on the first level of the tree. That way you can organize your music into bands at the root level, and albums at the sub level(s). For example:

- <ROOT>
- Band1
  - Album1a
  - Album1b
- Band2
  - Album2a
    - Disc1
    - Disc2

The right (EFX) encoder will scroll from <ROOT> to Band1, then to Band2. The left (Media) encoder will scroll through all eight shown. This allows faster navigation through a drive with many folders. Get to the band with the right encoder, then choose the album with the left encoder. Pressing either encoder will choose the album shown on the display.

Music files can be placed in the <ROOT> or root folders, although they typically wouldn't be in this type of arrangement.



NOTE: if you choose a folder that doesn't have any recognized music file extensions, you will see "No Songs" displayed for a couple seconds, and it will bring you back to the folder list to choose again.

Once you select a music folder, the right (EFX) encoder and top line of display will return to their duties of effects selecting/editing. The Media Player will enter "Song Navigation Mode" which allows you to either press Play to start the first song, or scroll through a list of all songs contained in the selected folder with the Media encoder, then select the song by pressing the encoder. After selected, you still have to press Play to start it. But if you select a song with the Media encoder while another song is playing, the new song will start as soon as you select it with the encoder press. (If you don't turn the encoder for a while, it will eventually return to showing the currently selected song.)

When the Media Player reaches the end of the last song in a folder, it will automatically loop back to the beginning of the folder.

Once a song is selected and the display shows it (whether stopped, paused, or playing), pressing the Media encoder will bring you back to Folder Navigation Mode. The current folder/song can continue to play and be manipulated with the three transport buttons while you look for a new folder. (If you don't turn the encoder for a while, it will eventually return to showing the current folder/song – assuming one has been selected prior to this entry into Folder Navigation Mode.)

NOTE: if you power up with a drive in the jack, and it is recognized as the same drive used on the last session (based on drive label and number of folders), it will return to the same folder it was in. That way you don't have to go through Folder Navigation Mode every time you turn the mixer on.

Transport Buttons:

The << button will typically bring you to the previous song in the list. If you're more than 4 seconds into a song, it will bring you back to the start of that song - then an optional 2nd press will bring you to the previous one if desired. At any point of the first song in the folder, it will re-start that song.

The Play button will toggle between play and pause of the current song.

The >> button will typically bring you to the next song. If you're on the last song in a folder, it will wrap to the first song in the folder.

NOTE: Following formats are supported:

WAV and AIF: Mono 16 bit and Stereo 8/16/24 bit, linear PCM.

MP3: MPEG 1 Layer 3 (MP3), ISO/IEC 11172-3, all sampling rates (32, 44.1, 48KHz) and all bit rates (32-320kbit/s).

## 25 BLUETOOTH BUTTON AND LED

The Bluetooth Button is used to turn on/off the Bluetooth. Once turned on, the Bluetooth will automatically enter pairing mode. The blue "Bluetooth Active LED" indicates the status of the Bluetooth connection. If the LED is off, the Bluetooth module is powered off. If the LED is slowly flashing, the PV mixer is not paired with any device, but is available for connection. When the LED is lit solid, the source device is properly paired to the mixer and ready to play.

## 26 RCA MEDIA INPUTS

The RCA inputs to channel 17/18 accept a stereo source such as an MP3 player, CD player, tape deck or other similar device. This input is optimized for portable handheld devices and therefore has very high sensitivity.

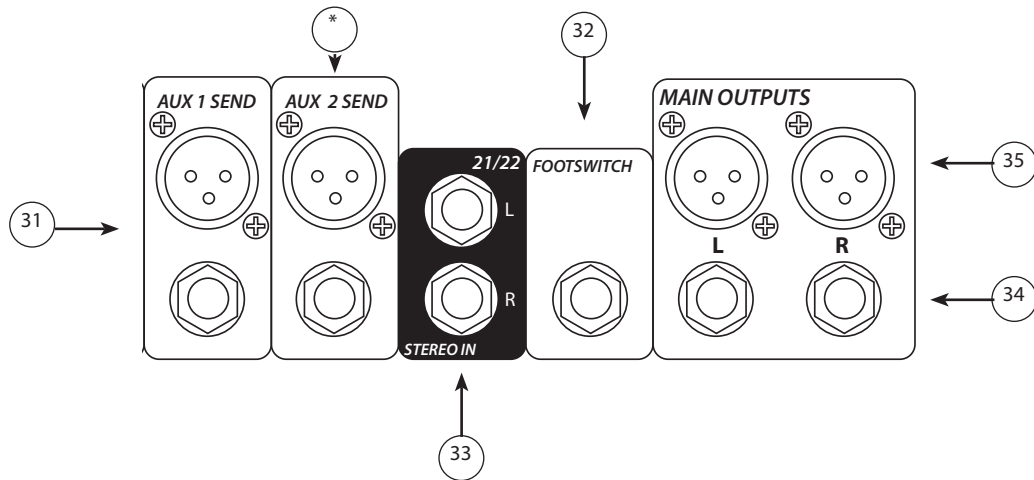
## 27 DIGITAL SOURCE SELECTOR

This switch selects between USB A (24), USB B (69), and the internal Bluetooth receiver.

## 28 MID CONTROL

Stereo channels' midrange is +/-15 dB @ 440Hz ; the HIGH (8) and LOW (10) controls are described above.

## PV22 Front Panel



### 29 ANALOG BALANCE CONTROL

Controls the balance between the analog channels 17/18.

### 30 DIGITAL BALANCE CONTROL

Controls the balance between the digital channels 19/20.

### 31 AUX SEND 1 XLR and 1/4" OUT

Ground compensated balanced outputs fed by the AUX SEND 1 master level (50). The XLR is internally in parallel with the TRS. You will get better hum and noise rejection by using balanced interconnects (either XLR or TRS), but unbalanced Tip Sleeve (TS) cables will also work.

### \* AUX SEND 2 XLR and 1/4" OUT

Ground compensated balanced outputs fed by the AUX SEND 2 master level (50\*). The XLR is internally in parallel with the TRS. You will get better hum and noise rejection by using balanced interconnects (either XLR or TRS), but unbalanced Tip Sleeve (TS) cables will also work.

### 32 FOOTSWITCH

This jack is designed for use with a 1-Button Momentary Footswitch. The tip of this jack remotely actuates the EFX Mute switch.

### 33 1/4" STEREO INPUTS

Channel 21 and 22 are a stereo pair of 1/4" jacks that can be used for an aux input, or effects return from an external processor. If only one jack is used, it behaves as a mono source. Once both jacks are connected, it behaves as a stereo source; 21 is Left and 22 is Right.

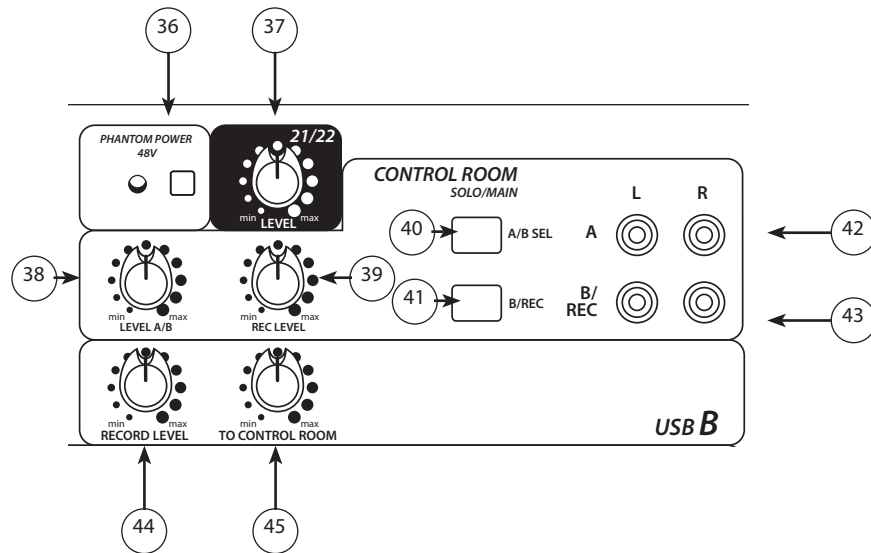
### 34 1/4" STEREO MAIN OUTPUTS

Ground compensated balanced output fed by the master L and R Faders (59). The TRS jacks are internally paralleled with the XLR's. You will get better hum and noise rejection by using balanced interconnects (either XLR or TRS), but unbalanced Tip Sleeve (TS) cables will also work.

### 35 XLR STEREO MAIN OUTPUTS

Ground compensated balanced output fed by the master L and R Faders (59). The XLR jacks are internally paralleled with the TRS's. You will get better hum and noise rejection by using balanced interconnects (either XLR or TRS).

## PV22 Front Panel



### 36 PHANTOM POWER

This Switch applies +48 VDC voltage to the input XLR connectors to power microphones requiring phantom power. If phantom power is used, do not connect unbalanced dynamic microphones or other devices to the XLR inputs that cannot handle this Voltage.

### 37 STEREO IN LEVEL 21/22

Controls the level of input jacks 21 and 22. If only one jack is connected, it is sent to both L and R. If both jacks are connected, 21 is L and 22 is R. The Aux output could be fed to an external effects processor, and these jacks could be used as the effects return. Or a second mixer could be daisy-chained in here.

### 38 LEVEL A/B

Controls the level of both A and B control room outputs. The active output is selected with A/B SELECT switch (40), when B/REC switch (41) is up. When B/REC switch is down, only output A is controlled.

### 39 REC LEVEL

When B/REC switch is down, controls the level at the B/REC outputs. **Note: When B/REC switch is up, this control is inactive.**

### 40 A/B SELECT

When this switch is up, output A is on and output B is off. When this switch is down, output B is on and output A is off. Use this switch to evaluate a mix on 2 different pairs of monitors, such as near field and far field monitors. By setting the level controls on both monitoring systems the same, a rapid A/B comparison can be made. Overall monitor level is controlled by LEVEL A/B. **NOTE: When the B/REC switch (41) is down, this switch is disabled, and the A output remains on at all times, fed by LEVEL A/B (38).**

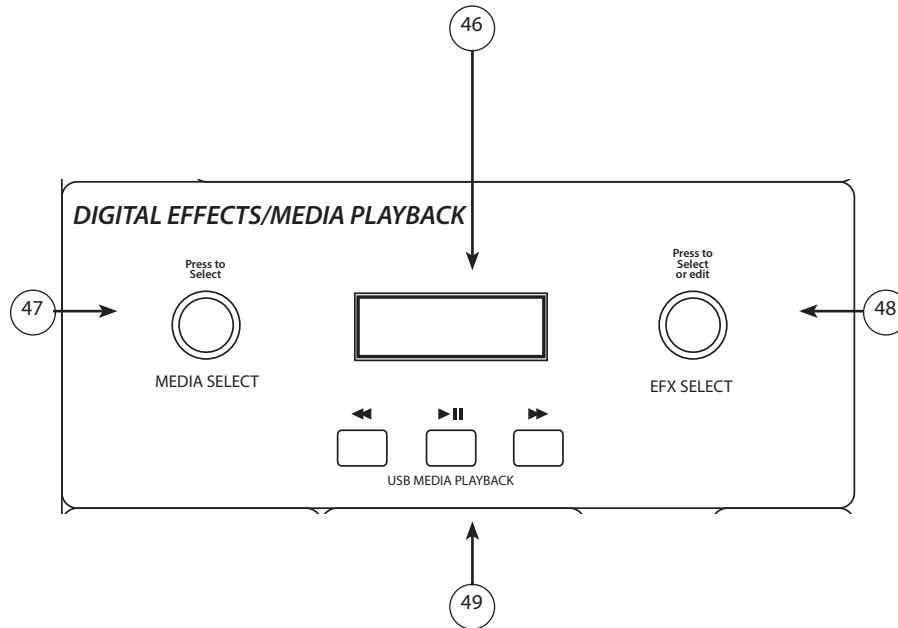
### 41 B/REC SWITCH

Determines the function of the B/REC output. When up, B/REC jack functions as monitor B output, selected by A/B select and controlled by LEVEL A/B. When down, B/REC jack is an independent record output, with level controlled by REC LEVEL.

### 42 CONTROL ROOM MONITOR OUTPUT A

Connect powered monitors, or an amplifier feeding monitor speakers here. Set the volume controls on the monitors A and B to be equal when the A/B switch is toggled. The signal sent to this output is normally the Left/Right mix. The USB "To Control Room" pot (45) feeds the USB return signal to these Monitor Outputs for use in a DAW recording setup. When the Solo LED is lit (61), only the soloed source(s) will be heard. **NOTE: When the B/REC switch is down, the A/B SELECT switch becomes disabled, and this output is output is controlled by the LEVEL A/B control.**

## PV22 Front Panel



### 43 CONTROL ROOM MONITOR OUTPUT B / RECORD OUT

This pair of outputs can either serve as your "B" Record Monitor Output; or, with the B/REC switch (42) down, as an independently controlled Record Output. **NOTE: When the B/REC switch is down, the A/B SELECT switch becomes disabled, and this output is output is controlled by the B/REC control.**

### 44 USB RECORD LEVEL KNOB

Controls the level of signal sent to the USB B connector on the back of the mixer. The recommended setting is near 12:00, but a wide range is available to accommodate varying levels and sensitivities.

### 45 USB TO CONTROL ROOM LEVEL

Controls the level of signal returning from the USB B connector on the back of the mixer. The signal is routed to the control room and headphone outputs, for monitoring DAW recordings. The recommended setting is near 12:00.

### 46 MEDIA AND EFFECTS LCD DISPLAY

The top row of this LCD displays the currently selected Effect and the bottom row displays the status of the MP3 Player, which can be used for navigating the folders on the USB drive or displaying the current song playing. The bottom line will also briefly display the Bluetooth status during power on, power off, and memory clearing.

### 47 MEDIA SELECT

Once a USB device is connected in channel 19/20, you can use the "Media Select" encoder to navigate through the folders/songs on the drive. Once the desired file is displayed on the screen, press the Media Select knob to cue that file. Use the controls on the mixer for play, pause, forward and reverse. See USB PLAYBACK (24)

### 48 EFX SELECT KNOB

See detailed description below.

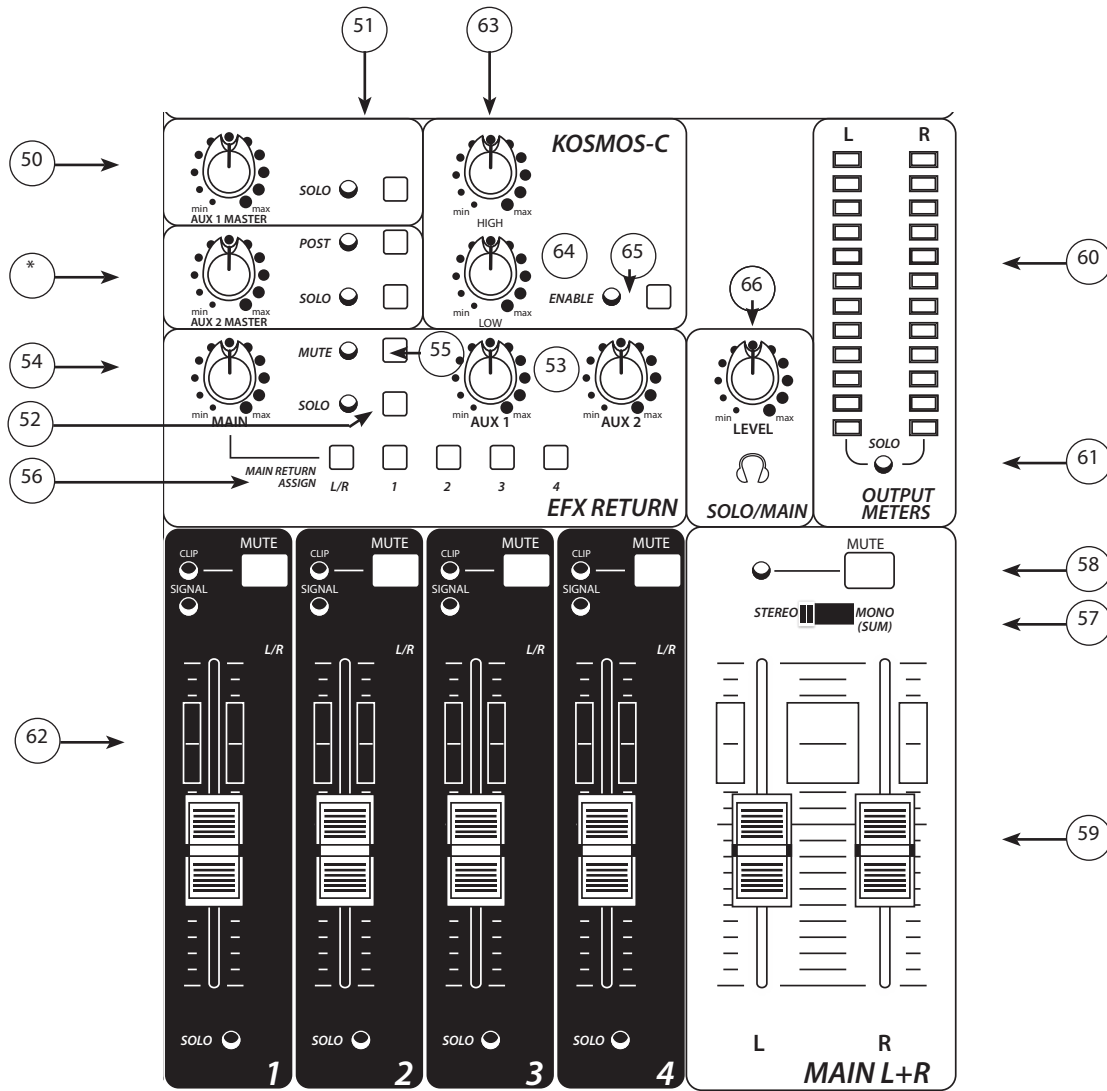
### 49 MEDIA PLAYBACK CONTROLS

These controls allow you to play, pause and scroll through digital media via USB jack.

## EFX

In EFX Edit Mode, the EFX Select knob is used to navigate through the EFX presets. Turning the knob changes the EFX preset in the display. The new selection will be blinking in the display; push the EFX Select knob to choose the new effect. Once the effect has been selected, you can now edit the effect. To do this, press the EFX Select knob and the display will change to the current parameter setting of the preset. Turn the EFX Select knob to edit the parameter. Press the knob again to exit EFX preset edit mode. To restore the EFX presets back to factory settings, press and hold the EFX Select knob for 5 seconds and select "Y" when prompted.

## PV22 Front Panel



### 50 AUX 1 MASTER CONTROL KNOB

Controls the overall level of the signal coming out of the Aux Output (31). This Auxiliary output is typically fed to a power amplifier to drive stage monitors so singers can hear themselves amidst amplified instruments, or to a headphone amplifier to give vocalists a monitor feed that will not be picked up by microphones while recording.

### 51 AUX 1 MASTER SOLO BUTTON AND LED

Allows you to listen to just the Auxiliary mix in the control room and headphones. The setting of the AUX MASTER knob determines the level you will hear when this button is pressed.

\*AUX 2 FUNCTIONS: same as Aux 1 functions with the addition of the pre/post switch/LED. When in the Up (Pre) position, the Aux 2 bus is taken pre-fader from each channel. When pressed in (Post), the Aux 2 bus is taken post-fader from each channel. In the Post position, the amount of signal sent from each channel is affected by the corresponding channel fader position.

### 52 EFX RETURN SOLO BUTTON AND LED

Allows you to listen to just the effects return. The setting of the Return to Main knob determines the level you will hear when this button is pressed.

### 53 RETURN TO AUX CONTROL KNOBS 1/2

These controls determine the level of the internal digital effects processor being sent to the Aux outputs. One possible use is to put reverb in the headphones of a vocalist, to give them a confidence boost for recording, without putting any reverb on the actual recorded track. Or in a live situation, the same can be done by feeding a delay or reverb to the monitors.

### 54 EFX RETURN TO MAIN

This control determines the level of the internal digital effects processor being sent to the main L and R outputs.

### 55 EFX MUTE BUTTON AND LED/CLIP LED

When depressed, the output of the internal digital effects is shut off. Muting the effects is an easy way to determine what a particular effect is doing to your mix. LED remains lit when EFX MUTE is engaged. When EFX MUTE is not engaged, this LED functions as a clip indicator for the internal digital effects. If the digital effects are clipping, reduce the level of the EFX SEND pots.

### 56 EFX RETURN ASSIGNMENT SWITCHES L/R, GROUP 1, 2, 3 or 4.

These switches assign the wet effects signal to the corresponding L/R, Group 1,2,3 or 4 bus. The EFX return control (54) can then be used to determine how much signal is being sent to each assigned bus.

### 57 STEREO/MONO MODE SWITCH

In the mono position the left and right buses are summed together before the faders. This gives you two mono outputs that can be controlled independently by the left and right main faders.

### 58 MUTE BUTTON AND LED

Depressing this button mutes all of the signals on the L/R bus.

### 59 MAIN LEVEL FADERS

The Master Faders control the levels sent to the Main Left/Right outputs (34, 35). Best results are obtained when these controls are set near the midpoint of the enclosed rectangle.

### 60 MAIN L+R METER ARRAY

Displays the level of the L and R outputs, or, when solo is active, displays the soloed channel(s). The top green LED corresponds to an output level of +4dBu. The red LED is a clip warning indicator. The range of the meter is from -29 dBu to +15 dbu.

### 61 MAIN SOLO LED

Lights when any solo button is pushed, to indicate that the solo system is active.

### 62 BUS LEVEL FADERS (SUB GROUPS)

This control determines how much signal is present at the selected output. As with channel faders, optimum setting is at unity gain (0). If the output level is too quiet or too loud at unity gain, the GAIN and FADER settings on the channels assigned to the SUB mix should be checked. If two SUB mixes, SUB 1 and SUB 2 for example, are intended to be in stereo, adjust both FADERS equally and simultaneously to preserve balance.

## PV22 Front Panel

### 63 KOSMOS-C HIGH CONTROL

A very selective high frequency filter with a high Q. The effect varies with source material, so some experimentation is required for optimum results.

### 64 KOSMOS-C LOW CONTROL

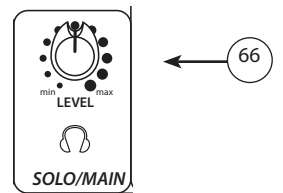
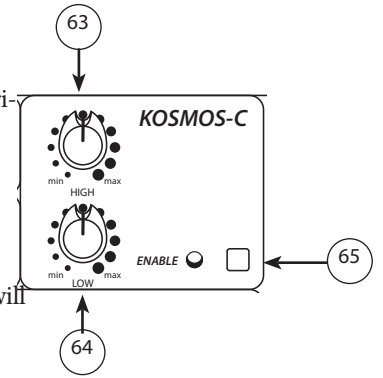
This Kosmos-C Low enhancement works by creating harmonics of signals in the bottom octave, where speakers are usually ineffective. The harmonics are more easily reproduced, resulting in a perception of stronger bass. The effect is source dependent; obviously a source with little energy in the bottom octave will not create booming bass.

### 65 KOSMOS-C ENABLE

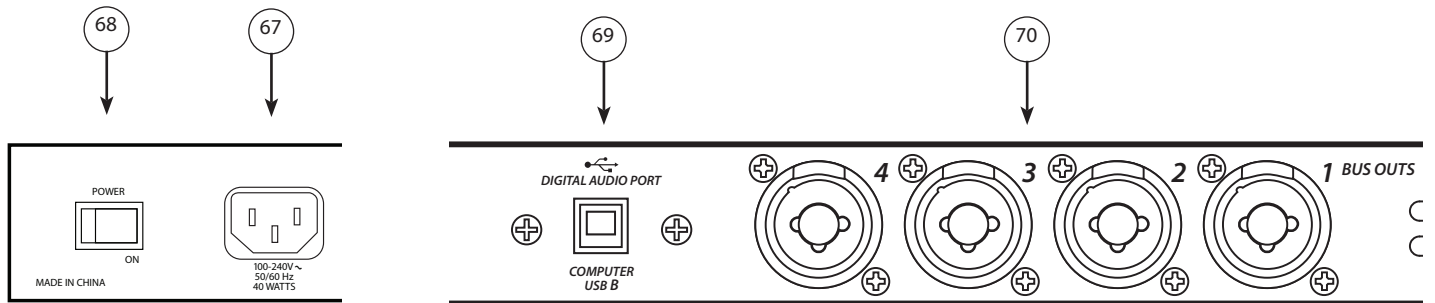
Allows you to easily A/B the effects of your Kosmos Settings.

### 66 HEADPHONE SOLO/MAIN LEVEL

Controls the level of the headphones. The headphone is normally fed by the main outs, unless the solo system is active. Always start with the headphone level at "min" to avoid hearing damage.



## PV22 Rear Panel



### 67 IEC POWER CORD CONNECTION



This receptacle is for the IEC line cord (supplied) that provides AC power to the unit. It is very important that you ensure the PV22 has the proper AC line voltage supplied.

### 68 POWER SWITCH

This rocker switch supplies AC power to the PV22 when switched to the ON position. The ON position is with the top side of the switch pushed "in" or nearly flush with the rear panel.



**WARNING!:** Before AC power is applied to this device, always ensure proper operating voltage selection is engaged to match AC power source being used.

Please read this guide carefully to ensure your personal safety as well as the safety of your equipment. Never break off the ground pin on any equipment. It is provided for your safety. If the outlet used does not have a ground pin, a suitable grounding adapter should be used and the third wire should be grounded properly. To prevent the risk of shock or fire hazard, always be sure that the mixer and all other associated equipment are properly grounded.

### 69 USB PORT TYPE B

The USB port is used to connect the PV® Series USB mixer to a computer for recording or playing back digital audio to/from your computer. The USB port sends the mixer's main/tape stereo out to the computer. The USB port receives digital audio from the computer; it can then be assigned via the selector switch (27) to channel 19/20, if the computer is being used for playback only. For recording, use the USB TO CONTROL ROOM control (45), to avoid creating a loop. Compatible with any operating system that supports USB Audio Class devices; operates with the native OS USB-audio driver.

### 70 BUS OUTS (SUB GROUPS)

These XLR balanced outputs provide signal from the Sub Groups (1-4). The level of signal here is controlled by the Bus (Sub Group) Level Faders (62).

## Effects (parameter)

PLATE (TIME)	DESCRIPTION	PREDELAY DAMP FACTOR	ROOM	ROOM SIZE	FRONT END HP	BACK END LP	MORE DESCRIPTIVE NAME
P1	Bright	35 ms					
P2	Gentle LP	48 ms					
P3	Med LP	62 ms					
P4	Hard LP	78 ms					
P5	Dark	95 ms					

HALL (TIME)							
H1	Vox Fox	35 ms	Med	Med	Subtle	Subtle	Med Hall
H2	Vox Huge	42 ms	Med	Large	Subtle	Subtle	Cathedral
H3	Vox Glow	10 ms	Med	Large	Subtle	Subtle	Auditorium
H4	Strings	30 ms	Med	Med	Subtle	Subtle	Concert Hall
H5	Brass Hall	35 ms	High	Med	Subtle	Moderate	Concert Hall 2

ROOM (TIME)							
R1	Vox Air	30 ms	Low	Small	Aggressive	Subtle	Hard Walls
R2	Vox Club	35 ms	High	Small	Subtle	Moderate	Club
R3	Snare Low	70 ms	Low	Small	Moderate	Subtle	Bathroom
R4	AC GTR	42 ms	Med	Small	Moderate	Subtle	Med Walls
R5	Brass Room	40 ms	High	Med	Subtle	Moderate	Med Room Damped Walls

DELAY (TIME)	
D1	Double
D2	Slapback
D3	Bright, Few Repeats
D4	Bright, More Repeats
D5	Bright, Most Repeats
D6	Dark, Few Repeats
D7	Dark, More Repeats
D8	Dark, Most Repeats

ENHANCE (CUTOFF FREQ)	
E1	Light Harmonics
E2	Moderate Harmonics
E3	Heavy Harmonics

CHORUS (RATE)		PREDELAY	CHORUS TIME	RATE	MODULATION
C1	High Depth, Slow Rate	10 ms	20 ms	0.1 - 1 Hz	Random Sine
C2	Mod Depth, Wide Rate	10 ms	5 ms	0.5 - 4 Hz	Random Sine
C3	Short Depth, Wide Rate	10 ms	2 ms	0.5 - 6 Hz	Sine
C4	Short Depth, Fast Rate	5 ms	1 ms	5 - 15 Hz	Random Sine
C5	High Depth, Mod Rate	2 ms	20 ms	0.2 - 3 Hz	Random Sine

# PV<sup>®</sup>22 Specifications

Mic pre EIN = -126 dBu @ max gain with 150 ohm source

## Inputs

Function	Input Z (ohms min)	Input Gain Setting	Input Levels			Bal/ Unbal	Connector
			Min**	Nominal*	Max		
Microphone (150 ohms)	2 k $\Omega$	Max Gain (59 dB)  Min Gain (4 dB)	-71 dBu  -17 dBu	-51 dBu  +5 dBu	-39 dBu  +16 dBu	Bal	XLR Pin 1 Gnd Pin 2 (+) Pin 3 (-)
Line (10 k ohms)	10 k $\Omega$	Max Gain (40 dB)	-52 dBu	-32 dBu	-20 dBu	Bal	1/4" TRS; Tip (+) Ring (-) Sleeve Ground
Line 11/12 TS, GTR SHAPE ON	1 Meg $\Omega$ @ $\leq$ 200 Hz, like 12AX7 input.	Min Gain (-15 dB)	+2 dBu	+23 dBu	> +32 dBu		
Stereo Input 17/18	10 k $\Omega$	Max Gain (18 dB)	-31 dBu	-12 dBu	+1 dBu	Unbal	1/4" TS; Tip (+) Sleeve Ground
		Nominal	-13 dBu	+6 dBu	+19 dBu		
Stereo Input 21/22	6.8 k $\Omega$	Max Gain ( 18 dB)	-23 dBu	-13 dBu	+3dBu		
		Nominal	-15 dBu	-5 dBu	+12 dBu		
3.5mm, RCA	2.8 k $\Omega$	Max Gain (18 dB)	-43 dBu	-23 dBV	-10 dBu	Unbal	3.5mm; Tip=L, Ring = R, Sleeve Ground RCA: Tip (+), Sleeve Ground
		Nominal	-24 dBu	-5 dBu	+8 dBu		

0 dBu=0.775 V (RMS)

\*\* Min Input Level (sensitivity) is the smallest signal that will produce nominal output (+4 dBu) with channel and master faders set for maximum gain.

\* Nominal settings are defined as all controls set at 0 dB (or 50% rotation for rotary pots) except the gain adjustment pot which is as specified.

## Outputs

Function	Min Load Z (ohms)	Output Levels		Bal/ Unbal	Connector
		Nominal	Max		
Main Left/Right	600	+4 dBu	+20 dBu	Bal	XLR Pin Ground Tip Pin 2 (+), Pin 3 (-)  1/4" TRS: Tip (+), Ring (-) Sleeve Ground
Aux 1 and Aux 2 Sends	600	+4 dBu	+20 dBu	Bal	XLR Pin Ground Tip Pin 2 (+), Pin 3 (-)  1/4" TRS: Tip (+), Ring (-) Sleeve Ground
Group Outputs	600	+4dBu	+20 dBu	Bal	XLR Pin Ground Tip Pin 2 (+), Pin 3 (-)
Control Room	600	+4 dBu	+20 dBu	Unbal	RCA: Tip (+), Sleeve Ground
Headphone	8	+4 dBu (no load)	+20 dBu	Unbal	1/4" TRS; Tip Left, Ring Right Sleeve Ground

0 dBu=0.775 V (RMS)

## Gain

Mic Input Gain Adjustment Range:	4 dB to 59 dB
Mic Input to Left/Right Balance Output	79 dB (max gain)
Line Input Gain Adjustment Range:	-16 dB to 40 dB
Line Input to Left/Right Balance Output	60 dB (max gain)
Stereo 17/18 1/4" Gain Adjustment Range:	Off to +18 dB
Stereo 17/18 1/4" to Left/Right Output	42 dB (max gain)
Stereo 17/18 3.5mm / RCA Gain Adjustment Range:	Off to +28 dB
Stereo 17/18 3.5mm / RCA to Left/Right Output:	47 dB (max gain)
Stereo 19/20 Gain Adjustment Range:	Off to +18 dB
Stereo 19/20 to Left/Right Output	28 dB (max gain)

## Frequency Response

Mic Input to Left/Right Output, Max Input Gain	14 Hz to 25 kHz +0 dB/-1 dB
Mic Input to Left/Right Output, input gain 12:00	9.5 Hz to 29 kHz +0 dB/-0.8 dB

## Total Harmonic Distortion

<0.006% Typical, Mic to Left/Right Output | (22 Hz to 22 kHz BW)

## Hum and Noise

Output	Residual Noise	S/N Ratio (Ref: +4dBu)	Test Conditions
Master Left/Right	-97 dBu	101 dB	Master Fader Down, Channel Levels Down
	-90 dBu	94 dB	Master Fader Nominal, Channel Levels Down
	-83 dBu	87 dB	Master Fade Nominal, Channel Faders Nominal, Panned Odd Channels (left), Even Channels (right)
Monitor Sends Groups	-95 dBu	99 dB	All controls off
	-80 dBu	84 dB	All channel sends nominal, masters nominal

(Hum and noise measurements: 22 Hz to 22 kHz BW)

## Equivalent Input Noise

-128 dBu (input terminated with 150 ohms, bandwidth 20 kHz)

## Crosstalk/Attenuation

Adjacent Input Channels (1 kHz) >90 dB	Mute Button Attenuation (1 kHz) >90 dB
Left to Right Outputs (1 kHz) >70 dB	Channel Fader Kill (1 kHz) >85 dB

## Common Mode Rejection Ratio (Mic Input)

50 dB minimum (20 Hz to 20 kHz)
70 dB typical @ 1 kHz

## Meters

## Signal/Overload Indicators

12 segment, peak reading (top green LED = +4 dBu)	Red LED lights 5 dB below clipping
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## Dimensions

26.5" wide x 18.5" deep x 3.625" high
(67.3 cm wide x 47 cm deep x 9.2 cm high)

## Weight

## Power Requirements

PV22:	100-240 VAC 50/60 Hz 40 Watts
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Features and specifications subject to change without notice.

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Logo referenced in Directive 2002/96/EC Annex IV  
(OJ(L)37/38,13.02.03 and defined in EN 50419: 2005  
The bar is the symbol for marking of new waste and  
is applied only to equipment manufactured after  
13 August 2005