



M4_{mkII}

Portable Audio Mixer

Operation Manual for Mixers with PCB V1.5
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DESCRIPTION

Thank you for purchasing the Professional Sound Corporation M4mkII Portable Audio Mixer. PSC is confident that this new M4mkII Mixer has set new standards for portable mixer technologies and features. Please feel free to contact us if you have any comments or questions concerning your new mixer. Additionally, we invite you to share your suggestions for new products you would like to see developed.

Professional Sound Corporation extends a one-year warranty on parts and labor to all M4mkII Mixer owners who return their warranty cards at the time of purchase. This warranty gives you specific rights, which are stated on the card, and enables us to keep you informed of product updates.

The PSC M4mkII Mixer provides all the functions necessary to produce studio quality recordings in the field. It's user friendly features, rugged design and sonic purity make the M4mkII Mixer perfect for electronic news gathering (ENG) electronic field production (EFP) and feature film production.

HEARING SAFETY WARNINGS:

Please be sure that you have read this entire manual before operating this mixer.

While special attention has been given to your safety and hearing protection, the operator determines proper and safe operating levels.

Please note the following:

Always turn down the headphone volume before plugging in your headphones.

Always operate your headphones at the lowest practical level.

Be especially cautious in unknown or widely varying environments.

Remember, your ears are your livelihood. Turn it down!

APPLICATIONS

- Electronic News Gathering
- Location recording (Dialogue and Music)
- Digital Recording and Playback
- Broadcast remotes
- Desktop Mixing for Video Post Production

INPUTS:

A. BALANCED INPUTS

The PSC M4mkII Audio Mixer provides four input channels utilizing female XLR connectors. The studio grade input circuitry is transformer balanced for improved RF rejection and in-field practicality. The XLR connectors are wired as follows: Pin 1 shield (ground), Pin 2 Audio high (in phase), Pin 3 Audio low (out of phase). Balanced wiring enables longer cable runs without the worry of excessive noise due to nearby electromagnetic and radio frequency interference. These balanced inputs may be unbalanced if desired. Either pin 2 or 3 may be tied to ground (pin 1) to unbalance the inputs of the M4mkII Mixer. Note: The AES standard for unbalancing an XLR connector is to tie pin 3 to ground (pin 1).

B. INPUT LEVELS

The PSC M4mkII Mixer can accommodate a wide range in input levels. Microphone levels of all types can be handled as well as line level signals. The input range of the M4mkII Mixer is -60dBu to $+4\text{dBu}$. Thus the M4mkII is compatible with all forms of consumer and professional audio equipment. The input level switches are located below and to the right of each input XLR connector. These input level switches provide for three level settings: “D” Dynamic Microphone (0dB attenuation), “C” Condenser Microphone (15dB attenuation), and “L” Line Level (50dB attenuation) These input level attenuation settings are used to correctly interface sources of varying levels to the M4mkII’s preamplifiers. Correct level matching ensures maximum headroom and lowest possible noise floor.

C. MICROPHONE POWERING

The M4mkII Mixer can accommodate the most popular microphones used today. The microphone powering switches are located directly below the input XLR connectors. They can be switched to either Dynamic (D) or 48Phantom (48).

In the Dynamic position the mixer provides no microphone powering. This position is used with Dynamic Microphones, Line Level inputs and when using Wireless Receivers.

In the 48 Phantom Position the mixer provides 48 volts DC to power 48PH microphones or simplex powered microphones with a range of 9 to 52 volts or 12 to 52 volts. Pin 1 is shield to ground while pins 2 and 3 carry 48 volts DC. The term “phantom” is derived from the fact that there is no voltage potential developed across a dynamic microphone transducer that would interfere with its operation. However, most portable wireless receivers will not operate with 48PH turned on. We strongly recommend setting inputs to dynamic for use with all wireless systems.

It should also be noted that the PSC M4mkII Mixer contains special electronics that automatically shut off the 48PH DC to DC converter if none of the four

microphone powering switches are set to 48 Phantom. This feature will conserve approximately 12mA of supply current.

In the interest of keeping the M4mkII Mixer design simple and up to date with today's technology, we have not offered "12T" or "AB" microphone powering. Although some "12T" microphones are still in existence, all new microphone designs are 48PH.

D. LOW CUT FILTERS

Each input channel of the M4mkII Mixer is equipped with an active low cut (high pass) filter. These filters are activated via the three way switches located below the adjacent channel fader knobs. These filters will attenuate all frequencies below a preset frequency at a rate of 12dB per octave. When set at "20Hz", frequencies below 20 Hz are effectively rolled off with the mixer operating at full frequency response. Optional low cut filter settings of 80Hz and 140Hz will roll off the frequencies below these figures at a rate of 12dB per octave (-3dB level at 80Hz and 140Hz respectively. Low cut filtering is important in location recording where wind noise can cause pre-amplifier overload. This effect can be minimized by switching the low cut filter setting to either a 80Hz or 140Hz cutoff. The low cut filter switches are located on the front of the M4mkII Mixer.

E. CHANNEL GAIN

In order to limit noise and increase headroom, the channel fader controls are located in the feedback path of the pre-amplifiers. This provides continuously variable gain rather than just a decrease in channel output level when an overload situation occurs. This results in increased headroom and lower chance of signal clipping (severe distortion).

F. CHANNEL PANS

The new M4mkII Audio Mixer contains front panel mounted pan pots. These pan pots are used to route the individual input channel's signal to either the left or right summing buss. These pots are equipped with center detents allowing the pots to remain centered when the operator so desires. These pots are also equipped with a retracting mechanism that allows the pots to be pushed in flush with the front panel after they have been set to the operators desired setting. This helps keeps the front panel "clean" and uncluttered and reduces the chance of the operator accidentally bumping the pan pot setting.

H. BOOM POLE REMOTE CONTROL

The M4mkII Mixer offers the ability to remotely control the audio level of the channel one input via a boom pole mounted remote control. When used, this remote control works as a gain control for the channel one input. It allows the operator to control the overall gain of the first preamp. To use this feature, you

must set of the mixer as you normally would for the type of microphone being used, I.E. 48PH power on, etc. Then you attach the boom pole remote control to the boom pole with it's captive Velcro™ straps. The cable should exit the remote control toward the heel end of the boom pole. Then simply plug the remote control cable into the mixer's "remote" connector located near the channel one input XLR. Set the remote controls slide fader to it's mid position and adjust the mixer's channel one fader for normal recording levels. You are now ready to remotely control the channel one input of your M4mkII Mixer. Sliding the fader toward the heel end of the pole decreases signal level, sliding the fader toward the microphone end of the pole increases signal level. This remote control allows for approximately 40dB of control range. It should be noted that using the boom pole remote control requires that the mixer channel fader be set slightly higher than normal. Because of this please heed the following safety warning:

***SAFETY NOTE* ALWAYS TURN DOWN THE MIXER'S CHANNEL ONE INPUT FADER BEFORE DISCONNECTING THE BOOM POLE REMOTE CONTROL. INADVERTENT HIGHER THAN EXPECTED VOLUME LEVELS MAY RESULT IF YOU DISCONNECT THE BOOM POLE REMOTE CONTROL WITH THE CHANNEL FADER OPEN!**

OUTPUTS:

A. BALANCED OUTPUTS

The M4mkII Mixer contains very high quality custom-made audio output transformers. These transformers have been designed to provide wide bandwidth, low distortion and real-world ease of use. Transformers have been chosen over a transformerless design because of their inherent ability to interface with virtually any other device, especially RF based products. This is very important in this day and age in consideration of the frequent use of multiple RF receivers and transmitters. These outputs are available via the right hand panel mounted male XLR connectors. These outputs are switchable between line or microphone levels. At the line level setting, the mixer outputs deliver a nominal 0dBv (1V) signal into 10K Ohm loads. When set to microphone level, the outputs supply -50dBv signal levels. Please note that 10K Ohm loads are typical of the loads imposed on the mixer by most Betacams, and other recording devices. Additionally, the M4mkII Mixer's outputs are capable of driving 600-Ohm loads.

B. MULTI-PIN (BETACAM) CONNECTOR

The M4mkII Mixer is equipped with a multi-pin in/out connector designed primarily to interface with Betacams. This connector provides the left and right balanced outputs as normally found on the XLR output connectors as well as left and right tape returns used for confidence monitoring. This multi-pin connection provides a convenient means of interfacing to Betacams with only one connection. In addition, this connection is located on the left hand side (inputs side) of the mixer. By locating the connector on this side of the mixer, all your

cables can be conveniently routed from one side of the mixer providing a clean and compact setup for use on the run.

C. OUTPUT LIMITERS.

The limit threshold (activation level) is factory set at +3 on the meter. The limiters compress the signal at approximately 2.7 to 1 ratio. This is to say an increase of 2.7dB in input signal will result in only a 1dB increase in output signal. Output channel limiting is displayed on the LCD meter.

The M4mkII contains two separate limiters that are controlled by one front panel mounted switch. This switch has three settings: Off, Separate (S), and Ganged (G). In the off position, no limiting occurs.

In the separate position, the limiters act independently of each other. This is especially useful when recording split tracks. I.E. interviewer and interviewee on separate channels. Thus, if one person un-expectantly raises their voice, that limiter will activate, but the other will not. In the ganged mode, both limiters are tied together and can be triggered by either input. This is useful in recording stereo, as independent limiting would alter the stereo image.

PRACTICAL USE NOTE: IT IS HIGHLY RECOMMENDED THAT THE LIMITERS BE USED AT ALL TIMES WHEN RECORDING TO BETACAM TYPE CAMERAS.

Most video cameras have limited audio track headroom and can easily be overloaded resulting in distortion of the recorded audio. Play it safe, use the limiters!

D. TRANSCRIPTION OUTPUTS

The M4mkII Mixer also contains a dedicated microphone level output used to feed transcription recorders. This connector is located directly below the main XLR outputs. It is a 3.5mm Stereo connector wired as follows: Tip = Left, Ring is Right, Sleeve = Ground. This connector provides a -45dBv signal. This is compatible with most transcription cassette recorders.

E. HEADPHONE OUTPUT

The Headphone output is located directly on the front panel of the mixer. This location was chosen to allow the operator to easily plug/unplug the phones from the M4mkII Mixer and other devices. The M4mkII Mixer's headphone amplifier circuitry is designed to drive virtually any headphone with an impedance rating of 32 to 600 Ohms. The headphone circuitry is controlled by the use of two switches and a convenient front panel mounted volume control. The two switches are used to control what the operator listens to. The most commonly used switch is located on the front panel and is used to allow the operator to choose between monitoring normal stereo, left channel to both ears or right channel to both ears. This feature is an improvement over previous M4 designs. The second switch is

located on the right hand side panel of the mixer. This switch is normally set to the stereo position. Under special circumstances, you may wish to monitor your headphones in Mono or decode MS signals when recording in MS Stereo. Please see MS Stereo section of this manual.

***SAFETY NOTE* ALWAYS TURN DOWN THE HEADPHONE VOLUME BEFORE PLUGGING IN YOUR HEADPHONES.**

F. TAPE RETURN

The M4mkII Mixer is equipped with tape returns used to monitor tape confidence heads from most any recording device. These tape monitor amplifiers can be adjusted to match the signal levels of most any device. These levels are adjusted using a small jewelers screwdriver (or "Greenie" screwdriver). The adjustment points are located directly above the Mutlipin connector. The tape/direct switch is located on the upper right hand corner of the front panel. When set to "D" (Direct) the phone amplifiers to monitor the mixers output signal. If switched to "T" (Tape), then the phone amplifies monitor the external source such as the Betacam.

METERS:

A. PEAK READING METERS

The M4mkII Mixer is equipped with a custom made LCD meter. We designed this meter to be easy to read and camera emulating. Because the most common use of this type of mixer is with Betacams, we designed the M4mkII's meters to emulate the peak reading attributes found on many Betacams. In this manor, you can be confident of your recording levels even when the Betacam is being fed via Betasnake cable or wireless transmission. The LCD meter also displays Left and Right Limiter functions as well as Low Battery Warning. When the "Lo Bat" indicator comes on, you have approximately 30 minutes of battery life remaining. You should replace the batteries at your earliest convenience. This low battery indicator automatically senses the use of a NP-1 rechargeable battery or AA alkaline batteries and adjusts itself accordingly.

The M4mkII Mixer is equipped with meter lamps used for night viewing of the meters. The light source for this meter back lighting is provided by a 2200mc (2.2 candela) high performance "white" LED in conjunction with a specially made woven fiber optic light transmission panel. These two new technologies were chosen as they provide good quality back lighting without adding noise to the mixer as some Electro-luminescent systems do. The use of the meter back lighting adds approximately 30mA of power consumption to the mixer.

ADDITIONAL FEATURES:

A. SLATE MICROPHONE

The M4mkII Mixer is equipped with a slate microphone. This microphone is activated when the front panel “slate” momentary push button switch is pressed. The slate microphone allows the operator to put voice slates (notes) on tape for later reference. These are normally notes for editing tape. A level adjustment trim pot is located on the bottom panel of the M4mkII Mixer. Turning the adjustment clockwise will increase the slate microphone level. Turning the adjustment counter-clockwise will lower the level.

B. REFERENCE OSCILLATOR

The M4mkII Mixer is equipped with a reference oscillator used for setting of levels between the mixer and recorder. This known reference level is also used when transferring tape during editing. The M4mkII’s oscillator operates at 440Hz at “0” on the meters. When setting up typical Betacams with LCD bar graph meters you simply adjust the Betacams inputs until “0” is reached. From that point on, you can monitor levels from the mixer only. We have chosen 440Hz simply because it is much more pleasant in your headphones than the typical 1Khz used by other manufactures. We have used 440 Hz on our mixers for many years. The reference oscillator is equipped with a level adjustment trim pot located on the bottom panel of the M4mkII Mixer. This adjustment is factory calibrated and should not be adjusted without proper measurement equipment.

C. BATTERY TEST

In addition to the low battery indicator on the LCD meter, the M4mkII Mixer is equipped with a push button activated battery test function: When pressed the remaining battery life is displayed on the top (left meter). A full battery will indicate “0” on the meter. A dead battery will not indicate on the meter. You can read the meter as a “fuel gauge”. Full bar = full battery, half bar = half battery, etc. This battery level meter automatically adjusts for the differences in battery types, NP-1 or alkaline. This battery test function can be adjusted to specific NP-1 type batteries via a bottom panel mounted trim pot. The mixer is factory shipped with the adjustment set for 12.6V NP-1 batteries. A fully charged 12.6V NP-1 battery will register “0” on the meter. If you use 13.8V NP-1 batteries, you can re-adjust the meter to “zero” on a fully charged battery. Because the M4mkII Mixer uses only a small amount of current, the mixer will operate for many hours on even a “dead” NP-1 battery. Because the mixer will operate down to 6.5Vdc, it will continue to operate long after the low battery indication comes on when using NP-1 batteries. This can be useful in the field as even a battery considered “dead” by the camera operator might work with your M4mkII. Note that over discharging of re-chargeable batteries on a regular basis is not a recommended practice for everyday use!

D. M-S AND X-Y STEREO RECORDING

The PSC m4mkII Mixer can be used to make stereo recordings in both the mid-side and X-Y stereo techniques. The M4mkII Mixer is equipped with an input channel ganging switch designed to allow the ganging of input channels 3 and 4. This switch is located on the bottom panel of the mixer. When switched to the “ganged” position, both input channels 3 and 4 are controlled by pot 4. All microphone powering and attenuation settings remain independent. X-Y stereo recordings are accomplished by plugging in two identical microphones into channels 3 and 4. The channel 3 pan pot is set to the extreme left and the channel 4 pan pot is set to the extreme right. The headphone monitor mode switch is set to “stereo”.

If M-S stereo recordings are desired, the “M” or middle microphone (cardioid pattern) is plugged into channel 3. The “S” or side microphone (Figure 8 pattern) is plugged into channel 4. As with the X-Y setup, pan pot 3 is panned to the extreme left and pan pot 4 to the extreme right. In this case, the headphone mode switch is set to “MS”. In the MS mode, the headphone amplifiers are fed MS decoded signals. The left headphone amp is fed M-S signals and the right headphone is fed M+S signals. In this manner, MS signals appear as standard stereo signals for headphone monitoring purposes. Note that the MS decode function only affects the headphone feeds, not the main XLR outputs.

More complete descriptions of the M-S and X-Y stereo recording techniques can be found in the literature of the major microphone manufacturers such as Neuman, Sennheiser, and Schemps.

E. WIRELESS MICROPHONE POWER DISTRIBUTION

Your new M4mkII Mixer is equipped with two four pin Hirose tm connectors designed to output DC power to operate your wireless microphone receivers. The two connectors are located directly below the channel four input XLR connector. These two connectors are wired as follows:

PIN 1 = GROUND

PIN 4 + POSITIVE BATTERY VOLTAGE.

This is the wiring standard found on most Betacams. Many wireless microphone makers such as Lectrosonics tm supply cables pre-made for this purpose. If you make your own cables, please understand that you must match grounding potentials or risk equipment damage! Please also note that while the new M4mkII Mixer has extensive RF filtering built into the power line supplying these connectors, there remains a possibility that not all wireless frequencies will operate without interference with either the mixer or other wireless units. Also note that all current supplied by these connectors is routed through the M4mkII Mixers Polyfuse (automatic resetting fuse) and thus there are limits to how much current can be supplied by these connectors. That limit is typically 1 Amp. Excessive current will cause the Polyfuse to trip and shut off the mixer. To restore power, simply switch off the mixer, disconnect the offensive load and turn the mixers power back on.

POWERING:

A. INTERNAL POWER, NP-1 BATTERY

The PSC M4mkII Mixer is the first compact ENG mixer to offer the ability to be powered from an *internal* NP-1 rechargeable battery. This feature provides a convenient way of powering the mixer without added size, adapters or cables. In addition, because the NP-1 battery is securely housed within the mixer, there is little chance that the battery could be knocked loose as with conventional battery adapters.

There are several high capacity NP-1 batteries now on the market. These include the standard Ni-Cad, Nickel Metal Hydride and most recently Lithium-Ion. Most of these batteries are available in both 12.6 Volt and 13.8-Volt varieties. Either voltage will work in your M4mkII. The M4mkII Mixer consumes approximately 175mA of current when no microphones are being powered. This translates into a battery life of 10 to 20 hours depending on the battery type. Powering wireless will shorten battery life considerably depending upon wireless models selected. The NP-1 battery pack is held in place with a simple spring steel latch. To remove the battery simply push down on the latch and pull out the battery.

B. INTERNAL POWER, ALKALINE BATTERIES

Eight "AA" alkaline batteries can also power the M4mkII Mixer. These batteries are housed in a convenient battery tray designed to be inserted in the standard NP-1 battery slot. When using alkaline batteries, you can expect 8 to 12 hours of operation under normal circumstances. The PSC M4mkII Mixer automatically senses the use of NP-1 battery or Alkaline cells. It automatically adjusts the "low battery" warning point to match the battery used.

PRACTICAL USE NOTE: NEVER STORE YOUR M4mkII MIXER FOR EXTENDED PERIODS OF TIME WITH THE ALKALINE BATTERIES INSTALLED IN THE MIXER. THERE IS A POSSIBILITY THAT THE BATTERIES MAY LEAK CAUSING CORROSION OF THE MIXER. BATTERY LEAKAGE AND THE RESULTING CORROSION DAMAGE IS NOT COVERED UNDER THE M4mkII MIXER WARRANTY.

C. EXTERNAL POWER

The PSC M4mkII Mixer can also be externally powered from any source of DC power from 7 to 18 Vdc. The mixer consumes approximately 175 mA over this voltage range. This current consumption is nearly constant and does not vary dramatically over operating voltages like other mixers. The external power connector is located on the right side of the mixer below the NP-1 battery slot. Pin outs of this Hirose 4 pin connector are as follows:

Pin 4 (+) Positive

Pin 1 (-) Negative

This external DC input is protected from reverse polarity. If you mis-apply connect external power of the incorrect polarity, the mixer will not be damaged, it simply will not power up.

CONSTRUCTION

A. CHASSIS

The new M4mkII Mixer chassis has been designed for increased torsional rigidity. This increased rigidity provides a stable base for the mixers modern electronics. The complete chassis is formed from 0.040" aircraft aluminum. All punching is done on a computer controlled "Strippet" rotary turret punch press for extreme accuracy. In addition, through careful design, we have managed to lower the overall weight of the M4mkII Mixer to 3 lbs. (1.36Kg) total. A full half-pound lighter than its predecessor and lighter than any other professional four-channel mixer in its category.

The mixers sheet metal is hand-formed using various press brake setups before the all stainless steel threaded insert are pressed permanently into place. The housing parts are then Chem Film TM plated for superior corrosion resistance before being electro-statically coated with an epoxy powder coating. This powder coat paint is then baked on in an oven. Powder coating chosen for its durability and environmental friendly characteristics.

All silk-screening is printed sub-surface (below) a hardface lexan tm overlay. This process provides a silk-screened label that is virtually wear proof. The lettering will not wear off as on other mixers.

B. ELECTRONIC TOPOLOGY

The new M4mkII audio mixer was designed from a clean sheet of paper. It utilizes completely new circuitry designs based upon the latest advances in semi conductor technology. In addition, it features surface mount technology for reduced size and weight.

The M4mkII Mixer uses high quality transformers on its inputs and outputs. Transformer topology was chosen for its inherent ability to reject RF, thus making this new mixer perfect for use with multiple RF systems.

This new design uses modern semi-conductors from Maxim, Linear Technology National Semiconductor, Burr-Brown and Analog Devices to name but a few. These operational amplifiers, voltage regulators and precision voltage references feature low power consumption, low noise and low distortion. They also feature ability to swing from rail to rail resulting in an energy efficient design.

C. ENVIRONMENTAL OPERATION

Your new M4mkII Audio Mixer has been designed to operate under extreme field conditions. The electronics have been designed to operate over a temperature range of -4 to 158 degrees Fahrenheit (-20 to +70C) less the affects on batteries. This in addition to the M4mkII's ability to operate under high humidity conditions makes it perfect for harsh field conditions.

D. PORTA BRACE CASE

Each PSC M4mkII Mixer is supplied with a custom-made Porta Brace case and shoulder strap. This case includes sewn on mounting rings allowing you to mount Porta Brace accessory cases such as their RF Multi case. These cases accommodate your wireless receivers. You can call Porta Brace or any of their authorized dealers for the complete line of Porta Brace products.

INTERFACING

A. TO BETACAMS:

The PSC M4mkII Mixer is especially designed for easy interfacing with all popular Betacam type cameras. The M4MKII is equipped with a 10 pin Hirose tm connector on the left-hand side panel. This all-inclusive connector provides both left and right balanced outputs and tape returns. Pin Outs are as follows:

Pin 1	Left Output High
Pin 2	Left Output Low
Pin 3	Right Output High
Pin 4	Right Output Low
Pin 5	Left Tape Return
Pin 6	Tape Ground
Pin 7	Right Tape Return
Pin 8	Tape Ground
Pin 9	Ground
Pin 10	Ground

The outputs are electrically the same as the XLR outputs on the right side of the mixer. Thus, the output levels can be switched to the mic or live levels.

PSC manufactures a selection of standard M4mkII Beta snake cables for use with the new M4mkII Mixer. These cables are available in standard and camera breakaway versions from any authorized PSC dealer. Part numbers are as follows:

FPSC1091M4A	15' (4.5M)	Standard
FPSC1091M4B	15' (4.5M)	Breakaway
FPSC1091M4C	25' (7.5M)	Standard
FPSC1091M4D	25' (7.5M)	Breakaway

B: TO RDAT RECORDERS:

The M4mkII Mixer can be interfaced to virtually any professional recorder via the standard XLR outputs. In addition, you can use the 10 pin Hirose tm connector if you desire to use the tape return function.

C: TO WIRELESS MICROPHONES:

The M4mkII Mixer will easily accept the output signal from virtually any wireless receiver. It can accept microphone or line level signal via a simple switch setting. Please note that most wireless receivers are not compatible with 48PH mic power. You should always set the M4mkII's mic powering switch to "D" dynamic when using wireless receivers.

The M4mkII Mixer can also be used to send audio signals to Betacams via wireless transmitters. The use of transmitters is normally accomplished by connecting the M4mkII's output XLR to the audio input of the specific transmitter. Many transmitter manufacturers supply application specific cables for this purpose. The M4mkII Mixer has been designed to minimize RF interference through the use of output transformers and other RF filtering. It is important to note that transmitter placement greatly affects transmit range and clarity. For best results, transmitters should be mounted away from the mixers surface allowing un-impeaded RF radiation. This can be accomplished by mounting the transmitters up and away from the mixer on the PortaBrace Strap.

WARRANTY AND NON-WARRANTY SERVICE

In the unlikely event your M4mkII Mixer requires service it should be carefully packed and shipped prepaid to:

Professional Sound Corporation
Service Department
28085 Smyth Drive
Valencia, CA 91355 USA
PH 661-295-9395
FAX 661-295-8398
e-mail techsupport@professionalsound.com

Please call before shipping your mixer. We may be able to solve your problem via the phone. Many older M4 and M4A+ Mixers have been shipped in to us for service with incorrect switch settings. We are always willing to help you with your M4mkII Mixer questions.

WARRANTY Complete details of the PSC M4mkII Mixer warranty are given on the enclosed blue warranty registration card. If you did not receive one, please contact your local dealer or call us directly.

SPECIFICATIONS

Size:	10.125" x 6.825" x 1.900" (257mm x 173mm x 48mm)
Weight:	3lbs. (1.36Kg)
Temp Range:	-4 to +158F (-20 to +70C)
Batteries:	NP-1 Rechargeable, any type or 8x AA Alkaline
Case Material:	0.040" (1mm) Aircraft Aluminum
Finish:	Epoxy Powder Coat
Overlays:	0.005" Hardface Lexan tm with Sub-surface Epoxy silk screening
Global Gain:	80dB at detent on master
Freq. Response:	20-20Khz +/-1dB
Signal to Noise:	128.5dB EIN 150 Ohms
Distortion:	00.08% THD
Low Cut Filter:	100Hz, 140Hz 12dB/Octave
Mic Power:	DYN, 48 PH
Oscillator:	440Hz
Limiter:	1mS Attack, 100 mS Release 2.7:1 Ratio
Warranty:	1 Year, Limited

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