



**MX200, MX200C, MXS100,
XPS100 & XPS200**

STEREO MIXERS and EXPANDERS

OPERATING AND MAINTENANCE MANUAL



Model MXS100

Model MX200

Model XPS100

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PURPOSE

The **MXS100** is a three-input miniature stereo mixer designed for demanding in-the-field use in broadcast ENG (Electronic News Gathering) and Field Production applications. The MXS100 incorporates the functions required by news professionals, sports announcers, film and video sound engineers into a tiny, lightweight and rugged package.

The MXS100 Stereo Field Mixer is ideal for field use with DAT and other high quality recording devices since it has extremely low input noise, wide, smooth frequency response and low harmonic and IM distortion. Active balanced input and output circuits eliminate transformer-induced microphonics, ringing, transient overshoot and low frequency distortion. Digital compatible dynamic range of 98dB is achieved at normal operating control settings. Full 18dB headroom above 0VU (+4dBm) is augmented with a fast, low distortion limiter. A built-in tone oscillator and slate microphone make it easy to set levels and mark takes. A switchable headphone feed allows program monitoring to one ear with a director's cue fed to the other. A simple, foolproof optional gel cell battery power pack (optional) allows extended field operation and fast full dual voltage recharge with no cell memory deterioration.

The **MX200** and **MX200C** Stereo Studio Mixers retain the identical high quality audio performance of the MXS100. They are an excellent choice for use in studios, TV vans and airborne ENG. With the companion Expanders, MS-Series Mixers can make a very powerful mixing system in only one rack unit (1- $\frac{3}{4}$ "). The MX200C adds an output limiter to the basic MX200 features.

The companion **XPS100** Input Expander adds four switchable XLR Microphone/Line inputs with pan pots and switched 24VDC phantom microphone power.

The companion **XPS200** Stereo Line Input Expander adds two stereo -10/+4 line inputs with close tracking VCA stereo level controls.

The MXS100/ MX200/ MX200C mixers may be used alone or in combination with the XPS100 and/or XPS200 expanders for any application requiring a compact, rugged and professional sounding mixing or input selection system. Several expanders may be added for up to a 23 input system with minimal noise buildup in the mixing system. Several power modules are available including both replaceable and rechargeable 24V battery packs, DC-to-DC step-up converters for 6 to 18V automotive or belt pack battery power and plug-in 24VDC wall mount power supplies.

An optional rugged Field Pack carry bag includes side protection plates for the mixer with quick-change slide mounts for the battery packs.

DESCRIPTION

MXS100 STEREO FIELD MIXER

Three XLR inputs with plug-programmable phantom power and front panel MIC/LINE switches drive low noise instrumentation preamplifiers with a wide range of internally selectable gains to accommodate either high output wireless or low output boom microphones. Front panel switches activate individual two pole LO-CUT filters to block bumps, thumps and wind noise.

Center-detent PAN pots feed the stereo mix busses along with a switched TEST TONE oscillator and a momentary switched SLATE microphone to easily mark takes. Bright, intense LED bargraph VU meters monitor the line level outputs and are easily viewed even in bright sunlight. A LIMIT indicator and switch shows peaks and controls limiter action. The MXS100 provides high level active XLR stereo line outputs to drive either balanced or unbalanced external loads of 600 ohms or higher. Rear panel switches individually select microphone or line output levels. A stereo TAPE OUT jack provides an isolated -10dBu output for an external recorder.

A front panel headphone switch selects either stereo program (L/R) or mono-summed program with cue (L+R/Q) as an input to the stereo headphone amplifier. A stereo TAPE IN jack routes an external -10dBu monitoring signal to the headphone amplifiers in place of the stereo program feed. A recessed, thumbnail operated headphone level control minimizes panel clutter and once set, tracks the MASTER output. An external CUE input jack or a pre-fader cue from any of the three inputs may be jumper plug programmed to the headphone cue circuit. The expansion buss input allows interconnection of two MXS100 units or the addition of one or more companion XPS100 Mic Expanders or XPS200 Stereo Line Expanders.

All panel controls, internal adjustments, and jumper plugs are clearly labeled.

MX200, MX200C STEREO STUDIO MIXERS

The MX200 and MX200C Stereo Studio Mixers are three-input stereo mixers with front panel selection of microphone or line input levels. Phantom power is internally jumper plug programmable to any microphone input. Detented Pan Pots feed fader output to the stereo mix busses. A close tracking VCA stereo MASTER level control feeds stereo high-level line output stages. The outputs comfortably drive either balanced or unbalanced output loads of 600 ohms or greater. Bright LED VU meters and a stereo headphone amplifier monitor the program outputs. XLR output connectors are standard. A rear panel Expander input allows interconnection of two mixers or the addition of one or more companion XPS100 or XPS200 Expanders. The MX200C adds a switched low distort-

tion compressor/limiter and peak indicating LED to the basic MX200 mixer features.

INPUT EXPANDERS

The companion **XPS100** Input Expander provides four XLR microphone/line inputs with pan pots and switched phantom power. The **XPS200** Stereo Line Input Expander accepts inputs from two stereo -10/+4 XLR line level sources and contains two tight tracking stereo VCA level controls. The XPS100 and XPS200 are supplied with interconnecting expansion cables for the audio and DC connections to the MXS100, MX200 or MX200C.

POWER

An MXS100, MX200 or MX200C Mixer and a pair of companion Expanders can comfortably share a single WA100-1, 24VDC / 400mA. wall mount power supply. Our WA100-2 90-264VAC 47-63Hz power supply is available for international use. The Mixers can also be powered directly by a PPA-1 rechargeable 24VDC battery pack or by a DCA100-1 DC-to-DC step-up converter connected to 6 to 18VDC automotive, belt packs, NP1s or 12V gel cell batteries. The PPA-1 and DCA100-1 can both mount to the mixer chassis as an integrated system. In addition, the BBU100 is a replaceable 9V battery pack that can be quick change, slide mounted with the PROK-1 accessory.

MOUNTING

Accessory protective side plates (PROK-1) extend past both front knobs and rear connectors and will allow no damage to the unit. The PROK-1 includes quick-change slides for the battery and converter modules. An attractive protective carrying bag with shoulder strap is available (ABAG-1) and includes the PROK-1 protection plates. Up to three MX and/or XPS units will mount side-by-side in only one rack unit using the available rack mounting shelf (21075-501). Units may also be neatly stacked or mounted side by side on your desk with available angled desk mounting and Horizontal Joiner kits.

CIRCUIT DESCRIPTION

The input stages of the MXS100, MX200, MX200C and XPS100 are identical. They are designed around a very low noise and low distortion, balanced and floating input, instrumentation amplifier. The SSM2017 is one of the latest generations of devices designed specifically for use as a low noise microphone amplifier. In addition to ultra low noise and distortion, it boasts a very high slew rate of 17V/ μ s virtually eliminating slew induced Transient Intermodulation Distortion.

The direct balanced low noise inputs eliminate the need for input transformers and avoid their distortion, transient overshoot, roll offs and microphonics. The input preamp stages can operate at a MIC gain of 30, 40 or 50dB as selected by an individual jumper plug for each input. To access the jumper plugs, remove the four cover screws (top two on each side) and pull the top cover up and off. For 30dB operation, remove the gain jumper plug completely or plug it on to only one pin for safekeeping. The preamps have a high direct input clipping level of -12dBu (260mV peak) in the 30dB position and optimum noise performance of -126dBm EIN (Equivalent Input Noise) at 50dB gain. In the LINE input switch position, preamp gain is unity and peak line level inputs of +18dBu are accepted with nominal inputs adjustable over the range of -10 to +4dBu.

Phantom Power

Phantom powered microphones will see a regulated +20VDC, open circuit, through a split and balanced 1660-ohm equivalent resistance. This provides over +12VDC to the typical 4ma powered microphone. Phantom power is individually selected for each input with a jumper plug labeled PH PWR placed in the ON position. Moving the plug to the OFF position removes phantom power and grounds the phantom power network. Phantom power is automatically removed when LINE inputs are selected. The phantom power regulator prevents sub-sonic oscillations and line bounce on the phantom power supply.

Low Cut Filters—MXS100 only

Individual two-pole active low cut filters for the reduction of thumps, bumps, and small hurricanes are controlled by front panel toggle switches. The -3dB corner frequency is 125Hz with 30dB roll off at 20Hz.

Input Level Controls and Pan Pots

Each input is adjusted by its own audio taper potentiometer located after the preamp stage to minimize noise. These controls are designed to operate in the ten-to-two o'clock range (-12dB). If you have a preferred position for a particular mixer input, you can pop out the knob cap and reposition its reference indicator line to the twelve o'clock position. Extra knob caps are provided to allow you to color code the inputs. Yellow, red and green caps are supplied in addition to the gray caps on the units. To replace the caps, gently pry out the old cap and press in the new one. Concentric pan pots on each input feed equal signals to left and right mixing busses in the center detent position with a reciprocal boost of 1.3dB and a cut to full off at the extremes.

Tone Oscillator and Slate Microphone—MXS100 only

A three position, center off toggle switch in the upper left corner of the panel selects a 700Hz TEST TONE oscillator in the up position indicated by an adjacent green bi-color LED. The tone level is adjusted by R101 and feeds the mixing buss a factory preset level which will produce an output of +4dBm with the MASTER control set to the recommended 8dB below maximum.

The built-in SLATE microphone is selected by the same toggle switch in the momentary down position. The LED will light yellow. The slate microphone gain is preset, if too high, talk softer, if too low, talk louder. If the yellow light is on don't talk about your boss.

Output Level Controls

The Master control adjusts the Line Outputs as indicated by the LED meter. The Master control should operate around the 2 o'clock position (-8dB) to maximize internal headroom and optimize noise performance. Close tracking stereo VCAs (voltage controlled amplifiers) are operated by the MASTER and PHONES level controls. VCAs eliminate stereo image shifts, which could occur due to possible mistracking of conventional multisection gain controls.

LED Meters

Ten-segment three-color LED bargraph displays meter the outputs with a VU average response characteristic. Internal calibration pots R92 (L) and R93 (R), set the meter readings to indicate 0VU at +4dBm output level and are adjustable from -10 to +8dBm. LEDs are driven in series to minimize current draw while providing a bright, color saturated display which is easily seen even in bright sunlight.

Compressor / Limiter—MXS100 and MX200C

The MXS100 and MX200C incorporate a switched low-distortion compressor / limiter with a front panel switch and peak indicating LED. The limiter threshold is adjusted relative to the 0VU meter indication with internal trimpot R110 and is factory set to +3VU with identical Left and Right signals applied. This setting corresponds to +9VU peaks for either Left or Right outputs individually.

Line Outputs

The output stages, A9 and A10, utilize a unique active-balanced output driver IC,

the SSM2142. The ICs sense whether the connected load is balanced and floating or is unbalanced due to either side being grounded. A balanced output load will be driven with equal and anti-phase levels on the HI and LO output lines. An unbalanced (one side grounded) load will cause the driver IC to shut off the signal output to the grounded side of the load and double the output level applied to the other side, thus maintaining equal output to either type of load. The output stage will drive loads of 600 ohms and higher. Nominal output is +4dBm with clipping at +22dBm into balanced loads. Maximum output *at clipping* is reduced by 6dB when driving an unbalanced load, since the full output swing of only one driver is available.

Output Level Switches—MXS100

S11 and S12, located on the rear panel directly above their respective output XLR connector, individually insert a 54dB attenuator into the left or right output line for nominal output at -50dBm microphone level.

Output Level Selector—MX200C and MX200

Two internal jumper plugs located directly behind the output XLR connectors select either full line level at +4dBm or attenuated microphone level at -50dBm.

Headphone Output Level

A front panel 1/4" TRS (stereo) jack and thumbnail-adjust headphone gain control provides an isolated stereo program output for headphones. The headphone output provides 100mW to phones of up to 600-ohm impedance and reduced levels into higher impedance phones.

Headphone Program / Cue Switch—MXS100 only

A panel toggle switch allows selection of normal stereo program monitoring or summed L+R into one side of the headset and an amplified CUE feed into the other side. A rear panel external CUE input or a jumper-plug-programmed-and-amplified pre-fader cue from any of the three mixer inputs may be fed into the headphone CUE circuit. The external CUE input is a 2.5mm TS (mono) jack. The external CUE feed should supply -10dBu (.25V) nominal level into 20Kohms. The pre-fader cue jumper plugs are labeled CUE1, CUE2 and CUE3.

Tape In, Tape Out—MXS100 only

Rear mounted stereo 3.5mm TRS jacks provide a -10dBu high impedance, unba-

lanced Tape Output signal to recorders and a matching -10dBu Tape Input for playback monitoring. Use of the Tape Out jack will not affect the Program output signal. Use of the Tape In jack interrupts the Program signal feed to the internal headphone monitor and substitutes the Tape playback signal.

Expansion Inputs

A 1/8" TRS (Tip-Ring-Sleeve / Stereo) jack, J10, mounted on the rear panel feeds the stereo mixing buss to allow interconnection of two mixers or the addition of XPS100 and XPS200 input expanders. The tip and ring float at half the supply voltage and must not be externally grounded. These points are zero impedance, current summing nodes on which you should normally be able to measure nothing other than a DC voltage.

Expansion Outputs—XPS100 and XPS200

The XPS100 and XPS200 Expanders amplified mixing buss outputs appear on rear panel paralleled 1/8" TRS jacks J7 and J8. The nominal output is +4dBu unbalanced through a 287Kohm source resistance to feed the current summing expansion inputs of the MXS100 or MX200. These paralleled jacks allow multiple Expanders to be looped together and into the MXS100. Internal jumpers can bypass the 287Kohm resistors to allow direct use of the Expander outputs for low impedance loads down to 600 ohms.

Power Supplies

All units require 22 to 30VDC from an external power source. The DC power connector is wired with the center pin negative and the outer cylinder positive. A series diode and a thermal overload device protect the unit from reversed polarity DC input. The mixers and expander incorporate an "artificial ground" power supply splitting circuit to continuously track the DC input voltage and provide a center point voltage reference for the audio stages.

A low dropout regulator provides a regulated 20.2VDC for phantom powering microphones from inputs as low as 21VDC. Active regulation of the phantom power supply helps eliminate any possibility of oscillation due to unbalanced loading of the phantom supply by the microphone.

Several units can share a common external 24VDC "Wall Wart" type power supply for fixed installations. A pair of loop-thru DC connectors on the rear of each unit permits several units to be daisy-chained with P/N20602-1 DC power cables to a single WA100-1 or WA100-2 power supply. Each Expander is supplied with a set of loop-thru DC and audio cables for easy interconnect to a com-

panion Mixer. The WA100-1 and WA100-2 are both 400mA supplies. An MXS100, MX200 or MX200C draws about 160mA; an XPS100 draws 100mA and an XPS200 draws 70mA. Therefore, one mixer could be combined with two XPS100 units or three XPS200 units on a single power supply module. Any combination of units which add up to less than 400mA can be powered by a single WA100-1 or WA100-2 supply.

BATTERY POWER

Several battery power systems are available for field powering of the MXS100, MX200C or MX200. The BBU100-1 houses four 9V alkaline or lithium batteries and will power the MXS100 for three to five hours.

The PPA-1 or PPA-2 rechargeable gel-cell pack powers a MXS100 for approximately five hours and can be recharged overnight with the included dual-mode charger. The PPA-1 is capable of approximately 500 charge-discharge cycles.

The DCA100-1 DC-to-DC Converter accepts inputs from 6 to 18 VDC and outputs 24VDC to operate a mixer from 6.0 or 7.2V camcorder Ni-Cad, belt-pack Ni-Cad packs, automotive 12V or 12.0 to 14.4V NP-1 batteries. The DCA100-1 requires a standard 4 pin XLR input connector from the battery source (pin 4 positive, pin 1 ground). Battery clips (Hawk-Woods Co. # NPA - XLR) are available for NP-1 type 13.2V NiMH batteries, which can power an MXS100 through a DCA100-1 for up to 10 hours.

The BBU100-1, PPA-1, PPA-2 and DCA100-1 can all mount directly to the underside of the mixer case or slip into the quick-change slide mounts provided with the PROK-1 protection kit or the ABAG-1 carry case. An NP-1 type battery and a spare can be Velcro-attached to the inside of the carrying case.

INSTALLATION

UNPACKING

Inspect the equipment. Shake it to see if anything is rattling around inside. If there is any visible damage to the unit or to the box it came in, contact the factory but do not return anything to ATI without prior authorization and shipping instructions. It may be necessary to have the shipping company inspect the unit and the box at your location. Count the pieces! Don't throw out the boxes and packing material until you are sure you have everything that is coming to you. The XPS100 and XPS200 come with an audio cable, P/N20612-2, a DC cable, P/N20602-1, and an instruction book. The MXS100 comes with a WA100-1 Power Supply, an instruction book and a mating 2.5mm T-S plug for the CUE input. The MX200 and MX200C only come with a WA100-1 Power Supply and an in-

struction book. (Note that the WA100-1, which operates from 120VAC, is supplied as standard. The optional WA100-2 is an international power supply operating from 90-264VAC, 47-63Hz, and is supplied with a variety of interchangeable AC mains connectors.)

Rack and desk mounting hardware may be packed in with the unit even though ordered separately. Optional PPA-1 Battery Packs and DCA100-1 DC Converters may be shipped already mounted to the bottom of the Mixer or may be separately packaged so you have the fun of putting them together (only four #4 x 5/16" screws).

SETUP ADJUSTMENTS

The following adjustments require that the mixer cover be removed and should be made before rack mounting while the mixer is accessible. Remove the top cover by removing four Phillips head screws (top two on each side).

PHANTOM POWER

Locate the red jumper plugs labeled PH PWR associated with each input. Move the desired plug from OFF to ON as required.

MICROPHONE GAIN

Locate the blue jumper plugs labeled GAIN associated with each input. The two positions are labeled 40 and 50dB. For 30dB gain mount plug by only one pin (leaving circuit open). Select a gain appropriate for the microphone in use such that peak microphone output voltage plus the set preamp gain will not exceed the clipping point of the preamp at +18dBu. Extremely sensitive shotgun microphones used in a close talking application may require an in-line attenuator to prevent input overload.

HEADPHONE CUE—MXS100

If it is desired to use one of the input channels for CUE, move the appropriate black jumper plug from OFF to CUE.

OUTPUT LEVEL, MIC or LINE—MX200C, MX200

Locate the two large jumper plugs located just behind the output XLR connec-

tors. Move them to the Line (+4dBm) or MIC (-50dBm) position as required. The MXS100 has rear panel switches for this function.

OUTPUT LEVEL, -10 to +8dBm

If a different output level at 0VU meter indication is desired, drive the output to the desired output level at 1kHz as indicated by an external audio voltmeter connected across the output line and readjust METER CAL—LEFT and METER CAL—RIGHT trimpots for 0VU meter indications. Note that the MIC output level (if used) will track the changes made to the LINE output.

LIMITER THRESHOLD—MXS100, MX200C

To increase the limiter action (by lowering the threshold) rotate the LIMITER ADJUST trimpot clockwise; to soften the limiter action rotate the pot CCW.

RACK MOUNTING

Mixers and Expanders may be rack mounted one, two, or three across in a standard EIA 19" rack and will require only 1-3/4" of vertical space. Rack Mount Shelf P/N 21075-501 mounts three units, and P/N 21097-501 is a 1/3RU Filler Panel. Mounting screws are provided to secure all equipment and provide for improved grounding.

DESK MOUNTS

Single desk mounting kits consist of a pair of angled base plates that mount under the lower front and rear cover screws of a single unit, to raise and to tilt it for easy desk use. In addition, one or more sets of vertical stacking plates, mounting to the upper front and rear cover screws of the bottom unit, allow multiple units to be stacked. Several units can be desk mounted side-by-side and even stacked side-by-side using horizontal joiner kits together with mounting base and stacker kits. P/N 20617-501 is the angled base kit. P/N 20617-502 is the base plus one stacker kit (two high). P/N 20617-503 is the base plus two stackers (three high). P/N 20617-504 is the stacker kit by itself and P/N 20617-505 is a Horizontal Joiner kit.

PROK-1 PROTECTION PLATES and ABAG-1 FIELD CARRY CASE

The Protection Plates PROK-1 (also included as part of the ABAG-1 Field Carry Case) are mounted to the sides of the MXS100 by removing the four cover mounting screws (one side at a time) and replacing them through the mating

holes in the Protection Plate. The Plate should mount with its overhang below the mixer case and the battery case slide bracket below and toward the mixer. Battery cases slide in from the front and should click into place when fully inserted. Plug the battery cable into the rear connector of the mixer. The ABAG-1 Carry Case wraps around the mixer and PROK-1 plates from below and mounts to the protection plates with the supplied four screws and washers inserted through eyelets in the carry case. Overlap the top folds of the case with the ATI logo on the outside. The attached Velcro strips can mount NP-1 batteries with mating strips of Velcro.

AUDIO CONNECTIONS

XLR type inputs and outputs are wired with pins 2 as HI and pins 3 as LOW. Pin 1 of all input connectors is permanently grounded and is the cable shield and DC return connection for phantom microphone power.

Active balanced outputs require a reference ground connection to the receiving device for proper operation. The rack frame or a studio buss connection can provide this ground if the output cable shield does not carry it through.

POWER DISTRIBUTION

Input Expanders should be looped through each other, then into the mixer using the DC jumper cables P/N 20602-1. Hum and noise performance of the Expanders can be degraded by poor DC ground connections between them and the mixer. Use of the recommended rack and desk mounting kits will assure a good ground connection between units by firmly strapping their chassis together.

CAUTION! The outer shell of the DC interconnect cables is positive relative to the chassis. Do not allow a DC cable plugged into a powered unit to hang loose where it might short against the chassis or rack frame.

MAINTENANCE

There is no routine maintenance required by your Mixer or Input Expander. If you have a problem, check panel LED indicators to assure that the units have DC power, eliminate by substitution microphones, input and output cables, connectors, downstream devices, Mixer-to-Expander interconnect cables and Wall Wart power supplies. If all else fails, read your warranty at the rear of this book (which probably ran out yesterday) and call us for sympathy and overpriced parts.

Power Supply Levels

The recommended loaded DC input voltage range is 22VDC minimum to 32VDC maximum. The audio circuits continue to work with reduced headroom below 22VDC but the VU meter will blink at full scale. Momentary surges up to 36VDC will cause increased internal heating, but above 36V call ATI for some expensive ICs.

Operating Points

An internal reference voltage equal to 1/2 the supply voltage is generated by A15 in the MXS100 and MX200 and by A7 in the XPS100. All IC inputs and outputs should show a DC level equal to this voltage when measured with a high impedance meter. XLR audio inputs and outputs are capacitor coupled and ground referenced. The expansion buss input is at the DC reference level and must not be accidentally grounded by dangling audio interconnects cables.

Switch Maintenance

The front panel MIC/LINE push-button switches have good wiping contacts and should need little attention. The switches are sealed and impossible to clean; in addition, most spray solvents will wash out the internal lubricant and cause premature mechanical failure. A good fix, if the switches ever get noisy, is to sit down at the unit, think about your girlfriend (or Britney Spears or Madonna, depending on your age bracket) and push those little red buttons about 500 times each. If that doesn't cure the problem, call us for more sympathy and a high-priced replacement. Those tiny toggle switches on the MXS100 panel are far more rugged than they appear because they bend rather than break. Gold contacts help them stay quiet. No routine maintenance is required or recommended.

Potentiometers

Input Gain controls are 10Kohm audio taper pots with a 10K linear concentric Pan pot. Replacements are our P/N10088-1. The Master and Phones pot is a 50Kohm linear taper pot, our P/N10089-1.

SPECIFICATIONS

Output Level:	+4dBm Nominal into 600 ohm balanced or unbalanced loads; +22dBm Max.
Distortion:	.5% Maximum, 20Hz to 20kHz at +20dBm.
Response:	±.3dB, 20Hz to 20kHz
Noise:	Microphone input: EIN= -126dBm; 50dB input gain Line Input: EIN= -84dBm; unity input gain All measurements at 20-20kHz bandwidth
Gain:	Mic Inputs: +82dB Max; Line Inputs: +42dB Max.
Headphone Output:	100mW to 600/150 ohm phones, TRS jack
Limiter:	5:1 slope, Attack time 25ms, Recovery time 200ms for 10dB change
Phantom Power:	+20VDC @ 4mA through 1660 ohms
DC Power:	24VDC Nom. 160mA for MXS100, MX200C or MX200 90 mA for XPS100; 60 mA for XPS200
Dimensions in.(cm.):	1.75 (4.45)H x 5.6 (14.2)W x 5.75 (14.6) D
Weight	1.25 lbs (.57kg) Net; 3 lbs (1.4 kg) Shipping Weight

MODELS AVAILABLE:

MXS100	Stereo Three Input Mic/Line Field Mixer
MX200C	Stereo Three Input Mic/Line Studio Mixer with Limiter
MX200	Stereo Three Input Mic/Line Studio Mixer
XPS100	Stereo Four Mic/Line Input Expander
XPS200	Stereo Two Stereo Line Input Expander

ACCESSORIES

WA100-1	Wall mount power supply (UL), 24VDC @ .4 amp, 120 VAC/60 Hz (included as standard)
WA100-2	Wall mount power supply for international use, 90-264VAC input via interchangeable connectors, 24VDC @ .4 amp output (optional)
20602-1	DC power cable assembly for looping the DC power between units
BBU100-1	Battery Pack unit houses four 9V alkaline or lithium batteries (batteries not included); nominal 3-hour operational life
DCA100-1	DC-to-DC converter powers units from 12VDC mobile, belt pack, NP1 and Gel cell batteries; supplies 24VDC @ .2amp maximum
PPA-1	24VDC Rechargeable Battery Pack with dual mode fast charger, mounts to mixer, four-hour nominal operation. Operates from 120VAC.
PPA-2	24VDC Rechargeable Battery Pack with dual mode fast charger, mounts to mixer, four-hour nominal operation. Operates from 230VAC.
ABAG-1	Carry Case with side protector plates and strap, holds MXS100 with DCA100-1, PPA-1 or BBU100-1, includes PROK-1
PROK-1	Bolt-on side plates protect controls and connectors and provide slide mounts for battery packs

Rack & Desk Mount Kits:

21075-501	Side-by-side rack mount for up to three units in 1RU
21097-501	1/3RU Filler Panel for use with 21075-501
20617-501	Angled Desk Mount Base
20617-502	Angled Desk Mount Base and One Stacker (2 units high)
20617-503	Angled Desk Mount Base and Two Stackers (3 units high)
20617-504	Stacker (2 units high)
20617-505	Horizontal Joiner (2 units side-by-side)

One Year Limited Warranty

ATI warrants this product to be free from defects in materials and workmanship to its original owner for a period of one year from date of purchase. ATI will repair or replace such product or part thereof, which upon inspection by ATI, is found to be defective in materials or workmanship.

The Proper Return Authorization Number must be obtained from ATI in advance of return. Contact ATI at 856-626-3480 or email sales@atiaudio.com to receive the number and instructions for return of your unit.

A written statement providing the name, address, daytime telephone number and email address of the original owner, together with receipt from the original purchase, and a brief description of any claimed defects, must accompany all returns. Parts or product for which replacement is made shall become the property of ATI.

The customer shall be responsible for costs of transportation and insurance to the factory of ATI, and shall be required to prepay such costs.

ATI shall use reasonable efforts to repair or replace any product covered by this limited warranty within thirty days of receipt. In the event repair or replacement shall require more than thirty days, ATI shall notify the customer accordingly. ATI reserves the right to replace any product that has been discontinued from its product line with a new product of comparable value and function.

This warranty shall be void in the event a covered product has been damaged, or failure is caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, or lightning, power fluctuations and other incidental or environmental conditions. Further, product malfunction or deterioration due to normal wear is not covered by this warranty.

ATI DISCLAIMS ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR USE, EXCEPT AS EXPRESSLY SET FORTH HEREIN. THE SOLE OBLIGATION OF ATI UNDER THIS LIMITED WARRANTY SHALL BE TO REPAIR OR REPLACE THE COVERED PRODUCT, IN ACCORDANCE WITH THE TERMS SET FORTH HEREIN. ATI EXPRESSLY DISCLAIMS ANY LOST PROFITS, GENERAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHICH MAY RESULT FROM BREACH OF ANY WARRANTY, OR ARISING OUT OF THE USE OR INABILITY TO USE ANY ATI PRODUCT.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitation on how long an implied warranty lasts, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

ATI reserves the right to modify or discontinue, without prior notice to you, any model or style product.

If warranty problems arise, or if you need assistance in using your product contact us.