

ROCKMAN™
XP 100

OPERATING MANUAL





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Front Panel Overview

Carrying Handle: Pulling up on the handle locks the two speaker cabinets together for transporting. Pushing down on the handle unlocks the two cabinets so that you can separate them for enhanced "wide" stereo operation.

Guitar/Keyboard Input: Accepts signals from all passive and active guitar pick-ups, as well as electric keyboards and high impedance mikes.

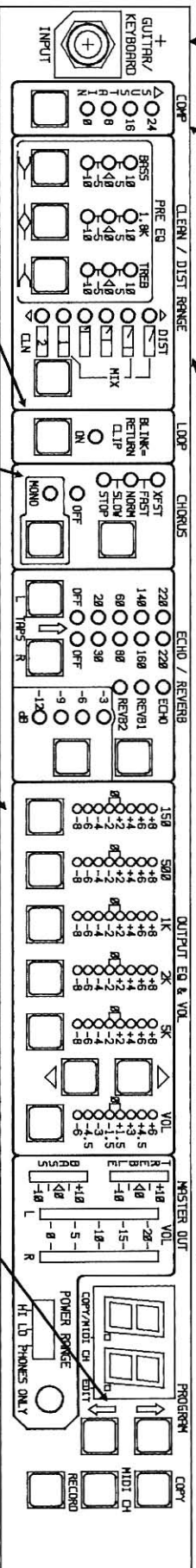
Compressor: Button controls compressor/sustain and distortion harmonics.

Pre-EQ: Provides bass and treble cut and boost, and 1.8k notching before the clean/distortion range amplifier.

Clean/Distortion Range: Button selects one of six basic sound modes and also allows CLN 1 to be mixed with DIST and HVY modes.

Echo/Reverb: LEFT and RIGHT TAPS buttons assign 4 different tapped delays to the left and right echo outputs. ECHO/REVERB button selects echo reverb 1, or reverb 2. LEVEL button controls the echo/reverb mix in the main signal.

Master Out: Manual sliders control overall treble and bass. Left and right volume sliders control overall headphone, volume speaker volume and stereo balance. POWER RANGE switch selects speaker HI power LO power, and HEADPHONES ONLY positions.



Loop: Button turns ON and OFF the rear panel effects loop. Dual mode LED shows loop ON when lit, and loop return overload when blinking.

Chorus: Button selects 4 separate sweep speeds, sweep stop with stereo image but no modulation, and chorus off. MONO button combines the two stereo chorus signals for a more intense chorus effect.

Output EQ and Volume: EQ buttons select their corresponding EQ bands to be cut or boosted by the UP/DOWN button. Two lit LEDs at the center of the EQ band indicate a "0" dB setting. The VOL button activates the output volume column of LEDs and can be cut or boosted by the UP/DOWN control buttons.

Program: Double digit LED display shows current program number (0-99), MIDI channel (1-16 plus OMNI = 00), COPY/MIDI Channel and EDIT marks. PROGRAM UP/DOWN buttons scroll through memory programs and MIDI channels. The COPY button allows the currently active front panel setting to be copied elsewhere in the memory. The MIDI CH button causes the MIDI channel to be displayed. The RECORD button enters the front panel settings into memory for the program number displayed. The COPY/MIDI CH mark indicates that the front panel settings can be copied to another program number, or that the MIDI channel is being displayed. The EDIT mark on the LED display indicates that the currently active program has been temporarily modified by the front panel control buttons.

Speakers: Two high output full range speakers in separable cabinets for widespread stereo operation.

Rear Panel Overview

MIDI Thru: Jack provides a buffered output of MIDI IN serial data.

MIDI In: Jack receives remote MIDI program change commands from a ROCKMAN MIDIPEDAL™, any other MIDI footcontroller, keyboard, or sequencer.

Direct Line Out: Left and right jacks can be connected directly to a mixing board, tape recorder, or additional power amp and speakers. Use the LEFT line out only for MONO output. These outputs are pre-master output controls.

Auxiliary Stereo Input: Full range input for monitoring drum machines, tape decks, etc.

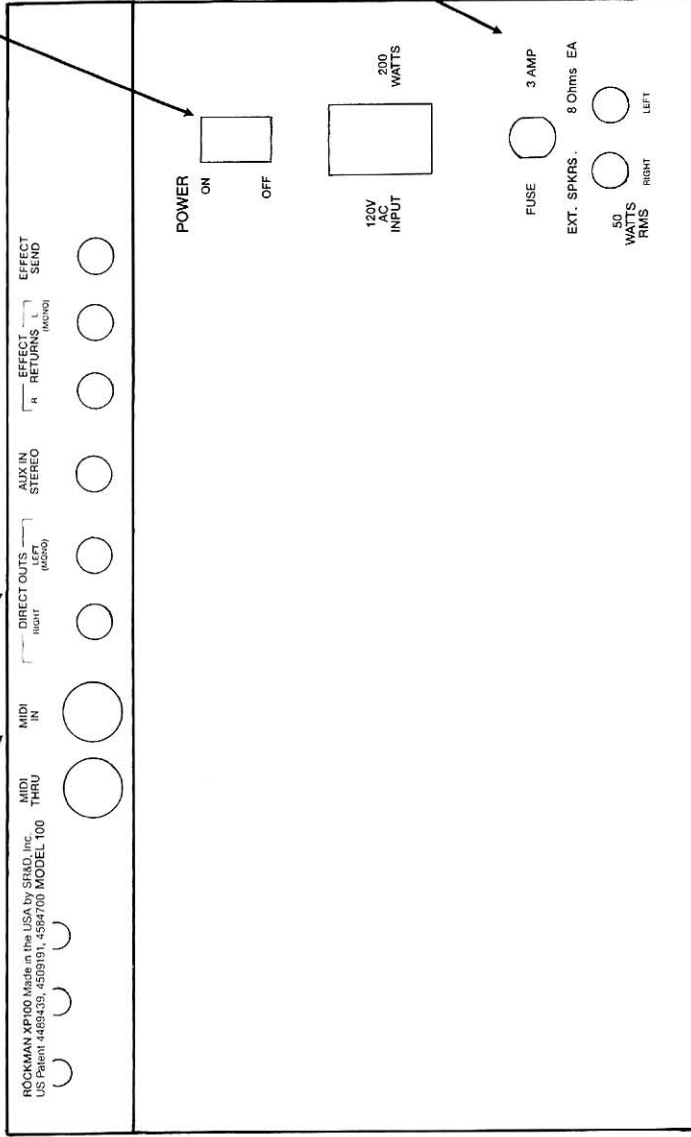
Effects Loop: SEND jack is after the COMPRESSOR and CLEAN/DISTORTION stage and before the CHORUS, ECHO/REVERB stage, and 5 band EQ. Connect SEND to input of external effects. Return output of effects to LEFT and RIGHT returns for stereo, or LEFT return for mono.

Power: On/Off. LED display lit indicates unit is ON.

Extension Cabinet Outputs: (Right Speaker) Connect speaker cable from right speaker output to input on XP 100 "satellite" speaker cabinet.

or

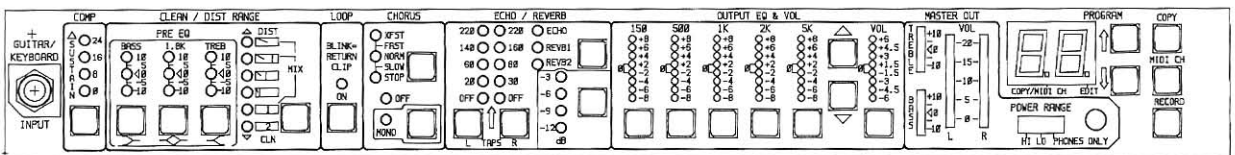
Connect speaker cables from speaker output jacks to drive additional speaker cabinets (4 ohm min load). Connecting left speaker output automatically disconnects XP 100 internal speaker.



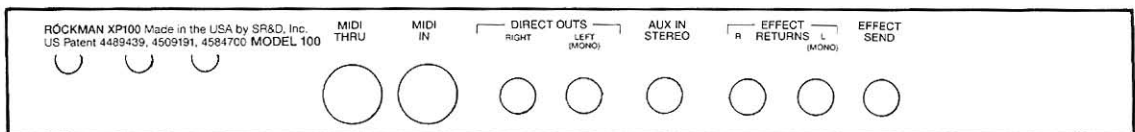
General Operating Instructions

These General Operating Instructions will get you started using your ROCKMAN™ XP 100 MIDI PROGRAMMABLE STEREO AMPLIFIER right away. We urge you to read the rest of this manual soon so that you will fully understand and be able to enjoy all of the capabilities of this sophisticated MIDI programmable amplifier.

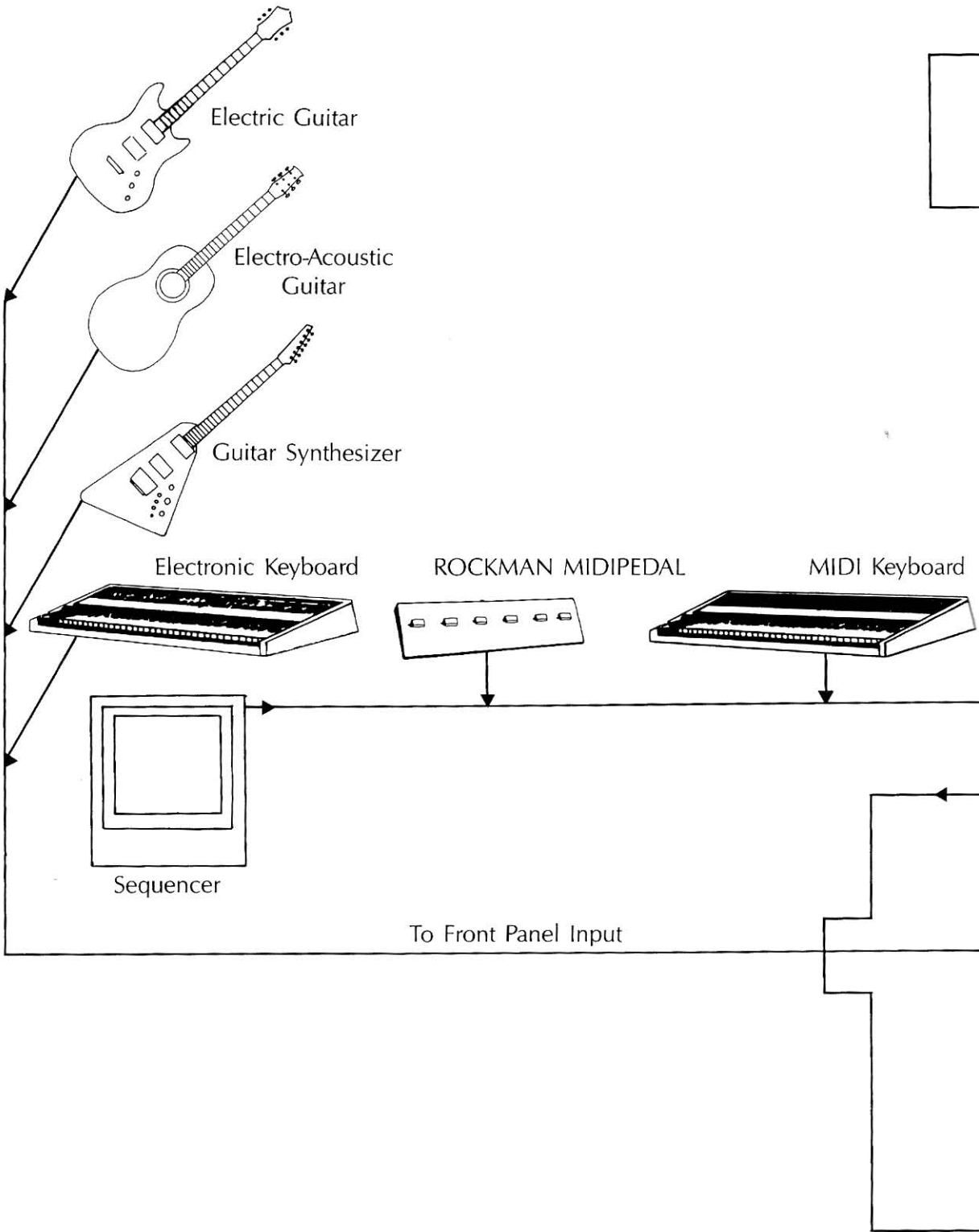
1. Connect the power cord of the XP 100 to an AC-outlet.
CAUTION: line voltage must match the voltage requirement printed on the rear panel of the unit.
2. Set the power range switch on LO.
3. Push the XP 100 AC-switch ON.
4. Plug in your instrument and play.
5. Adjust the MASTER OUT left and right volume sliders for a balanced stereo mix. Adjust the TREBLE and BASS sliders to compensate for room acoustics.
6. To record a program:
 - A. Select a program memory number using the UP/DOWN buttons.
 - B. Select one of the 8 sound modes in the CLEAN/DIST range section.
 - C. Select the compression, pre and post EQ, effect loop, chorus and echo/reverb effects and output volume you wish by using the selector buttons in each section.
 - D. Hold the RECORD button in until the LED display stops flashing (about 2 seconds). **NOTE:** programs may be edited at any time by using the front panel buttons. An EDIT mark will appear in the LED display. If you wish to keep the edited version simply hold the RECORD button until the LED display stops flashing, otherwise tapping up (↑) then down (↓) will return that program to its unedited condition.
7. To copy an existing program:
 - A. Press and hold the COPY button. The COPY mark will appear on the LED display.
 - B. Use the PROGRAM UP/DOWN buttons to select the desired program number you want the settings to be copied to.
 - C. Release the copy button.
 - D. Hold the RECORD button until the LED display stops flashing.



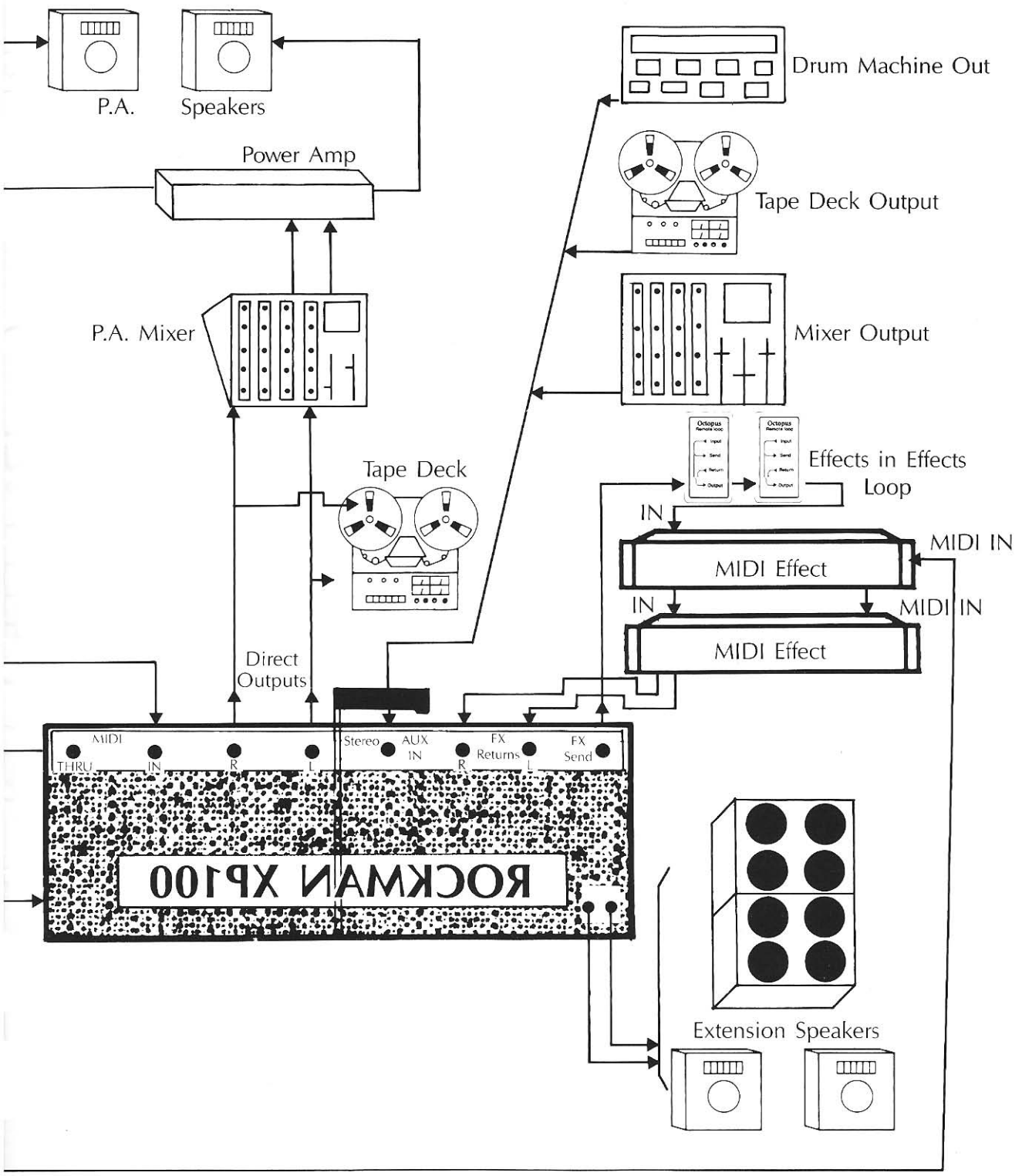
FRONT PANEL



REAR PANEL

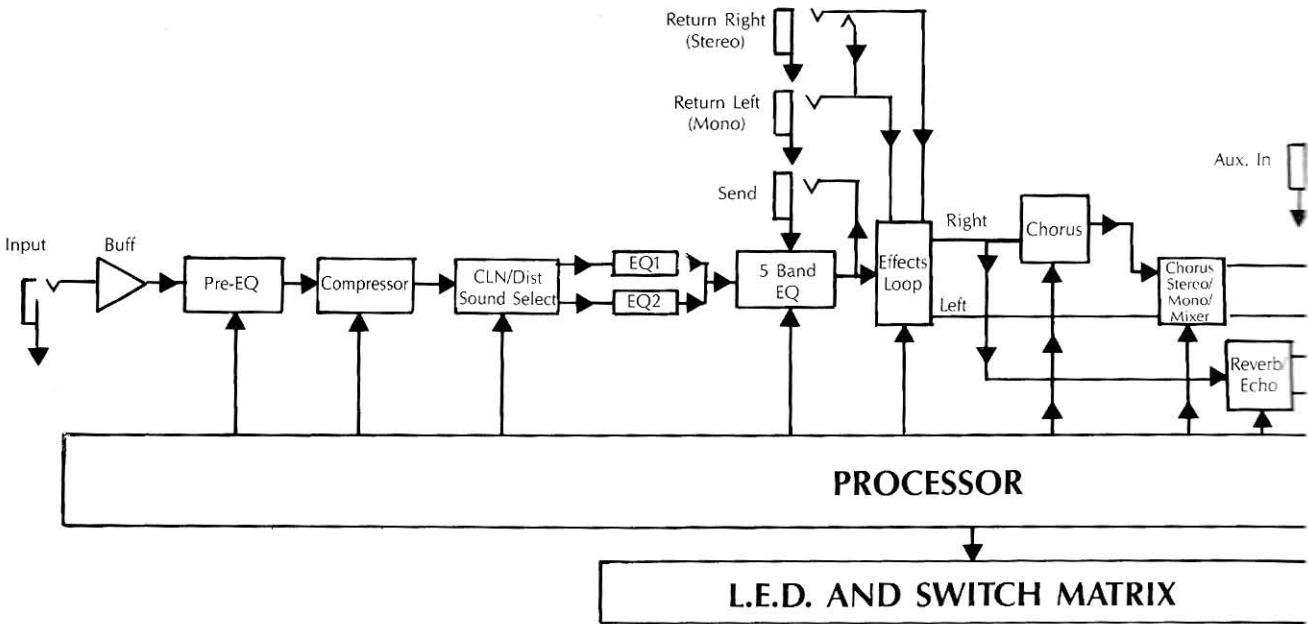


Connections

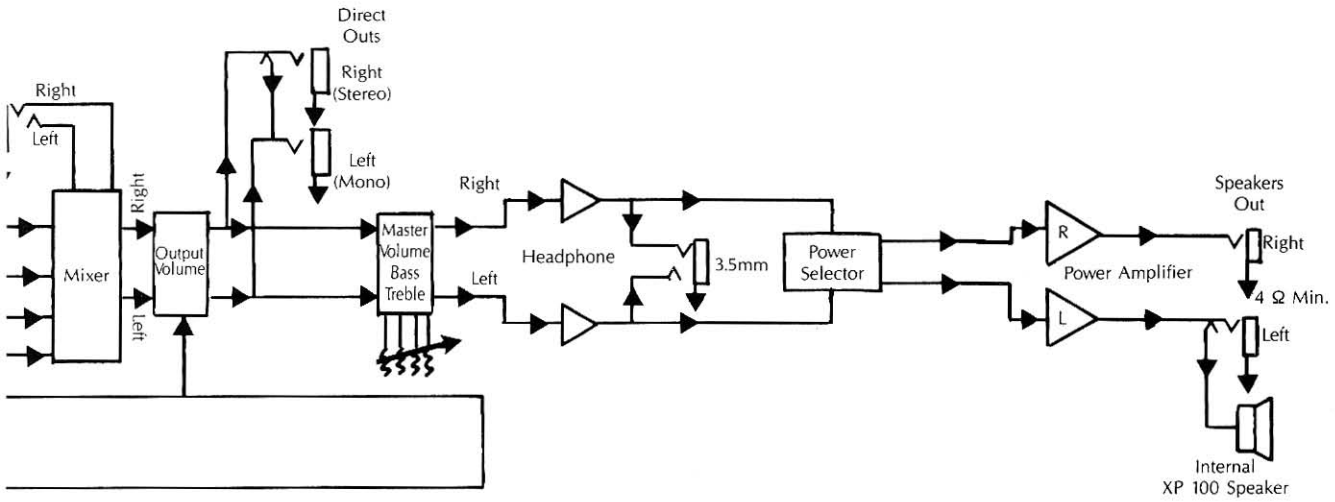




Signal Path



Diagram





Detailed Function Descriptions

The ROCKMAN™ XP 100 MIDI Programmable Stereo Amplifier represents a major step forward in the evolution of modern guitar amplifier technology. In addition to 100 user-defined memory programs and 100 watts RMS — in stereo, the XP 100 features the most versatile overdrive/tone shaping preamp section available today with fully programmable on-board processing and simultaneous stereo effects. Programming the XP 100 is as easy as pressing a button, and the full-time parameter LEDS for every control let you know, at a glance, the status of all the on-board functions and effects.

GUITAR/KEYBOARD INPUT accepts signals from virtually any high impedance source, including active and passive guitar pickups, electronic keyboards and microphones. For low impedance mikes, it is necessary to use a line matching transformer before the input.



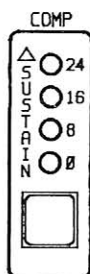
The AUXILIARY INPUT found on the rear panel of the XP 100 allows for full range stereo monitoring of any auxiliary sound source such as a drum machine, tape deck or mixing board output. Adjust the output volume on the drum machine, etc. to achieve the desired mix between the XP 100 and the AUX source.

AUX IN
STEREO

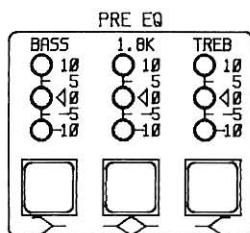


The COMPRESSOR/SUSTAIN button is the primary compression control and is used to adjust sustain time in all sound modes. This main compressor is designed specifically to handle the complex guitar signal envelope without the noise, “pumping” or “squashing” of conventional compressors and adds no tonal coloration of its own. This control also increases or decreases distortion harmonics when the XP 100 is set in a distortion mode. The compressor LEDS indicate how much gain reduction is being applied to the main signal. **NOTE:** reducing the COMPRESSOR/SUSTAIN setting will help avoid unwanted acoustic feedback at loud stage volumes.

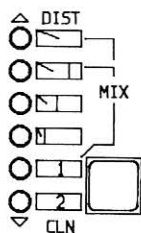
The new LEAD LEVELER™ distortion compressor circuit is also located in this section and is activated when the various distortion sound modes are being used. Another ROCKMAN™ exclusive, LEAD LEVELER™ features ultra fast attack and release times for enhanced hammer-ons, pull-offs and staccato picking techniques. It adds an amazing evenness and clarity to picked notes and trills in solo guitar parts.



The PRE EQ section of the XP 100 provides important programmable tone shaping equalization to the main signal before it reaches the CLEAN/DISTORTION RANGE amplifier. Bass and treble frequencies can be cut or boosted in 5 dB increments to + or -10 dB. The 1.8k notch can be set to cut by 5 dB increments down to -20 dB, improving power chord clarity and preventing intermodulation distortion in distorted rhythm parts. **NOTE:** this effect is subtle and is most noticeable when using a pickup with an accentuated upper midrange boost.

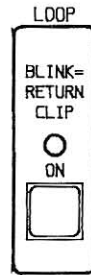


The CLEAN/DISTORTION RANGE section offers six ROCKMAN™ sound modes for creating sounds from very clean to very heavy distortion. Each sound mode features its own discreetly different processing circuit to ensure the correct signal treatment throughout. Also, the CLN 1 mode can be combined with either the DIST mode or the HVY mode to create two additional sound modes.

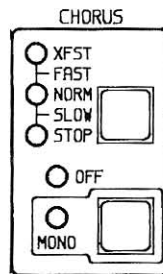




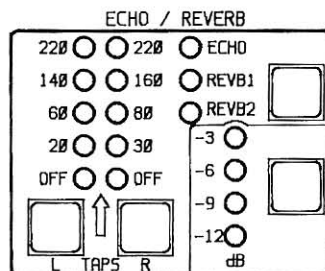
The LOOP button activates the programmable rear panel stereo effects loop, allowing any effects that are placed in the loop to be programmed into the existing memory program along with the rest of the XP 100 processing. The EFFECTS LOOP is located POST compressor and clean/distortion range amplifier and PRE chorus and echo/reverb circuits. Effects may be returned in stereo or mono by using the appropriate rear panel return jacks. The dual purpose effects loop LED INDICATOR shows loop ON/OFF status and blinks to show effects loop RETURN OVERLOAD. **NOTE:** to avoid effect loop return overload, set all effects in the loop to "unity gain" (i.e. input = output) or reduce the output of the last effect in the loop.



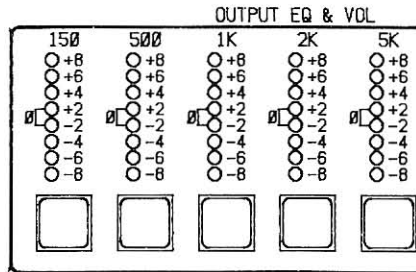
The CHORUS section of the XP 100 features the warm, fat sounding ROCKMAN™ analog stereo chorus circuit that provides a sweeping spacial effect by slightly modulating the pitch and delay time of the main signal. Included are four programmable sweep speed presets, SWEEP STOP which removes the chorus pitch modulation while maintaining a stereo image time delay of 20 ms, and chorus OFF. SLOW sweep speed creates a subtle phasing effect, while XTRA FAST sweep speed provides a more rhythmic vibrato-like sound with more pronounced pitch detuning. The MONO button combines the chorus and main signals for a more intense chorusing effect.



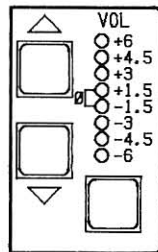
The ECHO/REVERB section contains the controls to create numerous stereo tapped echo and reverb effects. The LEFT and RIGHT TAPS buttons assign one of four delay time taps to their corresponding echo output. The ECHO/REVERB selector button chooses either the STEREO TAPPED DELAY mode, REVERB 1 or REVERB 2. REVERB 1 and 2 are true stereo analog reverberation effects, with REVERB 2 adding additional feedback for a longer delay. The LEVEL button controls the amount of echo or reverb effect that is mixed in with the main signal.



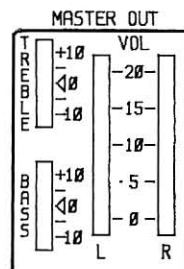
The OUTPUT EQ & VOLUME section features a fully programmable 5 band equalizer and programmable overall output volume control for creating and customizing endless variations of your own unique sounds. The 5 EQ bands are centered at 150 Hz, 500 Hz, 1 kHz, 2 kHz, and 5 kHz; with 8 dB maximum cut and boost adjustable in 2 dB increments. TO PROGRAM THE OUTPUT EQ: simply press the button below the appropriate EQ band. The corresponding EQ BAND LED will begin to flash, indicating that it has been selected. Then use the UP/DOWN buttons to affect the desired cut or boost at that frequency. Repeat this procedure for each EQ band until you have the desired equalization curve. Hold the red RECORD button until it stops flashing (about 2 seconds) to memorize the new EQ settings for the program number selected.



The programmable overall VOLUME control operates in the same way as the EQ bands. TO PROGRAM THE OUTPUT VOLUME: press the button below the VOLUME column to activate its flashing LED, and then use the UP/DOWN buttons to set the desired volume. The OUTPUT VOLUME control includes a unique circuit that automatically compensates for the perceived treble loss inherent in human hearing as the volume is reduced.



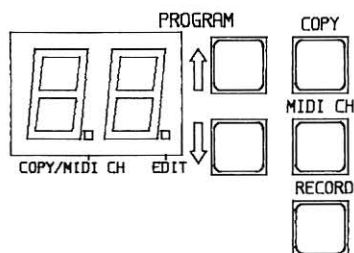
The MASTER OUT section provides overall MANUAL EQ and OUTPUT balance control after all the other processing and effects stages of the XP 100. The TREBLE and BASS sliders allow you to compensate for different room acoustics and other conditions affecting the overall sound without having to reprogram all the relative EQ settings in the XP 100. The three different power ranges are: HI (full power), LO (half power), or HEADPHONES ONLY. The front panel standard 1/8" stereo mini jack provides an output for headphones in all three power modes. The PHONES ONLY position offers private listening by deactivating the two XP 100 full range stereo speakers or external speakers (when connected to the speaker outputs).





The PROGRAM section allows you to record and then access up to 100 different XP 100 processing and effects combinations called PROGRAMS.

This section also allows you to COPY existing front panel settings to another program number, and select a MIDI RECEIVE CHANNEL so that the XP 100 can be controlled remotely. (See MIDI Functions chapter for more information).



TO ACCESS PROGRAMS VIA FRONT PANEL CONTROLS:

Use the PROGRAM UP/DOWN buttons to activate any program. Tap the UP button to count up one program number. Tap the DOWN button to count down one program. If you hold the UP or DOWN buttons longer, the numbers will count automatically. After ten numbers, the count will speed up. On the XP 100, after program 99, the count rolls over to 0. You can always reach any program by counting UP or DOWN.

RECORDING

All the front panel functions and effects, with the exception of the manually controlled MASTER OUT section, can be recorded into the 100 on-board memory programs in the XP 100.

TO RECORD A PROGRAM

- A. Select a program number using the PROGRAM UP/DOWN buttons.
- B. Select one of the 8 sound modes in the CLEAN/DISTORTION RANGE section.
- C. Select the compression, pre and post EQ, effects loop, chorus and echo/reverb effects and output volume desired by using the front panel selector buttons.
- D. Hold the RECORD button until the LED display starts and stops flashing.

EDITING

Once a program has been entered into memory, it can be modified at any time by using the front panel selector buttons. An EDIT dot will appear on the right side of the LED display, indicating that at least one parameter in the currently active program has been changed. If you wish to keep the edited program simply hold the RECORD button until the LED display starts and stops flashing, otherwise tapping up (↑) then down (↓) will return that program to its unedited state.

Copying

TO COPY AN EXISTING PROGRAM

- A. Press and hold the COPY button. A COPY dot will appear in the middle of the LED display, indicating that the front panel settings are ready to be copied to another program number.
- B. Use the PROGRAM UP/DOWN buttons to select which program number you want this sound to be copied to. Then release the UP/DOWN and COPY buttons. From here you can further edit settings and/or record new variations to that program.
- C. Hold the RECORD button until the LED display starts and stops flashing.

REMOTE MIDI PROGRAM ACCESS:

To access the XP 100 programs via MIDI, connect a MIDI cable from the MIDI OUT jack on the ROCKMAN MIDIPEDAL™, other remote footcontroller, keyboard, or sequencer to the rear panel MIDI IN jacks of the XP 100.

MIDI CHANNEL

The XP 100 will receive MIDI program change commands on any of the 16 MIDI channels. You may select any single channel, or select the OMNI mode (00) to receive on all channels.

TO SELECT A MIDI CHANNEL

Hold the MIDI CH button, and use the PROGRAM UP/DOWN buttons to count to the desired MIDI channel number. The LED display will show the MIDI CHANNEL number. The selected MIDI channel number will be retained in memory until changed and will not be lost during power downs.



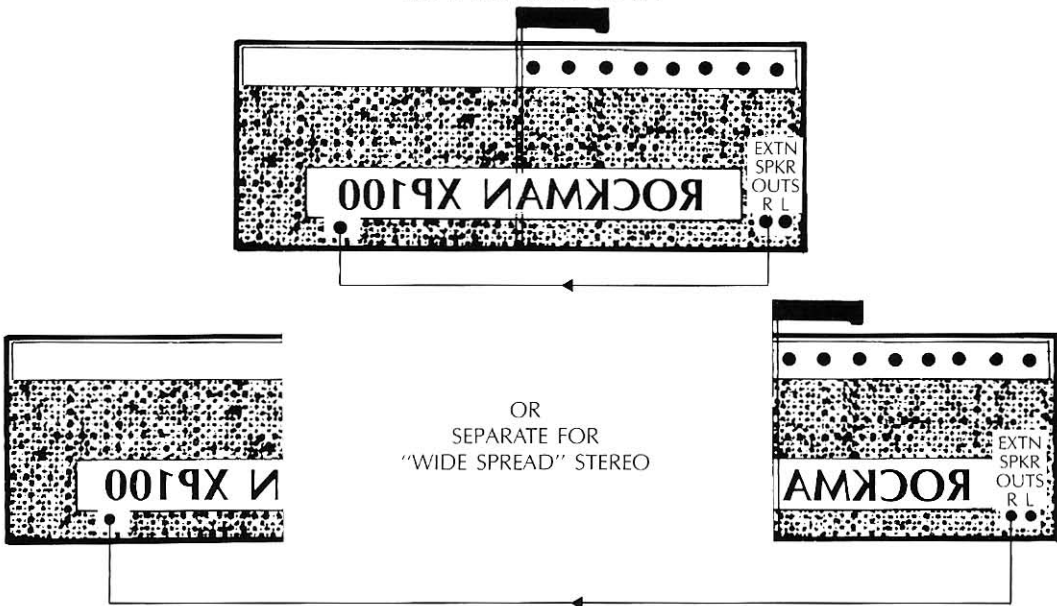
MIDI Functions

The ROCKMAN™ XP 100 has been designed to provide instantaneous MIDI remote program access when used with a ROCKMAN MIDIPEDAL™, any other MIDI footcontroller, MIDI keyboard, or sequencer. When the XP 100 receives a MIDI PROGRAM CHANGE COMMAND, it will immediately switch to the program requested. The ability to select one of 16 MIDI CHANNELS allows the XP 100 to respond to some commands and ignore others. For most applications, we recommend that the MIDI channel be set to OMNI (00) so that all messages will be received. Since the XP 100 features one hundred memory program capability, it will acknowledge PROGRAM CHANGE COMMANDS 1 through 100. (A request for program 100 will call up program 0). PROGRAM CHANGE COMMANDS 101 through 128 are ignored by the XP 100.

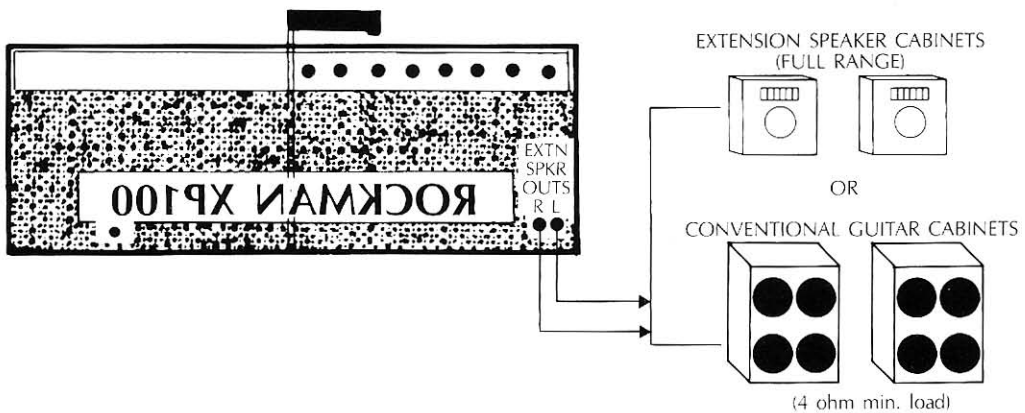
Stage System Hook-Up

The ROCKMAN™ XP 100 is designed to produce great guitar sounds in any performance environment, live or in the studio. And of course, by using the XP 100's DIRECT OUTPUTS to run the signal to the P.A. or recording mixing board, you will never need to hassle with miking up speaker cabinets.

LIVE USE WITH XP 100 "SATELLITE" SPEAKER CABINET
CONNECT A SPEAKER CABLE BETWEEN THE TWO XP 100 CABINETS
USE THEM TOGETHER . . .



LIVE USE WITH EXTERNAL SPEAKER CABINETS

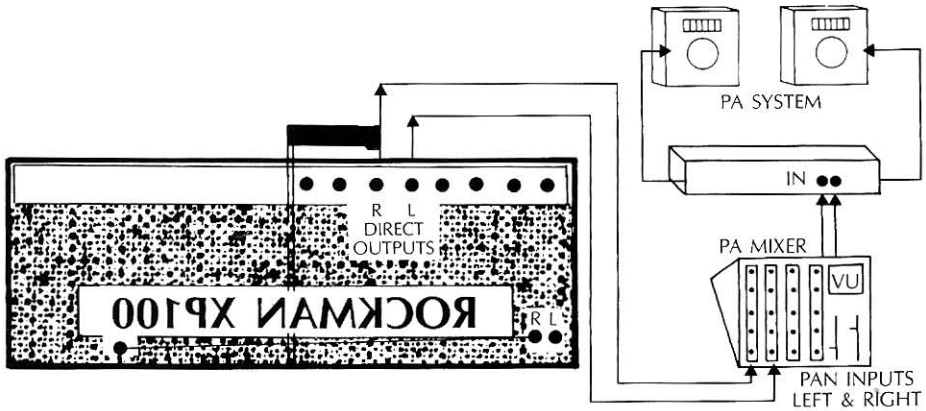


If additional on-stage speaker coverage is ever required with the XP 100, simply connect the extra speaker cabinets (4 ohm min) to the rear panel EXTERNAL SPEAKER jacks. Using these jacks disconnects the internal XP 100 speakers.

If other than full range speaker cabinets are to be used, boost the XP 100 MASTER OUT treble and bass sliders to compensate for the limited frequency response found in conventional guitar speakers.

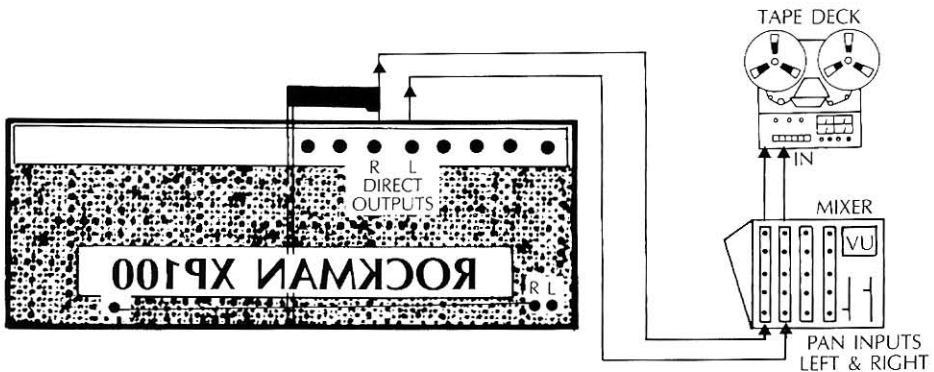


LIVE USE DIRECT INTO A P.A. SYSTEM



Plug the XP 100 DIRECT OUTPUTS into the P.A. mixing board and pan the input channels hard left and hard right. **NOTE:** for a MONO P.A. system, use the LEFT MONO DIRECT OUTPUT only. Use your speaker cabinets and/or the stage monitors to hear yourself.

ROCKMAN XP 100 DIRECT RECORDING HOOK-UP



For direct recording, plug the XP 100 DIRECT OUTPUTS into a mixing board and then on to the tape deck; or plug directly into the line level inputs of the tape deck. Pan the input channels hard left and hard right.