EVENTIDE SP2016
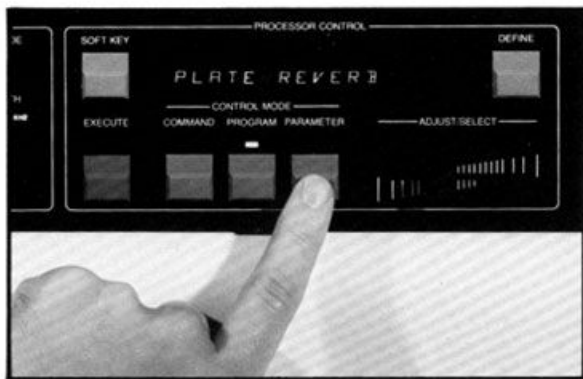## GENERATION II
EFFECTS PROCESSOR/REVERB

A Whole New World Of Special Effects At Your Fingertips

FROM THE WORLD LEADER IN DIGITAL AUDIO EFFECTS

Eventide
the next step

SP2016 SPECIFICATIONS

INPUTS:	Two XLRs, 10k Ohms, balanced, range is − 10dBm to + 24dBm
OUTPUTS:	Two XLRs, 150 Ohms, balanced, max. output is + 18dBm, suitable for driving 600 Ohms or higher line level impedances.
FREQUENCY RESPONSE:	20 Hz to 16kHz for most programs, 20 Hz to 8kHz for programs that require extended memory.
DYNAMIC RANGE:	82 dB typical
DISTORTION:	THD at 1kHz is equal to or less than .1%, .05% typical, .1% maximum.
PROGRAM CAPACITY:	11 program ROM capacity at any one time. Each ROM can hold from 1 to 5 programs, depending on memory required for each program. Any number of programs can be stored outside the SP2016 and inserted in moments.
PRESETS:	Up to 65 sets of program parameters can be stored in non-volatile memory.
REVERBERATION TIME:	0 seconds to hours (program dependent). 0 to 10 seconds typical.
FREQUENCY CONTOURING:	Program dependent, cut and boost at selectable low frequencies, cut at selectable high frequencies.
ROOM POSITION:	Program dependent. Controls relative strengths of "reflections"; controls apparent room position of listener in relation to sound source.
PRE DELAY:	0 to 999.9 ms; program dependent. 0 to 400 ms typical.
ADDITIONAL CONTROLS:	Two Input faders, two Output faders, two Dry/Effect faders. Program select, Parameter select, Command key (for addressing presets, help text, self test and more), Execute key, Adjust/Select slider, Define key, and Soft key (executes special program features), Output monitor button and On/Off switch.
DISPLAY:	Two 10 LED bargraph type meters for monitoring inputs or outputs. Program Status displays (i.e. Mono, 16kHz). Main display is 16 alphanumeric characters.
REMOTE:	Optional mini remote comes with 20 foot cable with DIN type connector for immediate use with the SP2016. Remote box is 3½"h x 1½"w x 1"d and has all "Processor Controls" except Define key and Display.
COOLING:	Forced air via internal fan.
DIAGNOSTIC PROGRAMS:	Short and Continuous self test shown on display is standard.
SERVICEABILITY:	Factory and field support.
PROTECTION:	750mA fuse for 110/120 volt. 600 mA fuse for 230 volt.
STANDARD INTERFACE:	IEEE-488 connector for computer control.
RFI SHIELDING:	AC power connector, audio connectors and remote cable RFI shielded.
POWER:	115 volts/230 volts, selectable, 50/60 Hz AC. 60 watts.
SIZE:	3½"h x 19"w x 12½"d (8.9cm x 48.3cm x32 cm)
WEIGHT:	14 lbs. (out of the box) Shipping weight is 20 lbs.

Eventide SP2016 Effects Processor/Reverb with Generation II Software
Hardware That Does More,
Software That Sounds Better.

EASE OF OPERATION—Designed from the start for simplicity and flexibility. Just a few controls handle all functions. Universal control design easily accommodates new programs and software updates.
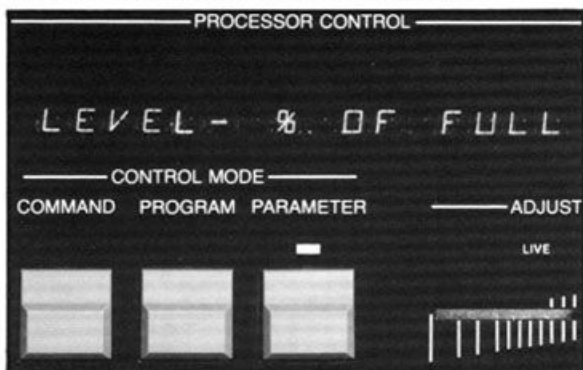
ALPHANUMERIC READOUT TELLS ALL—Program names, parameters, numeric units and their definitions, system prompts and more...the SP2016 spells it all out for you.

SELF-TEST MODE—Can check the unit every time you turn it on. A special continuous test mode has been designed to spot and report hard-to-find intermittents.

The Eventide SP2016 Effects Processor/Reverb...
HARDWARE THAT DOES MORE...

The SP2016 has been designed as an extremely versatile and capable *general purpose* audio signal processor. The hardware designs required for a no-compromise, natural sounding digital reverberator meeting Eventide performance standards are also capable of a wide variety of other audio effects and functions.

INTELLIGENT USER CONTROL DESIGN—Exploiting the full range of capabilities of the SP2016 presented a real design challenge: How to avoid a dense thicket of front panel controls, yet easily allow the user to access, adjust and program every possible combination of effect, parameter and control functions. And, importantly, how to accommodate from the outset any special control requirements of programs to be designed in the future. Eventide's R & D has met this challenge with a universal control panel. Deceptively simple in appearance, this handful of easily learned controls gives the user full control of all functions. The SP2016's computer-controlled alphanumeric display guides you through all control functions, one step at a time. Input, output and i/o mix controls and LED status indicators and level meters are also provided on the front panel.

NON-VOLATILE USER PRESETS—Up to 65 different sets of program and parameter presets can be stored and selected by the user. The programs are stored and retrieved by paging through alphanumeric user-selected names for each preset. These non-volatile presets are protected against accidental loss, even if power is interrupted. And if previously entered parameters are changed, the unit will continue to remember the original values.

**SELF-TEST FEATURE**—Extensive self-test capability is standard with the SP2016. Should a problem develop, the SP2016 will spot it and identify the likely cause. A special continuous test routine will repeatedly test the entire unit or specific sections you designate...ideal for locating any pesky intermittent problem.

REMOTE CAPABILITIES—IEEE-488 (a computer industry-standard interface) capability is standard on the SP2016. The hardware is also capable of interfacing with other control schemes such as SMPTE code and MIDI, which may be supported at a later date. A palm-size hand-held remote is available as a low-cost option. This amazingly compact remote duplicates all the processor control block functions of the SP2016.
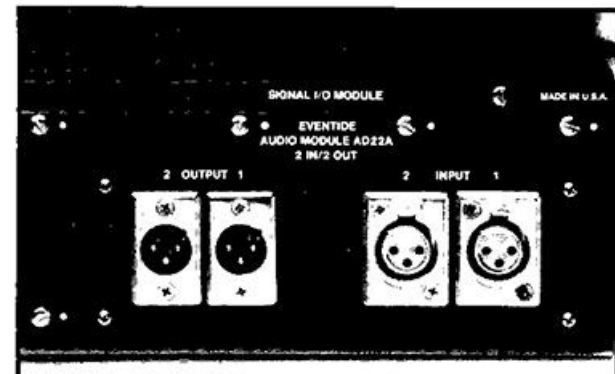
EXCLUSIVE EVENTIDE "SPUDSYSTEM"—A remarkable breakthrough. Because of the hardware complexity and unique software requirements of this type of product, development of new programs has heretofore been limited to product specialists at the factory. Now for the first time in the industry, Eventide makes it possible for the SP2016 *owner* to create programs for specific applications. This is accomplished by Eventide's Signal Processor User Development System (SPUDSystem). This integrated hardware/software development system is designed for people with general knowledge of and experience with audio signal processing. No specific knowledge of advanced programming techniques is required. SPUDSystem is currently supported on Hewlett-Packard personal computers. Other brands of computers may be supported in the future. In addition to applied practical purposes, such as the creation of new effects, the SP2016/SPUDSystem package together form an ideal teaching and experimental tool for college classes and research in signal processing. Please contact Eventide for full SPUDSystem details.
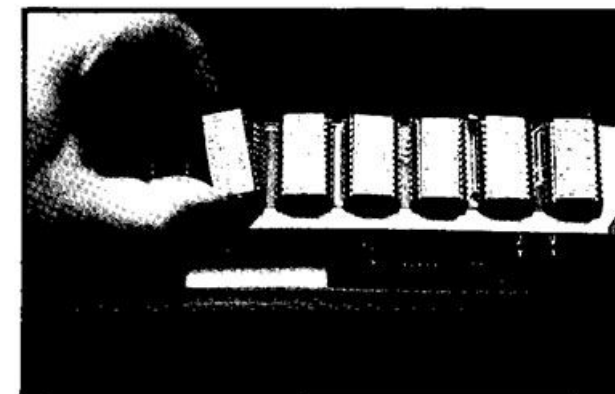
PLUG-IN SOFTWARE ROM's—Lets you add new program software in seconds. The SP2016 can accommodate 11 multi-program ROM's simultaneously to put dozens of effects at your fingertips.
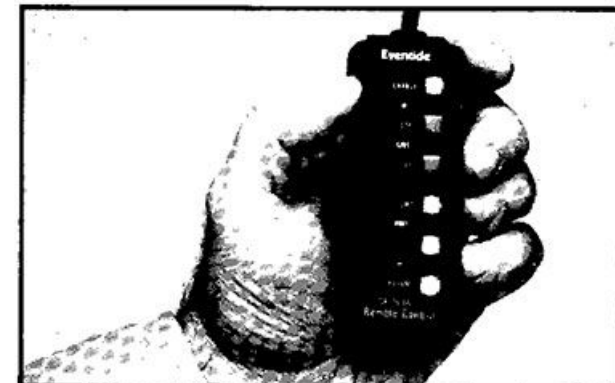
FULL-FUNCTION MINI-REMOTE—Puts all processor control functions into the palm of your hand. As easy to use as it is to hold. A low-cost plug-in option.

And now the SP2016 Generation II package...
SOFTWARE THAT SOUNDS BETTER.

The Eventide SP2016 Effects Processor/Reverb was designed from the start to accommodate advances in the art of digital signal processing. Now, Eventide has developed a software package that truly fulfills the promise of the SP2016. The Generation II software package, standard with every SP2016, offers the user a range of reverberation and effects programs of incomparable quality and utility. A brief description of the standard programs follows. But while the functions of an audio effect can be easily described, audio quality and effect characteristics simply cannot be adequately communicated in print. Determinations about naturalness and density of a reverberation program, for example, are highly subjective in nature. Our hardware designs and software algorithms are unique to Eventide. We strongly urge you to audition the SP2016 along with any other units you may be considering. Notice the smooth decay and absence of "discretes" in our reverberation programs. Hear for yourself the incredible range and versatility of effects programs such as loop edit and multitap delay. Let your ears decide, and you'll choose the SP2016!

MODULAR DESIGN ANALOG MODULE—Designed as a plug-in subchassis to keep pace with the advancing state of the art. And for the future—the SP2016 can accept an all-digital domain input/output module.

STANDARD PROGRAMS—

PLATE REVERB AND HIGH-DENSITY PLATE—Extremely natural plate simulations that retain their "good manners" even at long decay times.

STANDARD ROOM REVERB—With especially convenient and useful preset parameters.

STEREO ROOM REVERBERATION—Ranks with the best sounding limited- purpose dedicated room simulation devices, yet it's just one of the many programs you get with Generation II. Offers full user control of eight parameters.

GENERIC REVERB—The Eventide SP2016 utilizes far more sophisticated reverberation algorithms than most other digital reverbs...even units that are physically much larger and cost far more. As a result, the SP2016 is capable of smoother, more natural sounding reverb quality. However, some user applications may call for the harsher characteristics of less sophisticated reverbs. For these applications, Eventide has created this *Generic Reverb* program which emulates the reverberation characteristics of these reverbs. Offers nine user-adjustable parameters.

LOSSLESS ROOM™—Add layer-upon-layer of sound in a simulated room where sound never decays. The original infinite room-type program.

LOOP EDITING—A single-channel program which allows the user to capture a short (1.63 seconds at 16kHz bandwidth or 3.26 seconds at 8kHz bandwidth) segment of audio and then play back all or any portion of that segment on command. After capture, the segment can be edited from either end. Playback can be initiated either as a "one shot" or continuous loop. Playback is triggered from the SP2016 front panel, or from a remote switch, or by an audio trigger input.

MULTITAP DELAY—A powerful program which offers an incredible range of "unreal" reverberation and other effects. Select from one to 50 taps in mono, one to 25 in stereo. An additional feedback tap can be separately positioned. Six different envelope shapes are available, along with 11 different tap spacing choices. In all, a dozen different user-adjustable parameters make this one program capable of many, many different effects.

TIME SCRAMBLE—Uniquely scrambles audio in the time domain. Scramble rate is adjustable and segment length can be fixed or random. The amount of overlaying of the segments is variable. This effect sounds like nothing else!

CHORUS—Adds from two to eight voices to your original signal. The voices can be varied in their placement around the listener.

FLANGING AND ENVELOPE FLANGING—You've never heard a flanger sound like this. Up to ten parameters—adjustable over a wide range—put you in total control of the effect. Envelope follower function allows an external audio signal to control the flange sweep.

BAND DELAY—Separates the audio input into four frequency ranges and lets you control the time delay of each frequency band, in any order.

MUSICAL COMBS—Another program which can produce a wide variety of different effects. A pair of coupled digital comb filters are tuned to correspond to the musical intervals of a two octave musical scale. The type of scale can be specified by the user. In addition to the wealth of musical effects available, many robotic-type vocal effects can be created.

DUAL DIGIPLEX™ AND LONG DIGIPLEX—Our digital simulations of multiple-head tape echo. Unlike tape echo units, noise never builds up, no matter how long the decay.

DUAL DELAY AND LONG DELAY—Two channels at full bandwidth to .8 seconds or one channel at half bandwidth to 3.26 seconds.