Olive Series 2900 Console

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A new-wave console for the super studio

Olive Electro Dynamics Inc presents the Series 2000 console: the console designed to meet the needs of today's major studios.

It's a modular, multi-track recording and remix center incorporating the most advanced state-of-the-art techniques — but most important, its design is based on the recommendations and preferences of recording and audio engineers, musicians, studio owners and producers throughout North America and Europe.

After all, the people who use consoles know what they want better than anyone else. They know important little features are as vital as the main ones. So we drew from the best ideas in our interviews with production people and combined them with our own electronic developments.

Thus we created the Series 2000, a console to satisfy the most exacting user. Its human engineering and imaginative concepts are second to none. In fact, by its very design, the Series 2000 is the industry's choice.

To begin at the beginning

Assume that you need a major console, and that you're shopping around: For starters, although the Series 2000 offers more than you would expect to find in a large custom console, its price is competitive. And you order only what you need for the moment. It's modular, so you may choose as many or as few inputs as you now require.

When you're ready to expand, so is your console. With painless ease — even if your expansion plans include computerized operating modes.

Automation

Olive offers the unique Automated Remix Programmer to reduce the physical complexity of a multi-track mix down. Using this "memory module" the creative producer can quickly discover new horizons and, at the same time, reduce the studio time required to complete a final mix.

In operation, each channel fader on the Series 2000 console generates a DC control signal which can be monitored by the memory module and stored (usually on a spare track of the master tape) for future reference. The stored DC signals represent every movement of the faders during a mix.

During a remix, the console may be operated in the automatic mode — faithfully reproducing the initial mix, or, at any instant, the producer can override one or more faders and modify the original mix. Refinements are immediately monitored and stored on the original tape, updating all previous remix information.

Up to 64 separate functions may be monitored and controlled by the Automated Remix Programmer, providing the console operator with every opportunity to produce a wealth of expression in every recording.

Uncompromised craftsmanship

All Series 2000 modules are crafted to provide the most logical and efficient communication between man and machine. And quality is unmatched. The hardware, as an example, is simply the best available. Every single push button, switch and fader has been specifically chosen for its quality, durability and human engineering.

Reliability is ensured by using duplicate "back up" circuits and power supplies and by eliminating mechanical contacts in audio routing switches and replacing them with more reliable solid-state methods. Even the pilot lamps employ solid-state devices to eliminate heat generation and burn out.

Signal quality is preserved by using state-of-the-art circuitry techniques and by minimizing the audio path. Complex functions, such as the equalizer and compressor/limiter, are processed as elements of feedback loops while external functions, such as submasters, are processed as DC signals thus maintaining a simple and direct audio path.

All circuitry is active and electronically coupled. A single transformer is used in the console—on the microphone input. All circuitry beyond this point is transformerless with all function inputs and outputs actively balanced. This further preserves audio quality and ensures accurate square wave and transient response.

And while you're using your console, we'll be designing new modules which you can add (at anytime), so that your Series 2000 system will continually remain up-to-date and in tune with state-of-the-art advances.

A console is a console but a great console is an Olive

At Olive Electro Dynamics Inc we do things rather distinctively. We're out to set new standards of excellence, so whether we manufacture a Series 2000 console or just a small component, we do it with pride and care. We won't just ship and presume all is well.

. . . in other words, we're talking service. Good service and follow through are a big part of the Olive concept. We wouldn't be in business without them.

And whether you want to order a console or simply ask questions, we'd be delighted to talk.

Anytime.

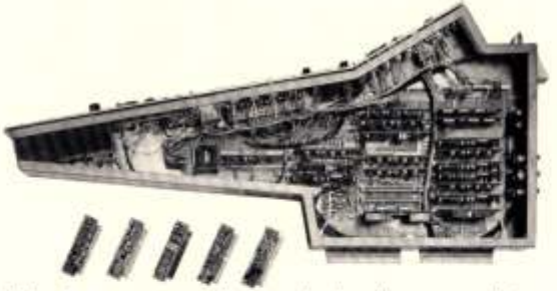
olive

Modular Construction

The purchase of a console facility such as the Series 2000 is a major decision. Primary consideration is, of course, given to your present requirements but, just as important, are your needs of the future. It may not be completely possible to predict these needs, however, the Series 2000 is sufficiently flexible in design and construction to meet varied requirements.

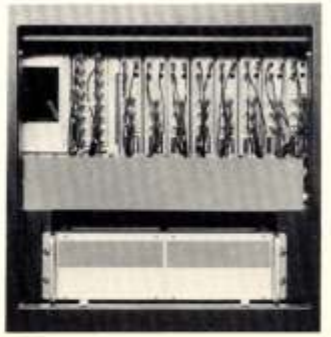
First, basic 24-inch skeleton frameworks are combined to form the desired console length and configuration. Each frame accepts up to 12 input modules.

An input module is shown with its side panel removed exposing the motherboard which accepts the plug in "mini" cards.

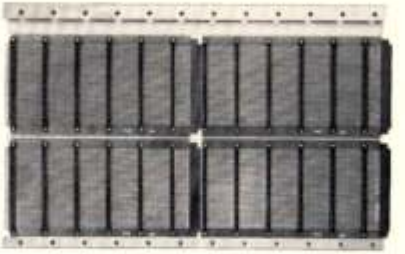


This demonstrates the total plug in or modular concept of the entire console — mini cards to input modules, modules to frames and frames to other frames.

Here a picture shows the rear view of a typical frame with its back panel removed. Power supplies and monitor amplifiers can be easily located in the rack mounting space provided. Cannon connectors for inputs and outputs enable easy access and installation. Cabling is held in the wiring trough.



Within every frame there is a bus board which links all that frame's modules into a system; in turn, as frames are added, these bus boards are linked. On the bus board, individual circuits are function-dedicated so that any type of module can be located anywhere in the console. This eliminates complex system wiring and makes the addition of frames — and modules — a simple plug-in installation.

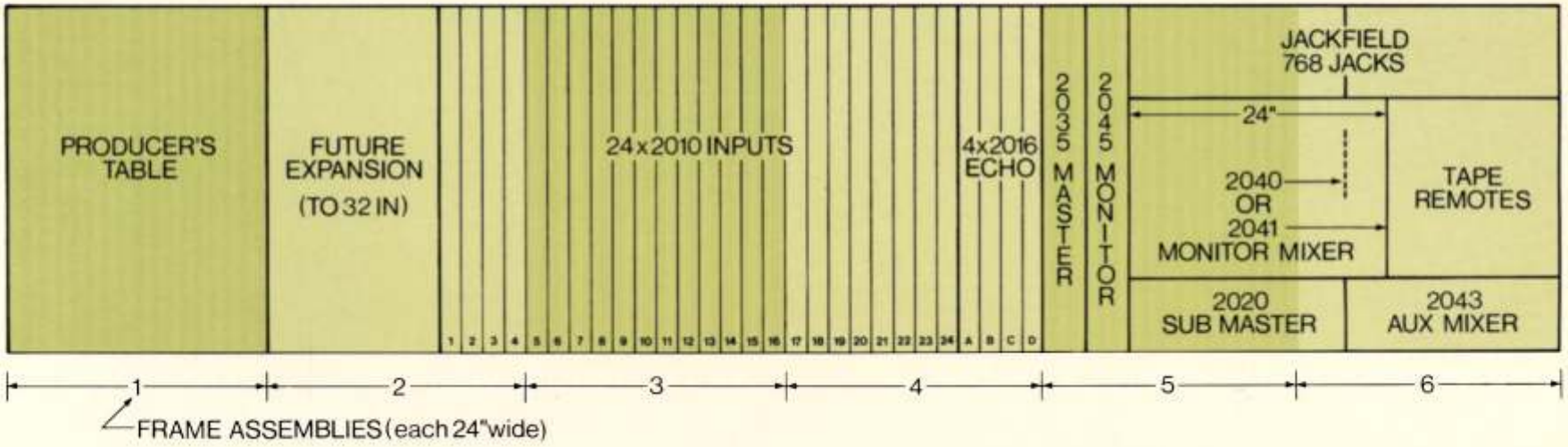


Skeleton frameworks are covered with finishing panels in your choice of real or imitation wood veneer. Custom finishes are easily accommodated.

The modular aspect of the system permits rapid initial assembly and installation, effortless future expansion with current or newly designed modules, and easy maintenance.

Start big and update as new recording concepts are developed or start small and grow with your needs. Either way, the Series 2000 console will meet your requirements — that's the way it was designed.

Typical Console Layout



Typical layout for a 24 Input/4 Echo/16 Output console with 24 channel monitor system. Built-in expansion capacity permits easy growth to 32 inputs by just plugging in additional 2010 modules.

To meet a variety of individual requirements, the Olive Series 2000 console may be as simple or as extensive as desired. For example, the console pictured on the front cover is a 20 Input/16 Output unit with a 16 input monitor mixer. The built-in capacity for expansion — provided in every Olive console — permits growth up to 32 inputs, and a second 2040 mixer may be added to provide a total of 32 monitor inputs.

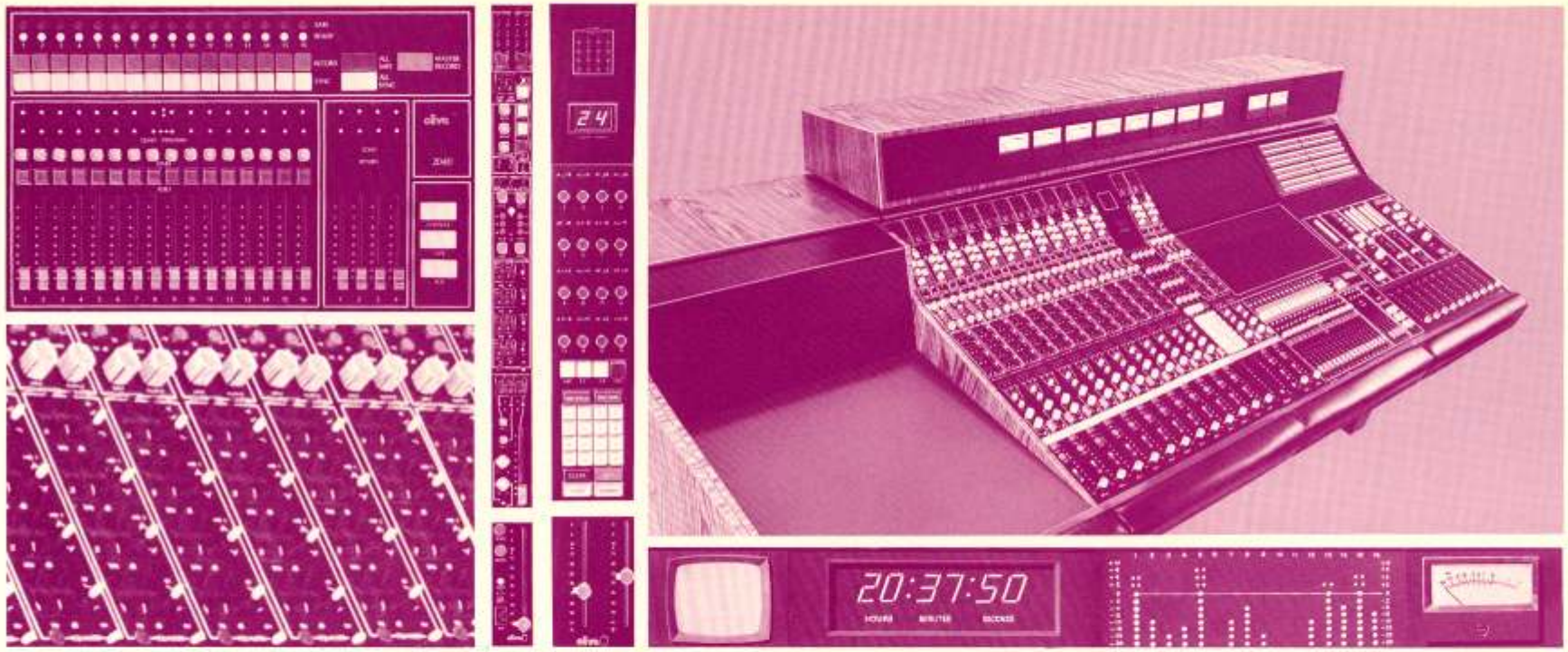
Included are a 16-channel sequential display, digital clock and other accessories.

Visible to the right of the operator is a custom remote panel with remote control for eight tape machines, four reverb units, eight Dolby systems, digital clock controls and a cue light button.

The console pictured on the inside front cover features 12 Inputs and 8 Outputs, VU meters and simplified monitoring facilities. Like all Olive consoles, this one can be expanded to any quantity of inputs and 16 outputs.

In fact, we have no standard configurations in the Series 2000. Every complement is formulated after consultation between our engineers and the customer. In this manner, the console precisely reflects the needs of the studio and its staff. This approach to your specific requirements is facilitated by Olive's modular construction methods which — by the same token — permit changes to the console to be made at any time.

In other words, you get a "custom" console at "stock" prices and delivery time.



Olive Electro Dynamics Inc is a carefully selected group of highly specialized personnel whose one aim is to provide you with professional audio equipment of the first excellence.

The Olive spirit is a fresh one, energetic and creative, with a solid background in engineering, broadcasting and recording. The combination is reassuring; accomplished professionals thinking new thoughts, designing new means to advance the state-of-the-art.

In addition to the top-of-the-line Series 2000, Olive also offers the compact Series 2500. It includes major components, such as the four-section equalizer and the monitor-mixer from the Series 2000, but eliminates certain features to provide a more economical package.

Options vary from automation to compressor/limiter and keyable audio gates.

The Series 2500 will meet varied installation requirements; permanent, portable, convertible (studio/portable) or remote.

Certain features, such as the equalizer and compressor/limiter, are also available in individual packages. These modules comprise our 2100 Series.

In the series — 2000, 2100, and 2500, Olive staff can serve the full spectrum of your audio requirements. You are assured of prompt and imaginative reactions to your enquiries, and unequalled satisfaction from products and service.

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WHENEVER THERE IS A NEED

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2010
Input Module

16 light emitting diodes indicate output bus assignment.

Set push button establishes output assignments.

10-position lever actuated switch links keyable gates.

Rotary control sets depth of audio kill.

Rotary control sets release time of gate.

Rotary control sets point at which gate operates.

Toggle switch to set action of gate: on with signal or off with signal.

Three toggle switches permit external devices to be inserted into audio path before equalizer and compressor, after equalizer and compressor or in echo send.

Rotary control sets attack time of compressor/limiter.

Lamp indicates when selected gain reduction is reached.

12-position lever actuated switch sets frequency of high boost or cut.

12-position lever actuated switch sets amount of high boost or cut.

12-position lever actuated switch sets frequency of Mid 1 boost or cut.

12-position lever actuated switch sets amount of Mid 1 boost or cut.

12-position lever actuated switch sets frequency of Mid 2 boost or cut.

12-position lever actuated switch sets amount of Mid 2 boost or cut.

12-position lever actuated switch sets frequency of low boost or cut.

12-position lever actuated switch sets amount of low boost or cut.

Rotary control to establish front to rear position for quadraphonic mixes.

Rotary control to establish left to right position for quadraphonic and stereophonic mixes.

3-position toggle switch to set mode of position control — quad/stereo/mono.

"Write in" strip for channel identification.

Pilot lamp to warn if feeds are being taken before the fader. Warns that fader may not completely kill channel.

Pilot lamp illuminates when channel is overdriven.

Thumbwheel switch to set gain of microphone pre-amp. "Sensitivity control".

Clear push button cancels output assignments.

Toggle switch to allow master module to override input select push buttons.

Four illuminated push buttons to establish input to module. Microphone, line 1, line 2 or oscillator.

Toggle switch allows gate to be controlled by external signal.

Toggle switch to invert phase of input signal.

Rotary control sets release time of compressor/limiter.

Interlocking push buttons establish gain reduction ratio of compressor/limiter.

Interlocking push buttons establish what amount of gain reduction will cause GR pilot to illuminate.

Rotary control to set output level of compressor/limiter.

Rotary control to set input level of compressor/limiter.

3-position toggle switch sets mode of high equalizer to boost, cut or flat.

3-position toggle switch sets mode of Mid 1 equalizer to peak boost, dip or flat.

3-position toggle switch sets mode of Mid 2 equalizer to peak boost, dip or flat.

3-position toggle switch sets mode of low equalizer to low boost, cut or flat.

Master equalizer in/out toggle switch.

Lamp indicates when equalizer is on.

3 12-position lever actuated switches select to which bus Cue 1, Cue 2 and Echo are sent.

3 3-position toggle switches establish source of cue and echo sends as before or after the fader, or off.

Rotary control to set level of Cue 1 send.

Rotary control to set level of Cue 2 send.

Linear fader to set level of echo send.

Illuminated push button to mute program feed to monitor and send input channel alone to monitor (solo).

Illuminated push button places module in "auto" mode for programmed mixes.

Conductive plastic linear fader.

2010 Input Module

Module 2010 in the Series is our input strip . . . a highly sophisticated, very impressive module.

It has a four-section equalizer which allows — simultaneously at four different parts of the audio spectrum — up to 12 dB boost or cut. A three-position toggle switch determines shelf boost, flat or cut at high and low sections; and peak boost, flat or dip in the two mid-range sections.

Multi-position lever actuated switches in each section determine the degree of equalization (0-12 dB) and select one of 12 frequencies. The use of lever actuated switches permits rapid selection and provides efficient visual indication.

Each strip sports a solo monitor push button, permitting single channel override without affecting the program or monitor mixes. Solo monitor bus will also feed a designated VU meter — with or without performing its monitor override function. And a nice little extra is the write-in strip above each fader for source identification.

In keeping with Olive quality, main fader elements are conductive plastic with precious metal wiper fingers, providing the utmost in reliability and life.

For quadraphonic applications, two rotary controls determine static geometric positions; one establishes left to right, the other sets front to back.

A function switch allows one to become a stereo pan control or disconnects both from the circuit.

There are two cue send channels—twice as handy, especially for live extravaganza sessions. A linear-motion echo send fader is provided and ten send busses carry echo and cue. "Effects Insert" switches are provided to route external devices (such as a graphic equalizer or tape delay) to program and echo channels.

A keyable noise/leakage gate reduces studio noise, tape noise and track leakage; it's also useful for modifying sounds. Actually a sound activated channel On/Off switch, this feature can serve a variety of useful functions. For instance, the gate on a given input channel can be set to control the gates on other selected inputs.

In other words, one brass instrument could be used to control and open inputs for other horns, or even close microphones from a string section. To the imaginative operator, this feature alone can be worth another pair of hands.

And our compressor/limiter is somewhat different too. There are controls for gain reduction ratio, release time, attack time, input level, output level, DS and indicator sensitivity. (The indicator is a lamp which glows when the compressor or limiter is meeting its preset gain reduction. With multiple input modules, this is much easier to follow than an array of gain reduction meters.)

Input and output assignment switches use electronic FET switches for the utmost in reliability. Inputs are selected by illuminated push buttons while outputs are assigned from a central keyset and their status indicated by light emitting diodes.

A 10-position lever actuated switch selects which submaster will control the internal voltage controlled attenuator. If, for example, five modules were used for five drum mics each module could be assigned to the same submaster fader which would act as an overall gain control. This however would not inhibit output assignment which retains its own delegations.

The module is a completely self-contained package with a large motherboard containing several plug in function cards. An internal voltage regulator supplies power to the logic and analog portions of the module.

Specifications are subject to change without notice. 2010-A-006 9/71 Printed in Canada.

2035
Master/Keyset Module

16 light emitting diodes show contents of output assignment memory.

Numerical display indicates position of sequential counter and number of input module being addressed.

4 push buttons override input select buttons on input modules.

Push button clears contents of output assignment memory.

Push button clears contents of memory from addressed module.

Push button advances sequential counter one step per actuation.

Conductive plastic master fader "A".

16 3-position toggle switches determine which master fader "A" or "B" will control level of bus. Center position leaves bus at full level.

16 rotary controls trim level of each bus.

Push button resets sequential counter to "00".

16 push buttons load output assignment memory.

Push button sets contents of memory into addressed module.

Push button advances sequential counter rapidly through full count.

"Write-in" strip.

Conductive plastic master fader "B".

2035 Master/Keyset Module

The 2035 Master/Keyset module contains all the electronics required for program outputs: 16 summing amplifiers and 16 line amplifiers, to process the bus output signals (from the input modules) and provide a balanced line level output. And 16 full range rotary trim controls can be used to balance levels between busses.

Each of the line amplifiers incorporates a voltage-controlled attenuator which may be controlled by either of two master faders. A toggle switch for each bus selects left or right master, or leaves the attenuator fully open. In this way, the console may be quickly setup with a single 16-gang master, two 8-gang masters or particular busses may be assigned to the left master, others to the right master and still others with no master (fully on).

This flexibility is really appreciated when you change modes from stereo or quad mixing to original multitrack recording or overdubbing.

And the 2035 Master/Keyset module includes all the necessary control logic for input module output assignment. In fact, the 16-button keyset and auxiliary controls permit all output assignments to be made from this central location. If you wish to assign every input module to four busses (for a quad mix-down, for example), only six buttons would have to be pushed and the total assignment would take place in less than five seconds.

Other push buttons (four) can override the local input push buttons on selected input modules to permit single button transfer from microphone to tape. This also allows single button punch-out and punch-in of several modules on cue — a feature often required in mixing, and usually requiring the coordinated efforts of several people.

Output busses are divided between two internal voltage regulators for added reliability and every function card is plug-in — as in all modules. The 2035 Master/Keyset is also available with 8-channel capacity. In this version, expansion to 16-channels is simply a matter of plugging in additional cards.

And with Olive's modular packaging concept, the 2035 may be located anywhere within the frame assembly. This permits your expanding or changing needs to be met simply and efficiently.

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2040/2041
Monitor Mix & Sync

Illuminated push button places all tracks in safe mode.

Illuminated push button places all tracks set to ready in record mode.

Green pilot lamps show tracks in safe mode.

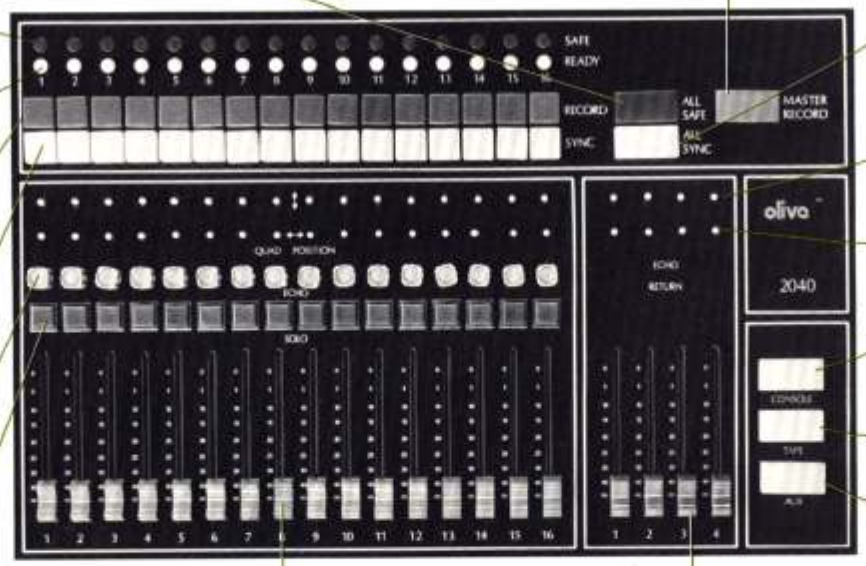
Amber pilot lamps show tracks in ready mode.

Red push buttons illuminate to show record. Alternate action sets ready or safe.

White push buttons illuminate to show sync. Alternate action sets sync or regular playback.

Rotary pots establish level of echo send mix.

Push button sends selected input to solo monitor system.



Illuminated push button places all tracks in sync mode.

Three-position toggle switches set front-to-back position of sound sources within a four-speaker monitor system.

Three-position toggle switches set left-to-right position of sound sources within a four- or two-speaker monitor system.

Illuminated push button determines mixer inputs fed by console program output.

Illuminated push button determines mixer inputs fed by Tape Group 1.

Illuminated push button determines mixer inputs fed by Tape Group 2.

Faders establish mix of 16 program channels.

Faders establish mix of 4 echo return channels.

2040/2041 Monitor Mix & Sync

Monitoring made easy.

For large multi-channel Series 2000 systems, a broadly functional monitor mix and sync module is available. Studio time and effort in complicated mix sessions can be considerably reduced by a 16/24-channel mixer which is independent from the main console or program mixer.

The module 2040 includes 16 mix channels while the 2041 provides 24 mix channels. Other features and facilities are similar on each module. The module is essentially a mixer. It permits simulated mix downs for monitor and sync purposes; includes solo push buttons, echo send and return channels and quadraphonic/stereophonic positioning for each input.

The internal echo send facility on each channel permits "wet" monitoring of "dry" tapes and recording sessions. In addition, the echo mix on the program input modules may be returned to the monitor system during recording sessions for wet monitoring while the tracks are recorded without echo.

Three groups of inputs may be switched into the monitor mixer. The first group is "Console" and monitors the output busses from the console. The second group is "Tape" and monitors the 16 or 24 outputs from a multitrack tape machine. The third group is "Auxiliary" and will monitor additional machines or console sources.

The choice of these three groups is made by three illuminated push buttons. The audio is switched electronically by FETs.

The module is additionally a tape remote control. Full mode selection controls are provided for a multitrack tape machine. Each track has ready and safe lamps, a ready/safe selector, a sync/play selector, a record indicator and a sync indicator. These mode controls are functionally and visually oriented to relate to the mixing positions of the monitor mixer.

Internal logic circuitry interrogates the tape machine status track by track and provides commands to override the input selection of console or tape. A type of computer will analyze the current tape mode and establish a monitor mix selecting the proper combination of console and tape feeds to present a true synchronous monitor mix.

This eliminates countless hours of patching and errors common when manually establishing monitor mixes. And the logic is fast. At the instant of a "punch-in", for example, certain monitor feeds must change. The 2040/2041 makes these changes silently and in microseconds.

The final result is that the 2040/2041 presents a compact integrated package interfacing the console and tape machine in an efficient central facility.

The 2040 module is packaged in a housing 20" x 13" while the 2041 is 24" x 13". When ordering, two options must be specified: 1) type of multitrack tape machine to be controlled, 2) type of quadraphonic positioning controls: the positioning controls may be either two 3-position toggle switches for rapid approximate stereo/quad positioning or two rotary controls for infinite positioning.

2043 Utility Mixer

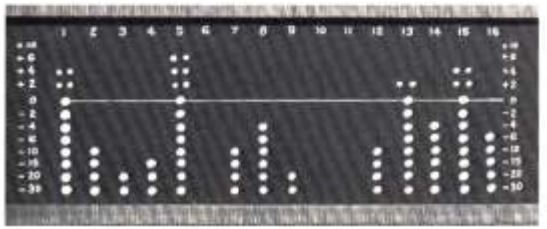
Need additional mixes?

Supplementary to the 2040/2041 module, utility mixers are available, each containing 16-channel mix facility and four echo returns. A mini-fader and quadraphonic positioner are provided on each channel. Two push buttons select two groups of 16 sources.

These modules may be used (independent from the 2040/2041 monitor mix and sync module) to feed studio headsets and speakers for cue purposes; to generate mono or stereo mix downs; or to provide the control room monitors with preset mix patterns of previously recorded material.

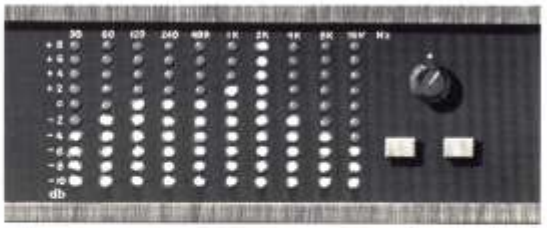
Visual Display Group

VU Meters



16-channel Sequential Display

Phase Monitor Oscilloscope



Spectrum Display

Digital Clock/Stopwatch

Television Monitor

Visual Display Group

Contained in a housing mounted above the module positions, the visual display system is normally supplied on a custom basis according to the specific requirements of each customer. Visual readout options available range from VU meters and sequential displays to clocks and spectrum displays.

VU Meters

Conventional 4″ or 5″ VU meters may be provided in whatever quantity required.

Sequential Level Display

This is a series of light emitting diodes (LED) employed to indicate program level. Available in groups of 8 or 16 for program output monitoring, these displays present a graphic display of level distribution over several channels at a single glance. They permit rapid identification of overloads, and allow mixers to achieve a generally higher level of tape modulation before distortion begins to set in. Additionally they monitor a range of 40 dB — +10 dBm to −30 dBm.

Phase Oscilloscope

A 3″ oscilloscope with identical x and y amplifiers to display a stereo signal for phase analysis. The use of logarithmic amplifiers produces a dB presentation and permits a wide range of analysis.

Spectrum Displays

These present a real-time graph of the frequency energy content of an audio signal. In use, they provide a visual indication of frequency balance, facilitate the matching of tapes, and detect potential disc and cassette mastering problem areas.

Like the sequential level display, they use light emitting diodes and a proprietary digital time-sharing circuit.

Digital Clock

Available as a simple elapsed-time indicator — similar to a stop watch — or a sophisticated timing facility with count down, count up, display hold, count preset, event initiate and external time display. The Olive digital clock uses state-of-the-art MSI logic and LED segmented numeric displays. It may be provided with AC line sync or an internal high stability crystal oscillator can be included.

Remote controls for the clock are normally provided on the producer's table and on the mixer remote control panel.

TV Monitor

A video monitor/receiver for studios using closed circuit television systems.