

**olive**  
WHENEVER THERE IS A NEED



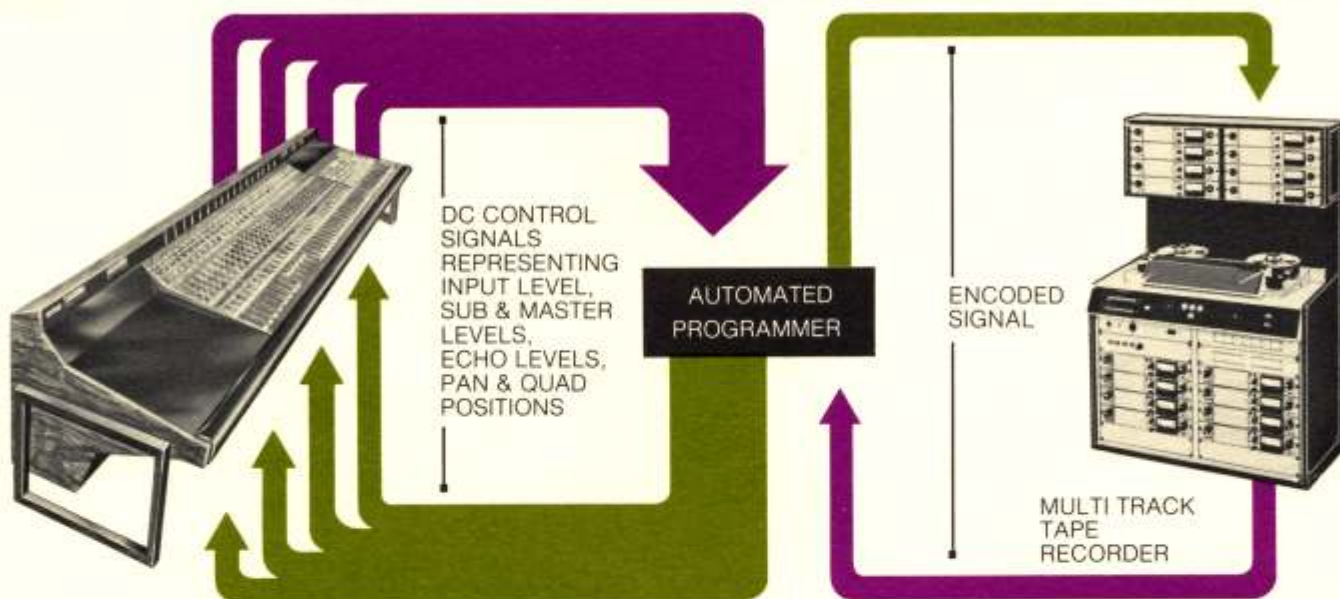
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## **Automated Remix Programmer**

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AUTOMATED REMIX PROGRAMMER  
INTERFACED WITH  
OLIVE SERIES 2000 CONSOLE  
AND MULTI TRACK TAPE RECORDER.

# olive



## Automation... now a reality

Olive proudly introduces the first realistic automation system to the recording industry. The revolutionary Olive Automated Remix Programmer is a unique new tool designed for the mixing engineer who seeks simply the time to work more creatively with advancing technology and new recording techniques. Regardless of the number of tracks involved, the Automated Remix Programmer simplifies the engineer's manually complex mixing task by preserving the dynamic functions of a mix (program levels, quad position, echo level) on the master tape itself. Recorded in perfect synchronism with the audio tracks they are now available for instant recall or alteration. In mixing a 16 or 24 track tape down to 2 or 4 channel master you can mix the tape track by track, concentrating on each effect one at a time until the final composite mix is obtained. Every adjustment, each subtle detail is preserved in memory — just as computer information is held in memory, and can be retrieved or modified, so too, the programmer information can be retrieved and if necessary modified. At any time. Even months later. No longer are complicated cueing systems necessary; nor does an engineer have to wish for multiple arms. With an Olive Automated Remix Console one person can now do the complete mix. Perfectly.

## How does it work?

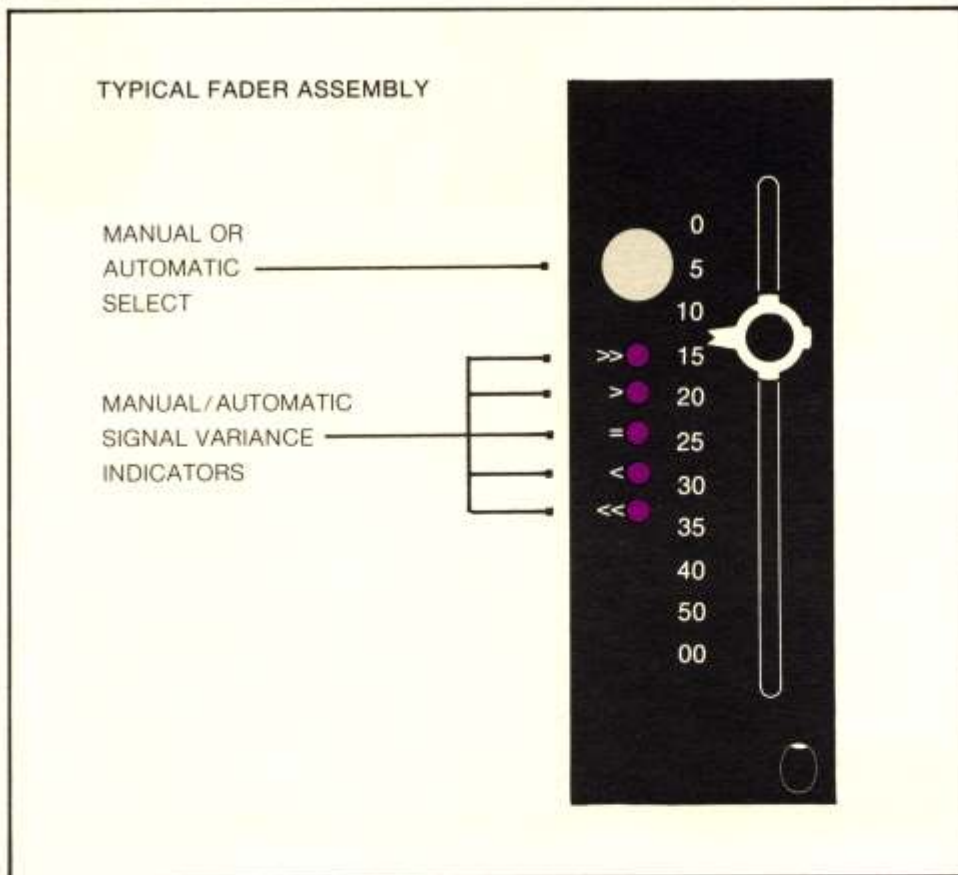
All Olive Series 2000 Consoles are equipped with programmable attenuators for all program level adjustments. The technique of voltage control is used, in which a DC signal is generated by each channel to represent the position of the fader on that channel. The same technique permits the attenuator and thus the level associated with the particular channel to be controlled by an external DC signal. The console presents this series of varying DC signals representing the levels to the programmer and will accept a similar series of signals to establish levels from the programmer. The programmer encodes and decodes these DC signals using a unique process proprietary to Olive.

The encoder output and decoder input of the Automated Remix Programmer are patched to an empty track on a multi-channel recorder. With this track in the record mode the first rough mix is preserved in memory on the multitrack tape.

During this mix, every fader movement is monitored, encoded and stored on the control track. If the tape is replayed the programmer module will decode and cause the console to duplicate exactly all the operations previously performed by the engineer on the first mix.

## Now it happens

During the second and subsequent mixes the engineer may manually modify all, or part, of the program material. To modify the mix, the encoder output is patched to a second vacant tape channel. If this second channel is operated in the record mode, and the first is used to drive the console, all the mix information stored on the first track will be transferred to the second.



## Operation

The operator is guided with the aid of five miniature LED lamps on the fader assembly which indicate when the programmer control voltage is above the fader voltage by 10 dB or 1 dB, below by 10 dB or 1 dB, or when both are equal.

An AUTO pushbutton (push on/push off) permits the attenuator to be controlled manually by the engineer, or automatically by the programmer module.

All the operator does to transfer from automatic to manual is simply move the fader in the direction necessary to light the "equal" voltage lamp. This ensures that the program level will remain constant when the AUTO pushbutton is released for manual operation.

The programmer now monitors the composite of signals previously recorded on track one plus any new manual signals. The up-dated control information is stored on the second track. This process is repeated, alternating from one control track to the other, until a satisfactory mix is achieved.

This final mix information is permanently stored on the 1" or 2" master tape, permitting any number of exact duplicate second generation copies to be made at any time from the master. Even months or years later.

## Future remixing — anytime!

Intricate, complex or novel mixes become routine since the effects can be built up, step by step. This is especially useful in quadraphonic mixes where the amount of dynamic processing normally required can tax the ability of even the most experienced mixers.

Even months later when it's decided that part of a track, perhaps the string track, needs special emphasis and should be redone it would have previously required a complete new mix. Now with the Automated Remix Console the engineer can simply re-sync the string track and let the programmer automatically remix the master tape, exactly duplicating all of the previously recorded console functions.

This gives the engineer freedom. Freedom to make just the modification desired to the string track. As he chooses, exactly where desired and whenever he wishes. Without fear of damaging the master mix format.

## Move ahead with Olive

We take particular delight in solving sophisticated engineering problems. Using techniques proven in the mixing of video tape and film, Olive engineers have freed the producer from limitations imposed by the complexity of mechanical co-ordination. The creative producer will readily appreciate the advantages offered by increased and simplified control during various phases of the mixing process. The Automated Remix Console is a combination of any standard (or custom) Olive Series 2000 Console and the unique automated programmer.

You can start small and easily expand to meet your requirements in the future. The Automated Remix Programmer will automate as few as 16 console functions and expand simply, by adding 16 function input/output cards, to a total of 64 automated channel functions. On smaller consoles where all 64 functions are not fully employed it can automate functions of compatible accessory equipment, such as music synthesizers.

All Series 2000 consoles are equipped with programmable input faders, submaster faders, echo return faders and master faders. Optional modules available permit programming of functions such as panning, quad positioning and program routing. Olive engineering doesn't stop there. In addition to perfecting present equipment we are continually designing new 2000 Series modules. Another module in the series, soon to be introduced, will even permit programming of equalization information.

## Unlimited uses

Versatility is a popular word at Olive. The Automated Remix Programmer is not only limited to use with the console. Any device which can be programmed with a DC control voltage can be automated with the programmer.

Possibilities include music synthesizers, stage lighting equipment, or even complex audio visual shows. Furthermore, the encoded signal from the programmer need not be stored directly on tape.

It can be transmitted by telephone line, radio channel, etc. So you can remote control up to 64 separate functions.

If you have a specific application in mind, why not contact us at Olive, as we say, "whenever there is a need". Our engineers would be pleased to discuss it.

## The total answer

Summing up, the Automated Remix Programmer is a tool. A new tool to permit a creative freedom in traditional and complex mix sessions. With console functions recorded and stored on the original master the engineer creatively works for the perfect mix in complete control of the console. He now has the freedom to manually modify any track on the tape as desired and again have this adjustment memorized without disrupting any other functions of the console. An Automated Remix Programmer and a Series 2000 Console is Olive's answer to quick, safe and economical sound recording of the highest quality.

## What about performance

At Olive we are proud of the quality and craftsmanship we build into our equipment. The Automated Remix Console is a component module built with the same simple criteria as any Olive product: To be among the best in design, quality and performance.

The programmer will recognize and faithfully reproduce the most subtle or dramatic mixing operations. It has sophisticated circuitry advanced beyond state-of-the-art. In fact, a great many of the component specifications surpass the requirements of normal mixing thus ensuring their compatibility with future industry developments.

The modular design enables you to economically step into the competitive future with an Olive system, confident that the equipment will expand painlessly, with additional modules designed to meet the needs of advanced technology and recording techniques.

If you're thinking about future progress you really should take an objective look at the Olive 2000 Series. Perhaps we can build your future — together.

## Specifications

Channel Capacity	16, 32, 48 or 64 using plug-in modules.
Range	Greater than 90 dB.
Accuracy	All levels are accurate to within less than 1 dB over the working range of the first 40 dB.
Response Time	Better than 0.1 second.
Program Resolution	The system will recognize and reproduce changes in program material that are smaller than 0.1 dB throughout the working range of the first 40 dB.
Storage Medium	Audio tape, usually a spare channel on the master recording tape.
Associated Equipment	Olive Series 2000 Console.

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