

A SIGNAL-PROCESSOR PATCH BOX

Simple switching facility allows easy rearrangement of outboard audio gear

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A WIDE variety of outboard signal processors is available for connection to home audio systems, but using them is often a problem—particularly if several are in tandem and one wishes to make a tape of the processed signal. The problem, simply, is that preamps, integrated amplifiers, and receivers don't have enough connection facilities to conveniently accommodate all the extra "black boxes" one might need.

Let's say, for example, that you want to prepare a tape of a 78-rpm disc that is scratched, noisy, and lacking in bass. You would probably use something like an SAE 5000 impulse noise reducer to de-click it, then feed the signal to a Burwen 1201 to de-hiss it, and finally, run the signal through a graphic equalizer to boost the bass.

It is possible to hook all these up in tandem via the TAPE MONITOR on your control center—be it a receiver, integrated amp, or preamp—and bypass each with its own TAPE MONITOR when its use is not desired. However, you'll still have a problem dubbing tapes without reconnection, unless your system can handle two or more recorders and has dubbing facilities. Even then, you'll only be able to dub in one direction—if you want to use the signal-processing facilities. There is a better

way: a switching panel that can arrange and vary the interconnection of components via switching. A schematic is shown below.

The Panel. The switch box accommodates three recorders with provisions for a fourth one connected to a front-panel jack. You can listen to any phono, tuner, aux, or tape recorder with or without processing, and if desired, record that signal. You can also dub between any of the recorders while processing the signal and still use the other preamp functions. A MONO switch is located in the circuit, to allow output summation after the pop/scratch filter. The second external loop exists for the rare instance when you have a single-channel processing device. In that case, the sum of the two channels is fed to the single-channel device via the MONO switch. When the EP_2 switch is operated, a Y-connector is fed out to both tape feeds. Normal stereo processors can also be added to the EP_2 loop.

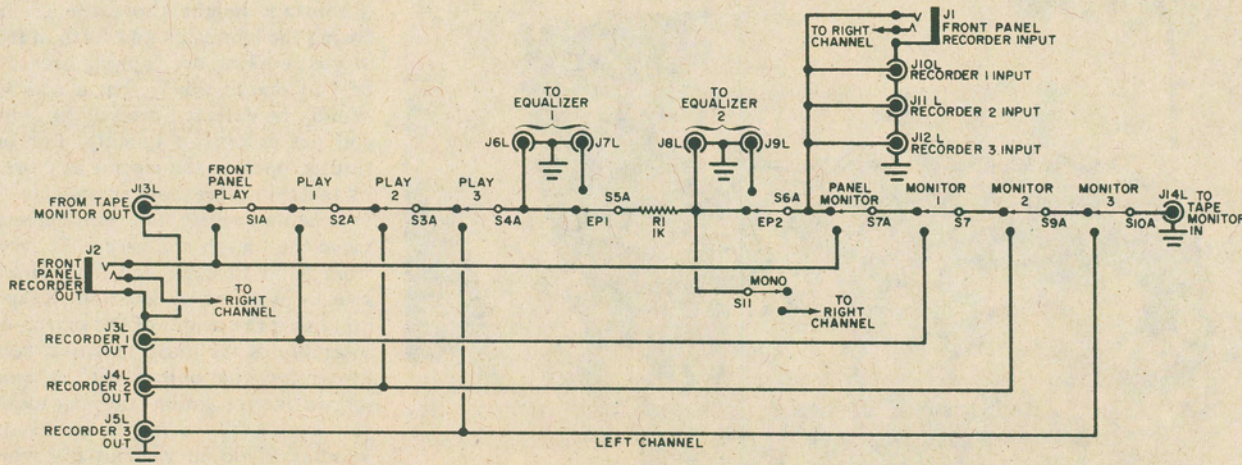
Construction. If you want to give your switch box a raw metallic look, use an aluminum rack panel. If you want to paint it, use a pre-painted panel of any color, and spray paint it as desired. You can also purchase an

anodized panel for a professional look.

Use an aluminum box that fits the panel which holds the 24 RCA jacks. Mount those jacks on the rear of the box and the 1/4-inch stereo jacks on the front. It is also possible to use another sheet of metal to mount the RCA jacks, and then mount the entire unit to the rear of the front panel, using 1- to 2-inch spacers. Shielded cable should be used wherever practicable, to minimize crosscoupling.

Operation. Connect the switch panel's amplifier jacks to the TAPE and MONITOR jacks of the preamp or receiver. When the preamp's MONITOR switch is on, it is extended to the switch panel. Then you can leave that switch depressed. Now connect your tape recorders and external processing devices to the panel.

To play a record or tuner with signal processing, simply play it as usual with the appropriate EQ switch. Thus, you can record the signal just as it sounds from the speakers. To hear the sound as it is being recorded, use the MONITOR. Signal processing will also work for any or all of the recorders in this scheme. When dubbing from one deck to another, it is possible to listen to the radio or phonograph by deactivating the MONITOR. \diamond



PARTS LIST

J1, J2 — 1/4" stereo phone jack

J3L through J14L, J3R through J14R — RCA phono jack

R1, R2 — 1 k Ω , 1/2-W resistor

S1 through S10 — Dpdt switch
S11 — Spdt switch