5. SIGNAL PROCESSORS

5.1 FINAL OUTPUTS

As mentioned previously, the Buchla has four output channels. All access to these is through the top panel on the synthesizer. Across the top are VU meters which indicate the output level for each channel.

5.1.1 Inputs

Below the left-hand meters are four identical input modules which offer tone controls, reverb, and voltage controlled output channel assignment. Despite the fact that these inputs are numbered 1 through 4, each one can send a signal to any of the four output channels. These input modules act much like a "4 in, 4 out" mixer.

At the top of each input are BASS and TREBLE tone controls. Be careful of these! They are easy to forget about and yet can have considerable effect on the output signal. Beneath these, on the right, is a REVERB send pot which determines the level of signal from each input being sent to the reverb generator. With this pot turned "up" the signal is sent to all reverb channels regardless of which output the signal is assigned to. This allows the main signal to be present in only one or two speakers and still have the reverberated signal in the other speakers. This kind of setup can create some reasonably realistic accustic environments.

Beside the REVERB pot is the ASSIGN control which determines to which output channel(s) the signal will be sent. The LED's around this pot indicate the strength of signal going to each output channel ("A" through "D" going clockwise from the lower left-hand corner. Channel assignment can be voltage controlled from the two inputs at the bottom of each input channel. The "X" input controls panning from side to side (as the voltage increases the signal pans from channel "A" to "D" and from channel "B" to "C"). The Y input controls panning from front to rear (as the control voltage increases the signal pans from A to B and from D to C).

The large red knob on each input channel is the attenuator on the input signal. As with the inputs controlled by the blue slider attenuators, the master output level is

controlled by the pot on the far right labeled PROGRAM LEVEL.

5.1.2 Reverb

The REVERB RETURN pots, just to the left of the PROGRAM LEVEL pot, determine the amount of reverb signal present in the final outputs. The two pots allow separate control over reverb in the front two channels (B and C) and the rear two channels (A and D). Unfortunately, reverberation is one of the few aspects of this machine which is not voltage controllable.

5.1.3 Headset Monitoring

In the top right-hand corner are controls for monitoring Buchla output with headphones. Just above the PROGRAM LEVEL pot is the headset output jack which takes a standard stereo phone plug. The switch beside it selects for output either the "front" two channels or the "rear" two channels or a mix of all four. The two pots to the left are volume controls for right and left sides. The red MONITOR LEVEL pot is the master volume control for the headset output.

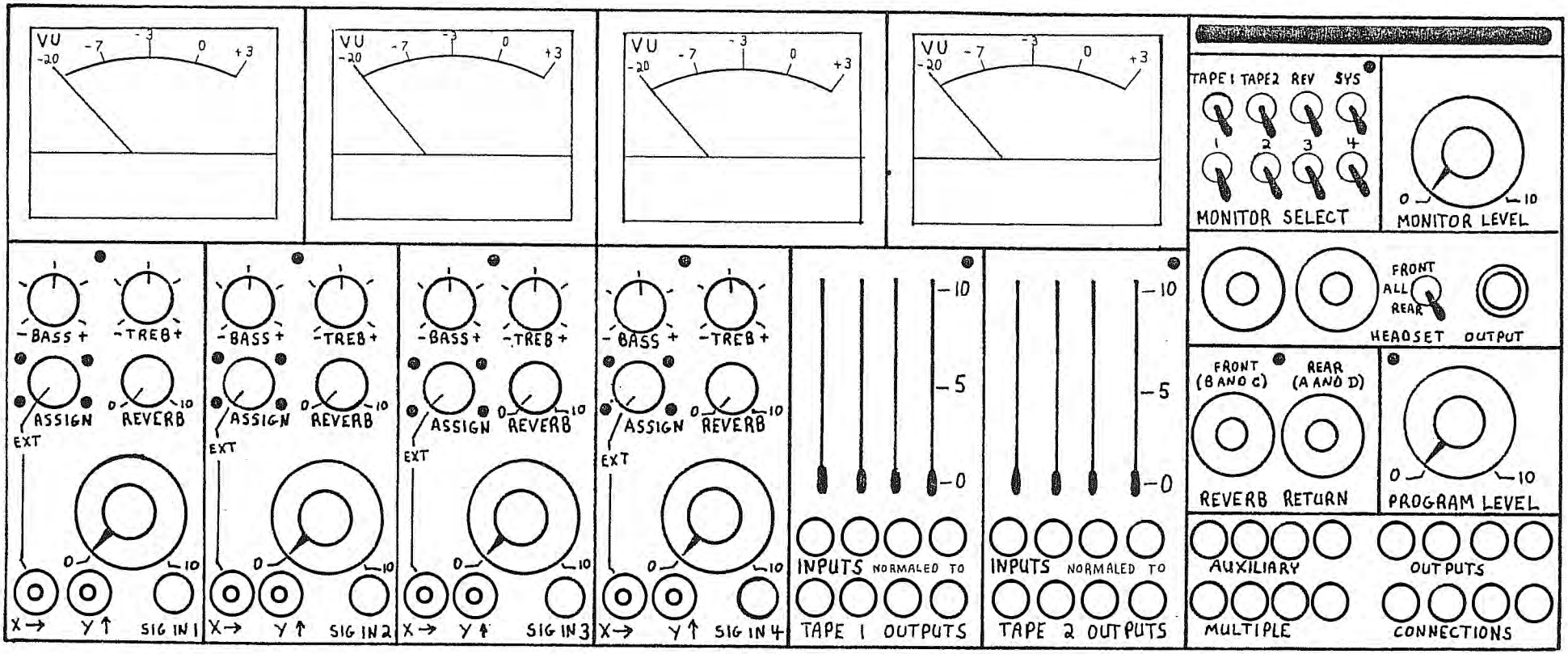
The eight switches labelled MONITOR SELECT determine the source of the headset signal. With all eight switches in the down (off) position the MONITOR output is the same as the Program output. If one or more switches are in the up (on) position then the MONITOR signal is only from whichever switches are "on". The TAPE 1 and TAPE 2 switches present to the monitor the signals from the "Synthesizer Patchbay" input jacks on the studio patchbay. The REVERB switch selects the reverb signal for output to the monitor. It is not affected by the REVERB RETURN pots only by the reverb send pots on each input channel. The SYS switch has no function except to cut off the PROGRAM signal to the headphones. The four red switches correspond to the four main input channels. There are LED's which light to indicate which of these possible sources are being sent to the monitor output.

The signals from the "Synthesizer Patchbay" inputs on the studio patchbay can be accessed on the synthesizer from the jacks labeled TAPE 1 OUTPUTS and TAPE 2 OUTPUTS located below the eight blue sliders. The first four inputs are connected to TAPE 1, the last four to TAPE 2. The TAPE outputs are normaled to the inputs directly above them which are at-

tenuated by the blue sliders. This means any signal presented to the "Synthesizer Patchbay" inputs can be fed into the Buchla outputs just by lifting the appropriate slider.

Note: The normaled connections within the synthesizer are not reliable and it might be best to patch from the TAPE outputs into the inputs above them if you need to use this setup.

The jacks labeled AUXILIARY OUTPUTS in the lower right-hand corner have no function in the studio but, with a special edge connector, these can be used as outputs when the synthesizer is out of the studio. Below these, the jacks labeled MULTIPLE CONNECTIONS are two sets of four jacks wired together to allow splitting of a signal for distribution to more than one place. These should <u>not</u> be used for mixing two or more signals together.


VU
-20
-7
-3
0
+3
-BASS+
-TREB+
ASSIGN
REVERB
0
10
EXT
X→
Y↑
SIG IN 1
SIG IN 2
SIG IN 3
SIG IN 4
-10
-5
-0
INPUTS NORMALED TO
TAPE 1 OUTPUTS
TAPE 2 OUTPUTS
TAPE 1 TAPE 2 REV SYS
1
2
3
4
MONITOR SELECT
MONITOR LEVEL
FRONT
ALL
REAR
HEADSET OUTPUT
FRONT (B AND C)
REAR (A AND D)
REVERB RETURN
PROGRAM LEVEL
AUXILIARY
OUTPUTS
MULTIPLE
CONNECTIONS