Off: min. 10 ms max. 5 sec
Decay Time sensitivity: 0.4 V/octave.
Control Voltage Output (Trapezoid): max. — 3V (ON) to +4V (OFF).

Reverberation

Delay: 2 springs with delay times of 25 ms and 30 ms.
Reverberation Time: max. 2 sec.
Mix control sensitivity: —2V no reverberation. +2V maximum reverberation.

Input Amplifiers

Microphone inputs: (2x) 5mV AC into 600 ohms.
High Level inputs: (2x) 1.8V AC (rms) or ±2.5V DC into 50Kohms.
Keyboard Connections: See diagram (Fig. 24). The Low Level controls are 50 micro amps mm. A into 500 ohms.

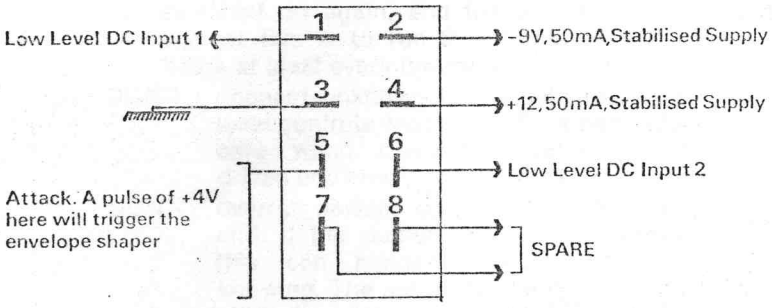

FIG. 24

Output Amplifiers

Signal Outputs: (2x) 2V p-p into 600 ohms.
Headphones: (2x) 10V p-p into 50 ohms.
DC (Control Voltage) Outputs: see device specifications. The impedence should not be less than 2Kohms.

Meter

Control Voltages: ±1V DC centre zero.
Signal Voltages: 4V p-p.

Joystick

Control Voltage Output: ±2V DC.
When the joystick is moved up and to the right, with the range controls at 10, both outputs are +2V.

Matrix Board

For all devices at the patchboard:
Input Impedance: 10 Kohms.
Input Sensitivity: 1.5V p-p.
Output Impedance: 300 ohms — 3 Kohms.
Output Level: 2V p-p average.

Keyboard

The Keyboard and certain other devices) are connected via an 8-way Jones socket.

Scope

The jack-socket labelled Scope is connected to the meter row on the patchboard.

A General Care and Maintenance

The VCS3 could hardly be easier to maintain, because the solid state circuitry is designed to run well within its capacity, even under conditions of electrical misuse, and there are no mechanical parts except the Joystick. But the following general points may be helpful:

1 **Jack Sockets.** These are of standard pattern, and extra jack plugs can easily be obtained. However there are some non-standard sizes on the market, and no plugs should be used if they are a very tight fit or on the contrary move too freely in the socket. They should push home with a firm click and have very little lateral play when in position.

2 **Joystick.** The grease in the control slots may eventually dry out, particularly if the studio is kept in a warm place. To service, remove the bottom panel, and take off the red cover plate of the joystick. Carefully clean the slots and ball joint, and re-lubricate with a *little* Vaseline or silicone grease. Do not allow any grease to touch the potentiometers, and take care not to cross-thread the self-tapping screws when replacing the cover.

3 **Knobs.** If knobs become loose, slacken off the set screw, reset at either maximum or minimum position, and tighten firmly. The spindles are nylon, and it is normal for the screw to bite in slightly for a firm fixing. If knobs are lost, we can supply more of the correct pattern, or in an emergency any knob suitable for a $\frac{1}{4}$" spindle can be used. If knobs are wrenched so that the whole potentiometer becomes loose, attend to it at once before an internal wire is broken. Take off the back, hold the potentiometer from behind and tighten the nut firmly. If the wires