JOERGER ENTERPRISES

DATAWAY DISPLAY, MODEL DD

DESCRIPTION -

The Dataway Display is capable of displaying the 72 bussed dataway lines in two ways. A switch is used to select either the "Track" mode or the "Latch" mode. This switch also has a momentary position "Reset" that will reset all the registers. In the "Track" position, all the registers are clocked open and the dataway information is fed directly to the front panel indicators. In the "Latch" position the registers are clocked during a dataway cycle and visually display the results of that operation.

All the signals except the power lines and the Strobes S1, S2 and Busy are latched. A typical dataway line is first buffered by an inverter then is applied to the D input of the latch. The Q output of the latch then drives the front panel LED directly. The latches are the type that will follow their data input while the clock signal is present. In the "Latch" mode the clock is a strobe signal, in "Track" the clock is a D.C. signal and so allows the unit to track the dataway.

The 24 Read lines are stored in 3 - 8 bit latches I.C.'s 18, 19, and 21 and they are clocked with strobe S1. The 24 Write lines are also stored in 3 - 8 bit latches, I.C.'s 10, 17, and 20 and are clocked with S1. The four subaddresses (A), the five function codes (F), Q, X, N, I, P1, and P2 are latched in I.C.'s 4 and 9 at S1. Initialize (Z), and Clear (C) are latched in I.C. 1, however, they are clocked with strobe S2. This is to insure that they are present at S2 time when they would be used by the modules. Patch pins P1 and P2 are also clocked in this I.C. at S2. This is provided as an option. Because it is not specified when the bussed patch pins might be used, we provide the user with the option to have these signals latched with either strobe. We supply units using strobe S1 as standard, however, if in a particular application it would be more appropriate to use S2 for one or both patch lines it is possible. This is accomplished simply by removing resistor R15 for P1 and replacing it in the holes provided just above it, and removing R16 for P2 and replacing it just to the right in the holes provided for it. Resistor R15 is just to the left of I.C. #4 and R16 is just below I.C. 1.

All the latches are reset when the front panel switch is placed in the "Reset" position. The switch signal is integrated by C7 and buffered in I.C. 22 to drive the master reset inputs on all the latches.

There are four latches in IC 1 and one latch in IC 4 that are unused. These have been brought to pads and may be used to satisfy

special applications that may arise. The latch in IC 4 will be strobed at S1, however, the latches in IC 1 may be strobed at any time and for your convenience strobes S1 and S2 are available and may be easily jumped to the clock. These points are labeled A, B and C.

The Strobe lines and Busy, because of their nature, are handled differently than the other dataway signals. In the "Track" mode they are buffered and drive the LED's directly in a similar fashion to the other signals. In the "Latch" mode, however, instead of being strobed, they are stretched in monostable multivibrators, IC 25 and 26, for visual display. During a dataway cycle these signals will flash once for each cycle indicating that all the strobes and Busy were present. There is an extra monostable in IC 26 and its inputs and outputs have been run to pads and are available for customer use.

The power lines $\pm$6v, $\pm$24v are all sensed in the same way. Each line supplies power to a differencial switch. One base is referenced to a fixed zener voltage. The other base senses the power line. If the voltage becomes 10-20% below normal, the pair will switch, turning off the light. Because the voltage being monitored is used for the zener, each power sensor is completely independent of other voltages.