

International Technical Assistance Bulletin FOR EDP SYSTEMS

air mail

Dayton, Ohio, U. S. A.

No. 2096-69

TO ALL INTERNATIONAL TECHNICAL
SERVICE MANAGERS AND CLASS
615, 390 AND 500 SYSTEMS TECHNICIANS:

December 19, 1969

CLASS 615, 390 AND 500 SYSTEMS

SERVICE INFORMATION

Troubleshooting Aid

Mr. Hegtor, South Africa, has informed us of a Troubleshooting Aid he has developed for use on the above systems which may be of interest to other Service Technicians. The aid assists in isolating certain intermittent complaints and may also be used for various tests and adjustments. The aid is as follows:

A Basic Latch Circuit can be used to Troubleshoot most Logic type machines. See Diagram "A".

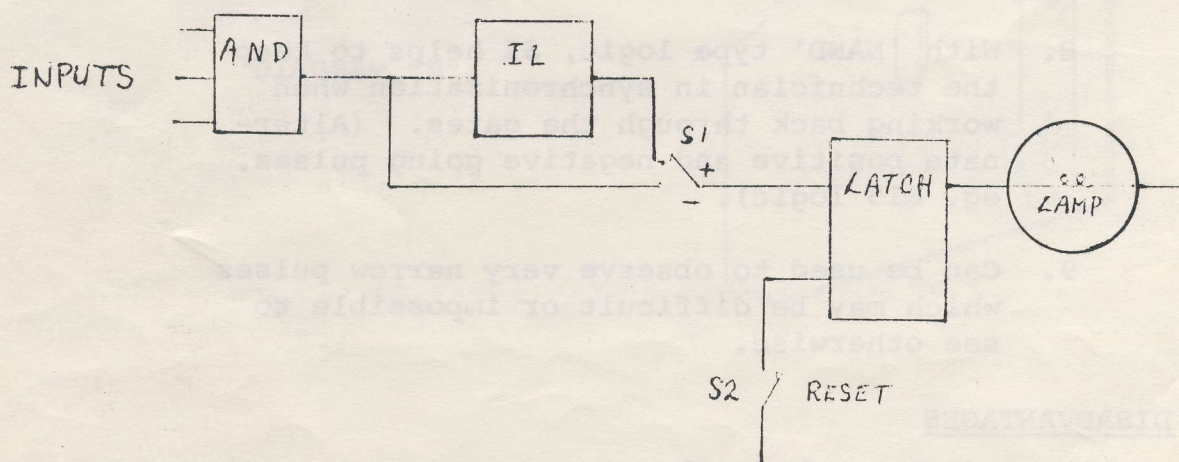


DIAGRAM "A"

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The input is hooked to wherever you wish to observe a signal. If there is a pulse at that point, the latch will set, lighting the lamp, and will remain set until manually reset by means of switch S2. In order to see if two or more pulses are occurring at the same time, connect them all to the inputs, (which feed an 'AND' gate) and if the pulses overlap, the latch will set. This circuit can be used in most cases where an oscilloscope is presently used. It is not meant to replace an oscilloscope, but does have certain advantages over an oscilloscope.

ADVANTAGES

1. Can be used for intermittent faults. The Technician can hook it onto a suspected point, and return later to see if the fault has reappeared.
2. No triggering necessary.
3. Not necessary to constantly watch it.
4. Normally only one wire needed to hook up.
5. Fast to operate.
6. Compact.
7. Can also be used for static type adjustments.
8. With 'NAND' type logic, SI helps to keep the technician in synchronization when working back through the gates. (Alternate positive and negative going pulses. eg. 615 logic).
9. Can be used to observe very narrow pulses which may be difficult or impossible to see otherwise.

DISADVANTAGES

1. Can not measure the duration of a pulse.
2. Can not trigger with one thing and look at another.

Following are circuits which have been tested for the 615 (Diagram B), and 390/500 (Diagram C) Systems.

CLASS 615 LATCH TEST CARD

Convert A Logic #1 Card (A01) 315-0504667 by making the following connections on the Card.

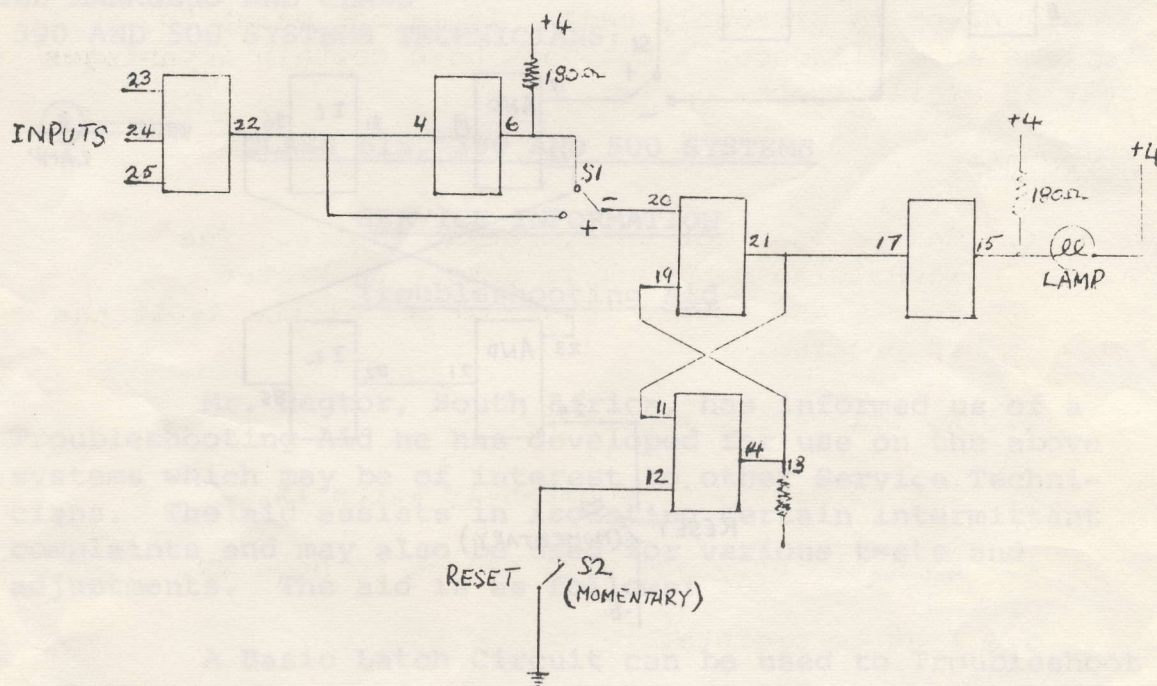
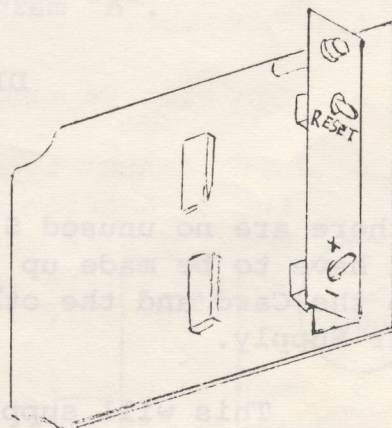


DIAGRAM "B"



Plug Test Card into any empty slot and use Backpins 23, 24, 25 as Inputs.

CLASS 390/500 LATCH TEST CARD

Convert an Inverter Card 095C0002702 by making the following connections on the Card.

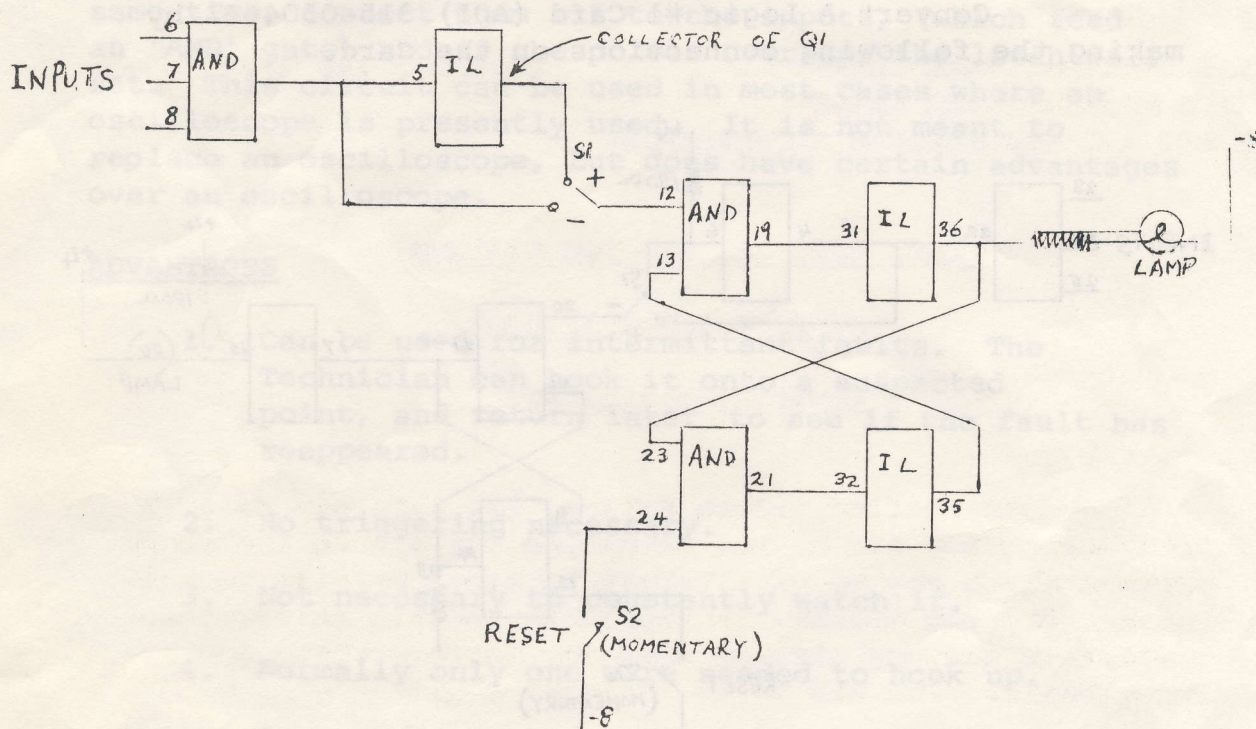


DIAGRAM "C"

As there are no unused Slots on the 390, an Adaptor Cable will have to be made up (4 wires), so that one end can plug onto the Card and the other end can plug into X1 on the Power Supply.

This will supply the voltages to the Card. The Input Pins will have to be brought out to Test Points on the front of the Card.