



- **Voltage Regulator VR1**  
This voltage regulator must be oriented so that its package matches the image on the circuit board. Compare photo in ? with the image in Figure 1. The flat edge of the voltage regulator is at the bottom in both figures.
- **Capacitor C2**  
Orientation is not important. This is a flat disk capacitor with the number "104" on one side. The circuit board has three holes to accommodate different widths for this component. Kits are currently supplied with capacitors that use the upper and lower holes, as seen in ?. Smaller capacitors use the centre and lower holes.
- **Power Connector J1**  
There is only one way to position this on the board. If the pins on the jack area little tight, they may be filed a little smaller or gently squeezed with pliers in order to fit easier.
- **Capacitor C1**  
This capacitor must be oriented so that their longer lead goes through the hole marked with a "+".
- **Modular Jack X2**  
This is the front-panel jack and is mounted on the top of the circuit board with all other components. There is only one way to position this on the board. Once the six pins are inserted, the two larger studs can be pressed through their mounting holes to support the jack in place.
- **Modular Jacks X1 and X3**  
These are the rear jacks and are mounted on the bottom of the circuit board. There is only one way to position these. Once the six pins of each are inserted, the two larger studs can be pressed through their mounting holes to support each jack in place. These will have to be soldered from the top of the board.

## **Installation**

See the enclosed installation instruction sheet.

## Attaching the Faceplate

The faceplate comes pre-assembled with the bezel and lens for the display and stand-offs already attached. Four #4 Phillips screws with are included to attach the faceplate to the circuit board.

If these screws are on the bottom of the stand-offs, remove them and position the faceplate so that the front modular jack extends through the faceplate so that the jack and the faceplate are even or close to even. Re-install the four screws through the circuit board to secure everything together.

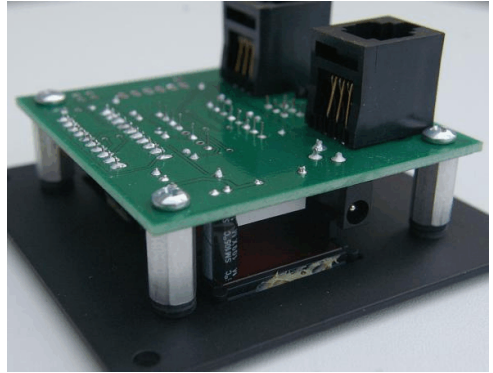


Figure 3

## Warranty

Card and components are warranted against manufacturing defects for a period of 1 year from date of purchase. As the circumstances under which this kit is assembled and installed cannot be controlled, failure of the detector card due to assembly or installation problems cannot be warranted. This includes overheating during assembly, misuse, miswiring, operation under loads beyond its specifications, or short circuits. The warranty is voided if a DC power supply exceeding 14 volts is used.

If the Fast Clock Display fails for non-warranted reasons, it can be replaced, without faceplate hardware, with no questions asked for the cost of \$30 plus shipping for an assembled card, or for \$15 plus shipping for a replacement kit (fees subject to change).

Send an email to [circuits@daxack.ca](mailto:circuits@daxack.ca) for information on warranty or non-warranty replacement.

## Late Production Note

A late circuit design changes resulted in the need for two additional resistors. For this release of the Fast Clock Display, SMT versions of these have been pre-installed on the circuit board.

When assembling a Fast Clock Display, be aware of these tiny devices, located near the ICPS header pads as indicated in Figure 4.

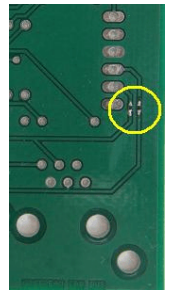
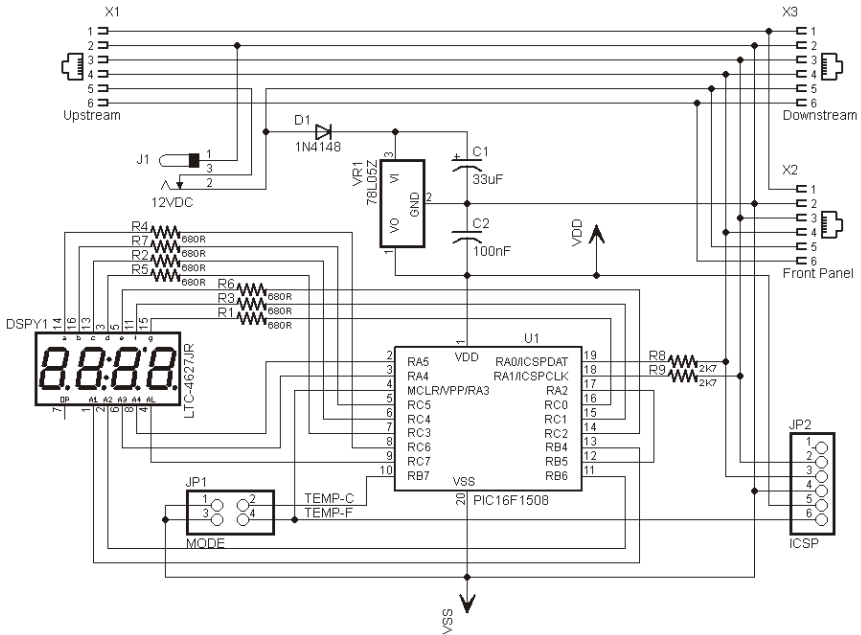


Figure 4

# Circuit Schematic



## Part values:

C1	33 µF, 35 volt electrolytic capacitor
C2	100 nF, 10 volt or greater capacitor
D1	1N4148 diode
DSPY1	LED 7-Segment, 0.4" 4-Digit Super Red
J1	PJ-007 power jack
R1-R7	680 ohm, ¼ watt resistor
R8, R9	2k7 SMT resistor (pre-installed on circuit board)
U1	PIC16F1508 micro-controller
VR1	78L05Z regulator
X1- X3	6P6C modular connector (RJ-12)
JP1	2x2 header *
JP2	6-pin 90° header †

\* optional jumper block for temperature option - not included in kit  
 † In Circuit Serial Programming (ICSP) header - not included in kit

*This document is available in PDF format on our website.*