

## Miltrac CGA to VGA Conversion

To complete this conversion the processor board must be upgraded to a 186 processor board. New software must be installed and the controls programmed. The approximate time to complete this retrofit is one person working 5 man hours to install the hardware. In addition, it will take approximately 2 man hours to program the new software. Prior to beginning the conversion, it is necessary to familiarize yourself with all safety precautions in the Continuous Batch Washer and Miltron manuals; please observe all safety precautions. It is also imperative that these instructions are read prior to beginning the retrofit. While working on the Miltrac, tag and lockout the power. Also, inventory the parts received with the kit.

Tools required for this retrofit are: a drill, wire cutters, crimping tool, digital volt meter and common hand tools.

Step one; print copies of the configuration. These pages will be used to program the new software.

Step two; disconnect the monitor from the CGA video board and the 120vac source. Remove the monitor and the existing belt box.

Step three; label all of the connectors, except the 34 pin connector, on the processor board. Then remove the processor board. Next, install the new software in the new 186 processor board (08BSPE2T). Refer to figure four number 2 (processor board), which is a photo with the new processor installed. When installing the software make sure that the notch in the software lines up with the notch on the software receptacle on the processor board. Refer to figure four number 3 (software). Mount the new processor board where the old processor board was. Install the bracket on the video card. Insert the video card in the processor board. Refer to figure four number 4 (video card). Mark the holes that need to be drilled to mount the video card bracket. **WARNING DONOT SKIP THIS NEXT STEP!!!** Cover all the electronic in the bottom of the Miltrac console with card board or other non-conducting material to prevent metal shavings from coming in contact with the electronic boards. **DO NOT USE PLASTIC** to cover the electronic boards because it can create a static discharge. Then using the number 17 drill bit supplied drill the holes to mount the video card. When removing the material used to cover up the electronic boards in the bottom section of the Miltrac console make sure that the metal shaving do not get on the electronic boards.

Install the video card and the bracket. Connect the video cable from the monitor to the video card. Refer to figure four number 5 (video cable). Number 1 in figure four is where the interface board and old video card mounted. Remove the interface board. MTA1 power, on the interface board is no longer necessary and should be taped up with electrical tape.

Step four; label the wires that go to 1MTA-38 and 1MTA-39. Rewire both of these connectors using the following chart. In addition, refer to schematics W8CBWMC\94517B and W8CBWSE\94517B included in these instructions.

OLD PROCESSOR BOARD	NEW PROCESSOR BOARD	
MTA38-2	MTA38-1	SIGNAL CANCEL
MTA38-3	MTA38-2 & 3 (Jumper)	PROGRAM KEY
	MTA39-2	+12VDC

Then add +12VDC (blue\orange, V2, wire) to MTA39-2.

Step five, if Miltrac Programmer or a flash memory box is to be used to download information to the Miltron the down load connector must be wired to 1MTA29-3&1 on the processor board. Refer to schematic W8CBWMBA\94517B lines 10 through 12.

Step six; install the EPROM (software) chip. Pay close attention to the orientation of the notch at the end of the chip, it must line up with the notch in the socket on the board.

**IMPORTANT!!**

There should be 2ea. EPROM chips furnished with this kit. For Miltrac made with software WUMILTRAC version 8624D or earlier use the WUMILTCE chip. For WUMILTRACB version 89100 or later use the chip with WUMILTCD. It is vital that the correct chip be used, as the incorrect version will result in your system not communicating

Finally, after rewiring MTA38 and MTA39, plug all of the MTA connectors in their appropriate places. Then turn on the Miltrac and reprogram. After reprogramming the Miltrac, test the system. If you should have any questions, please call Milnor Technical Support at (504) 467-9591 extension 276.