**TECHNICAL NOTE**
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**SUBJECT: Microprocessor replacement procedure using a PLCC extraction tool**

The purpose of this procedure is to aid the technician in identifying and replacing the microprocessor on the main control board of the Freedom 10, 15, 20 and 25.

**TOOLS REQUIRED:**

#1 Phillips screwdriver
Microprocessor PLCC +extraction tool

**DISASSEMBLY:**

Insure that the Freedom inverter is disconnected from AC input power and from the batteries prior to doing any disassembly work.
Using the Phillips screwdriver, remove the 12 screws (6 on each side) that hold the top cover to the chassis. Lift the top cover from the unit.
Using the attached main board layout diagram identify the microprocessor on the main control board.

**MICROPROCESSOR REMOVAL AND REINSTALLATION:**

WARNING: The microprocessor is a static sensitive device. Ground yourself prior to handling the part outside of its protective envelope. A static discharge will damage the device.
Prior to removal, note the orientation of the microprocessor in the socket, the new microprocessor will need to be installed the same way. Using the microprocessor PLCC extraction tool remove the microprocessor from the socket by inserting the tool in the 2 slots in the PLCC socket hooking the tool under the chip. Squeeze the tool and the microprocessor will lift out of the socket.
Install the replacement microprocessor. The small dot on the new microprocessor identifies how it should be aligned in the socket. This dot is located on the beveled edge of the microprocessor and identifies the top and pin 1 of the microprocessor. This beveled of the processor should be aligned edge the socket and the flat corner of the microprocessor aligned with the flat corner of the socket. Try to install it so that four sides are inserted evenly.

**ASSEMBLY:**

Place the top cover back on the unit and reattach the 12 Philips screws. Bench test the unit if possible.