

ASTRO-PHYSICS

INSTALLING NEW ROM CHIP INTO GTO CONTROL BOX – MODEL GTOCP1

Static

Microchips can be damaged by static discharge. Avoid handling the chip while walking on carpet or rug. Work on a wood table and use the anti-static bag that the chip came in as a backing for the circuit board.

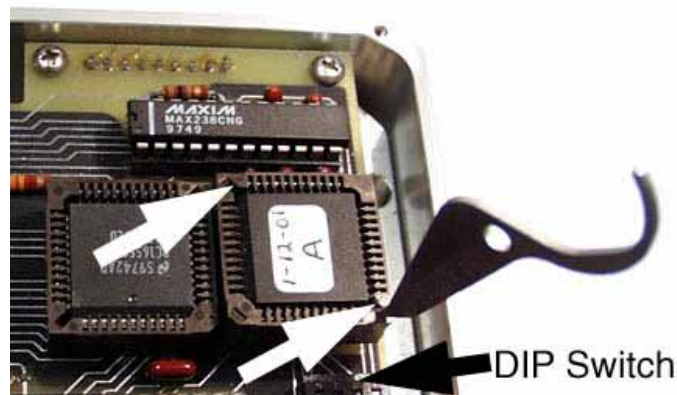
Removing the Top Cover

There are six screws holding on the top cover of the Servo drive box (located on top of the polar axis of the 1200 and 900 mounts and in carrying bag for 600E and 400 mounts) that contains the electronics. Use a 5/64 hex key to remove the two Allen screws on the upper front panel and the four screws on the top of the box. The cover will now lift off.



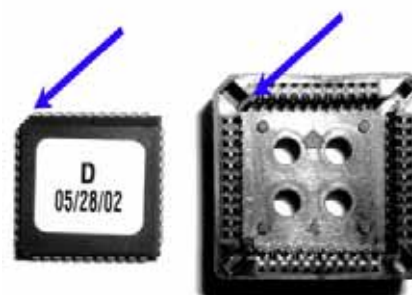
Removing the Old Chip

The chip that needs to be changed is toward the back of the upper circuit board. **It is held on the board by a plastic chip carrier that can be easily damaged if improperly handled.** The chip is removed with the tool provided. Insert the thinner end of the tool into one of the two slots in the chip carrier as indicated in the diagram. **DO NOT** use the outer corner of the carrier as a support to apply leverage since it will crack the carrier. Carefully pry one edge of the chip up a bit. Do not try to remove the chip entirely from one side. Now insert the tool into the other slot and pry that side up a bit also. By going back and forth a few times, the chip will work itself free and can be removed.



Inserting the New Chip

You will note that the microchip and chip carrier each have a flat spot built in one corner as shown in the photo. These 2 flats must be aligned before the chip is pressed into the carrier. Failure to align these marks will cause permanent damage to the carrier and circuit. Press the chip in evenly until it is firmly seated. Excessive pressure will bend the circuit board and put all kinds of stress on the traces and small component parts. When the chip has been replaced, reattach the top with the 6 screws.



Changing the DIP Switch

Locate the quad DIP switch adjacent to the chip you just replaced. If upgrading from an "A", "B" or un-lettered chip, you will need to change the #2 switch so that the switch pin is close to the numeral "2". If upgrading from a "C" or "D" chip, the switch should have already been changed. (We suggest you verify this.) Using the tip of the extraction tool, gently move the switch in the number 2 slot towards the printed number 2. After the DIP switch has been changed, replace the cover and reattach all of the screws. Please save the extraction tool for future upgrades.