

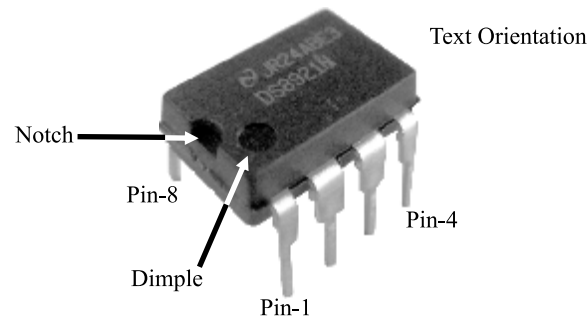
## Installing New Modular Cable Driver Chips

The most common cause of a damaged modular cable driver chip is a shorted modular cable. Sometimes, nearby lightning strikes can also damage the chip. Regardless, the chip is in a socket so it is easy to replace. Use the simple check below to see if you have a damaged chip.

**Symptoms:** You'll first notice that the trains are not running. You'll also discover there is no voltage on the rails. Look at the front panel of your ZoneMaster. The GP light will be off and the red FT light will be flashing. These are symptoms of no Command Station data getting to the ZoneMaster. Unfortunately, there is no easy way to determine if the bad chip is in the Command Station, or in the ZoneMaster. The same chip is used in both and we recommend replacing both at the same time.

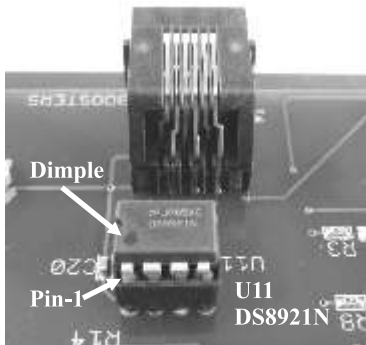
**Ordering Chips:** Send us an email and explain your problem. In the email, include your address and phone number. We will send you two new chips at no charge. While you are waiting for the chips, find their locations using the guide below.

**Chip Part Numbers and Appearance:** The chip part number is DS8921N from Texas Instruments. It is an 8 pin part. The chip is polarity sensitive and must be oriented correctly in the socket. If plugged in backwards, it will not work and may be damaged.

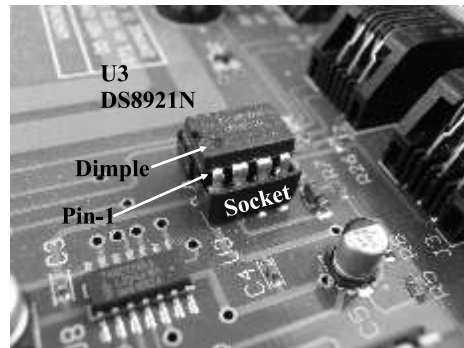


**Chip Locations:** The chips that drive the modular cable between the Command Station and the ZoneMaster booster are plugged into sockets to make them easy to replace.

### Command Station - Model CS2B

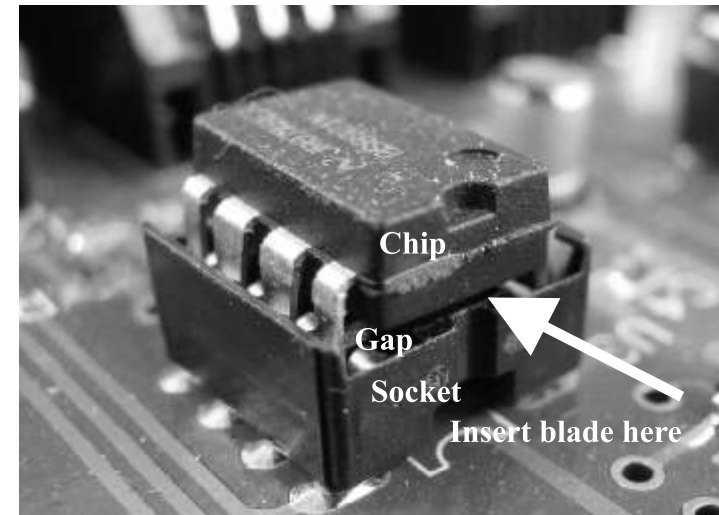


### ZoneMaster - Single/Dual



## Installing New Modular Cable Driver Chips - *continued*

**Removing Old Chips:** This is easy but must be done correctly. The most common mistake made is removing the socket instead of just the chip. The socket stays on the board. The chip is plugged into the socket. Insert a thin flat-bladed screwdriver in the narrow gap between the socket and the chip. Gently twist the screwdriver to lift the chip out of the socket. A closeup of the ZoneMaster U3 is shown below illustrating the correct position of the screwdriver blade. Remove the Command Station's chip the same way.



**Insert New Chips:** Locate pin 1 on the new chip. Orient it correctly with the socket. Insert all 8 pins into the socket. Verify that all pins are in the socket and not outside, or bent up underneath the chip. Insert the new chips in both the Command Station and the ZoneMaster.

**Ready To Checkout:** Plug in the modular cable between the Command Station and the ZoneMaster booster. Turn on power to both. Verify that the ZoneMaster's green GP light is on. Reassemble the booster and reconnect it to the layout.

**Common Problems:** The most common mistake is inserting the chip without all pins going into the socket. A pin that becomes bent up and underneath the chip is difficult to see. If in doubt, unplug the chip, inspect and reinsert. The second most common mistake is inserting the chip backwards into the socket. Check the pictures and then check orientation.

**Safely Discard The Old Chips:** Bend all the pins up under the chip to identify it as a bad part. Discard the old chips in an appropriate trash receptacle. Do not leave them lying around where children can find them as they are a choking hazard.