

## Upgrade the firmware on a T2000 FACP

Before you start the upgrade on the new Tracker panels with the latest firmware for the T2000 combination MCC/LCU, the following equipment and PC software programmers and drivers are required

Program cable for USB	Part #TG-CBL-USB
Firmware Program	FireSpy Firmware Programmer Version 1.1.0.0 or newer
Panel Programmer	FireSpy Tracker PC Programmer Version 5.0.16.0 or newer
Drivers for USB Chip	FTDI USB Drivers 2.06.00
Operating System on PC, Windows XP or newer operating system with USB port.	

### **Step 1.**

Before you can start to upgrade the T2000's firmware, save the database from the system that you are going to be upgrading.

This is crucial, since the system will do a factory default and put all the devices and messages back to the default level. So all of the messages and groups you have created will be lost.

### **Step 2.**

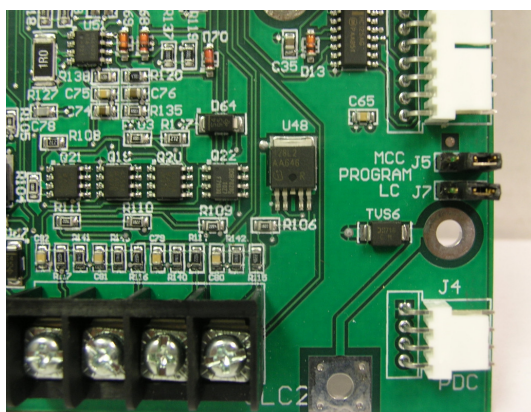
Create a new folder on your C: drive. Place the MCC and LCU firmware Hex files in this new folder. These Hex files are used for both systems the T8000 and T2000. Updated firmware Hex files can be obtained through the ESD Center or emailed to you from the Technical Services Department.

### **Step 3.**

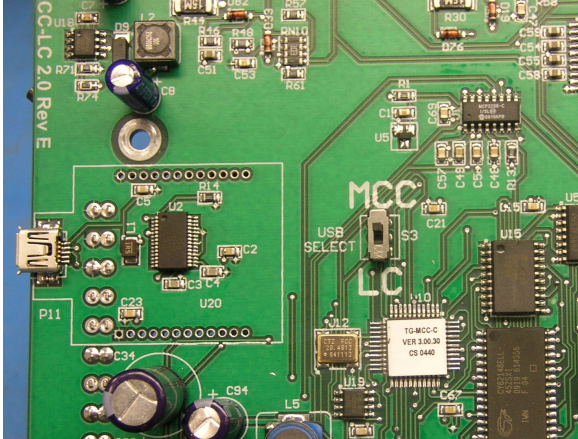
On the T2000 MCC/LCU combo mother board, located at the bottom right corner are two programming jumpers. One is used for programming the MCC (J5) and the other for programming the LC (J7) on the T2000 FACP. **“Figure 1”**

The jumpers come placed in the right side position for normal operations “as pictured below”.

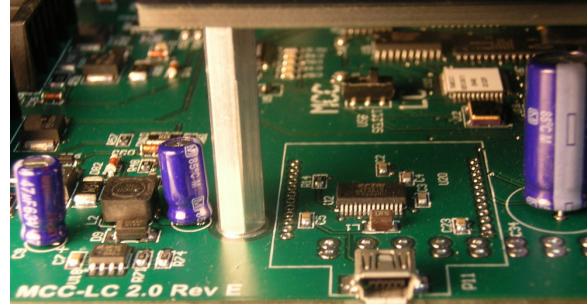
When you place the jumpers to the left side position toward the **Program Label**, this sets up the communication from the USB connector and the chip that holds the firmware to be loaded and upgraded. Then there is a switch (**S3 USB Select**) located under the LCD KeyPad display board (**2” to the right of the USB port**) that needs to be placed in the proper position for programming either MCC or LC. This switch is factory defaulted in the up position for programming the MCC. **“Figure 2 & 3”**



**Figure 1: MCC & LC Program Jumpers**



**Figure 2: USB switch location**



**Figure 3: USB switch location**

#### Step4.

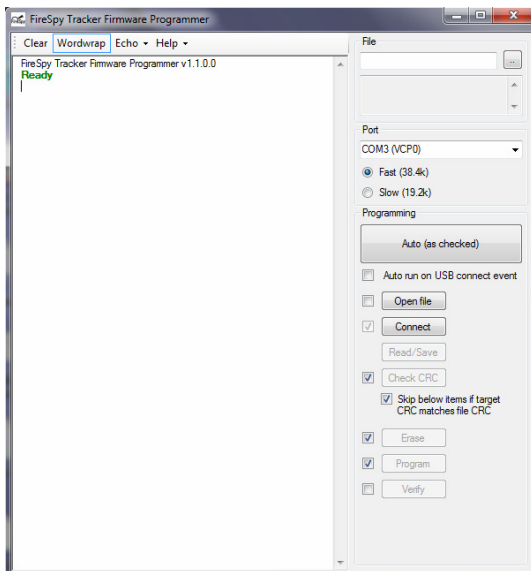
Place the USB cable into the USB port on the MCC at P11 USB connection.

The USB port is located on the left side of the MCC, about 2 inches up from the RS232 DB9 connector.

Activate the FireSpy Tracker Firmware Programmer, and it will open up like **Figure 4**. The large box on the left will come up with the following print inside, if it is connected.

**FireSpy Tracker Firmware Programmer V1.1.0.0**

**Ready**

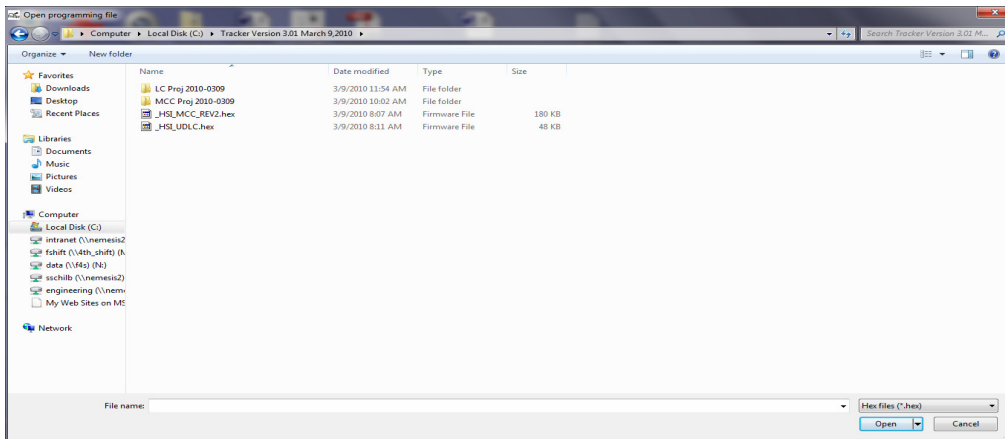


**Figure 4.**

### Step 5.

To the right of File, press the button on the top right side and it will let you browse your computer. Select the folder that you have placed the MCC and UDLc hex files in.

The folder will open up and you will have the two Hex files to pick from as in **Figure 5** below. Select the file that is labeled HSI\_MCC\_REV2.hex. Then Press “**Open**” located at the lower right area at this screen.



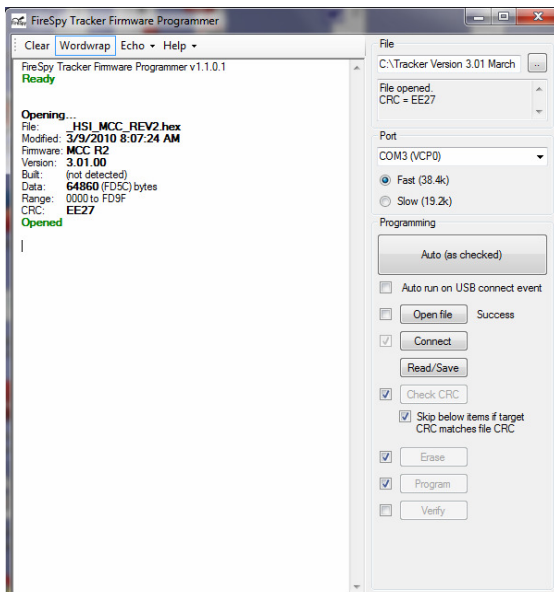
**Figure 5.**

### Step 6.

This screen will have the MCC firmware information comes up in the left box, like **Figure 6** below. File, Date, Version, CRC ect...

On the right side, below file will be a File open with the CRC=XXXX.

This number will match the same as in the box on the left. This is the Check Sum of the file you will be loading “**CRC number will change with newer updates**”. You are ready to start the load command.



**Figure 6**

### Step 7.

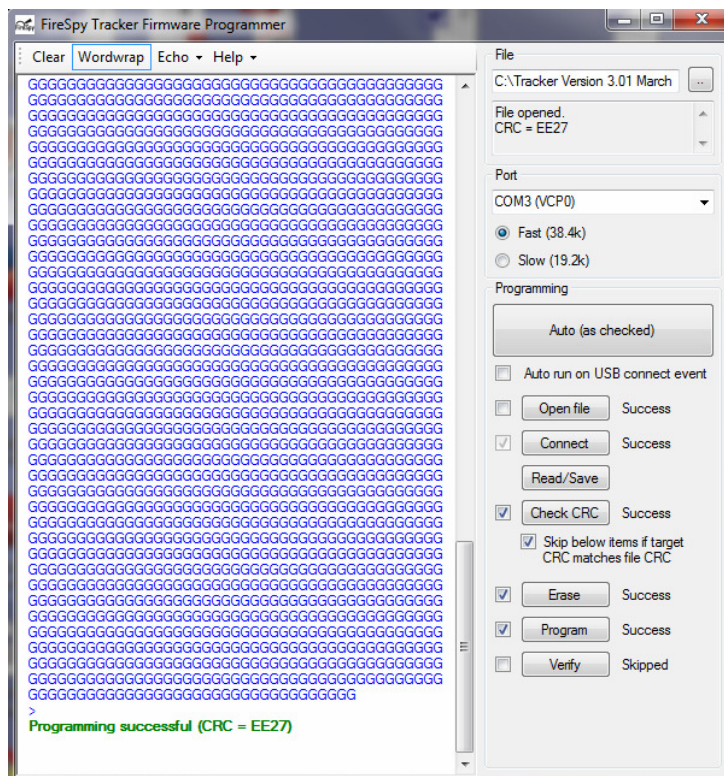
To start the load command, Press the **Auto (as checked)** box.

This will start the erasing command of the firmware. When the chip is erased, the program will state the loading of the new firmware. The box will start to fill up with GGGGGGGG's, like **Figure 7** below.

### Step 8.

When the firmware is finished loading, your screen will look like below in

**Figure 7. Programming successful (CRC=EE27).** The CRC will change with newer updates.



**Figure 7.**

### Step 9.

The T2000 MCC mother board is finish loading, place the **J5** jumper back to the **Run** mode. The display on the LCD of the system will tell you to press the Reset button to put the system back to Factor Default mode. This will take a few minutes.

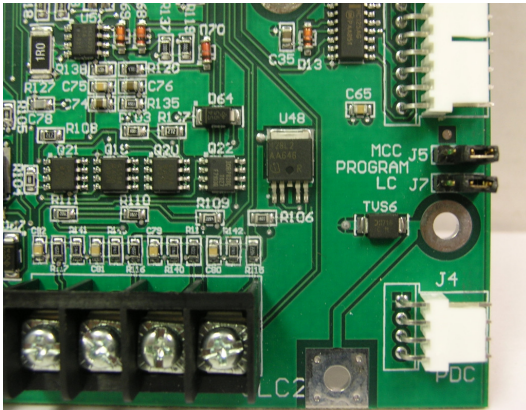
When the panel finishes this step, you can start to load the firmware for the LC.



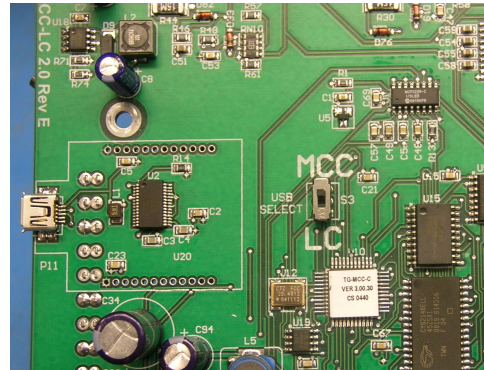
## Programming the T2000 LC Firmware

### Step 10.

To updating the firmware for the LC on the T2000 mother board. First place J7 (Program LC) jumper to the program side, which will be the two jumpers on the left. In **figure 8** it shows the jumpers in the right side, this is set for normal mode of operation. Then you place the switch to the down position to open up the connection to the LC chip from the USB connector as shown in **figure 9**.



**Figure 8. Program Jumpers**



**Figure 9. USB Select switch MCC/LC**

The T2000 will go into a LCU communication fail trouble, when you put the jumper into the program mode. This is normal, since you are taking away the communication connection to the LC from the MCC.

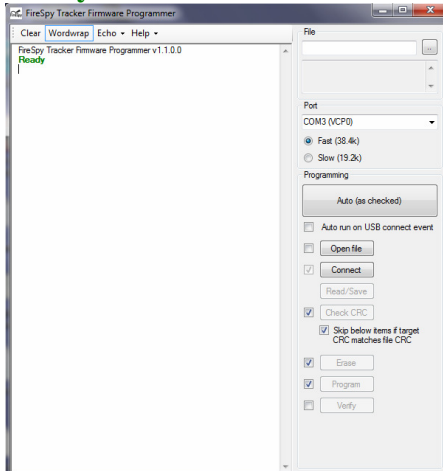
Connect the USB cable into the USB connector on the left side of the T2000 mother board and into the PC USB Port.

### Step 11.

Activate the FireSpy Tracker Firmware Programmer, and it will open up as in **Figure 10**. The large box on the left will come up with the following print inside, if it is connected.

### FireSpy Tracker Firmware Programmer V1.1.0.0

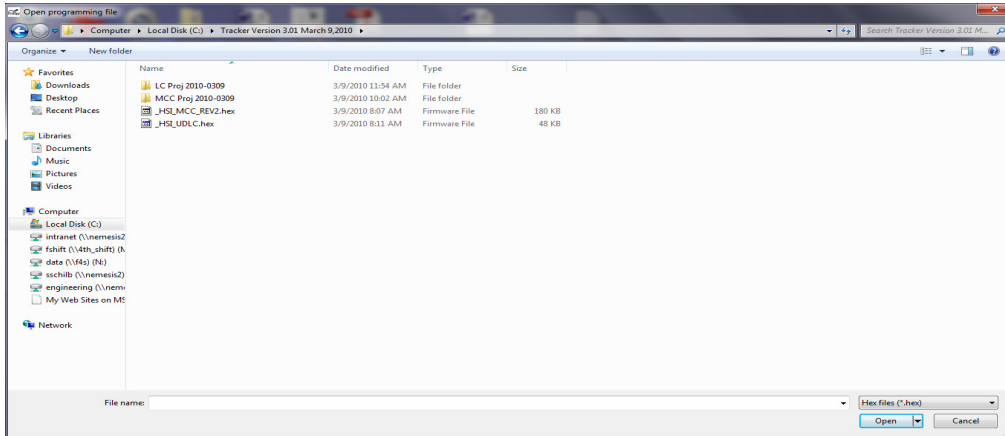
Ready



**Figure 10. Firmware Program Screen**

## Step 12.

To the right of File, press the button on the top right side and it will let you browse your computer. Select the folder that you have placed the HSI\_MCC and HSI\_UDLC hex files in. The folder will open up and you will have the two Hex files to pick from as in **Figure 11**. Select the file that is label HSI\_UDLC.hex. Then Press “**Open**”



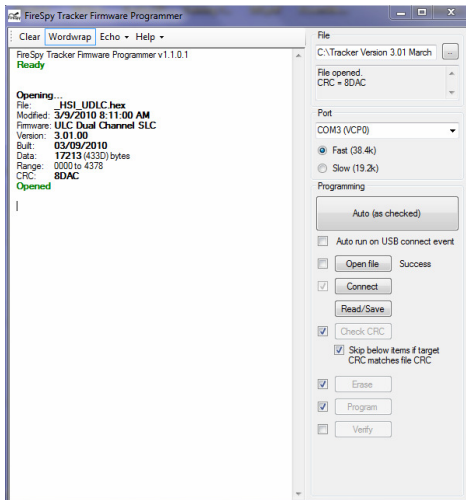
**Figure 11. Folder with Firmware Files**

## Step 12.

The screen will have the HSI\_UDLC firmware information appear in the left box, like it shows in **Figure 12**. File, Date, Version, CRC ect...

On the right side, below file will be a **File opened** with the CRC=XXXX.

This number will match the same as in the box on the left. This is the Check Sum of the file you will be loading. You are ready to start the load command.

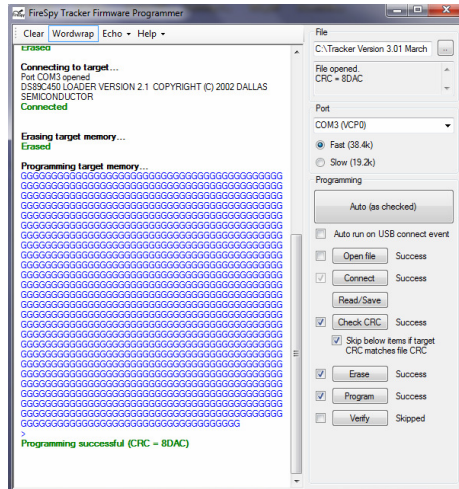


**Figure 12. Firmware Programmer**

### Step 13.

To start the load command, Press the Auto (as checked) button.

This will start the erasing command of the firmware. When the chip is erased, the program will state the loading of the new firmware. The box will start to fill up with G's and at the end it will state **Programming Successful (CRC=XXX)** as in **Figure 13** below.



**Figure 13. Firmware Loading**

### Step 13.

The unit is finished with the loading, place the programming jumper (J7) back to the Run mode and place the MCC/LC USB switch back to the up position for MCC.

The panel will then take a few seconds to find the LC, once the communications is established again between the MCC and the LCU, the communication fail trouble will clear itself.

The system is ready to take the download of the saved database that you saved at the beginning.

The Panel Programmer, Firmware Programmer and USB Drivers can be downloaded from the ESD Center, which is located on the Harrington Web site.

<http://www.harringtonfire.com>

If you have any issues or question on any of this, please contact the Technical Service Department at Harrington Signal.

800-577-5758