V2

PROGRAMMING INSTRUCTIONS FOR SRU BOARDS

VERSION 1.0

∧ SMARTRISE

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Document History

Date	Version	Summary of Changes	Modified By	Status
May 9, 2019	1.0	Initial Submittal		

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Replacing and Programming a SRU Board

All Smartrise SRU boards are backwards compatible with prior revisions. For example, Revision 8 boards can replace all prior revision boards. The main issue a technician will face is whether or not the replacement board has the same IO as the existing board. The following is a list of considerations when replacing a Smartrise SRU board:

1. Revision 8 boards can replace all previous board revisions (Revision 5-7).
2. Revision 5-7 boards can replace any board up to Revision 7. These boards are not recommended for replacing Revision 8 boards. Revision 8 boards have 16 additional inputs and 8 additional outputs.
3. IO list for SRU boards per revision:

    a. Revision 5-7 (Inputs 501-532) (Outputs 601-616)
    b. Revision 8 (Inputs 501-548) (Outputs 601-624)

Access Code

Some software versions require an access code when powering up an SRU board for the first time. The access code is "XFFFF" or "X0000". When prompted, press and hold the UP arrow button on the SRU board until the display reads "XFFFF" or "X0000" and then press the enter key.
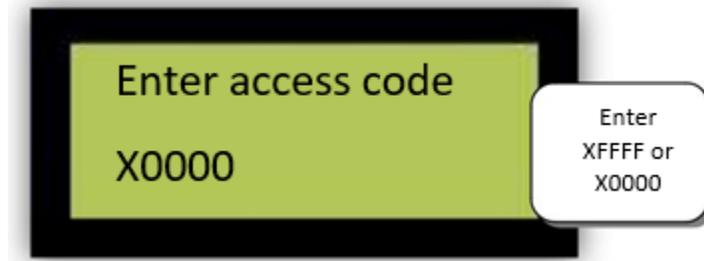
Figure 1: Enter Access Code

SRU Board Revision Layouts

The figure below shows the Revision 5-7 SRU board.
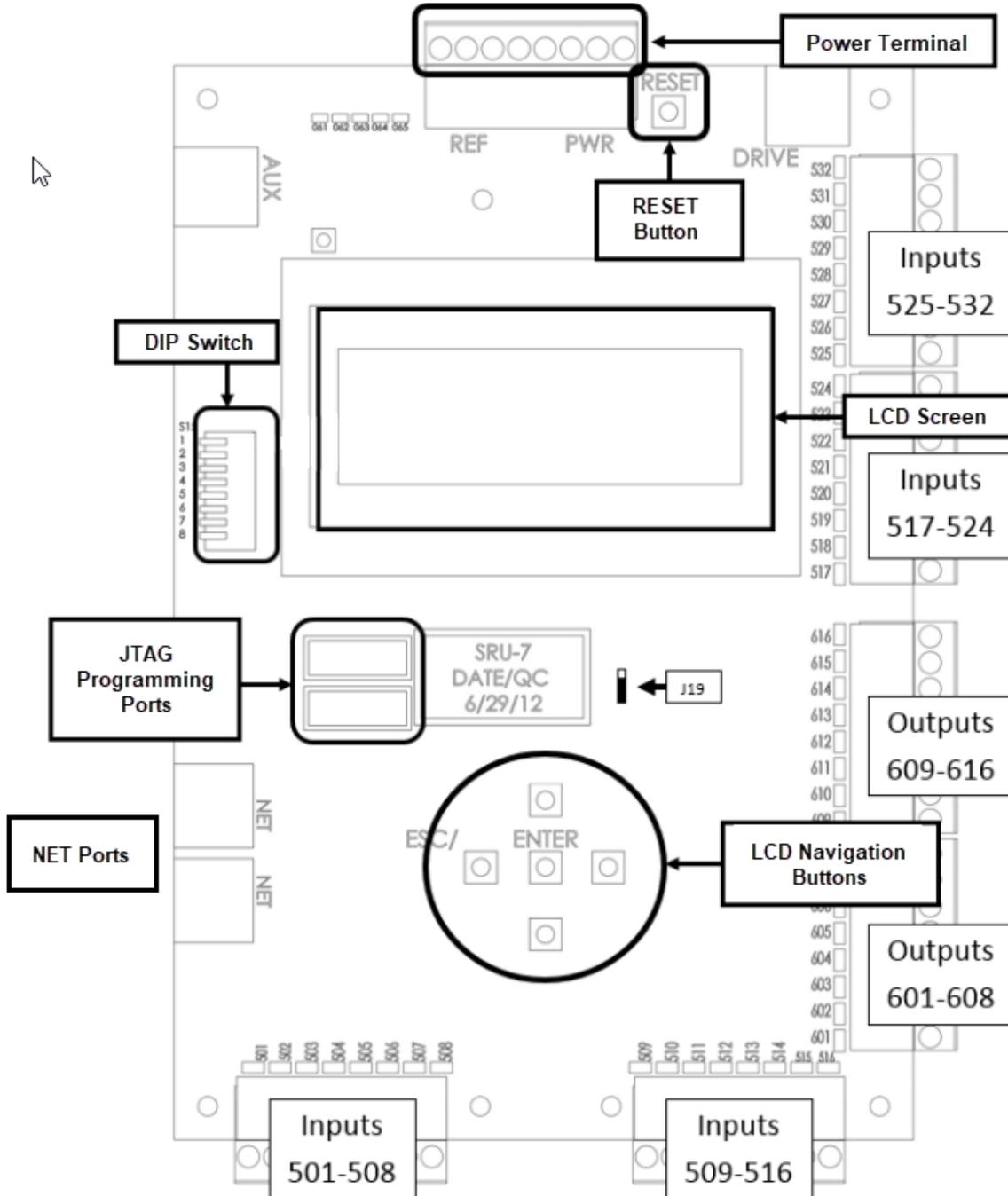
Figure 2: Revision 5-7 SRU Board

The figure below shows the Revision 8 SRU board.
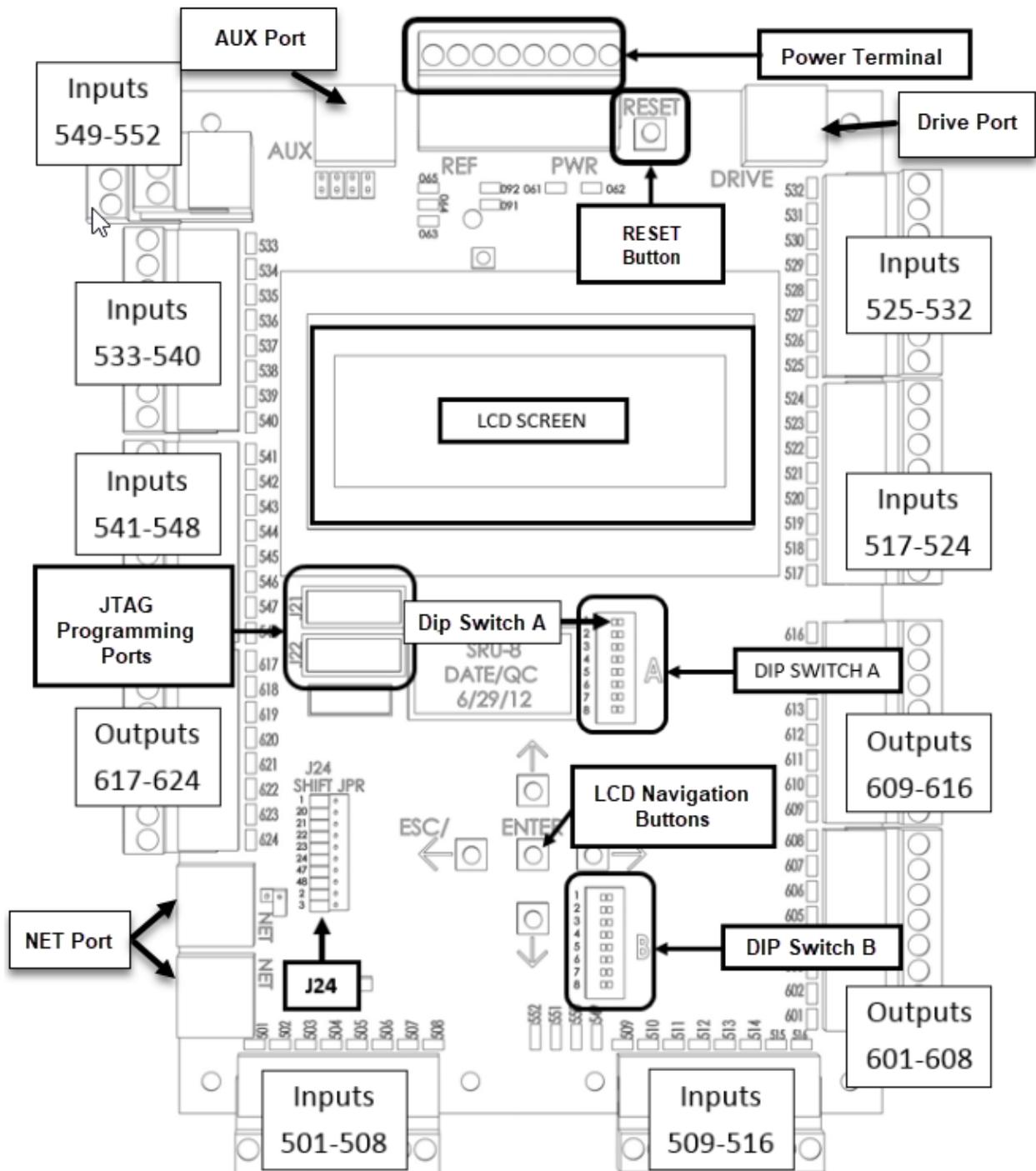
Figure 3: Revision 8 SRU Board

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Tips to Preserve Settings During Board Replacement

The Machine Room (MR) board sends all settings and parameters to the Cartop (CT) and Car Operating Panel (COP) boards. These settings are stored in each board. If the MR SRU fails, then the only way to save the job settings (Slowdowns, Floor Levels, Parameters, etc.) is as follows:

- Replace the MR SRU with either a CT or a COP board
- Replace the MR board that still powers on.

Swapping the MR SRU board

1. Replace the MR board with either the existing CT or COP board.
2. Once replaced, power it up and reprogram the CT or COP board as the MR board.
3. Install the new board as the CT or COP board and program it as such.

Replacing the MR SRU board

1. Power down the controller.
2. Remove the CAT5 pigtail that goes from the MR SRU NET port to the DIN rail.
3. Using a standard CAT5 cable, connect the MR SRU to a new CT SRU board, NET port to NET port.
4. Power up the controller.
5. Wait 15 minutes for all the parameters to download to the new CT SRU.
6. After the parameters are downloaded to the new CT SRU board, power down the controller and replace the MR SRU with the new CT SRU (Do not plug in the CAT5 pigtail that was previously removed).
7. Reprogram the CT SRU as the new MR SRU.
8. Connect the CAT5 pigtail.

The previous settings from the old MR SRU board (that were transferred to the new CT SRU board) will now transfer to the new boards and the car should operate as before with all the original settings.

You can replace either the CT or COP board at any time as it will retrieve the settings from the MR board when powered up.

USB Debug Adapter

To program an SRU board you will need:

- Smartrise Programming Pod (USB Debug Adapter).
- A <u>fully charged</u> laptop with up to date software. An older version may experience compatibility issues.
- The software for the specific job is provided by Smartrise in two ways:

  - A Smartrise Flash drive is included in the job binder.
  - By an online software link. Contact Smartrise if you do not have the software for the particular jobsite.

Figure 4: USB Debug Adapter

Replace a Functioning MR SRU Board for a Newer Revision Without Losing Settings

Perform the following to replace a functioning MR SRU board without losing the settings.

1. Remove the CAT5 pigtail from the MR SRU NET.
   NOTE: This is the communication cable that connects the MR SRU to the existing CT SRU.
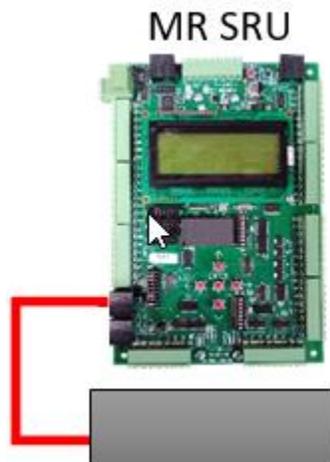
Figure 5: Remove CAT5 Pigtail

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2. Take the new SRU board and plug a standard CAT5 cable from the MR SRU NET port to the new SRU NET port. This provides the communication and power to the new SRU board.
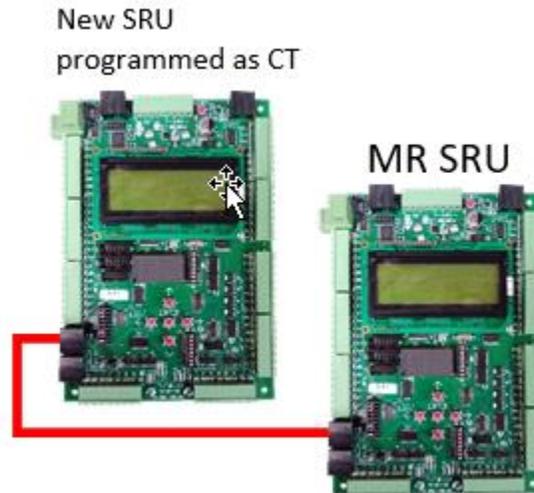
Figure 6: CAT5 Cable Connection

3. Program the new SRU board as the CT SRU board.
4. Cycle power to the new CT SRU board by temporarily unplugging the CAT5 cable.
   NOTE: The new CT SRU board will download all the existing parameters from the existing MR SRU board in about 15 minutes.

5. Once the parameters are transferred, unplug the CAT5 cable and remove the original MR SRU board.
6. Install the new CT SRU in place of the original MR SRU board and reprogram it as the MR SRU.
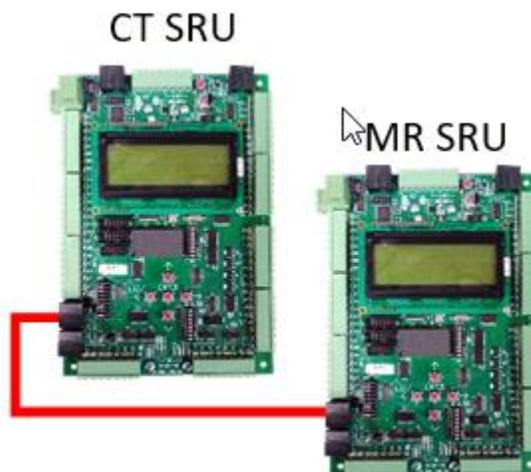
Figure 7: Transferred Parameters

7. Reinstall the CAT5 pigtail from the DIN rail to the MR SRU NET. This re-establishes communication between the MR SRU to the original CT SRU.
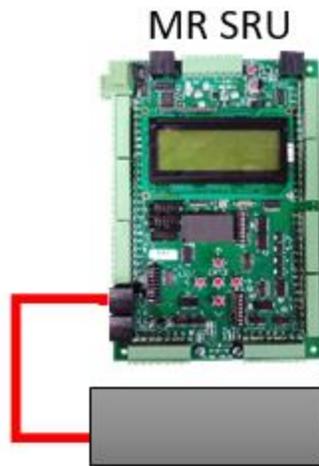
Figure 8: Re-established Communication

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Replace a Non-Functioning MR SRU Without Losing Settings

Perform the following to replace a non-functioning MR SRU without losing settings.

1. Remove the MR SRU.

Figure 9: Remove MR SRU

2. Move the CT SRU to the machine room.

CT SRU

CT SRU

COP SRU

Figure 10: Replacing MR SRU with CT SRU

3. Reprogram the CT SRU as the MR SRU.

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4. Install the new CT SRU.
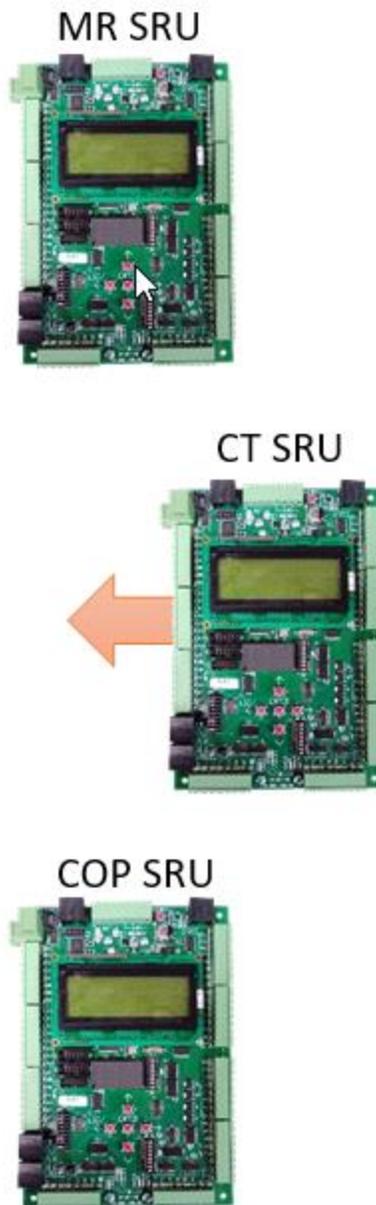
MR SRU

CT SRU

COP SRU

Figure 11: New CT SRU

5. Car is ready to run.

MR SRU

CT SRU

COP SRU

Figure 12: Thee good SRU's

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Software Extraction to Laptop

The software can be provided by an online download link. If an update was made to the job OR the flash drive is not available, Smartrise can send an e-mail with a link to a downloadable zip file for the software.

For example: http://smartrise.info/Software_packages/Smartrise_Job_(111112-001).zip

Download Zip File

Perform the following to download the zip file.

1. Click on the link and choose Save As to save the zip file to the laptop, preferably to the desktop.
   NOTE: There are several ways to open a zip file. The laptop should have the capability to extract the file to a location of your choosing. If not, you need to download a free program from the internet to unzip this file.
2. Navigate to the location of the saved zip file and double click on it to show the contents.
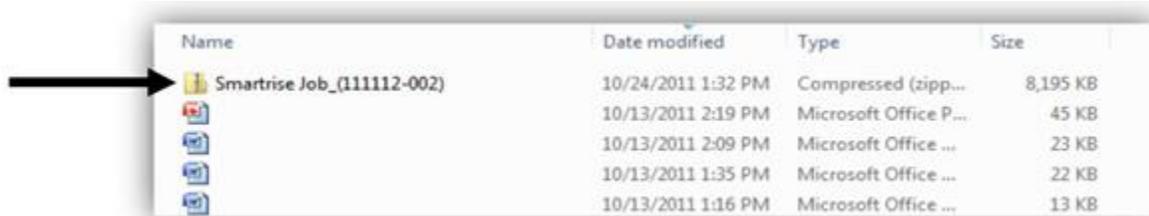
Figure 13: Zip File Location

3. For those laptops that do not allow the Smartrise programmer to run directly from a zip file, copy all the contents of the zip file to a folder on the laptop.
4. Proceed with the installation of the programmer (if not already installed) and software files.

Figure 14: Programmer and Software Files

Installing the Smartrise Programmer

Special considerations need to be made when installing the software.

The following procedure describes how to install the Smartrise Programmer Application

1. Double click on (5) New Smartrise Programmer Folder in the software package. See Figure 14.
2. Double click on 1 - Programmer Installer folder.
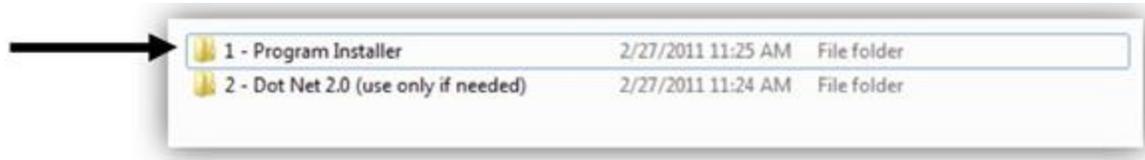
Figure 15: 1 - Programmer Installer Folder

3. Install the Smartrise Programmer.

Figure 16: Smartrise Programmer

Installing the Controller Software

Once the Smartrise Programmer software is installed, the controller software must be installed.

The following procedure describes how to install the controller software.

1. Once the Smartrise Programmer is installed, navigate back to the list of the software package folders and double click on the (1) - Controller Software folder. See Figure 14.
2. Double click on the Controller Software folder, in this example the version is 2.20h. The version will vary on the production date of the job.

Figure 17: Controller Software Folder

3. Double click on the JCF file. If it does not open, then the Smartrise Programmer might not be correctly installed. See Installing the Smartrise Programmer

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4. to reinstall the Smartrise Programmer.
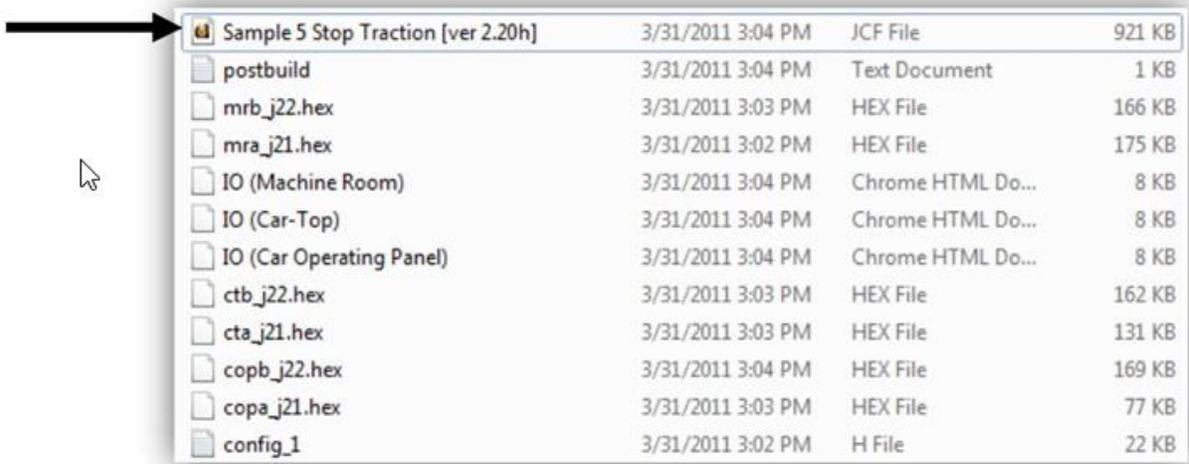
Figure 18: JCF File

5. The Smartrise Programmer Interface Programmer displays.
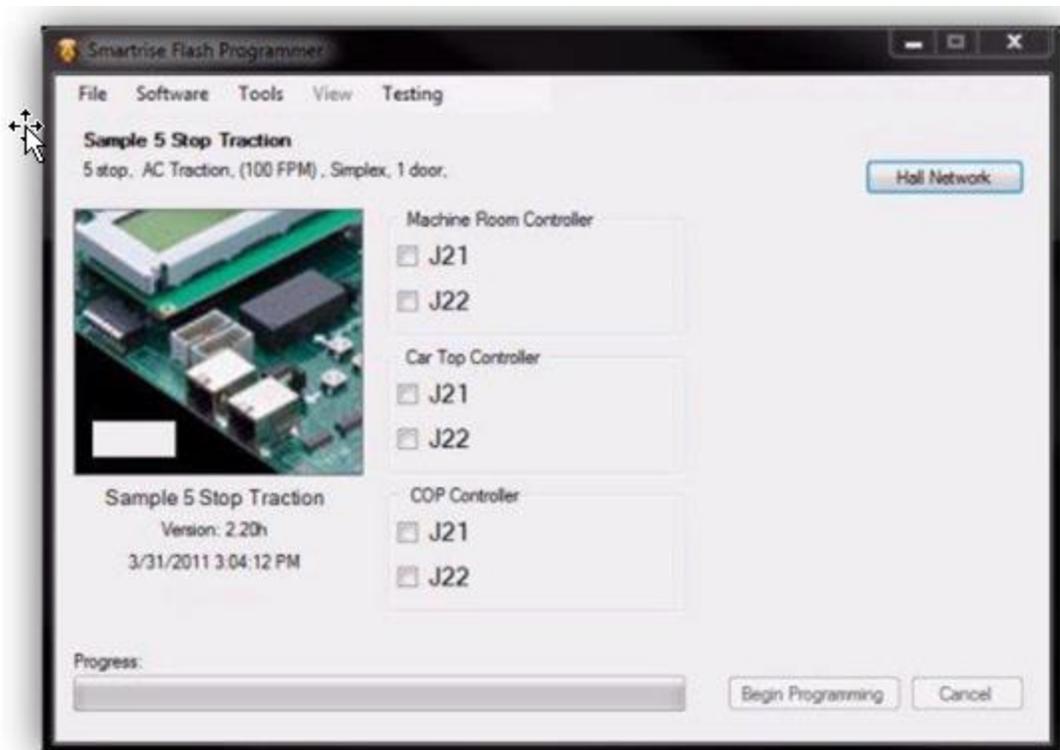
Figure 19: Smartrise Flash Programmer

NOTE: All controller software is located on this interface except the group software.

Software Provided by Flash Drive

Every Smartrise job is provided with a binder that consists of one flash drive containing software for the specific job. Smartrise controllers are shipped initially with the software already installed on the controller; these flash drives are provided as back-ups.

The following procedure describes how to install the software via a flash drive.

1. Insert the supplied flash drive into the USB port.
2. Do the software menus display?

   a. If the software menus display (see Figure 14), go to step 5.
   b. If the software menus do not display, go to 3.

3. Click My Computer and then click on flash drive.
4. Click on Open folder to view files to explore the Smartrise folders.
5. Double click (1) - Controller Software. See Figure 14.
6. Connect the Smartrise Programmer to the laptop via USB.
7. Connect the other end to the JTAG port on the controller.
   CAUTION: It is imperative that you install the correct software onto the correct JTAG port.
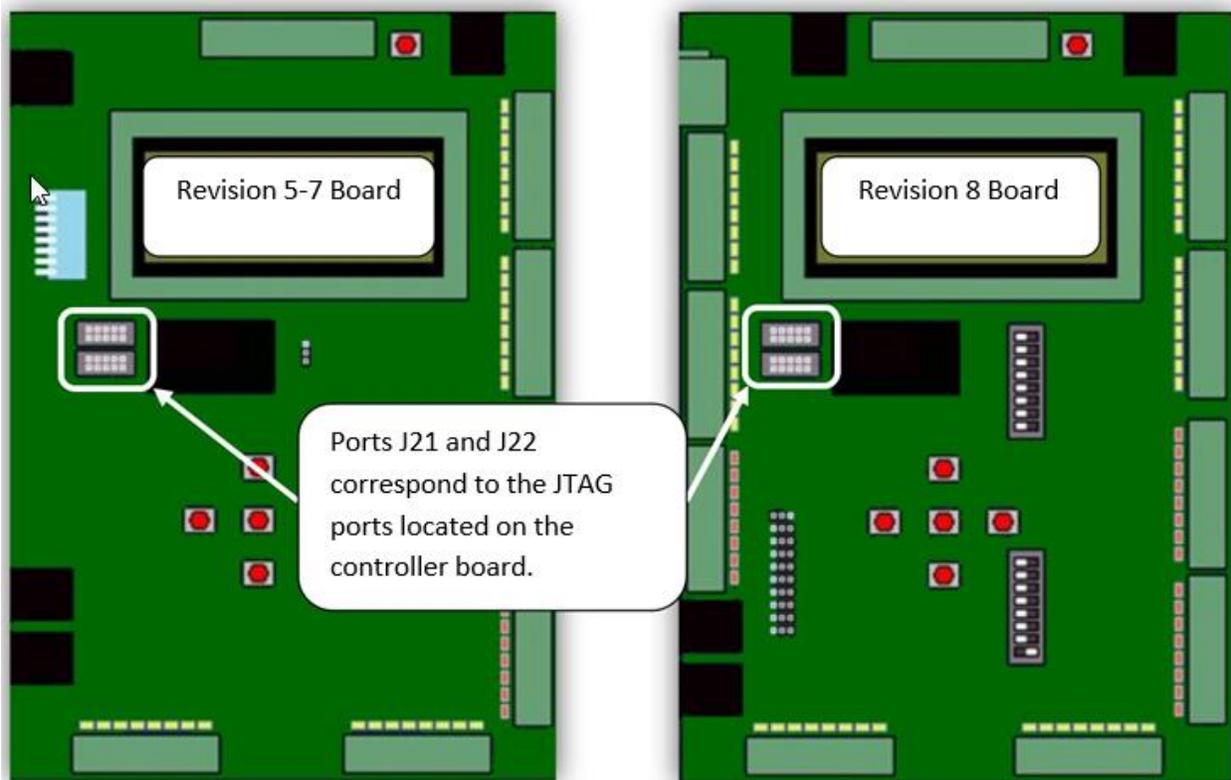
Figure 20: JTAG Port

Installing the SRU Software

WARNING

THE LAPTOP NEEDS TO BE FULLY CHARGED FOR THIS PROCESS. PLUGGING IN THE LAPTOP TO AN AC SOURCE WHILE INSTALLING THE SOFTWARE COULD DAMAGE THE SRU BOARD.

DO NOT DISCONNECT THE PROGRAMMER POD FROM THE SRU BOARD WHILE THE CONTROLLER IS BEING PROGRAMMED.

Identify which controller you are installing, Machine room, Car-Top, or COP.

A controller cannot be programmed without power applied. Ensure that 24 VDC is applied to the controller.

Programming a New MR Controller

The following procedure describes how to program a new MR controller.

1. Turn on Dip Switch 1 (Dip A). When Dip Switch 1 is activated, a F77: CPU Stop Switch fault is displayed on the controller.
2. Plug the programming pod's ribbon cable connector into the J21 port.
3. Select the J21 checkbox on the Smartrise programming application.

Figure 21: J21 and J22 Checkbox

4. Click the Begin Programming button on the bottom of the programming interface to begin programming the board.
   The progress report bar moves until the programming has been completed. Upon completion a Done message is displayed.
   NOTE: Verify the POWER and RUN LEDs on the programming pod itself are off before disconnecting from a controller.

5. Move the programming pod from port J21 to J22, then click on the J22 check box and begin programming. See Figure 21.
6. When programming is completed, cycle the power.
   WARNING: ** DO NOT PRESS THE RESET BUTTON **

7. Reprogramming an existing SRU board or programming a newly installed MR SRU board only?

    a. If reprogramming an existing SRU board, do not perform the DEFAULT ALL procedure as this will erase all existing settings. Go to step 10.

    b. If programming a newly installed MR-SRU board, got to step 8.

8. Go to MAIN MENU | SET UP | DEFAULT ALL | select Yes and press the center button. The controller begins defaulting all the factory parameters to the original programming (This could take several minutes).

9. Cycle power again.

10. When the controller is fully powered and finished loading, turn off Dip Switch 1.

11. Verify that the controller is programmed correctly by going to the MAIN MENU | ABOUT screen. Is all the information correct?

    a. If all the information is correct, the MR Controller has been successfully programmed.
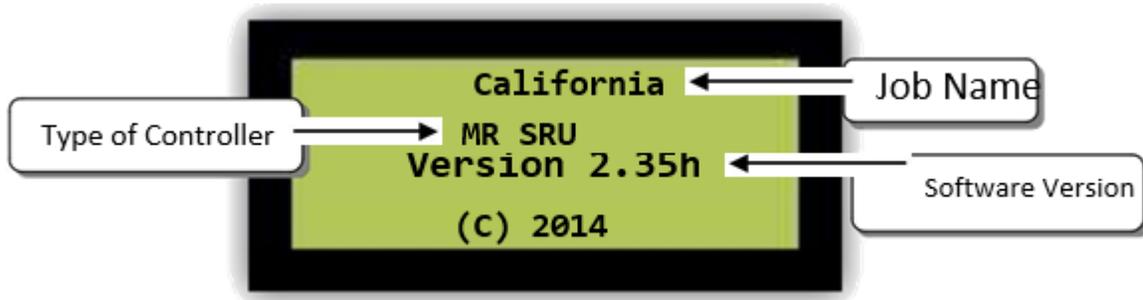
Figure 22: Successful Program

    b. If the information is not correct, go to step 1.

Instructions for Programming a CT/COP Controller

Programming the CT/COP boards is very similar to programming a MR controller. When programming these boards, it is not necessary to activate Dip Switch 1 and DEFAULT ALL.

A controller cannot be programmed without power applied. Ensure that 24 VDC is applied to the controller.

The following procedure describes how to program a new CT/COP controller.

1. Plug the programming pod's ribbon cable connector into the J21 port.
2. Select the J21 checkbox on the Smartrise programming application. See Figure 21.
3. Click the Begin Programming button on the bottom of the programming interface to begin programming the board.
   The progress report bar moves until the programming has been completed. Upon completion a Done message is displayed.

NOTE: Verify the POWER and RUN LEDs on the programming pod itself are off before disconnecting the pod from the controller.

4. Move the programming pod from port J21 to J22, then click on the J22 check box and begin programming. See Figure 21.
5. When programming is completed, cycle the power.
   WARNING: ** DO NOT PRESS THE RESET BUTTON **

6. When the controller is fully powered and finished loading, verify that the controller is programmed correctly by going to the MAIN MENU | ABOUT screen. Is all the information correct?

   a. If all the information is correct, the CT/COP Controller has been successfully programmed. See Figure 22.
   b. If the information is not correct, go to step 1.

Instructions for Programming a Group Controller for Non-Simplex Jobs

Group controller software is located in the Controller Software folder.

(1) - Controller Software	3/31/2011 4:29 PM	File folder	
(2) - Drawings	3/31/2011 4:29 PM	File folder	
(3) - Supplemental Documents	2/27/2011 11:19 AM	File folder	
(4) - Manuals	2/27/2011 11:34 AM	File folder	
(5) - New Smartrise Programmer	2/27/2011 11:26 AM	File folder	
(6) - Old Flash Programmer	2/27/2011 11:23 AM	File folder	
About These Folders	2/27/2011 12:04 PM	Rich Text Format	2 KB
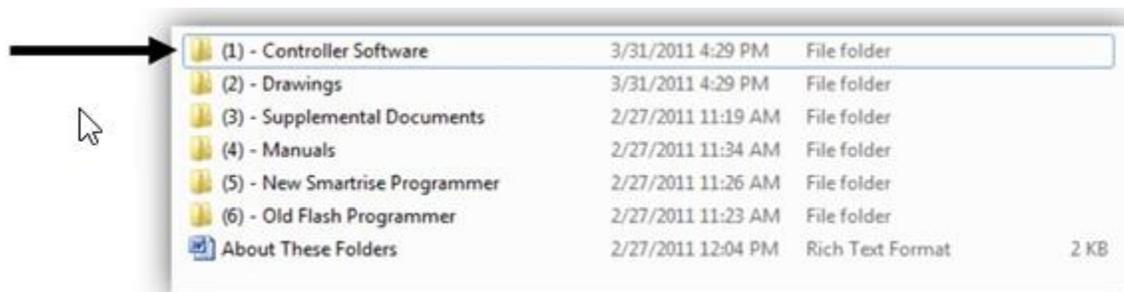
Figure 23: Controller Software Folder

The folder is clearly labeled Group Software.

A controller cannot be programmed without power applied. Ensure that 24 VDC is applied to the controller.

The following procedure describes how to program a group controller for non-simplex jobs.

1. Activate **Dip Switch #1** on the group controller. (The group controller will not fault like the MR controller.)

2. Select the J21 checkbox on the Smartrise programming application.

Figure 24: J21 and J22 Checkbox Group Controller

3. Click the Begin Programming button on the bottom of the programming interface to begin programming the board.
   The progress report bar moves until the programming has been completed. Upon completion a Done message is displayed.
   NOTE: Verify the POWER and RUN LEDs on the programming pod itself are off before disconnecting from a controller.

4. Move the programming pod from port J21 to J22, then click on the J22 check box and begin programming. See Figure 24.
5. When programming is completed, cycle the power.
   WARNING: ** DO NOT PRESS THE RESET BUTTON **

6. Go to MAIN MENU | SET UP | DEFAULT ALL | select Yes and press the center button.
   The controller begins defaulting all the factory parameters to the original programming. (This could take several minutes.)
7. Cycle power again.
8. When the controller is fully powered and finished loading, turn off Dip Switch 1.
9. Verify that the controller is programmed correctly by going to the MAIN MENU | ABOUT screen. Is all the information correct?

   a. If all the information is correct, the MR Controller has been successfully programmed. See Figure 22.
   b. If the information is not correct, go to step 1.

Should you experience any issues, contact out Technical Support Team at 916-457-5129.