



## **SECTION 11 – CONTROLLER COMMUNICATION INTRODUCTION**

This section describes how to communicate, or “interface” with the **Futura™** controller via either a PC/Laptop or a VT100-terminal (Human Interface). This section is critical in setting up the controller and performing diagnostics. We recommend that you read it over carefully. If you have any questions about any part of this section, please call CEC Technical Support.

This manual uses several important terms repeatedly, which describe various ways information is transferred between the user and the system. They are called: **error codes, commands, input, output, parameters, bits, and devices**. In some cases, these terms are interchangeable, but most often, each refer to a specific type of communication between the system and you, or communication within the system.

**ERROR CODE:** A failure (also called fault or error) status indicator, which is returned by the system in order to locate the source/resolution of a problem occurrence. The manufacturer programs these codes into the system (i.e.: Error code 96 signifies that the SPU board tach was not in UP position while car was running UP).

**COMMAND:** A request entered (or “input”) by the user (via the computer keyboard) which orders the controller to perform a specific function (i.e.: <RFL> asks the system to **Reset** all the **Faults**). Commands must be recognizable to the system in order to trigger a response, and therefore are written exclusively in the language of the system by the manufacturer. Various tables of commands and their descriptions are presented in this section, and most commands in this manual are presented in a specific way for easy identification and input.

**INPUT:** Data entered by the user or from external mechanical devices (i.e.: switches, sensors, etc.) which is necessary for the system to process information and execute commands.

**OUTPUT:** Data (signals) sent from the CPU to the mechanical devices to (de)activate.

**PARAMETER:** A variable entered (or “input”) by the user and assigned a value, which refers to a specific function of the system. Parameters are used for setting limits, timers, etc. ----- (i.e.: <CDT = 5> is what is entered to set the Car Call Door Timer at 5 seconds)

**BIT:** A variable setting, which determines enabling, or disabling of specific features in the system. (Similar to a toggle switch)

**DEVICE:** Generic term usually referring to a physical, mechanical component (i.e.: board, switch, or other mechanical equipment) monitored by and used to execute or trigger input and output signals.

**Note:** *We recommend that a list of the parameter and bit settings be recorded and maintained for each individual controller as each initial controller setup is completed. This list will be helpful in the event the settings are accidentally changed or lost. We also recommend that any person placing a technical support call to CEC have this list available.*

### **TERMINAL MODE OPERATION**

Terminal Mode operation allows the user to interface directly with all the parameters and commands of the controller. One does not need the **Futura™ WIZARD** interactive tool to operate exclusively on terminal mode. A PC with a 9-pin serial port and any regular VT-100 terminal emulating program can be used to interface with the controller. (the program “HyperTerminal” is standard with Windows)

Your computer or terminal must be connected to P11 (USER) RS-232 port located on the left side of the SPU Link board. The following communication parameter settings must be available:

Baud Rate	19200
Word Length	8
Parity	No Parity
Stop Bit	1
Flow Control	Xon / Xoff



### WIZARD MODE OPERATION

The *Futura*™ **WIZARD** is a PC-based visual interface, which operates under the Microsoft Windows operating system. The information is grouped logically, permitting easy navigation through the menus with the tool's built-in mouse.

The **WIZARD** permits interfacing with most controller functions, including most commands parameters, diagnostics, and uploading of software (whereas the Terminal mode only permits manipulation of parameters and commands, which are accessible exclusively through Terminal mode). Door timing setup, speed curve setup, diagnostics, or downloading new software are a few functions accomplished by selecting, with the mouse, the appropriate *icon*. However, full Terminal operation is also available from within the **WIZARD**.

Menus within the **WIZARD** software program make adjustments easy for those not familiar with the *Futura*™ parameters. The **WIZARD** software is provided for *Futura*™ installations. This *Futura*™ interactive tool is based on a regular PC or a notebook PC with integral mouse control (preferred) and requires a standard RS-232 serial communication port (usually COMM 1) to operate. The integral mouse control is preferred because notebooks without the integral port use the RS-232 serial communication port for the mouse. The **WIZARD** is an optional item, available in color or monochrome. The online HELP system for this visual interface is provided with the **WIZARD** software.

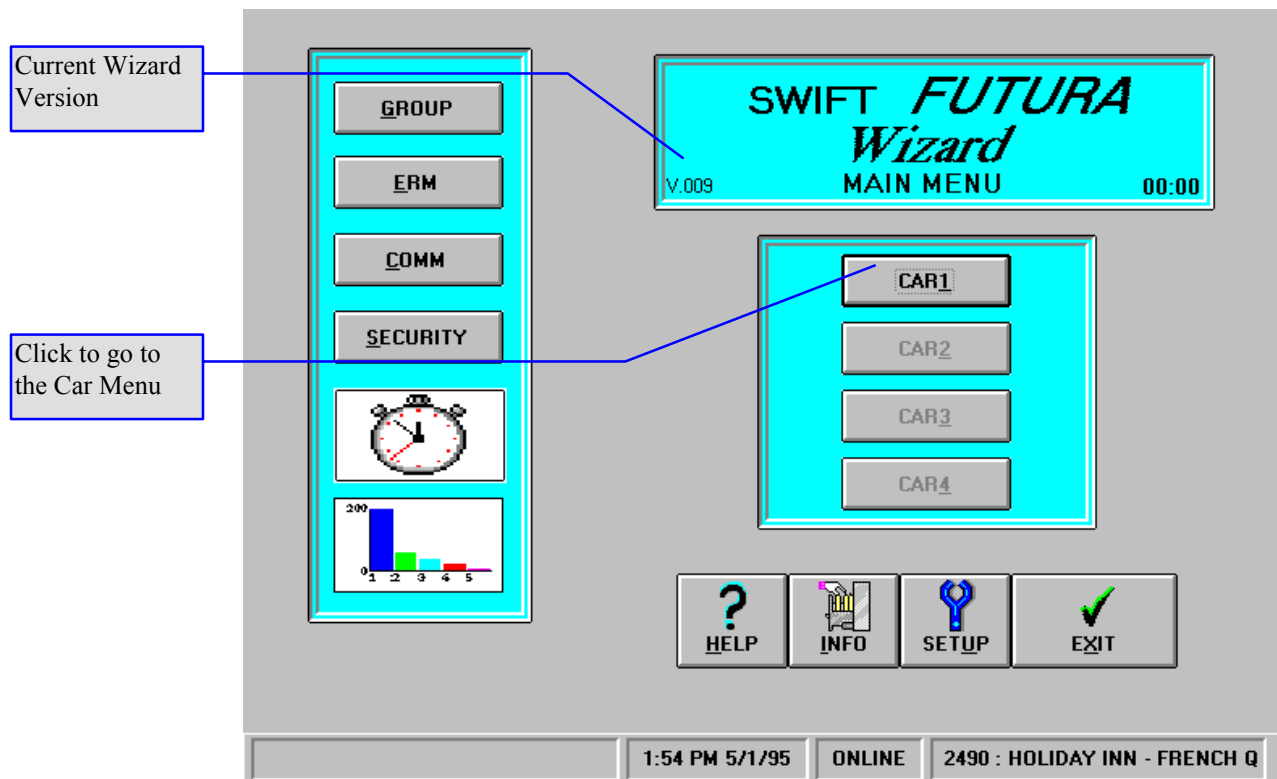


Figure 11-1



## CONTROLLER COMMANDS & PARAMETERS

### LINE EDITING AND CONTROL CHARACTERS

The examples shown in this chapter are based on the assumption that **no typing errors** occur. The *Futura*™ Operating System has line-editing controls to permit you to correct typing mistakes.

You can use specific characters to control and edit terminal input. Some of these characters correspond to single keys on your terminal.

Examples:

**<enter ↵>** = Carriage RETURN

**<backspace ← >** = DELETE).

Any time you need to delete a character, use the backspace key. The delete key **<del>** is not used on the *Futura*™.

For control characters, you must hold down the **<ctrl>** key while also pressing an alphabetical key. The *Futura*™ Operating System recognizes these control/edit characters:

**<enter ↵>**

Terminates the current line and executes the command.

**<backspace ← >**

Deletes the previous character in the input line. Each execution of the Backspace key (←) removes a character from the screen and moves the cursor back to that position. Used in place of delete **<del>** key.

#### OPTIONAL----->

**<ctrl>+<R>**

If the current line is not empty, this command reprints the line including any editing that's been performed. If the line is empty, it reprints the previous line and executes it.

**<ctrl>+<X>**

Discards the current line: echoes a pound sign (#) followed by a carriage return/line feed.

**<ctrl>+<S>**

Places the terminal in stopped mode (stops output). This feature can be used to pause or freeze the display when viewing scrolling data. You can resume output without loss of data by entering **<ctrl> +<Q>**.

**<ctrl>+<Q>**

Resumes output mode. (See **<ctrl>+<S>**)

**<ctrl>+<Z>**

Aborts output to the terminal. This feature can be used to stop scrolling data on the display and return to the terminal prompt.

## POWER-UP OR RESET MESSAGE SEQUENCE

When power is applied to the SPU chassis, the CPU board boots up invoking a System Confidence Test (**SCT**). This confidence test will display its results on the terminal through the human interface port. The normal power-up or reset message sequence is shown in the example below. A GO or NO GO status indicates whether or not the test was successful. If any of these tests fail, the processor will not enter into the control mode.

The RAM Memory and FLASH Memory (EEPROM) tests are associated with devices on the CPU board. If the FLASH test fails, it probably indicates a **checksum** error or invalid job parameter(s).



FUTURA 5434-1 Car # 1)	
Software Version 0.1	
System Confidence Test	
TEST	STATUS
Memory (CMOS RAM)	GO
Video Display	GO
Job Configuration	GO
I/O Configuration	GO
Analog Load Weigher	GO
EEPROM (Car Parameters)	GO
EEPROM (Group Parameters)	GO
WAIT...Initializing Drive	
Enter Password >	
On Line	

*Figure 11-2 System Confidence Test Screen (No Failure)*

When new software is installed in the car controller, it may be necessary to initialize the FLASH (EEPROM). To determine if the FLASH requires initialization, check the "Status" in the System Confidence Test (SCT) for "No EEPROM". (See System Confidence Screen Figure 11-3.) Check both the "FLASH (Car Parameters)" and "FLASH (Group Parameters)" lines. If status is "No EEPROM", then the FLASH must be initialized.

*Note:* the Video board installed on the main processor as well as an analog load-weighing sensor are options.

FUTURA 5434-1 Car # 1)	
Software Version 0.1	
System Confidence Test	
TEST	STATUS
Memory (CMOS RAM)	GO
Video Display	GO
Job Configuration	GO
I/O Configuration	GO
Analog Load Weigher	GO
EEPROM (Car Parameters)	NO-GO
### EEPROM NO EEPROM	NO-GO
WAIT...Initializing Drive	
Enter Password >	
On Line	

*Figure 11-3 System Confidence Test Screen (Flash Memory Failure)*

**Initialize Flash (Car Parameters)**

Note: this procedure loses all previous adjustments

To initialize **FLASH (Car parameters)**, perform the following steps (Terminal Mode only):

1. Get Car Prompt: Logon as <HUDSON.BAY>  
<enter ↵>
2. Enter <EPI2374> to initialize the RAM memory. (wait 10 seconds and recycle main processor [Circuit Breaker 2])
3. Additional parameter adjustments may be needed. Enter system with password "install", enter <GET> to update the RAM. If any parameters require adjustment, a message will be displayed naming the parameter. A value is entered for this parameter and steps 2 and 3 are repeated. If after entering <GET> your response is "OK", then you have successfully completed the initialization of **FLASH (Car Parameters)**.



4. If the car has previously been adjusted, parameters saved and the EEPROM data has failed, the car will power up as **car #0** and will show a prompt of C# 0>. To attempt to recover parameters, follow steps 5 through 7).
5. Logon as <HUDSON.BAY> <enter ↵>.
6. Enter <GET> <enter ↵> to read data into RAM. Any parameters with errors will be displayed. If parameters cannot be updated, call CEC.
7. Correct the individual parameter then enter <WRT> <enter ↵>. Repeat until you receive a response of "OK" indicating that all parameters are fine. If there were more than 5 parameters with errors, it would be better to re-initialize the EEPROM with the EPI2374 command and start over at step 1.

**Initialize Flash (Group Parameters)**

To initialize **FLASH (Group parameters)**, perform the following steps (Terminal Mode only):

1. Get Car Prompt: Logon as <HUDSON.BAY> <enter ↵>
2. Go to Group prompt: Enter <GRP>
3. Enter <EPI2374> to initialize the EEPROM memory. (wait 10 seconds and recycle main processor [Circuit Breaker 2])
4. To return to the Car prompt, enter <CAR>.

**LOG-ON**

When prompted for the password, type in the system password, then <enter ↵> (see Note). Each character you type will be displayed as an asterisk on the terminal screen for security. It is important that you enter the password carefully. If you enter the password incorrectly, the system will prompt you to reenter the password continually until the correct password is entered. When the system acknowledges a valid password, it will return the prompt "OK".

**Note:** <INSTALL> is the factory default system password. Each time you disconnect and

*then reconnect the terminal, you must reenter the password.*

EXAMPLE (How to Type in the Password)

```

Enter Password
On Line
***** <enter ↵>
(* represents each key entry of the password)
OK>
C # 1 =>

(ready to perform diagnostics or adjustments)

```

**CHANGING PASSWORDS**

The Change Password <CHP> command has been provided to allow the user to change the default passwords used to enter the human interface. The first two levels of password protection can be changed using this command (see below).

**Caution:** *Once the passwords are changed, CEC will not be able to help you in case you forget the new passwords. To provide extra security, the passwords cannot be read back from the terminal. It is critical that you write down any new passwords and store them in a safe place.*



	<u>FACTORY SET &lt;PASSWORD&gt;</u>	<u>PROMPT</u>	<u>FIXED?</u>	<u>AVAILABLE FUNCTIONS</u>
<u>Level #1</u>	SNOW-FLAKE	C# 1=:	(Changeable)	Adjust, View, and Change Password
<u>Level #2</u>	INSTALL	C# 1=>	(Changeable)	Adjust and View
<u>Level #3</u>	INSTALL	C# 1=>	(Changeable)	Adjust and View
<u>Level #4</u>	HUDSON.BAY	C# 1=.	(Fixed)	View Only

Figure11-4

To change any of the passwords you must first log-on using the level #1 password, then type the <CHP> command. You will be prompted for the password ID level and the new password. You will be prompted to enter the password twice in order to ensure that the password is entered correctly. It is then necessary to execute the <WRT> command in order to save any changes made with the <CHP> command.

**Note:** The prompt " =: " indicates that you have logged-on using the 1st level password. <SNOW-FLAKE> (you must include the dash) is the default 1st level password.

**To Change the Password:**

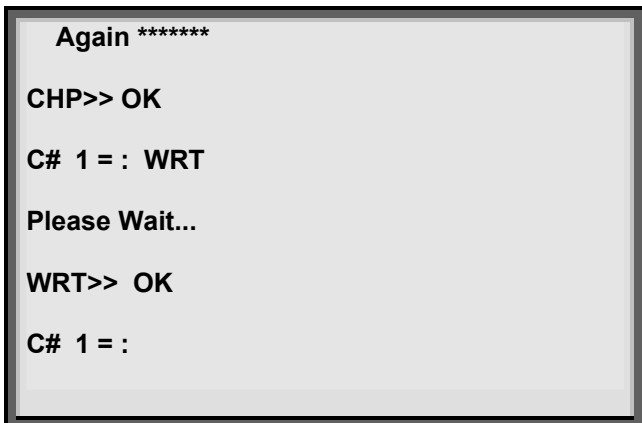
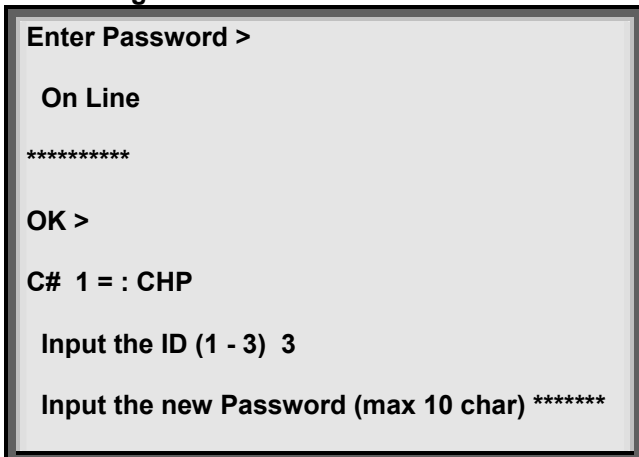


Figure 11-6 Change Password Screen

**SAVING PARAMETERS**

A Parameter Menu is available to save all Car and Group Parameters to a file on your computer or floppy disk. These Parameters can then be reinstalled on the controller at a future time. It is HIGHLY recommended that the Parameters be saved after any time significant changes are made to parameter settings.

**TRIGGERING FOR ERRORS** (Frame Capture)

The **WIZARD** contains a frame capture feature. When the icon is clicked, a new set of icons are available. Clicking the "setup" icon at the bottom of the screen, allows the user to arm the wizard to "capture frames" on a particular error. Once the user has chosen the error and clicks "activate", the **WIZARD** will wait for the error to occur. When the error has occurred, a "video" will be available which shows all the information concerning car operation for 45 seconds prior to the fault. This "video" may be played back and forth in 1/16 of a second frame intervals through easy to use icons. The captured frames can also be saved and played back when the PC / laptop is disconnected from the controller. The captured frames can also be emailed to CEC for further analysis.



Figure 11-5

To Change the Password:

- |                                   |  |
|-----------------------------------|--|
| 1. Log on as <SNOW-FLAKE> <enter> | 5. Type <WRT> <enter ↵> (Write to FLASH memory. Saves change.)   |
| 2. Enter password level.          | 6. Disconnect the connector from the P15 USER port and then reconnect it. You should now be able to log-on using the new password. |
| 3. Enter new password.            |  |
| 4. Repeat password entry.         |  |

## Swift-Futura Remote Video Unit Operation (optional)

### Introduction

This section will provide a complete understanding of the operation of the SWIFT **FUTURA™** Remote Video Unit (RVU). By using the four push buttons on the front panel of the RVU, a variety of functions can be performed. These functions include:

- setting hall calls and car calls
- error tracking
- error analysis.

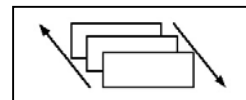
These features make the RVU an invaluable tool for troubleshooting and diagnostics.

The RVU communicates to the group controller (SPU) on the Car to Group bus (CTG). Since the Futura system is a distributed system, any of the cars in the bank can act as the group. Therefore, the RVU can be wired to any controller in the bank. The RVU will communicate with whichever controller is acting as the group. Once connected, it is possible to view information from all of the cars in that particular bank.

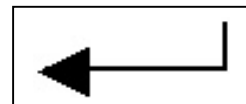
There are two main screens displayed by the RVU:

1. Group Screen, which shows all of the elevators in the bank, their position and movement.
2. Car Diagnostic Screen, which provides detailed information on the status of the car being viewed.

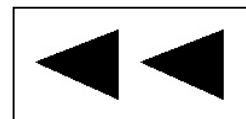
Depending on which screen is being viewed, the push buttons can be used to perform different tasks. Throughout the remainder of this document, the push buttons will be referred to as:



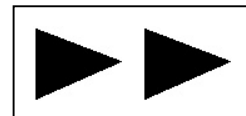
**Rotate Screen**



**Enter**



**Scroll Left**



**Scroll Right**

Figure 11-7

Become familiar with these buttons and their names. A full description on the use of the push buttons and the functions they perform will be provided in the following pages.



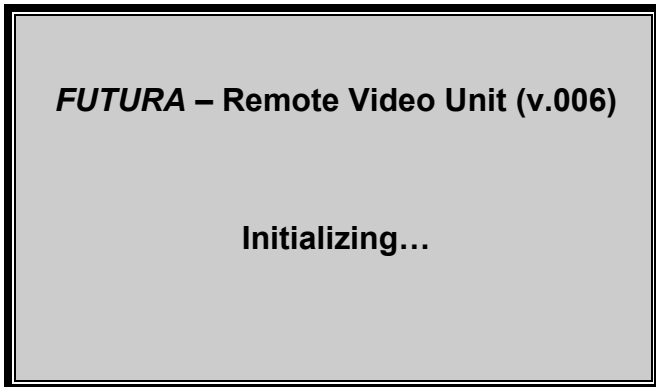
**INITIALIZATION AND COMMUNICATION SETUP** (Set at factory)

Before powering up the RVU, consult the wiring diagram. Remember, when wiring the RVU, the transmit and receive lines are swapped with the SPU. **Example:**

**T<sub>x</sub>- on the RVU is wired to R<sub>x</sub>- on the SPU**

Once proper wiring is confirmed, connect the VGA monitor to the RVU and power on the monitor and RVU.

After a few seconds, the following screen will appear:



*Figure 11-87*

If the EMIS feature was purchased, the screen will display “Remote Video Unit & EMIS.”

When this screen appears, you have approximately three seconds to access the communication setup menu. To enter communication setup, press the rotate screen button as soon as the initialization screen appears. The following screen will appear:

Communication Setup			
PORT	BAUD RATE	SIGNAL TYPE	COMM ADDRESS
REMON/WIZARD	19200	RS-232	1
CTG/HC	38400	RS-485	212
[ ] DONE	<-CHANGE	<<>> UP/DOWN	<< LEFT >>RIGHT

The default settings are shown in the screen illustration.

The only time it will be necessary to change any settings is when a Remote Monitoring System is being used. If any changes need to be made and the message “Unable To Setup Comm” appears on the screen, disconnect the connector from the CTG/HC port on the back of the RVU.

**If line drivers are used to communicate to a Remote Monitor PC, the comm setting for the Remon/Wizard port will need to be changed:**

1. Press the scroll right button until the signal type for the Remon/Wizard port is highlighted.
2. Next, press the Enter button to change the value from RS-232 to RS-485.
3. Once this value has been changed, press the rotate screen button (DONE). The RVU will reset and the change will take place.
4. Reconnect the CTG/HC port after the RVU resets.



The menu can also be used to set up extended RVUs. In this configuration, more than one RVU can be connected to the same group on the same bus. One RVU, the master, will communicate to the SPU at address 212. Any other RVUs or extended RVUs connected to this group must use comm address 213. **To switch to the CTG/HC parameters:**

1. Press both the scroll left and right buttons simultaneously.

2. Highlight the comm address parameter.
3. Press the enter button to switch the address to 213.
4. Press the rotate screen button and the RVU will reset. Extended RVUs can only access the group screen, not diagnostic screens.

### THE GROUP SCREEN

After the RVU initializes successfully, the group screen, or motor room screen, will be displayed. A sample group screen is shown below:

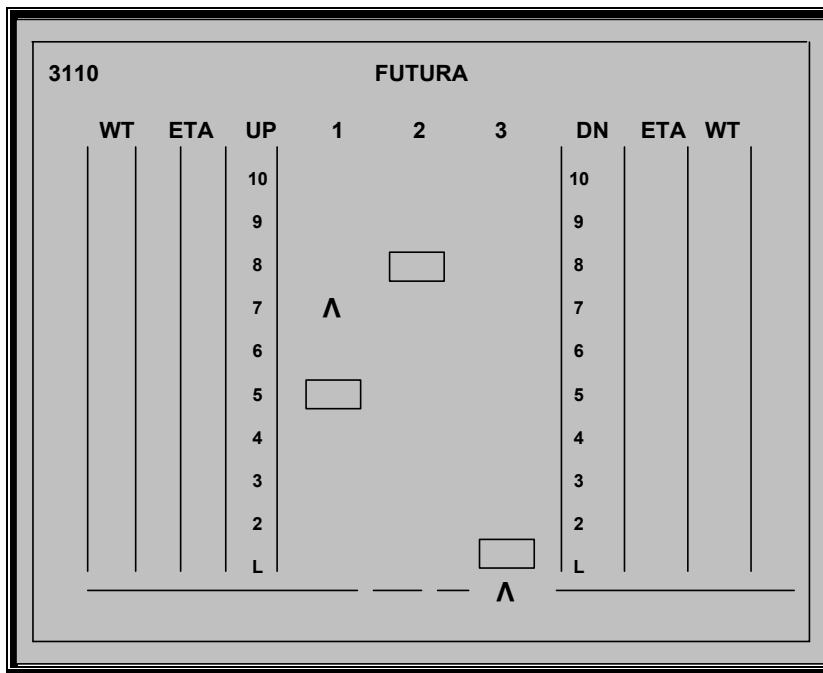


Figure 11-10

Note that the CEC job # is shown in the upper left corner of the screen. The left side of the display represents the wait time and estimated time of arrival for UP calls. DOWN call information is displayed on the right side of the screen.

**From this screen, the push buttons can be used to perform various functions:**

1. The Rotate Screen button is used to rotate the screen from the group display to the car diagnostic screen. Pressing this button once from the group screen will display the diagnostic screen for car one.

2. To see the next car, press the Rotate Screen button again. It is possible to scroll directly to a desired car's diagnostic screen without scrolling through all of the cars' screens.
3. By pressing the Scroll Left button or the scroll right button, a specific car number can be highlighted at the top of the screen.
4. Once the desired car is highlighted, press the Rotate Screen button to scroll directly to that car's diagnostic screen.



The functions available from the group screen include setting hall and car calls, changing the appearance of the group screen, and hiding the ETA and wait times.

**To access the list of functions available from the group screen:**

1. Press the Enter button. The command 'Hall Call' will appear at the bottom of the screen.
2. To scroll through the available commands, press the Scroll Left or Scroll Right buttons.

**SETTING A HALL CALL FROM THE GROUP SCREEN**

1. Once the command 'Hall Call' appears at the bottom of the screen, press the enter key. The option 'Set Up Call' will appear to the right.
2. To select 'Set Down Call' press the scroll right button.
3. Pressing the scroll right button again will bring up the 'Exit' option.
4. Once the desired function is selected (up call, down call, or exit) press the enter key. If an up or down call was selected, the command 'Select Floor' will appear.
5. Use the scroll left and scroll right buttons to set the desired floor and press the enter key. The call will be set at that floor and the commands will clear from the bottom of the screen.
6. You also have the option to exit from the 'Select Floor' option. If 'Exit' is selected, all the commands will clear from the bottom of the screen and no calls will be set.

**SETTING A CAR CALL FROM THE GROUP SCREEN**

**In order to set a car call, you must first select a car. To do this:**

1. Press the scroll right or scroll left button until the desired car is highlighted.

2. Then press the Enter key once, select the option 'Car Call', and press enter. The option 'Set Car Call' will appear to the right.
3. You can also select the option 'Exit' from here.
4. To set a call, select 'Set Car Call' and press Enter. The command 'Select Floor' will appear to the right.
5. Use the scroll left and right buttons to select the desired floor and press Enter. The call will be set at that floor and the commands will clear from the bottom of the screen.

**CANCELING CAR CALLS FROM THE GROUP SCREEN**

**This option can only be selected if a car call has been set for the highlighted car:**

1. Press the Enter key, select 'Car Call', and press Enter. The option 'Set Car Call' will appear.
2. Press the scroll right button once and the command 'Cancel Car Call' will appear.
3. Press Enter to activate this command. This cancels **ALL** of the car calls for that car.

**CHANGING THE APPEARANCE OF THE GROUP SCREEN**

**This option allows the user to select different preset colors for the group screen as well as to hide/show the ETA and wait times:**

1. Press Enter once, select the option 'Group Screen', and press Enter. The command 'Hide ETA & Wait Time' will appear.
2. Pressing Enter will cause the ETA and wait time columns to disappear from the display. Also, the service type and job number will not be displayed. The next time this option appears, it will read 'Show ETA & Wait Time'.
3. Press Enter to return to the original display.
4. If you do not wish to select this option, use the scroll right button to select 'Select Preset Colors' or 'Exit'.



5. If 'Select Preset Colors' is chosen, the command 'Preset Color 1' appears. There are 10 preset color options. Use the scroll left and right buttons to choose a preset color and press Enter.
6. The screen will change colors and the commands will clear from the bottom of the screen.

## **THE CAR DIAGNOSTIC SCREEN**

### **To access a car diagnostic screen:**

1. Press the rotate screen button from the group screen.
2. To scroll to the next car, press the rotate screen button again. Pressing the rotate screen button from the last car in the group will return you to the group screen.
3. To return to the group screen without scrolling through all of the cars, press and hold in the rotate screen button for two seconds and then release it. This will return you to the group screen, regardless of which car diagnostic screen was being displayed.

There are eight SMI blocks displayed on a car diagnostic screen. **To rotate the SMI blocks:**

4. Press either the scroll left or scroll right button. This will rearrange the blocks and allow the user to see any remaining SMI blocks. Only eight blocks can be displayed at one time.
5. As with the group screen, pressing the Enter key will bring up an options menu. This menu will appear in the middle of the screen. The available commands are:

**Set Car Call**  
**Arm/Trigger**  
**Error Codes**  
**Reset Errors**  
**Exit**

In addition, if any car calls have been set for this car, the option '**Cancel Car Call**' will appear. (The option '**Error Codes**' will only appear for SPU version 17 and above and only when the car being viewed has any faults listed.)

6. Use the scroll left and right buttons to select the desired option and press Enter to activate it.

## **SETTING A CAR CALL FROM THE DIAGNOSTIC SCREEN**

**After selecting the 'Car Call' option, the command 'Set Car Call' will appear to the right:**

1. Press Enter. The command 'Set Floor' will appear.
2. Again, use the scroll left and right buttons to select a desired floor and press Enter to set the call.

## **CANCELING CAR CALLS FROM THE DIAGNOSTIC SCREEN**

**This option can only be selected if a car call has been set for the car being viewed:**

1. Press the Enter key.
2. Select 'Cancel Car Call', and press Enter.
3. Press Enter to activate this command. This cancels **ALL** of the car calls for that car.

## **TRIGGERING FOR ERRORS** (Frame Capture)

After selecting the option '**Arm/Trigger**', you have the option to 'Trigger Now' or 'Arm for Error'. If you select 'Trigger Now,' the screen will turn red and the Enter button will flash. The total number of frames and the current frame will be displayed. **To scroll through these frames:**

1. Press and hold in the rotate screen button and press the scroll left and right buttons.
2. For more trigger options press the Enter key and select 'Arm/Trigger'. The options are:

**Set Frame Increment**  
**Jump Frame**  
**Jump To Current Frame**  
**Play Backward**  
**Play Forward**  
**Reset**  
**Exit.**



Selecting 'Exit' will exit from this menu and leave the RVU in trigger mode. To exit trigger mode, select 'Reset'.

**The RVU can also be set to trigger only for certain errors:**

1. Select 'Arm/Trigger' and press Enter.
2. Scroll to the option 'Arm for Error' and press Enter. The error and its error code will appear to the right.
3. Use the scroll buttons to select the error desired for the RVU to trigger on and press Enter. When the error occurs, the screen will appear with a red frame and the Enter key will flash.
4. Press the scroll left button once (while holding in the rotate screen button) to find where the error occurred. Scroll left will then show the frames before the error, and scroll right will show the frames after the error.

## **VIEWING ERROR INFORMATION**

1. Select the option 'Error Codes' from the diagnostic screen menu and press Enter.

The screen will turn blue and the message "DOWNLOADING CONTROLLER FAULTS Please Wait..." will appear. After a few seconds, the Fault List screen will appear. Along the left side of the screen, there is a menu and directions on how to use the push buttons. The lower left corner displays the number of pages to view or the number of bytes.

- A. The first screen displayed is the fault list. This list displays the faults (by corresponding error code) in the order they occurred. Also listed with each fault is the number of times the fault occurred, the floor the car was on, and so on. Use the scroll left and right buttons to view the other pages of information.
- B. To switch to the Description list, press both of the scroll buttons simultaneously. This will bring up a list of all of the error codes and their descriptions. The descriptions are in the same order as the Fault List.

C. Pressing both scroll buttons again will bring up the Details screen. This is a visual representation of the car's status when the error occurred. Information such as the door status, motor field status, and brake status can be viewed. Each fault has three pages of information. The pages can be scrolled through using the scroll left and right buttons.

D. To see the List Description screen, press both scroll buttons. This will bring up a list of all of the acronyms used in the fault list (i.e. DMD, demand velocity). Each acronym is shown with a brief description. The control status words are also explained in detail. Scroll through this list and become familiar with the information it contains.

2. To exit the error diagnostics, press the Enter key. The car diagnostic screen will be displayed.

## **RESETTING ERRORS**

- Select 'Reset Errors' and press Enter from the diagnostic screen menu. This will clear all of the faults on the diagnostic screen.

