



## SECTION 11 –DIAGNOSTICS

This section describes how to communicate, or “interface” with the **Meridia™** controller via either a PC or a 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 operative terms, which describe various ways information is transferred between the user and the system. They are called: error code, command, input, output, parameter, bit, and device. In some cases, the terms are interchangeable, but most often each refers to a specific type of informational exchange between the system and the user, or within the system for serving different purposes.

**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. These codes are programmed into the system by the manufacturer (i.e.: Error code 96 signifies that the CCU 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, 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.

**DEVICE:** Generic term usually referring to a physical/mechanical component (i.e.: board, switch, or other mechanical equipment) monitored by and used to execute/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 **Meridia™ WIZARD** interactive tool to operate exclusively on terminal mode. A PC with a serial port and any regular terminal program can be used to interface with the controller.

Your computer or terminal must be connected to P15 (USER) RS-232 port located on the side of the CCU chassis. The following communication parameter settings must be available:

Baud Rate	19200
Word Length	8
Parity	No Parity
Stop Bit	1



### **Wizard Mode Operation**

The **Meridia™ 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.

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

### **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 **Meridia™** Operating System provides 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 (such as <enter ↵>/Carriage RETURN or <backspace ←> /DELETE). Any time it is necessary to delete a character, use the backspace key; the delete key <del> is not used on the **Meridia™**. For others, called control characters, you must hold down the <ctrl> key while also pressing an alphabetical key. The **Meridia™** Operating System recognizes control/edit characters as follows:

#### **<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.

The **WIZARD** software is provided for **Meridia™** installations. This **Meridia™** 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 reason why an integral mouse control is preferred is 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.

For comprehensive instruction on the **WIZARD**, please see the **Meridia™ WIZARD** Startup Guide.

#### **<ctrl>+<R>**

If the current line is not empty, this command reprints the line with editing performed. If it 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 CCU chassis, the CPU board boots up invoking a System Confidence Test (SCT). This confidence test will display its results on the terminal through the P15 USER 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 (except the load weigher) 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).

MERIDIA	5434-1	Car # 1)
Software Version 0.1		
System Confidence Test		
TEST		STATUS
Memory (CMOS RAM)		GO
Battery Test		GO
LCD Display		GO
Job Configuration		GO
I/O Configuration		GO
Analog Load Weigher		GO
EEPROM (Car Parameters)		GO
EEPROM Parameters)	(Group	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 below.) Check both the "FLASH (Car Parameters)" and "FLASH (Group Parameters)" lines. If status is "No EEPROM", then the FLASH must be initialized.

MERIDIA	5434-1	Car # 1)
Software Version 0.1		
System Confidence Test		
TEST		STATUS
Memory (CMOS RAM)		GO
Battery Test		GO
LCD 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)

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.
3. Additional parameter adjustments may be needed. 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. Power down and Power up CCU. Re-log the System password.



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.
4. Additional parameter adjustments may be needed. Enter <GET> to update the RAM. If any parameters require adjustment, a message will appear naming the parameter. Enter a value for this parameter and repeat steps 2 and 3. If after entering <GET> your response is "OK," you have successfully initialized FLASH (Group Parameters).
5. To return to the Car prompt enter <CAR>.
6. Power down and Power up CCU. Re-log password.

**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 re-enter the password continually until the correct password is recognized. Then the system will acknowledge by displaying "OK."

**Note:** <INSTALL> is the factory default system password. Each time you disconnect and reconnect, you must re-enter the password.

EXAMPLE (How to Type in the Password)

```
Enter Password
On Line
***** <enter ↵>
(* represents each password key entry)
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).

**Note:** Once the passwords are changed, CEC will not be able to help you if 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.

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

Figure 11-4



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>** is the default 1st level password (dash must be included).

**To Change the Password:**

```
Enter Password >
  On Line
*****
OK >
C# 1 = : CHP
  Input the ID (1 - 3) 3
  Input the new Password (max 10 char) *****
    Again *****
CHP>> OK
C# 1 = : WRT
Please Wait...
WRT>> OK
C# 1 = :
```

*Figure 11-6 Change Password Screen*

1. Log on as **<SNOW-FLAKE>** **<enter>**
2. Enter password level.
3. Enter new password.
4. Repeat password entry.
5. Type **<WRT>** **<enter ↵>** (Write to FLASH memory. Saves change.)
6. Disconnect the connector from the J2 Human Interface port and then reconnect it. You should now be able to log-on using the new password.

