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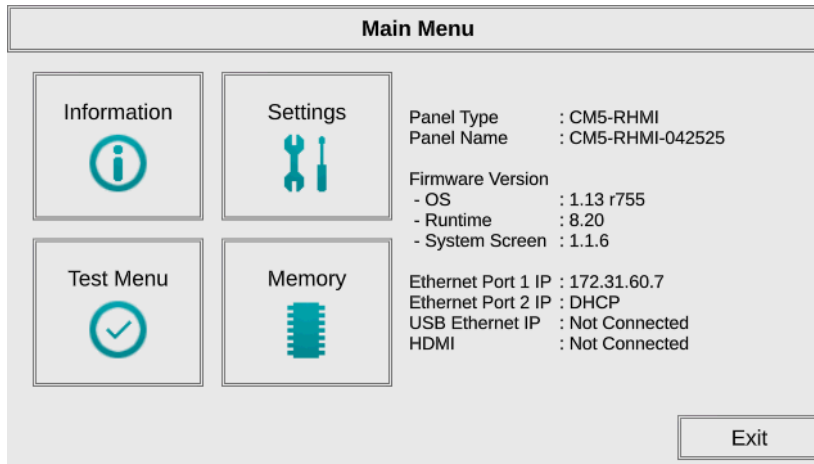
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## Introduction

The **C-more** touch panels include a series of built-in System Setup Screens that allow the user to view detailed information about the panel; adjust certain features; configure communications; test various functions of the touch panel; backup & restore firmware, recipe, log and project memory; clear memory and reset all values and conditions back to the original factory defaults.

The four Main Menu selections are:



### Information

The information tabs display details about the HMI hardware, firmware, features enabled, memory status, Ethernet port settings, panel errors and license information.

### Settings

The Settings menu allow adjustments to be made to the internal clock, touch screen calibration, Ethernet port settings, display brightness and enabling or disabling other options.

### Test Menu

The Test menu is used to test the touch screen, audio outputs, serial and Ethernet PLC connections, display colors and pixels and User LEDs.

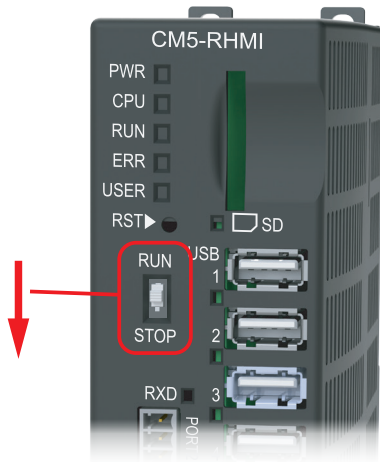
### Memory

The Memory menu is used to Backup and Restore the panel firmware and project, clear the panel memory or reset the HMI to a factory default state.

## Accessing the System Setup Screens (no project loaded)

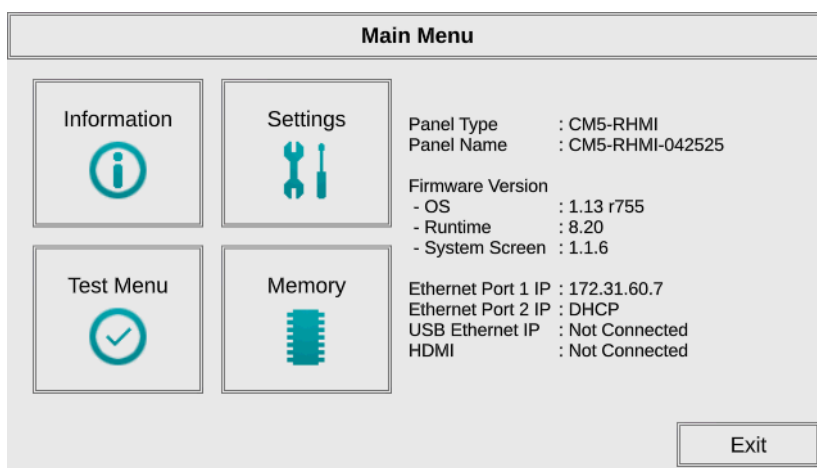
To access the Main Menu of the CM5-RHMI System Setup Screens with a project loaded into memory, move the RUN/STOP switch to the STOP position.

If the RUN/STOP Switch is not accessible, a Key Button Object can be added to a screen in the **C-more** HMI project to access the System Screens. See the **C-more** Programming Software Help File Topic, “Key Button Object” for more information.



If the Key Button is used and no system screen password is enabled, the following WARNING dialog box will appear on the connected screen:

- Pressing OK will display the system setup screen. See the WARNING below!
- Pressing Cancel will take you back to the project screen.
- Communication with the PLC is active while the Warning is displayed.
- The dialog box will close if no action is taken for 60 seconds.
- The dialog box will not display if the HMI does not have a project loaded.
- The dialog box will display after a valid password is entered if the System Screen password is enabled.

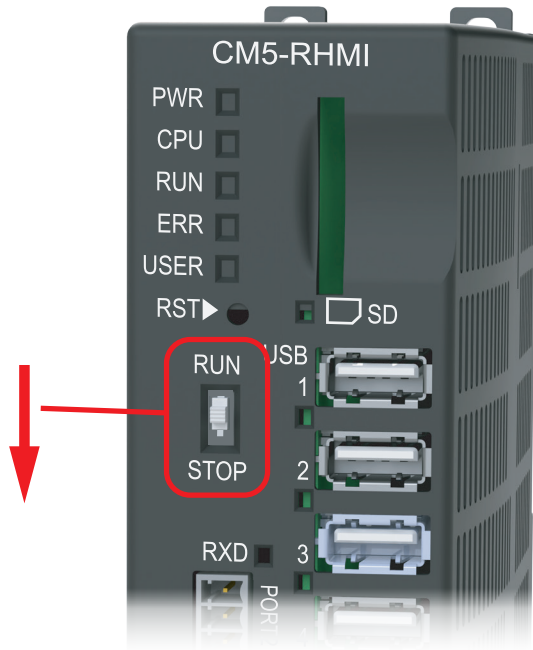


**WARNING:** This will STOP the PLC driver and therefore all communications between the CM5-RHMI and PLC will cease. In addition, moving the RUN / STOP switch to the STOP position does not display this warning. This is why it is strongly recommended that the password system tag “SYS SYSTEMSCREENPW” be enabled to add a safeguard step in accessing the system setup screens. See the next section for an overview of how to set the System Tags in the Event Manager Database.

## Accessing the System Setup Screens (with project loaded)

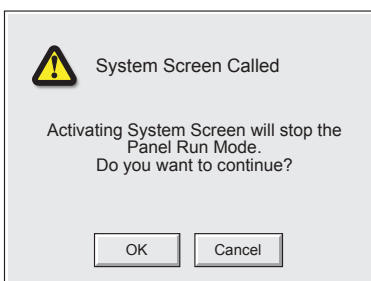
There are three ways to access the System Setup Screens in the CM5-RHMI.

- 1) On the HMI by moving the RUN/STOP switch to the STOP position.
- 2) From a connected compatible touch screen using the Key Button Object.
- 3) From the C-more Software and using the RHMI USB Remote utility.



If the RUN/STOP Switch is not accessible, a Key Button Object can be added to a screen in the **C-more** HMI project to access the System Screens. See the **C-more** Programming Software Help File Topic, “Key Button Object” for more information.

If the Key Button is used and no system screen password is enabled, the following WARNING dialog box will appear on the connected screen:



- Pressing OK will display the system setup screen. See the WARNING below!
- Pressing Cancel will take you back to the project screen.
- Communication with the PLC is active while the Warning is displayed.
- The dialog box will close if no action is taken for 60 seconds.
- The dialog box will not display if the HMI does not have a project loaded.
- The dialog box will display after a valid password is entered if the System Screen password is enabled.



**WARNING:** This will STOP the PLC driver and therefore all communications between the CM5-RHMI and PLC will cease. In addition, moving the RUN / STOP switch to the STOP position does not display this warning. This is why it is strongly recommended that the password system tag “SYS SYSTEMSCREENPW” be enabled to add a safeguard step in accessing the system setup screens. See the next section for an overview of how to set the System Tags in the Event Manager Database.

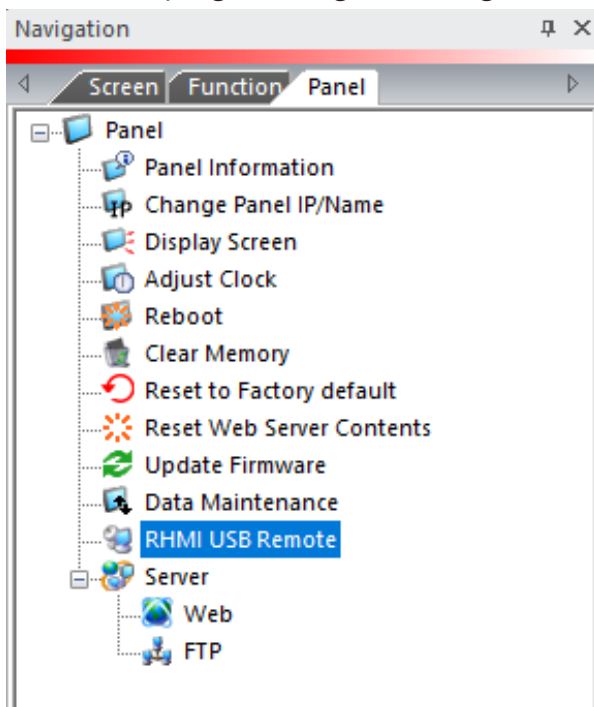
## Using RHMI USB Remote

Another option for seeing the System Screens is through a PC connected by USB to the CM5-RHMI.

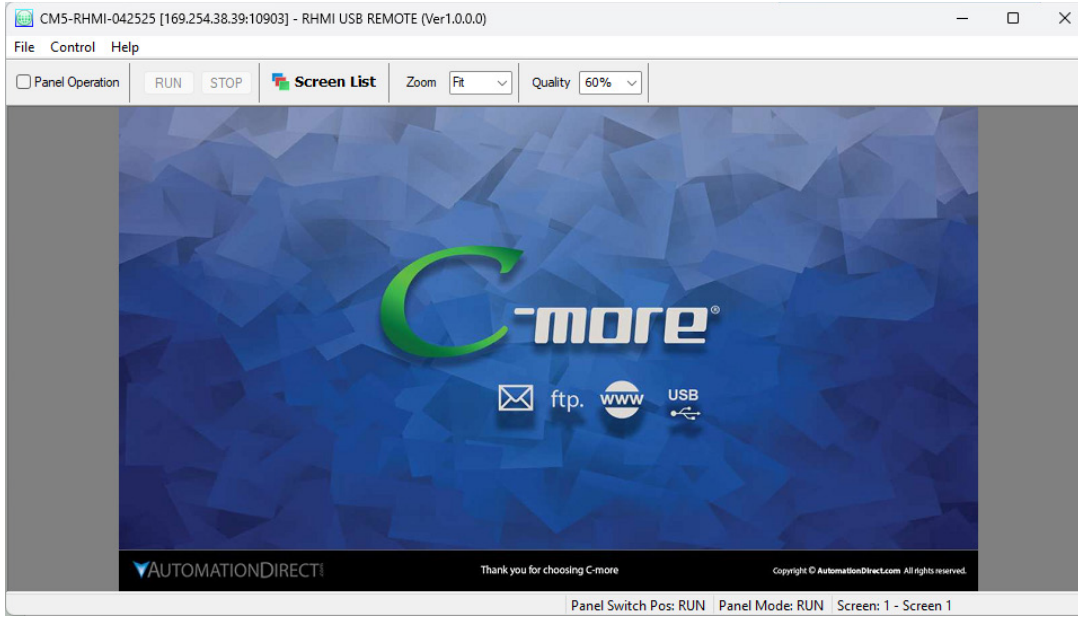
When a monitor is not attached to the RHMI, the RHMI USB Remote feature can be used to view and operate the RHMI screens and System Screens.

Connect the PC to the RHMI with a USB cable from the USB type B port on the RHMI to a USB Type A port on the PC running the software. See the CM5-RHMI User Manual Chapter 1 for more details on connecting the CM5-RHMI to a computer.

In the **C-more** programming software go to the Panel tab and select RHMI USB Remote.



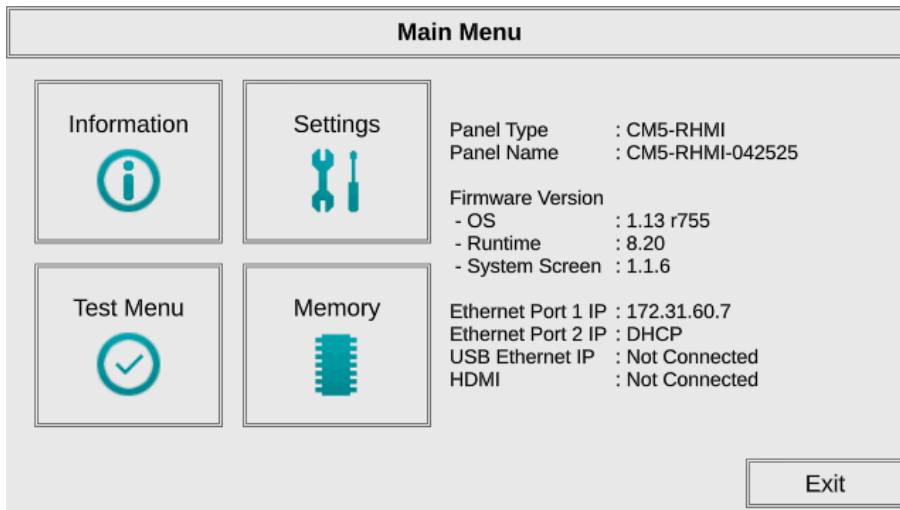
The RHMI USB Remote displays the same screen that is shown on a connected HMI monitor.



**NOTE:** The RHMI USB Remote selection is only available if the panel is connected to the PC by a USB cable.

**Panel Operation:** This allows the screens to be clicked with a mouse and operated as if you were touching a touch screen connected to the HMI.

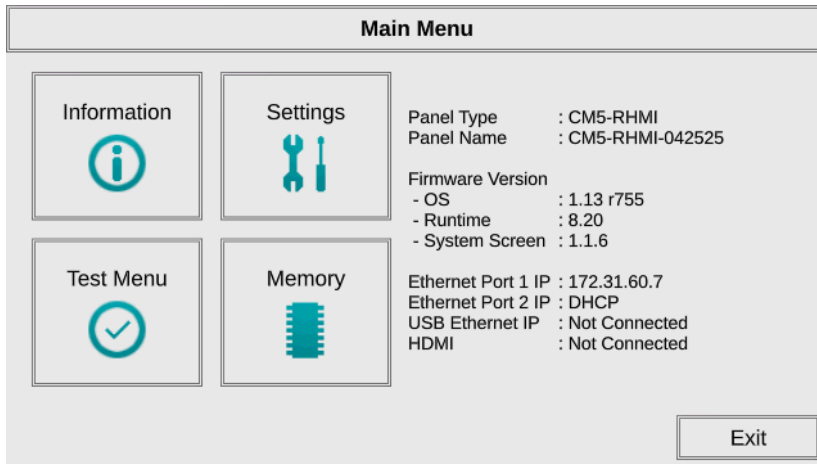
**RUN STOP:** If the RHMI's RUN/STOP Switch is in the RUN position, you can select STOP to see the System Screen. If the Switch is in the STOP position already, the System Screen will already be displayed.





## System Setup Screens

Pressing the OK button in the Warning dialog box will bring up the Main Menu as shown below. You can then proceed to the other system setup screens.



## Password Protecting System Screen Access

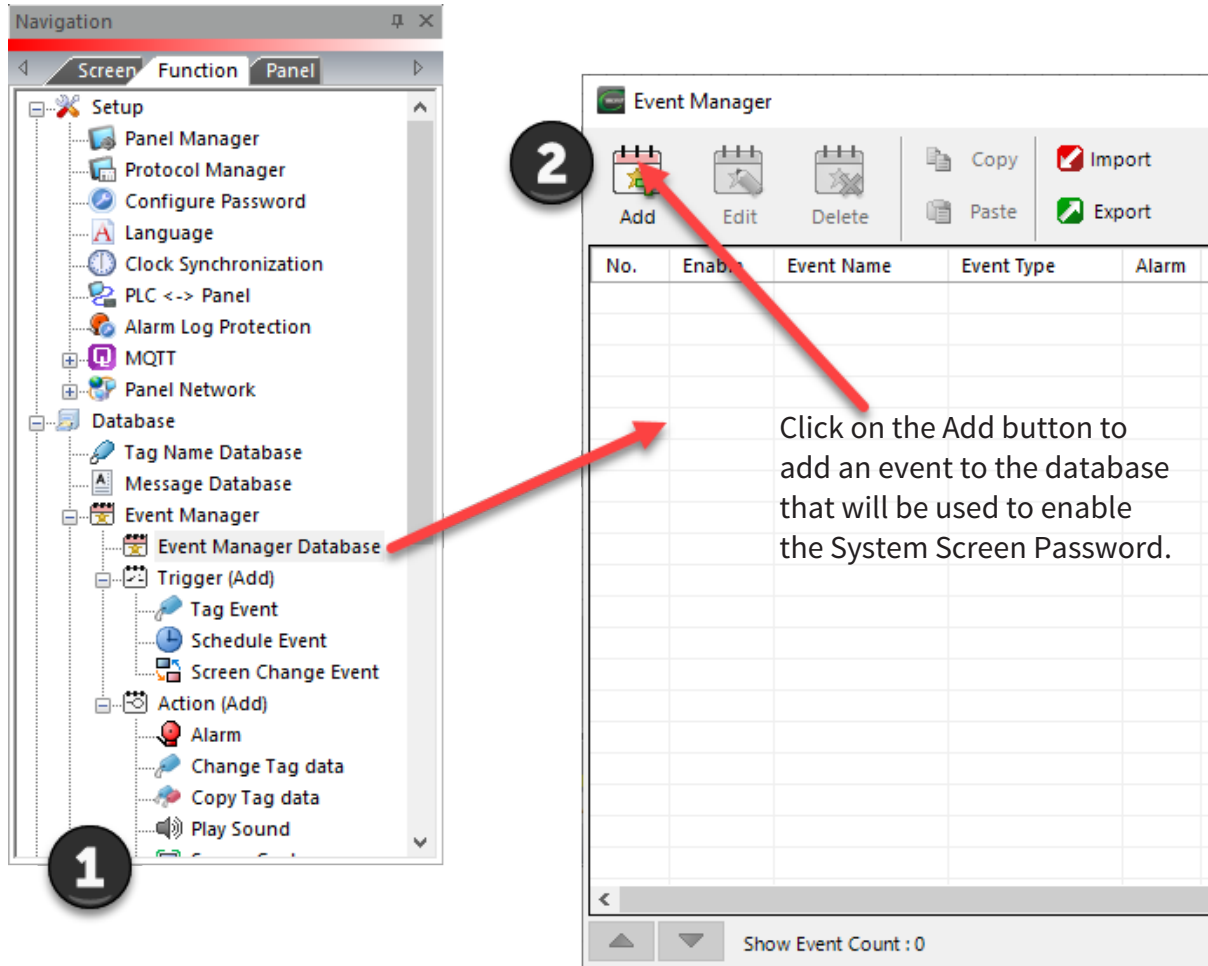


*NOTE: If the password system tag **SYS SYSTEMSCREENPW** is enabled, the Enter Security Code keypad shown below will open. The following procedure details enabling the **SYS SYSTEMSCREENPW**. Entering the correct password will display the Panel Run Mode warning dialog described previously. PLC communications continue while the keypad is displayed. The keypad will timeout after 60 seconds.*



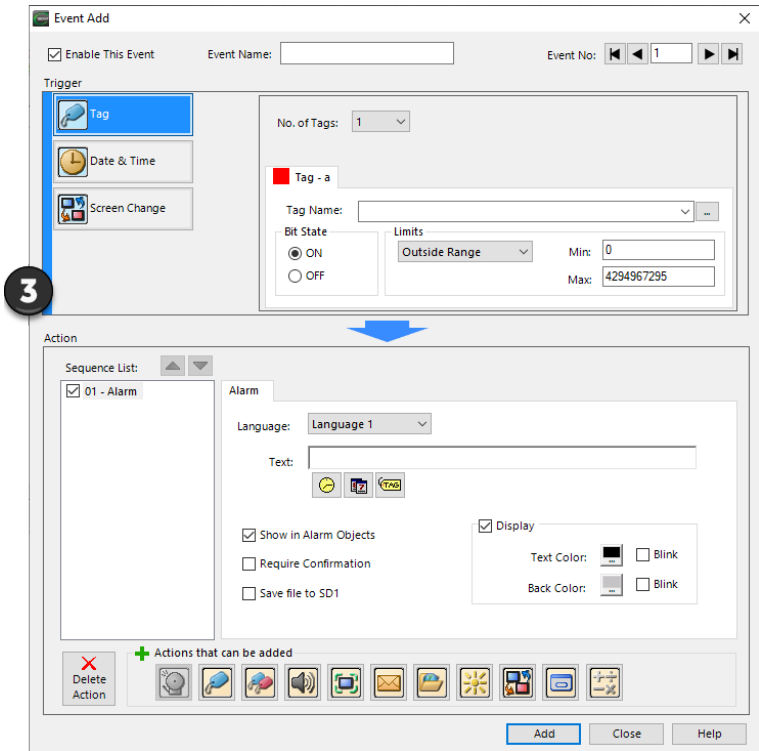
## System Setup Screens — Enable Password in Software

Under the **C-more** Programming Software’s Navigation window, select the Function tab, then double click on “Alarm Action” to display the Event Manager Database shown below:

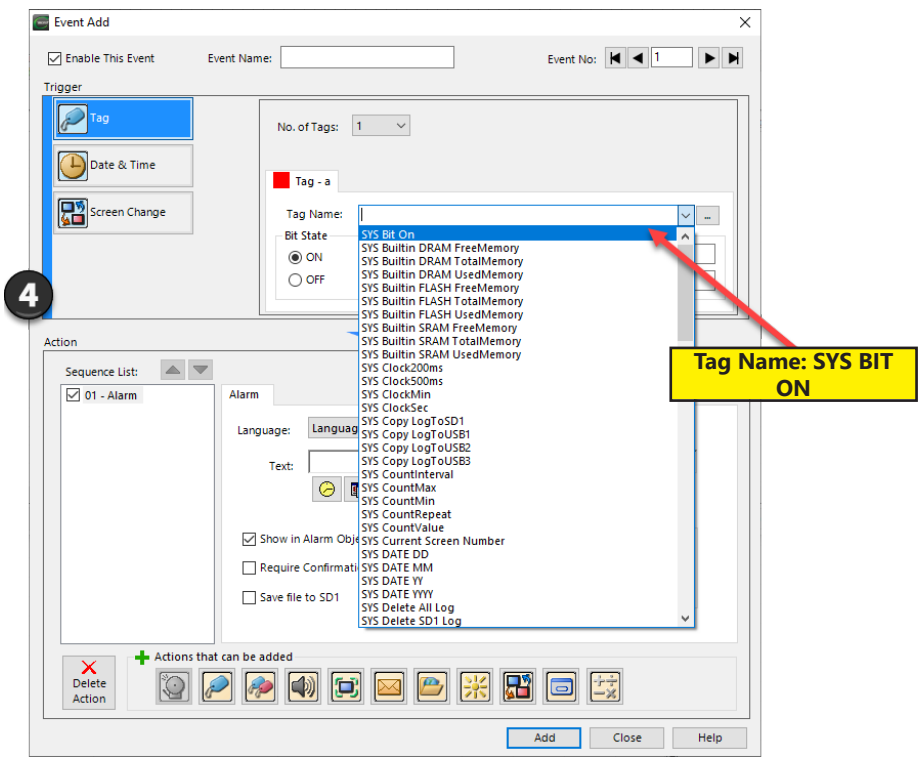


# System Setup Screens – Enable Password (cont'd)

The **Event Add** dialog box will be displayed as shown.

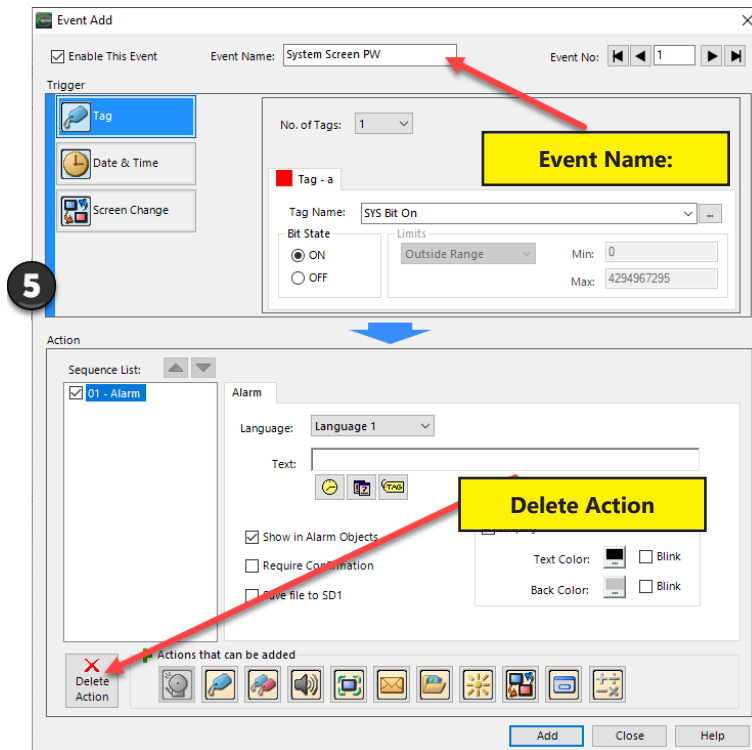


Click on the **Tag Name:** pull down menu and select the internal **System Bit On (SYS BIT ON)** tag as shown. This will force the tag event type to be continuously active.

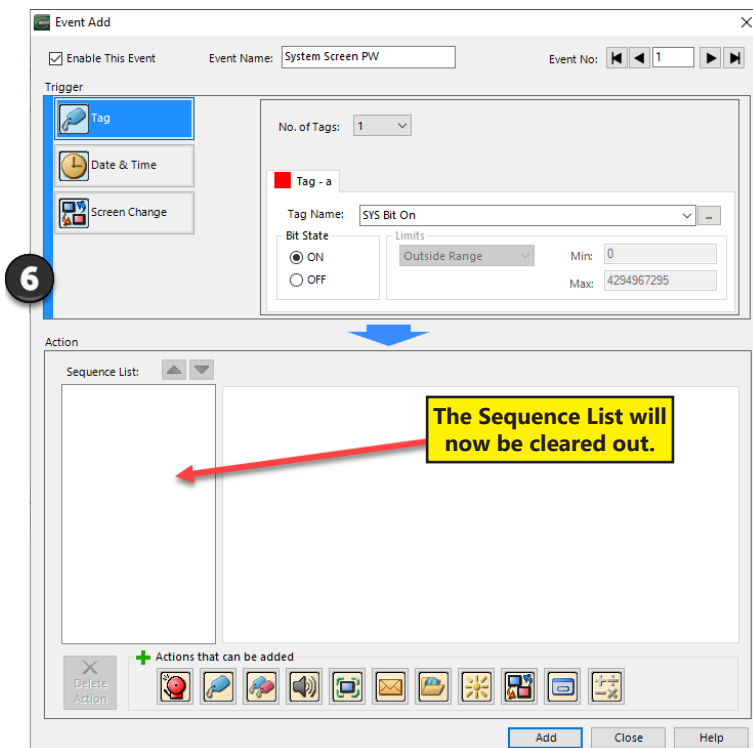


## System Setup Screens – Enable Password (cont'd)

Use the **Event Name:** text box to document the event as “System Screen PW” for record keeping. This is optional.

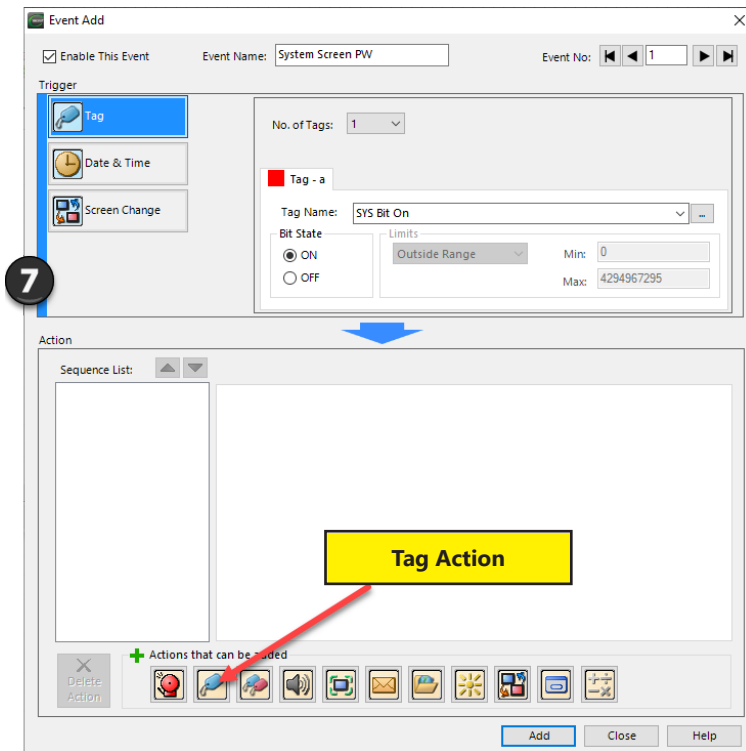


In the Action box, click once on the displayed 01-Alarm under the Sequence List: so that 01-Alarm is highlighted. Then click the **Delete Action** button to remove the **01-Alarm**.

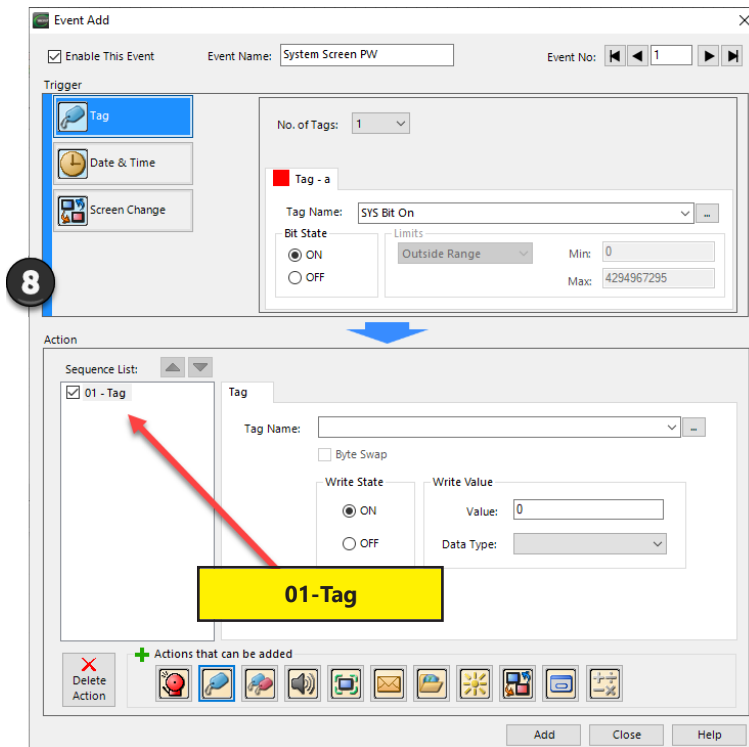


# System Setup Screens – Enable Password (cont'd)

From the **Add Action** icons, click on the **Tag Action** button.

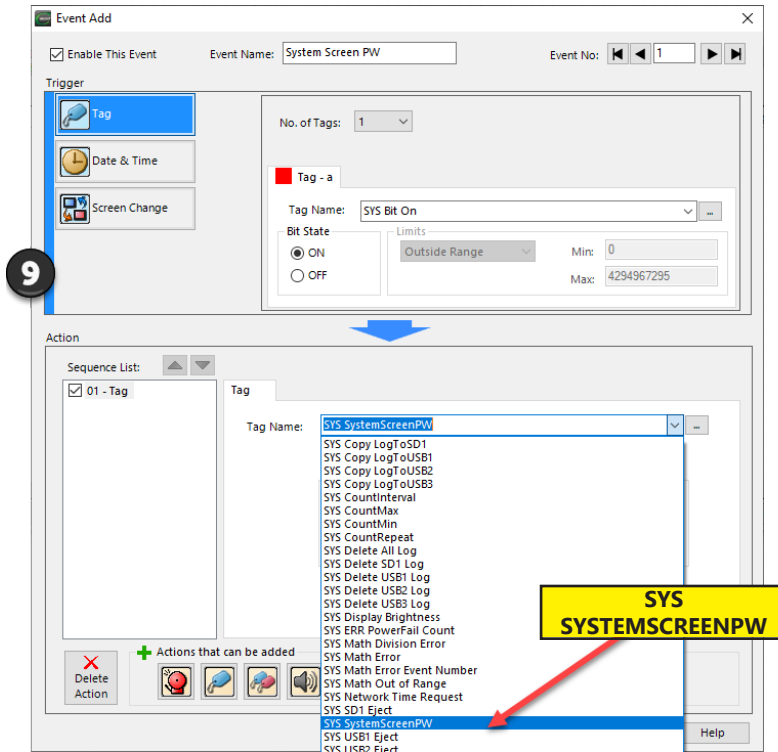


A **01-Tag** action item will then be added to the Sequence List.

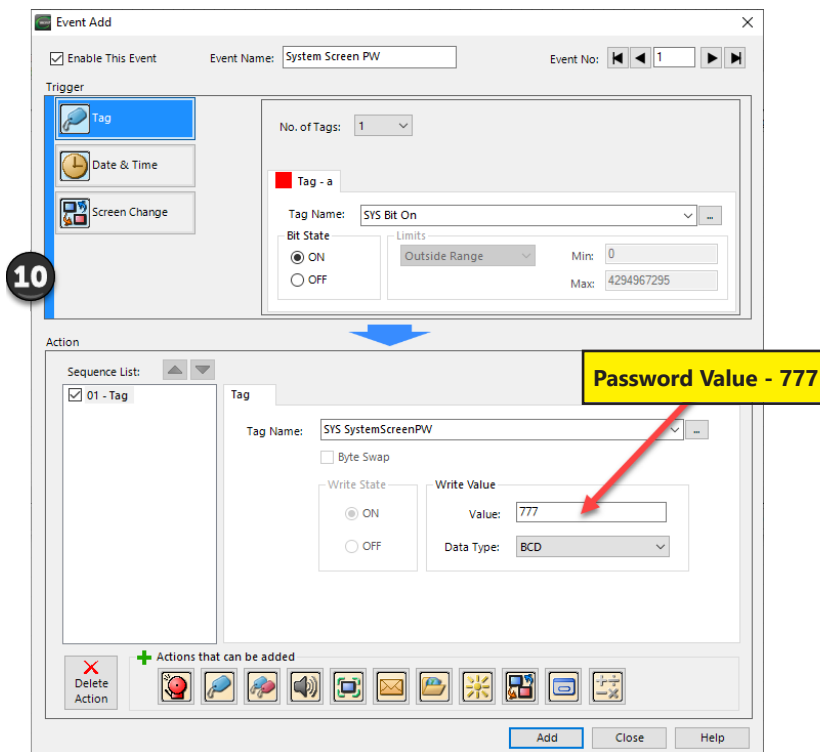


## System Setup Screens – Enable Password (cont'd)

Click on the **Tag Name:** drop down list down arrow and select **SYS SYSTEMSCREENPW** from the list.

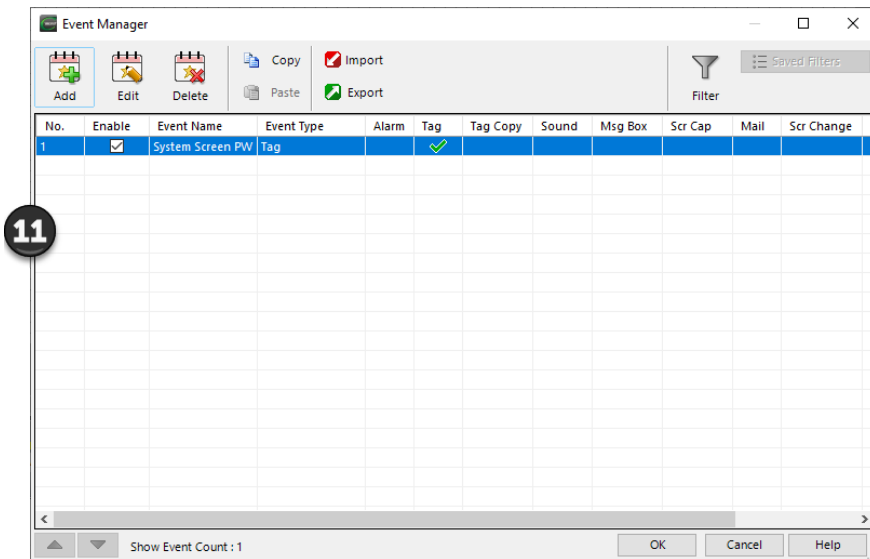


Enter a numeric value into the **Value:** box, such as “777”. This value becomes the Password code to access the System Setup Screen’s **Main Menu**.

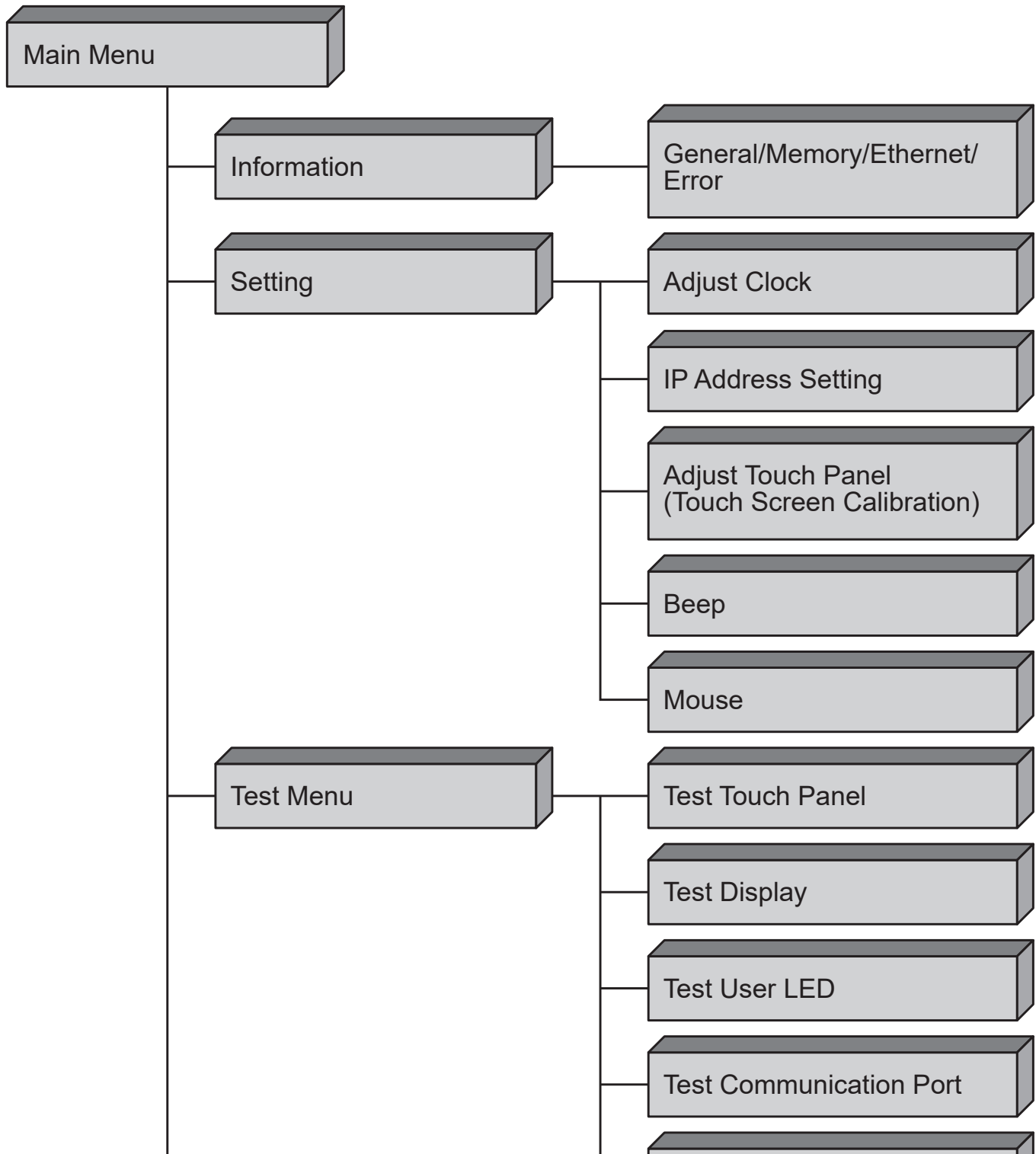


## System Setup Screens – Enable Password (cont'd)

Click the **Add button** to return to the Event Manager Database. You now will see that the first event in the database is for the System Screen Password and it is enabled.



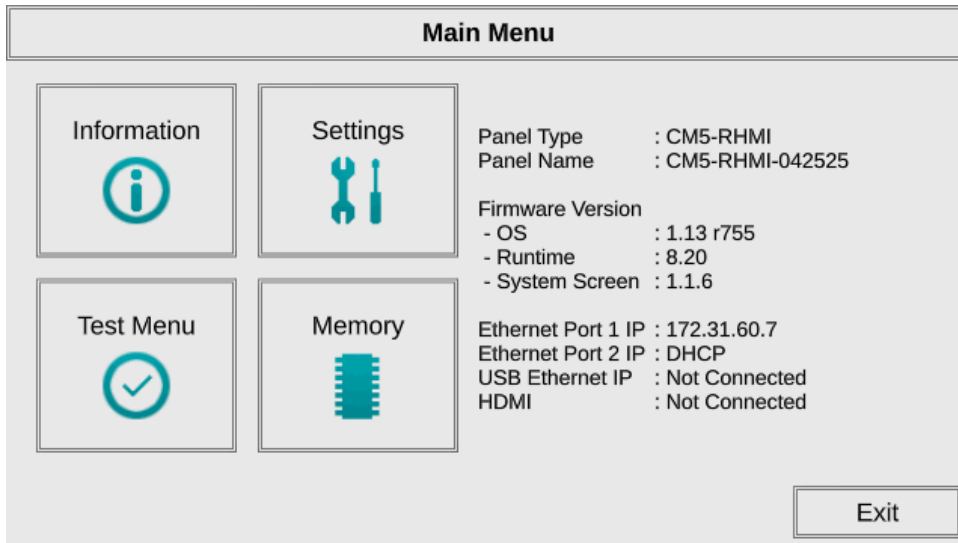
# System Setup Screens Flowchart





## Main Menu

The Main Menu system setup screen is the top layer in the menu structure.



## Information Screen

### Information — General Tab

The General tab under the Information Screen provides detailed information of the **C-more** touch panel.

Information				
General	Memory	Ethernet	Error	License
Panel Type	: CM5-RHMI			
Panel Name	: CM5-RHMI-042525			
Version				
Hardware	: 00-00-00-00			
Boot Loader	: 01			
Firmware				
- OS	: 1.15 r743			
- Runtime	: 8.20			
- System Screen	: 1.1.6			
Clock	: Internal			
Beep	: Enabled			
Project Boot Storage	: Built-in FLASH			
HDMI	: Connected (Resolution: 1920x1080)			

Close

Item No.	Function	Description	Comments
1	<b>Panel Type</b>	CM5-RHMI	Model Number
2	<b>Panel Name</b>	The panel name is configured in the programming software and saved with a project.	The default panel name is the model number plus the lower three bytes of the panel MAC address, ie CM5-RHMI-0022C4.
3	<b>Version</b>	The version identifications provide information on the components and firmware in the panel	Files reside in the <b>C-more</b> touch panel's memory
4	<b>Clock</b>	Internal/External - Network Time Service (UTC Time)	Configured in the <b>C-more</b> Programming Software. This can be HMI's internal clock, a PLC or a time server such as time.windows.com.
5	<b>Beep</b>	Status of the internal beeper	Enabled or Disabled. This setting is over written by the project Protocol Manager settings.
6	<b>Project Boot Storage</b>	SD Built-in FLASH	SD: SD Card in SD1 slot Built-in FLASH: Panel internal FLASH memory
7	<b>HDMI</b>	HDMI connection to an external screen	Connected, Not Connected

## Information – Memory Tab

Information				
General	Memory	Ethernet	Error	License
	<b>Total</b>	<b>Used</b>	<b>Free</b>	
SDRAM:	428.7 MB	319.2 MB	109.5 MB	
SRAM:	512.0 KB	124.0 KB	388.0 KB	
Built-in Flash:	43.0 MB	145 B	43.0 MB	
SD1:	1.8 GB	1.2 MB	1.8 GB	
USB1:	58.7 GB	32.0 KB	58.7 GB	

Resource Monitor Close

- 1) **Memory components** - Status of each memory component - SDRAM, SRAM and Built-in Flash are internal memory components. When external memory devices are installed in the panel they will be included in this list : SD and USB. These can also be monitored using the System Tags. See Chapter 2, Handling External Memory Devices.
- 2) **Resource Monitor** - This troubleshooting tool displays CPU usage and panel internal memory usage. When enabled, the Resource Monitor will display on the panel screen even after the System Screen is closed, while the project is running.

## Information – Ethernet Tab

**Information**

General	Memory	Ethernet	Error	License
<div style="position: relative; margin-bottom: 10px;"> <span style="position: absolute; top: -15px; left: -15px; border: 1px solid black; border-radius: 50%; padding: 2px 5px; font-weight: bold;">1</span> </div> <p>Link Status : Online</p> <p>MAC Address : 00:06:48:02:66:FD</p> <p>Address Type : DHCP</p> <p>IP Address : 172.31.60.36</p> <p>Subnet Mask : 255.255.254.0</p> <hr/> <p>Default Gateway : 172.31.60.1</p> <hr/> <p>DNS Server : DHCP</p> <p>Preferred DNS : 8.8.8.8</p> <p>Alternate DNS : 8.8.4.4</p>	<p>Ethernet Port 1</p>	<p>Ethernet Port 2</p>	<p>USB Ethernet Port</p>	<p>Link Status : Offline</p> <p>MAC Address : 00:06:48:02:66:FC</p> <p>Address Type : DHCP</p>
<input type="button" value="Close"/>				

Item No.	Function	Description	Comments
<b>1</b>	<b><i>Ethernet Status</i></b>	Ethernet Port Settings: Link Status: Online/Offline MAC Address: 00 06 48 XX XX XX Address Type: Static/DHCP IP Address: Subnet Mask: Default Gateway: DNS Server: Static/DHCP	Configurable in the <b>Setting Screen – IP Address Setting</b> shown in this section or in the <b>C-more</b> Programming Software.  Not Connected - There is no USB to Ethernet Adapter in a USB port.

## Information – Error Tab

Information				
General	Memory	Ethernet	Error	License
<b>No</b>	<b>Time</b>	<b>Code</b>	<b>Error Message</b>	
1	02/21/23 05:04:29	PLC-001	PLC Communication Timeout (ETHERNET,DEV001,RC	
2	02/21/23 05:04:19	PLC-001	PLC Communication Timeout (ETHERNET,DEV001,RC	
3	02/21/23 05:04:09	PLC-001	PLC Communication Timeout (ETHERNET,DEV001,RC	
4	02/21/23 05:03:59	PLC-001	PLC Communication Timeout (ETHERNET,DEV001,RC	
5	02/21/23 04:51:20	PLC-001	PORT2 - PLC Communication Timeout (COM2,PORT2.	
6	02/21/23 04:51:19	PLC-001	PORT2 - PLC Communication Timeout (COM2,PORT2.	
7	02/21/23 04:51:19	PLC-001	PORT1 - PLC Communication Timeout (COM1,PORT1.	
8	02/21/23 04:51:18	PLC-001	PORT2 - PLC Communication Timeout (COM2,PORT2.	
9	02/21/23 04:51:17	PLC-001	PORT2 - PLC Communication Timeout (COM2,PORT2.	
10	02/21/23 04:51:16	PLC-001	PORT2 - PLC Communication Timeout (COM2,PORT2.	
11	02/21/23 04:51:16	PLC-001	PORT1 - PLC Communication Timeout (COM1,PORT1.	

## Error Message Format

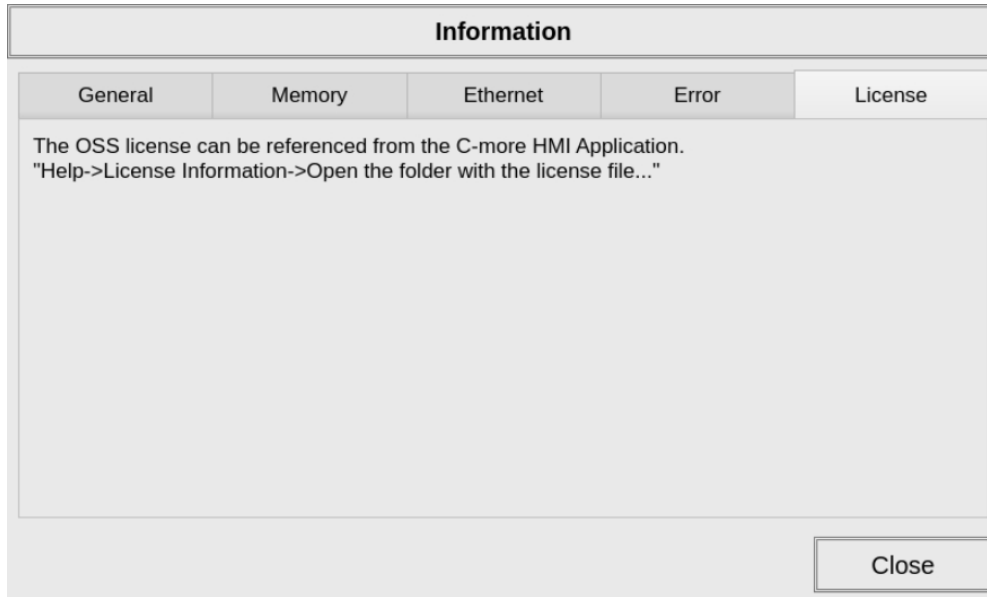
Item No.	Function	Description	Comments
1	<b>Date</b>	Format: MM/DD/YY	Date error occurred.
2	<b>Time</b>	Format: HH/MM/SS	Time error occurred.
3	<b>Error Code</b>	The error code is the same as the code displayed in the upper left of the <b>C-more</b> touch panel's display.	A list of error codes are shown in Appendix A
4	<b>Error Message</b>	The Meaning of the error code	
5	<b>Error Port</b>	PLC Serial Communications Port: Ethernet:	
6	<b>Device Name</b>	The name of the device reporting the error.	Device names are configured in the Protocol Manager in the programming software.
7	<b>Error Type</b>	RD: Read WT: Write	
8	<b>PLC Address</b>	The assigned address of the PLC that caused the error.	
9	<b>Access Bytes</b>	The number of access bytes.	

## Error Message Navigation Buttons

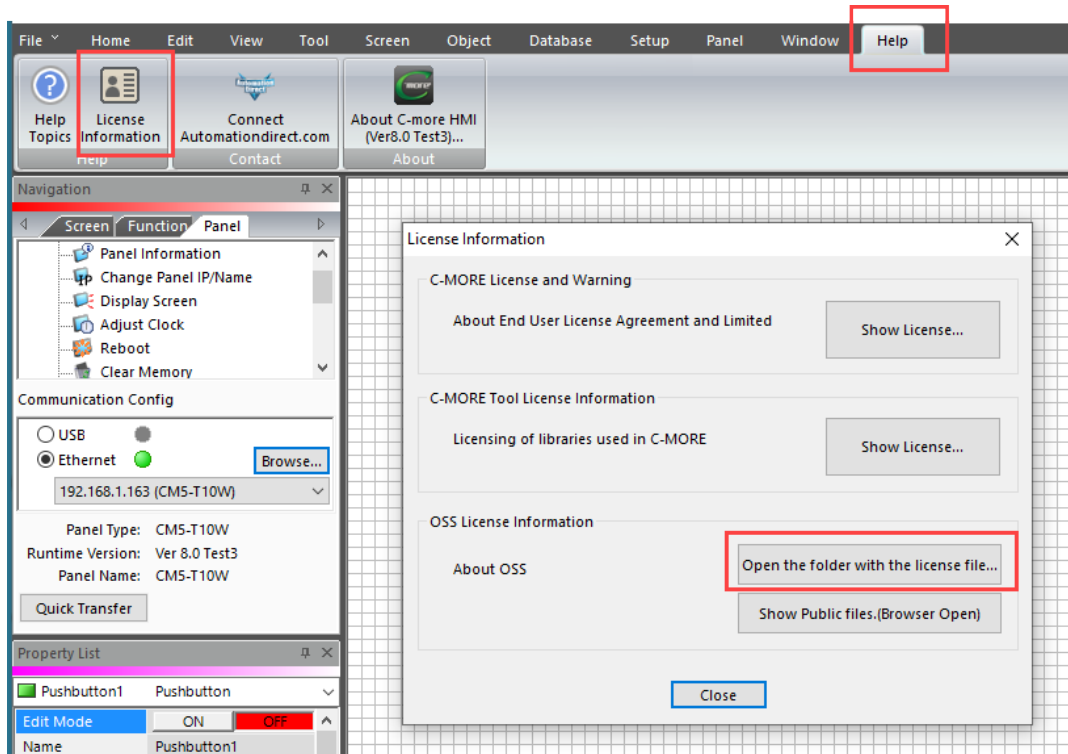
Item No.	Function	Description	Comments
1	<b>Clear</b>	Press to clear all error messages. This button is grayed out when there are no error messages to display.	
2	<b>Scroll Down/Up</b>	To scroll down and see more messages tap the bottom of scroll bar to the right. Or while touching in the Error list, drag your finger to move the list up and down.	
3	<b>Page Right/Left</b>	To scroll right to see the entire message tap the right side of the scroll bar on the bottom. Or while touching in the Error list, drag your finger to move the list left and right.	

### Information — License Tab

The Operating System License information can be accessed from the Software by selecting the Help Tab>License Information Icon>Open the folder with the License file.

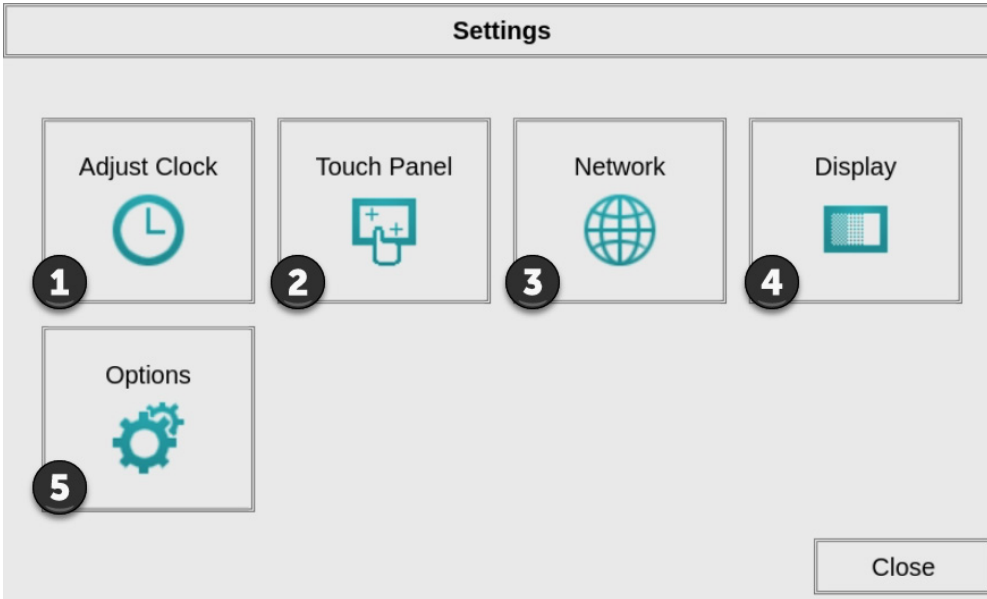


It can also be found in the “C:\Users\[user]\Documents\AutomationDirect\C-moreCM5\License” folder.



## Settings Screen

The **Settings Screen** is used to adjust the internal clock, calibrate the touch screen, enter Ethernet port settings, adjust the display brightness, change the **System Screen** theme, along with enabling or disabling the mouse cursor and panel beep.



Item No.	Function	Description	Comments
1	<b>Adjust Clock</b>	Select to adjust the Time, Date and Time Zone on the HMI.	Time cannot be adjusted if an external time server is configured.*
2	<b>Touch Panel</b>	Select to calibrate the touch screen.	
3	<b>Network</b>	Select to configure the Ethernet Ports.	The IP Address can also be set from the programming software or by the project.*
4	<b>Display</b>	Select to adjust the brightness of the LED display	The Adjust Display object can also be used in the project.
5	<b>Options</b>	Select to enable or disable the panel beep and mouse cursor.	These are also project settings.*

\*Project settings will override any changes on project transfer or a power cycle.

## Settings — Adjust Clock

**Adjust Clock**

Time			Date		
Hour	Minute	Second	Month	Day	Year
11	52	12	04	22	2024

Time Zone

(UTC-05:00) Indiana (East)

Clock Synchronization

Read from External Clock : Disable

Write to PLC Clock : Disable

Select Hour, Minute, Second, Month, Day or Year and use the keypad to enter a new value.

**Adjust Clock**

Time			<div style="text-align: center; margin-bottom: 5px;">Hour</div> <div style="text-align: center; border: 1px solid gray; margin-bottom: 5px; width: 100px;">01</div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid gray; width: 30px; text-align: center;">7</td> <td style="border: 1px solid gray; width: 30px; text-align: center;">8</td> <td style="border: 1px solid gray; width: 30px; text-align: center;">9</td> <td rowspan="4" style="border: none; padding: 5px; text-align: center;"> <input style="width: 100%; height: 100%;" type="button" value="ESC"/> </td> </tr> <tr> <td style="border: 1px solid gray; text-align: center;">4</td> <td style="border: 1px solid gray; text-align: center;">5</td> <td style="border: 1px solid gray; text-align: center;">6</td> <td rowspan="2" style="border: none; padding: 5px; text-align: center;"> <input style="width: 100%; height: 100%;" type="button" value="BS"/> </td> </tr> <tr> <td style="border: 1px solid gray; text-align: center;">1</td> <td style="border: 1px solid gray; text-align: center;">2</td> <td style="border: 1px solid gray; text-align: center;">3</td> <td rowspan="2" style="border: none; padding: 5px; text-align: center;"> <input style="width: 100%; height: 100%;" type="button" value="CLR"/> </td> </tr> <tr> <td style="border: 1px solid gray; text-align: center;">0</td> <td colspan="2"></td> <td style="border: none; padding: 5px; text-align: center;"> <input style="width: 100%; height: 100%;" type="button" value="ENT"/> </td> </tr> </table>						7	8	9	<input style="width: 100%; height: 100%;" type="button" value="ESC"/>	4	5	6	<input style="width: 100%; height: 100%;" type="button" value="BS"/>	1	2	3	<input style="width: 100%; height: 100%;" type="button" value="CLR"/>	0			<input style="width: 100%; height: 100%;" type="button" value="ENT"/>
7	8	9							<input style="width: 100%; height: 100%;" type="button" value="ESC"/>															
4	5	6	<input style="width: 100%; height: 100%;" type="button" value="BS"/>																					
1	2	3		<input style="width: 100%; height: 100%;" type="button" value="CLR"/>																				
0			<input style="width: 100%; height: 100%;" type="button" value="ENT"/>																					
Hour	Minute	Second																						
01	29	32																						

Clock Synchronization

Read from External Clock : Disable

Write to PLC Clock : Disable



NOTE: The clock settings on the panel's setup screen are disabled if an External clock source is selected in the C-more programming software. The choice of an internal or external clock source is available by selecting Clock Synchronization in the C-more programming software under the Main Menu Setup tab.

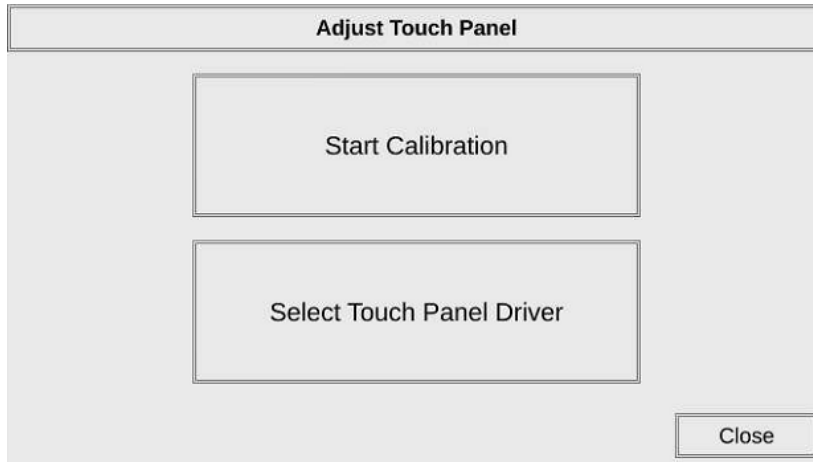


NOTE: The panel's clock can also be adjusted from the C-more programming software. The Adjust Clock function can be accessed in the software by selecting Adjust Clock under the Main Menu Panel tab or selecting Adjust Clock under the Panel tab in the software's Navigation window.



## Settings – Touch Panel

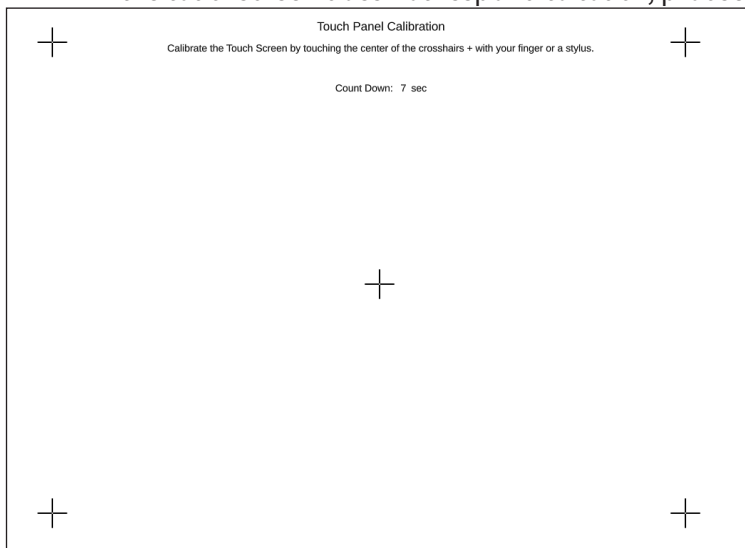
Use this procedure to calibrate the touch screen for accuracy of touch areas. Calibration is based on five areas of the touch screen.



Item No.	Function	Description	Comments
1	<b>Start Calibration</b>	Press to begin the touch screen calibration.	—
2	<b>Select Touch Panel Driver</b>	Press to return to the Settings Screen.	If the touch calibration does not work correctly, a different touch panel driver may be required. Go to this screen to make a choice of selected drivers.
3	<b>Close</b>	Press to return to the Settings Screen.	—
4-8	<b>Touch Points 3-7</b>	The touch screen calibration crosshairs will appear individually in the order of point 3 thru 7 respectively as each proceeding crosshair is pressed.	If the touched co-ordinate point is too far off from normal, then it will not advance to the next point.

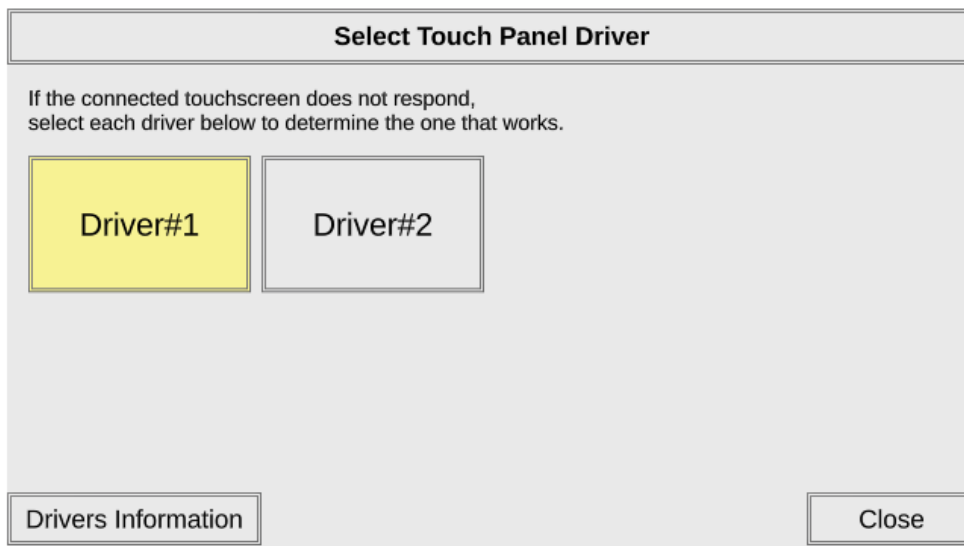
### Start Calibration

- 1) Select Start Calibration.
  - The Touch Panel Calibration Screen opens.
- 2) Select all five calibration points (crosshairs) as they appear.
  - Select them carefully and use a stylus if necessary for accuracy.
  - If the touchscreen does not respond to touch, proceed to “Select Touch Panel Driver” below.

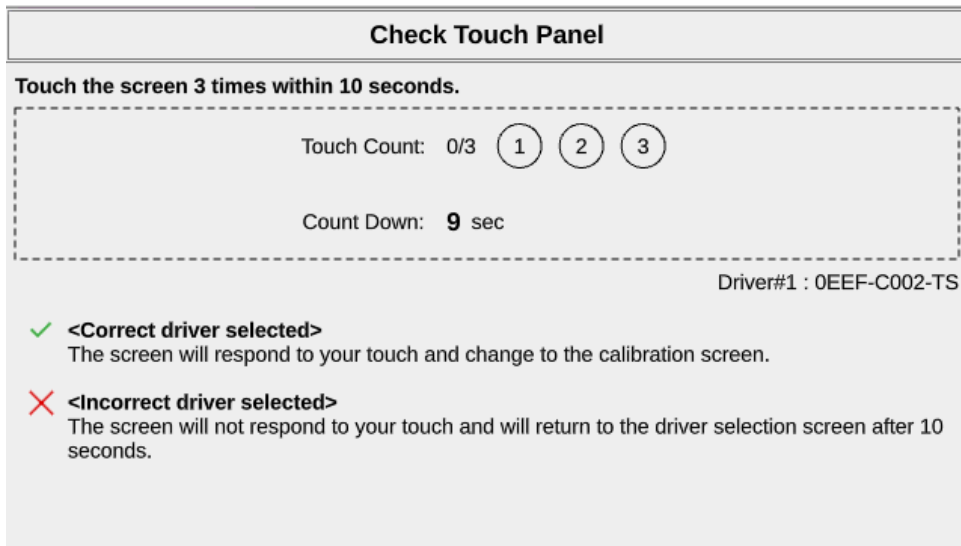


## Select Touch Panel Driver

- 1) With a touchscreen connected to the panel, the panel attempts to negotiate the proper driver. If the touchscreen does not respond, the panel may have selected the incorrect driver.
  - The screen below opens.
  - There are up to three Drivers to select, Driver #1, Driver #2 and Driver #3.
- 2) Select each driver in turn and the Check Touch Panel screen opens.



- 3) Touch the screen 3 times within 10 seconds.
  - If the touch is registered, then the driver is used.
  - If the touch is not registered, the screen will timeout.
  - If this occurs, select the next driver and follow the same process.
  - If all drivers have been selected without success, this indicates the panel does not have a driver for the selected touchscreen.



## Reporting unsupported driver to AutomationDirect

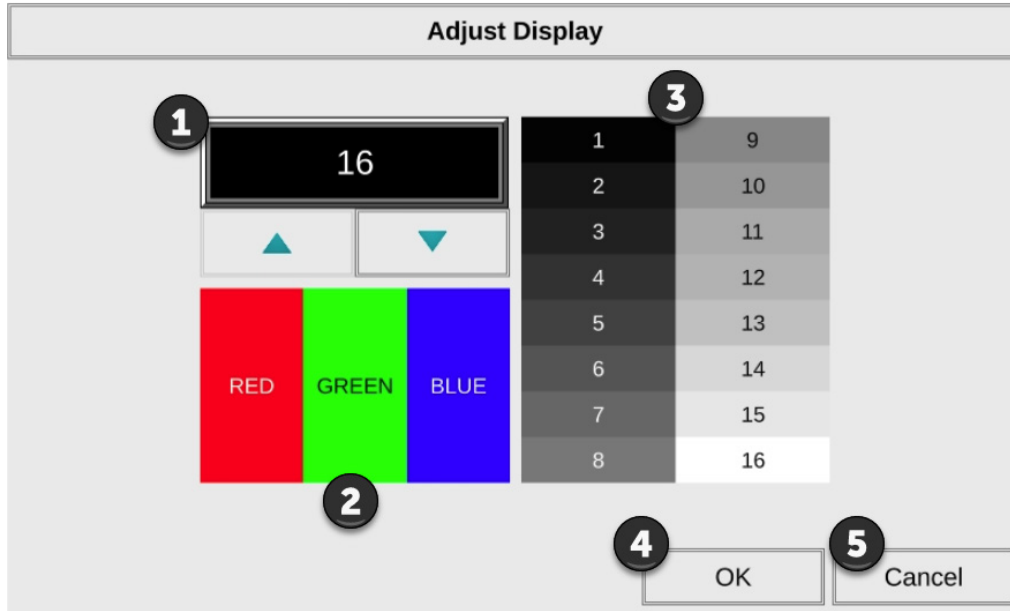
With the correct driver information, you can attempt add the driver to the panel firmware for a later release.

- 1) Select the Drivers Information button.
  - The Touch Panel Drivers Information window opens as shown below.
- 2) Record the information for all drivers displayed.
- 3) Contact Technical Support and provide this information to them.
  - There is no guarantee the driver can be added, and the time required may not be feasible for your project. You may consider trying a different touch panel monitor.

Touch Panel Drivers Information			
Driver	PID	Vender ID	Type
Driver #1	0EEF	C002	TOUCH SCREEN
Driver #2	0EEF	C002	MOUSE

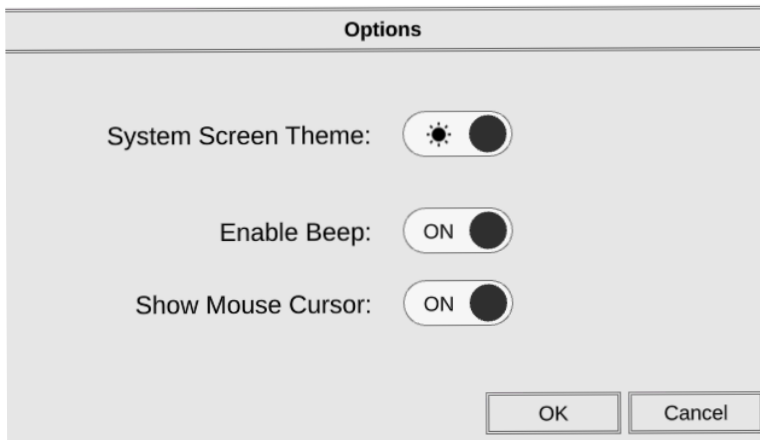


## Settings — Adjust Display



Item No.	Function	Description	Comments
1	<b>Setting</b>	Use the Up and Down arrows to change the brightness.	—
2	<b>Color Sample</b>	Displays a sample of how colors will appear with the new setting	—
3	<b>Contrast Sample</b>	Displays a sample of contrast with the new setting	—
4	<b>OK</b>	Press to accept the changes.	—
5	<b>Cancel</b>	Press to return to the Setting screen without accepting the changes.	—

## Settings — Options



### System Screen Theme

This setting is used to select a light or dark theme for the System Screens. This can be useful in very dark or brightly lit situations to help see the screen more clearly.

### Enable Beep

This system setup screen function is used to enable or disable the touch panel's internal beep function.

### Show Mouse Cursor

This system setup screen function is used to enable/ disable the arrow mouse cursor on the panel screen. It may be valuable to display the mouse cursor, for example, when an external USB keyboard and mouse are connected to the panel.



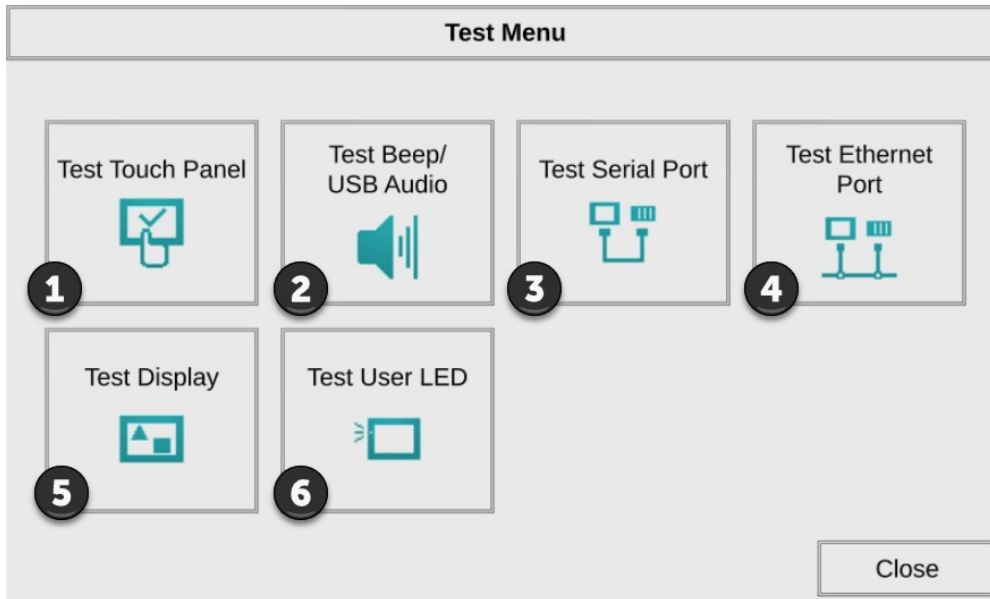
---

*NOTE: The project settings in the C-more programming software Protocol Manager will override the touch panel's internal setting upon initial download.*

---

## Test Menu

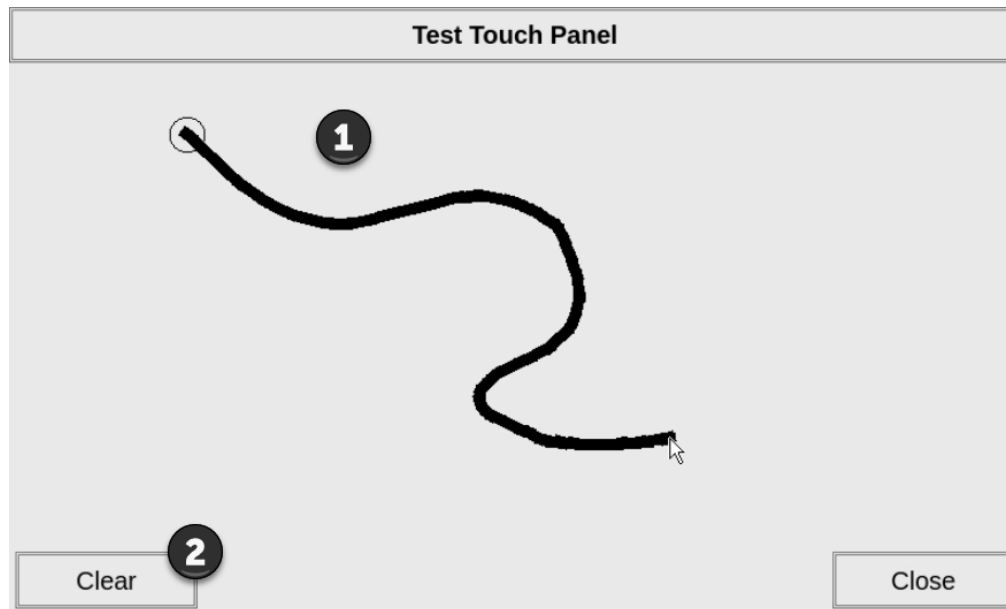
The **Test Menu** gives the user the ability to test the operation of the touch screen, test the LCD display, test the various communication ports, and also test the internal beeper and the audio through an user supplied audio adapter and amplified (stereo) speaker(s).



Item No.	Function	Description	Comments
1	<b>Test Touch Panel</b>	Select to test the HMI touch screen functionality and calibration.	—
2	<b>Test Beep Audio</b>	Select to test the HMI beep function or a connected USB to Audio devices.	—
3	<b>Test Serial Port</b>	Select to Test the HMI Serial Ports	—
4	<b>Test Ethernet Port</b>	Select to Test the HMI Ethernet Ports	—
5	<b>Test Display</b>	Select to test the color and contrast of the HMI LCD screen	—
6	<b>Test User LED</b>	Tests the user configurable LED on the front of the panel. Refer to the online help file CM014 User Defined LED for details on the configuration of this LED.	—

## Test Menu — Test Touch Panel

Using this test, normal or unusual operation of the analog touch panel can be determined.



### Testing

If an area of the touch screen is suspected to be inoperable, touch or touch and drag that area of the screen. The screen pixels should turn black in that area. If the screen pixels do not turn black when touched, then the touch screen is defective or needs to be calibrated. **See Settings — Touch Panel**

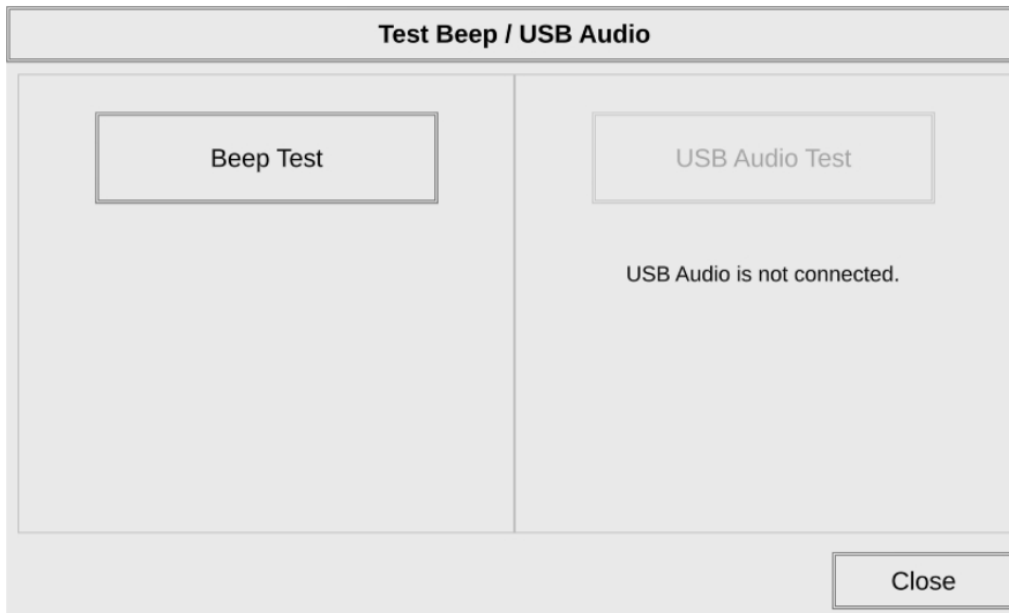
Item No.	Function	Description	Comments
1	<b>Touch Area</b>	Touch to turn on pixels on the screen.	The title bar (Test Touch Panel), Clear and Close button can be drawn across to test the touch operation.
2	<b>Clear</b>	Clear previously highlighted pixels to start over.	—



*NOTE: The Touchscreen is designed to respond to a single touch. If it is touched at multiple points at the same time, an unexpected object may be activated.*



## Test Menu – Test Beep/Audio



The internal Beeper can be tested from this system setup screen whether the Beeper is enabled or disabled. After the Beep Test button is pressed and released, the Beeper will sound for 500 msec.

The USB Audio Test requires that a USB audio adapter and speaker(s) with an amplifier (can be stereo) be connected to one USB port on the HMI. After the USB Audio Test button is pressed and released, a system provided Test.wav file will play once.



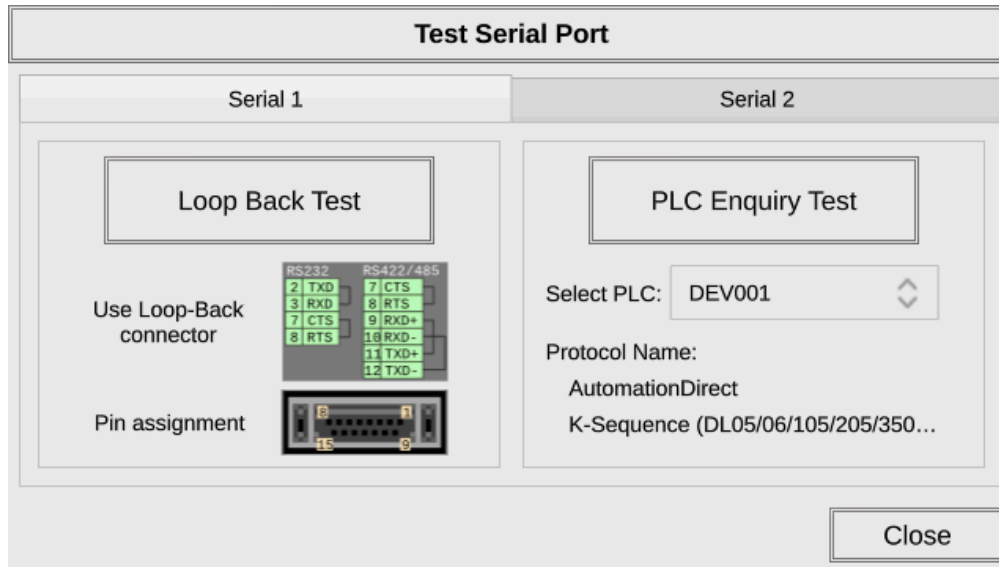
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**WARNING:** Hearing damage may occur if the volume on the user supplied external amplified speaker is set too high.

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## Test Menu – Test Serial Port

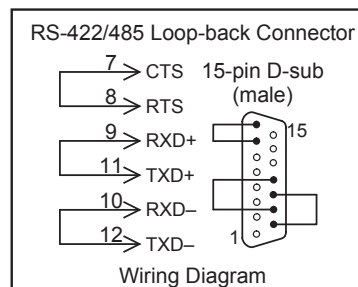
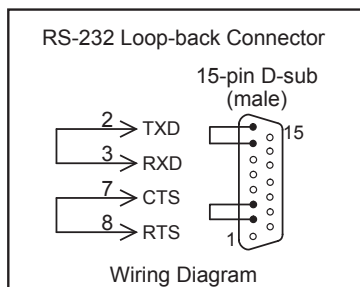
The following test can be used to check the operation of the serial communication ports, with the use of a loop back connector and can also check the serial communications to any connected and configured PLC.



Item No.	Function	Description	Comments
1	<b>Loop Back Test</b>	The loop back test checks the hardware components of the selected port for proper operation.	The loop back test may be performed on Serial Port 1 or Serial Port 2. Each tab shows diagrams to assist the user in building the loop back connector.
2	<b>PLC Enquiry Test</b>	This function allows the ability to select any PLC that may be connected to the touch panel via a serial connection and checks to see if the communications are working correctly.	The PLC must be configured for the selected port in the <b>C-more</b> programming software Protocol Manager and transferred to the panel before attempting the PLC Enquiry test.

*Note: Serial 3 on the CM5-T4W and CM5-T7W require a USB to Serial converter, ADC Part No. USB-485M. Otherwise it will show "Not Connected".*

Serial Port 1



## Test Menu — PLC Serial Comm Port - Loop back test

### Test Results

Bytes Sent:

The number of bytes sent after a test is started.

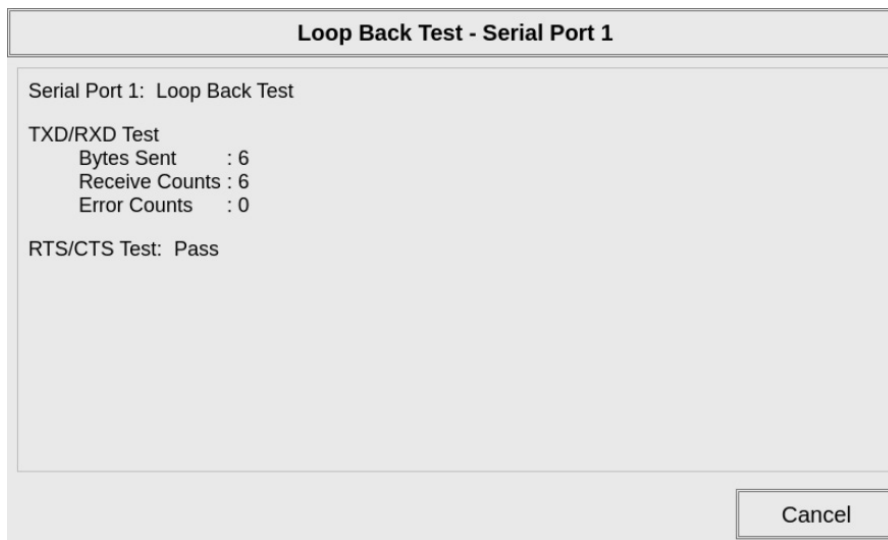
- 1) Receive Counts:  
The number of bytes which are received after the test is started.
- 2) Error Counts:  
The number of bytes which have not been received after the test is started.
- 3) RTS/CTS Test: Pass/Fail  
RTS is turned on and if CTS receives the signal then the test shows “Pass”, otherwise the test shows “Fail”.




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*NOTE: The test will continue to run until the Cancel button is pressed. If there are any error counts, check the loop back connector.*

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## Test Menu — PLC Enquiry Test: Serial Connection

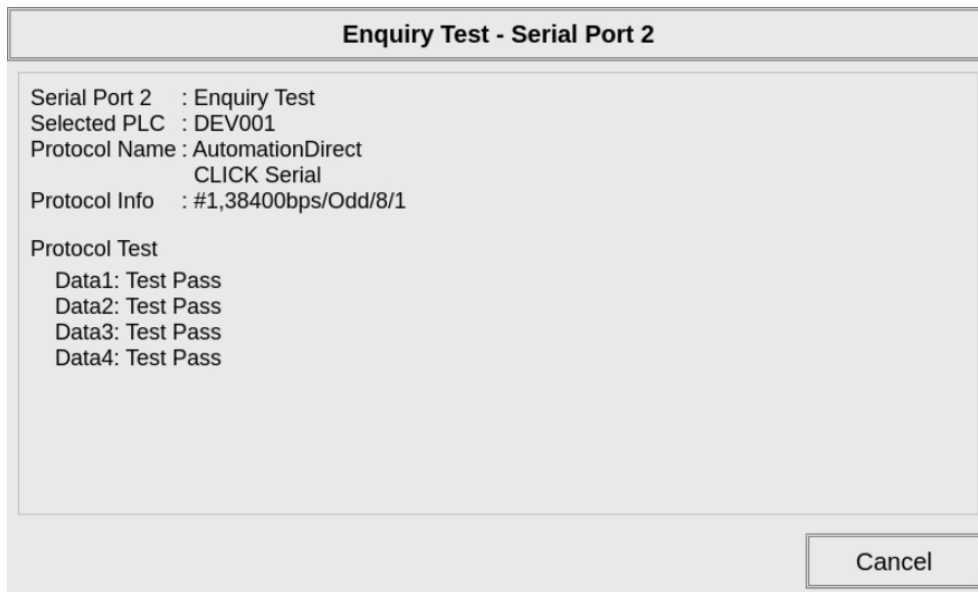
This function allows the ability to select any PLC that may be connected to the touch panel through the selected serial comm. port connection and checks to see if the communications are working correctly.



*NOTE: The communications protocol for the selected PLC must match the the C-more touch panel. The touch panel PLC serial communications are configured using the C-more Programming Software's Protocol Manager.*

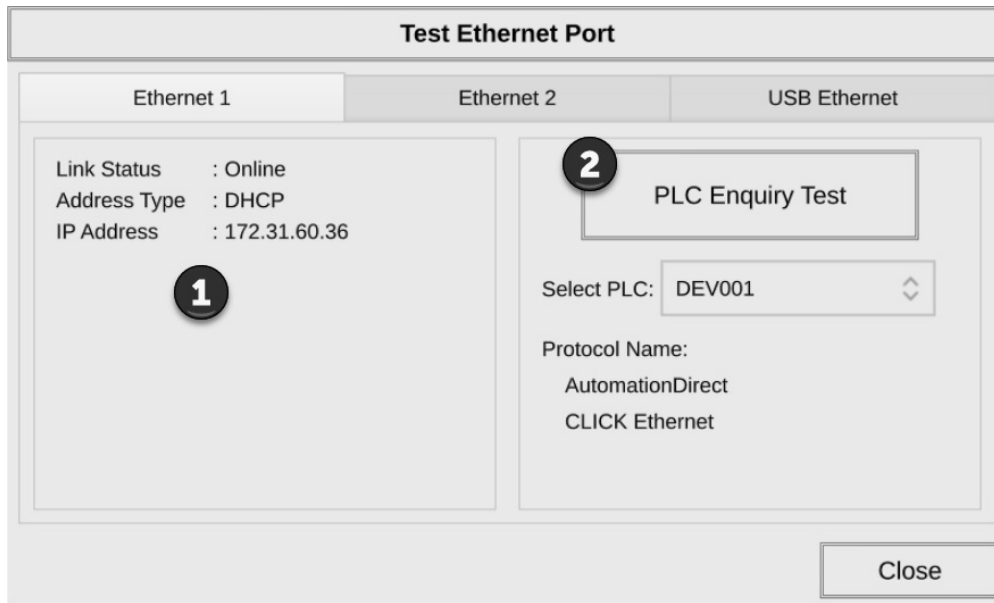
## PLC Enquiry Test

Four test packets are sent to the selected PLC. The test result with return either Pass or Fail.



## Test Menu – Test Ethernet Port

The following test feature can be used to check the operation of the Ethernet communication port by indicating if an Ethernet link has been established or not, and can also check the status of the Ethernet communications to any connected PLC.



*NOTE: The communications protocol for the selected PLC must match the the C-more touch panel. The touch panel PLC serial communications are configured using the C-more Programming Software's Protocol Manager.*

Item No.	Function	Description	Comments
1	<b>Connected</b>	This area displays information to whether an Ethernet link has been established for the touch panel's Ethernet comm port or not. Displays panel's IP address and shows whether it is static or assigned by a DHCP server.	Ethernet 2 is not supported on the CM5-T4W and CM5-T7W. USB Ethernet requires a USB to Ethernet converter. Otherwise it will show "Not Connected".
2	<b>PLC Enquiry Test</b>	This function allows the ability to select any PLC configured in the project that may be connected to the touch panel via an Ethernet connection and checks to see if the communications are working correctly.	The PLC must be configured for the selected port in the <b>C-more</b> programming software Protocol Manager and transferred to the panel before attempting the PLC Enquiry test.

## Test Menu — PLC Enquiry Test: Ethernet Connection

### PLC Enquiry Test

Following are the steps that the Ethernet PLC Enquiry Test performs:

- 1) Ping the network 4 times for the PLC selected.
- 2) Four of the test read packets are sent to the selected PLC.

The test result will either be Pass or Fail. However, if the result of pinging the network shows an error.

**Enquiry Test - Ethernet Port 1**

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Ethernet Port 1: Enquiry Test  
 Selected PLC : DEV002  
 Protocol Name : AutomationDirect  
                   CLICK Ethernet  
 Protocol Info : 192.168.1.32

Ping Test	Protocol Test
Data1: Reply from PLC bytes=64, time=0.528ms, TTL=64	Data1: Test Pass
Data2: Reply from PLC bytes=64, time=0.231ms, TTL=64	Data2: Test Pass
Data3: Reply from PLC bytes=64, time=0.225ms, TTL=64	Data3: Test Pass
Data4: Reply from PLC bytes=64, time=0.298ms, TTL=64	Data4: Test Pass



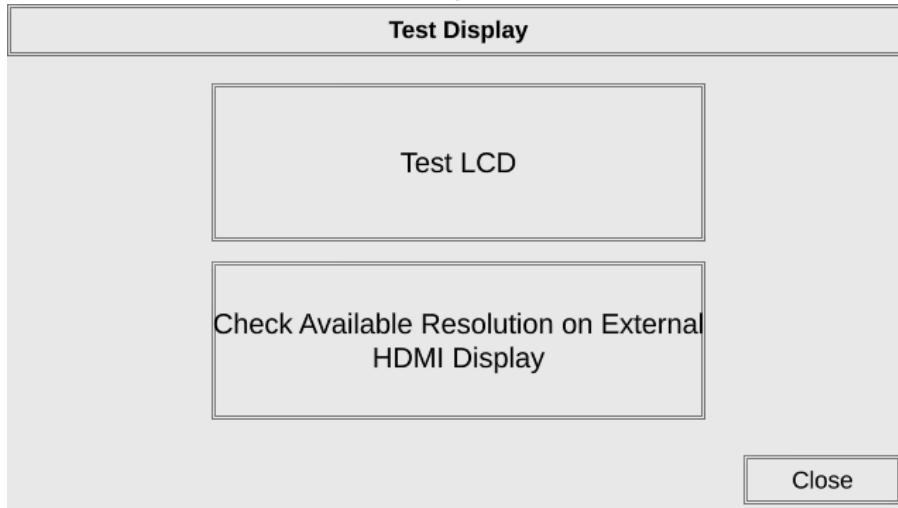

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*NOTE: The communications protocol for the selected PLC must match the the C-more touch panel. The touch panel PLC serial communications are configured using the C-more Programming Software's Protocol Manager.*

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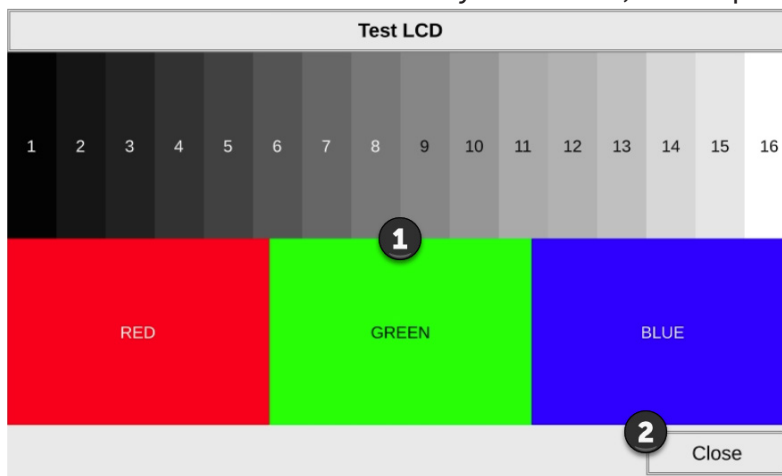
### Test Menu – Test Display

There are two different test patterns that may be run on the display to allow the user to check for display screen defects. If the screen is not touched within 3 seconds of Test Pattern 1 being displayed, then Test Pattern 2 will be displayed until the screen is touched, otherwise Test Pattern 1 will remain until closed. Press Test LCD to begin the test.



Test Pattern 1 displays a test pattern of 16 grayscale graduations and RGB colors.

Test Pattern 2 will follow the pattern as shown in the following chart with the color wiping across the screen in the direction indicated by the arrows, then repeats:



Color	1st Time	2nd Time	3rd Time	4th Time
Red	→	↑	↓	←
Green	←	→	↑	↓
Blue	↓	←	→	↑

Item No.	Function	Description	Comments
1	<b>Touch the Test Display screen.</b>	Press the screen anywhere except the Close button and the shown Test Pattern 1 remains.	If the Test Display screen is not touched, then in three seconds the display will move to Test Pattern 2.
2	<b>Close (Test Pattern 1)</b>	Press to return to the Test Menu	
3	<b>Touch Anywhere (Test Pattern 2)</b>	Touch the screen anywhere during Test Pattern 2 and return to the Test Display Menu.	

**Test Results:** If any pixels on the screen do not appear the same color as the surrounding pixels, the screen may be defective. A single pixel gone bad is relatively common. Surrounding pixels going bad over time is another indication the screen may be defective.

### Check Available Resolutions on External HDMI Display

This selection performs a check through the HDMI port and attempts to negotiate with a



*NOTE: If the display is connected through a signal converter such as an HDMI-DVI converter, the negotiations may not be successful and the available resolutions may not be correct.*

connected display and determine all available resolutions.

**Check Available Resolution on External HDMI Display**

Panel has detected an HDMI display with following available resolutions. Check if your selected resolution is fully and properly displayed on the HDMI Monitor.

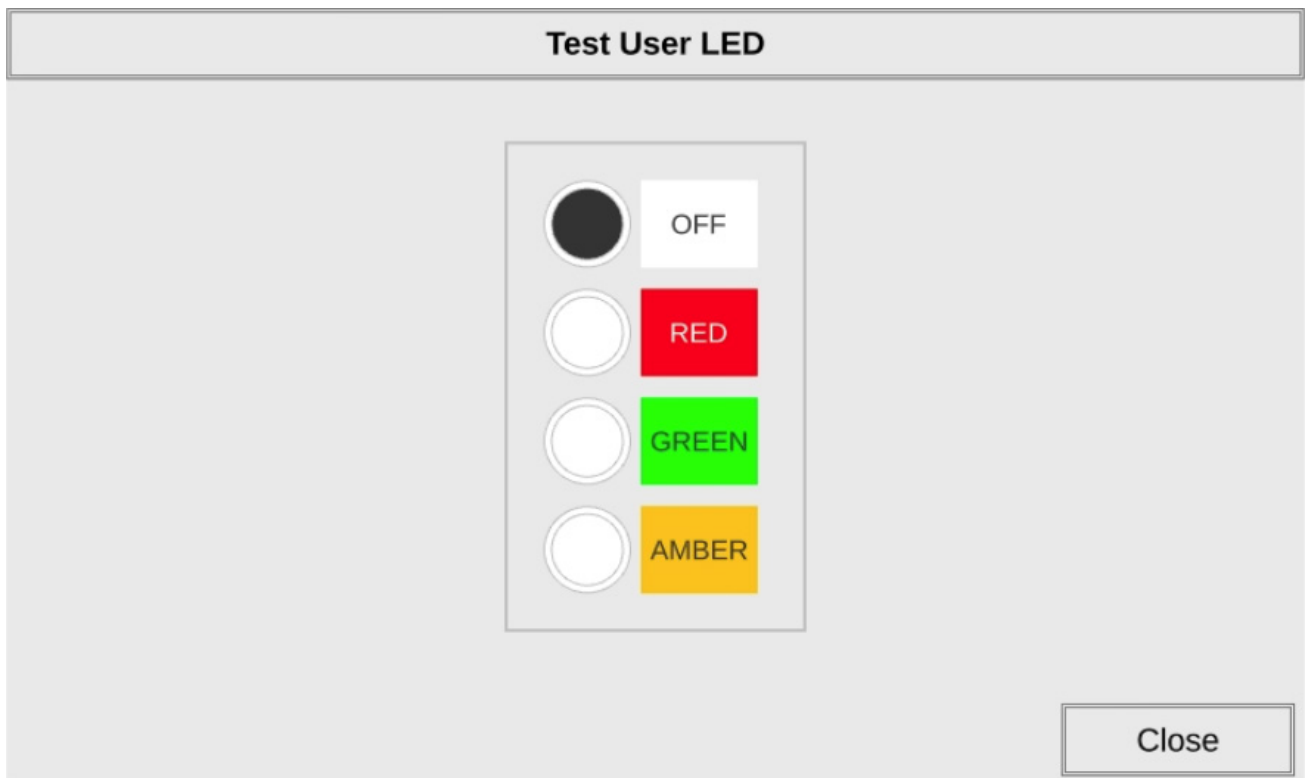
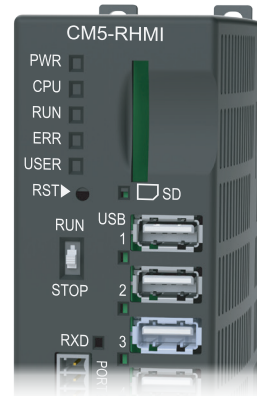
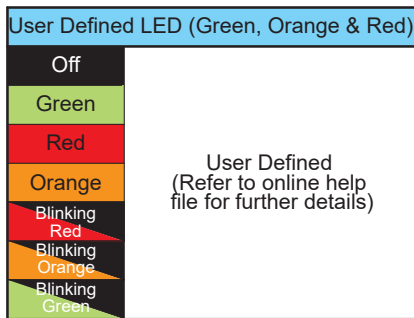
Note: When using a signal converter such as an HDMI-DVI Converter may affect results.

- ✓  VGA (640x480,60Hz)
- ✓  XGA (1024x768,60Hz)
- ✓  SD 480P (720x480,60Hz)
- ✓  HD 720P (1280x720,60Hz)
- ✓  FHD 1080P (1920x1080,60Hz)



### Test Menu – Test User LED

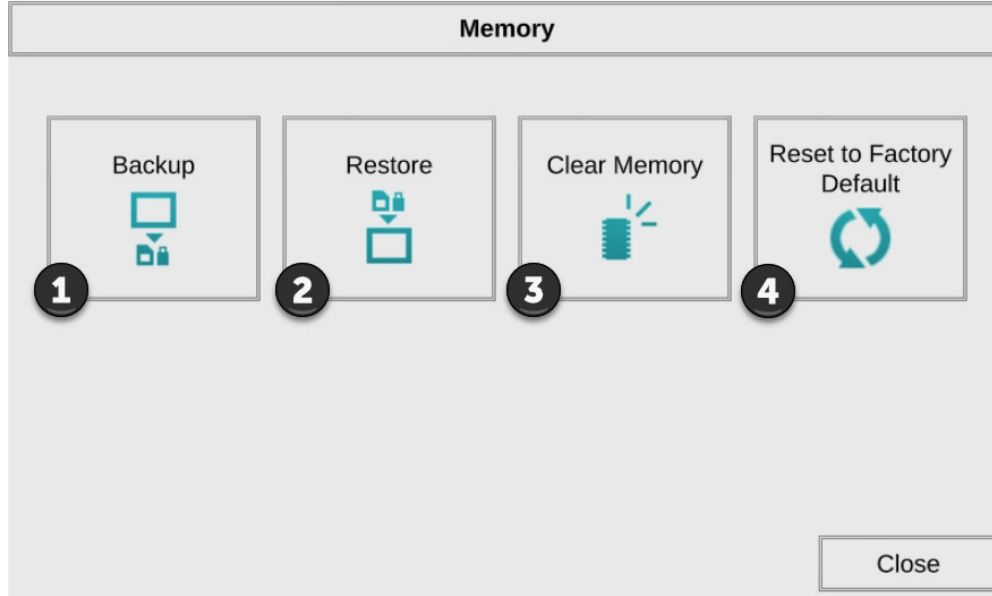
The user defined LED on the panel front bezel can be controlled from the project to illuminate red, green, or orange. It can also be configured to blink these colors. Refer to the online help file provided with the programming software for details. The System Screen can also be used to verify that the User Defined LED is functioning.



NOTE: CM5-T4W doesn't have a User Defined LED.

## Memory Screen

The **C-more** CM5 panel project, Firmware and OS, log and recipes files can be backed up to or restored from an SD memory card or a USB memory device. From this screen the user can also clear the project log files. The user also has the ability to clear any memory or memory device in the **C-more** touch panel.



Item No.	Function	Description	Comments
1	<b>Backup</b>	Backup project, Firmware and OS, logs & recipe files to the following memory devices: USB port - Type A: USB pen drive SD Card Slot1:SD Card	Any USB 2.0 pen drive. SD formats SD , SDHC and SDXC are supported. Capacity up to 32 GB. The backup data files are created and copied to a folder on the memory device named "CM_MemoryCopy." The project file is named StartupStorage.easv "Log" and "Recipe" folders with the appropriate data files are also created on the memory device.
2	<b>Restore</b>	Restore project, Firmware and OS, log & recipe files to the internal memory from one of the following memory devices: USB port - Type A: USB pen drive SD Card Slot1:SD Card	A folder on the memory device named "CM_MemoryCopy" must exist containing a file named "StartupStorage. easv". The project data file is stored in this file, and if the system data file was backed up, it also will be stored in this file. Any backed up log or recipe data files will be located under the appropriate "Log" or "Recipe" folders.
3	<b>Clear Memory</b>	Clear selected data files from the memory of the following internal memory or external memory devices: Built-in FLASH Memory USB port - Type A: USB pen drive SD Card Slot1:SD Card	Can only clear project, log and recipe data files of the Built-in FLASH memory. Can clear entire contents or individual data files of external memory devices.
4	<b>Reset to Factory Default</b>	The touch panel's internal memory is set to the original factory defaults.	Clears all project memory and other settings to factory original settings.

## **Saving to an External Memory Device**

The project is RESTORED to the panel from an external memory device. A project can be TRANSFERRED to an SD card or USB memory from the programming software by saving to an External Memory Device. Then the project can be RESTORED to a panel that is not connected to the programming software. This file has the .easv extension NOT the .eapv extension of a project SAVED from the software.

## **Increasing Project Memory Size using an SD memory card**

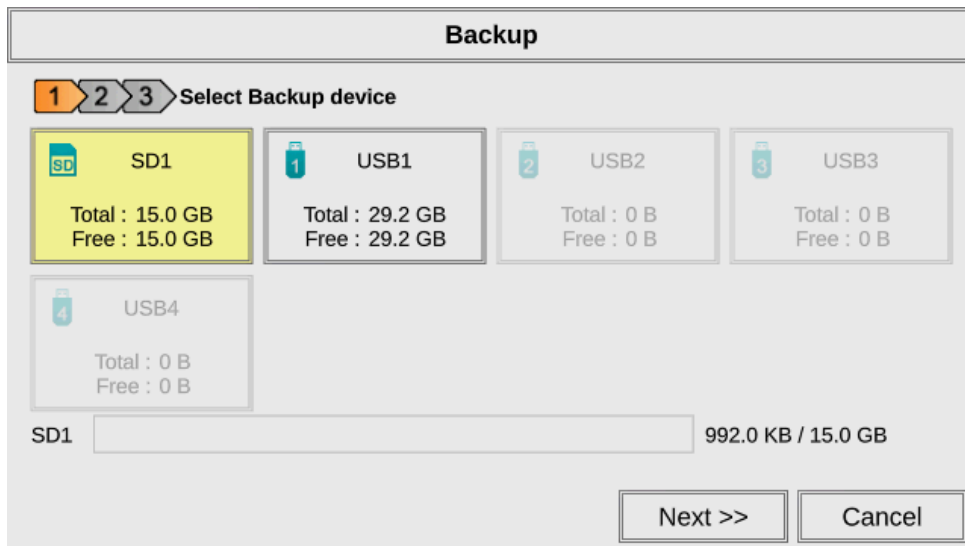
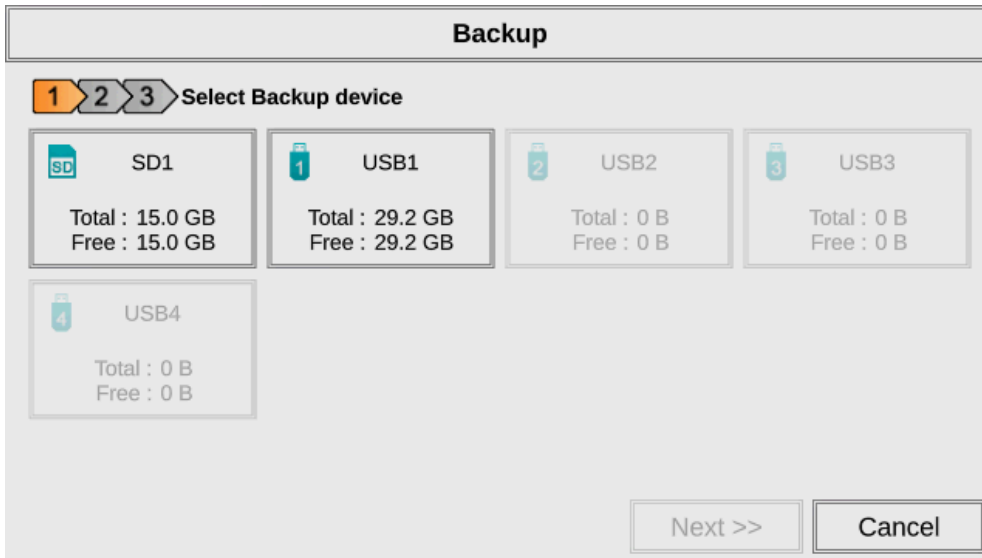
If a project is transferred to the panel with an SD memory card in SD slot, the Font and Recipe data files are not included in the 45MB project size. Therefore using an SD memory card can allow a project to be loaded that is larger than project storage memory of the panel if the excessive size is caused by Fonts and/or Recipe Sheets.

## Memory — Backup

The Memory - Backup selection allows you to backup the panel’s Project, Log files, Recipe files or even the Firmware files to either an SD memory card or USB pen drive. The available memory devices will be displayed with their total and free memory. If the device is not available, it will be grayed out. The Next >> button is grayed out until a device is selected. The Cancel button can be pressed at any time to return to the Memory Screen.

Below is an example of selecting a USB memory device to write the backed up files to. The selected device is highlighted. Pressing again deselects it. Even if there is only one available memory device, it still needs to be highlighted in order to go to the next step.

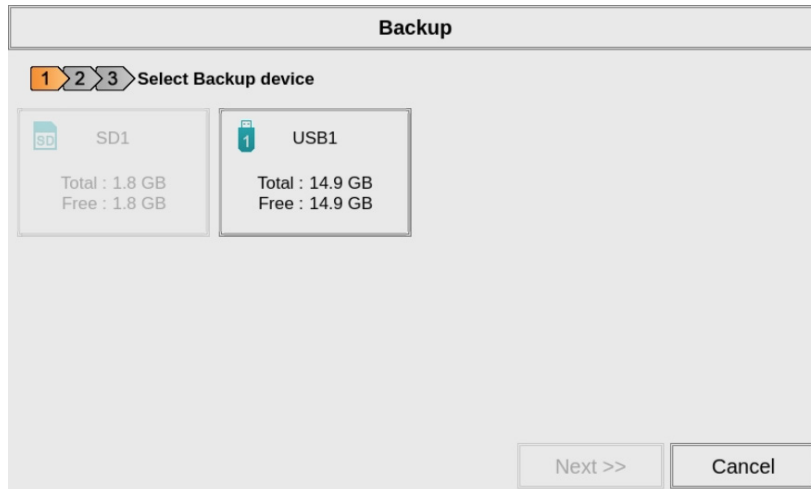
Press the Next >> button to continue to Step 2.



### SD1 Availability

SD1 may be unavailable (grayed out) if there is no card in the SD Slot or the card in the SD slot has the project currently running on the panel stored on it. The project will reside on the SD Card if the Project Storage/Boot Location is set to Auto or SD1 in the **C-more** software Protocol Manager, and an SD memory card is located in the SD Card Slot 1 at the time a project is transferred to the panel

Select the data file(s) to be backed up by pressing the appropriate data file button. The selection will be highlighted.



*NOTE: The following definitions are for the various file types that can be backed up:*

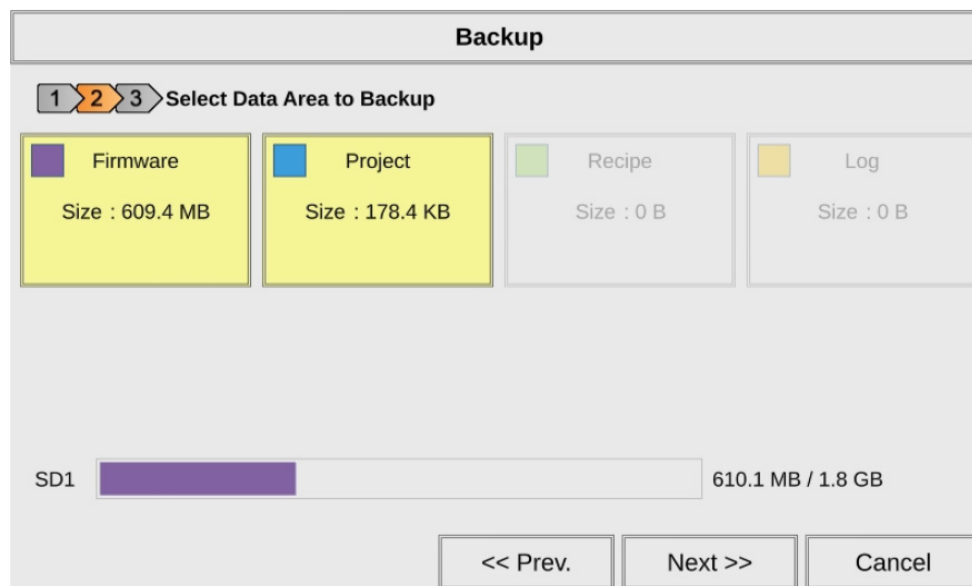
**Firmware** – consists of the operating system, firmware and run time files. Included in backup file name StartupStorage.easv.

**Project data** – consists of the actual developed project data that is created in the C-more programming software and includes all functionality, objects, screens, tag names, labels, comments, graphics, etc. Included in backup file name StartupStorage.easv.

**Recipe data** – consists of all the data values and labels that have been created for the various recipe sheets. Includes all recipe sheets loaded to the panel. Only recipe sheets used in the project are loaded to the panel.

Pressing the highlighted data file button again will turn it off. The Next >> button will stay grayed out until at least one data area is selected. Any file type not available will be grayed out.

Press the Next >> button to continue.

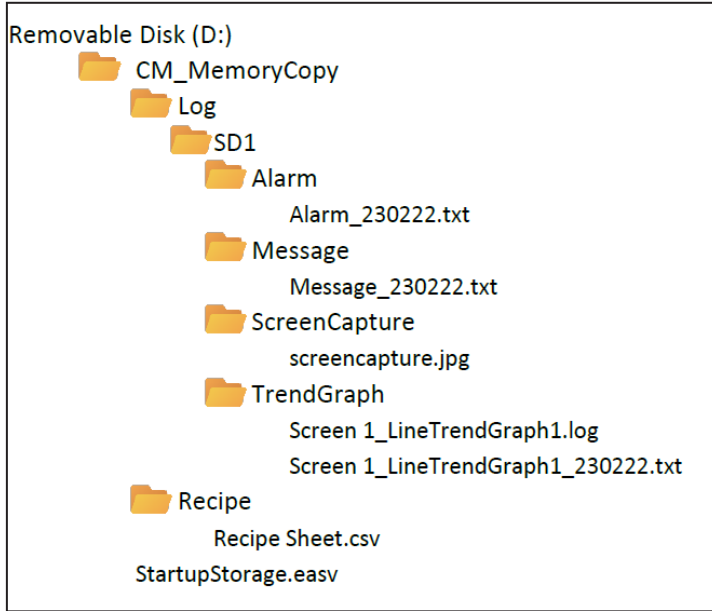


## Backup Data Files Naming and Organization

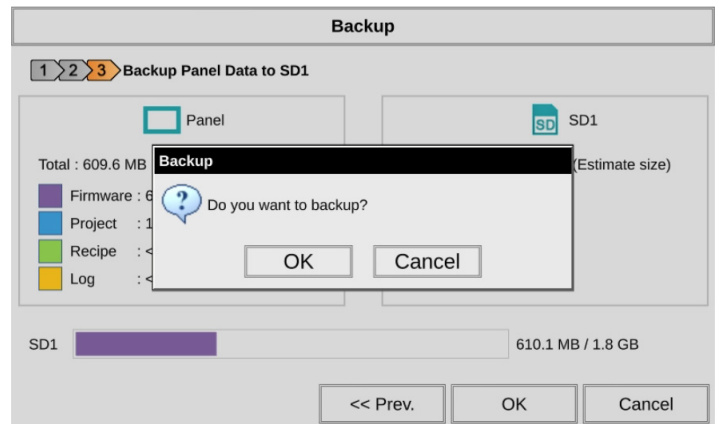
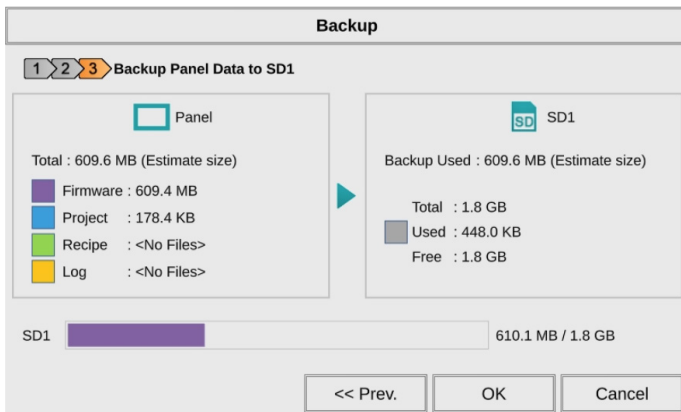


*NOTE: In the case of the Project and Firmware files, these can be Restored later to another panel.  
 Recipe files can be edited externally from the panel and then Restored to the panel.  
 The Log files are for viewing purposes only.  
 See **Memory - Restore** later in this chapter for instructions on Restoring the Project, Firmware and or Recipe files to a Panel.*

The following graphic shows how the various data files are organized on the memory device when doing a Backup and also the file naming convention that is used when viewed in Windows® File Explorer on a PC.



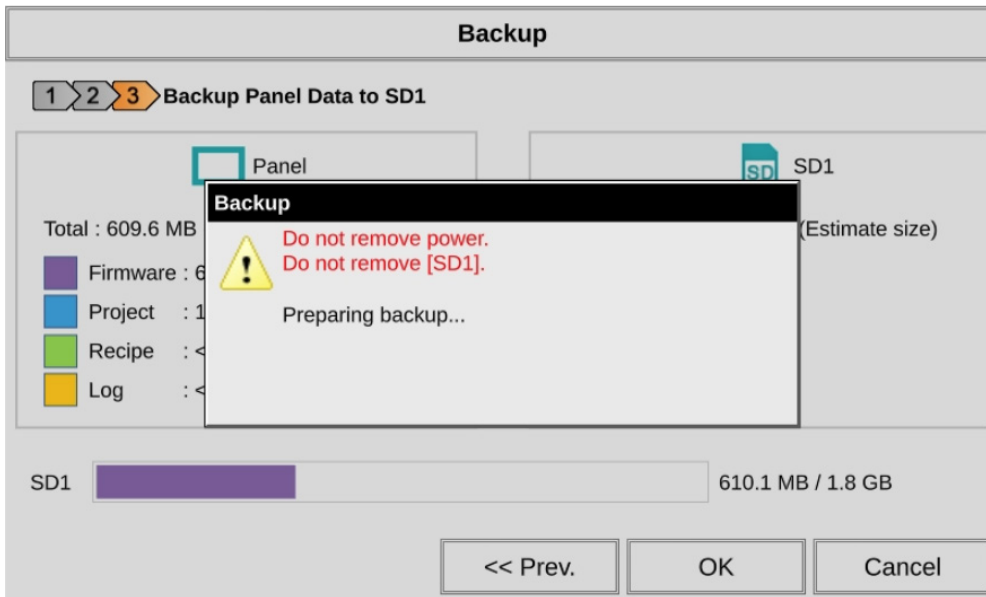
The next system setup screen allows the verification of the data file and backup device selections. When the OK button is pressed, a last verification popup is displayed.



The following text is shown in the copying progress message box. This message is displayed during the Backup copying process.

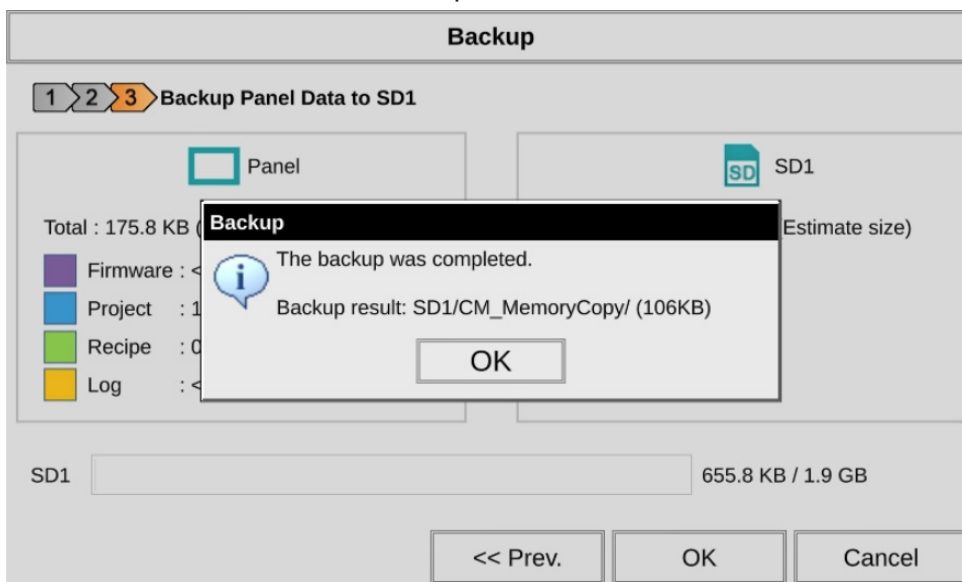
**Do not remove power**  
**Do not remove [%device%]**  
 %device% will show either **SD1, USB1, USB2, or USB3.**

The backup process will take several minutes if backing up firmware. This message is displayed to indicate the backup is complete.



**WARNING:** During the backup process do not power off the touch panel or remove the memory device.

Press the OK button to return to the previous screen selection.



### Backup Warning Messages

If the destination does not have enough space to store the selected memory size, then the message shown here will be displayed. Press the OK button to clear the warning message.

The warning message will read:

**[SSC-300] %device% does not have enough free space. Please use a [device type] with more space.**

%device% and [device type] will show either **SD1, USB1, USB2, or USB3.**



This warning message will be displayed if the backup Memory device fails or is removed during the backup. Press the OK button to clear the warning message. The warning message will read:

**[SSC-306] Backup Failed. %device% cannot be found.**

%device% will show either **SD1, USB1, USB2, or USB3.**



Refer to **Chapter 8: Troubleshooting** and **Appendix C: System Screen Error Codes** for additional help.



## Memory — Restore

The Memory - Restore function is used to:

- 1) Restore a project previously backed up on an SD card or USB pen drive memory device to the same panel. See **Memory — Backup** previously in this chapter.
- 2) Copy a project from one panel to another panel using a memory device to physically transport the data files.
- 3) Restore a project into the panel that was transferred to an “External Memory Device” using the **C-more** Programming Software.
- 4) Restore Recipe Sheet(s) previously backed up to a memory device or copied to the memory device using a PC.

The available memory devices will be displayed showing the total and free available memory for that device. If the device is not available, it will be grayed out. The Next button is grayed out until a device is selected.

Below is an example of a SD card memory device selected to be the source for restoring the data file(s). The selected device is highlighted. Pressing again deselects it. Even if there is only one available memory device, it needs to be highlighted in order to go to the next step.

Press the Next >> button to continue.



*NOTE: If you have a memory device inserted into the proper port on the touch panel, but it doesn't show up as highlighted in Step 1 of the Restore screen, then try a different device to determine if the memory device is defective or if there is a possible problem with the memory device connection. It may not be compatible with the panel. Some USB pen drives are not USB 2.0 compatible and will not work with C-more touch panels. Some SD cards must be formatted using the SD formatter provided by [SDcard.org](http://SDcard.org)*



*NOTE: The following definitions are for the various file types that can be restored:*

**Firmware** – consists of the operating system, firmware and run time files. Included in backup file name StartupStorage.easv.

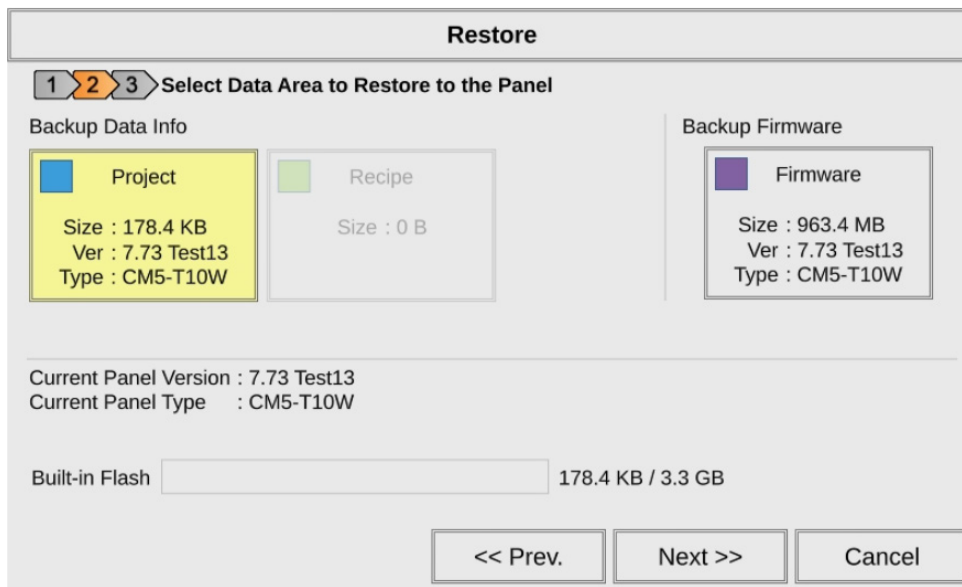
**Project data** – consists of the actual developed project data that is created in the C-more programming software and includes all functionality, objects, screens, tag names, labels, comments, graphics, etc. Included in backup file name StartupStorage.easv.

**Recipe data** – consists of all the data values and labels that have been created for the various recipe sheets. Includes all recipe sheets loaded to the panel. Only recipe sheets used in the project are loaded to the panel.

Select the data file(s) to be restored by selecting the appropriate data area button. The selection will be highlighted. The data area can either be the Project, Recipe files and/or the Firmware. If the backup file was made using the software and transferring to External Memory Device, and the Project Storage/ Boot Location setting in the project Panel Manager determines the restoration location. See the Help File Panel Manager topic.

If the backup file was made using the System Setup Screens then the restoration point is the same as the projects boot destination. Pressing the highlighted data area button again will turn it off. The Next >> button will stay grayed out until at least one data area is selected. Any file type not available will be grayed out.

The selected file is highlighted. Pressing Cancel will return to the Memory screen. Pressing the << Prev button with return to the previous screen. Press the Next >> button to continue.



NOTE: The following definitions are for the various file types that can be restored:

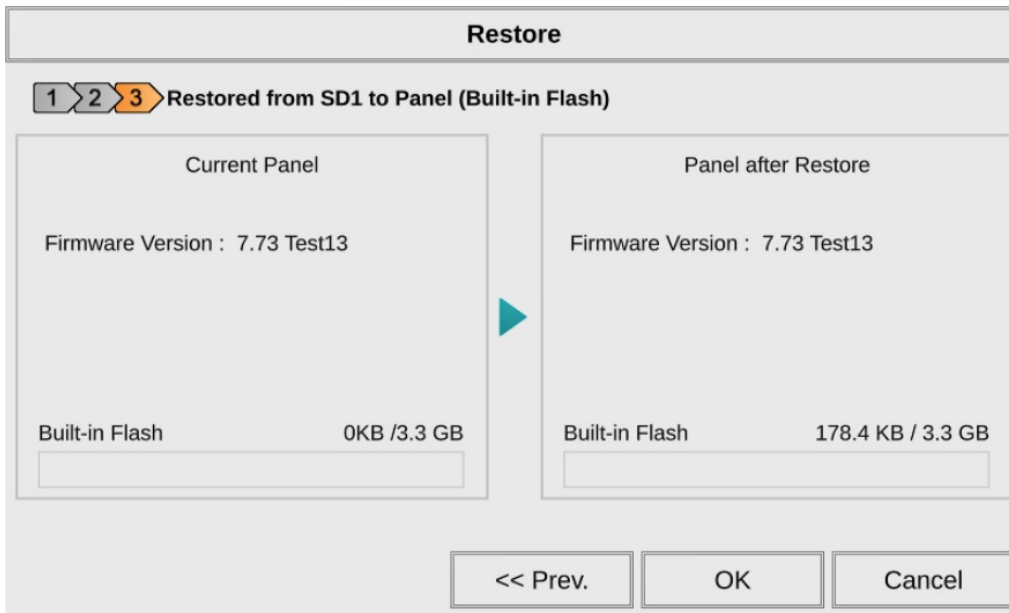
**Project data** – consists of the actual developed project data that is created in the C-more programming software and includes all functionality, objects, screens, tag names, labels, comments, graphics, etc. Included in backup file name StartupStorage.easv.

**Recipe data** – consists of all the data values and labels that have been created for the various recipe sheets. Includes all recipe sheets loaded to the panel. Only recipe sheets used in the project are loaded to the panel.

**Firmware** – consists of the operating system, firmware and run time files. Included in backup file name StartupStorage.easv.

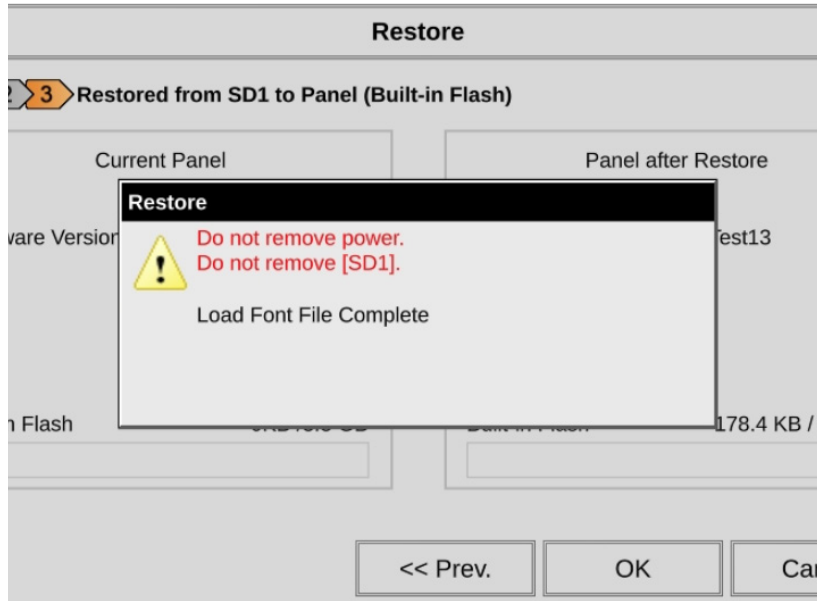


The next window shows what has been selected and the operation that is carried out.



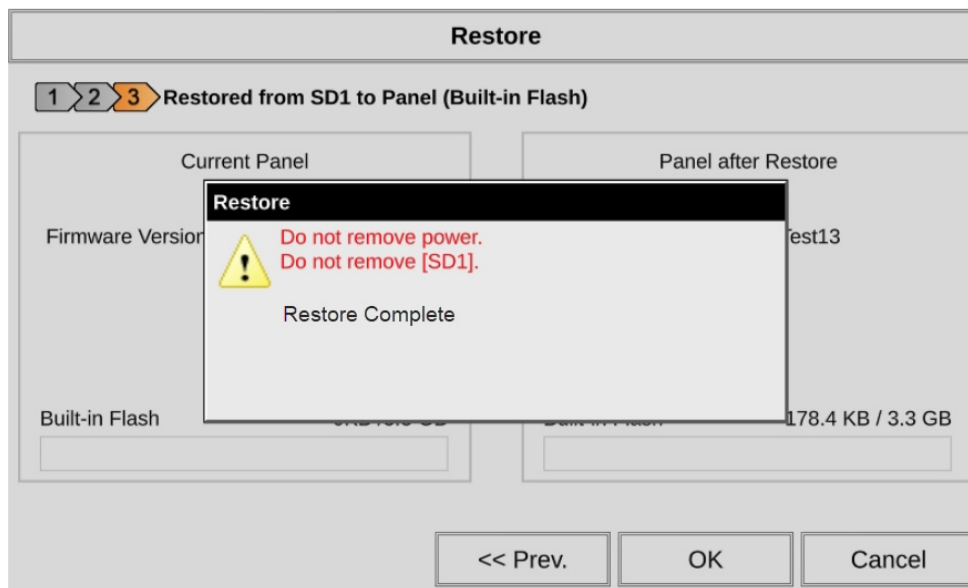
The following text is shown in the copying progress message box:

**Do not remove power**  
**Do not remove [%device%]**  
 %device% will show either **SD1**, **USB1**, **USB2**, or **USB3**.



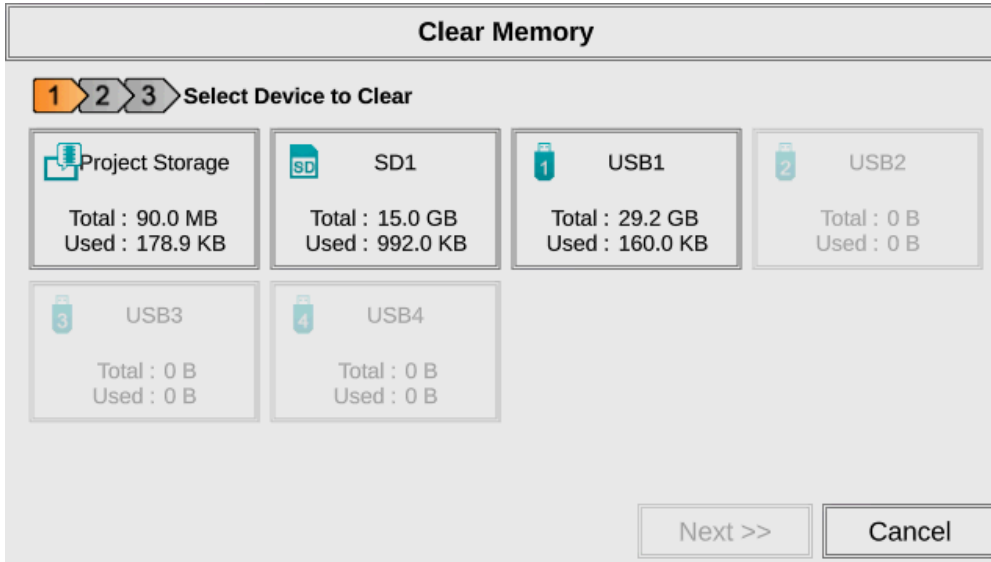
**WARNING:** During the restore process do not power off the touch panel or remove the memory device.

The message below is displayed momentarily to indicate the Restore is complete. The panel will reboot automatically and run the restored project or data.

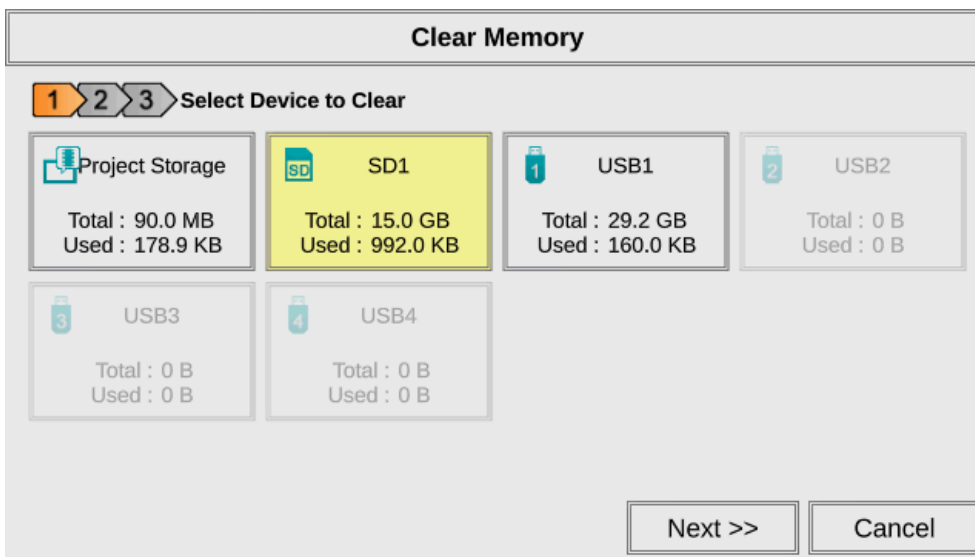


### Memory — Clear Memory

This function is used to clear individually selected data files, or all data files, within the panel’s built-in memory, or any installed memory device such as a USB pen drive or an SD card. Select the memory device to clear. If the device is not available, it will be grayed out. The Next >> button is grayed out until a device is selected.



The selected device is highlighted. Pressing again deselects it. When there are more than two available backup devices, only one can be selected at a time.



Press the Next >> button to continue.

Select the data area to be cleared. The Next >> button will stay grayed out until an area is selected. Selecting Clear All will erase all files located on the memory device.

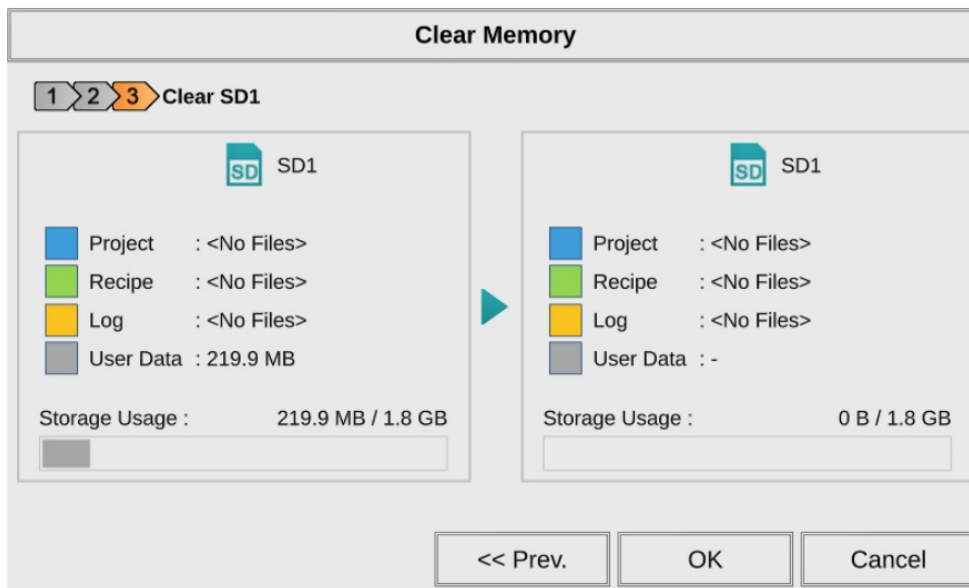
The selected memory is highlighted. Pressing again deselects it. Pressing Cancel will deselect the file(s) and return to the Memory screen.



NOTE: Firmware files cannot be cleared from internal memory.

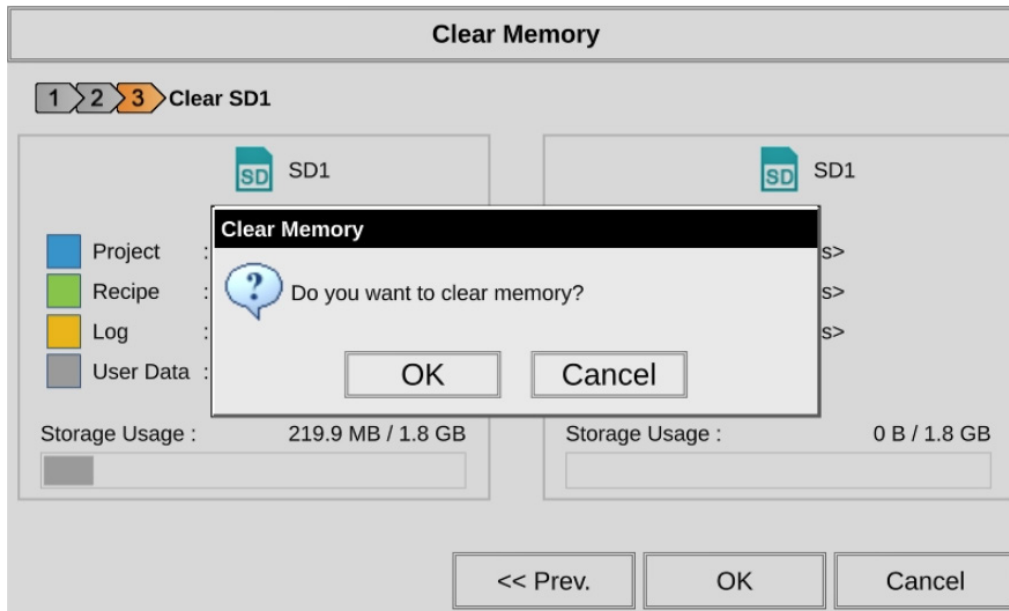
Press the Next >> button to continue.

The next window shows what has been selected and the operation that will be carried out.

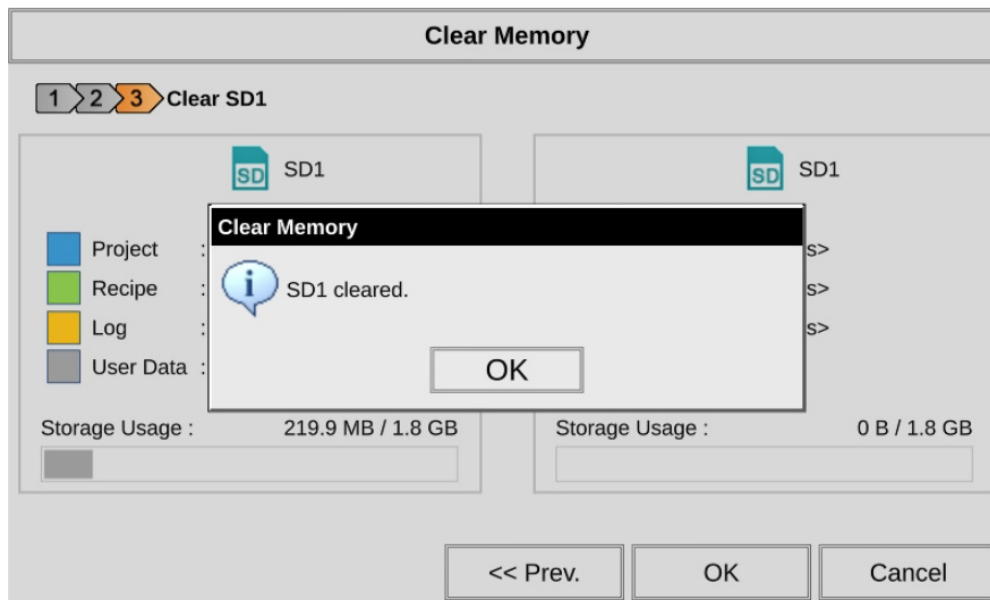


Press the OK button to continue.

Select OK to begin clearing the memory at the desired location(s). Select Cancel to return to the previous screen.



After the Clear Memory process is complete, press OK to return to the Memory screen.



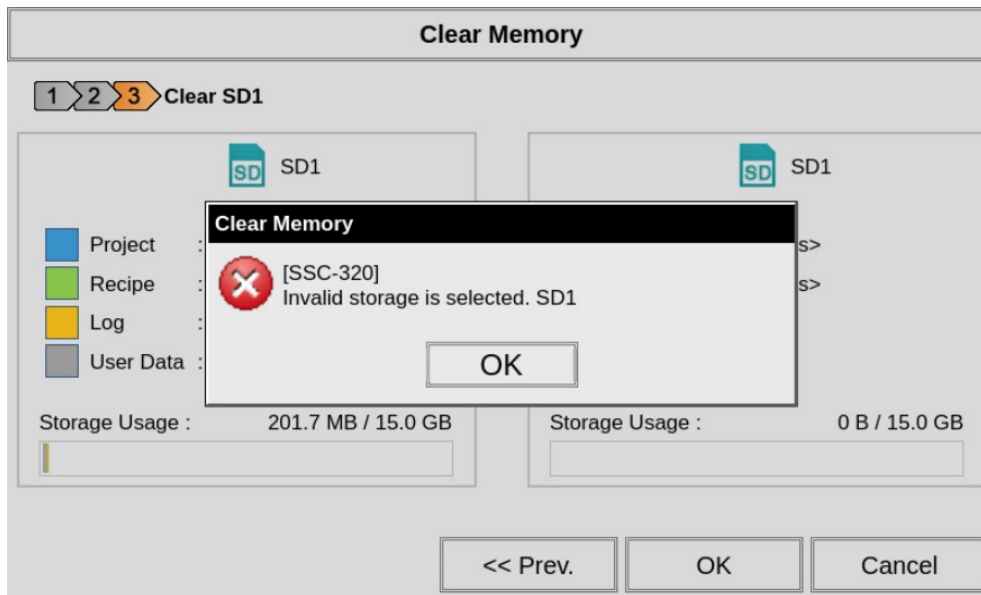
## Memory Clear Warning Message

The warning message shown below will be displayed if the clearing process fails.

### Invalid Storage is selected %device%.

%device% will show **SD1**, or **USB 1, 2, or 3**.

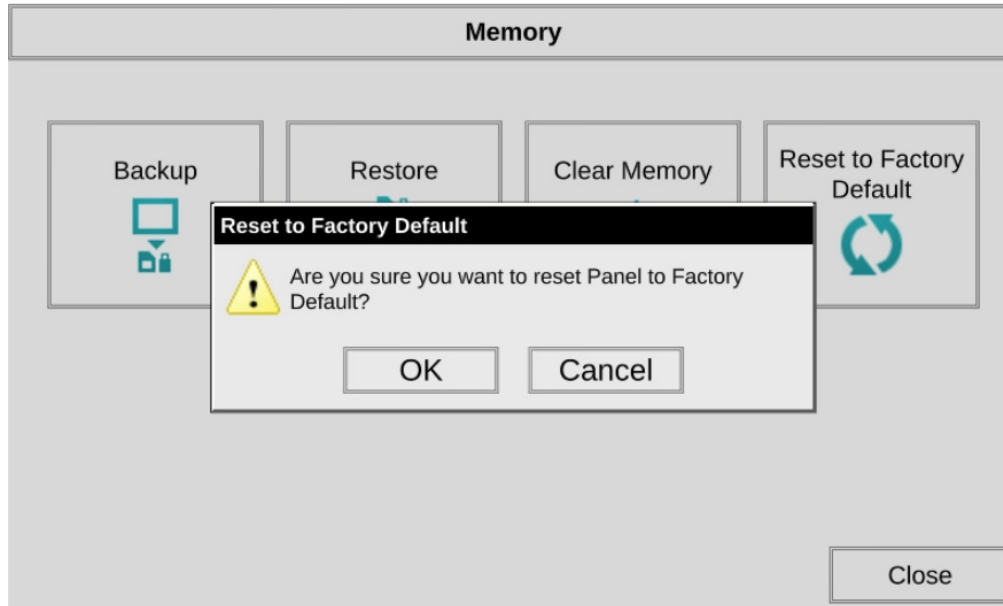
Press the OK button to return to the Memory screen and try again. If the selected memory still fails to clear, then refer to **Chapter 8: Troubleshooting** and **Appendix C: System Screen Error Codes** for additional help.





## Memory — Reset to Factory Default

To reset the **C-more** panel to factory default settings, press Reset to Factory Default. The following message appears.



Resetting to factory defaults produces the following actions:

- 1) The touch screen calibration is reset.
- 2) The project file is cleared.
- 3) The log, recipe & WAV files are cleared.
- 4) The IP address is set to DHCP.
- 5) Time Zone is set to UTC-5
- 6) Orientation is set to 0 degrees



**WARNING:** As a precaution, it is recommended to create a backup file to an SD card or USB storage device using the Memory Backup function before resetting to factory defaults.

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