

LS2403K Control Panel Installation Manual



This Manual covers all functions and options available in the Syndyne Organ Resource Control System, Model LS2403K. Your system may have been setup by the installer with security codes if Security Codes are used, some programming functions listed in the following pages may not be available to you. If you see an option listed in the manual but are not able to find it on your control panel after entering your Security Code, then that option is not available to you.

If you have questions about operation, programming or available features, please contact the organ builder who installed your Syndyne System or the Organ Technician who Maintains your organ.

Note: This manual does not cover LS2403M (Memory only controller) models.
LS2403M controllers have their own manuals.

Control System Installed By _____ Date Installed _____
Installer Telephone _____ Email _____ Fax _____

Control System Maintained By _____
Maintenance Telephone _____ Email _____ Fax _____

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TABLE OF CONTENTS

| | |
|---|-----|
| Table Of Contents | i |
| Installation | 1-1 |
| Basic Operations | 2-1 |
| Main Menu..... | 3-1 |
| Display Sleep..... | 3-2 |
| Set Brightness..... | 3-2 |
| Set Contrast..... | 3-3 |
| Entering Program Options..... | 3-4 |
| Enter Access Code | 3-4 |
| Entering Display Options..... | 3-5 |
| Entering Set Up Options | 3-5 |
| Program Options | 4-1 |
| Entering Program Options..... | 4-2 |
| Programming Couplers | 4-3 |
| Programming MIDI Stops..... | 4-4 |
| Programming Crescendo..... | 4-5 |
| Programming Patch Changes On General Pistons..... | 4-6 |
| Clear MIDI Stops | 4-7 |
| Clear All Patch Changes On General Pistons | 4-7 |
| Clearing The Crescendo | 4-7 |
| Clear All Couplers..... | 4-8 |
| Clear Transpose General Pistons | 4-8 |
| Setup Options..... | 5-1 |
| Setting Memory Levels..... | 5-2 |
| Setting Access Codes | 5-3 |
| Setting Access Levels | 5-4 |
| Programming The Marque | 5-7 |
| Set Power Up Sleep | 5-8 |
| Set Crescendo End..... | 5-9 |
| Display Options | 6-1 |
| Selecting A Display Option | 6-2 |
| Accessing Display Options | 6-2 |
| Display Options 1-8 | 6-3 |
| Display Options 9-18 | 6-4 |
| Display Options 19-28 | 6-5 |
| Display Options 29-36 | 6-6 |

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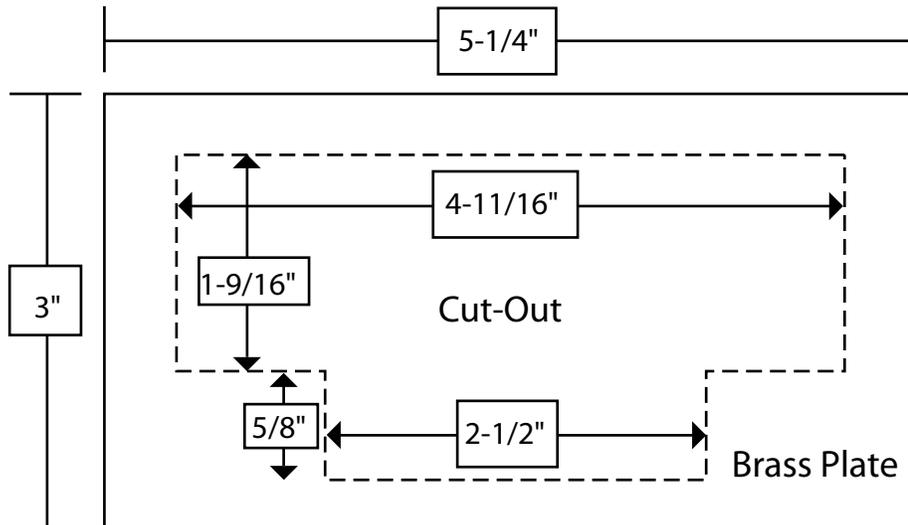
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INSTALLATION

This section explains how to install and wire the LS2403K Control Panel.

MOUNTING

There are different methods of mounting the LS2403K Control Panel. The LS2403K can be special ordered without the brass plate and/or without standard buttons. Consult with factory before ordering the LS2403K if a special installation method is required. To mount the Control Panel with a brass plate and standard buttons, cut out a hole in the console, see diagram below for more information. Insert the LS2403K into the cut out and attach it from the back of the console. Attach the brass plate to the console with the brass screws which are provided.



CONNECTIONS

Memory Level Connector

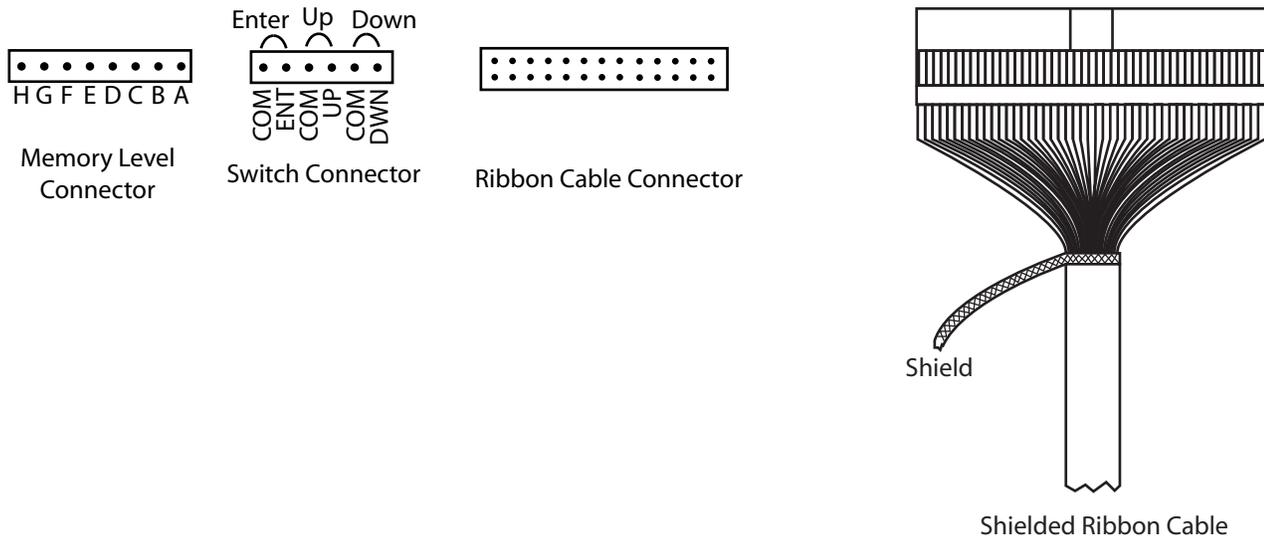
Connect the Control Panel's Memory Level Outputs (A-E for the LS5608 and A-G for the LS2464) to the memory level inputs of each Combination Action board. Connect the LS2403K's output H to the Memory Lock-out input pin of each Combination Action board. See the diagram below for a drawing of the connector pin out.

Switch Connector

This connector enables the LS2403K to use thumb pistons or (other momentary, normally open buttons) to control the up, down, and enter functions of the control panel. See the drawing below for a connector pin out.

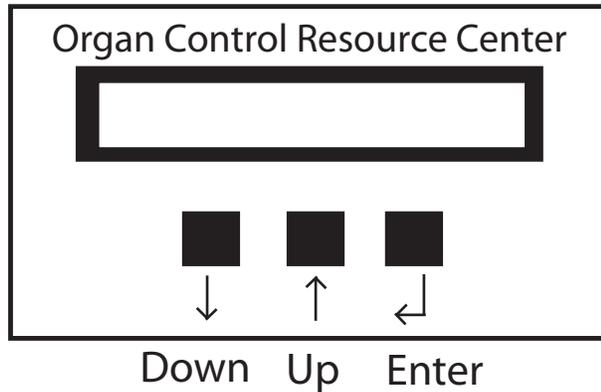
Ribbon Cable Connector

Connect the LS2403K to the CPU board connector labeled "Control Panel," using the shielded ribbon cable provided, and attach the shield to Negative Ground (the CPU board can be either an LS5600K or LS2400K).



BASIC OPERATIONS

Basic operations you will need to navigate through your control panel interface.



THREE BUTTONS

Program Mode

Down: Scrolls Down through Menus and Options

Up: Scrolls Up through Menus and Options

Enter: Selects the Current Menu or Option

Normal Operation Mode

Down: Lowers memory level or transpose pitch, depending on which function has cursor line beneath it.

Up: Raises (same as above)

Enter: Switch between memory level control and transposer control

The three buttons listed above are all the controls needed while programming the Control Panel and its many features and options. To access the Panel's main menu, hold the Enter button for two seconds after powering up organ. This will allow access to any of the system settings that have been included in the installation process. Scrolling through the different menus is done by using the up or down arrows, and selections are made using the Enter button. To exit a menu, scroll to the exit option and press enter. If stuck in a menu, lost among selections, or do not want to scroll to the exit option, it is possible to escape the current menu by holding down a directional button and the enter button in the following order: First press and hold either directional button, second, press and hold the enter button. This will exit from the current menu or screen up to the previous menu. At the main menu, selecting the exit option or pressing and holding one of the directional buttons and enter, will return the Control Panel to normal operation mode.

NOTE: Never hold the Reset button down at Power Up

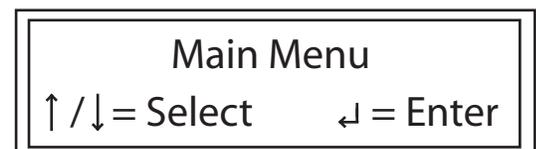
Master Reset: To perform a master reset, hold down the Reset button on the back of the CS2403K for five seconds while the CS2403K is fully on. This will restore factory settings for all the Setup and Display Options. This will not clear couplers, MIDI, Crescendo, Transposer, and Patch Changes on General Pistons.

Accessing the Main Menu



Upon powering up your panel the display should look similar to the picture shown above. It may be different depending on your particular installation

Hold Enter
For 3 Seconds



After accessing the main menu your display will show this picture for a few seconds and then allow you to toggle through the Main Menu

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MAIN MENU

Your control panel has various Main Menu Options available to Configure your Control Panel. The following explanations will provide step by step instructions on how to use these different options.

Note: To access the Main Menu, hold the Enter button for 2 seconds

| | |
|--------------------------------------|------------|
| Display Sleep | 3-2 |
| Set Brightness | 3-2 |
| Set Contrast | 3-3 |
| Entering Program Options..... | 3-4 |
| Enter Access Code | 3-4 |
| Entering Display Options..... | 3-5 |
| Entering Set Up Options | 3-5 |

DISPLAY SLEEP

This option allows you to send your display into sleep mode. Sleep mode will cause your display to appear shut down without actually powering down your organ.

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Display Sleep. Then press the Enter Button.



Step 2. Press the Enter button to send the display into sleep mode. No other prompts will be offered. You will simply enter sleep mode by pressing the Enter button.

Step 3. Press any button to wake the control panel from sleep mode.

- Note:
1. When you wake the control panel it will show the Screen from power up, not the Main Menu Screen.
 2. You can program the LS2403k to automatically come up in sleep mode at organ powerup.
(See Power Up Sleep)

SET BRIGHTNESS

This Option allows you Set the brightness of your Control Panel

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Set Brightness. Then press the Enter Button.



It will display a screen similar to this:



Step 2. Use the Up or Down Buttons to select the desired level of Brightness. Once the desired level of brightness is selected, press the enter button.

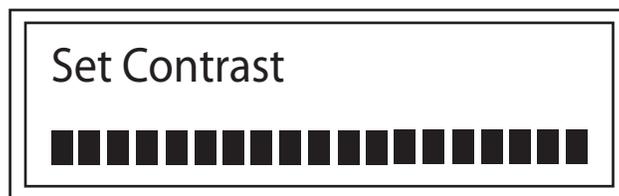
SET CONTRAST

This Option allows you Set the Contrast of your Control Panel

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Set Contrast. Then press the Enter Button.



It will display a screen similar to this:

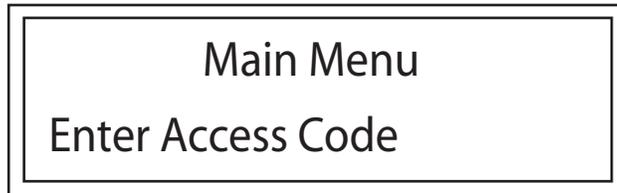


Step 2. Use the Up or Down Buttons to select the desired level of Contrast. Once the desired level of Contrast is selected, press the enter button

ENTER ACCESS CODE

This Option allows you to enter your access code. Depending on your installation you may or may not have an access code. If you do have access codes, you will have access to different levels of memory or different menu options depending on your particular installation. If you have a question about your access codes please ask the installer of your system.

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Enter Access Code. Then press the Enter Button.



It will display a screen similar to this:



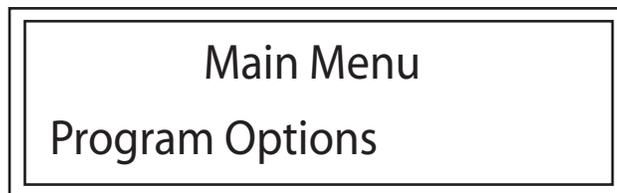
Step 2. Use the Up or Down Buttons to select the first number and press the enter button to advance to the next number in the code. Once the desired Code is input, press the enter button.

Note: If you enter an incorrect access code, the Control Panel will ask if you would like to try again. Use the up or down arrows to select yes or no and press the enter button. If you select yes, you will be returned to step 2. If you select no, you will be returned to the Main Menu.

ENTERING PROGRAM OPTIONS

This allows you to enter the Program Options Menu. For more information see the Program Options Section. This option may or may not be available to you depending on your Access Code.

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Program Options. Then press the Enter Button.

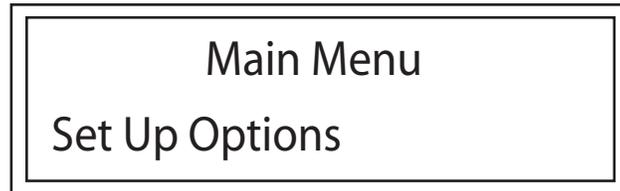


Note: For options available under the Program Options Menu, See the Program Options Section

ENTERING SET UP OPTIONS

This allows you to enter the Set Up Options Menu. For more information see the Set Up Options Section. This option may or may not be available to you depending on your Access Code.

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Set Up Options. Then press the Enter Button.



Note: For options available under the Set Up Options Menu, See the Set Up Options Section

ENTERING DISPLAY OPTIONS

This allows you to enter the Display Options Menu. For more information see the Display Options Section. This option may or may not be available to you depending on your Access Code.

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Display Options. Then press the Enter Button.



Note: For options available under the Display Options Menu, See the Program Display Options Section

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PROGRAM OPTIONS

Your control panel has various Programming Options available to aid you in an easy installation, and to configure other system features. This section will provide step by step instructions on how to use these different options.

| | |
|--|------------|
| Entering Program Options..... | 4-2 |
| Programming Couplers | 4-3 |
| Programming MIDI Stops..... | 4-4 |
| Programming Crescendo..... | 4-5 |
| Programming Patch Changes On General Pistons..... | 4-6 |
| Clear MIDI Stops | 4-7 |
| Clear All Patch Changes On General Pistons | 4-7 |
| Clearing The Crescendo | 4-7 |
| Clear All Couplers..... | 4-8 |
| Clear Transpose General Pistons | 4-8 |
| Perform A Master Reset | 4-8 |

ENTERING PROGRAM OPTIONS

This allows you to enter the Program Options Menu. This option may or may not be available to you depending on your Access Code. If you cannot access this menu option, contact your system installer.

Step 1. Scroll through the Main Menu using the Up or Down Buttons until you see Program Options. Then press the Enter Button.



Note: This is the Program Options Main Menu.
Features within this menu may be limited based on the organ's installation

PROGRAMMING COUPLERS

Step 1. Scroll through the Programming Options Menu using the Up or Down buttons until you see Program Couplers. Then press the Enter Button. Three Possible Screens will show up.

If one or more stops are on:

| | |
|-----------------|-----|
| Select Stop | ↓/↑ |
| D4/56 Coupler 0 | ↓ |

If no stops are on:

| |
|-------------|
| Error |
| No Stops On |

Note: You do not need to exit these screens to activate stops. The panel will automatically update as stops are drawn or shut off. If more than one stop is activated you can scroll through with the Up and Down Buttons

Step 2. Activate the stop(s) you would like to program as a coupler (if you have not already). Notice that the display shows the Division and Stop number in the lower left corner and the Coupler Name/Number in the center of the bottom.

| | |
|-----------------|-----|
| Select Coupler | ↓/↑ |
| D4/56 Coupler 0 | ↓ |

Step 3. Once you have the stop active, use the Up or Down Buttons to select the Coupler you would like to use. Once the Name of the Coupler you would like to use is displayed on the center bottom part of the screen, press the Enter Button. (A list of all available couplers is included in your keying system Manual)

Step 4. The Display will let you know it is saving your coupler with this screen:

| | |
|--------------|--------|
| PROG Coupler | D5/S18 |
| Saving | |

Step 5. It will now ask you if you would like to Program another coupler.

| | |
|--|--------|
| PROG Coupler | D5/S18 |
| Would you like to Program Another? Yes | |

Step 6. Use the Up or Down Buttons to select Yes or No, and press the Enter Button. If you Select Yes, it will return you to the screen showing your activated stop. Turn this stop off, turn the next stop on that you would like to program as a coupler, and repeat the process above. If you select No, it will return you to the Programming Options Menu.

PROGRAMMING MIDI STOPS

Step 1. Scroll through the Programming Options Menu using the Up or Down buttons until you see MIDI Stops. Then press the Enter Button. Three Possible Screens will show up.

If 1 to 16 stops are on:

| | |
|----------------------|-----|
| Non MIDI Stop | ↓/↑ |
| D5/S18 Non-MIDI Stop | ↵ |

↑ Division # ↑ Stop #

If no stops are on:

| |
|-------------|
| Error |
| No Stops On |

If more than 16 stops are on:

| |
|-------------------|
| Error |
| Too Many Stops On |

Step 2. If you haven't already, activate the stops to be programmed as MIDI stops. Notice multiple stops can be on for programming. Use the Up or Down buttons to scroll through the list of activated stops. After finding the desired stop, press the Enter Button.

Step 3. Next select the channel to use for the MIDI Stop using the up or down buttons. Press the Enter Button.

| | |
|-----------------|-----|
| Select Channel | ↓/↑ |
| D4/56 Channel-1 | ↵ |

Step 4. Select the Patch to apply to the MIDI Stop using the up or down buttons. Press the Enter Button.

Note: The MIDI patches coincide with the General MIDI Listing.

Step 5. Select the Transpose Octave to apply using the up or down buttons. Press the Enter Button. (The Default is 0)

Step 6. Set the On velocity to apply using the up or down buttons. Press the Enter Button (The Default is 64)

Step 7. Set the Expression Shoe to apply using the up or down buttons. Press the Enter Button. (The Default is zero)

Note: Leaving a zero here will apply no Expression shoe.

Step 8. Set the Minimum Expression to apply using the up or down buttons. Press the Enter Button. (The Default is 64)

Step 9. The LS2403K is saving your MIDI stop

Step 10. It will ask you if it should program another. Use the Up or Down Buttons to select Yes or No, and press the Enter Button. If you Select Yes, it will return to the screen listing activated Stops. Select the next Stop to program, and follow the rest of the process above. If you select No, it will return to the Programming Options Menu.

PROGRAMMING CRESCENDO

Syndyne Keying Systems have two 60 Stage Crescendos that are operated from a single shoe. A reversible piston is required to move the crescendo shoe to the second Crescendo. The Crescendo shoe that is to be programmed must be selected before leaving the normal display screen and entering the main menu.

Step 1. Before entering Programming Mode, Push the Crescendo Piston of the Crescendo to program, and move the crescendo shoe to the first level that will be changed or set.

Step 2. Scroll through the Programming Options Menu using the Up or Down Buttons until you see Set Crescendo. Press the Enter Button. The screen should look similar to this:



Note: Crescendo bar graph depicts 2 crescendo steps per bar

Step 3. Use the Up or Down Buttons to select the crescendo step to set.

Step 4. Turn on all of the stops to be activated when that level of crescendo is reached. Press the Enter button.

Step 5. It will now ask you if you would like to Set Another.

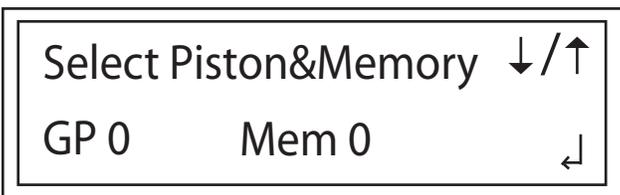
Step 6. Use the Up or Down Buttons to select Yes or No, and press the Enter Button. If you Select Yes, it will return to the screen showing the level of crescendo. Select the next level of crescendo to set, and follow the rest of the process above. If you select No, it will return to the Programming Options Menu.

PROGRAMMING PATCH CHANGES ON GENERAL PISTONS

In order to Program Patch Changes to General Pistons, you must first have programmed MIDI Stops!

Step 1. Scroll through the Programming Options Menu using the Up or Down Buttons until you see Program MIDI PC/G-Pistons. Press the Enter Button.

If one or more stops are on, a screen similar to this will show:



If no stops are on, this screen will show:



Step 2. On the Piston Memory Select Screen, Press the General Piston the patch change to be programmed on.

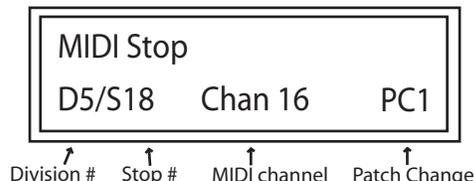
Step 3. Use the up and down buttons to select the level of memory the patch change is to be programmed on. Once the Piston and Memory Level are selected, press the enter button.

Depending on whether the first stop you have activated has been programmed as a MIDI stop, one of these screens will be displayed

Non MIDI Stop



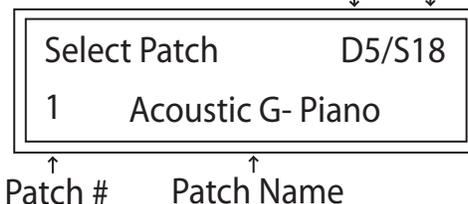
MIDI Stop



Step 4. Use the up and down buttons to select the stop on which to program the Patch Change. When the correct stop is displayed, press the enter button.

Note: You can only program a patch change on a MIDI Stop. If a stop has not been programmed as a MIDI stop, it must be programmed before a patch change can be set for it.

Division # Stop #



Step 5. Using the up and down arrows, select the Patch to apply. Press the enter button.

The LS2403K is now saving your selection

Step 10. It will ask to program another. Use the Up or Down Buttons to select Yes or No, and press the Enter Button. If Yes is selected, it will return to the screen listing your activated Stops. Select the next Stop to program, and follow the rest of the process above. If No is selected, it will return you to the Programming Options Menu.

CLEARING THE CRESCENDO

Step 1. Scroll through the Programming Options Menu using the Up or Down Buttons until you see Clear Crescendo. Press the Enter Button.

Note: The crescendo selected before entering programming mode will be cleared by this procedure. Be sure that the correct crescendo (1 or 2) is selected before proceeding.

The Control Panel will ask, "are you sure?"

Step 2. Use the Up or Down Buttons to select Yes or No, and press enter. If Yes is selected your crescendo will be cleared. If No is selected it will return to the programming menu

Note: To change a particular level of crescendo you can reprogram that particular level by following the same process listed in "Programming The Crescendo."

CLEAR ALL PATCH CHANGES ON GENERAL PISTONS

Step 1. Scroll through the Programming Options Menu using the Up or Down Buttons until you see Clear All PC/G-Pist. Press the Enter Button.

The Control Panel will ask if you are sure.

Step 2. Use the Up or Down Buttons to select Yes or No, and press enter. If Yes is selected the patch changes on general pistons will be cleared. If No is selected it will return to the programming menu.

Note: To change a particular patch change you can reprogram that particular patch change by following the procedure listed in "Programming Patch Changes To General Pistons."

CLEAR MIDI STOPS

Step 1. Scroll through the Programming Options Menu using the Up or Down Buttons until you see Clear MIDI Stops. Press the Enter Button.

The Control Panel will ask if you are sure.

Step 2. Use the Up or Down Buttons to select Yes or No and press enter. If Yes is selected your MIDI stops will be cleared. If No is selected it will return to the programming menu

Note: To change a particular MIDI Stop you can reprogram that particular MIDI Stop following the procedure listed in "Programming MIDI Stops"

CLEAR ALL COUPLERS

Step 1. Scroll through the Programming Options Menu using the Up or Down Buttons until Clear All Couplers is displayed. Press the Enter Button.

The Control panel will ask, “are you sure?”

Step 2. Use the Up or Down Buttons to select Yes or No, and press enter. If Yes is selected, the couplers will be cleared. If No is selected, it will return to the Programming menu.

Note: To change a particular coupler you can reprogram that particular coupler by following the procedure listed in “Programming The Crescendo.”

CLEAR TRANSPOSE GENERAL PISTONS

Step 1. Scroll through the Programming Options Menu using the Up or Down Buttons until you see Clear Transpose GPs. Press the Enter Button.

The Control Panel will ask you if you are sure.

Step 2. Use the Up or Down Buttons to select Yes or No, and press enter. If Yes is selected, the transpose general pistons will be cleared. If No is selected, it will return to the Programming menu.

PERFORM A MASTER RESET

You can perform a Master Reset by holding the Reset button on the back of the CS2403K Control Panels for 5 seconds while the power is fully on. Do not hold down the Reset button while the CS2403K Control Panel is powering on. This may ruin the memory on your CS2403K. A master reset will reset factory defaults for the setup and display options.

SETUP OPTIONS

Your control panel has various Setup Options available to other system features. The following explanations will provide step by step instructions on how to use these different options.

Setting Memory Levels5-2

Setting Access Codes5-3

Setting Access Levels5-4

Programming The Marque5-7

Set Power Up Sleep5-8

Set Crescendo End.....5-9

Setting Up Utilities5-10

SETTING MEMORY LEVELS

This option sets the highest Memory Level to be recognized by the control panel.

Step 1. Scroll through the Setup Options Menu using the Up or Down Buttons until you see Setting Memory Levels. Press the Enter Button.



Step 2. Use the up or down arrow to set the highest memory level to be recognized.

Example: If you only want 31 memory levels, you would set the Memory Level to 31 as shown below



Step 3. Once you have the highest memory level selected, Press the Enter Button.

SETTING ACCESS CODES

IMPORTANT NOTES: Syndyne has installed two access codes within the factory default settings. Fourteen other access codes can be assigned to allow a range of features for multiple organists.

Access code #0 is the access code that is active when the panel is first powered up. Access code #0 has been programmed to allow minimal features to protect unauthorized users from changing critical organ features and parameters. A range of memory levels can be set on #0 so visiting organists can set pistons without changing memory levels assigned to someone with another access code.

Access code #16 grants full access to all of the features available in the LS2403K, when its access code of 1234 is entered into the LS2403K. To initially gain access to all of the functions of the LS2403K enter 1234 when prompted to give an access code. If the access code of 1234 is changed from access code #16, write the new access code down to ensure it is not lost. At least one access code # must be programmed with access to the Set Up Menu or changing access codes in the future cannot take place. If access code #16 is changed from full access, another access code # should be programmed for full access.

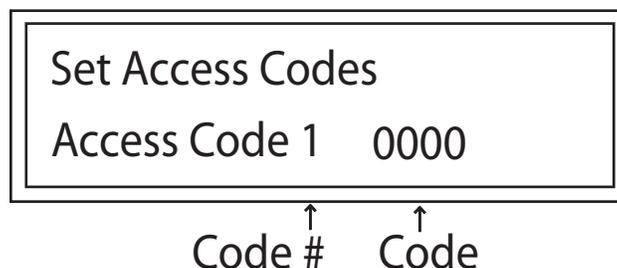
If access code information is lost and you cannot get access to the programming features of the LS2430K, the LS2403K must be reset. Once the LS2403K is reset, *all programmed information will be lost* and the panel will revert to factory default settings. After resetting the LS2403K Couplers, MIDI stops, and crescendos will not function and the panel must be completely reprogrammed for the specific instrument it is controlling.

After creating an access code for an access code #, go to "Setting Access Levels" to set up features that will be accessible to that access code.

Step 1. Scroll through the Setup Options Menu using the Up or Down Buttons until you see Setting Access Codes. Press the Enter Button.



Step 2. Select the Code # you would like to Set using the up or down buttons. Press the Enter button
 Note: You are allowed 16 different Access Codes.



Step 3. Once you have the Code # selected the cursor should be under the first number of the 4 digit access code. Use the up or down arrows to change the numbers and press the enter button to move to the next digit.

Step 4. Once you have set the 4 digit Code press and hold the enter button until the screen changes back to the Setup Options Menu.

SETTING ACCESS LEVELS

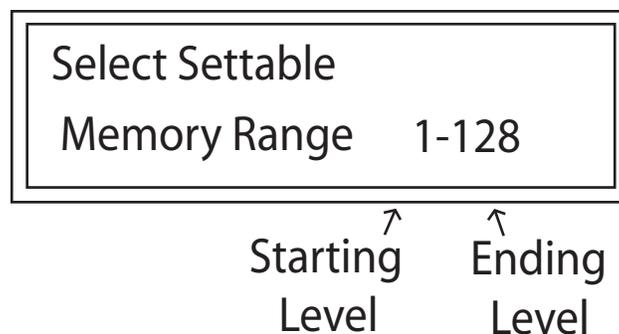
Once Access Codes have been set, the levels of memory and features available to that access code can be set.

Step 1. Scroll through the Setup Options Menu using the Up or Down Buttons until you see “Setting Access Levels.” Press the Enter Button.



Step 2. Using the directional buttons, scroll through the list of Access Codes until the desired Access Code is displayed. Press the enter button.

Step 3. A screen similar to the one shown below will appear. Set the starting level of memory available to this Access Code # by using the up and down buttons and press the enter button. The cursor should move to the ending level of memory. Set the ending level of memory available to this Access Code # by using the up and down buttons, then press and hold the enter button until the screen changes. There are 128 total memory levels available when using the CS2403K with the CS2400K System. There are a total of 56 total memory levels available when using the SC2403K with the CS5600K System.



The display will ask to allow access to the Display Menu.



Step 4. Use the up and down buttons to select yes or no and press enter. Yes will allow access to the Display Menu. No will prohibit access to the Display Menu.

The display will ask to allow access to the Set Up Menu.

| | |
|------------------|----|
| Main Menu Access | |
| Set Up Menu? | No |

Step 5. Use the up and down buttons to select yes or no and press enter. Yes will allow access to the Set Up Menu. No will prohibit access to the Set Up Menu.

The panel will ask if you would like to allow access to the Programming Menu.

| | |
|------------------|----|
| Main Menu Access | |
| Program Menu? | No |

Step 6. Use the up and down buttons to select yes or no and press enter. Yes will allow access to the Programming Menu. No will prohibit access to the Programming Menu.

If you select No for the Programming Menu Access, the Set Access Level process is complete and you will be returned to the Set Up Menu.

If you select Yes for the Programming Menu Access, you will be able to choose which programming options you want the Code # to access and which programming options will be prohibited. The panel will start by asking if you would like to allow access to Clearing and Programming the Crescendo.

| | |
|---------------------|----|
| Program Menu Access | |
| Clr/Pgm Crescendo | No |

Step 7. Use the up and down buttons to select yes or no and press enter. Yes will allow access to Clearing and Programming the Crescendo. No will prohibit access to Clearing and Programming the Crescendo.

The panel will ask if you would like to allow access to Clearing and Programming Patches on General Pistons.

| | |
|---------------------|----|
| Program Menu Access | |
| Clr/Pgm Patches? | No |

Step 8. Use the directional buttons to select yes or no and press enter. Yes will allow access to Clearing and Programming Patches Changes on General Pistons . No will prohibit access to Clearing and Programming Patches Changes on General Pistons.

The display will ask to allow access to Clearing and Programming MIDI Stops.

| | |
|---------------------|----|
| Program Menu Access | |
| Clr/Pgm MIDI Stops | No |

Step 9. Use the up and down buttons to select yes or no and press enter. Yes will allow access to Clearing and Programming MIDI Stops. No will prohibit access to Clearing and Programming MIDI Stops.

The display will ask to allow access to Clearing and Programming Couplers.

| | |
|---------------------|----|
| Program Menu Access | |
| Clr/Pgm Couplers | No |

Step 10. Use the up and down buttons to select yes or no and press enter. Yes will allow access to Clearing and Programming Couplers. No prohibit access to Clearing and Programming Couplers.

The display will ask to allow access to Clearing and Programming Transposer Settings on General Pistons.

| | |
|-----------------------|----|
| Program Menu Access | |
| Clr/Pgm Transpose/GPs | No |

Step 11. Use the up and down buttons to select yes or no and press enter. Yes will allow access to Clearing and Programming Transposer on General Pistons. No will prohibit access to Clearing and Programming Transposer settings on General Pistons.

The panel will ask, "set another?"

| | |
|--------------|----|
| Set Another? | |
| | No |

Step 12. Use the up and down buttons to select yes or no and press enter. Yes will allow setting the access levels on another Code #. No will return to the Setup Menu. Entering an access code # after you have selected yes at this step will start this procedure over for the new access code #.

Note: You will not be able to exit this process in the middle by pressing an arrow key and the enter button. Do not power off the organ before completing the selections. If you make a mistake just answer yes to the last question, "Set Another." and repeat the process for the same Code # to correct your mistakes.

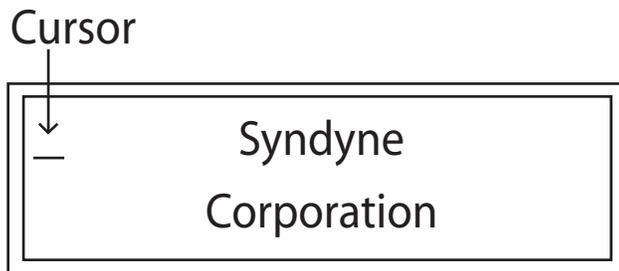
PROGRAMMING THE MARQUE

When the Organ is powered up it displays a marque briefly. This marque is set to Syndyne Corporation at default. This marque can be programmed to display a unique message of 2 lines of 20 characters each. A list of all the possible characters in the order they appear is shown at the bottom of this page.

Step 1. Scroll through the Setup Options Menu using the Up or Down Buttons until you see Program Marque. Press the Enter Button.

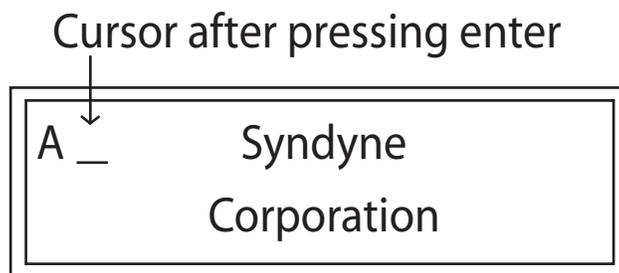


The panel will display something similar to this:



Step 2. Use the up and down arrows to change characters and press the enter button to select the character and move to the next character.

Example: If you wanted to place the letter "A" in the first square you would hit the up arrow until "A" is showing over the cursor. Then you would press the enter button to advance to the next character. The result is shown below.



Step 3. Once all the desired characters have been entered, hold the Enter button until the screen changes. Once the screen changes it will flash the new marque and return you to the Set Up Menu

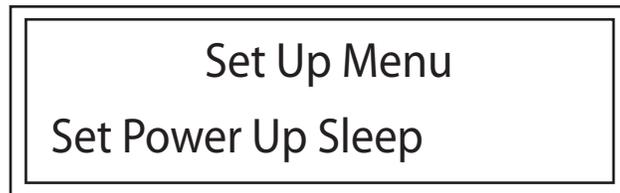
Characters

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ! | " | # | \$ | % | & | | (|) | * | + | , | - | „ | / | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | : | ; | < | = | > | ? | @ | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
| P | Q | R | S | T | U | V | W | X | Y | Z | [| \ |] | ^ | _ | ` | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t | u | v | w | x | y | z | { | | } | ? | ? |

SET POWER UP SLEEP

When your organ is powered up, its default setting is to show the marque and then go directly to Operation mode. With this option you can have the display automatically come up in sleep mode. Once in Sleep mode, momentarily press any button to have the display wake up.

Step 1. Scroll through the Setup Options Menu using the Up or Down Buttons until you see Set Power Up Sleep. Press the Enter Button.



The display will now ask you to Set Power Up Sleep



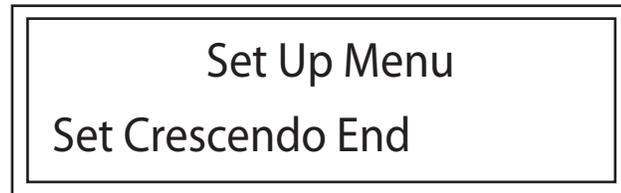
Step 2. Use the up and down buttons to select yes or no. Yes will make the organ enter sleep mode after each powering up. No will make the organ power up normally. When you have selected yes or no press the enter button.

Note: When the organ is powered up, the marque will display and then the display will enter sleep mode. If you want the display to enter sleep mode manually see the Display Sleep Section under the Main Menu.

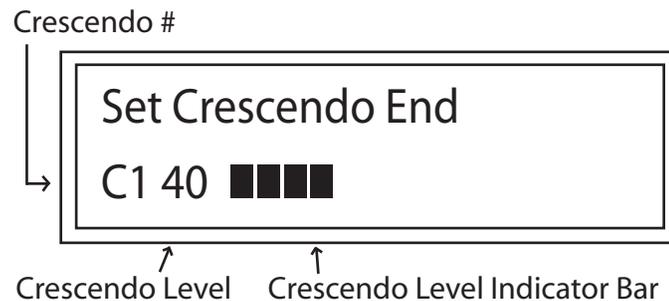
SET CRESCENDO END

Step 1. Before entering the Main Menu, press the Piston of the Crescendo you would like to set if there are 2 crescendos available on the organ.

Step 2. Scroll through the Setup Options Menu using the directional Buttons until you see Set Crescendo End. Press the Enter Button.



The display will show you a screen similar to this:



Step 2. Use the up and down buttons to select the appropriate level of crescendo. When the desired level of crescendo is reached, press the enter button.

Note: Make sure that the Crescendo # reflects the desired end position of the crescendo.

Note: The LS2403K controls 60 levels for each of the 2 crescendos. If your crescendo shoe has less roller contacts than 60, you can set the maximum number of contacts to less than 60. This option should not be used for crescendo shoes with a potentiometer. Setting less than 60 levels on a potentiometer type shoe will have the last level reached before the end of the shoe travel. For example, setting 30 will have the highest level (30) reached at half travel of the shoe.

SETTING UP UTILITIES

The utilities in the CS2403K can be used to change how some of the Syndyne System functions work. The functions the CS2403K can change are ventsils, MIDI expression, and transposer indicator. The factory defaults for all utilities is “OFF”

Ventils: The ventils included with a Syndyne System operate with a blind reversible action which will not allow the stops captured to the ventil to turn on unless the ventil is on. When the Ventil Utility in the CS2403K is changed to “ON” the ventil will still operate with a blind reversible action, but when the ventil is on it will cancel and prevent any stops from playing that were captured on the ventil.

| | |
|---------------------------|-----|
| Select Utility | ↓/↑ |
| 1 - ON Ventil-1 Cancel | ↓ |

When Ventil 1 is on, it will cancel and prevent its captured stops from playing

| | |
|----------------------------|-----|
| Select Utility | ↓/↑ |
| 1 - OFF Ventil-1 Cancel | ↓ |

The stops captured to Ventil 1 will not turn on unless Ventil 1 is turned on

| | |
|---------------------------|-----|
| Select Utility | ↓/↑ |
| 2 - ON Ventil-2 Cancel | ↓ |

When Ventil 2 is on, it will cancel and prevent its captured stops from playing

| | |
|----------------------------|-----|
| Select Utility | ↓/↑ |
| 2 - OFF Ventil-2 Cancel | ↓ |

The stops captured to Ventil 2 will not turn on unless Ventil 2 is turned on

MIDI Expression: Under normal operation, the Syndyne System transfers MIDI Expression for MIDI Stops that have been assigned to an expression shoe. When the MIDI Expression Utility is changed to “ON” the Syndyne System transmits MIDI Channel Volume instead of MIDI Expression.

| | |
|---------------------------|-----|
| Select Utility | ↓/↑ |
| 3 - ON MIDI Exp -> Vol | ↓ |

Transmitting MIDI Channel Volume

| | |
|----------------------------|-----|
| Select Utility | ↓/↑ |
| 3 - OFF MIDI Exp -> Vol | ↓ |

Transmitting MIDI Expression

Transposer Indicator: With a Syndyne System, the transposer can be turned on or off with a reversible piston, or can be turned on permanently by setting a jumper on the Main CPU Board. Under normal operation, the transposer indicator output will turn a lamp/LED on when the transposer is on even if it is set at zero. When the Transposer Utility is turned to “ON” the transposer indicator output will turn on a lamp/LED only when the transposer is on, and is actually transposing (set to something other than zero).

| | |
|-----------------------|-----|
| Select Utility | ↓/↑ |
| 4 - ON Transposing | ↓ |

Transposer Indicator turns on when the organ is transposing

| | |
|------------------------|-----|
| Select Utility | ↓/↑ |
| 4 - OFF Transposing | ↓ |

Transposer Indicator turns on when the transposer is turned on, even if it is set at zero

DISPLAY OPTIONS

This section will explain how to change the display shown upon powering up the organ after the marque is flashed.

Selecting A Display Option6-2

Accessing Display Options6-2

Display Options 1-86-3

Display Options 9-186-4

Display Options 19-286-5

Display Options 29-366-6

ACCESSING DISPLAY OPTIONS

Upon entering the main menu, scroll with the up or down buttons until you see "Display Options. Press the Enter Button. A Screen similar to this will show

| | | | | | | | | |
|---|----|---|---|---|---|---|---|----|
| # | E1 | 2 | 3 | 4 | C | T | M | GP |
| 1 | ✓ | | | | ✓ | ✓ | ✓ | ✓ |

SELECTING A DISPLAY OPTION

Step 1. Access the Display Options as specified above.

Step 2. Use the directional buttons to scroll through the list of display options.

The picture below shows the name of each of the elements on the Display Option Screen. As you scroll using the directional buttons, notice that the Display Number changes. As the display number changes different check marks show different elements that will be selected if that Display Number is selected. For Example, if you were to scroll to Display Number 14 you would see that the Expression 1, Crescendo, Transpose, and General Piston have check marks below them. If you were to select this option, the control panel will display all of these elements. If you choose a display option with a feature not on the organ, that feature will show but not function

Step 3. Once you have selected the Display Number you want, press the Enter Button

E=Expression T=Transpose GP=General Piston
C=Crescendo M=Memory Level #=Display #

| | | | | | | | | |
|----|----|---|---|---|---|---|---|----|
| # | E1 | 2 | 3 | 4 | C | T | M | GP |
| 14 | ✓ | ✓ | | | ✓ | ✓ | | ✓ |

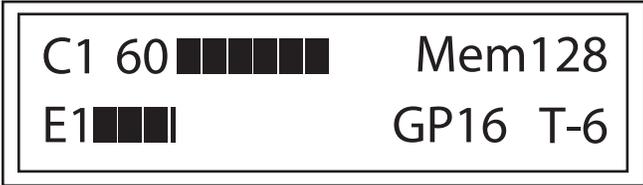
Display ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑
 Number Exp1 Exp2 Exp3 Exp4 Crescendo Transpose Memory Level General Piston

Note: Examples of the various display numbers are included at the back of this section.

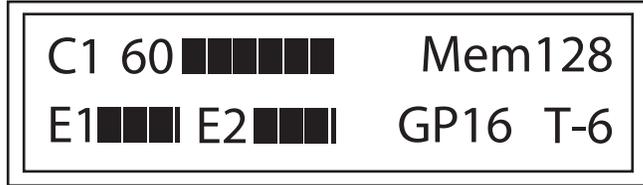
DISPLAY OPTIONS 1-8

The following pictures represent the 36 display options available in the LS2403K Control Panel.
 Select the display option number that includes the features to be included in your display

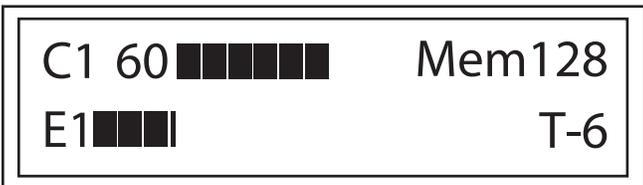
Display Option 1



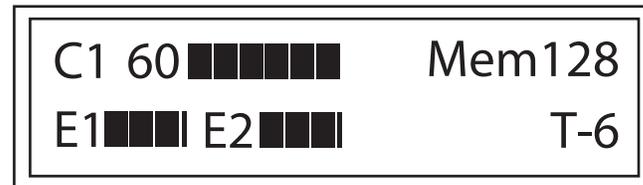
Display Option 2



Display Option 3



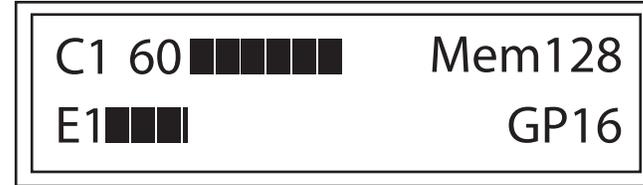
Display Option 4



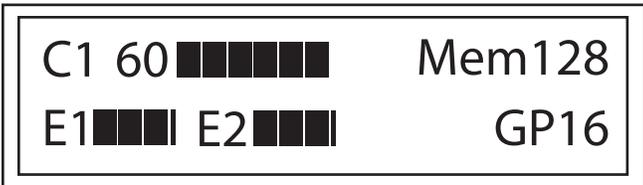
Display Option 5



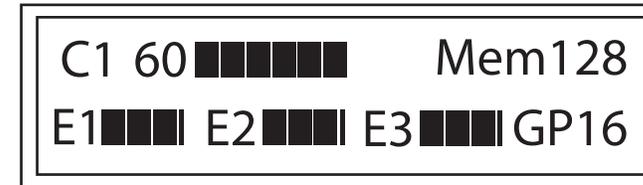
Display Option 6



Display Option 7



Display Option 8



C1= Crescendo One
Mem=Memory Level
GP=General Piston
T=Transposed Level

E1= Expression One
E2= Expression Two
E3= Expression Three
E4= Expression Four

DISPLAY OPTIONS 9-18

Display Option 9

```
C1 60 ██████████ Mem128
E1██████
```

Display Option 10

```
C1 60 ██████████ Mem128
E1██████E2██████
```

Display Option 11

```
C1 60 ██████████ Mem128
E1██████E2██████E3██████
```

Display Option 12

```
C1 60 ██████████ Mem128
E1██████E2██████E3██████E4██████
```

Display Option 13

```
C1 60 ██████████ GP16
E1██████ T-6
```

Display Option 14

```
C1 60 ██████████ GP16
E1██████E2██████ T-6
```

Display Option 15

```
C1 60 ██████████ GP16
E1██████E2██████E3██████ T-6
```

Display Option 16

```
C1 60 ██████████
E1██████ T-6
```

Display Option 17

```
C1 60 ██████████
E1██████E2██████ T-6
```

Display Option 18

```
C1 60 ██████████ T-6
E1██████E2██████E3██████
```

DISPLAY OPTIONS 19-28

Display Option 19

| | | |
|-------|-------|----------------------|
| C1 60 | ■■■■■ | T-6 |
| E1 | ■■■ | E2 ■■■ E3 ■■■ E4 ■■■ |

Display Option 20

| | | |
|-------|-------|------|
| C1 60 | ■■■■■ | |
| E1 | ■■■ | GP16 |

Display Option 21

| | | |
|-------|-------|-------------|
| C1 60 | ■■■■■ | |
| E1 | ■■■ | E2 ■■■ GP16 |

Display Option 22

| | | |
|-------|-------|---------------|
| C1 60 | ■■■■■ | GP16 |
| E1 | ■■■ | E2 ■■■ E3 ■■■ |

Display Option 23

| | | |
|-------|-------|----------------------|
| C1 60 | ■■■■■ | GP16 |
| E1 | ■■■ | E2 ■■■ E3 ■■■ E4 ■■■ |

Display Option 24

| | | |
|-------|-------|--|
| C1 60 | ■■■■■ | |
| E1 | ■■■ | |

Display Option 25

| | | |
|-------|-------|--------|
| C1 60 | ■■■■■ | |
| E1 | ■■■ | E2 ■■■ |

Display Option 26

| | | |
|-------|-------|---------------|
| C1 60 | ■■■■■ | |
| E1 | ■■■ | E2 ■■■ E3 ■■■ |

Display Option 27

| | | |
|-------|-------|----------------------|
| C1 60 | ■■■■■ | |
| E1 | ■■■ | E2 ■■■ E3 ■■■ E4 ■■■ |

Display Option 28

| | |
|----------------|-------|
| Memory Level | 128 |
| Settable Range | 1-128 |

DISPLAY OPTIONS 29-36

Display Option 29

| |
|-----------------------|
| C1 60 ■■■■■■ |
| Mem128 T-6 GP10 |

Display Option 30

| |
|---------------|
| C1 60 ■■■■■■ |
| Mem128 T-6 |

Display Option 31

| |
|----------------|
| C1 60 ■■■■■■ |
| Mem128 GP10 |

Display Option 32

| |
|--------------|
| C1 60 ■■■■■■ |
| Mem128 |

Display Option 33

| |
|---------------------|
| C1 60 ■■■■■■ |
| T-6 GP10 |

Display Option 34

| |
|--------------|
| C1 60 ■■■■■■ |
| T-6 |

Display Option 35

| |
|--------------|
| C1 60 ■■■■■■ |
| GP10 |

Display Option 36

| |
|--------------|
| C1 60 ■■■■■■ |
|--------------|