C-more Micro-Graphic Programming Software

FREE software!

C-more Micro-Graphic Programming Software can be downloaded at no charge or a CD version may be purchased by ordering EA-MG-PGMSW. The software requires a USB port on your PC to connect to the *C-more* Micro-Graphic panel. Software Help Files are included in the download. This software programs all the *C-more* Micro-Graphic panels (does not program the *C-more* 6" through 15" touch panels).

> **Note: This software is used to program C-more Micro-Graphic panels only.**
> **Part Numbers: EA1-S3ML, EA1-S3ML-N, EA1-S3MLW, EA1-S3MLW-N, EA1-T4CL, EA1-S6ML, EA1-S6MLW, EA1-T6CL**

> **NOTE: Software and Firmware Version 3.0 or later is required with model EA1-T4CL.**
> **Software and Firmware Version 2.50 or later is required with model EA1-T6CL.**
> **Software and Firmware Version 2.0 or later is required with models EA1-S6ML and EA1-S6MLW.**
> **Software and Firmware Version 1.5 or later is required with models EA1-S3MLW and EA1-S3MLW-N.**
> **Available for free download at *www.automationdirect.com.***

C-more Micro-Graphic Programming Software is a spin-off of its powerful sibling *C-more* Touch Panel. It offers very high end features designed to reduce your configuration time. Simply drag and drop the objects from the object list (right side of screen) onto the the screen construction area. Then configure your PLC tags and click on the objects you wish to use. Use the built-in simulator to review your work on your PC before ever downloading your project! The time saving benefits of the *C-more* Micro-Graphic configuration software could easily pay for the panel. Check out **www.C moreMicro.com** to download a free version.
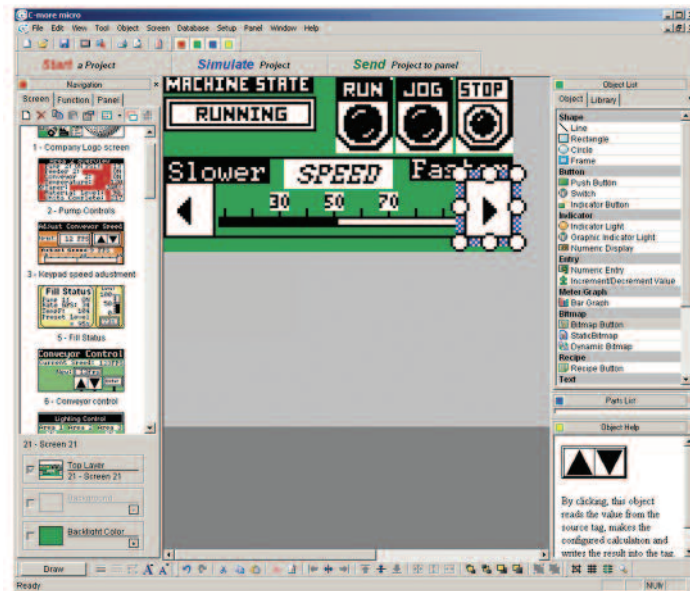
Built-in project simulator

• Runs your project on your PC

• Test all of your screens before downloading

• Time savings pays for the panel

• Version 2.5 or later - Simulate function keys and keypad bezel.

Built-in user object/screen libraries

Save time by re-using your custom objects and screens.

Scrolling object selection window

Lets you find the object you want fast. Just drag and drop it on the screen.

Thumbnail project preview pane

Helps keep track of multi-screen projects.

PC requirements

Following are the minimum system requirements for running *C-more* Micro-Graphic Programming Software, EA-MG-PGMSW, on a PC:

- Operating System - Windows® XP Home / Professional Edition Service Pack 2, Windows® 2000 with Service Pack 4, Windows® Vista (32 or 64 bit), Windows® 7 (32 or 64 bit) or Windows 8 (32 or 64 bit)
- Keyboard and Mouse or compatible pointing device
- Super VGA color video adapter and monitor with at least 800 x 600 pixels resolution
  (1024 x 768 pixels recommended) 64K color minimum
- 150 MB free hard-disk space
- CD-ROM or DVD drive for installing software from the CD, or internet access to download free programming software
- USB port to use with the correct Programming Cable Assembly for project transfer from the programming software to the panel

Scrolling help window

Gives you helpful information on each object

C-more Micro-Graphic Programming Software

Company Information

Systems Overview

Programmable Controllers

Field I/O

Software

C-more & other HMI

Drives

Soft Starters

Motors & Gearbox

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

Temperature Sensors

Pushbuttons/ Lights

Process

Relays/ Timers

Comm.

Terminal Blocks & Wiring

Power

Circuit Protection

Enclosures

Tools

Pneumatics

Safety

Appendix

Product Index

Part # Index

| Object	Graphic	Object	Graphic
The **Line** object, just like with drawing tools, allows the user to insert a straight line drawing into a project. When a Line is inserted into a project, a window opens to allow the user to setup all available parameters for the Line object. Some of the uses for Line Objects include but are not limited to adding callouts, pointers, or indicators.		The **Analog Meter** object is used to display the current value of a Tag Name.	
The **Rectangle** object, just like with drawing tools, allows the user to insert a drawing of a Rectangle as well as other geometric shapes into a project. When this object is inserted into a project, a window opens to allow the user to setup all available parameters for the Rectangle object.		The **Bar Meter** object is used to monitor up to two assigned Tag Names continuously. This object has various appearances depending upon the relative value of the tags. The Bar Meter can be used to create digital versions of level, current, and flow meters to name a few samples, or gauges that measure speed and other measurable data.	
The **Circle** object, just like with drawing tools, allows the user to insert a drawing of a Circle or ellipse shape into a project. When this object is inserted into a project, a window opens to allow the user to setup all available parameters for the Circle object.		The **Bitmap Button** object offers the ability to use a Bitmap graphic to perform the functions of a Button. This allows users to create their own graphics and implement them within the software project. The Bitmap Button object can be used to activate or deactivate components assigned to a Discrete Tag Name. The C-more Micro-Graphic display only supports two colors, black and white.	
The **Frame** object allows the user to insert a Frame to the project that can be used to Frame other objects. Some of the uses for Frame object include but are not limited to graphically separating objects for different operations that may appear on one screen and emphasizing pushbuttons or other objects that may require more attention by the operator.		The **Static Bitmap** offers the ability to display a Bitmap graphic on any screen. The Static Bitmap does not change state. Refer to the Dynamic Bitmap Object if you require the graphic object to change state based on a Tag Value in your PLC. The dialog box for a "Static Bitmap" object allows you to "read from disk" and select a graphic file for import. Graphics must be in one of the following formats: .BMP .WMF .JPG .JPEG	
The **Pushbutton** object is available from the Button Category of the Object List window. The Pushbutton object is an electronic version of a typical Pushbutton normally found on control panels. The Pushbutton object can be used to activate or deactivate components assigned to a Discrete Tag Name.	On	**Recipe** objects make it easy to make a large number of tag changes with the push of a single button. Create Recipes with up to 99 entries, and multiple sets of values. Then just push a button to load an entire set of values into the group of recipe tags.	RECIPE
The **Switch** object is an electronic version of a typical Switch that normally can be found on control panels. The Switch object can be used to activate or deactivate components assigned to a Discrete Tag Name.		The **Dynamic Bitmap** object offers the ability to make an object using two different Bitmap graphics that will display one graphic when the Tag is On and a different graphic when the Tag is Off. Use your own bitmap designs or use some of the bitmaps provided with the software that are located in the User Graphic Library.	
The **Indicator Button** object is available from the Button Category of the Object List window. The Indicator Button object is an electronic version of a typical Indicator Button normally found on control panels. The Indicator Button is a combination of a Pushbutton and an Indicator Light. The Indicator Button can be used to activate or deactivate components assigned to a Discrete Tag Name.	On	The **Static Text** object is used to display a Frame with a personalized Message. This Frame and Message can be placed on any screen and any location within the screen.	STATIC TEXT
The **Indicator Light** object is an electronic version of a typical Indicator Light normally found on industrial control panels. The Indicator Light can be configured to display the status of the assigned Discrete Tag Name.	On	The **Lookup Text** object is used to display a Frame with a personalized Message. This Frame and Message can be placed on any screen and any location within the screen. The object is always displayed like a sign but is configured to display only the message prompted by an assigned Tag Name. Messages are retrieved from a Message Database which is configured by the user with text defined by the user. The Lookup Text Object will scroll text up to 128 characters.	LOOK UP TEXT
The **Graphic Indicator Light** object is a more enhanced version of the "Indicator Light Object" that allows the user to choose more detailed graphics to display the status of a tag. This object is an electronic version of a typical Indicator Light normally found on industrial control panels. The Indicator Light can be configured to display the status of the assigned Discrete Tag Name.		The **Dynamic Text** object is used to display text that is retrieved from data stored in a Tag. The Tag Name is assigned to registers in the PLC that contain set character data. The data can be stored in the PLC in ASCII format and may include information such as machine numbers, locations, part numbers, and such. The Message can be configured to be visible (Trigger) when an associated Tag Name is On or Off. This object can be placed on any screen and any location within the screen. The Dynamic Text Object will scroll text up to 40 characters.	DynamicText
The **Numeric Display** consists of a frame that displays a real-time numeric value according to the value of data received from an assigned Tag Name. The Numeric Display supports numeric Signed Decimal, Unsigned Decimal, BCD, and Floating Point data types with up to 11 digits, including decimal point. User Defined Alpha Numeric Prefix and Suffix values are also supported.	1234512345	The **Scroll Text** object is available from the Text Category of the Object List window. The Scroll Text object is an electronic version of a marquee. It is similar to the Static Text Object. If the text in the object does not fit in the window, it will scroll from right to left across the window. The Scroll Text object does not require a Tag Name assignment. The Scroll Text Object has a maximum character limit of 128 characters.	ScrollText
The **Numeric Entry** object is used to enter a value from your Panel to a PLC Register. This object, when selected, opens a Numeric Keypad that allows the user to enter a new value that will be written to the assigned Tag Name. The Numeric Entry supports numeric Signed Decimal, Unsigned Decimal, BCD, and Floating Point data types with up to 11 digits, including decimal points. User Defined Alpha Numeric Prefix and Suffix values are also supported.	1234512345	The **Screen Change** Pushbutton object is available from the Control Category of the Object List window. The Screen Change Pushbutton object is a pushbutton that can be configured to activate another screen in the project. This object may be edited to various colors and sizes. Users can configure the button to activate the Power-Up screen, Forward Screen, Previous Screen, or any one of the project screens.	Screen
The **Increment/Decrement Value** object is used to add or subtract a value by pressing a button on the Panel. Basically the object uses two Tags, one to read a value from and another to write a modified value to. The Increment/Decrement Value supports numeric Signed Decimal, Unsigned Decimal, BCD, and Floating Point data types with up to 11 digits, including decimal points. The Increment and decrement values are also user selectable.		The **Screen Selector** object is available from the Control Category of the Object List window. This object is an enhanced version of the Screen Change pushbutton in that it offers many more features and defaults with data from screens in the project. This helps to save time by not having to create Screen change buttons for each screen. This object may be edited to various colors and sizes.	Screen Selector
The **Real Time Graph** object displays the value stored in up to two PLC tags, over a history of up to 24 points each. One point is added at each refresh.		The **Adjust Display Contrast** object is used to allow the operator to adjust the Panel Display Contrast. The default Display setting often works in most applications, however lighting may vary based on the location of each application. In these cases the operator can use this object to make adjustments. The current display setting value will appear on the top of the button and will change as the arrow keys are pressed. This button can be modified to various sizes.	
The **Line Graph** object displays the values of up to 24 PLC address points. Up to two address arrays can be displayed. The line is drawn in its entirety at each refresh.		The **Function** object is used to assign the panels function key buttons to a particular action as well as assigning the control of the LED On/Off status. When a button has been assigned as a shift button, the then F1 through F5 will become F6 through F10. The Function Object buttons will activate when the hardware button is pressed or when the object is pressed on the screen. The object size is restricted so that the keys will line up with the hardware function keys on the panel.	

C-more Micro-Graphic Programming Connections

C-more STN Micro-Graphic Programming Connection

Using the *C-more* Micro-Graphic Programming Software for project development, STN *C-more* Micro-Graphic panels can be connected to a PC (personal computer) by using EA-MG-PGM-CBL, the USB-to-RS-232 cable assembly.

- Connect the USB programming cable (included) from a USB port type A on the PC to the USB type B port on the converter (included). Next connect the serial programming cable from the converter's RJ12 port to the panel's RJ12 serial port. The panel receives power from the USB port of the PC that it is connected to through the USB to RS-232 converter assembly.

USB to RS-232 Programming Cable Assembly
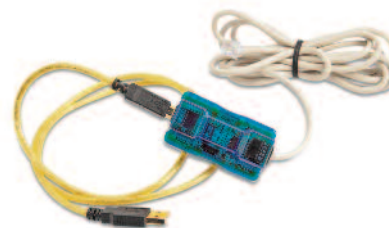
USB Connectivity

Part No. EA-MG-PGM-CBL

<--->
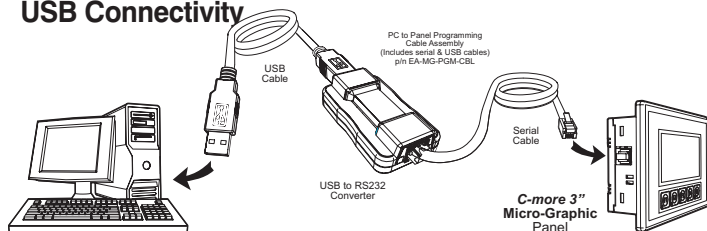
> NOTE: The TFT panels EA1-T4CL and EA1-T6CL do NOT use the EA-MG-PGM-CBL assembly. The TFT panels use a standard USB A-to-B type cable such as USB-CBL-AB6. See below.

USB to RS-232 Converter Specifications	
Part Number	EA-MG-PGM-CBL
Hardware	
USB Interface	USB Specification Rev. 1.1 Connector: USB Type B jack to accept USB Type B cable plug
Serial Interface	RS-232 (EIA-232-E) Connector: RJ12 phone jack 6p to accept RJ12 cable plug
Baud Rate	115.2 kbps Maximum
Input Voltage	5 VDC (Supplied thru serial interface cable.)
Power Consumption	50 mA (Does not include power to panel and/or bezel.)
Accessory Cables (included)	
USB Cable	USB Type A plug to PC on one end, USB Type B plug to converter on other end, 0.30 m [1 foot] length (* Note)
Serial Cable	RJ12 phone plug connectors on both ends, 2.0 m [6.56 feet] length (* Note)
Physical	
Dimensions	2.559" (W) x 1.417" (H) x 0.886" (D) [65.0 mm x 36.0 mm x 22.5 mm]
Weight	1.06 oz. [30 g]
Environmental	See Micro-Graphic panel specifications at the beginning of this catalog section.
* Note: Maximum cable length for either the USB or serial cable should not exceed 2.0 m [6.56 feet] in length.	

C-more TFT Micro-Graphic Programming Connection

The *C-more* TFT Micro-Graphic panels EA1-T4CL and EA1-T6CL include an integral USB to serial converter. It is programmed via any USB Type A to Type B cable.

When properly installed on your PC, the device driver will be assigned a communication port number and appear in Windows Device Manager as a serial com port.

USB cable options for programming EA1-T4CL and EA1-T6CL

Part Number	Description	Price
USB-CBL-AB3	Standard 3-ft. (0.9 m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
USB-CBL-AB6	Standard 6-ft. (1.8 m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
USB-CBL-AB10	Standard 10-ft (3 meter) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->
USB-CBL-AB15	Standard 15-ft. (4.6 m) USB 2.0 cable, A-type connector to B-type connector, used to connect personal computer to any *C-more* touch panel for setup and programming. (Note: Touch panels require a 24 VDC power source for configuration and operation.)	<--->

FREE Configuration Software!

C-more Micro-Graphic Programming Software is based on its powerful sibling, the *C-more* Touch Panel. It offers high end features designed to reduce your configuration time. Simply drag and drop the objects from the Object list (right side of screen) on to the screen construction area. Then configure your PLC tags and assign them to the objects. Use the built-in simulator to review your work on your PC before ever downloading your project! The time saving benefits of the *C-more* Micro configuration software could easily pay for the panel.
Check out www.C-moreMicro.com for a demo.

Built-in project simulator
- **Runs your project on your PC**
- **Test all of your screens before downloading**
- **Time savings pays for the panel!**

Built-in user object/screen libraries
Save time by re-using your custom objects and screens.

C-more Micro Programming Software
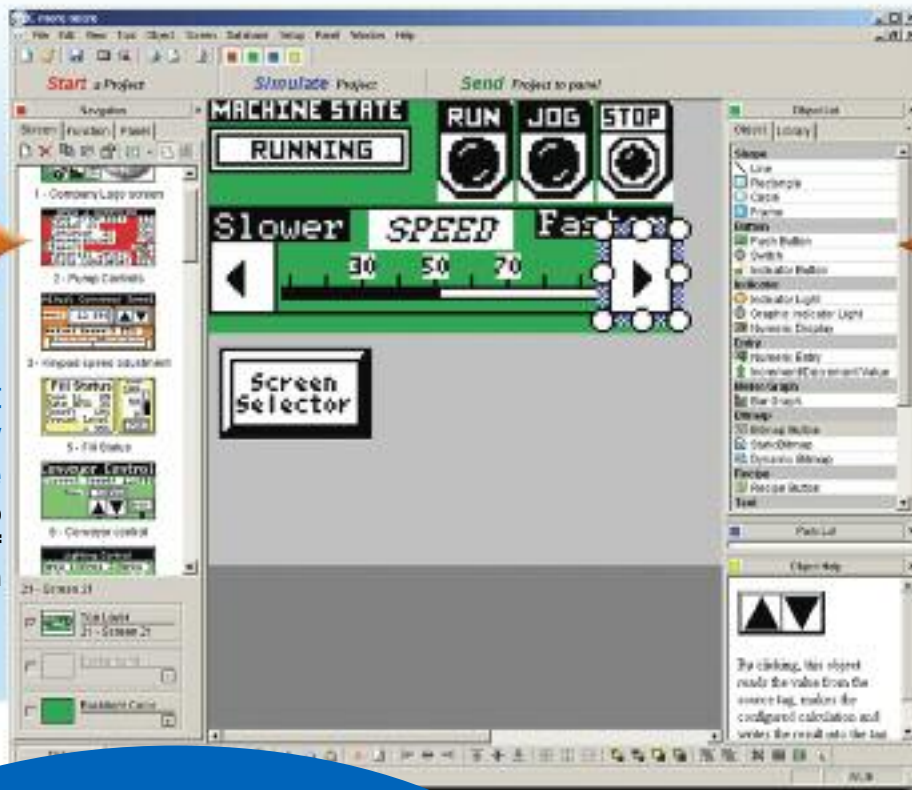
Thumbnail project preview pane
Helps keep track of multi-screen projects.

Scrolling object selection window
Lets you find the object you want fast. Just drag and drop it on the screen.

Download the Software!
C-more Micro-Graphic Programming Software can be downloaded at no charge from the *AutomationDirect* web site, or a CD version may be purchased for $25 by ordering p/n EA-MG-PGMSW. The software requires a USB port on your PC to connect to the *C-more* Micro-Graphic panel. Help files are included in the software. *This software can only be used to program the C-more Micro-Graphic panels, **not** the C-more 6" through 15" touch panels.*

Scrolling help window
Gives you helpful information on each object

Learn more! Go to:
www.C-moreMicro.automationdirect.com
for detailed specifications, a virtual tour of the product, programming examples, newest communication drivers...

C-more Micro Productivity Tools

Built-in Project Simulator

The simulator is a real productivity booster that saves hours of trial-and-error programming and testing, with no need for a panel or controller.

The simulator pops up on your PC screen, along with the simulated controller Data Window. Use your mouse to activate objects on the simulated project screens while monitoring the simulated controller values in the data window. Another option is to adjust simulated values directly in the data window, and see how your *C-more* Micro screens will react in the simulator window.

Build and Save Custom Objects

Store your objects in the library for fast and easy re-use.

Once you've built a custom object, just right-click on it and select "Object -> Library"

You're then prompted to give your object a name, and you can choose whether to save the PLC tags with the object.

Drag and drop objects from the library onto the workspace.

It's easy to re-use an object. Just drag it from the library and drop it on the desired screen. Then double click it if you want to edit the tags or other options.

Download more objects and graphics from our online library at *www.c-moremicro.com*

Lots of memory lets you get creative

Screens

While many text panels are limited to 256 or fewer messages, *C-more* Micro allows up to 999 screens for every project. Create all the screens you need to control your machine or process.

Memory

Ample user memory allows tons of objects and graphics on your screens.

- Pictures and icons convey information faster than text
- Use bar graphs and indicator graphics to enhance comprehension
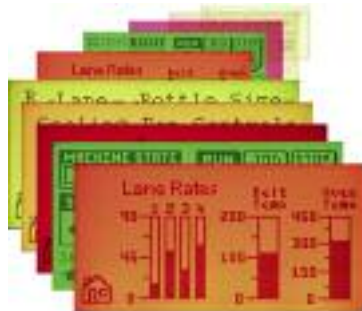
Note: Keep in mind that depending on the complexity of your screens, the limiting factor could be the 999 addressable screens or the panel's memory.

It's easy to track the size of your project:

When you download a project to a *C-more* Micro panel, the download dialog box shows you the current project size.

- If your project is large you may want to download only the Runtime File and the controller driver file, but not the entire Project File.
- If you download the Project File, you will be able to upload the entire project from the panel at a later date.

Overlapping Objects

Our customers loved overlapping objects on the larger C-more panels, and we knew you would expect the same capabilities with C-more Micro. Here are some examples of overlapping objects:

Several "Text" objects and a "Bar Graph" object overlapped on a "Rectangle" object.

"Dynamic Bitmap" object overlapped on an "Indicator Light" object

"Static Bitmap" object overlapped on a "Screen Change Pushbutton" object

Obviously, some items should not be overlapped. Multiple overlapping touchable objects, for example, may yield undesirable results.

The *C-more* Micro programming software will provide warning messages at the time of download that some overlapping objects may be disabled, or not work as intended.

C-more Micro Productivity Tools

Alarm Control Setup

The Alarm Control Setup feature makes configuring alarms fast and easy. Use a controller tag to activate up to 16 alarm conditions with the built-in Alarm Control feature. Choose from:

- Beep
- LED Blink
- Change Backlight Color
- Blink Selectable Colors
- Show a Banner Message

Use the built-in alarm feature above or create a simple Alarm Screen (right) in conjunction with the message database to display **HUNDREDS** of different alarm messages.

Look-up Text Object

Use any font on your PC

C-more Micro offers 10 built-in fixed-width "Classic" fonts and allows the use of any Windows fonts present on the programming computer.

- Fixed-width fonts allow maximum lines and characters
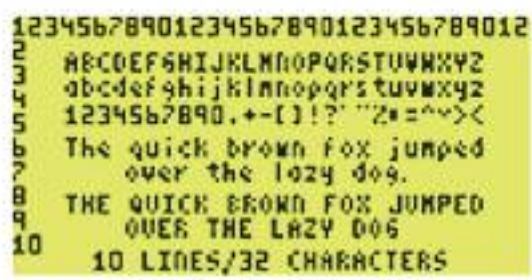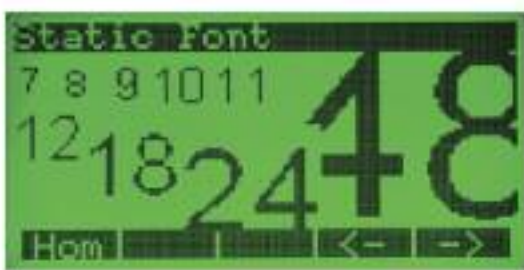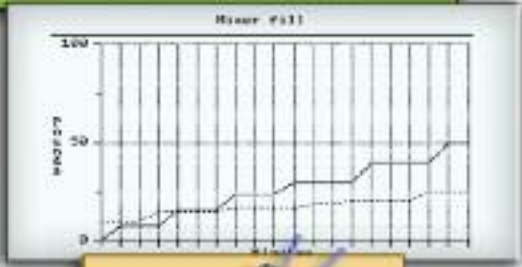- Windows fonts can be scaled to many sizes

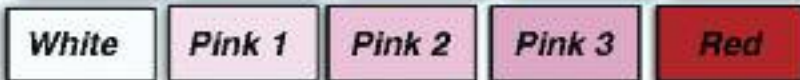Windows fonts can be sized with their familiar "point" values.

For 3-inch units, the "4x6" fixed font allows a maximum of 32 characters per line and 10 lines for static text.

The 6-inch units support up to 53 lines with 60 characters per line in portrait mode, or 40 lines with 80 characters per line in landscape mode.

Company Information

Systems Overview

Programmable Controllers

Field I/O

Software

C-more & other HMI

Drives

Soft Starters

Motors & Gearbox

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

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Pushbuttons/ Lights

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Terminal Blocks & Wiring

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Appendix

Product Index

Part # Index

Bitmap graphics

- 3-inch models have 128 X 64 pixel graphical display that supports bitmap graphics
- 4-inch and 6-inch models have 320 X 240 pixel graphical display that support bitmap graphics
- Use bitmap images of pushbuttons, switches, indicators, your company logo
- Use our library of bitmaps
- Create your own library of bitmaps

Real-time graph

- Each pen displays the value of a single PLC memory location. Values are refreshed by either time or a trigger tag.
- One or two pens can be displayed on the STN models
- Up to eight pens can be displayed on the TFT model
- Up to 24 values can be displayed for each pen

Controlled beep

- Beep to indicate an alarm
- Beep for a special message
- Beep to verify when button is pressed

Bar graphs

- Vertical, horizontal, thin, wide, multiple
- Combine with a numeric display for digital readout

Data entry

- Pop-up numeric keypad on the screen
- Increment/Decrement a value by touching arrows
- Add an optional keypad bezel

Recipes

Each recipe button transfers up to 99 values from PLC source registers to PLC destination registers and/or from the recipe table to PLC destination registers.

Change background colors

The screen colors are programmable! Use them to convey meaning - see a red alarm screen from across the room, or use a yellow screen as a caution.

All STN models support the following
5 background colors:

Green - Red - Yellow - Amber - Lime

All high-contrast STN models support the following 5 background colors:

White - Pink1 - Pink2 - Pink3 - Red

TFT models allow 32K colors to flash for the backround.

Alarm feature

C-more Micro has an Alarm action that can control:

- Backlight color change/flash
- Function Key LED flash
- Beep activation
- Custom alarm banner display
- Up to 16 configurable alarm actions