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## **MCS-TOUCHSCREEN**

# & Graphics





This Manual will walk you through the process of setting up your Touchscreen, modifying and loading graphics for MCS-Connect.

See Appendix section in back of Manual for quick steps for some MCS-TOUCHSCREEN functions



MCS Total Solution for all your Control Needs

**Energy Efficient and RoHS Compliant** 

Revision/Disclaimer Page

DateAuthorDescription of Changes08-18-15DEWSetup Manual09-02-15DEWAdd images, edit pages09-18/22/30-15DEWAdd pages, edit pages03-07-16DEWAdd description and password for time and date change
09-02-15     DEW     Add images, edit pages       09-18/22/30-15     DEW     Add pages, edit pages
09-18/22/30-15 DEW Add pages, edit pages
02.07.16 DEW Add description and password for time and data change
Add description and password for time and date change
06-01-16 DEW Make changes for Ver 3.00F
12-01-16 DEW Add Appendix#123
02-01-17 DEW Modify replacing graphic file as per Danny B
10-02-19 DEW Re-do sections adding appendixes (APPS)
07-12-2021 DEW Remove App127 update balance

The MCS Commitment is to provide practical solutions for the industries needs and to be both a leader and partner in the effective use of microprocessor controls.

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## Chapter - 1. Getting to know your Touchscreen

On the following pages we will acquaint you with the function and use of the MCS-TOUCHSCREEN, plus introduce you to the graphics that we have incorporated into the design.

OEMs with additional training and the Graphic Builder, will be able to make changes to the graphics and help manage with all the information the MCS controller has available to provide.

### TOUCHSCREENS

The MCS-TOUCHSCREEN has a new Weather Proof Touchscreen interface designed to simplify user access with the MCS-Magnum and MCS-MicroMag. MCS-Connect can be utilized to provide both graphics and service mode access for technicians.

Information and graphics on the MCS-TOUCHSCREEN are shown on high resolution (1280x800) LCD display with LED back lighting, which guarantees long-life operation.

The high resolution screen makes it easy for the user to manage complex installations quite easily. It also ensures that the pages can be navigated in a fast and straightforward manner. Up to 60 MCS controllers can be connected to a MCS-TOUCH via RS485 or Ethernet.

Utilizing a gasket for an environment seal provides the MCS-TOUCHSCREEN with a NEMA4 rating.

Depending on the Box Enclosure you choose, an installation can be either indoor or outdoor.

A NEMA4 Box Enclosure must be used for outdoor installation or for areas that are subject to water wash-down or extreme harsh environments. The MCS-TOUCH temperature range is -20oC to 70oC / -4oF to 158oF.

The Magnum can be installed without the Keypad Display using the new Touchscreens.

### **GRAPHICS FOR TOUCHSCREENS**

With the new Graphical Interface and MCS-Connect, you now have a better view of your controller's many functions as shown on the screen to the right.

The graphics package is pre-installed and can be customized by OEMs with the MCS Graphic Builder or custom build by MCS for your clients.





Additional information on the setup and using your Touchscreen and Graphics can be found on our web site, along with additional App. notes concerning the Touchscreens. http://www.mcscontrols.com/manuals.html

## Chapter - 2. Touchscreen's Interface

Your touchscreen is shipped installed with the latest Linux operating system, MCS-Connect and additional files for displaying your graphics.

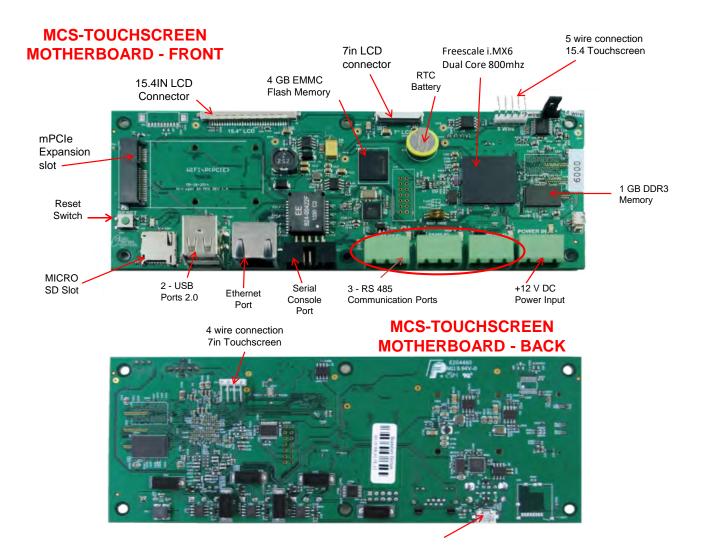


Back of Display - 15.4"



**INCLUDED COMPONENTS** 

**90W Single Output Power Supply for Touchscreen** Resistant to short circuiting, overloading, and over voltage. Operating temperature up to 158F (70 °C)



## Chapter - 3. Site Documents

### 3.1. Documents, Spec Sheets, Drawings, etc.

Stored in the Touchscreen's flash memory you will find pdf's and documents pertaining to the building of your unit. Each unit's configuration is different, so the 'SITE DOCUMENTS' file will pertain to that unit only.

An example of the contains of the 'SITE DOCUMENTS' folder may contain:

- 1. DRAWINGS (PDF'S) of the components used in this unit
- 2. EXAMPLE OF MANUALS (if installed in your unit)
  - a. Getting Started Manual
  - b. Keypad Manual
  - c. Touchscreen Manual
  - d. EXV Manual
  - e. BMS-GATEWAY Startup Guide
  - f. Additional manual may be stored here depending on the configuration of the unit

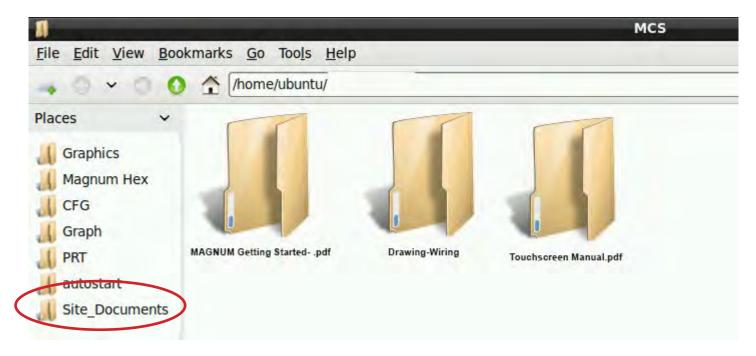
#### **3. SPECIFICATION SHEETS**

Each part installed should have a spec (data) sheet included in the 'SITE DOCUMENTS' folder

**4. CONFIGURATION FILE** - This is the key file in building your unit. If your config file is somehow corrupted, this is the original file used and may need to be re-installed. Call MCS-SUPPORT for help in re-installing this file to your controller.

### To locate the 'SITE DOCUMENTS' folder:

- 1. Navigate to the 'MCS TOOLS folder' on your desktop
- 2. Double click on folder to open
- 3. Click on Site \_Documents under Places on left.



2.

## Chapter - 4. Main Screen

#### 4.1. Layout of Main Screen on the Touchscreen

1. MCS-Connect icon

On Screen Keypad icon

- 4. Touchscreen Software Version
- 5. Touchscreen LOCKED OR UNLOCKED
- 3. MCS Tools, icon
- 6. Time of Day



#### 4.2. COMPANY GRAPHICS

If your touchscreen came pre-installed with the 'Graphic Package', OEM's and trained Installers will be able to modify some of the displays after the initial installation using the Graphic Builder if they are authorized.

With its 1280x800 Resolution, the display is sharp and easy to read. Making use of the 'Stylus pen', and the on screen keypad adjustments are easy and lets the technician check readouts as to the status of the controller.

Descriment Scan Graph Transmit Clp Receive Clp Sha tafe ' & imporvement many	UNITSTATUS	COMPRESSOR CONTROL STATE	-	
	UNIT LONDING-VM	CLIP OFF READY	CMICRO CONTROL	
		Makes J. Cert.	3	
SUCT PSI DISC PSI OIL DIFF O	L TMP			
FLA & AMPS A AMPS B A	MDS C 2244	۵)		
	CT CT	1	All and a second	
CW EN CW OUT				
COND IN COND OUT		-		
	-			
	System Overview Comp	essor Evap and Cond Overview		

The Touchscreen now comes with a Linux operating system.

The latest touchscreens, firmware version 3.0 +, comes with a 9 point calibrating software program for pin point accuracy.

## Chapter - 5. Touchscreen Keypad

### 5.1. KEYPAD -

On the main screen, click on Keypad Icon as shown in screen 1.



### 5.2. 'ON SCREEN KEYPAD'

Screen 2 shows keypad display. Use the stylus and keypad to enter or make adjustments.



## Chapter - 6. Touchscreen Utilities

#### 6.1. Utilities folder and its sub folders

- 1. Navigate to the 'MCS TOOLS folder' on your desktop.
- 2. Double click on folder to open.
- 3. Double click on the 'Utilities' sub folder to view contents.



4. 4. Screen 3 below displays the difference utilities build into the system.

Brief descriptions of these files will be shown on the following pages in this manual.

/home/ubuntu/De	sktop/MCS TOOLS/Ut	ilities	Scr	een 4			
USB DISK				50	2	Ċ	
Magnum Hex CFG Graph	Calibrate Touchscreen	Leafpad	LXTerminal	MCS Website	Network Connections	Reboot	Time and Date

### 6.1.1 Calibrate Touchscreen

Your touchscreen comes with a software program which will allow you to calibrate your touchscreen stylus pen to pin point the accuracy. When you touch an area on the screen the stylus point aligns with the screen area. We will describe how to do this later in this manual.

#### 6.1.2 Leafpad

Leafpad is a text editing program enabling you to make changes to text files.

#### 6.1.3 LX Terminal

LXTerminal is the LXDE version of a terminal emulator. It is used by programmers who are familiar with the Linux operating system.

#### 6.1.4 MCS Website

If you are connected to the internet where this touchscreen is installed, you will be directed to the MCS web site by clicking on this icon.

#### 6.1.5 Network Connections

Clicking on this icon will direct you to a program which will allow you to setup your communications to the company's network and controllers.

#### 6.1.6 Reboot

Clicking on this icon will reboot your touchscreen.

## 6.1.7 Setting Time and Date - MCS-TOUCHSCREEN

- 1. Navigate to the 'MCS TOOLS' folder on your desktop.
- Double click on folder to open. LXDE 3.00 F UNLOCKED MCS Connect 0 В On Screen Keypad ICRO MCS TOOLS INTROI File Edit View Bookmarks Go Tools Help 🛶 🕤 🗸 🕤 🚺 🛧 [/home/ubuntu/ Places 2 Graphics 📕 Magnum Hex L CFG J Graph Utilities Memory Lock I PRT 📙 autostart Jite\_Documents
- 2. Double click on the 'Utilities' sub folder to view contents.



3. Double Click 'Time And Date' to make changes

4. Screen opens- click on 'Unlock'

You must be authorized to make these changes.

Time zon	e:		A/New_	York			
Configura	ition:	(Manua)					-
Time:	11 -	+ :	13	- +	: 11	-	+ 0
Date:	H Ma	arch +				,	2016
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	28	29	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	1	2
	3	4	5	6	7	8	9
2	elp		1		lock		Close



- 5. Using the keypad, enter password "mcs' (lower case)
- 6. Click 'Authenticate' to unlock

			Authenticate			•
		the system	henticate to r	need to a iguration		-0
	eges.	that requires privilege	npting to perform a ired to perform this			
				ord: mcs	Password	
						Details
nticate	Authent	Cancel A				
	Authe	Cancel A	ired to perform this			Details

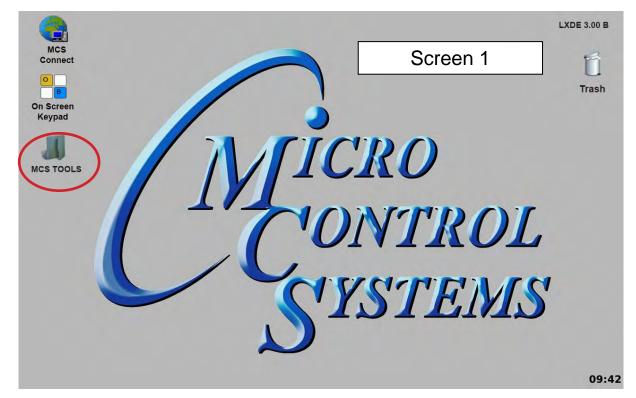
7. Make changes to date or time and click to 'Lock'.

Time zor	ne:	America	A/New_	York			
Configura	ation:	Manual					-
Time:	11	-+:	57	- +	: 19	-	+ 0
Date:	• M	arch +					2016
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	28	29	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	1	2
		4	5	6	7	8	9

## Chapter - 7. Network

#### 7.1. Setting Up Network For Communication With Your Controller

At the touchscreen main screen, click on 'MCS TOOLS' folder' as seen screen 1.



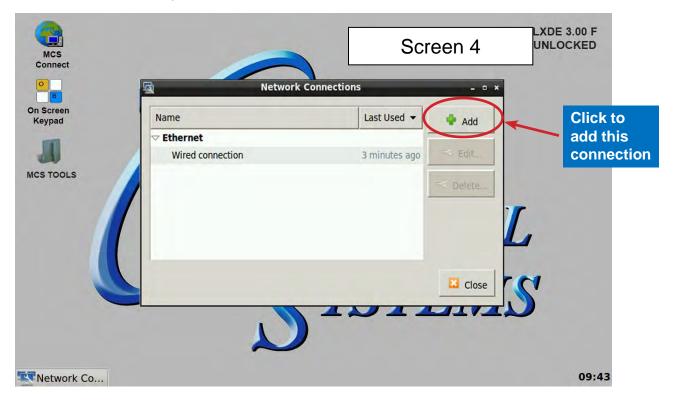
#### 7.2. Utilities Folder

Screen 2 appears, click on 'Utilities" to view contents of folder. Click on '**Network Connections**' as shown in screen 3.

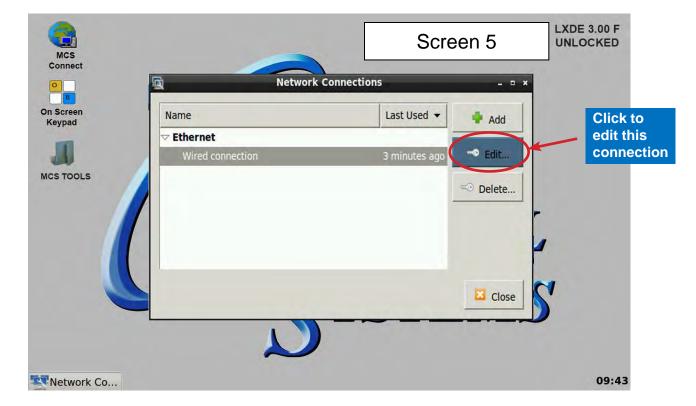


### 7.2.1 Network Connections Screen

Next display, screen 9-4 shows network communication screen. Your touchscreen will show 'Wired connection', click to add.



Screen 5, click to 'Edit' this connection.



### 7.2.2 Adding IP Address

On screen 6, set '**Method**' to '**Manual'** click on '**IPV4**' than click on '**Address**', enter the IP address, the netmask and gateway addresses. Click to save to touchscreen memory.

MCS Connect	Set to Manual		DE 3.00 F UNLOCKED
B On Screen Keypad MCS TOOLS	Connection mme: Wired connection General Ethemet 802.1x Securit IPv4 S Nan Method: Manual Cet Addresses Addresses Address Netmask Gatew 192.168.10.71 255.255.255.0 192.16 DNS servers:	Add etc	Enter Static IP, Netmask & Gateway Address
	N	ancel Save	Click to save
Network Co	liting Wire		09:44

## Chapter - 8. MCS-CONNECT

## 8.1. MCS-CONNECT Shortcut on Desktop

1. Click on the **MCS-Connect**.



- 2. This will launch the MCS-Connect main screen.
- 3. Click on Serial or Ethernet to scan for your controller.

	Local Netwo	rk Connections—	
Ser	ial		Ethernet
ite Name		ork Connections-	-
lew Site	-	Conne	ect Remotely
	O Dialup	○ IP (Internet)	○ IP Lantronix

4. Screen below shows available controllers on your network.

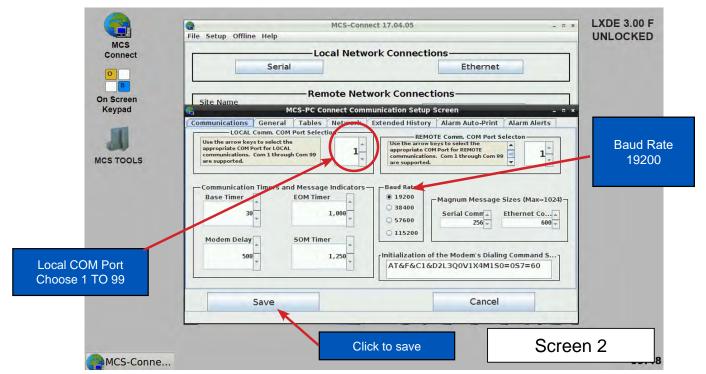
ile Setup Offline Rese	t/Clear Workspace	View Button Bar T	Time Help					
Disconnect	Scan	Graph	Transmit Cfg	Receive Cfg	Factory	Diagnostic Save	B	Print
Site Info 84 - 7AN	IL CH #4 0 - N	iaster Control 1 -	- CivicOpera Ch1	1 - PAC480Q3-T3-Z	0 - Soho-Day	CPM 81 - FWC	410A	1 - WDT T
or an								

## Chapter - 9. MCS-Connect Comunication

- 1. At the 'Desktop screen' click on the 'MCS-CONNECT shortcut'.
- 2. Click on 'Setup' at the MCS-CONNECT' screen.

MCS Connect		E 3.00 F OCKED
кеураа	e Name v Site O Dialup O IP (Internet) O IP Lantronix	
Click Setup to move to the MCS-CONNECT setup	Screen 1	
MCS-Conne		09:48

- 3. Next screen is the setup screen for communicating with your controller or PC.
- 4. You can change the "Com port' and 'Baud Rate" depending on how you are communicating with your controller or computer.



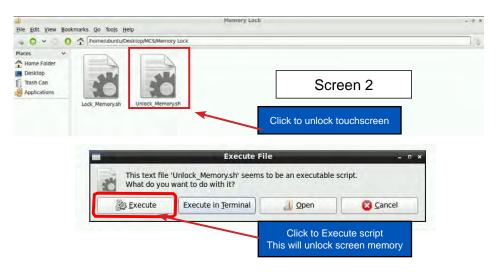
## Chapter - 10. UnLocking / Locking Touchscreen

#### 10.1. Unlocking the Touchscreen.

1. Click on the 'MCS TOOLS' folder on the desktop, 'Memory Lock' sub folder will appear when this file is opened..



- 2. Double click on the 'Memory lock' folder
- 3. Double click on the 'Unlock\_Memory'sh icon
- 4. Next screen, click on 'Execute'
- 5. Touchscreen will perform a restart



### **Re-Locking Touchscreen**



- 1. Double click the 'MCS TOOLS' Icon on the Desktop.
- 2. Double click 'Memory Lock' sub directory.
- 3. Double click 'Lock Memory'.
- 4. Click 'EXECUTE'. The touchscreen will reboot.





When the Lock Memory file is pressed it does an automatic reboot and autostarts MCS-Connect.

Check the top right corner of the desktop to make sure the touchscreen is locked.

### 10.2. Installing New Graphics

# **MCS-TOUCHSCREENS GRAPHICS**



## Replacing Graphics Tools Needed:

- 1 USB stick- format new used for copying old graphic files for backup.
- 1 USB stick- format new used to copy new graphic files from your computer.





# **Unlock Touchscreen**

- Linux Software Start by Unlocking the Touchscreen
  - 1. Click on the MCS TOOLS folder on the desktop.
  - 2. Memory Lock sub folder will appear when the file is opened.
  - 3. Double click on the Memory Lock folder
  - 4. Double click on the Unlock Memory icon
  - 5. Next screen, click on Execute
  - 6. Touchscreen will perform a restart







# **Locate Graphic Files**

Installed on the Touchscreen Flash memory located in the Graphic subfolder.

- 1. Navigate to the 'Desktop' on your touchscreen.
- 2. Click on 'MCS TOOLS' to view the tools folder and sub folders.
  - a. Bookmarks will appear on the left of your screen.
  - b. Click on the '**GRAPHICS**' folder.



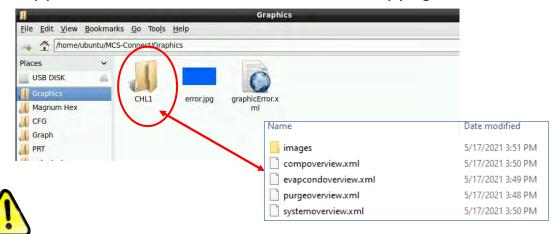
c. Locate your Graphics folder (this example shows 'CHL1' which contains the files needed for the graphics on your touchscreen,

(Your file can have a generic name (Trane, Carrier, etc.)



## **MCS-CONNECT GRAPHIC FILES**

1. Click on the Graphics bookmark, click on the example 'CHL1' graphic folder Copy this folder to a USB drive, delete after copying.



If you are updating or changing your Touchscreen Graphics – Copy this entire folder and make a BACKUP OF THIS FILE to a USB DISK.



# **Replacing Graphic Files**

Step 1 – Download the emailed file from OEM or MCS to your computer desktop.



Step 2 – Click on file to unzip (DO NOT COPY UNZIPPED FILE).

Step 3 – Click on folder which contains your graphic file.

- Step 4 Copy example folder, 'CHL1', to a formatted USB Stick.
- Step 5 Plug the USB Stick with the new graphics file into the back of the touchscreen.





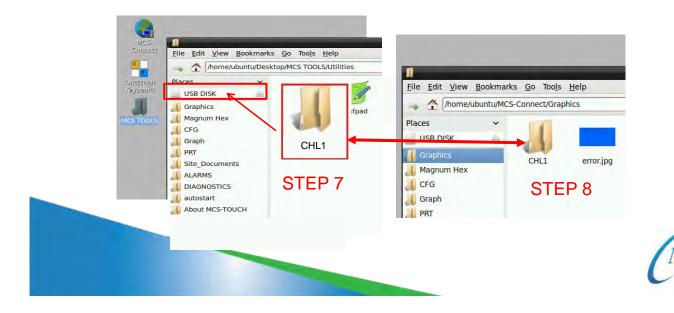
# **Replacing Graphic File** (continued)

- Step 6 On Touchscreen Places, double click on the USB DISK to open.
- Step 7 Click on the new graphic file, (example 'CH1'), click on edit, copy.

Step 8 – On bookmarks Places, click on Graphics, click on edit, paste. Your new graphic files will be in the subfolder in 'CHL1 graphics example folder'.

ONTROL YSTEMS

## (Generic names can be used for different chillers (Trane, Carrier, etc.)



## **Replacing Graphic File** (continued)

## Open MCS-CONNECT SCREEN

- 1. Click on **'OFFLINE**' at top.
- 2. Click on load an 'OFFLINE XML file', Enable Auto Screen Refresh.



3. Click on 'GRAPHICS' to open your graphics folder

1		Graphics	
Eile Edit View J	Bookmarks Go Tool	s Help	
-> 🛧 //home/ut	ountu/MCS-Connectifie	aphics	
Places	*		
USB DISK	4	0	
I Graphies	CHL1	error.jpg graphicError.x	
A Magnum Hex		ml	

4. Navigate to the sub directory which will show the files in the root directory, then click on 'systemoverview.xml.

Name	Date modified
images	5/17/2021 3:51 PM
compoverview.xml	5/17/2021 3:50 PM
evapcondoverview.xml	5/17/2021 3:49 PM
systemoverview.xml	5/17/2021 3:50 PM



# **Replacing Graphic File** (continued)

1. MCS-CONNECT will open, Click on 'systemmoverview.xml tab on the Site Info 'systemoverview.xml.

Site Info systemov	erview.xml		
Address	HW Serial #	Cfg Name	
systemoverview.xml		-	1
			-

2. Once you verified the graphics have been loaded, close MCS-CONNECT and re-connect to the controller and click on the '**GRAPHICS**' tab at the top right to display your graphics





## Touchscreen Exercise 2 IMPORTANT THINGS TO REMEMBER WHEN CHANGING GRAPHIC FILE

- 1. BACKUP OLD GRAPHIC FILE BEFORE REPLACING.
- 2. UNZIP NEW FILE FROM OEM OR MCS TO YOUR COMPUTER DESKTOP AND COPY ONLY THE FILE NEEDED TO A USB STICK.
- 3. COPY AND PASTE NEW GRAPHIC FILE TO THE SUBFOLDER WHERE YOU DELETED THE OLD FILE.
- 4. MCS-CONNECT POINTS TO THE GRAPHIC FILE AS SHOWN IN THE SERVICE WINDOW OF MCS-CONNECT.

Service           RS485         BACNET         Ethernet         Graphics         Site Info         SI Diag.           Graphics Location         The following file path is preceded         by the default Graphics directory.	
JGWHOUSE\HouseOverview.xml Browse Send Graphics File Changes to Controller	
Send Comm. Changes to Controller	-



## **Chapter - 11. APPLICATION NOTES**

THE FOLLOWING PAGES CONTAIN APPLICATION NOTES FOR MAKING ADJUSTMENT TO THE TOUCHSCREEN AND UPGRADING FIRMWARE OR SOFTWARE



## **APPLICATION NOTE**

## APP #113 - Upgrading MCS-CONNECT

**Revision History** 

Date	Author	Description
03-30-16	DEW	Setup Application note
02-22-17	DEW	Additions remove setup file on desktop and trash
10-03-19	DEW	Edits from Bret

## UPGRADING

## **MCS-CONNECT**

## on

## **MCS-TOUCHSCREENS**

Any questions regarding this release, contact: support@mcscontrols.com

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## **Upgrading MCS-CONNECT on Touchscreen**

## NOTE: MAKE SURE YOU DOWNLOAD THE LINUX VERSION OF MCS-CONNECT FROM OUR WEBSITE AT:

http://www.mcscontrols.com/software.html

### **Download Latest MCS-CONNECT software**



Call or email MCS for the password to download the latest MCS-CONNECT LINUX VERSION software.

Download to your laptop or computer's desktop or a location where you will be able to copy to a USB drive.

### Start by Unlocking the Touchscreen.

1. Click on the 'MCS TOOLS' folder on the desktop, 'MEMORY LOCK' sub folder will appear when this file is opened..



- 2. Double click on the 'Memory lock' folder
- Double click on the 'Unlock\_Memory.sh' icon
- 4. Next screen, click on 'Execute'
- 5. Touchscreen will perform a restart

File Edit View Bookman	ks Go Tools Help	Memory Loo	de .	
.0.01	/home/ubuntu/Desktop/MCS/Me	mory Lock		
Places V A Home Folder	3	4		
Mosktop Trash Can Applications	2 1	5	Sc	reen 1
	ock_Memory.sh Unlock_Mer	-	Click to unlock	touchscreen
		Execute F	ile	- C.
4		'Unlock_Memory.sh' seems want to do with it?	s to be an executable	script.
	Execute	Execute in <u>T</u> erminal	<u>D</u> pen	Cancel
			Click to Exe This will unlock s	•

#### PLUG IN USB DRIVE AS SHOWN

On back of touchscreen, locate the USB PORT as shown on screen 2 and insert the USB drive with the new version of MCS-CONNECT.



### **Copy the Updated File**

- 1. After plugging in the USB drive, the following screen will appear, click ok to open in File Manager.
- 2. When the drive opens, drag the 'MCS-CONNECT installation file' to the desktop.

Removable medium is inserte Removable medium is inser	Screen 2	
Type of medium: removable disk Please select the action you want to perform:  Open in File Manager	Connect Onscreen Keyboard Mcs TOOLS	Elle Edit View Bookmarks Go Tools Help
Cancel	USB DISK MCS- Connect_1	ALARMS DIAGNOSTICS autostart DRAG THIS FILE TO YOUR DESKTOP AS SHOWN

- 3. Close the screen so you can access the desktop.
- 4. Double click on the 'MCS-CONNECT installation file' you just dragged to your desktop to upgrade.

5. Click next to continue installing the new 'MCS-CONNECT installation



6. Accept the terms for the 'license agreement', click next to continue.

#### 7. Select the 'Default Path' for the upgrade., click next to continue.

	Installation of MCS-Connect 17.11.04
(.	Please read the following license agreement cares Screen 4
CMICRO CONTROL S'YSTEMS	End-User License Agreement for MCS-Connect This End-User License Agreement (EULA) is a legal agreement between either an individual or a single entity and the mentioned owner (Micro Control Systems) of this Software for the software product identified above, which includes computer software and may include associated media, printed materials, and "online" or electronic documentation ("MCS-Connect"). By installing, copying, or otherwise using MCS-Connect, you agree to be bounded by the terms of this EULA. If you do not agree to the terms of this EULA, do not install or use the SOFTWARE PRODUCT. SOFTWARE PRODUCT LICENSE a) MCS-Connect is being distributed for commercial use with MCS products. It may be included with CD-ROM/DVD-ROM distributions. You are NOT allowed to make a charge for distributing this Software (either for profit or merely to recover your media and distribution costs) whether as a stand-alone product, or as part of a compilation or anthology, nor to use it for supporting your business or customers. It may be distributed as long as no part of it is changed in any way.
C	1. GRANT OF LICENSE. This EULA grants you the following rights: Installation and Use. You may install and use an unlimited number of copies of the MCS-Connect. Reproduction and Distribution. You may reproduce and distribute an unlimited number of I accept the terms of this license agreement.
	O I do not accept the terms of this license agreement.
	Step 2 of 7 🔶 Previous 🖗 Next 🚳 Quit

8. Click on 'YES' to overwrite the existing file, click next to continue.

<u>}</u>	Installation of MCS-Connect 17.11.04	- 8 ×	_
CM CONTROL S'YSTEMS	5	Screen 6	
	Warning! appears MCS-Connect is already installed here, would you	like to update your current y	– • ×
-	Step 3 of 7	Next Quit	

9. Choose Keep Existing Config/Setting, click next to continue.

Existing Co Personal Settings	workspace Settings	Screen 7 Graph Data
Personal Settings	Workspace Settings	Graph Data
Settings Found	Settings Found	Settings Found
Keep Existing	Keep Existing	Keep Existing
nstallation Defaults	○ Installation Defaults	O Installation Defaults
		Next 🙆 Quit
	nstallation Defaults 5tep 4 of 7	

10. Make sure to **Un-check** the box to 'Create shortcuts in the Start-Menu',

	Setup Shortcuts	
-check	<ul> <li>Create shortcuts in the Start-Menu</li> <li>Create additional shortcuts on the desktop</li> </ul>	
Check thi box if no	select a Program Group for the Shortcuts:	
checked	MCS	Default

Check box 'Create additional shortcuts on the desktop', click next to continue.

11. Next screen will show progress of installation.

<b>.</b>	li I	Installatio	n of MCS-C	Connect 17	.11.04		- • ×
CMICRO CONTROL SYSTEMS						Scree	n 9
						Scre	en 8
	Pack inst /home/ubun	tallation pr htu/MCS-Co	nnect/Java_		ct.jar 1 Linux Files		
	🖗 Overall i	nstallation	progress:				
				1/5			
	Step	o 6 of 7			Previous	<u>∳ N</u> ext	Ouit

12. Installation is complete, click next to continue.

	Installation of MCS-Connect 17.11.04	- O X
CMICRO CONTROL SYSTEMS		Screen 10
	Pack installation progress: [Finished]	
	Overall installation progress:	
	5/5 Step 6 of 7	us Next Quit

13. Screen shows installation was successful, click 'DONE'.

	Installation of MCS-Connect 17.11.04	×
CMICRO CONTROL SYSTEMS		Screen 11
	<ul> <li>Installation has completed suction</li> <li>An uninstaller program has be /home/ubuntu/MCS-Connect/Un</li> </ul>	en created in:
	Step 7 of 7	📀 Done

14. Double click on the USB drive on the desktop, opens in file manager.



15. Click on '**ARROW**' to eject and remove from the back of the touchscreen.



16. While on the desktop, touch stylus pen to '**MCS-CONNECT** install file', select move to trash. Next double click 'MCS TOOLS' on the desktop, opens in File Manager.



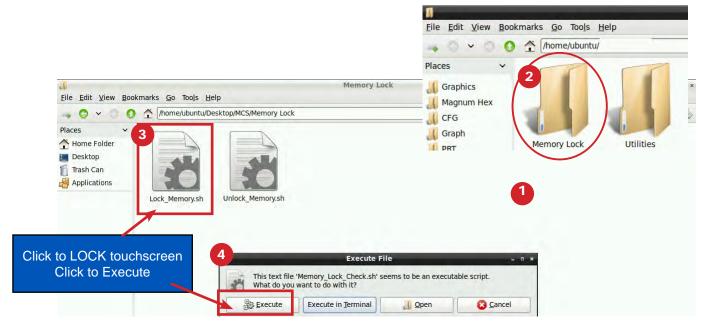
17. Click on the 'Go' button at the top and select trash can, Highlight the MCS CONNECT installer and select delete



#### **Re-Locking Touchscreen**

- 1. Double click the 'MCS TOOLS' Icon on the Desktop.
  - 2. Double click 'Memory Lock' sub directory.
  - 3. Double click 'Lock Memory'.
  - 4. Click 'EXECUTE'. The touchscreen will reboot.





When the Lock Memory file is pressed it does an automatic reboot and autostarts MCS-Connect.

Check the top right corner of the desktop to make sure the touchscreen is locked.



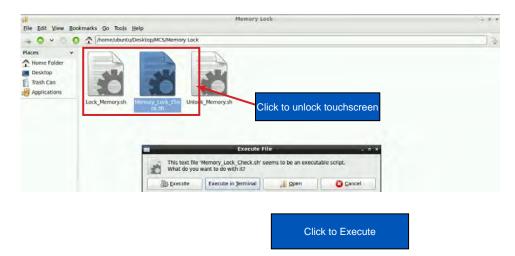
### APP #129 - Editing Linux Touchscreen IP Address and Auto Start File

#### **Unlock the Touchscreen**

1. Navigate to the 'Desktop', click on 'MCS TOOLS'.



- 2. Click on the 'Memory Lock folder' screen 1.
- 3. Double click the 'Unlock\_Memory.sh'
- 4. Click 'Execute'
- 5. The touchscreen will reboot and show unlocked at the top right corner..



1. **KEYPAD** - On the main screen, click on Keypad Icon as shown in screen 1.

#### 'ON SCREEN KEYPAD'

Screen 2 shows keypad display. Use the stylus and keypad to enter or make adjustments.





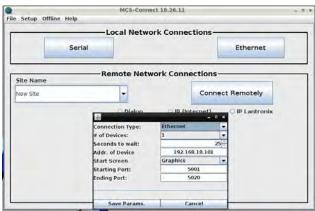
#### 2. Editing the Autostart File

- a. On the main screen, click on MCS CONNECT
- b. On MCS CONNECT, click on 'OFFLINE'
- c. Click on 'Edit Autostart file'

				LXDE 3.00 B	👩 MCS-Con	nect 18.30.01 Beta		
	MCS Connect		Screen 1	n	File Setup	Offline Help		
MCS CONNECT	On Screen Keypad MCS TOOLS	Mich	RO	Trash		Load an Offline GRAPH File Load an Offline XML File Load an Offline MODBUS .cfg File Edit Autostart File	ocal Networ	k Connection
		101	VTROI	L	Site Na		emote Netwo	ork Connectio
		C'Y	STEM.	S	New Sit	e	•	
		N.		09:42			O Dialup	○ IP (Intern

#### 3. Changing the address for the controller.

It is important that you know the IP address for the controller before you can make changes. (on keypad - addresses found under '**SERV TOOLS' on menu.MCS-CONNECT**: Connect by 'SERIAL' or 'ETHERNET', address is on right side, SERIAL connection will show the RS485 address only, 'ETHERNET' connection will show the IP ADDRESS and the RS485 address in (). If you know the address, highlight the 'Addr. of Device' and type in the correct address for the controller. 'SAVE THE PARAMS'





BEFORE MAKING CHANGES TO THE AUTOSTART FILE YOU SHOULD MAKE A BACKUP OF THAT FILE. THE AUTOSTART FILE IS HOW YOUR SYSTEM STARTS EACH TIME IT REBOOTS.

See next page for Descriptions of Arguments that can be changed in the Autostart file.

1. Below is a description of the different 'Arguments'.

Connection Type:	0	Ethernet	
# of Devices:	0	1	
Seconds to wait:	3		25
Addr. of Device	4	192.168.18.	101
Start Screen	6	Graphics	-
Starting Port:	6	5001	
Ending Port:	0	5020	
Save Params.	_	Cancel	

#### Descriptions of Arguments that can be changed in the Autostart file:

Editing the 'AUTOSTART MCS-CONNECT' file (see corresponding numbers above).

- 1. **'Connection Type'** = This argument can be set to **"ethernet"**, **"serial"**, **"remote" or "lantronix"** depending on the type of connection used to connect to the Magnum.
- 2. '# of Devices' = This argument is the number (1-60) of Magnums MCS-Connect is to look for on the network.
- 3. 'Seconds to wait' = This argument is the time in seconds MCS-Connect waits while searching for the number of Magnums specified in argument 6 before creating an error popup message.
- 4. 'Address of Device' = This argument is the address of the Magnum that you want to connect to upon auto start. If argument 1 is set to "ethernet" then enter the IP address of the Magnum. Otherwise if argument 1 is set to "serial" then enter the Magnum RS485 address. (on keypad addresses found under 'SERV TOOLS' on menu. MCS-CONNECT: Connect by 'SERIAL' or 'ETHERNET', address is on right side, SERIAL connection will show the RS485 address only, 'ETHERNET' connection will show the IP ADDRESS and the RS485 address in ().
- 5. 'Start Screen' = This argument determines which screen MCS-Connect will load on auto-start. There are 3 options: "graphics", "status" or "transmit".
- 6. 'Starting Port'= If argument #5 is "transmit", this argument is used for the file path of the configuration to transmit. Otherwise, if argument #1 is "remote" or "lantronix" this argument is used to pass in the starting port for these connection types.
- 7. 'Ending Port' =This argument is only used when argument #1 is "remote" to pass in the ending port for a remote connection.
- 8. Auth. Level = This argument allows the user to pass in a keyword that starts MCS-Connect with a preset Authorization Level.



APP 126 is available at http://www.mcscontrols.com/appNotes.html to set the Graphics Lock feature which ensures that unauthorized users cannot navigate out of the Graphics screen.

#### **Command Line Arguments Explanation**

Argument #1	Argument #2	Argument #3	Argument #4
"serial"	# of controllers to look for	# seconds to search	MCS address of controller to connect to
"ethernet"	# of controllers to look for	# seconds to search	IP address of controller to connect to
"remote"	# of controllers to look for	# seconds to search	IP address of controller to connect to
"lantronix"	# of controllers to look for	# seconds to search	IP address of controller to connect to

Argument #5	Argument #6	Argument #7	Argument #8
graphics"/"status"/"transmit"	null/null/cfg file address	null	Desired Auth Level code word
graphics"/"status"/"transmit"	null/null/cfg file address	null	Desired Auth Level code word
"graphics"/"status"	starting port	ending port	Desired Auth Level code word
"graphics"/"status"	starting port	null	Desired Auth Level code word

#### **Re-Locking Touchscreen**

- 1. Double click the 'MCS TOOLS' Icon on the Desktop.
- 2. Double click 'Memory Lock' sub directory.
- 3. Double click 'Lock Memory'.
- 4. Click 'EXECUTE'. The touchscreen will reboot.





#### **Revision History**

Date	Author	Description
10-19-17	DEW	Setup from Touchscreen Manual
09-30-19	DEW	edits made as per Bret
04-8-2020	DEW	combine APP 129 AND 127 as per Bret
06-30-2020	DEW	Make changes to APP 129

Any questions regarding this release, contact: support@mcscontrols.com Micro Control Systems, Inc. 5580 Enterprise Parkway Fort Myers, Florida 33905 (239)694-0089 FAX: (239)694-0031 www.mcscontrols.com

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### **APP #135 - Installing New Graphics**

#### **Revision History**

Date	Author	Description
6/3/19	DEW	Setting APP for installing new graphics for touchscreen
09-30-19	DEW	Edits from Bret, using winzip
08-30-2022	DEW	Edit 'ON MCS-CONNECT SCREEN' section

# **Installing New Graphics**

# on Touchscreen

Any questions regarding this release, contact: support@mcscontrols.com

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#### **INSERT A MEMORY STICK IN THE BACK OF THE TOUCHSCREEN**

- 1. Screen will appear, highlight 'Open in File Manger' and click OK.
- 2. Make a backup of your Graphics file before proceeding with the new graphic install
- 3. Highlight your 'Graphics Folder' on left, click to open, than highlight the actual graphics folder on the right.
- 4. Click on 'EDIT" at top and click 'COPY"
- 5. HIGHLIGHT THE 'USB' MEMORY STICK on the left side under places
- 6. Click on 'EDIT' and click 'PASTE'
- 7. CHECK TO MAKE SURE YOU HAVE A BACKUP ON YOUR USB MEMORY STICK
- 8. Remove that USB memory stick
- 9. INSERT NEW USB memory stick with new graphics package

#### Unlocking the Touchscreen.

- 1. Click on the 'MCS TOOLS' folder on the desktop
- 2. Click on 'MEMORY LOCK'
- 3. Click on 'Unlock\_Memory"
- 4. Click on 'Execute'
- 5. Touchscreen will re-boot
- 6. When Touchscreen re-boots- NOTE ON TOP RIGHT THAT SCREEN IS 'UNLOCKED'

#### **Delete old Graphics Folder**

- 1. On desktop, click on 'MCS TOOLS'
- 2. Under places, locate your 'GRAPHICS FOLDER', CLICK TO OPEN
- 3. Locate the folder for your touchscreen graphics and highlight
- 4. Click on 'EDIT' move to trash
- 5. DO NOT DELETE 'ERROR.JPG, GRAPHICeRROR.XML files

#### Install 'New Graphics Folder'

- 1. Before saving the graphics to the USB MEMORY STICK BE SURE TO EXTRACT THEM FROM THE WINZIP FOLDER
- 2. Click on the USB memory stick
- 3. Highlight new 'Graphics folder' on the memory stick
- 4. Click on 'EDIT' at top
- 5. Click on 'COPY'
- 6. Highlight 'GRAPHICS' under places
- 7. Click on 'EDIT' at top
- 8. Click on 'PASTE'
- 9. Verify that the new Graphics file has been copied to your touchscreen Graphics folder

#### **Re-lock Touchscreen**

- 1. Click 'HOME' (House Icon) tab at top of screen to the left of your file path.
- 2. Click on 'MEMORY LOCK' folder

- 3. Click on 'Lock\_Memory'.
- 4. Click on 'EXECUTE'
- 5. When touchscreen reboots, verify the touchscreen is 'LOCKED' AT TOP RIGHT OF SCREEN

#### **ON MCS-CONNECT SCREEN**

- 1. Click on **'OFFLINE'** at top.
- 2. Load an Offline XML file, Enable Auto Screen Refresh.
- 3. Click to open your graphics folder in the graphics folder under 'Places'.
- 4. The files located in the 'Graphics folder' was labeled for your chiller in the root directory.
- 5. Navigate to the sub directory which will show the files in the root directory, then click on 'systemoverview.xml.
- 6. When MCS-CONNECT opens, click on the 'systemoverview.xml tab, in the 'Site Info at top'.
- 7. Once you verified the graphics have been loaded, close MCS-CONNECT and re-connect to the controller and click on the graphics tab at the top right.

CONTACT SUPPORT FOR ADDITIONAL INFORMATION OR VIEW THE FOLLOWING MANUAL ON OUR WEBSITE:

https://mcscontrols.com/Documents/MCS/Manuals/MCS-Touchscreen%20and%20Graphics%20Manual.pdf

Email: support@mcscontrols.com Phone: 239-694-0089



### APP #136 - Calibrating the Touchscreen

#### **Revision History**

Date	Author	Description
09-30/2019	DEW	Setup

# Calibrating the

## Touchscreen

Any questions regarding this release, contact: support@mcscontrols.com

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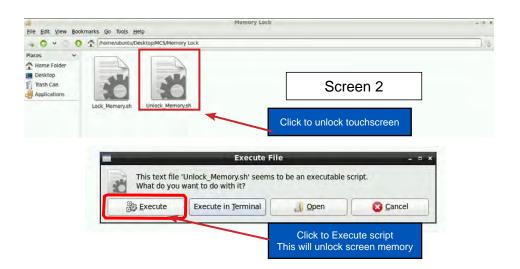
### **Unlocking MCS-TOUCHSCREEN**

#### Start by Unlocking the Touchscreen.

1. Click on the 'MCS TOOLS' folder on the desktop, 'MEMORY LOCK' sub folder will appear when this file is opened..



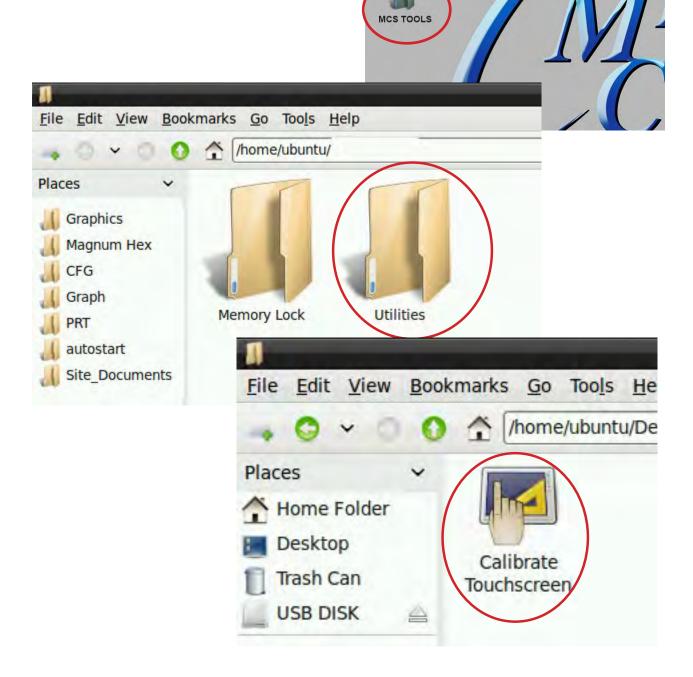
- 2. Double click on the 'Memory lock' folder
- 3. Double click on the 'Unlock Memory' icon
- 4. Next screen, click on 'Execute'
- 5. Touchscreen will perform a restart



#### USING CALIBRATING SOFTWARE

#### At the main menu:

- 1. Click on the 'MCS TOOLS folder'
- 2. Click on the 'Utilities' folder'
- 3. Click on 'Calibrate Touchscreen'
- 4. Calibration software will open.



MCS Connect

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On Screen Keypad

#### CALIBRATING WITH NEW 9 POINT SOFTWARE ON Touch 7 and 15.4

The screen below shows calibration for the touchscreens.

#### (only one target point will display at a time)

	ר   ב ב   ב TSLIB calibration utility Touch crosshair to calibrate	<b></b>
끐	<u>-15</u>	
<del>行</del>	代	笎

The first target point will display on the left top side of your screen.

1. Position your stylus pen point as close to the center of the target as you can.

#### BE CAREFUL NOT TO PRESS ON THE SCREEN IN OTHER AREAS.

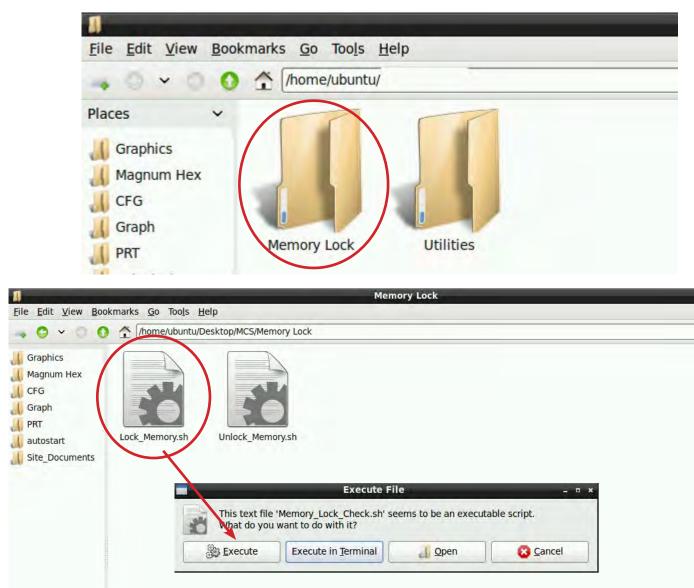
2. After touching the left top target, the next target will appear in the top center and continue to display as per the screen below until all '9 target points' have been calibrated.

If satisfied with the calibration, go to the next step. If needed, rerun the calibration tool.

3. After you calibrated all 9 points on the screen you will be returned to the desktop.

#### LOCKING THE TOUCHSCREEN AFTER CALIBRATION

1. Click on 'MEMORY LOCK', CLICK ON 'LOCK MEMORY', click on 'EXECUTE



When the Lock Memory file is pressed it does an automatic reboot and autostarts MCS-Connect.

Check the top right corner of the desktop to make sure the touchscreen is locked.



### APP #137 - Setting Time & Date

**Revision History** 

Date	Author	Description
10-01-2019	DEW	Setup

# Setting Time & Date MCS-TOUCHSCREEN

Any questions regarding this release, contact: support@mcscontrols.com

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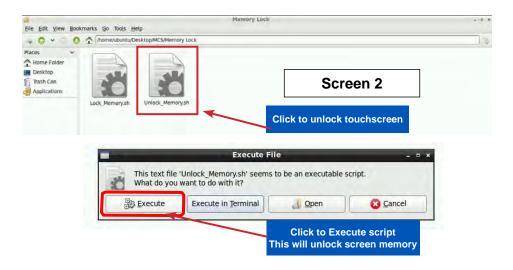
### Unlocking MCS-TOUCHSCREEN

#### Start by Unlocking the Touchscreen.

1. Click on the 'MCS TOOLS' folder on the desktop, 'Memory Lock' sub folder will appear when this file is opened..



- 2. Double click on the 'Memory Lock' folder
- 3. Double click on the 'Unlock\_Memory.sh' icon
- 4. Next screen, click on 'Execute'
- 5. Touchscreen will perform a restart



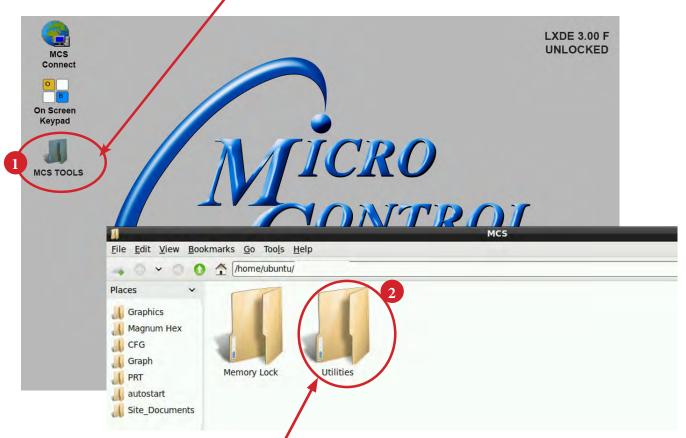
#### Open 'On Screen Keypad'

1. Navigate to the 'On Screen Keypad' on your desktop as shown below. Click with stylus or touch to open.



### Setting Time and Date - MCS-TOUCHSCREEN

- 1. Navigate to the 'MCS TOOLS' folder on your desktop.
  - Double click on folder to open.



2. Double click on the 'Utilities' sub folder to view contents.



54

4. Screen opens- click on 'Unlock'

You must be authorized to make these changes.

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5. Using the keypad, enter password "mcs' (lower case)

Click 'Authenticate' to unlock

~	-	Authen	ticate	*
	You need configur		to modify the syste	m
		ion is attempting to per ion is required to perfor	form an action that requires m this action.	privileges.
	Password:	mcs		
Details				5
			Cance	I Authenticate

6. Make changes to date or time and click to 'Lock'.

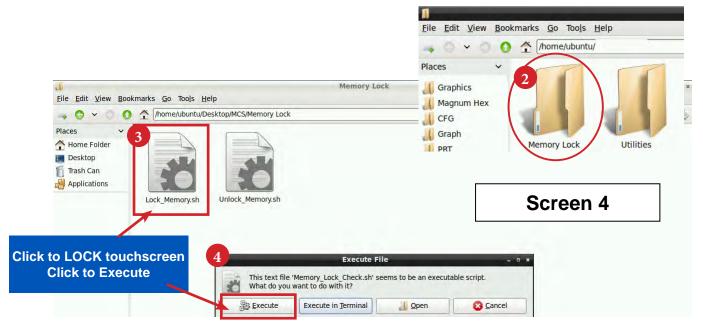
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Configura	ation:	Manual					-	
Time:	11	-+:	57	- +	: 19	-	+ 0	
Date:	• M	arch +					2016 •	
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	28	29	1	2	3	4	5	
	6	7	8	9	10	11	12	
	13	14	15	16	17	18	19	
	20	21	22	23	24	25	26	
		28	29	30	31	1	2	
	27	20						

### Locking MCS-TOUCHSCREEN

#### 1.1. Locking Touchscreen

- 1. Double click the 'MCS TOOLS' Icon on the Desktop.
- 2. Double click 'Memory Lock' sub directory.
- 3. Double click 'Lock\_Memory.sh'.
- 4. Click 'Execute'. The touchscreen will reboot.





When the Lock Memory file is pressed it does an automatic reboot and autostarts MCS-Connect.

Check the top right corner of the desktop to make sure the touchscreen is locked.