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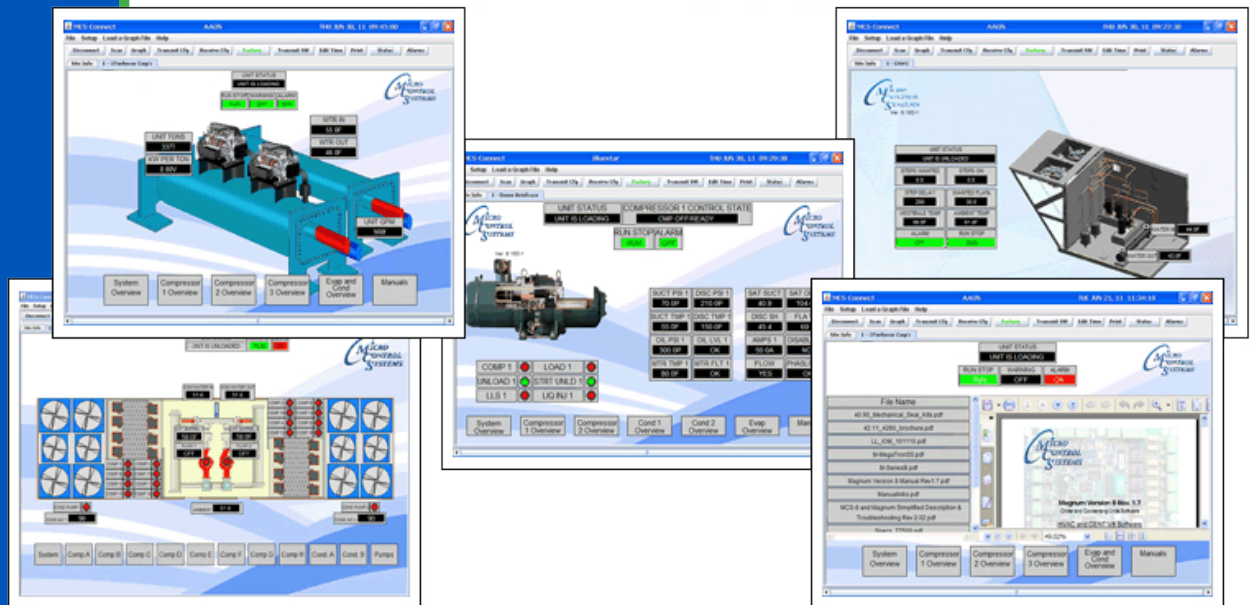
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Touchscreen Software Version 3.01F

Revision 1.3 - 2022-08-30

MCS-TOUCHSCREEN & Graphics



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

**MCS Total
Solution
for all your
Control
Needs**

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



Energy Efficient and RoHS Compliant

Revision/Disclaimer Page

Date	Author	Description of Changes
08-18-15	DEW	Setup Manual
09-02-15	DEW	Add images, edit pages
09-18/22/30-15	DEW	Add pages, edit pages
03-07-16	DEW	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.

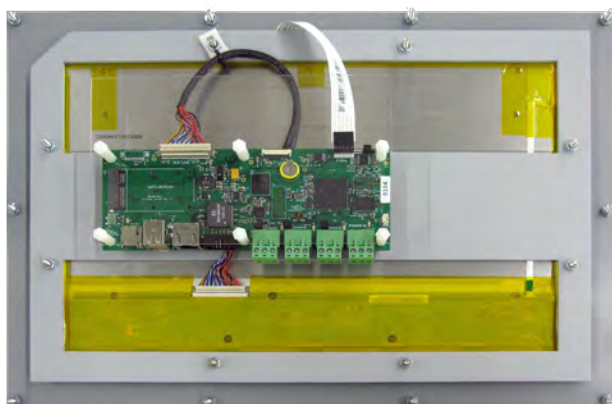


Additional information on the setup and using your Touchscreen and Graphics can be found on our web site, along with additional App. notes concerning the Touchscreens.

<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.



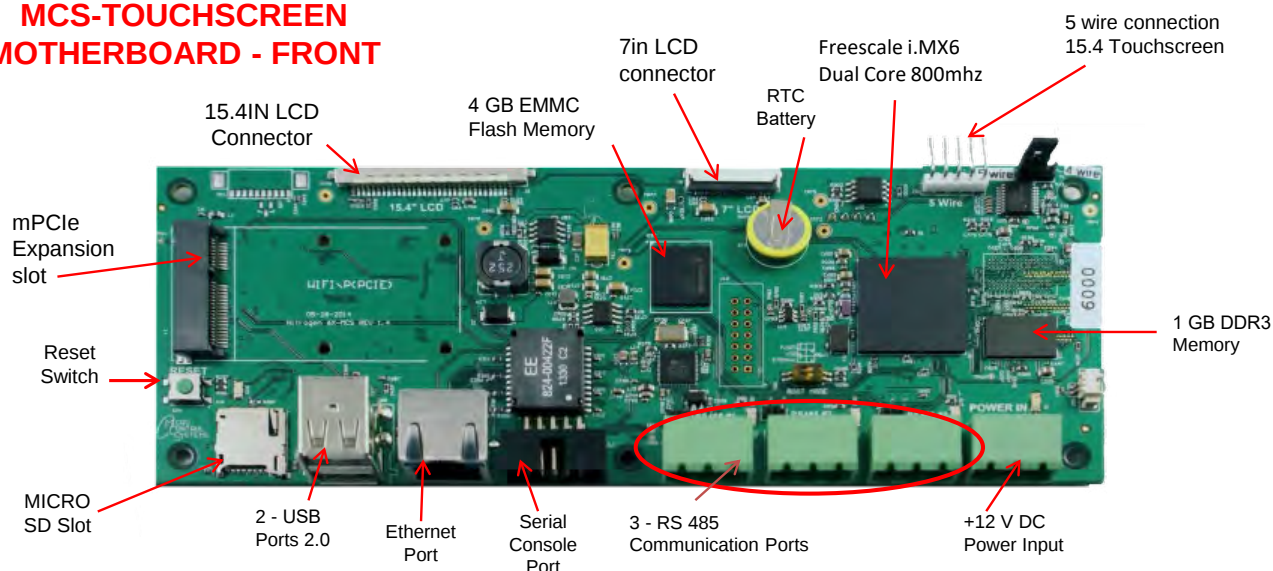
Back of Display - 15.4"



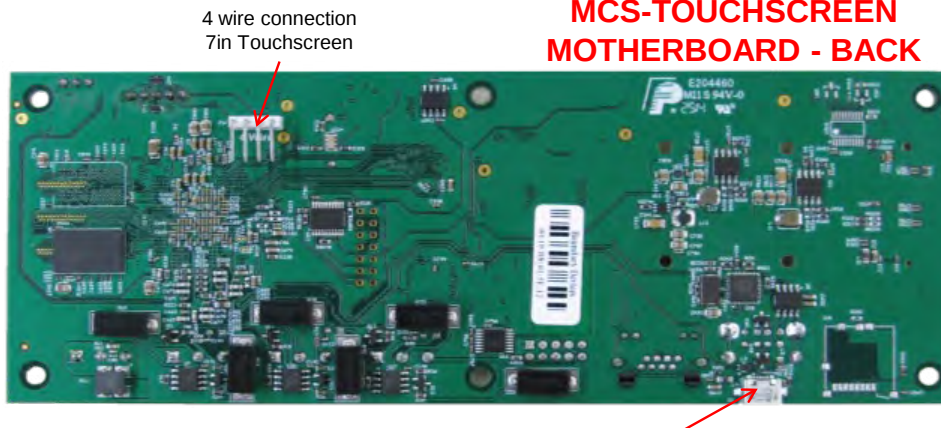
INCLUDED COMPONENTS

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

MCS-TOUCHSCREEN MOTHERBOARD - FRONT



MCS-TOUCHSCREEN MOTHERBOARD - BACK



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.

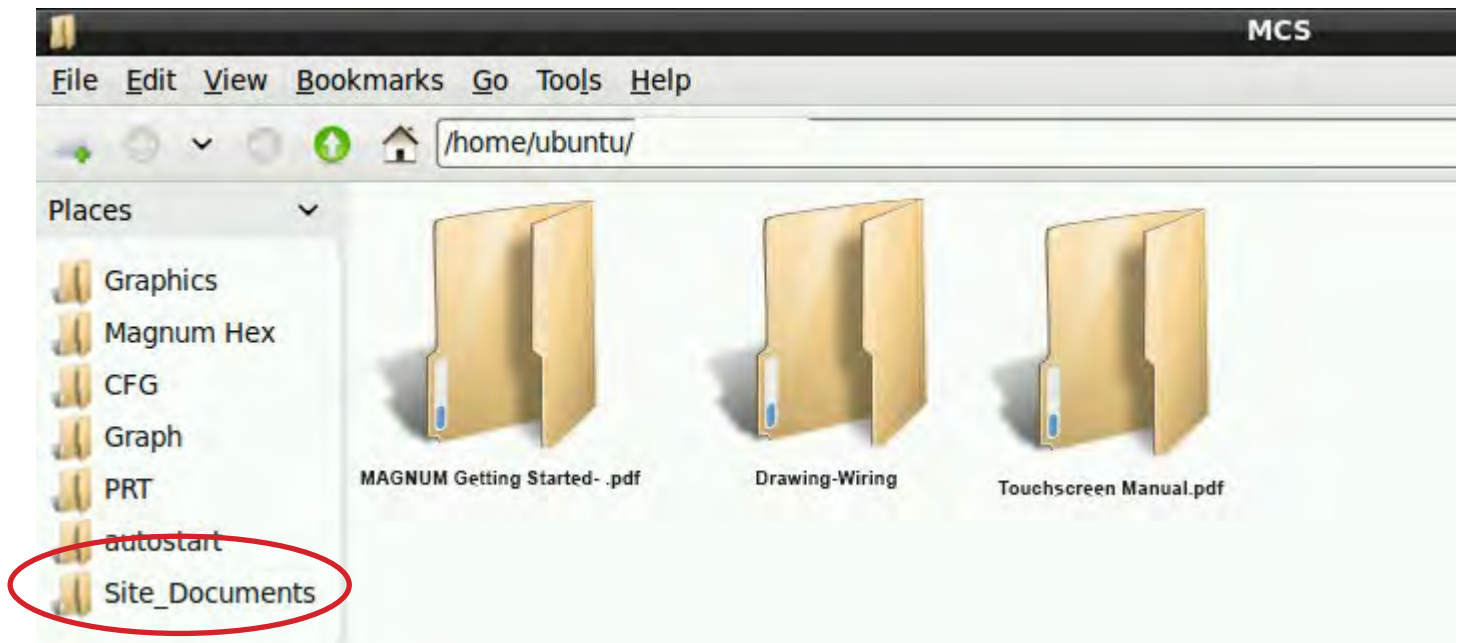
An example of the contains of the 'SITE DOCUMENTS' folder may contain:

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.



Chapter - 4. Main Screen

4.1. Layout of Main Screen on the Touchscreen

1. MCS-Connect icon
2. On Screen Keypad icon
3. MCS Tools, icon
4. Touchscreen Software Version
5. Touchscreen - LOCKED OR UNLOCKED
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.



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'

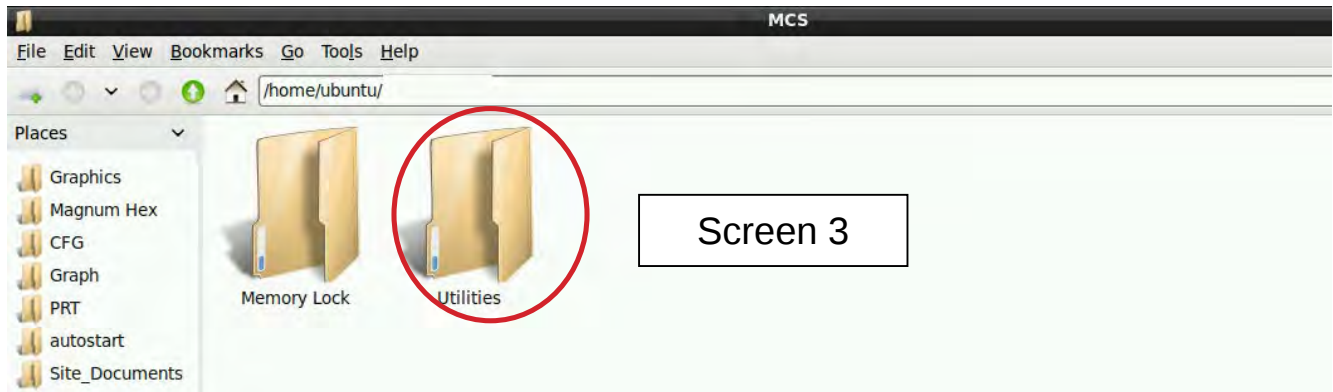
Screen 2 shows keypad display. Use the stylus and keypad to enter or make adjustments.



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. 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.



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.

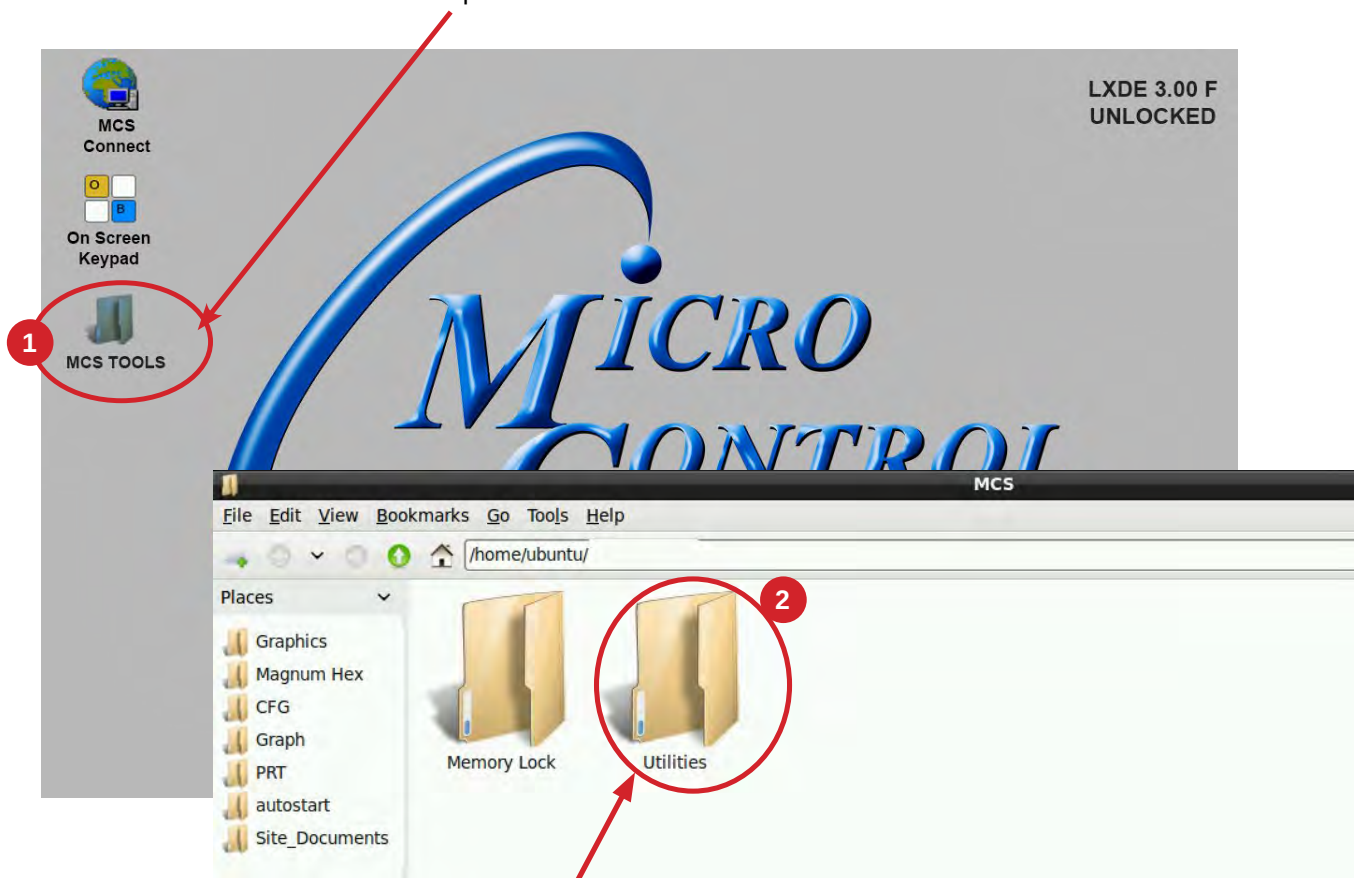
6.1.6 Reboot

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.



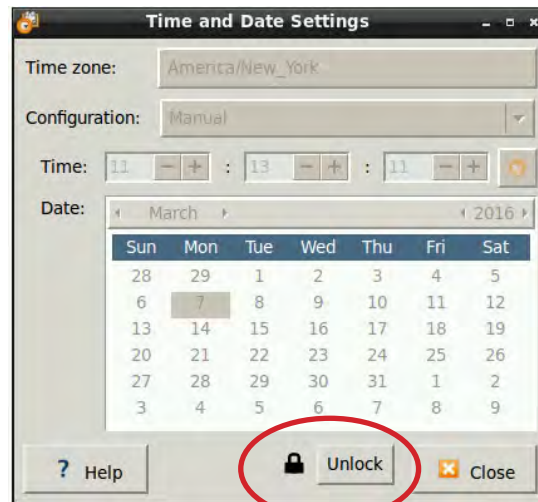
2. Double click on the '**Utilities**' sub folder to view contents.



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

4. Screen opens- click on **'Unlock'**

You must be authorized to make these changes.

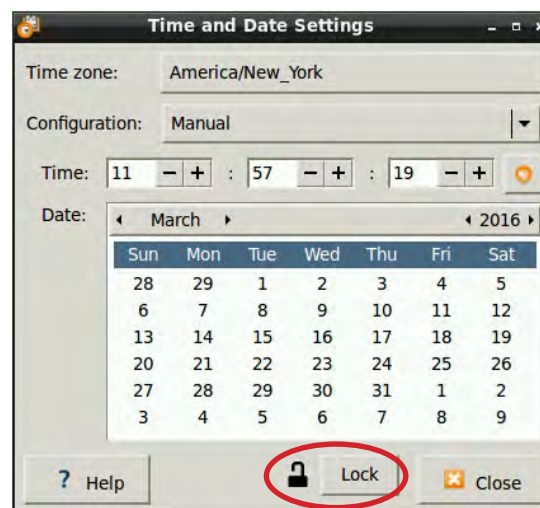


5. Using the keypad, enter password "mcs" (lower case)

6. Click **'Authenticate'** to unlock



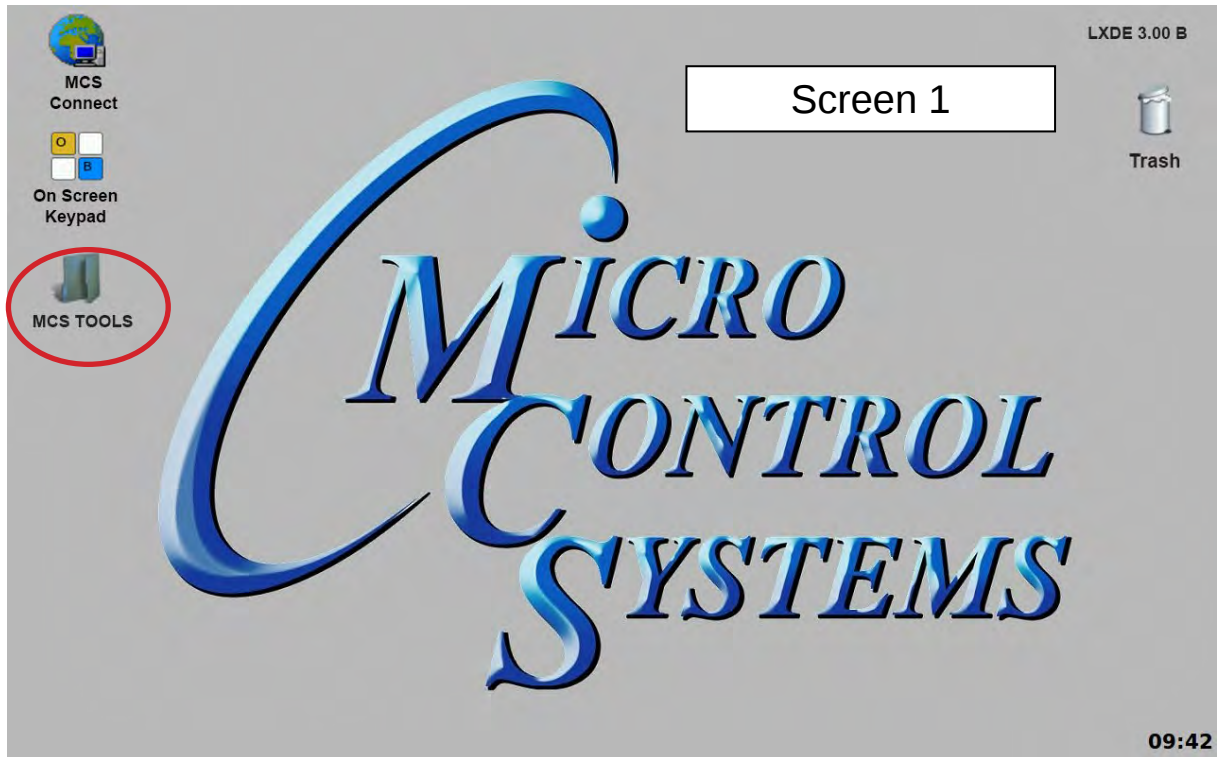
7. Make changes to date or time and click to **'Lock'**.



Chapter - 7. Network

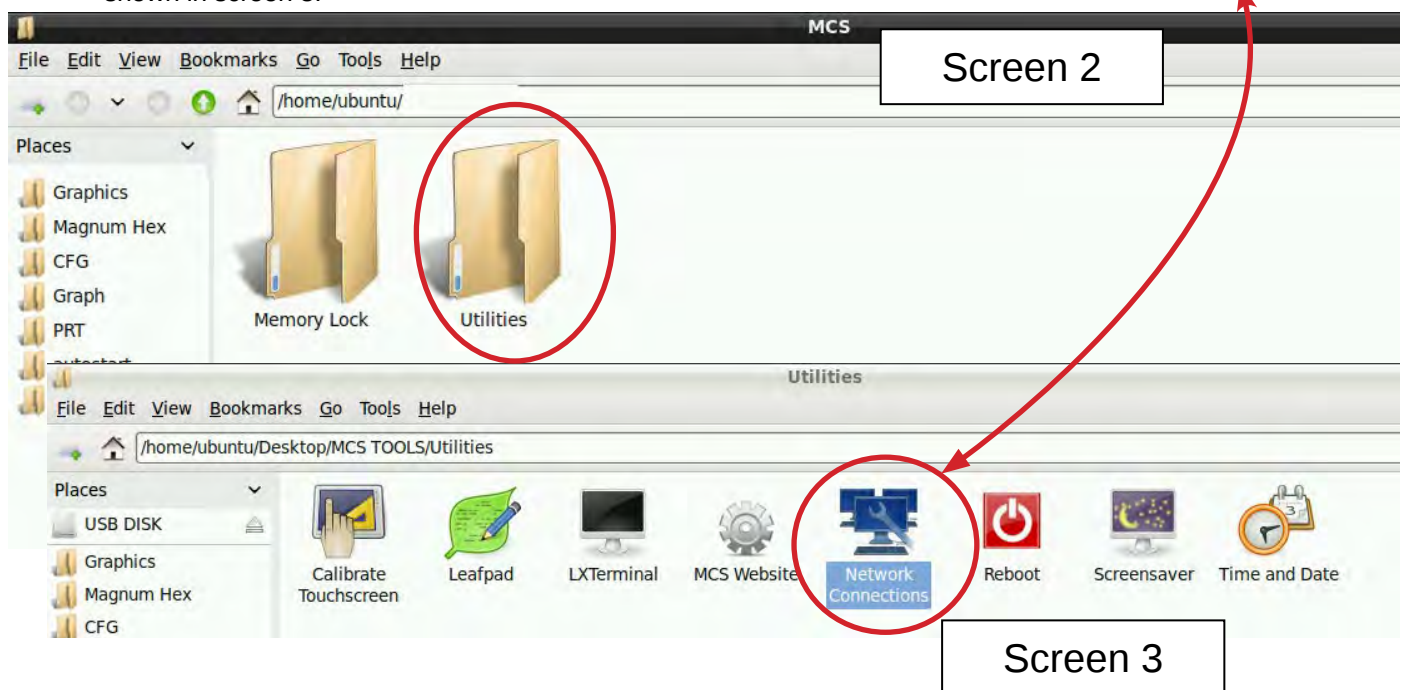
7.1. Setting Up Network For Communication With Your Controller

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



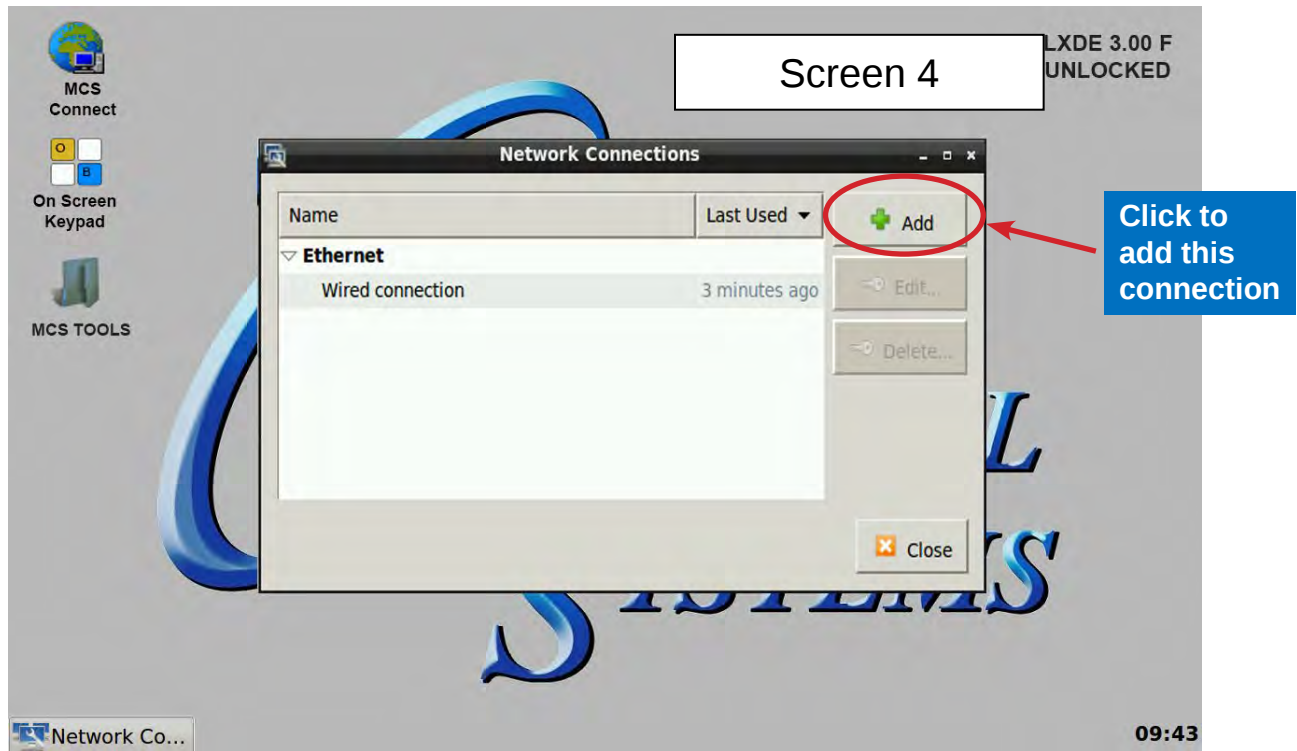
7.2. Utilities Folder

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

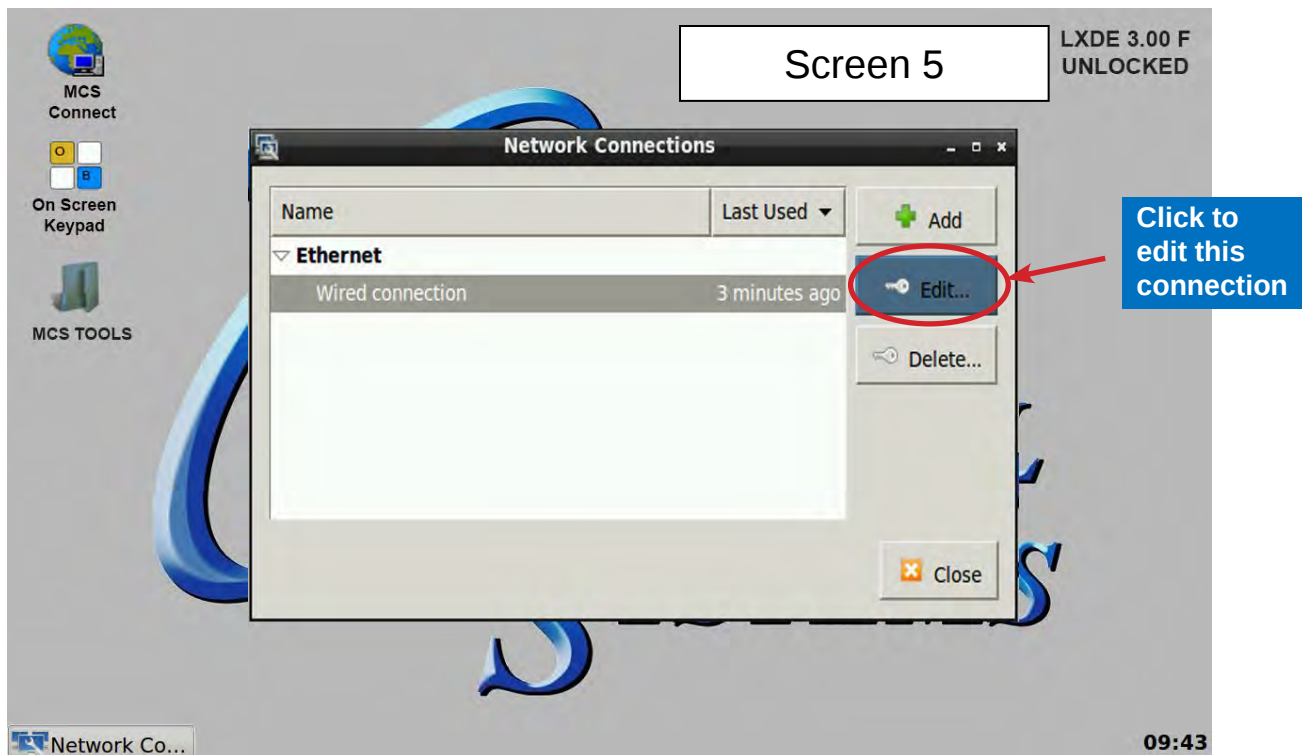


7.2.1 Network Connections Screen

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

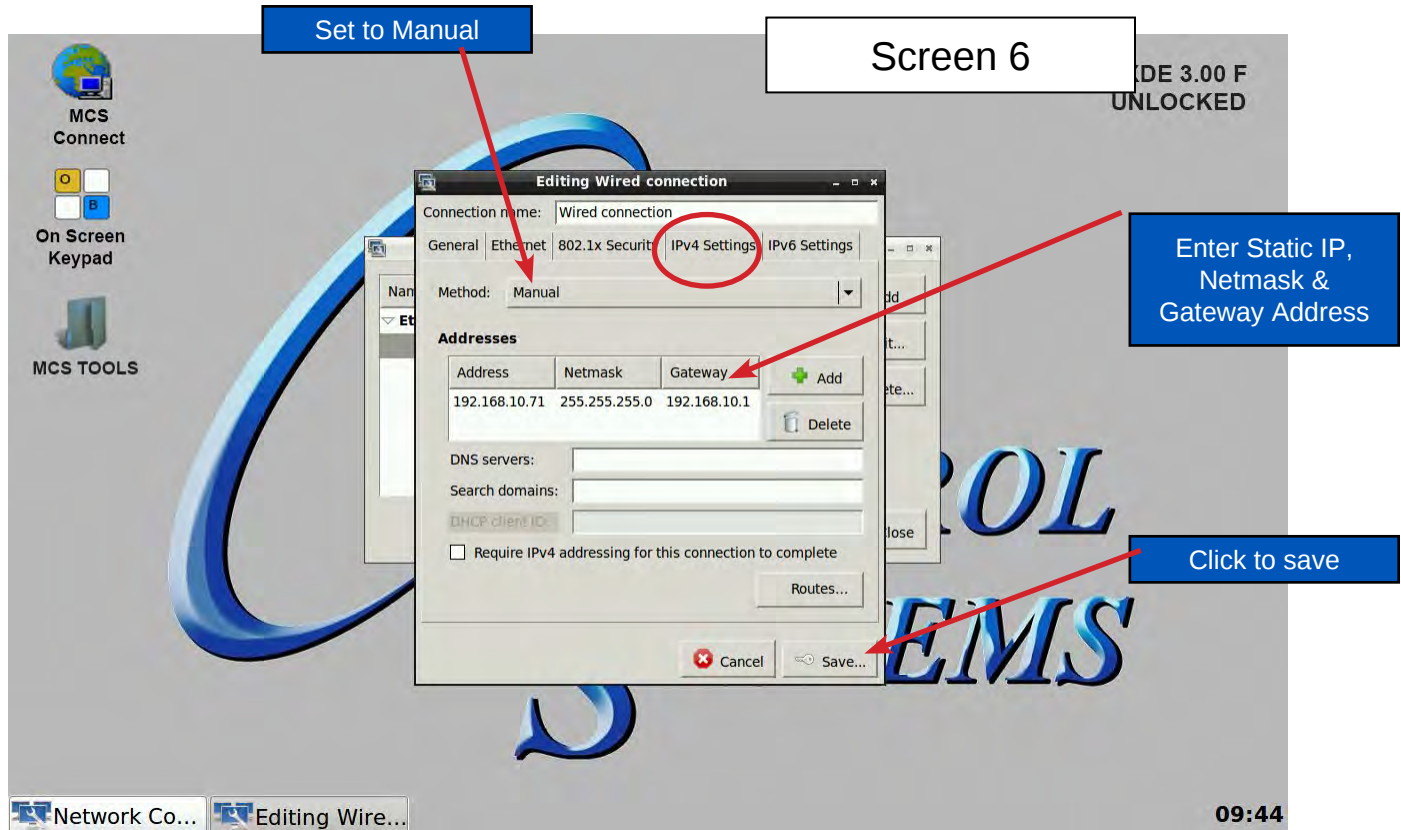


Screen 5, click to **'Edit'** this connection.



7.2.2 Adding IP Address

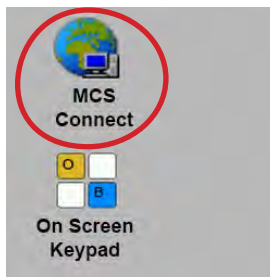
On screen 6, set **'Method'** to **'Manual'** click on **'IPv4'** than click on **'Address'**, enter the IP address, the netmask and gateway addresses. Click to save to touchscreen memory.



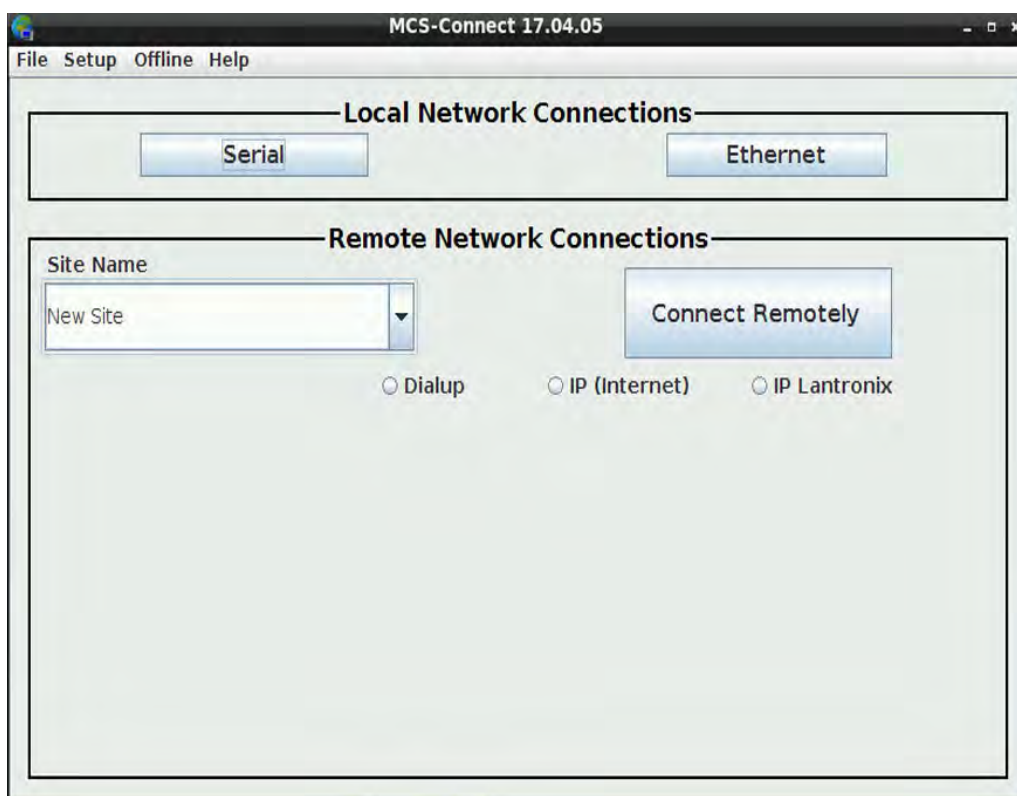
Chapter - 8. MCS-CONNECT

8.1. MCS-CONNECT Shortcut on Desktop

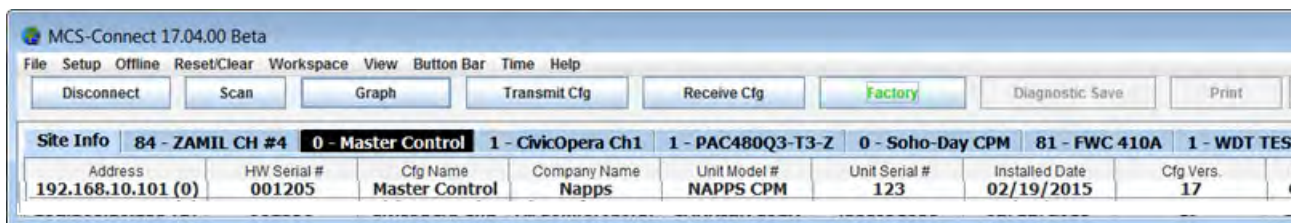
1. Click on the **MCS-Connect**.



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

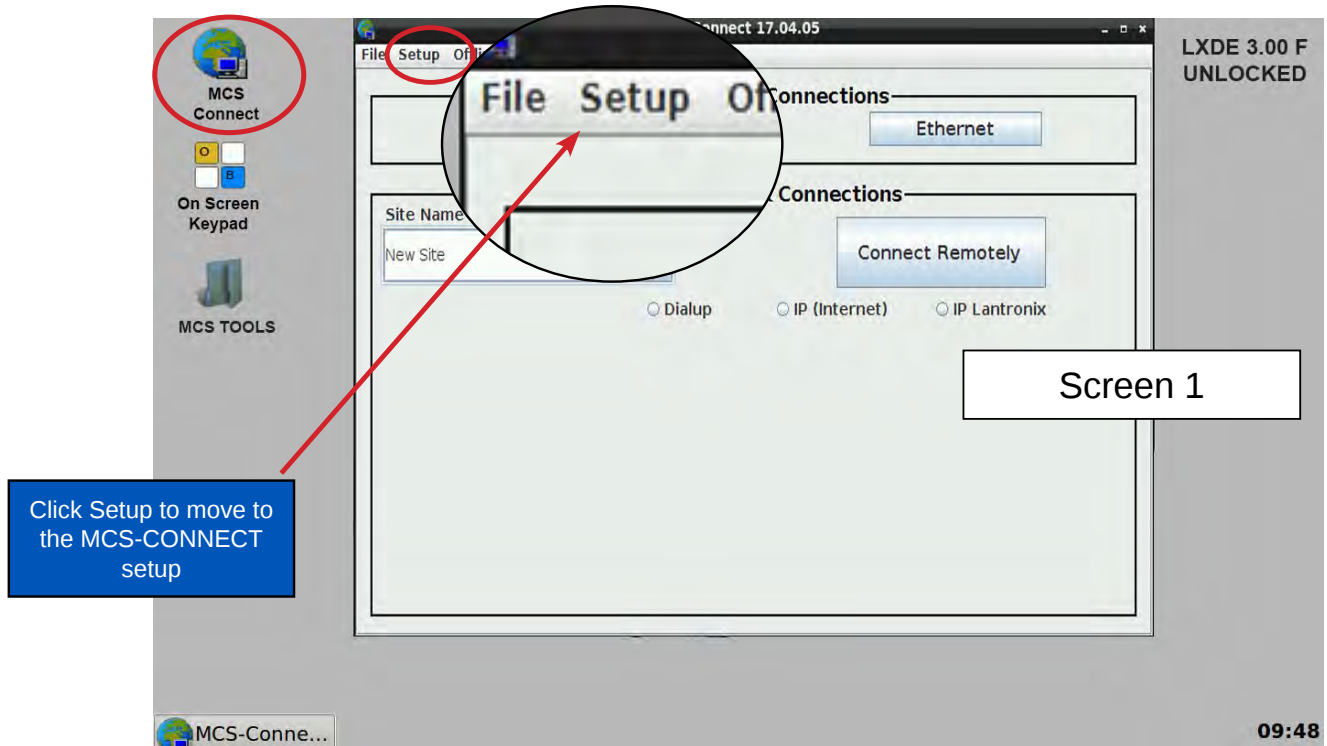


4. Screen below shows available controllers on your network.

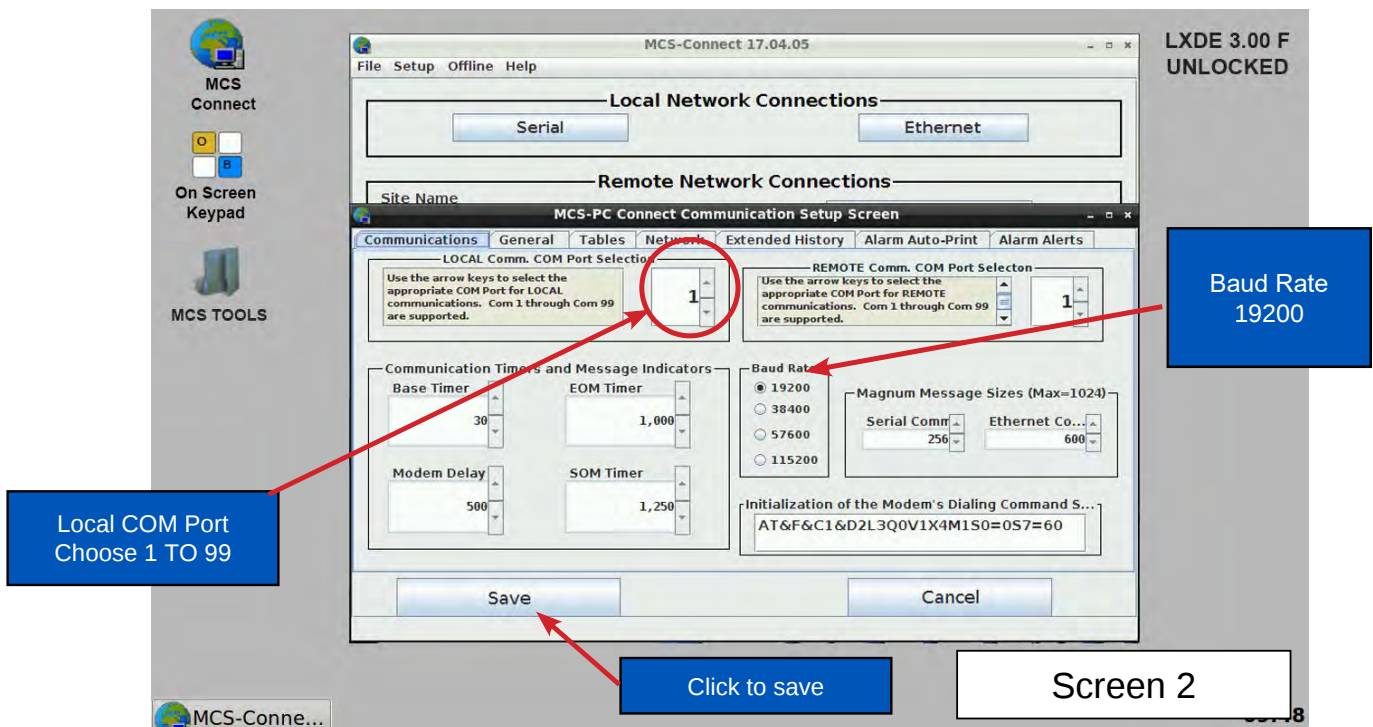


Chapter - 9. MCS-Connect Communication

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



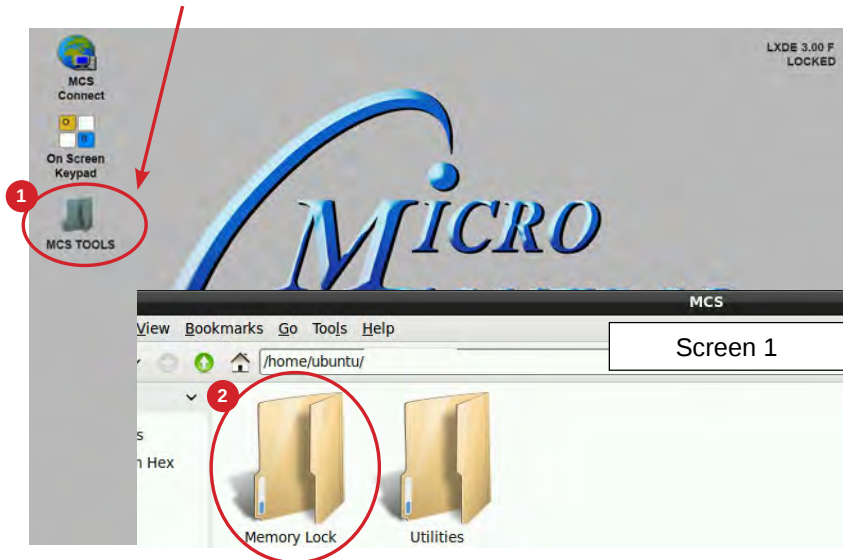
3. Next screen is the setup screen for communicating with your controller or PC.
4. You can change the "Com port" and "Baud Rate" depending on how you are communicating with your controller or computer.



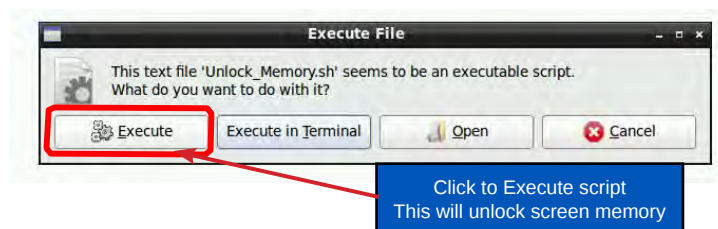
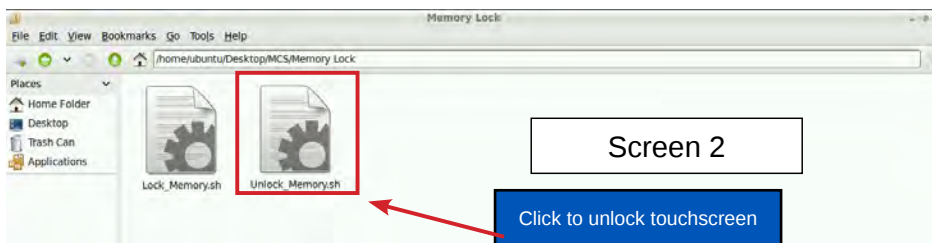
Chapter - 10. UnLocking / Locking Touchscreen

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..



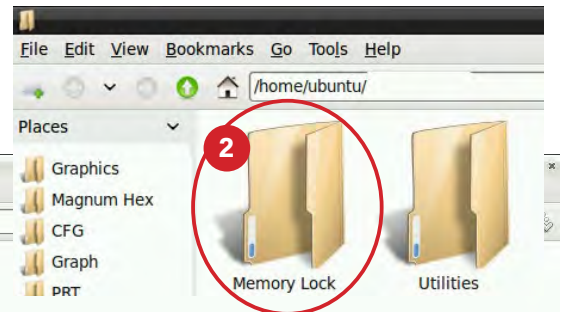
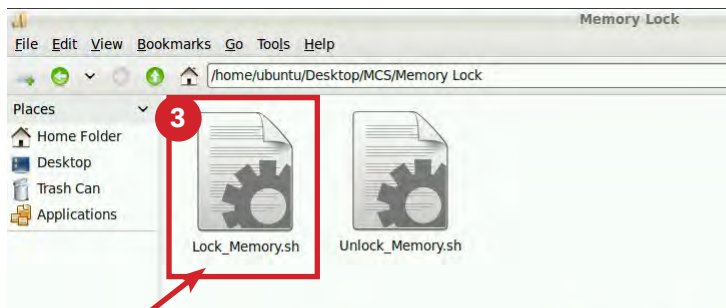
2. Double click on the '**Memory lock**' folder
3. Double click on the '**Unlock_Memory.sh**' icon
4. Next screen, click on '**Execute**'
5. Touchscreen will perform a restart



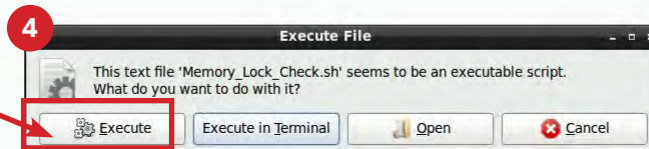
Re-Locking Touchscreen



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.



Click to LOCK touchscreen
Click to 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.

10.2. Installing New Graphics

MCS-TOUCHSCREENS GRAPHICS



Replacing Graphics

Tools Needed:

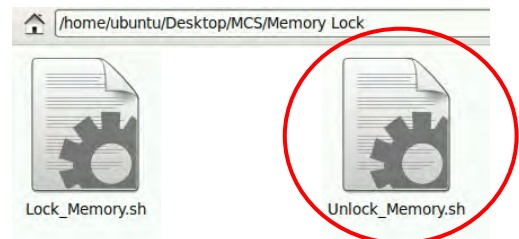
- 1 USB stick- format new – used for copying old graphic files for backup.
- 1 USB stick- format new – used to copy new graphic files from your computer.



Unlock Touchscreen

- **Linux Software - Start by Unlocking the Touchscreen**

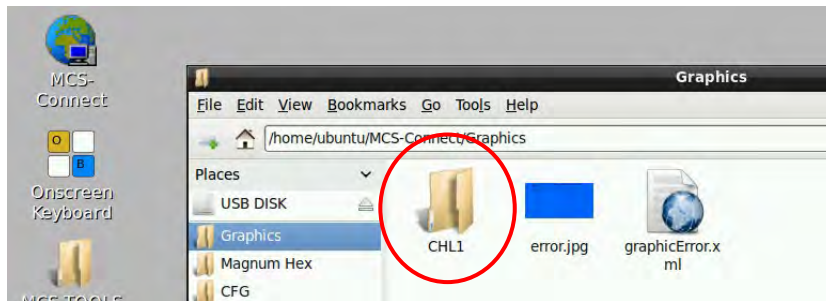
1. Click on the MCS TOOLS folder on the desktop.
2. Memory Lock sub folder will appear when the file is opened.
3. Double click on the Memory Lock folder
4. Double click on the Unlock Memory icon
5. Next screen, click on Execute
6. Touchscreen will perform a restart



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.

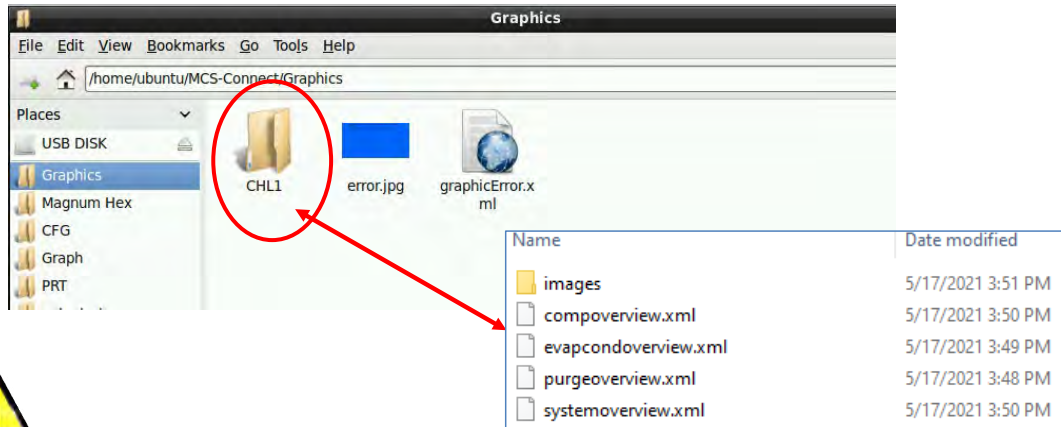


- c. Locate your Graphics folder (this example shows 'CHL1' which contains the files needed for the graphics on your touchscreen,
(Your file can have a generic name (Trane, Carrier, etc.)



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.

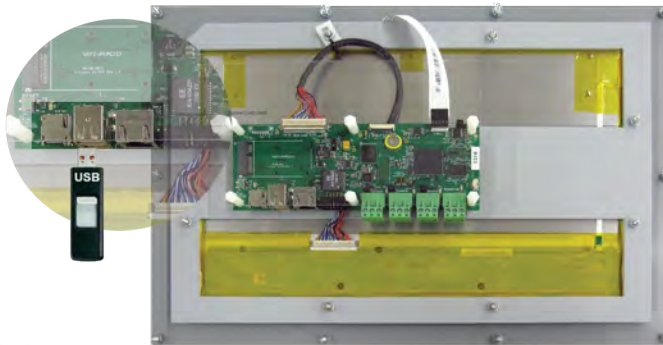


Step 2 – Click on file to unzip **(DO NOT COPY UNZIPPED FILE).**

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.



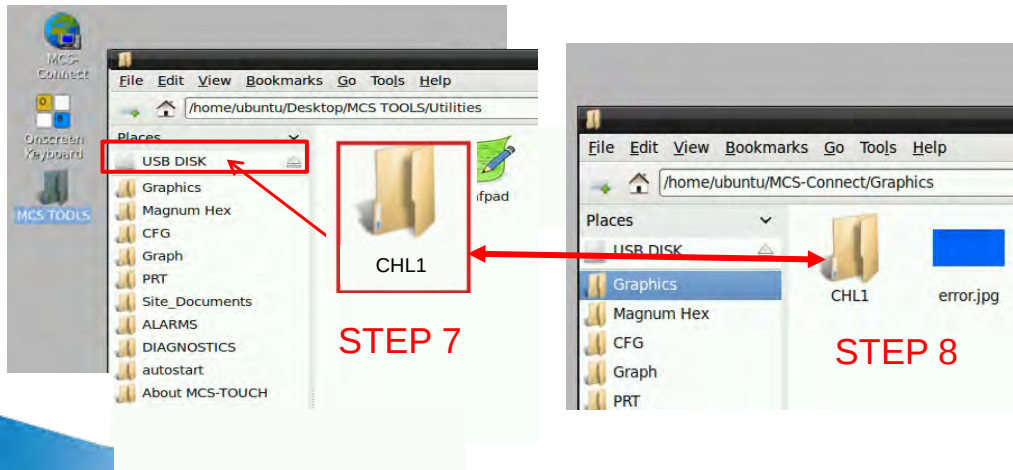
Replacing Graphic File (continued)

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'.

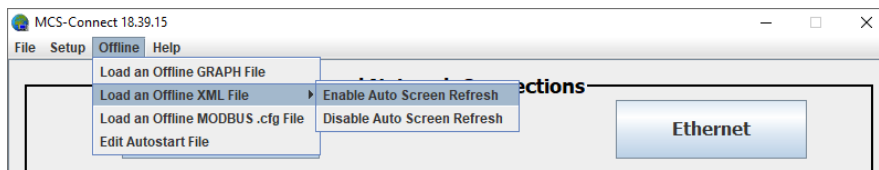
(Generic names can be used for different chillers (Trane, Carrier, etc.)



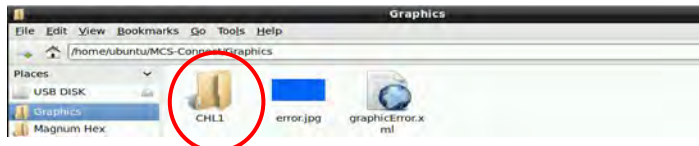
Replacing Graphic File (continued)

- **Open MCS-CONNECT SCREEN**

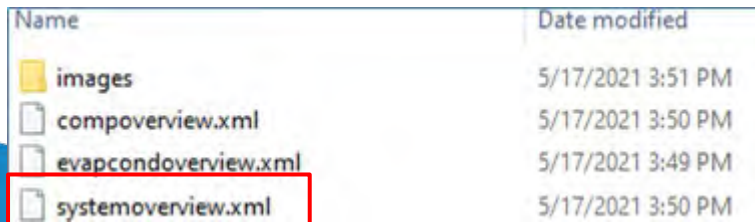
1. Click on '**OFFLINE**' at top.
2. Click on load an '**OFFLINE XML file**', **Enable Auto Screen Refresh**.



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

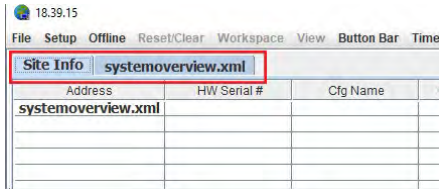


4. Navigate to the sub directory which will show the files in the root directory, then click on '**systemoverview.xml**'.

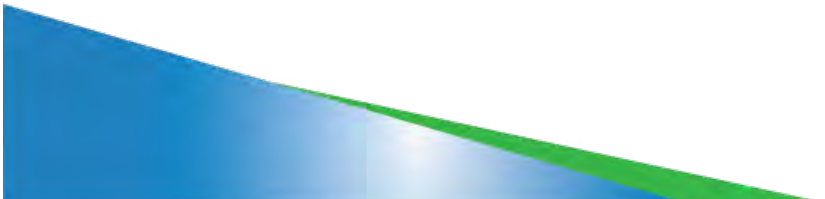


Replacing Graphic File (continued)

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



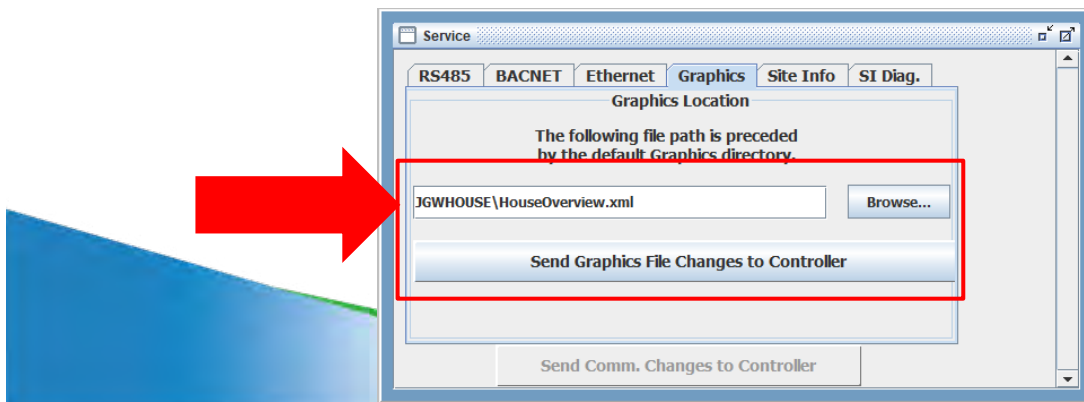
2. Once you verified the graphics have been loaded, close MCS-CONNECT and re-connect to the controller and click on the **'GRAPHICS'** tab at the top right to display your graphics



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.



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

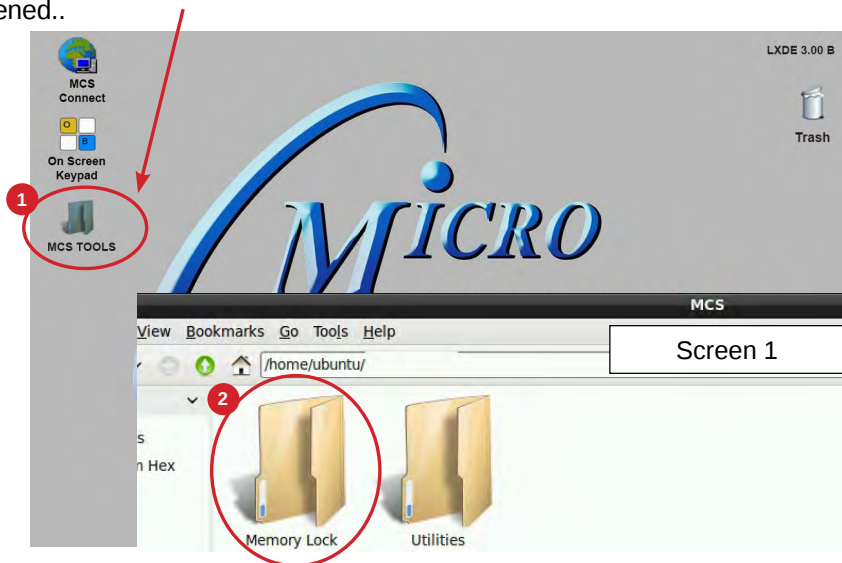


Call or email MCS for the password to download the latest **MCS-CONNECT LINUX VERSION** software.

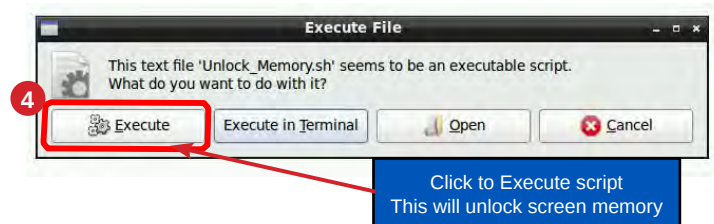
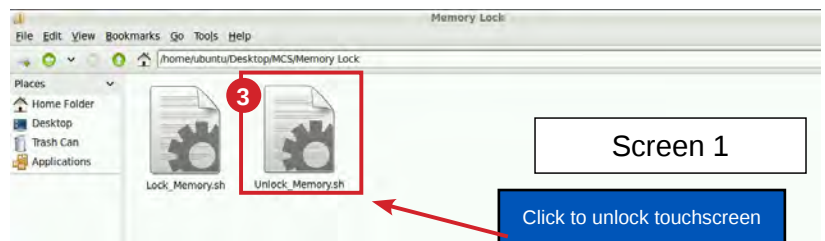
Download to your laptop or computer's desktop or a location where you will be able to copy to a USB drive.

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..

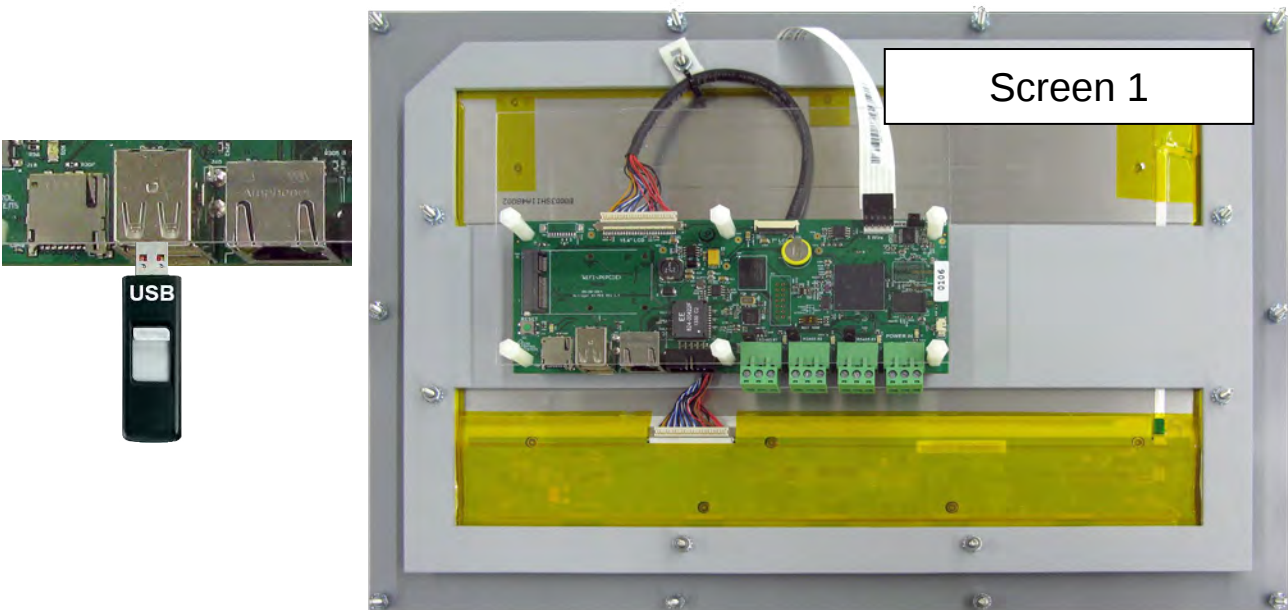


2. Double click on the '**Memory lock**' folder
3. Double click on the '**Unlock_Memory.sh**' icon
4. Next screen, click on '**Execute**'
5. Touchscreen will perform a restart



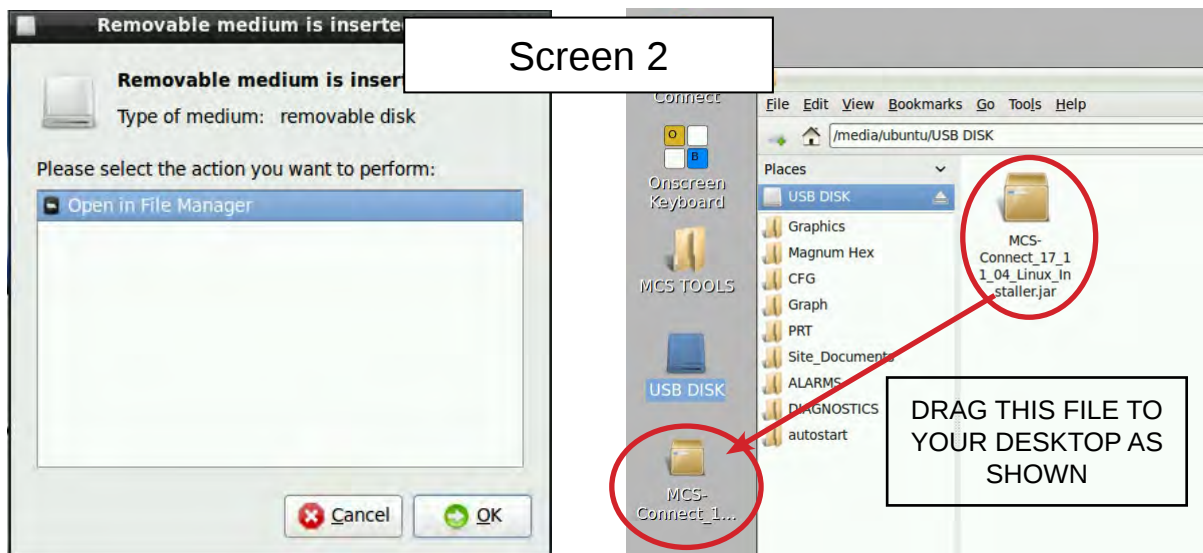
PLUG IN USB DRIVE AS SHOWN

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..



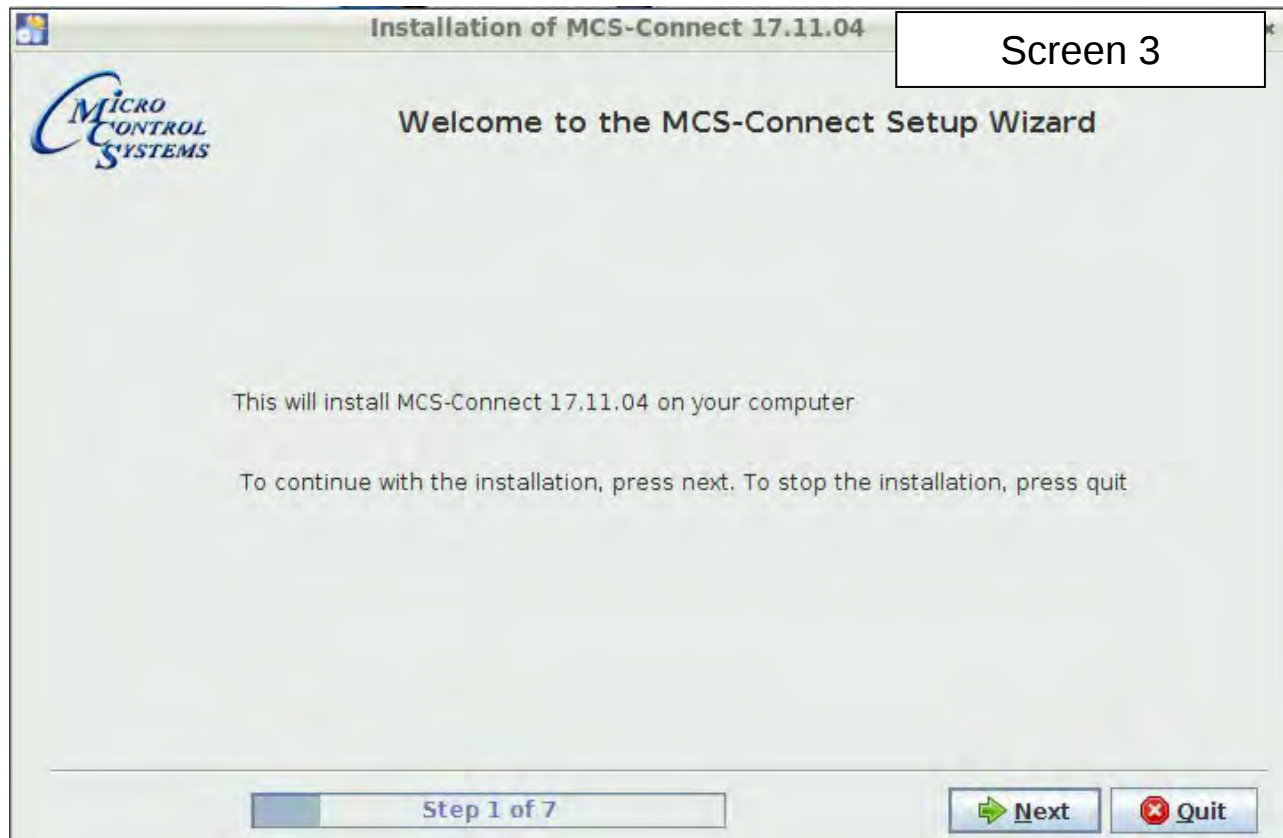
Copy the Updated File

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.**

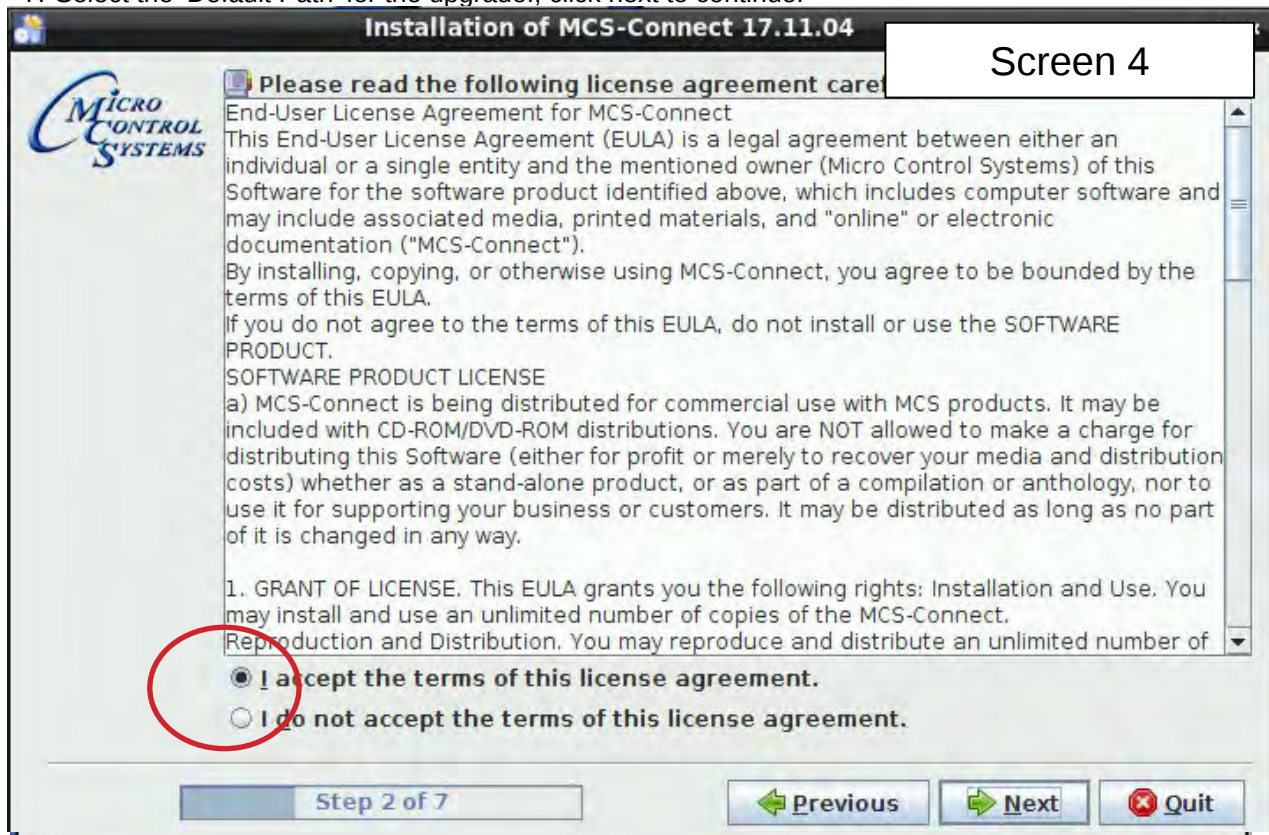


3. Close the screen so you can access the desktop.
4. Double click on the '**MCS-CONNECT installation file**' you just dragged to your desktop to upgrade.

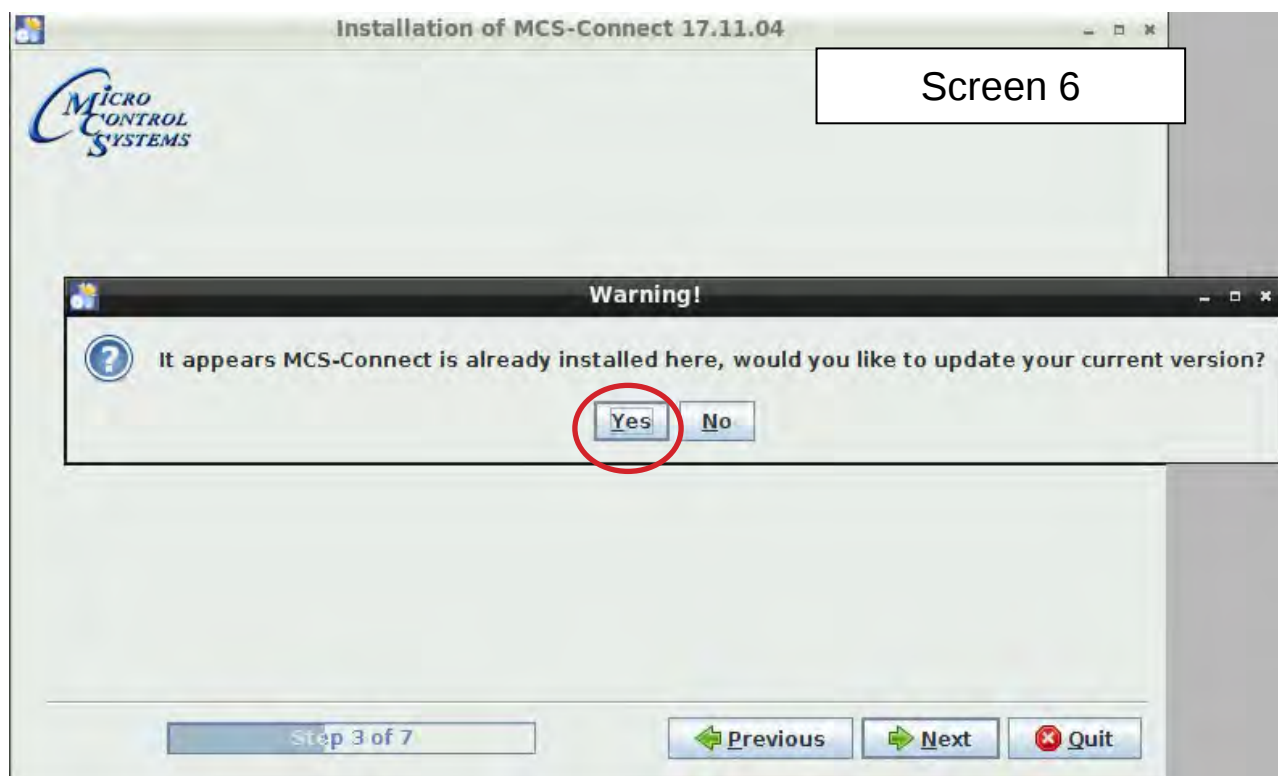
5. Click next to continue installing the new 'MCS-CONNECT installation



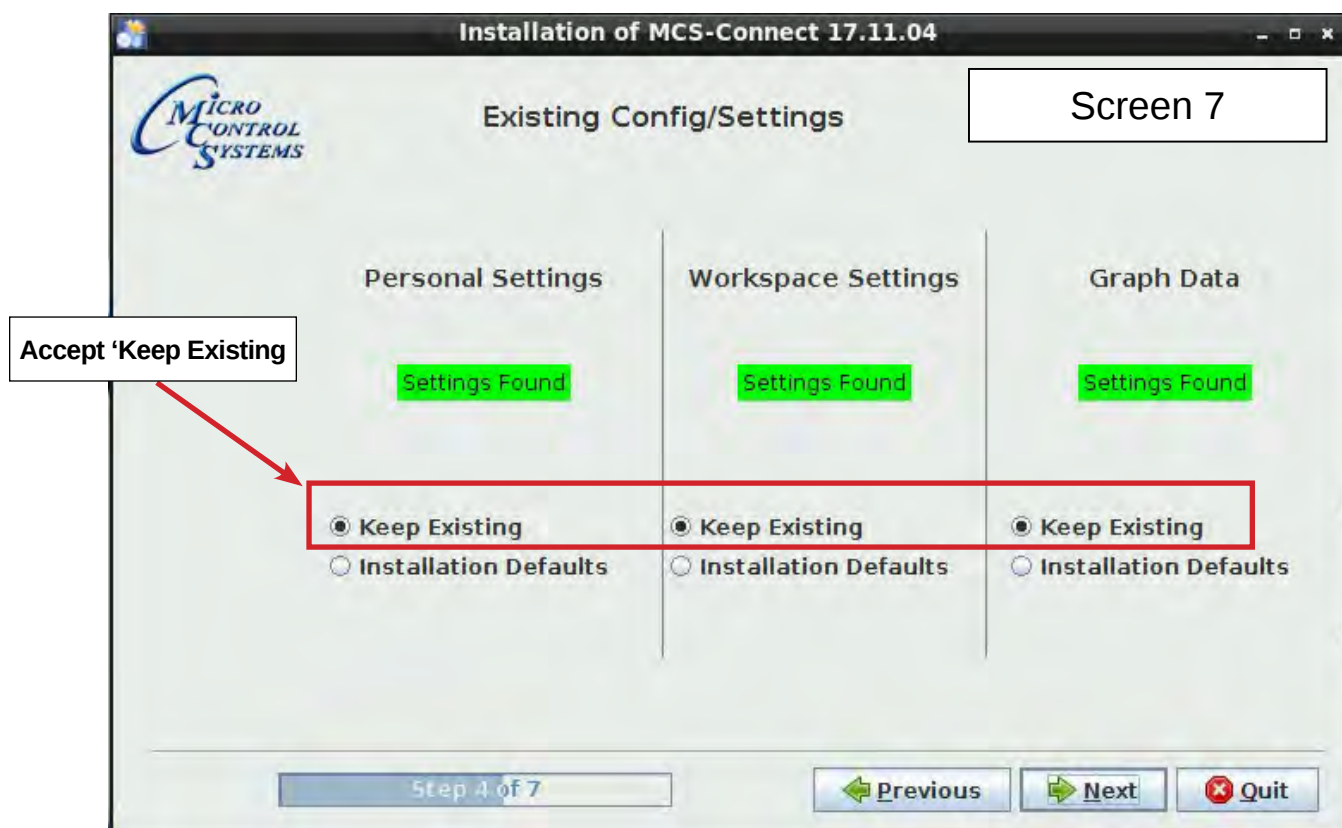
6. Accept the terms for the 'license agreement', click next to continue.
7. Select the 'Default Path' for the upgrade., click next to continue.



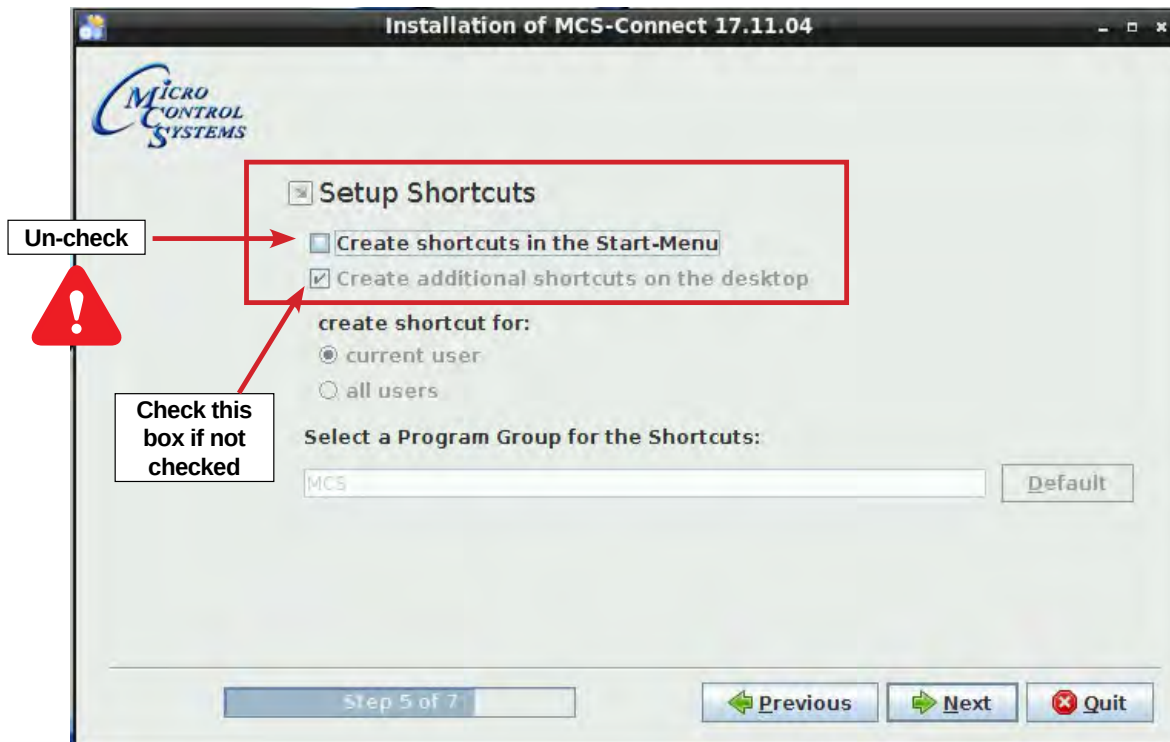
8. Click on 'YES' to overwrite the existing file, click next to continue.



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

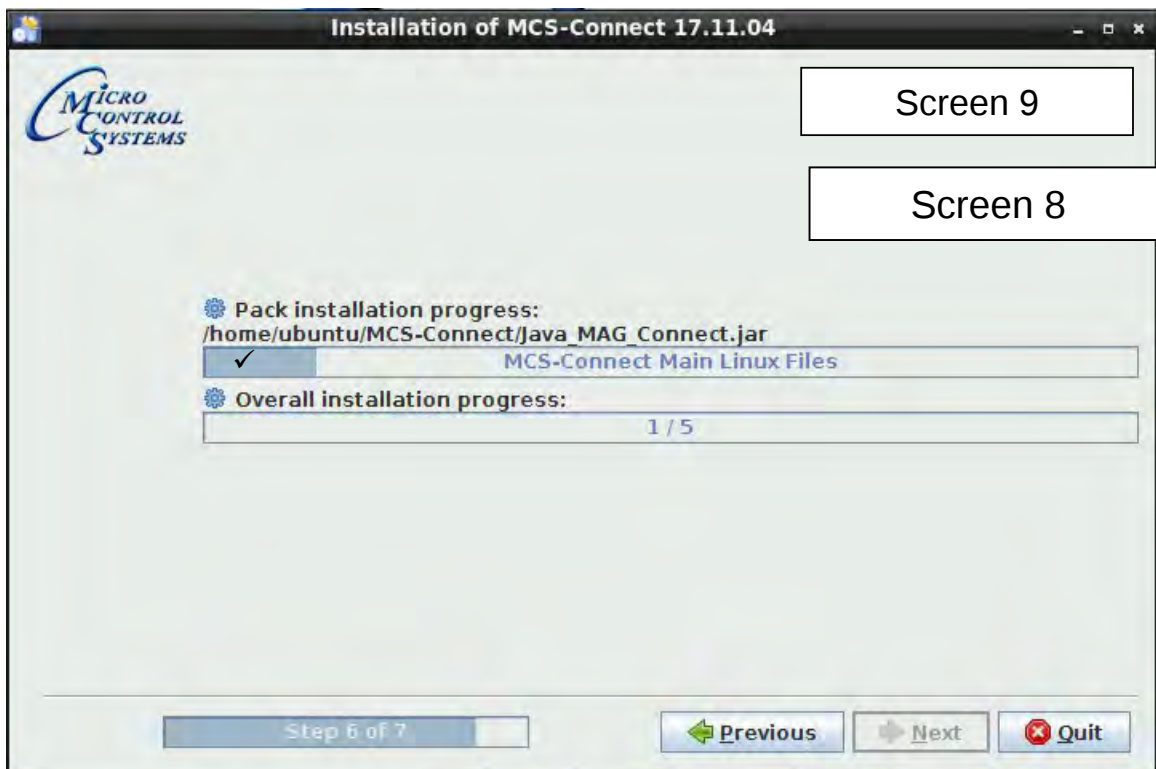


10. Make sure to **Un-check** the box to 'Create shortcuts in the Start-Menu',

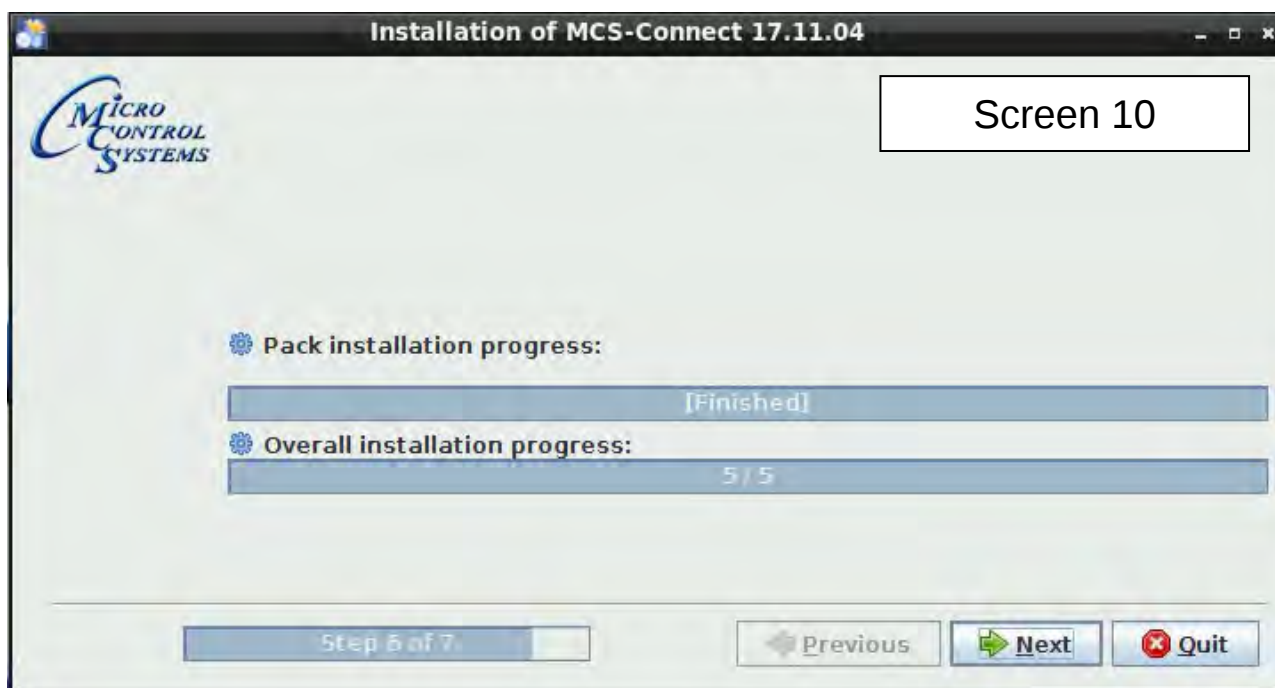


Check box 'Create additional shortcuts on the desktop', click next to continue.

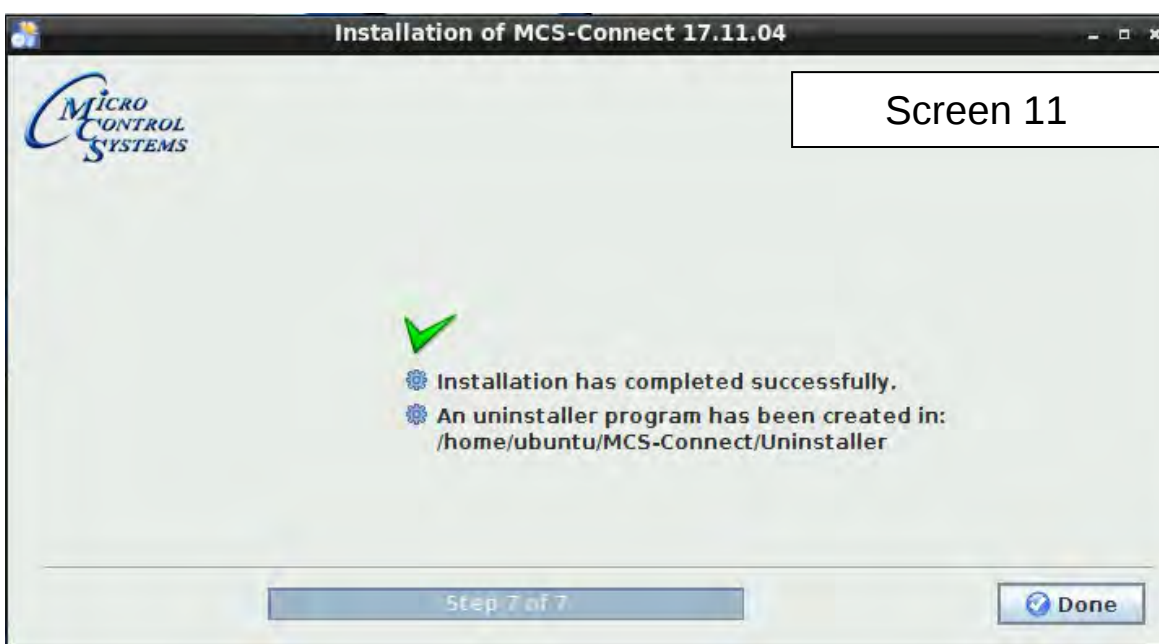
11. Next screen will show progress of installation.



12. Installation is complete, click next to continue.



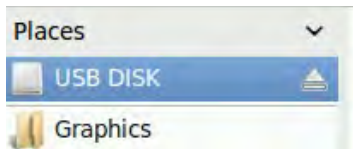
13. Screen shows installation was successful, click 'DONE'.



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



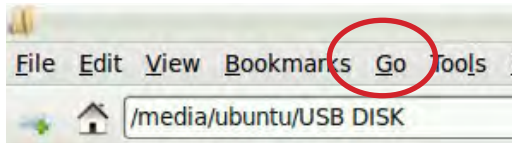
15. Click on '**ARROW**' to eject and remove from the back of the touchscreen.



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.



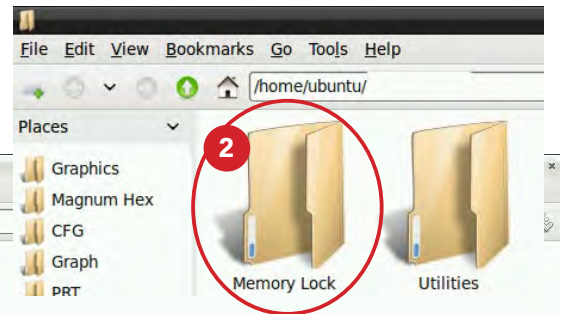
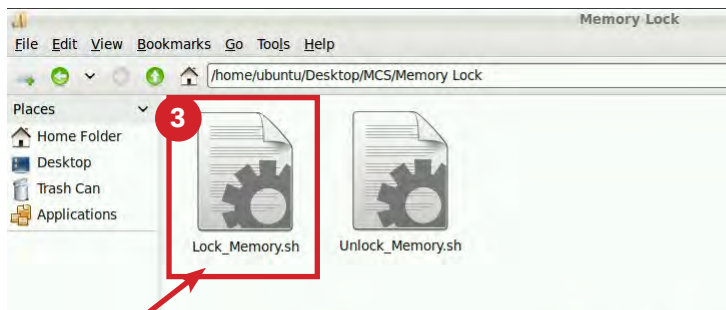
17. Click on the 'Go' button at the top and select trash can, Highlight the MCS CONNECT installer and select delete



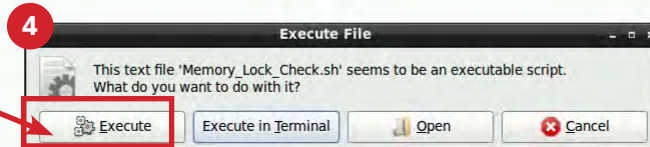
Re-Locking Touchscreen



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.



Click to LOCK touchscreen
Click to 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.



APPLICATION NOTE

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..



Click to Execute

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

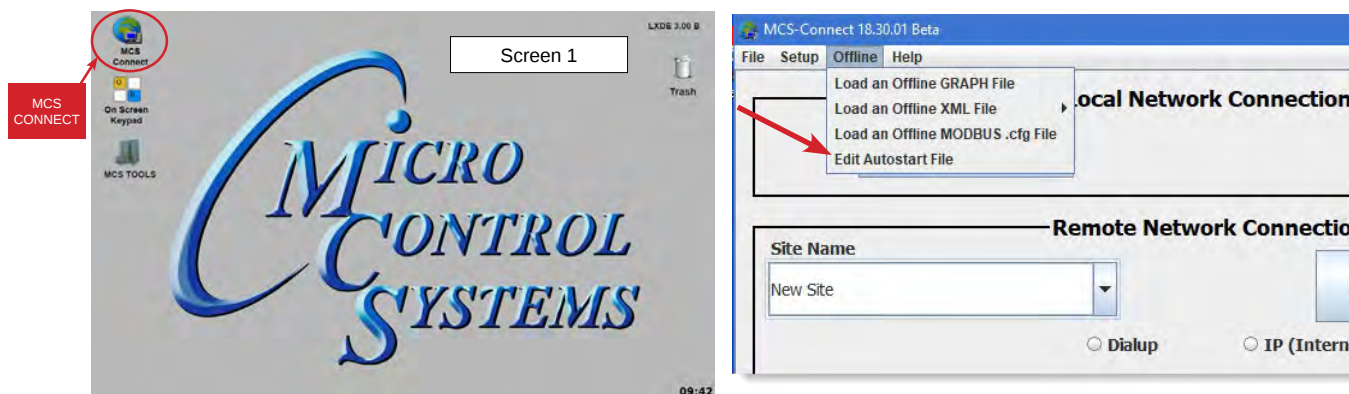
'ON SCREEN KEYPAD'

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



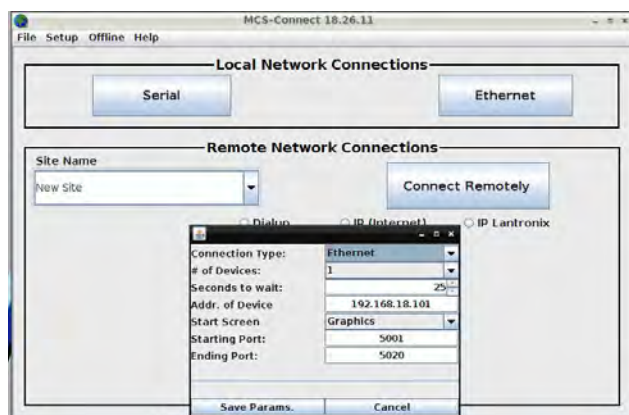
2. Editing the Autostart File

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



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.

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

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

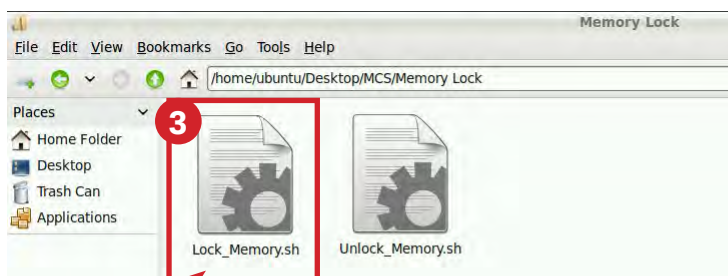
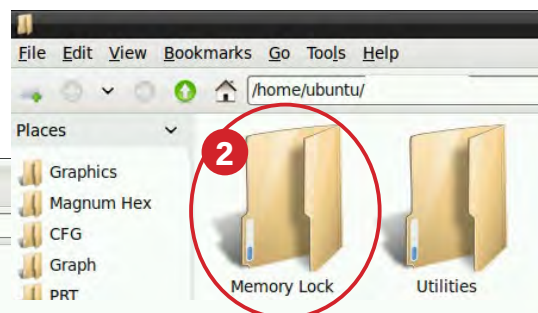
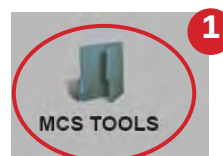
Argument #1	Argument #2	Argument #3	Argument #4
"serial"	# of controllers to look for	# seconds to search	MCS address of controller to connect to
"ethernet"	# of controllers to look for	# seconds to search	IP address of controller to connect to
"remote"	# of controllers to look for	# seconds to search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

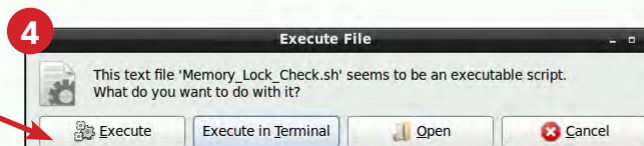
Re-Locking Touchscreen



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.



Click to LOCK touchscreen
Click to Execute



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
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(239)694-0089 FAX: (239)694-0031 www.mcscontrols.com

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APPLICATION NOTE

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



APPLICATION NOTE

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

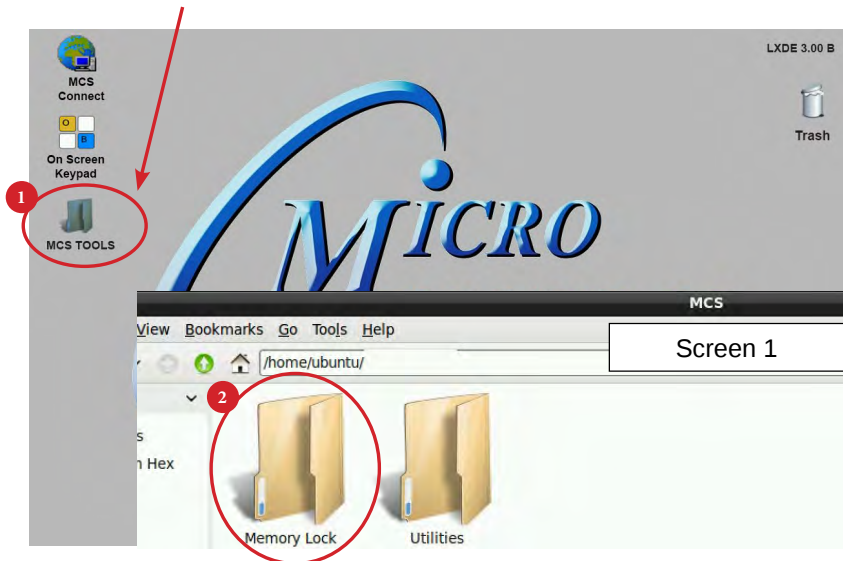
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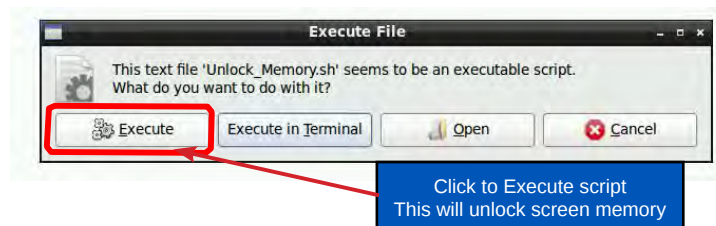
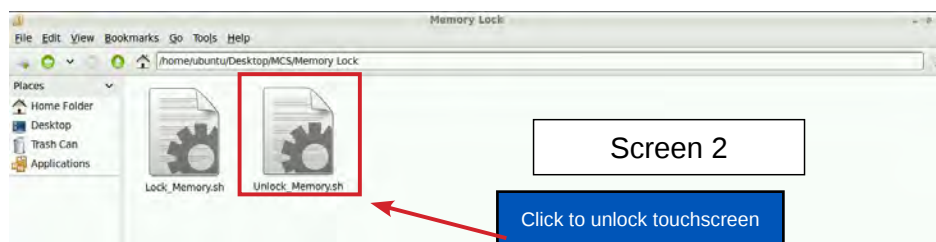
Unlocking MCS-TOUCHSCREEN

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..



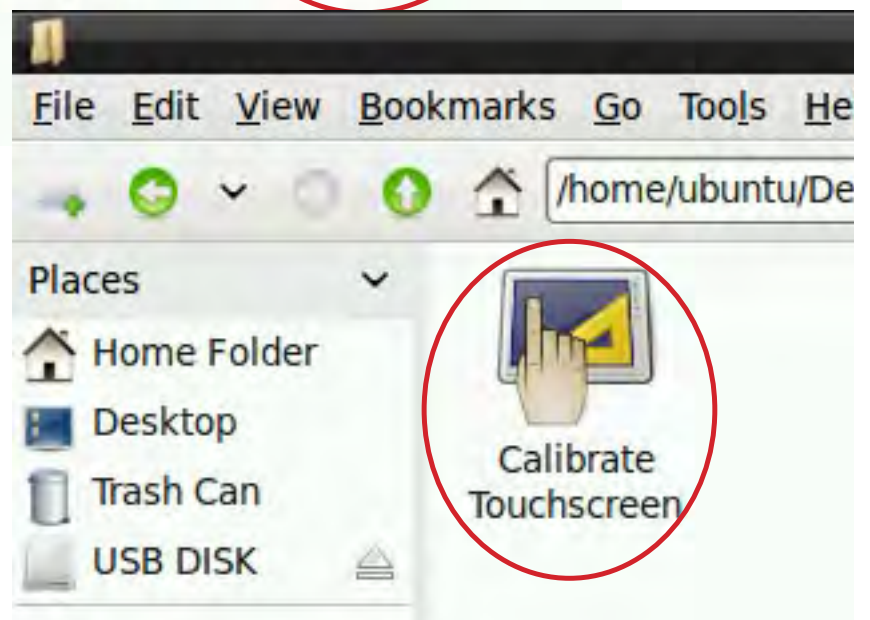
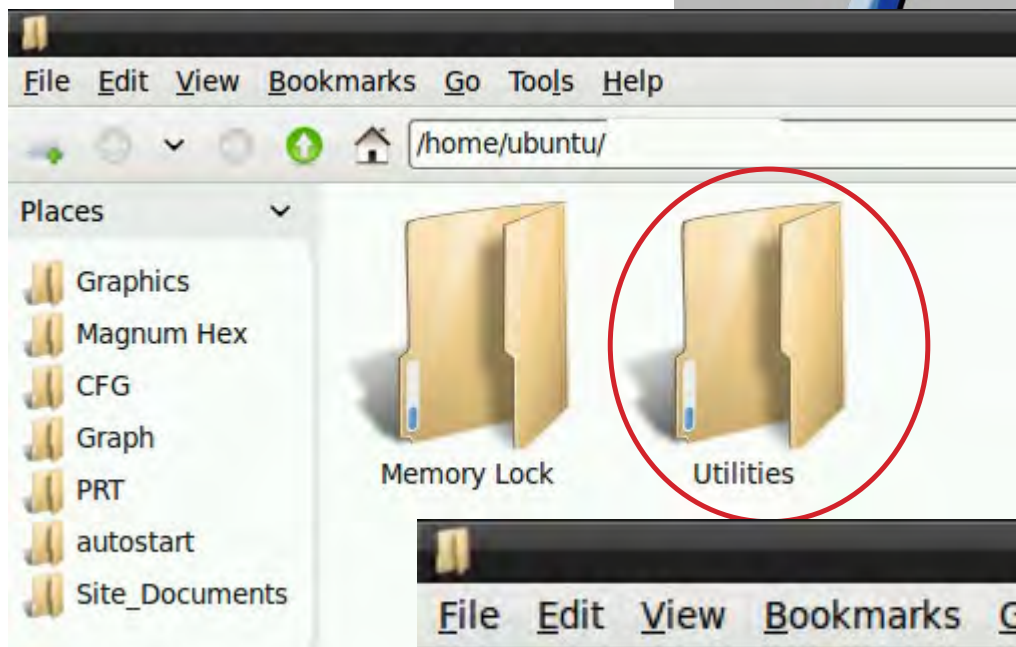
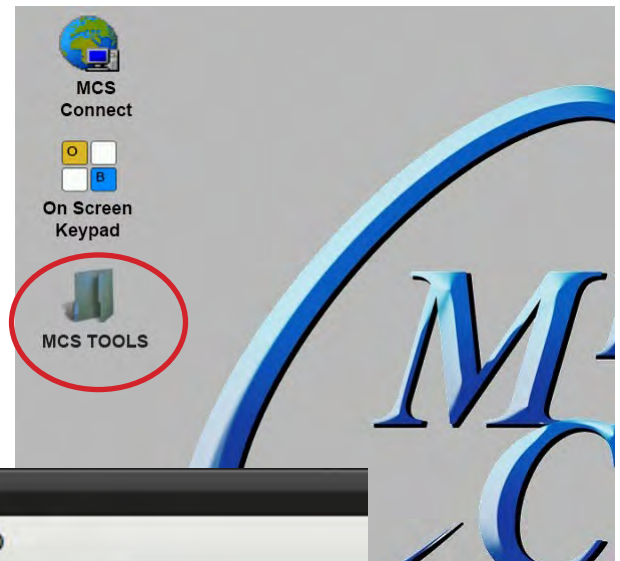
2. Double click on the 'Memory lock' folder
3. Double click on the 'Unlock Memory' icon
4. Next screen, click on 'Execute'
5. Touchscreen will perform a restart



USING CALIBRATING SOFTWARE

At the main menu:

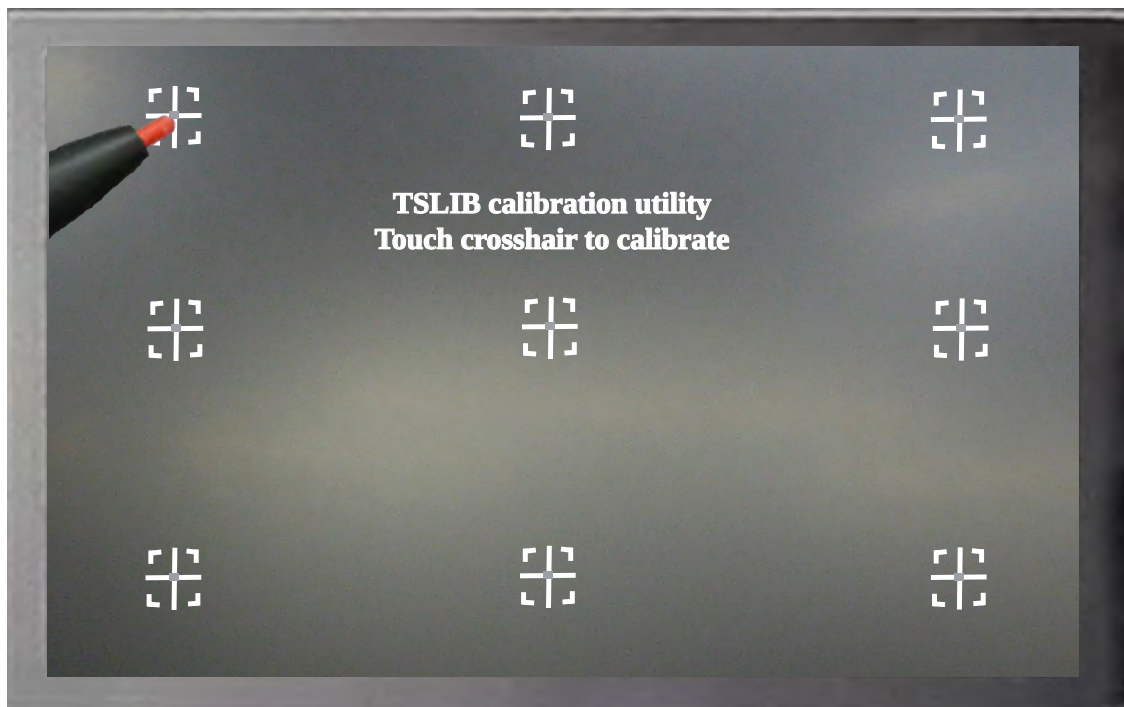
1. Click on the **'MCS TOOLS folder'**
2. Click on the **'Utilities' folder'**
3. Click on **'Calibrate Touchscreen'**
4. **Calibration software will open.**



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)



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.

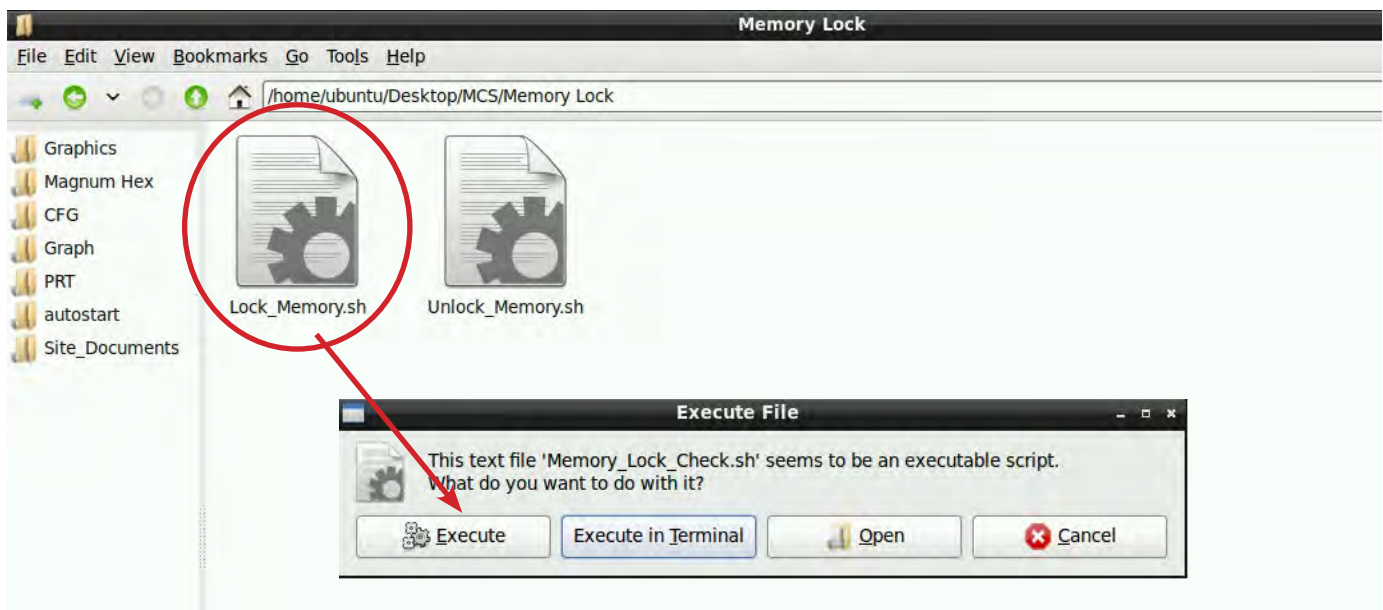
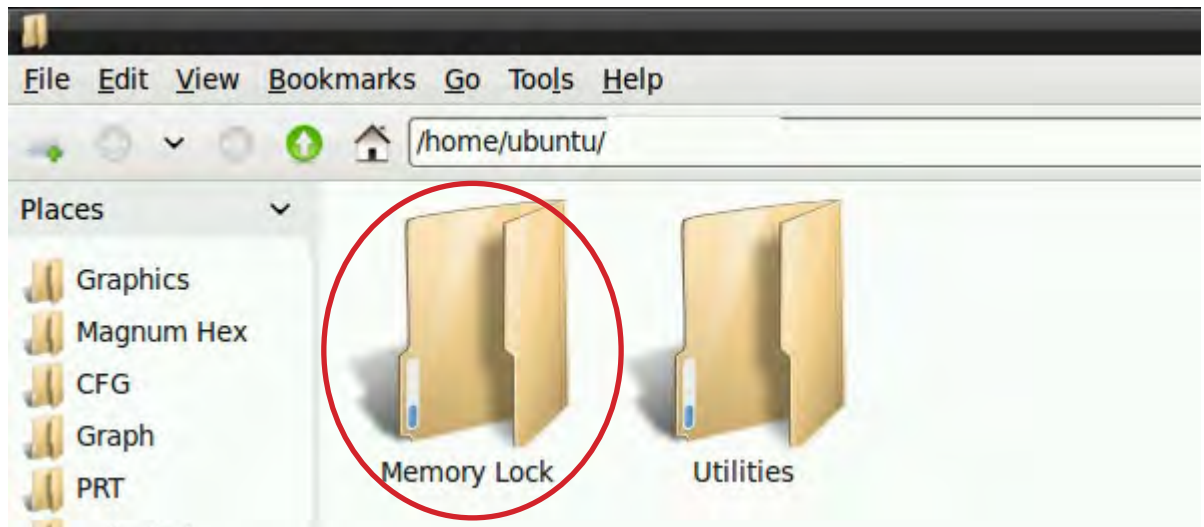
2. After touching the left top target, the next target will appear in the top center and continue to display as per the screen below until all '**9 target points**' have been calibrated.

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.



APPLICATION NOTE

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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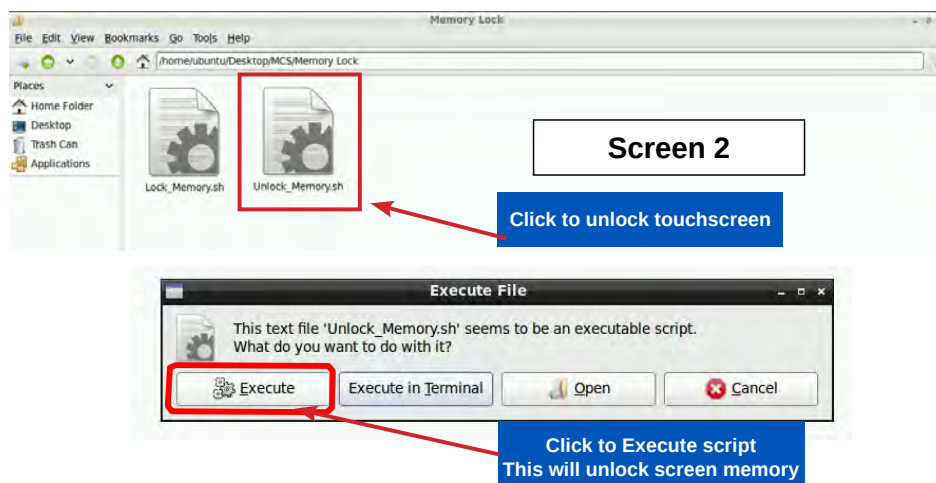
Unlocking MCS-TOUCHSCREEN

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



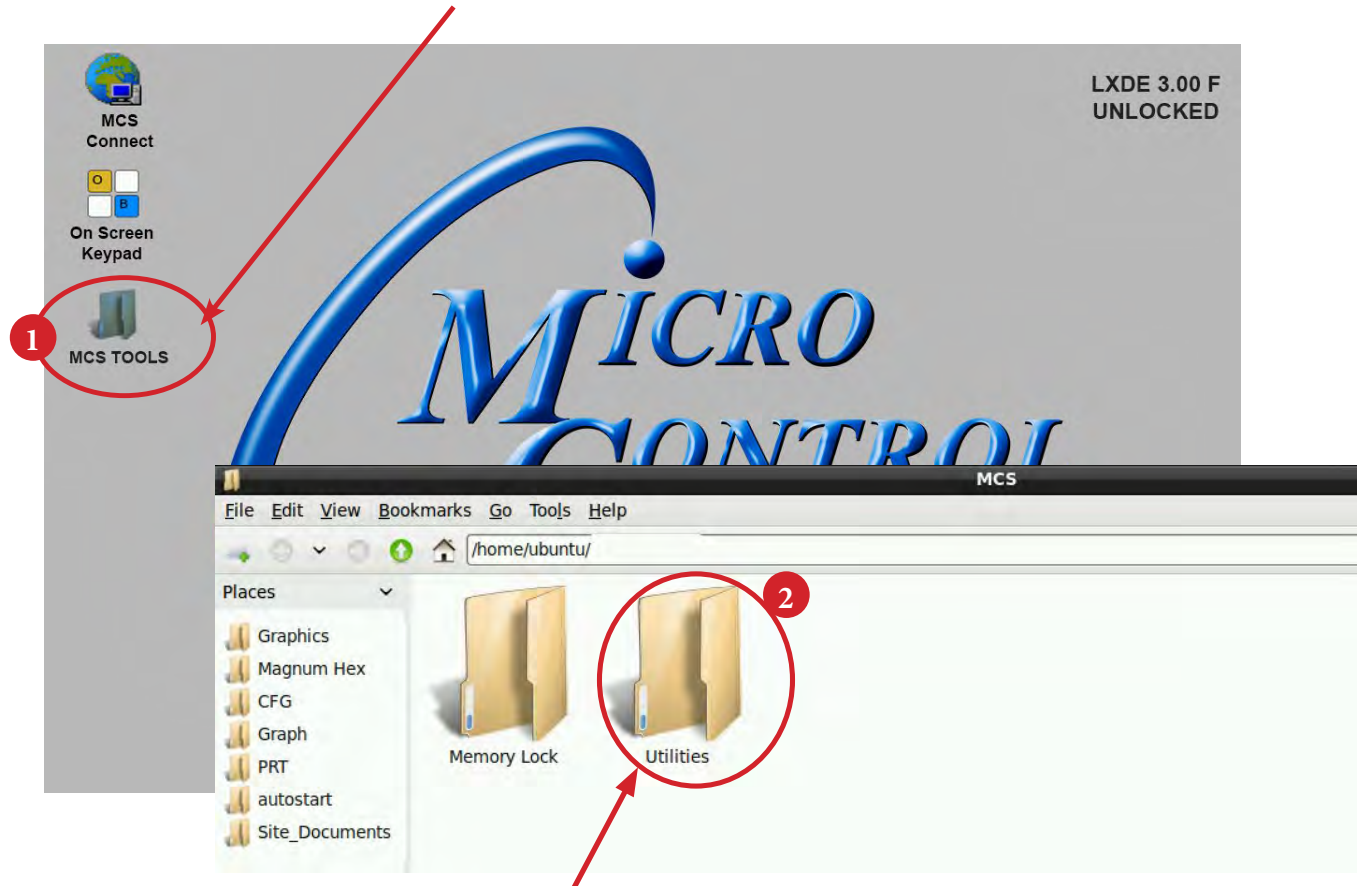
Open 'On Screen Keypad'

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.



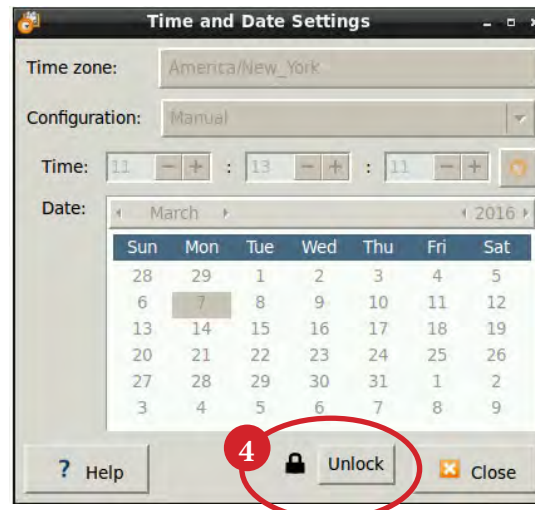
2. Double click on the 'Utilities' sub folder to view contents.



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

4. Screen opens- click on **'Unlock'**

You must be authorized to make these changes.

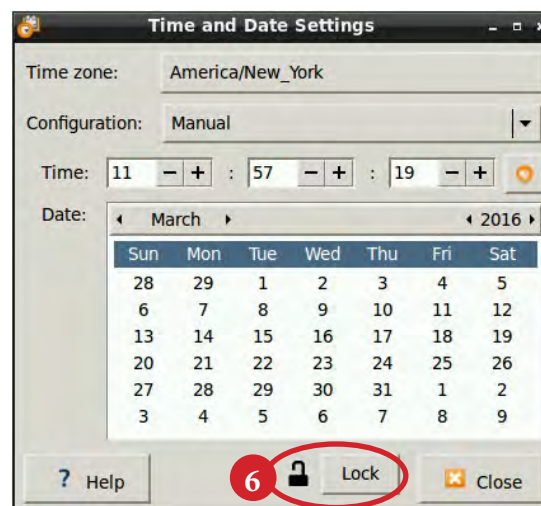


5. Using the keypad, enter password "mcs" (lower case)

Click **'Authenticate'** to unlock



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

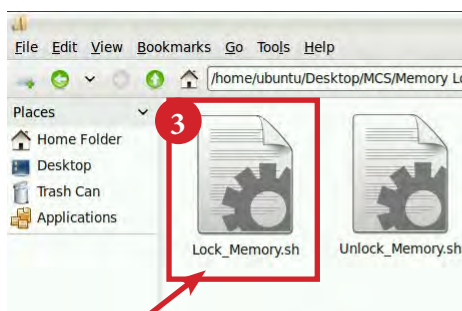


Locking MCS-TOUCHSCREEN

1.1. Locking Touchscreen

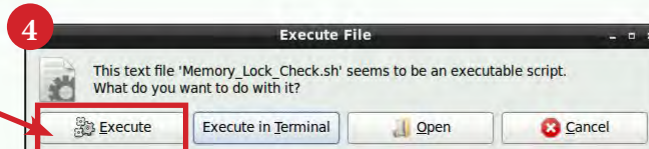


1. Double click the '**MCS TOOLS**' Icon on the Desktop.
2. Double click '**Memory Lock**' sub directory.
3. Double click '**Lock_Memory.sh**'.
4. Click '**Execute**'. The touchscreen will reboot.



Screen 4

Click to LOCK touchscreen
Click to 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.**