1

ATTENTION !!!!

IT IS IMPERATIVE THAT YOU READ AND FOLLOW THESE INSTRUCTIONS PRIOR TO UPGRADING ANY AND ALL SYSTEM DEVICES USING SYSTEM CD V3.41 OR NEWER.

THE C:\USI STRUCTURE PRIOR TO THIS VERSION WILL NOT OPERATE WITH THE UTSCI INSTALLATION UTILITY!!

UTSCI Install Utility

Introduction

Utah Scientific's graphical installation interface for system setup is designed to streamline most of the previous setup and maintenance functions. Using one simple dialog, you can perform software installation and system upgrades for any component in your operation.

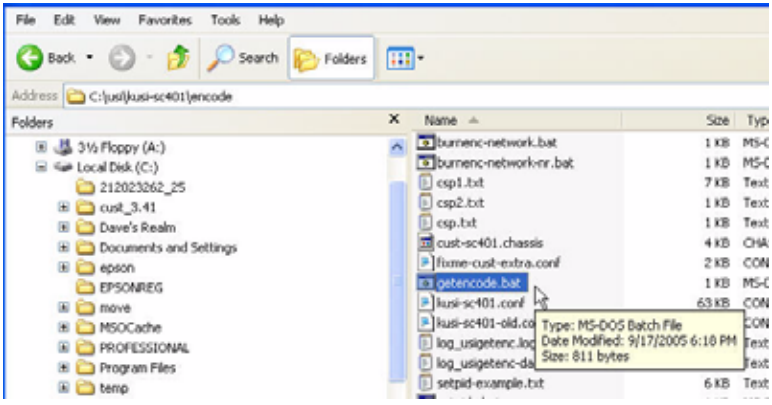
Using the New UTSCI Install Utility

If you are using a new system purchased after 3/15/2009 with an SC4/SC400/SC400X and received a laptop with your system then you will find a shortcut to this Utility in the shortcuts folder on the desktop. Launch the application and skip to the section below called “New systems with UTSCI Install Utility already installed”.

If you are an existing customer then you should already be familiar with the script files that are used from the c:\usi folder. In this case you will need to proceed in following all of the steps below.

To use the “Utsci Installation Utility” you must upgrade all system software folders using system cd version 3.41 or newer, which will replace the old platform batch file and program functionalities in the c:\usi environment prior to this release. We recommend that you make a backup of the current usi folder of which steps are included in the following procedure. If you are using a system purchased after 3/15/2009 but have existing equipment prior to this and do not have a folder called c:\usi then skip to step 3 and begin there.

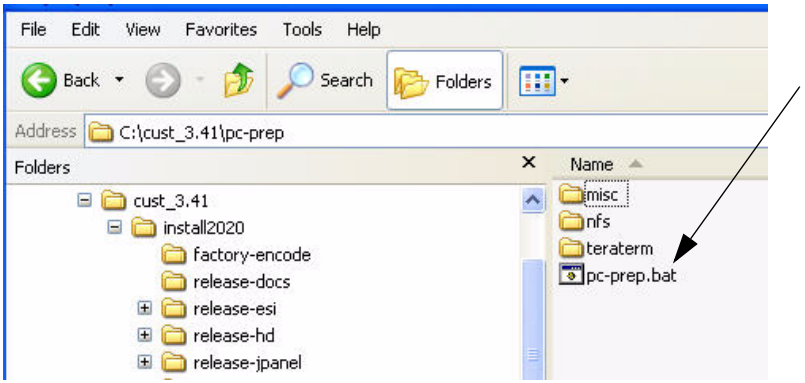
1. Perform getencode.bat from each device folder in c:\usi encode folder and verify that the.conf file is updated.



2. Change name of c:\usi folder to c:\backup usi.

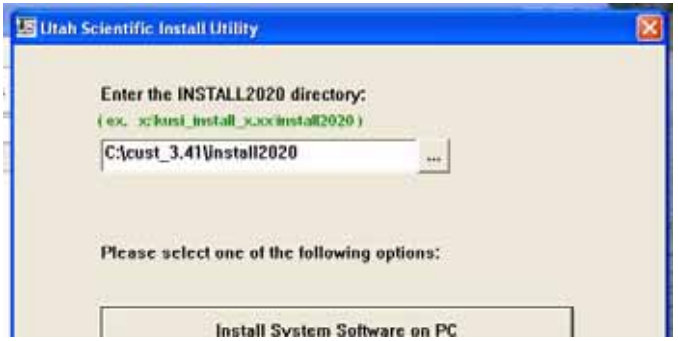
3. Copy the new system cd to c:\ and open the pc prep folder.

4. Run the pcprep.bat file found in step 3 above and verify that a new usi folder was created on the c:\ drive and a shortcut to the Utsci Install Utility was copied to the desktop.

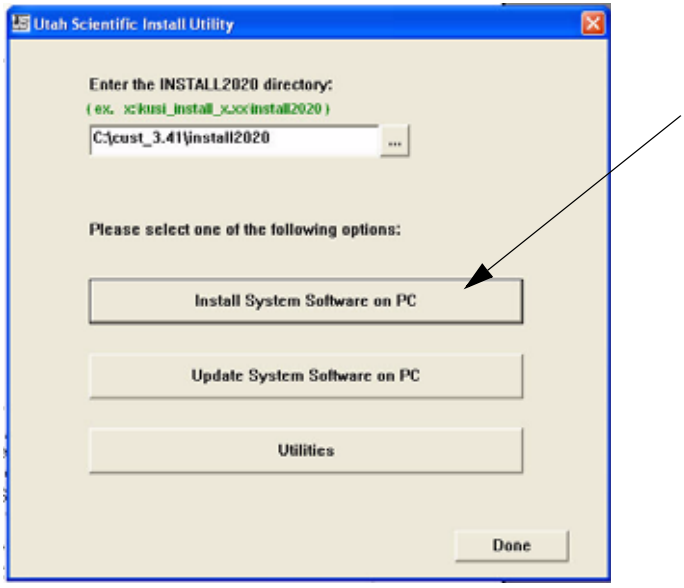


5. If the desktop is not where you would like the Utsci Install Utility shortcut then move it to a desired location and then launch the program.

6. In the top selection window browse to the location of the install2020 folder found in step 3 above where the system cd was copied.

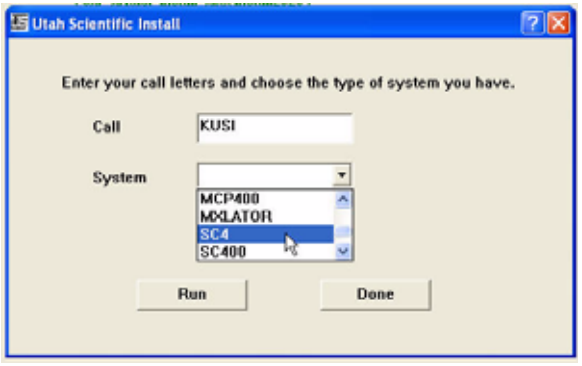


7. Click on the “Install System Software on PC” button in the Utsci Install Utility.



8. Enter the desired name or call letters for that new device folder. Note: this name will be attached as a prefix to the device type for that new folder.

9. Drop down the System list and select one of the devices in your system such as the SC4 or SC400.



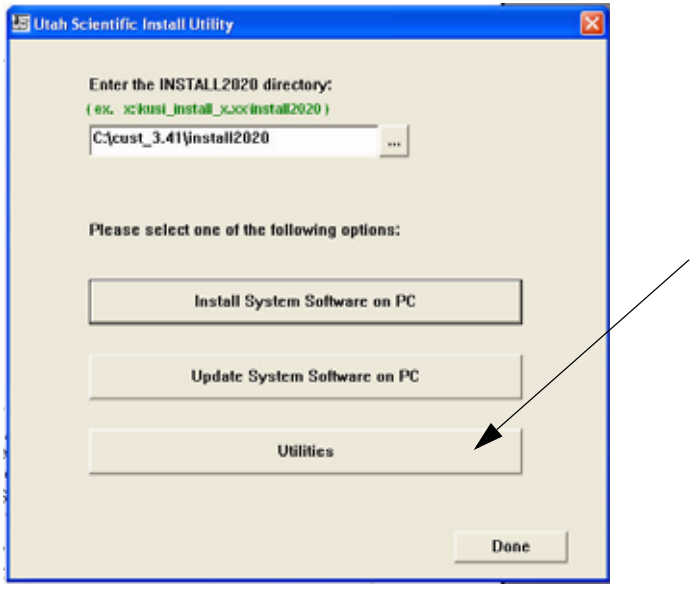
The devices labeled CBSHD, ESI, HD, MCP and SD are all MC2020 products. All the other devices are self-descriptive of what they represent.

Note: This name will be the suffix of the name for that new folder and will add the number 01 to the end of the name. (I.e. -sc401) If you repeat this step using the same name and device it will add a 02 at the end of this next folder and so forth. Repeat this step for all physical devices in your system and click “Done” when finished.

Encoding Retrieval Using the New Utility

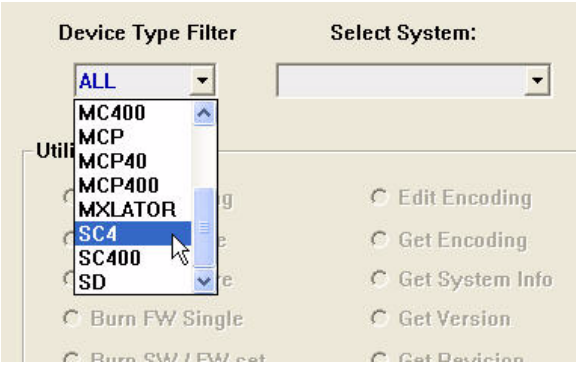
Next you will need to retrieve the encode config file for each of the newly created device types using these steps. Pay attention to the message window at the bottom of the application as it will inform you of the current process as well as any errors.

1. Launch the Utsci Installation Utility and on the main screen click the Utilities button.



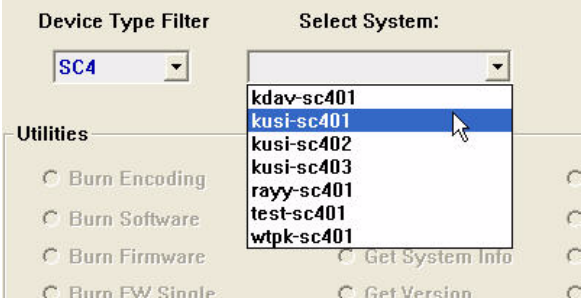
Note: if you do not already have the NFS Server running it will not allow you to proceed and you will get an error box indicating this.

2. Drop down the selection list for the Device Type Filter and select each device type one by one such as the SC4.



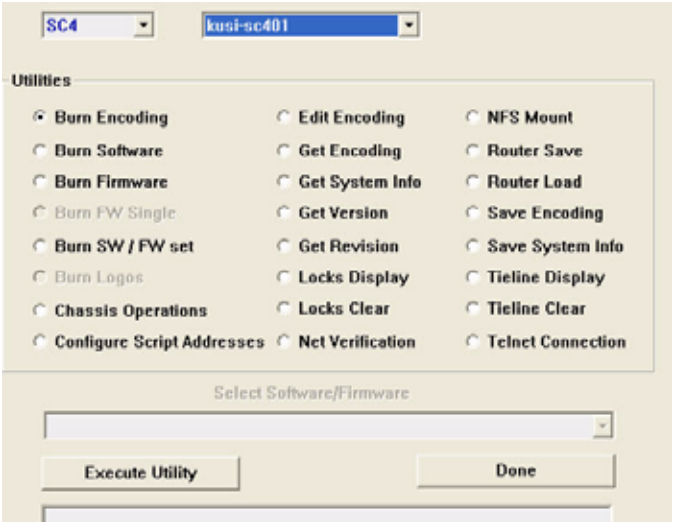
Keep in mind that the devices labeled CBSHD, ESI, HD, MCP and SD are all MC2020 products. All the other devices are self descriptive of what they represent.

3. Drop down the selection list for the system you will be retrieving the encoding from.

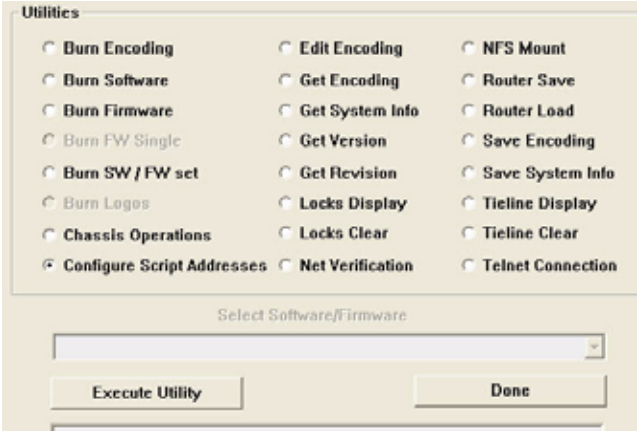


(Note: this will only display the system folders created above for that device type. I.e. – if you created a folder called KUSI and a device type for an SC4 then the list will only display a folder called kusi-sc401.)

4. All of the possible utilities for the selected device will be activated. You will need to enter the IP addresses for this device and the config pc you are using this application from.

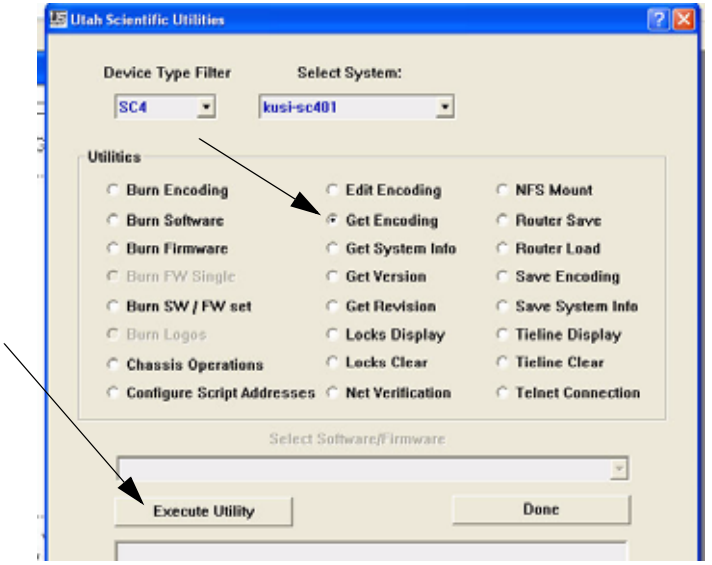


Unless you change the IP address in the device, this will be the only time you will need to set the addresses for the script files to function properly. Choose the “Configure Script Addresses” and then click on the “Execute Utility” button.

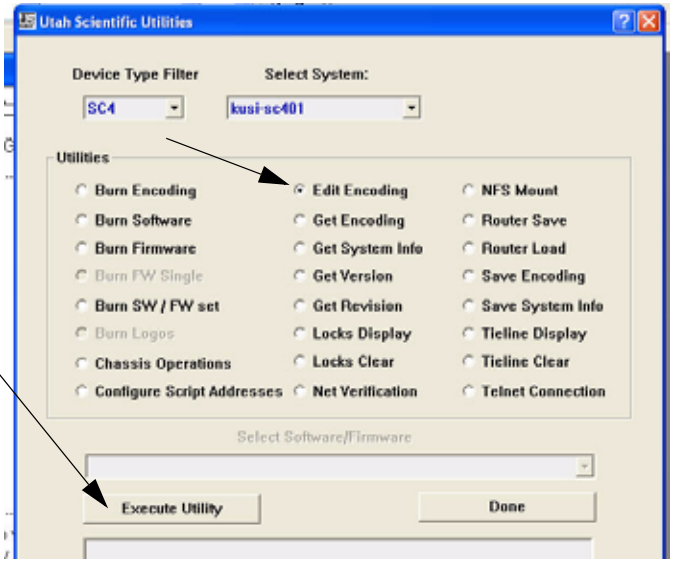


This will prompt you to enter the correct pc address first followed by the correct device address. It will retain this for all remaining utility functions.

5. Next choose the “Get Encoding” button and then click on the “Execute Utility” button.



6. If you would like to view the config file retrieved in step 4 then change to the “Edit Encoding” utility and then click “Execute Utility”.



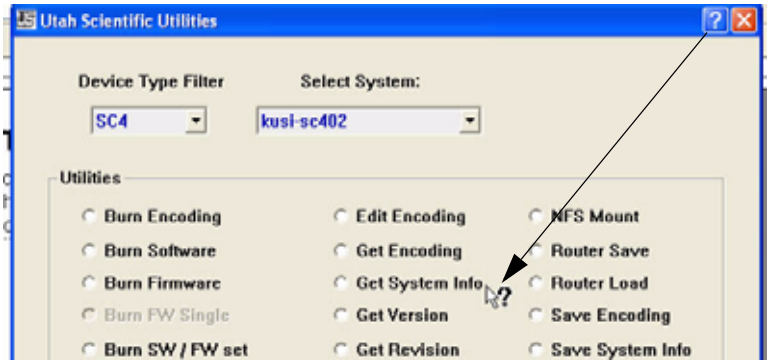
This will open the file for you to view and edit if needed.

Note: If a window opens prompting to choose what program to open it with, select Word Pad.

7. Perform steps 2-6 above for each device in your system.

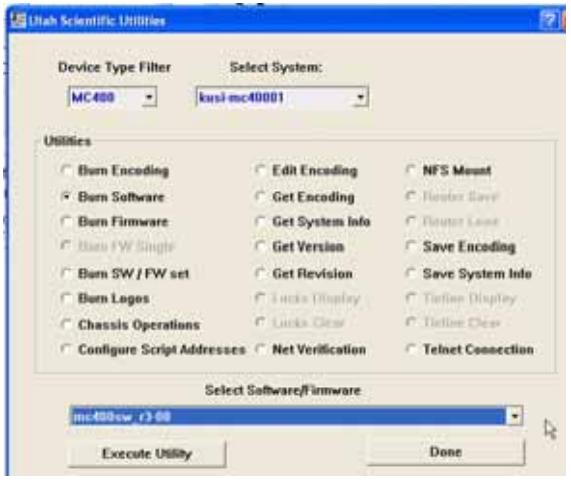
Remaining Utilities and Help Functions

To use the help function that describes each of the utilities simply click on the question mark in the upper right corner of the Utility screen for any device and then click on the actual utility.



This will display a brief description of that utility. The following is a list of these Utilities and their functions.

Note: When burning software and firmware you will need to drop down the “Select Software/Firmware” list and choose the file to load.



This Utility will only allow SW/FW versions from system CD v3-41 and newer to be loaded into any device. If you have a need to downgrade any device to something prior to this you will need to use the original script files from the c:\backup usi folder created earlier.

Batch File Selection (Utility Help List)

Note that there are certain functions (such as software burning) that cannot be completed until another function (version selection) takes place.

The single-line display provides shorter, immediate activity relation to the operation. This allows the last selected status to remain on-screen indefinitely, until another action is selected or the program is closed.

The larger pop-out dialog window contains more comprehensive detail related to the selected operation

Net Verification

This utility provides verification for network communications between the PC and the USI target device, such as a SC-4.

Burn Software

This utility updates the flash memory of a USI target device, such as a SC-4 Router Controller.

Burn Firmware

This utility updates the programmable logic devices (FPGA's) of a USI target device, such as a SC-4 Router.

Burn SW / FW Set

This utility updates a USI target device with new software and firmware that are known to work together.

Burn Encoding

This utility updates a USI target device with encoding stored in a file on the local PC hard drive.

Get Encoding

This utility downloads encoding information from a USI target device and stores it in a file on the local PC hard drive.

Save Encoding

This utility copies the encoding stored on the local hard drive to the windows desktop.

Burn Logos

This utility updates the flash memory of the USI master control devices, replacing existing files with new ones stored on the local PC hard drive.

Get System Info

This utility generates a detailed report for a USI target device and stores it to a file on the local PC hard drive, which is typically sent to USI Customer Service. *Use the Save System Info utility to copy the file to your desktop for easy access.*

Get Version

This queries a USI target device for its current software version and displays it in the message window.

Get Revision

This queries a USI target device for its current software revision, Firmware revision, and board inventory, then displays the information in the terminal window.

NFS Mount

This opens a telnet terminal and causes a USI target device to map the local PC hard drive as a remote drive, allowing access to tiles stored on the local PC hard drive.

Telnet Connection

This utility allows a convenient telnet connection to a USI target device.

Router Save

This updates a USI router controller with a file generated with the Router Save utility. This effectively returns the router control system status to a previous state.

Edit Encoding

This opens the encoding file for a USI target device stored on the local PC hard drive using Wordpad. You can then easily make file changes.

Router Load

This updates a USI router controller with a file generated with the Router Save utility. This effectively returns the router control system status to a previous state.

Tieline Display

This opens a telnet terminal and displays the current tieline status on the terminal screen.

Tieline Clear

This utility clears out all tieline controls, essentially resetting the Tieline processing engine in a USI router controller.

Locks Display

This opens a telnet terminal and displays the current lock status for a USI router system controller.

Locks Clear

This utility removes all active locks in a USI router control system.

Configure Script Addresses

This utility allows the user to enter or modify the IP addresses used by the utilities on the Local PC hard drive. This does not modify the IP address in a USI target device. That must be done using the Chassis Ops utility.

Chassis Operations

This utility allows the user to modify various settings in a USI target device, including the IP address, Chassis Name, Customer Name, and UNET node #

Save System Info

This utility copies the system information report generated with the Get System Info utility to the Windows desktop for easy access by the user.

Updating Existing System Software Folders

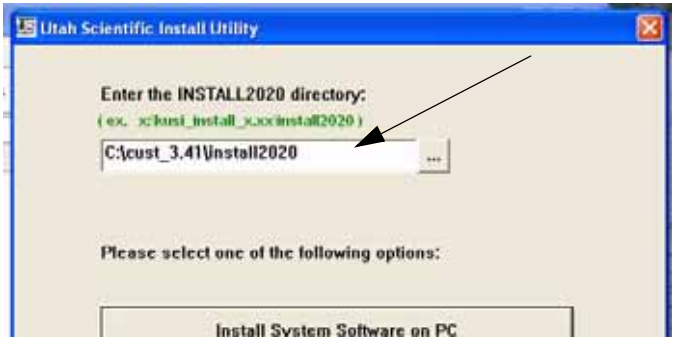
This “Update System Software on PC” button is used to add new software and firmware release folders and their programming files into the already existing device folders located in the c:\usi directory. This process will leave all existing folders in their place and simply add the new update folder in with all of these existing ones.

Note: The Utsci Install Utility will NOT work with CD versions older than v3.41. If your system has been initially installed with a CD with numbers smaller than 3.41 (i.e. 3.39; 3.40,etc) then you need to follow the instructions found in the section above titled “Using the New Utsci Install Utility”. The Update System Software button is ONLY to be used with systems newer than v3.41 and to be used properly you would be running the Utility from the newer CD which would have a number larger than 3.41 (i.e. 3.42; 3.43,etc).

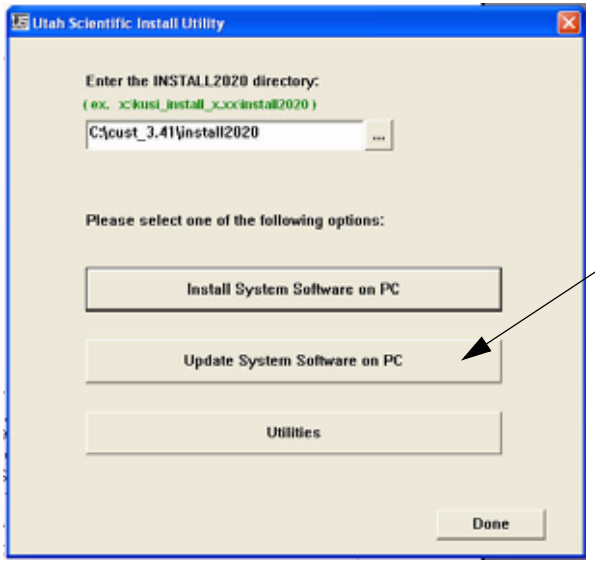
To Update existing system software folders you will need to follow these steps.

1. Copy the new system CD which will be v3.42 or newer to the c:\drive.

2. Launch the Utsci Install Utility application and in the top window browse to the Install2020 directory found in the release CD installed in step 1.

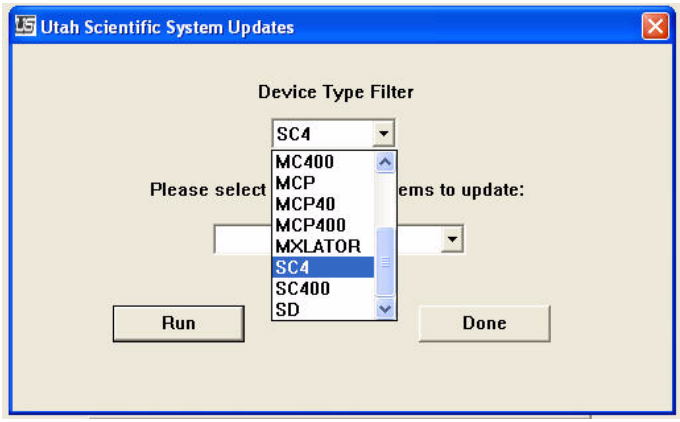


3. Click on “Update System Software on PC” button.

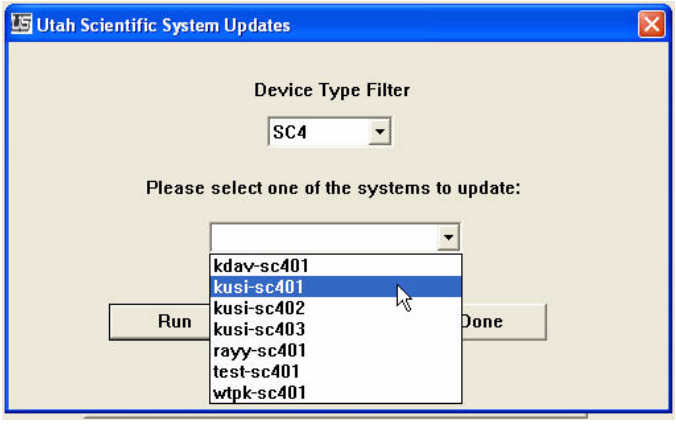


4. In the window that opens, drop down the “Device Type Filter” menu and select one of the devices in your system such as the SC4 or SC400.

Note: These represent physical devices you have in your system. The devices labeled CBSHD, ESI, HD, MCP and SD are all MC2020 products. All the other devices are self descriptive of what they represent.



5. After selecting the filter type, drop down the system list to update. This will only show all folders in the c:\usi directory that end with the device type name that was selected in the filter.



6. Click on the **Run** button and this will update the device folder with the new additions found on this CD.

New Systems with the UTSCI Install Utility Already Installed

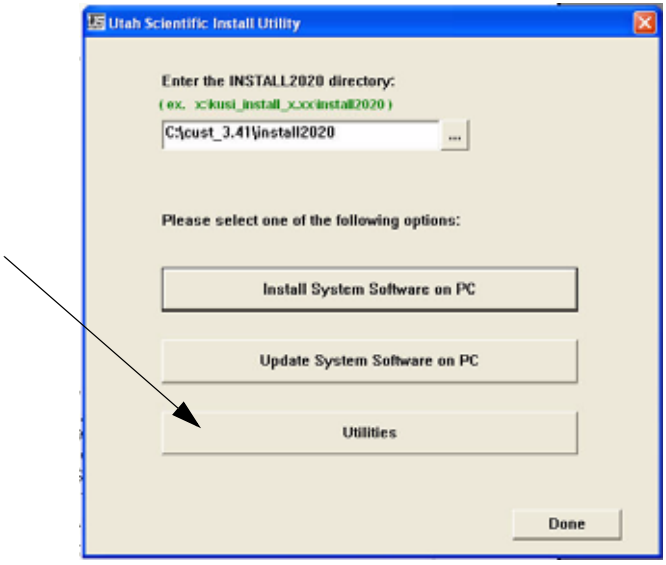
If you are using a new system purchased after 3/15/2009 with an SC4/SC400/SC400X and received a laptop with your system then you will find a shortcut to this Utility in the shortcuts folder on the desktop. Launch the application called “Utsci Install Utility”. (Note: this application points to folders that were created in the c:\usi directory for each device on your system such as an SC4 controller and master control channel. It uses script files to look up critical information such as versions as well as retrieving and editing the current configuration files that are programmed into the device. It is also the tool for updating software and firmware into the device.)

Here are some bullets on utilizing this application.

(In the future) If you purchase a new device sometime after the initial install or wish to change the name of a folder in the c:\usi directory then refer to steps 7-9 in the section above titled “Using the New Utsci Install Utility”. Note: if you wish to change the name after following these steps simply delete the original folder. You CANNOT just manually change the names of any folders found in c:\usi as the script files will no longer function.

(In the future) If you receive a new system CD with the version newer than v3.41 then you will need to update your current folders following the steps found in the section of this guide called “Updating Existing System Software Folders.”

To use any of the Utilities click on the “Utilities” button.

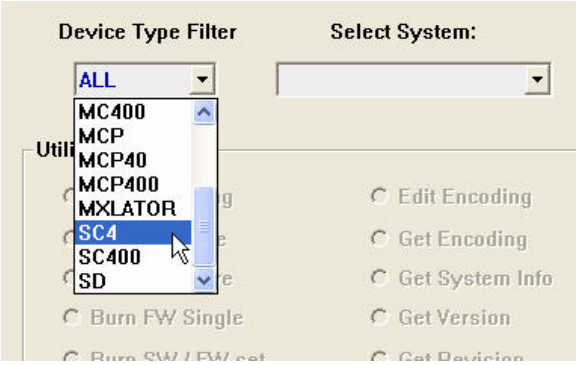


Note: If you do not already have the NFS Server running it will not allow you to proceed and you will get an error box indicating this.

If the error does appear then go to your Utah Shortcuts folder and click on the NFS Server shortcut.

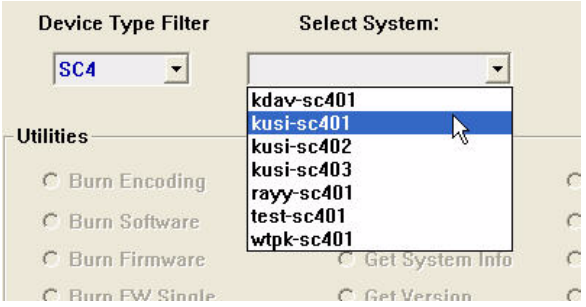
Then proceed to the next step.

Drop down the selection list for the Device Type Filter and select each device type one by one such as the SC4.



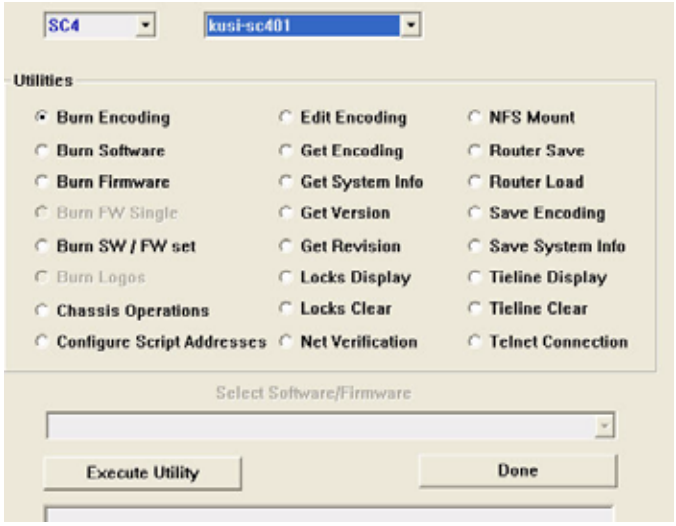
The devices labeled CBSHD, ESI, HD, MCP and SD are all MC2020 products. All the other devices are self descriptive of what they represent.

Drop down the selection list for the system you will be performing any utility on.



(Note: this will only display the system folders found in the c:\usi for that device type. I.e. – if a folder was created called KUSI and a device type for an SC4, then the list will only display a folder called kusi-sc401.)

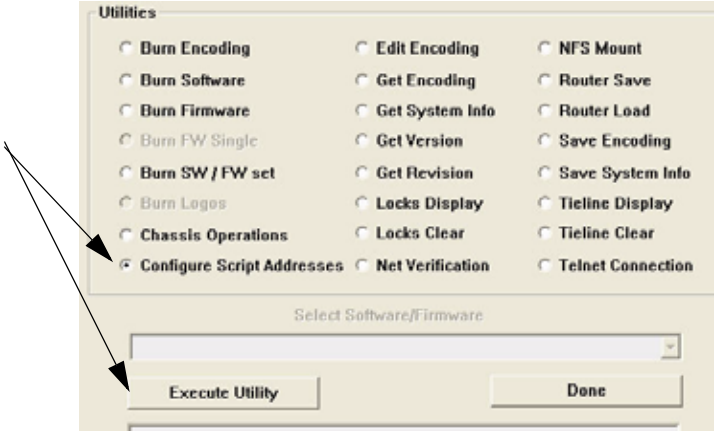
At this point all of the possible utilities for the selected device will be activated.



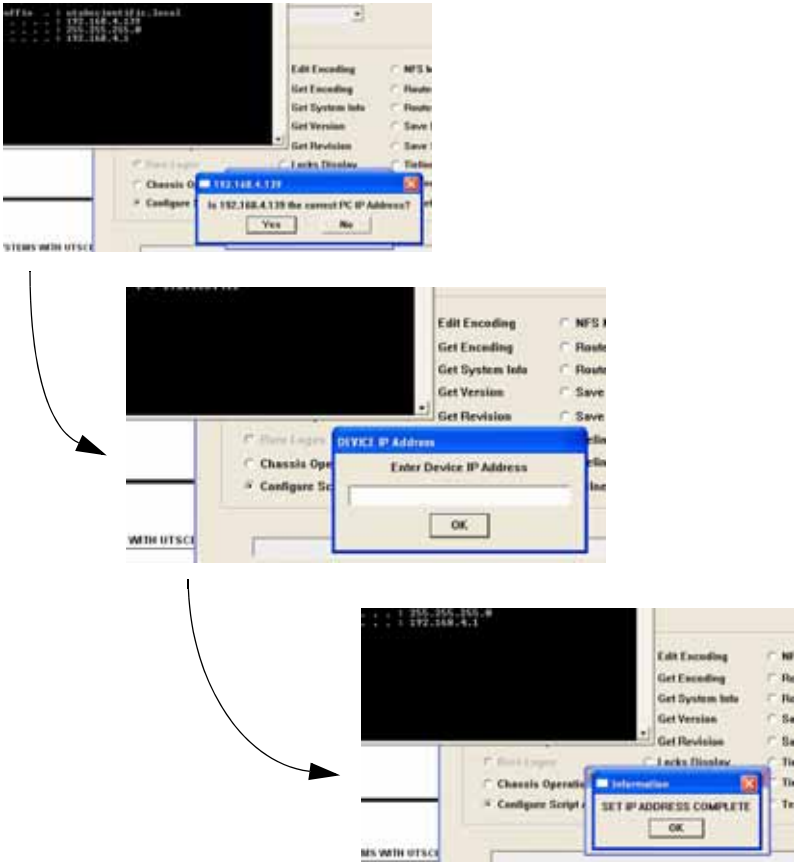
(Note: Unless Utah Scientific was supplied with IP addresses for each device then they would have been sent with default addresses and each utility will operate using those addresses and you can proceed along by skipping the next step.

IMPORTANT: If you wish to change each device address then you will need to run the Utility called “Chassis Operations” for each device and change the IP address as you are prompted to do so. Ignore any requests to change ID and customer name at this point by clicking no when asked.)

If you did make changes to the IP addresses in the previous step then you will need to enter the IP addresses for this device and the config pc into the script file location in this Install Utility application. Unless you change the IP address in the device. After this the Utility will remember the new IP address and this will be the only time you will need to set the addresses for the script files to function properly. Choose the “Configure Script Addresses” and then click on the “Execute Utility” button.



This will prompt you to enter the correct pc address first followed by the correct device address.



It will retain this for all remaining utility functions.

You are now ready to use the remaining Utilities. For further details on using these functions refer to the section above titled “Remaining Utilities and Help Functions”.

Upgrading Device Software and Firmware Using the Utility

ALL software will need to be upgraded to use this Utility, Ucon and the MCConfig application. However, the firmware versions may not need to be upgraded as it may already be current. The following is a list of current firmware versions for all devices as of 3/14/2009. This section will describe how to check the version in the device and how to use the Utility to upgrade if needed. NOTE: All systems purchased after 5/1/2008 will most likely be current on the firmware versions.

Device Type FW Version

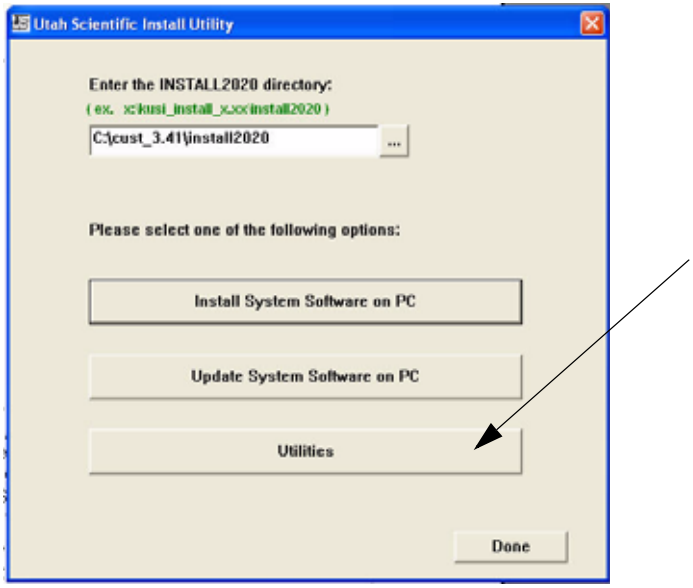
SC4	2.18 or 2.21 (both are valid)
SC400	1.03 or 1.05 (both are valid)
SCX400	1.00
SD-2020 0301	All cards A5EE (ENG REV) 0300 (MNF REV) except VO is
HD-2020 0301	All cards A5EE (ENG REV) 0300 (MNF REV) except VO is
MCP-2020 command	3.09- Date will read 20080310 from Utility Get Revision
ESI-2020	3.06
MC-40 command	1.5- Date will read 20080428 from Utility Get Revision
MC-400 command	1.5- Date will read 20080428 from Utility Get Revision
MCP-40 command	2.01- Date will read 05282008 from Utility Get Revision
MCP-400 command	2.01- Date will read 05282008 from Utility Get Revision
MXLATOR	2.06

CHECK REVISIONS

Using table above, compare findings from these steps to verify firmware revisions. Look for the dates noted above in the screens that appear.

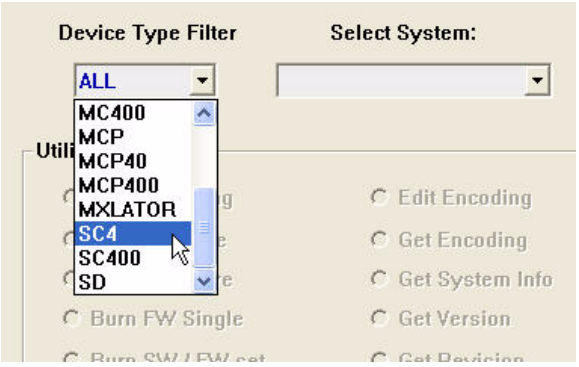
Checking Firmware Revisions Using the New Utility

1. Launch the Utsci Installation Utility and on the main screen click the Utilities button.



Note: if you do not already have the NFS Server running it will not allow you to proceed and you will get an error box indicating this.

2. Drop down the selection list for the Device Type Filter and select each device type one by one such as the SC4.



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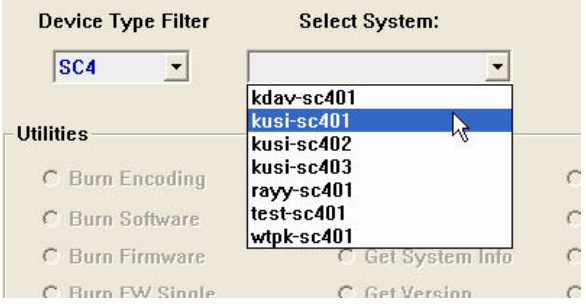
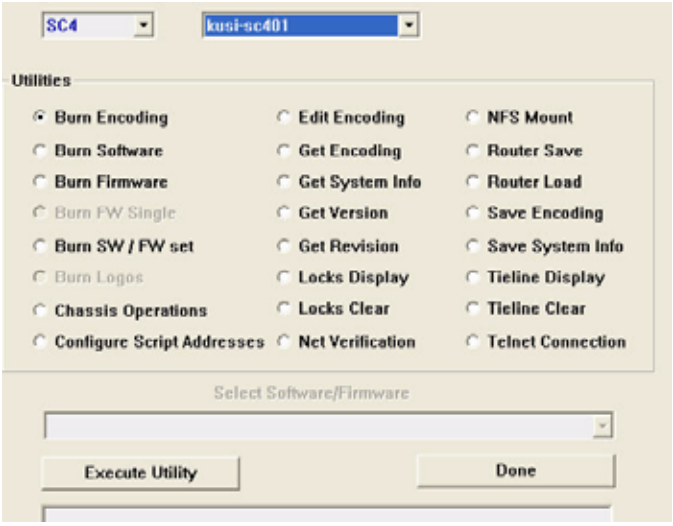
3. Drop down the selection list for the system you will be retrieving the encoding from.

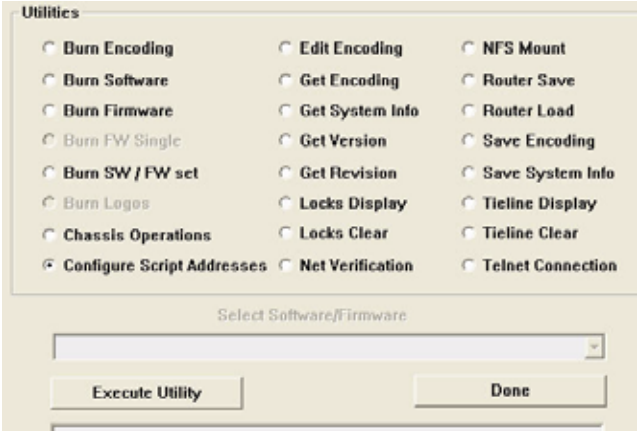


(Note: this will only display the system folders created above for that device type. I.e. – if you created a folder called KUSI and a device type for an SC4 then the list will only display a folder called kusi-sc401.)

4. All of the possible utilities for the selected device will be activated. You will need to enter the IP addresses for this device and the config pc you are using this application from.

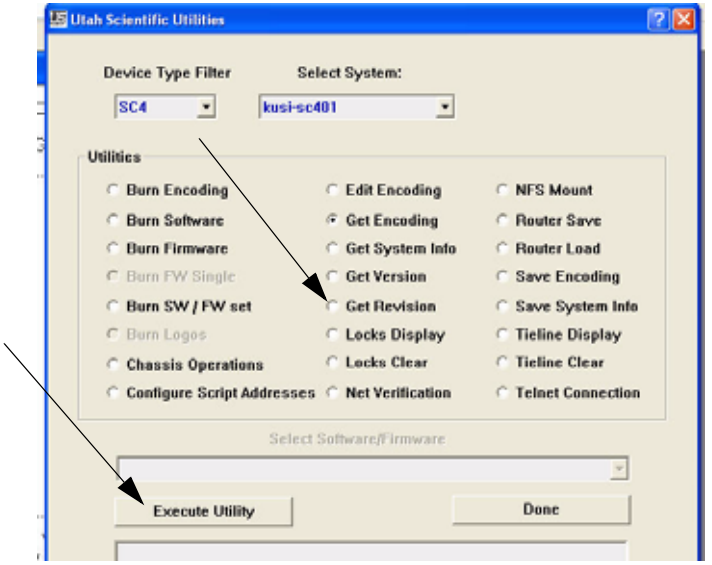


Unless you change the IP address in the device, this will be the only time you will need to set the addresses for the script files to function properly. Choose the “Configure Script Addresses” and then click on the “Execute Utility” button.

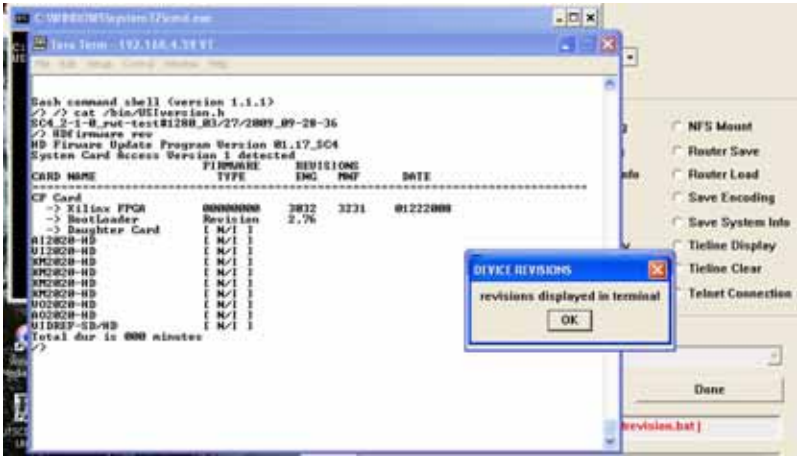


This will prompt you to enter the correct pc address first followed by the correct device address. It will retain this for all remaining utility functions.

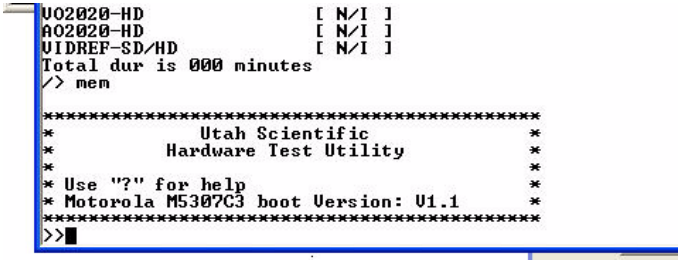
5. Next choose the “Get Revision” button and then click on the “Execute Utility” button.



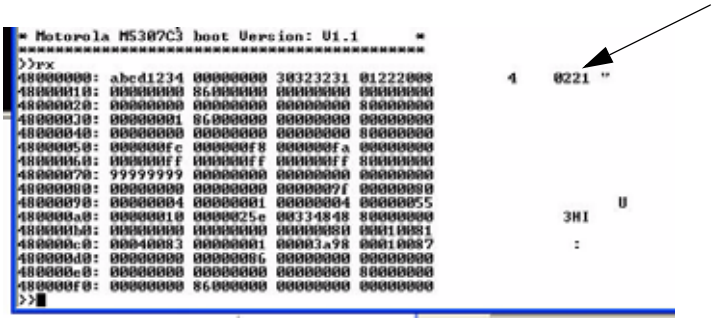
This is an example of the SC-4’s firmware readback. This will be similar to all devices that this application is performed with.



In order to see the firmware version for the SC-4, SC-400, SCVX-400, ESI, and MX-Lator,you will need to click on the terminal window and type mem, then click Return (to activate the >>). Do not click the OK button.



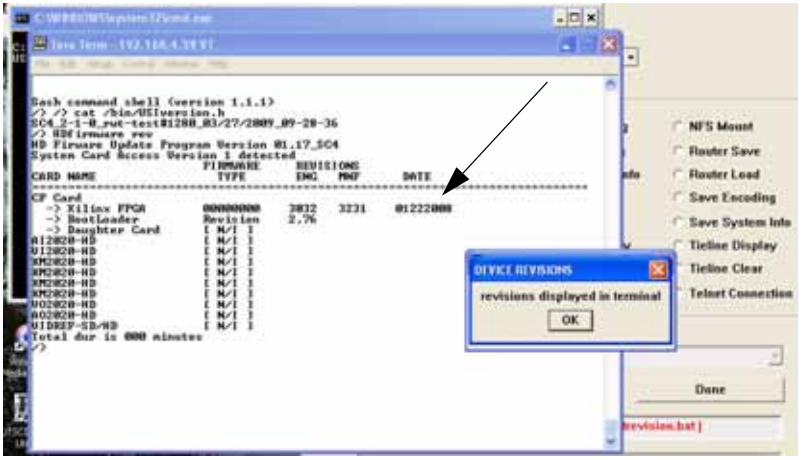
Next, type rx at the prompt, followed by Return.



In this example, the 0221 refers to the firmware version, which you will compare with the same number found in the table on page 1-26.

Each device listed will contain their own firmware revision (number).

To verify the proper firmware version on the remaining devices, note the date column, then compare with the table located on page 1-26.

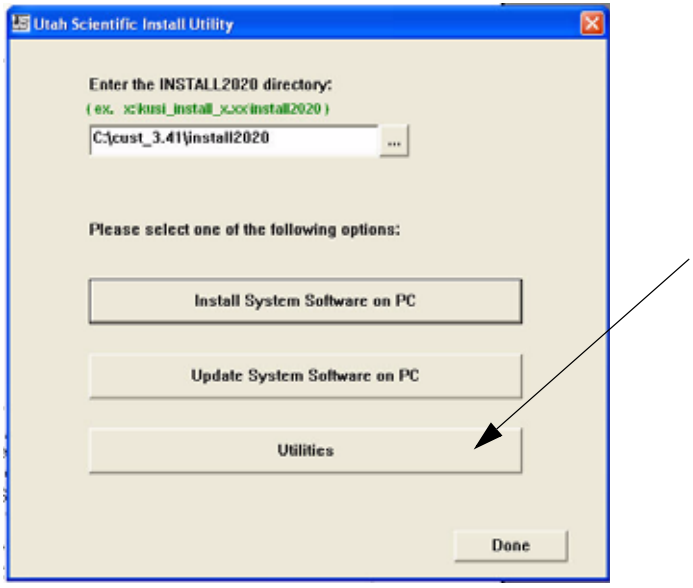


The remaining devices include; MC-40, MC-400, MCP-40, MCP-400, SD/HD-2020, and the MCP-2020.

Repeat steps 1-5 (above) for each device in your system.

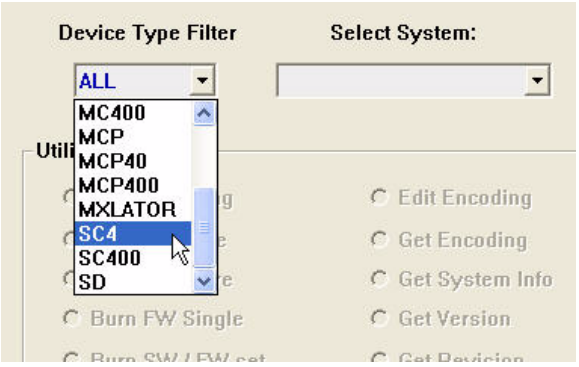
Upgrading the Device Firmware/Software Using the New Utility

1. Launch the Utsci Installation Utility and on the main screen click the Utilities button.



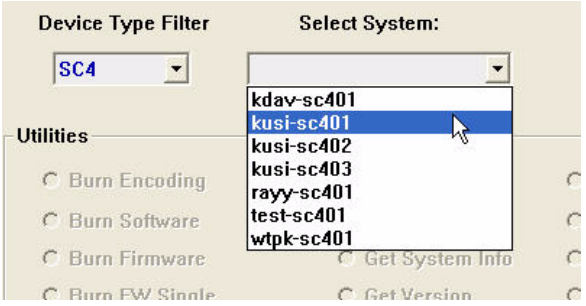
Note: if you do not already have the NFS Server running it will not allow you to proceed and you will get an error box indicating this.

2. Drop down the selection list for the Device Type Filter and select each device type one by one such as the SC4.



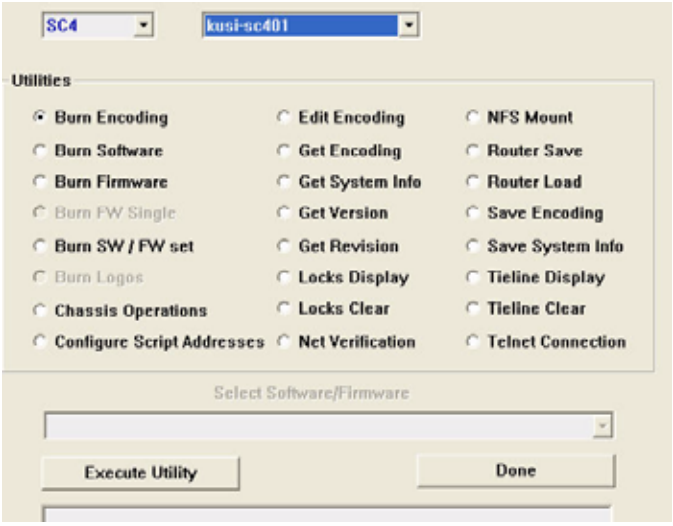
Keep in mind that the devices labeled CBSHD, ESI, HD, MCP and SD are all MC2020 products. All the other devices are self descriptive of what they represent.

3. Drop down the selection list for the system you will be retrieving the encoding from.

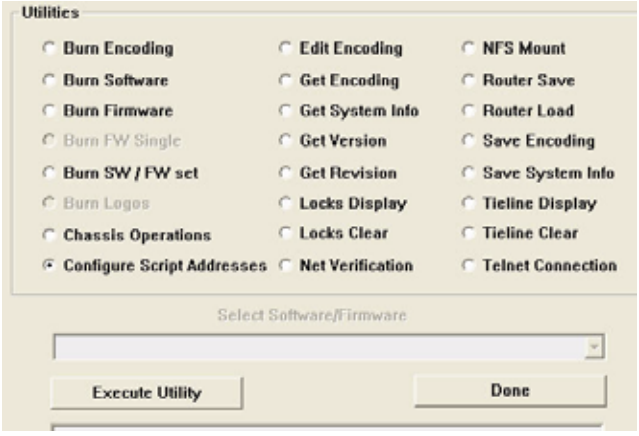


(Note: this will only display the system folders created above for that device type. I.e. – if you created a folder called KUSI and a device type for an SC4 then the list will only display a folder called kusi-sc401.)

4. All of the possible utilities for the selected device will be activated. You will need to enter the IP addresses for this device and the config pc you are using this application from.



Unless you change the IP address in the device, this will be the only time you will need to set the addresses for the script files to function properly. Choose the “Configure Script Addresses” and then click on the “Execute Utility” button.

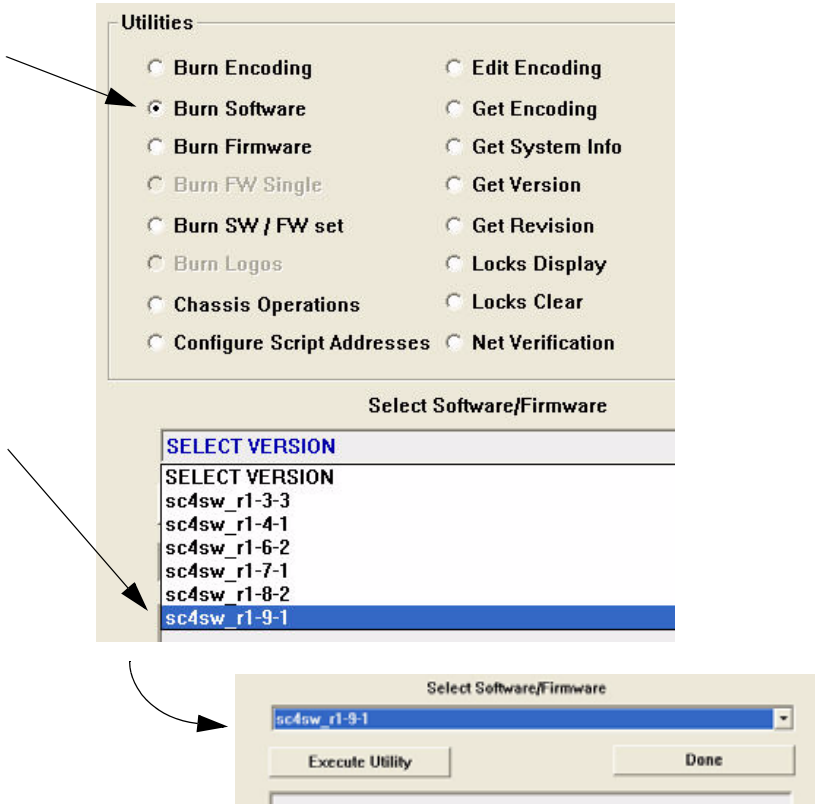


This will prompt you to enter the correct pc address first followed by the correct device address. It will retain this for all remaining utility functions.

Note: If your device firmware is current, there is no need to perform the Burn Firmware update. However the software update must be performed. If your system does require a firmware upgrade, you will perform the same procedure as shown below for updating the software, but you will select the Burn Firmware button instead.

Firmware upgrades will take anywhere from 5 to 45 minutes, depending on the device type. *Software typically last less than 5 minutes.*

5. Next choose the “Burn Software” button and then select the current version from the drop-down menu (shown). Then click the Execute



button.

If your device requires both firmware and software, select **Burn SW/FW** set, which will perform both upgrades consecutively.

Note: All software versions for each device listed in the drop-down menu will contain “xxxsw_r3-00” or newer, and is required in order to use this utility, the U-CON, and MC-Config applications.

Repeat steps 1-5 (above) for each device in your system.