Commander™

Handheld Programming Unit User Guide

Introducing a new tool to program, maintain, and monitor your HyTronic®, E-Tronic®, or ELR faucets from the palm of your hand.

CHICAGO FAUCETS®

Geberit Group

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Section 1: Introduction, Device, Updates

1.1 Introduction

Thank you for choosing the Chicago Faucets Commander Handheld Programming Unit. Commander allows you to change settings quickly and easily on your Chicago Faucets HyTronic®, E-Tronic®, or ELR products. This guide will help you use the Commander to scan, modify settings, use applicable diagnostic tools and other advanced functions for all Chicago Faucets electronic fittings.

If you have not done so, REGISTER your device to access software, firmware or hardware updates and to receive notification of future updates. Register and download Commander Desktop at chicagofaucets.com/commander.

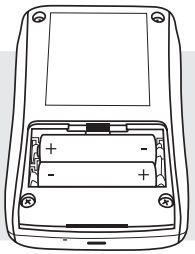
1.2 Device overview

Basic Commands	
BACK	To previous screen
HOME	To Main Menu
SET	To save and execute setting; and return to previous screen
SAVE	Saves data to Commander device only
CANCEL	Stops command and returns to previous screen
<	Information list continues on previous screen
>	Information list continues on next screen

Section 1: Introduction, Device, Updates

To start using your device:

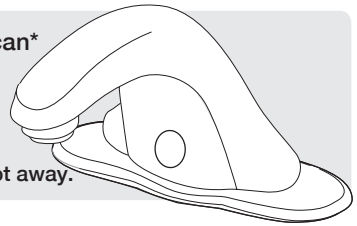
1. Install batteries



2. Press and Hold “On” Button for 2 seconds -
   - Calibrate Touch Screen
   - Tap “Settings”
   - Tap “Set Time/Date”
   - Set time and date

3. Ready to Aim and Scan*

*For best scanning performance stand and aim approximately a foot away.



If unit does not power up, See Section 7, FAQ

Main Menu

Scan Fitting — Provides access to diagnostics and general information of the fitting. This button also allows you to:
– Add fitting to database
– Add notes
– Access fitting modes or adjust settings
– Reset the fitting
See Section 2 for more details.

Review Scans — Review data of previously scanned fittings, including:
– Snapshot of fitting(s) by day/time;
– View module serial number
– Set/edit locations
See Section 3 for more details.

General Information — Diagnostic tool for troubleshooting, list of parts and accessories and technical contact information.
See Section 4 for more details.

Cleaning Mode — Disable fitting for a specified amount of time to allow sink/fitting cleaning.
See Section 2 for more details.

Settings — Adjust Commander Unit settings, including:
– Auto-sleep time
– Display brightness
– Time/date
– Calibrate screen
See Section 1.3 for more details.

About — See Section 5 on file transfer & USB, Section 6 for specialized fittings. Provides version info; access to USB connection mode for updates and data file transfer. Access to specialized functions (engineering mode, pipe cleaning mode). Provides version info; access to USB connection mode for updates and data file transfer. *See Section 5 for more details.*

Access to specialized functions (engineering mode, pipe cleaning mode). *See Section 6 for more details.*

DEVICE IS NOT WATERPROOF!

1.3 Device Settings

Quickly adjust Commander HPU settings for improved usability such as:

- Auto-sleep time
- Display brightness
- Time/date
- Calibrate screen

Basic Commands	
BACK	To previous screen
HOME	To Main Menu
SET	To save and execute setting; and return to previous screen
SAVE	Saves data to Commander device only
CANCEL	Stops command and returns to previous screen
<	Information list continues on previous screen
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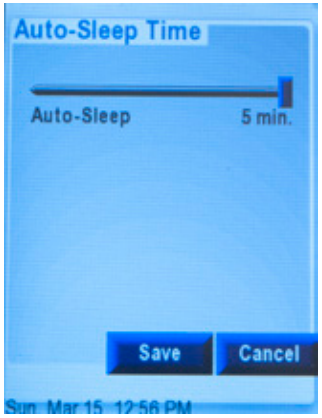
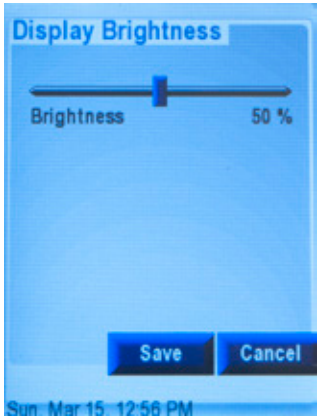
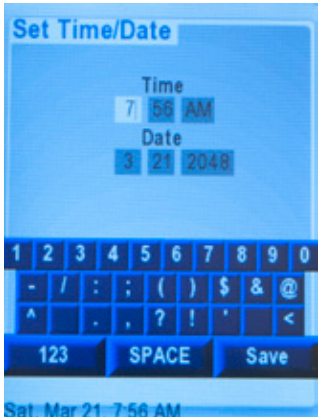


Unit auto-powers off after preset time to save on battery life (1 to 5 minutes).

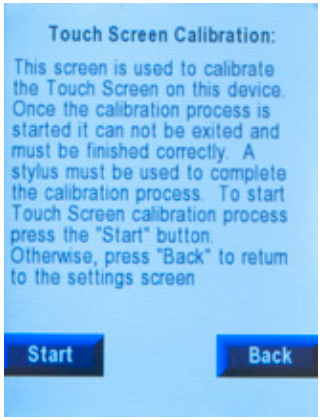
Note: Auto-Sleep does not function when Commander HPU is in "USB Mode".



Set screen display brightness from 1 to 100%, for ease of viewing and/or power saving (dimmer = battery saving).



Set time and date: 12 hour clock; MM/DD/YYYY. Must be set after each battery charge.



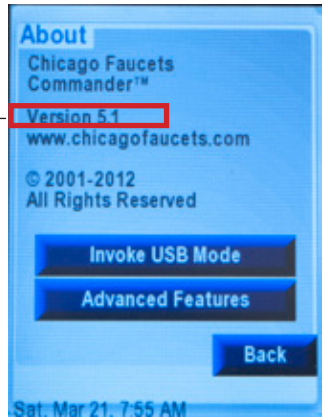
Calibrate screen: Use stylus to tap each screen corner as directed by the screen instructions. (Only required when having difficulty with screen touch response.)

Note: A calibration is recommended after every Commander HPU Reset.

1.4 Updating Your Device

Your new Commander should normally come with the latest software and firmware installed. Refer to the update section of www.chicagofaucets.com/commander page to review the version information.

To check if your device has the latest version, from Main Menu tap “ABOUT”. Look for Version information. If your version is a lower number, you will need an update.



REGISTER your device at chicagofaucets.com/commander to access software, firmware and hardware updates. Supply an e-mail to receive notification for future updates.
chicagofaucets.com/commander

In order to update the Commander Handheld Unit, download and installation of Renesas Flash Development Toolkit (FDT), Evaluation version (free)*, is required:
http://am.renesas.com/products/tools/flash_prom_programming/fdt/downloads.jsp
*Requires PC running Windows 7, 10, XP, and Vista

UPDATE STEPS

1. Download update files

1.1 Download zip package from www.chicagofaucets.com/commander
Note: Zip package includes these files:
- Readme file Readme.txt
- Firmware update file Verxx.xx.xx.fpf4
- Graphics software update file Resource.bin

1.2 Unzip files onto your PC

2. Flash programming update

Be sure the Commander device is off and PC audio is not muted!

2.1 Connect device to PC via USB cable (supplied)
Note:
- If this is the first time the device is connected to a particular PC, you may see a note from Windows saying that it has found new hardware or new USB device is being installed
- If Windows “alert” tone sounds, device is in “programming mode”. Go to Step 2.4.

2.2 Quick click “on/off button” to activate “Programming mode”

2.3 If PC fails to recognize device, or no audio tone is heard:
- Unplug and reconnect Commander device, begin step 2 again OR
- Tap Commander Unit Reset, and begin step 2 again

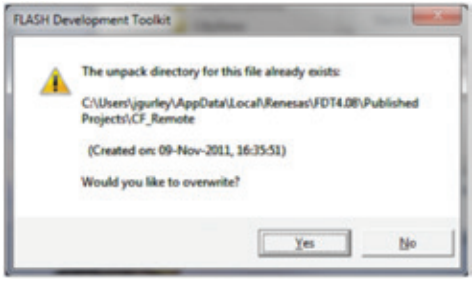
1.4 Updating Your Device (Continued)

UPDATE STEPS

2. Flash programming update (Continued)

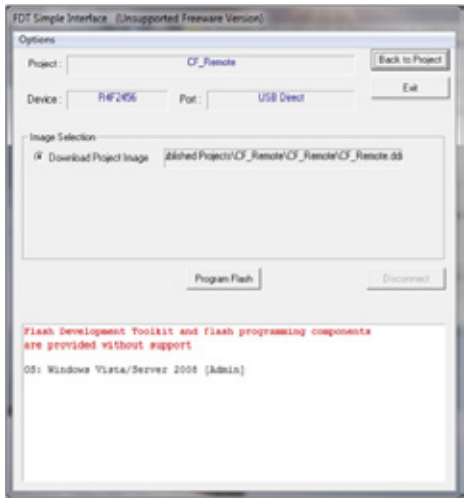
2.4 Run the flash utility - Find and double-click the Verxx.xx.xx.fpf4 file or launch the utility.

Note: If you have already performed a prior update you might get the following warning:

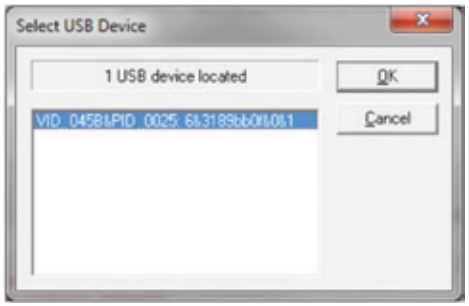


Simply click “Yes” and continue on.

2.5 This window should pop up. Tap the “Program Flash” button.



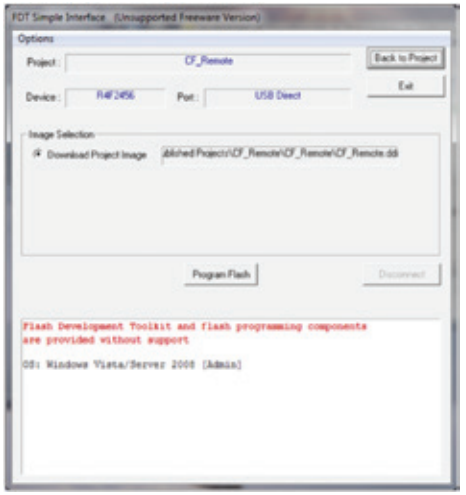
2.6 You will be promoted to Select USB Device.
There should only be one VID in the list box as shown.



Simply tap the “OK” button to continue. The device will program.

2.7 Click on the “Disconnect” button to finish.

2.8 Click on the “Exit” button to exit the Flash Development Toolkit.



2.9 Tap “Reset” on Commander Unit. On power up, Commander Unit lands at Calibrate Screen. It’s recommended to Calibrate the touch screen after every RESET. *See Section 1.3 for more details.*

To escape without a Calibration sequence, tap “Cancel”.

1.4 Updating Your Device (Continued)

UPDATE STEPS

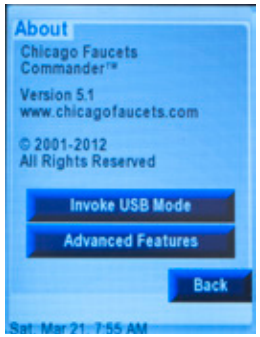
3. Update the Resource.bin file

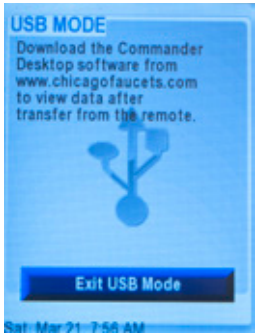
3.1. Connect device to PC via USB cable if not already connected (supplied)

3.2. Power on Commander Unit

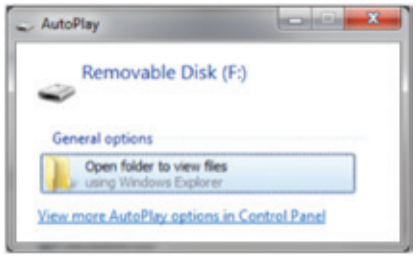
3.3. Tap “About” and then tap “Invoke USB Mode”

Note: Auto-Sleep does not function when Commander HPU is in “USB Mode”.





3.4. Commander should be recognized as drive in Windows Explorer.
Select “Open folder to view files”. Something like this



Special Notice: If this is the first time the device is connected to a particular PC, you may see a note from Windows saying that it has found new hardware or new USB device is being installed.

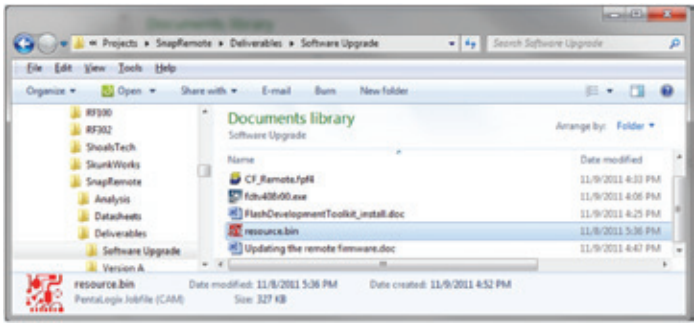
If PC fails to recognize device, unplug and reconnect device, begin step 3 again OR tap Reset, and begin step 2 again.

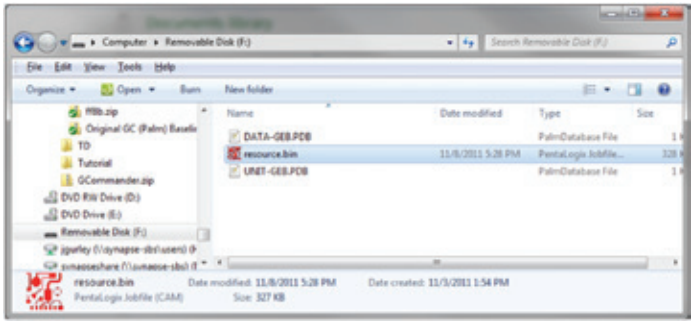
3.5 Find the resource.bin file on your PC.
Copy/Paste or drag/drop from the PC to the Commander “Drive”

WARNING:

Copy and paste or drag and drop from your PC only!

Cutting or deleting the existing resource.bin file during the update removes all graphical data (text, buttons) from the device. Screen will be completely white, but unit is placed in USB mode. Paste the resource.bin file back to device. Power down and then power up the device. Graphics are restored.





Note: Do not be alarmed if you do not see an existing resource.bin file on your Commander device, since the file is normally a Hidden File. To view the file on your Commander Device, select Folder Options and select “view hidden files”.

3.6 Disconnect Device from PC. Update complete.

1.5 Commander Desktop

Commander Desktop — Quickly and easily manipulate scan data
Looking for usage reports, to generate annual water savings estimates?
Need to know when a fitting was last serviced and what was changed and by who?
These are examples of the types of reports that can be generated using the Commander Desktop.

Register and download Commander Desktop at chicagofaucets.com/commander. Follow installation steps.

If you are already a have Commander Desktop and want to transfer files to and from your new device, see Section 5 for more details.

Note: Installing the desktop application on your Windows based PC* is not required to use the Commander Handheld Unit.

1.6 Existing PALM Commander or Desktop User

Go to www.chicagofaucets.com/commander to access user notes just for you.

Everything you need to transition to the new device, including:

1) Differences between PALM interface and Handheld Unit.

2) Files transfer steps from existing PALM or Commander Desktop to new Commander Handheld Programming Unit.

*Windows 7, 10, XP, and Vista

SECTION 2: Scanning, Mode and Setting Adjustments

2.1 Introduction

The Chicago Faucets Commander HPU's ability to scan a Chicago Faucets fitting provides quick and easy access to diagnostic and general fitting information, as well as the ability to add new fittings and notes to a database, modify fitting modes and adjust settings, and reset fittings.

1) Add fitting to database. *See Section 2.2 for more details.*

2) View a direct indication of the fitting status. Is it operating properly or need maintenance? *See Section 2.2 for more details.*

3) Create or edit location and other fitting notes. *See Section 2.3 for more details.*

4) Review fitting history. *See Section 2.3 for more details.*

5) Review Current Settings relative to Factory Settings and reset flitting if needed. *See Section 2.4 for more details.*

6) Access fitting specific diagnostics. *See Section 2.5 for more details.*

7) Access fitting mode changes or other adjustments including CLEAN Mode. *See Section 2.6 for more details.*

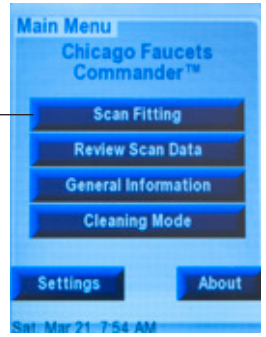
8) Scan the same fitting again or scan another fitting. *See Section 2.7 for more details.*

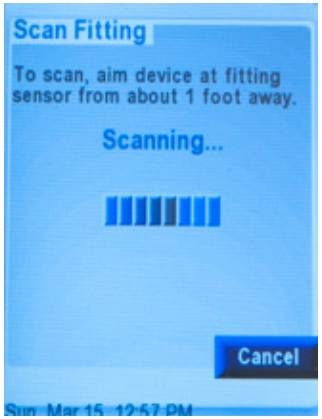
9) Access CFC Contact info. *See Section 2.7 for more details.*

2.2 Scan Fitting

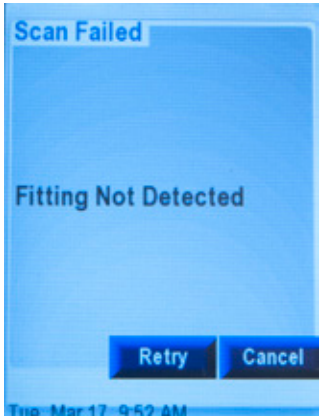
Tap SCAN FITTING*, and aim Commander device at fitting sensor from about 1 foot away. Here is what it looks like:

Refresh reader to return to main menu. Select scan fitting.





*For best scanning performance stand and aim approximately a foot away



If fitting is not detected within 30 seconds, a SCAN FAILED message is returned.
Suggested step, try again, slightly closely to sensor eye

If fitting still will not scan after second attempt, refer to Section 7, Troubleshooting for more details or Contact CFC.

2.2 Scanning Fitting (Continued)

When the fitting has scanned and saved the information properly, a new record is created in the database. The visual indicator is the Scan Fitting screen, outlined as shown.

Power Level — Sliding % bar indicates power level for DC (Battery and SSPS units). For AC power, "AC" lights inside the symbol. Combine with Status information to determine if there is a power issue. *See Section 4 for more details.*

Serial # — Of the electronics module.
For troubleshooting, reference fitting manual or contact CFC Technical Support. *See Section 4 for more details.*

Model # — Of the entire fitting.
For troubleshooting, reference fitting manual or contact CFC Technical Support. *See Section 4 for more details.*

Location — Manually entered fitting reference name to assist with locating the fitting in the future.
For example, "2nd floor men's on the right".
Default value is "Not Set". *See Section 2.3 for instructions on how to add or update the location field.*

Status – Indicates if the fitting is functioning properly, and if not, what is the reason to aide in diagnostics and troubleshooting. *See Section 4 for more details.*

Continued on Page 12.

2.2 Scanning Fitting (Continued)

Continued from Page 11.

History — Create/edit locations & notes. *See section 2.3 for details.* Review data of previously scanned fitting(s); search by serial numbers.
See section 3 for details.

Settings — view fitting current settings as compared to factory settings. *See section 2.4 for more details.*

Contact us — Chicago Faucets contact information for Technical Support, phone, hours, website.
See section 2.7 for more details.

Diagnostics — takes user directly to Diagnostics tool of particular fitting. Similar to main menu "General Information", but by-passes several steps, taking you directly to that fitting type.
See Section 4 for more details.

Adjust — Enable, disable, fitting mode and settings, as well as other fitting settings.
See section 2.6 for more details.

Scan — another fitting (or same fitting). Equal to Scan Fitting of main menu.
See section 2.7 for more details.

2.3 History

The History button takes user to an existing fitting data. The last record created for that type of fitting (default). Each record contains the fitting data at that specific scan time and date. The feature allows user to:

1) Set/edit locations and create/add notes specific to fitting. See *Section 2.3.1 for details.*
2) Review data of previously scanned fittings. This includes: snapshot of particular fitting(s) at a specific day/time, search by serial number, number of uses / uses per day (to assist with water savings calculations), and time on (to assist with battery change outs or other PM activities of the bathroom).
See Section 3 for more details.

Search — search records to find a specific fitting, by module serial number.
See section 3.4 for more details.

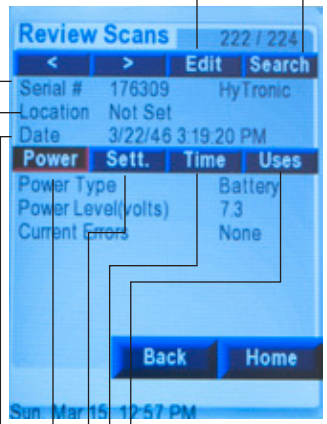
Edit — view existing notes/location; create new notes/locations; add notes/location information. *See Section 2 and 3.1 for more Details.*

Serial # — of the electronics module. Followed by Fitting type. For troubleshooting reference or contacting CFC Technical Support *See Section 4 for more details.*

Location — manually entered fitting reference name to assist with locating the fitting in the future.
See Section 3.1 for more details.

Date — date and time of scan record (subject to setting date/time).

Note — give the status of the fitting,module and environment (see Section 3.3 for more details) There are 4 tabs to flip between.



Uses — time is use; number of uses, uses/day (calculated) — helps to plan for PM work and calculate water savings.

Time — values of time-based mode parameters.

Sett.(ings) — modes are enabled or disabled; values of individual mode parameters (non-time based).

Power (default) — list power type, power level and any errors.

2.3.1 Edit Fitting Data.

Add/update fitting LOCATION information or add NOTES for fitting.

Location — Tap inside box, keyboard will appear for data entry. Limited to 17 characters.

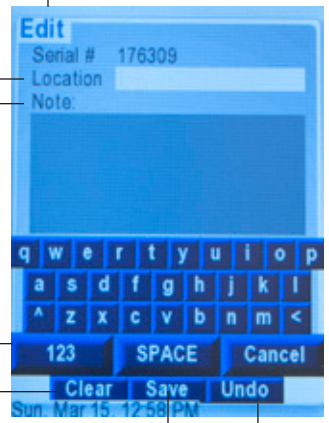
Notes — Tap inside box,keyboard will appear for data entry. Limited to 64 characters.

123 — Jumps to numbers and symbols keyboard.

Clear — Deletes all data from field.

Save — Tap “Save” to save the text to the device

Undo — Last unsaved information.

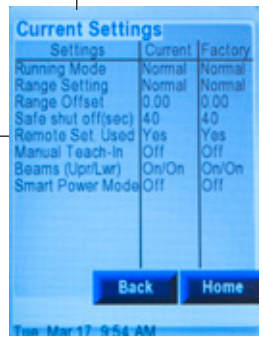


2.4 Settings

Settings allow the user to view existing fitting settings relative to the factory settings.

Current — Lists current settings for the fitting, including any settings that may have been modified after the fitting was installed.

Factory — Shows what the factory settings are for the scanned fitting.



2.5 Diagnostics — *See Section 4 to use the Diagnostic tools.*

2.6 Adjust Fitting

User may enable, disable, fitting mode and settings, as well as other fitting settings for unique needs or circumstances, tough applications, improved fitting user experience, power saving, improved hygiene, user courtesy.

Running Mode — enable, disable or adjust specific water on/off modes of fitting to meet user needs and/or remove user inconvenience. *See Section 2.6.1 for more details.*

Range & Sensing — adjust sensing distances; turn on/off sensing beams to troubleshoot detection issues like ghost detections, no detections or too sensitive detection or not sensitive enough detections. *See Section 2.6.2 for more details.*

Other Settings — enable, disable, adjust other options such as fitting power saving; routine hygiene flush; manual teach-in; safety-shut off time. *See Section 2.6.3 for more details.*

Reset Fitting — return to factory settings or to last settings (same function as Settings). *See Section 2.6.4 for more details.*

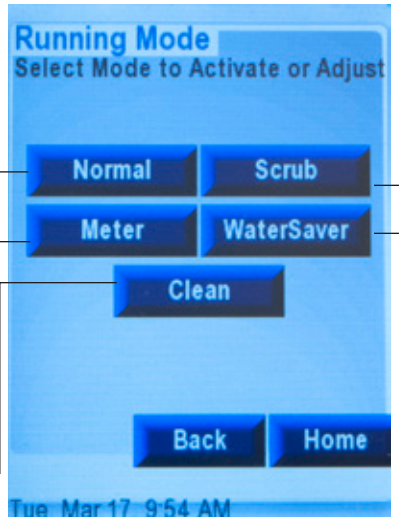
2.6.1 Running Mode

Running Mode — enable, disable or adjust specific water on/off modes of fitting to meet user needs and/or remove user inconvenience.

Normal Mode — Fitting operates when user is detected and stops immediately after user detection ends. Default factory mode (for non-SSPS fittings). *See Section 2.6.1.1 for more details.*

Metering Mode — Fitting operates only when user is detected and stops after a prescribed amount of time. *See Section 2.6.1.2 for more details.*

Cleaning Mode — Fitting is deactivated and will not operate when user is detected to allow cleaning or maintenance without running water. *See Section 2.6.1.3 for more details.*



Scrub Mode — Fitting can be set for longer run times for scrub sinks. Automatically runs after user is detected and does not end until after assigned time. *See Section 2.6.1.4 for more details.*

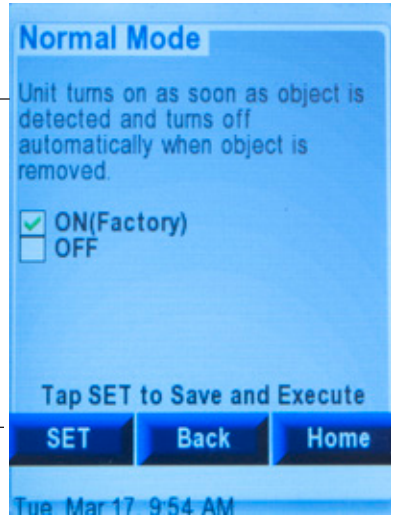
Water Saver Mode — Fitting operates when user is detected and stops after a brief delay when user detection ends. Default factory mode (for SSPS fittings). *See Section 2.6.1.5 for more details.*

2.6.1.1 Running Mode

Normal — Fitting operates when user is detected and stops immediately after user detection ends. Saves water versus metering fittings which run for a prescribed amount of time after every activation. Default factory mode (for non-SSPS fittings, E-Tronic, and ELR).

Normal Mode —Maximum run time duration pre-set at factory. See Section 2.6.3 to change this value.

Set — Tap "SET" to save and execute setting.



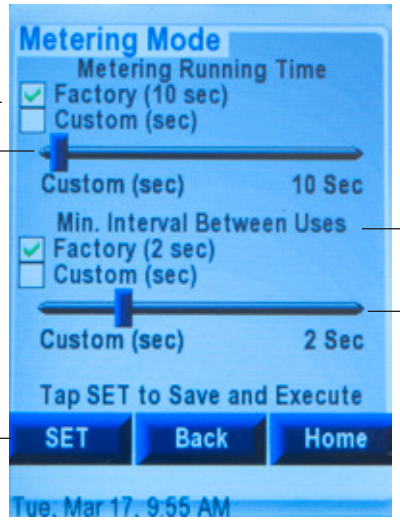
2.6.1.2 Running Mode

Metering — Fitting will operate only when user is detected and stops after a prescribed amount of time. This helps to promote water conservation and prevent long run ons of the fitting.

Metering Running Time — Choose “Factory” pre-set for 10 second running time.

Choose “Custom Setting” and adjust running time from 3 to 180 seconds with slide bar.

Set — Tap “SET” to save and execute settings.



Min Interval Between Uses — Choose “Factory” pre-set for 2 second delay time before new detections are registered.

Choose “Custom Setting” and adjust delay time from 1 to 5 seconds with slide bar.

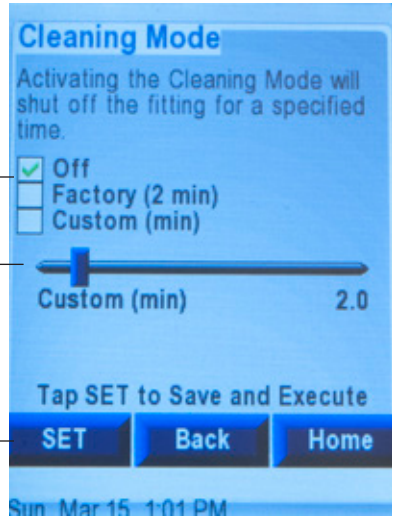
2.6.1.3 Running Mode

Cleaning — Fitting is deactivated and will not operate when user is detected to allow for cleaning or maintenance without running water. Fitting automatically returns to current mode after prescribed time or 30 minutes have elapsed, or set to “off”.

Cleaning Mode Running Time — Choose factory “preset” for 2 minutes duration.

Choose custom to set time from 1 to 10 minutes in duration.

Set — Tap “SET” to save and execute setting. A warning screen will appear. Tap “Yes” to activate, or “Cancel” to end the command without saving and executing.



Warning and activation confirmation

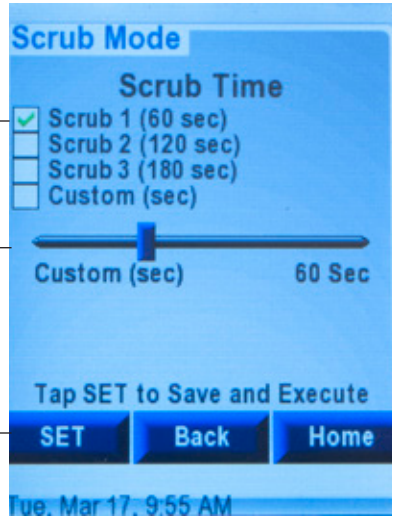
2.6.1.4 Running Mode

Scrub — Fitting can be set for longer run times for health care or surgical scrub sinks. Automatically runs after user is detected and does not end until after assigned time.

Scrub Mode Running Time — Choose from “Presets” to set common run times.

Choose “Custom” and adjust running time from 1 to 180 seconds.

Set —Tap “SET” to save and execute setting.

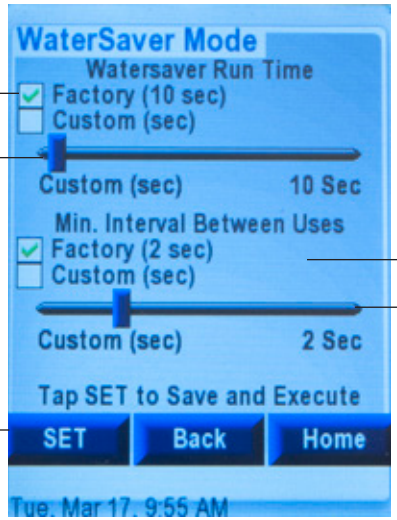


2.6.1.5 Running Mode

Water Saver — Fitting operates when user is detected and stops after a brief delay when user detection ends. However, it is saves more water than Normal Mode in that the maximum run time is typically shorter AND there is a mandatory time delay between activations to discourage multiple quick on cycles (and waste water). Default setting for SSPS fittings.

Water Saver Running Time — Choose "Factory" pre-set for 10 second running time.

Choose "Custom Setting" and adjust running time from 3 to 180 seconds with slide bar.



Min Interval Between Uses — Choose "Factory" pre-set for 2 second delay time before new detections are registered.

Choose "Custom Setting" and adjust delay time from 1 to 5 seconds with slide bar.

Set — Tap "SET" to save and execute settings.

2.6.2 Range and Sensing

Setting adjustment allows user to change sensing distances or tun off sensing beams. This includes four presets and fine adjustments to both upper and/or lower beam settings. These setting adjustments may be necessary to troubleshoot detection issues. *See section 4 for more details.*

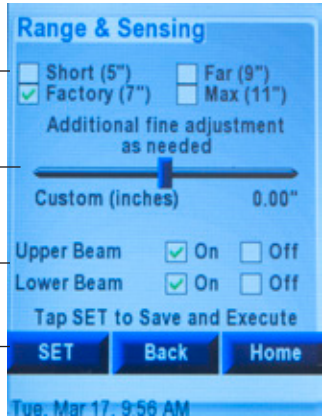
Range Adjustments — Choose "Factory (7")" pre-set for default sensing distance.

Choose other "pre-sets" to specify shorter or longer sensing distances.

Make "fine adjustment" to pre-sets using slider bar from -2" to +2" relative to pre-set.

Beam Settings — Choose one or both beams to turn "on" (default), set to Dynamic Mode or turn "off". *See Section 4 for more details concerning when and how to use.*

Set — Tap "SET" to save and execute setting



2.6.3 Other Settings

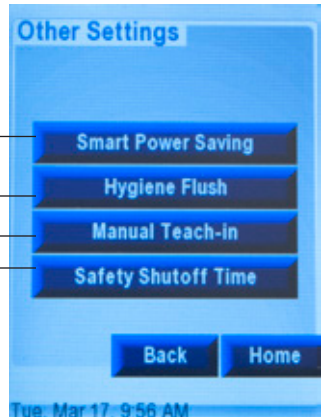
Other settings include: enable, disable, adjust other convenience options such as fitting power saving; routine hygiene flush; manual teach-in; safety-shut off time; and Safety-Shut off Time.

Smart Power Saving — Saves power and extends battery life by reducing scan frequency.

Hygiene Flush — For fittings with low or infrequent use, setting will run fitting for an assigned time to keep fresh water in lines and refill trap ways.

Manual Teach-In — Enables CLEAN mode activation without a Commander HPU.

Safety Shutoff Time — Limits the maximum running time in Normal Mode.



SECTION 2: Scanning, Mode and Setting Adjustments

Smart Power Saving Setting

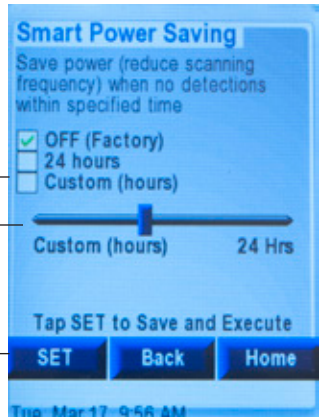
This setting can save power and extend battery life by reducing scan frequency.

Smart Power Saving Interval — Choose preset interval between “no detections” and when reduced scanning frequency should begin. Default is “Off”.

OR

Choose “Custom” setting from 6 to 48 hours.

Set — Tap “SET” to save and execute setting.



Hygiene Flush Setting

For fittings with low or infrequent use, setting will run fitting for an assigned time to keep fresh water in lines and refill trapways.

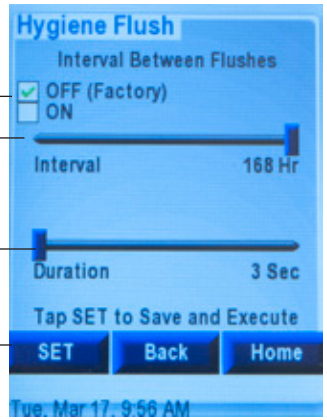
Hygiene Flush Interval — Choose “On” to enable setting.

Choose “custom” interval between activations time from 1 to 168 hrs using slider bar. Fitting will run for prescribed time if no detections within this custom time.

Factory setting is assigned to “Off”.

Hygiene Flush Duration — Choose “Duration” using slider bar from 3 to 180 sec.

Set — Tap “SET” to save and execute setting



SECTION 2: Scanning, Mode and Setting Adjustments

Manual Teach In Setting

Enables **CLEAN** mode activation without a Commander HPU. Turn this on, by holding thumb over eye for 5 seconds or until water stops flowing, to enable manual activation of Clean mode for cleaning crew. Leaving it set to “off” could prevent vandalism or tampering.

Manual Teach-In — Choose “On” to allow for manual activation. Factory setting is assigned to “Off”.

Set — Tap “SET” to save and execute setting

Safety Shut-Off Time Setting

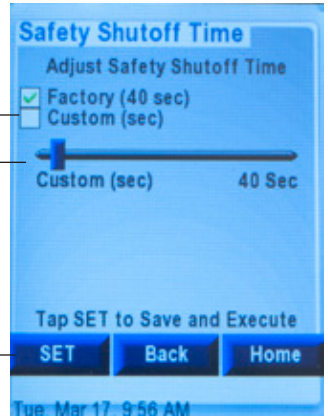
Limits the maximum running time in Normal Mode.

Safety Shutoff Time — Choose “Factory” preset

OR

Choose “Custom” setting using slide bar to set time from 30 to 180 seconds. Factory setting is 40 seconds.

Set — Tap “SET” to save and execute setting



2.6.3 Reset

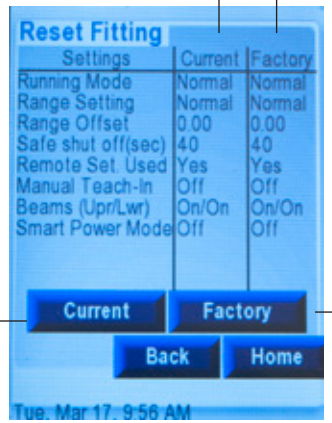
Reset allows the user to view existing fitting settings relative to the factory setting. This is important if the fitting is not operating correctly, or there is a need to cancel the current Settings. There are two options available: Factory (Default) or Current (as of last SET command)

Factory — Shows what the factory settings are for the scanned fitting. **FAC** Initiates Reset of fitting to match Factory Setting

Current — Lists current settings for the fitting, including any settings that may have been modified after the fitting was installed.

CUR — Initiates Reset of fitting to match Current Settings

FAC — Initiates Reset of fitting to match Factory Setting



To execute command:

Tap “FAC” for reset to factory setting

OR

Tap “CUR” for reset to current settings

Reset caution appears. Tap “SET” to continue or “CANCEL” to end command with savings

Warning: Some data loss may occur when using RESET - (example, but not limited to number of uses, uses per day). This occurs because scan data is not written to the module immediately. The information buffers for a certain time, and is written to the module at some later date. Any scanned information in the buffer will be lost by using RESET.

2.9 Contact Us

View Chicago Faucets contact information
Allows the user to have Chicago Faucets phone number, website and technical support at the touch of a button.

Section 3: Review Scan Data

3.1 Introduction

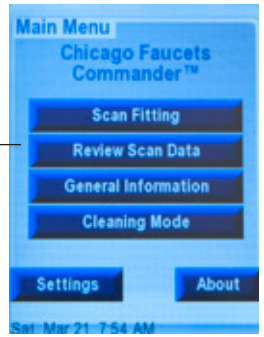
The History button takes user to an existing fitting data. The last record created for that type of fitting (default). Each record contains the fitting data at that specific scan time and date. The feature allows user to:

1) Review data of previously scanned fittings. This includes: snapshot of particular fitting(s) at a specific day/time, search by serial number, number of uses / uses per day (to assist with water savings calculations), and time on (to assist with battery change outs or other PM activities of the bathroom). *See Section 3.2 through 3.4 for more details.*

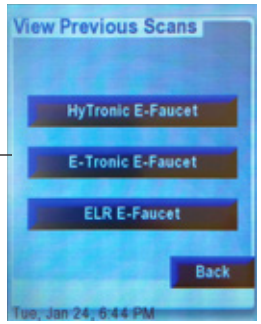
2) Set/edit locations and create/add notes specific to fitting. See *Section 2.3.1 for details.*

3.2 Review Scan Data

To review tap “Review Scan Data”. Choose the one you need.



Fitting Type — Select fitting type. Choose the one you need.



Section 3: Review Scan Data

Search — search records to find a specific fitting, by module serial number. *See Section 3.4 for more details.*

Edit — view existing notes/location; create new notes/locations; add notes/location information. *See Section 2 and 3.1 for more details.*

Serial # — of the electronics module. Followed by Fitting type. For troubleshooting reference or contacting CFC Technical Support *See Section 4 for more details.*

Location — manually entered fitting reference name to assist with locating the fitting in the future. *See Section 3.1 for more details.*

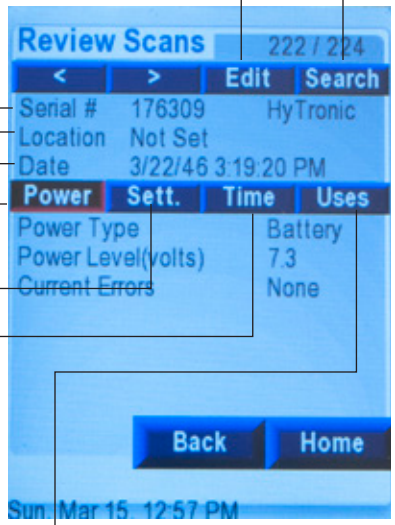
Date — date and time of scan record (subject to setting date/time).

Power (default) — list power type, power level and any errors.

Sett.(ings) — modes are enabled or disabled; values of individual mode parameters (non-time based).

Time — values of time-based mode parameters.

Uses — time is use; number of uses, uses/day (calculated) helps to plan for PM work and calculate water savings.



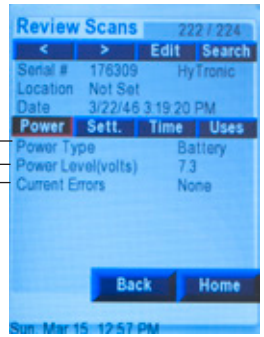
Note: give the status of the fitting,module and environment. *See Section 3.3 for more details*. There are 4 tabs to flip between. Power is default. Active tab is outlined in red.

Section 3: Review Scan Data

3.3 Data related to the status of the fitting, module and environment

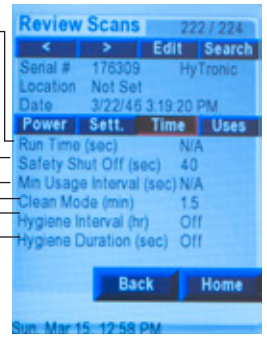
Power

Power Type — of fitting (AC, Battery)
Power Level (volts) — of power supply
Current Error — of fitting, if any



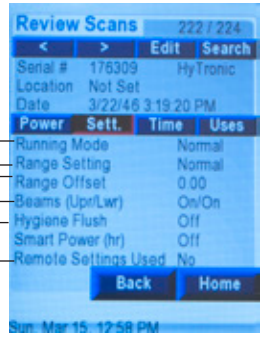
Time

Run Time (seconds) — of fitting
Safety Shut off Time (seconds) — value from normal mode
Minimum Usage interval (seconds) — from mode updates
Clean Mode (minimum) — time
Hygiene Interval (hour) — from mode update
Hygiene Duration (seconds) — from mode updates



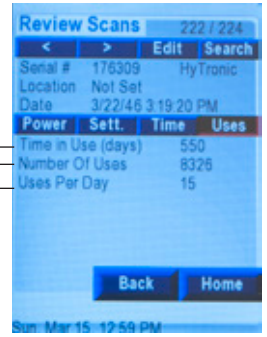
Settings

Running Mode — current
Range Setting — from presets
Range Offset — distance
Beams (Upper/Lower) — on/off status of upper and lower IR beams
Hygiene Flush — on/off
Remote Settings Used — was handheld device used to make setting changes



Uses

Time in Use (days) — of module
Number of Uses — of fitting
Uses per Day — calculated

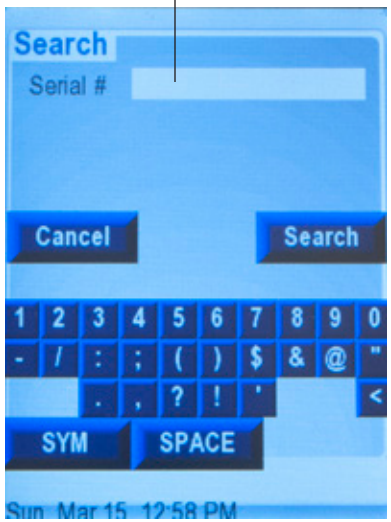


3.4 Search

Search data base for records by serial number.

Tap “SEARCH” and enter serial number via keypad.
Note: Serial Number must match exactly.

If there is no match, a screen will return with Serial #, Location and Date = NA



SECTION 4: General Information

4.1 Introduction

Purpose of the General Information command is to provide specific fitting information in support of the following:

1) Troubleshoot CFC electronic fittings — Mobile diagnostic tool to directly analyze symptoms and provide fitting specific solution paths *See Section 4.2 for more details.*

2) Access to spare parts and accessories list — fitting specific for easy ordering if needed. *See Section 4.4 for more details.*

3) Contact information — to contact CFC TecTrue for additional questions. *See Section 2.9 for more details.*

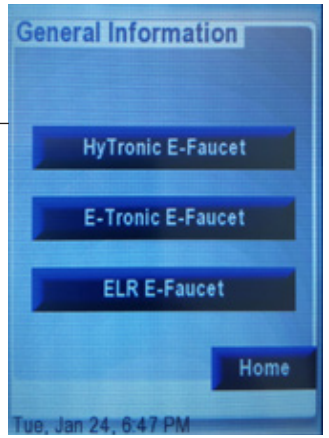
Tap “General Information”

Diagnostics — Troubleshoot CFC electronic fittings. Mobile diagnostic tool to directly analyze symptoms and provide fitting specific solution paths.
See section 4.2 for more detail.

Parts & Accessories — Contact information for CFC TecTrue in case of additional questions.

Contact Us — Contact information for CFC TecTrue in case of additional questions.
See Section 2.9 for more detail.

Fitting Type — Choose fitting type. Select the one you need.

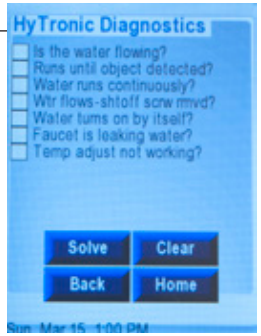


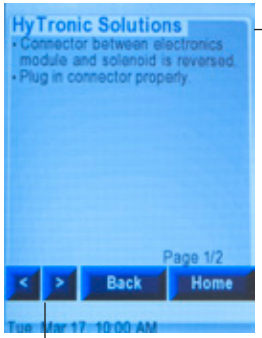
4.2 Direct Diagnostics

Troubleshoot CFC electronic fittings — Mobile diagnostic tool to directly analyze symptoms and provide fitting specific solution paths.

Remember: If all else fails, try “CURRENT RESET”. Failing that, FACTORY RESET.

Supply check-box answer to symptom questions.





Possible solution is returned.

< > — scroll back and forth through records

SECTION 5: File Sharing

5.1 Introduction

To transfer files to and from Commander Handheld Programming Unit and a Windows PC*

Reasons this is necessary:

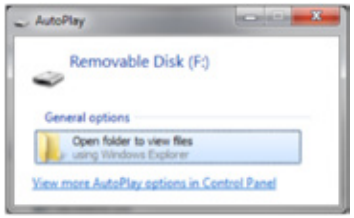
1) Transfer data to PC for use with Commander Desktop
2) Transfer data from PALM device to new Commander unit
3) Back-up and Restore (if needed in case of accident, loss)
   a. Transfer data to PC for back-up
   b. Transfer data from PC to device (restore)

Which files? What is their purpose?

1) DATA-GEN.PDB — database containing fitting scan data
2) UNIT-GEB.PDB — database containing user input notes, names, and locations

5.2 TRANSFER STEPS from Commander to PC

1. Connect device to PC via USB cable if not already connected (supplied)
2. Power on Commander Unit
3. Tap “About” and then tap “Invoke USB Mode”
   Special note: Auto-Sleep does not function when Commander HPU is in “USB Mode”.
4. Commander should be recognized as drive in Windows Explorer.
   Special Notice:
   If this is the first time the device is connected to a particular PC, you may see a note from Windows saying that it has found new hardware or new USB device is being installed.
   Select “Open folder to view files”.



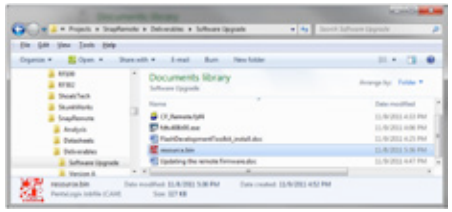
*Windows 7, 10, XP, and Vista

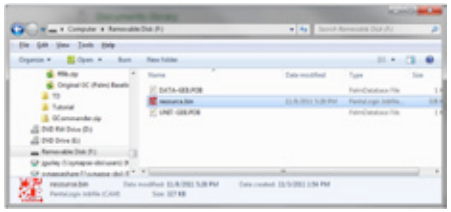
TRANSFER STEPS from Commander to PC (Continued)

   If PC fails to recognize device,
   Unplug and reconnect device, begin step 2 again OR
   Tap Reset, begin step 1 again
5. Find both the DATA-GEN.PDB and UNIT-GEB.PDB files on your Commander. Copy/Paste or drag/drop from the Commander “Drive” to your PC.
   IMPORTANT – both files must be copied!

Warning! Cutting or deleting the .pdb files from your Commander device causes the device to automatically regenerate the files, which takes several minutes. Any power down or RESET during the file regeneration causes a restart of the file regeneration process at the next power up. Unit is not usable until the regeneration is complete. The status of the regeneration is shown on the screen.

Warning! Cutting or deleting the existing resource.bin file during the update removes all graphical data (text, buttons) from the device. Screen will be completely white, but unit is placed in USB mode. Paste the resource.bin file back to device. Power down and then power up the device. Graphics are restored.





6. Disconnect Device from PC. Complete

5.3 TRANSFER STEPS from PC to Commander

Repeat all steps
Exception -> reverse transfer direction.
Find both the DATA-GEN.PDB and UNIT-GEB.PDB files on your Commander.
Copy/Paste or drag/drop from your PC to the Commander “Drive”.

Warning! Same warnings apply that are in 5.2.

Section 6: Advanced Functions

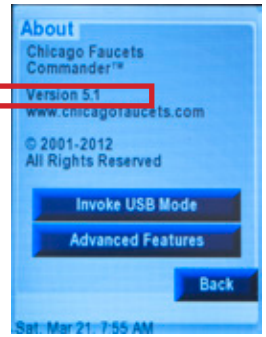
6.1 The ABOUT command has three purposes:

1) lists firmware version information for the HPU. *See Section 6.2 for more details.*
2) Access to “USB Mode” for data file transfer with a PC.
   See Section 6.3 for more details.
3) Access to specialized functions.
   See Section 6.4 for more details.

6.2 Commander Information

For information tap “About”

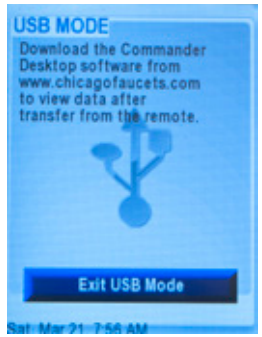
Version information is listed.



6.3 Commander connection utilizing USB Mode

Prepares commander for communications with a PC. *See Section 5 for file transfer steps.*

Special Notes: AutoSleep doesn’t work when device is in USB mode.



Section 6: Advanced Functions

6.4 Specialized Functions

Commander has 2 specialized functions for specific needs:

1) Engineering Mode* — very powerful; useful for large installs or bank installations where repeated identical setups are required, and to do so without having to go through SCAN steps for every fitting (time saver … one button immediate update).

Modes, Run times, Delay intervals — Enable, disable all available fitting modes and run times

Clean Mode — enable and set duration

Other Modes — enable and set duration and intervals

Range and Sensing — enable preset distances, fine adjustment and turn off/on upper and lower beams (and with special option)

Disable/Enable Remote device changes — to prevent tampering (even with another device around, only those with access to engineering mode can make any changes)

Other special information designed for factory troubleshooting in tough cases where normal procedures, settings can't solve the issue

*Note: not all functions are available for each fitting.

2) Pipe Clean Mode — permits fitting to run continually for up to 21 hours without stopping, in cases of deep line purging or disinfection or other water treatments.

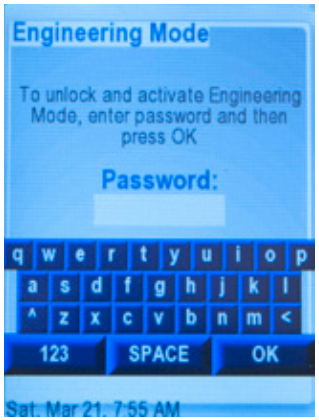
Note: both applications can be active at together.

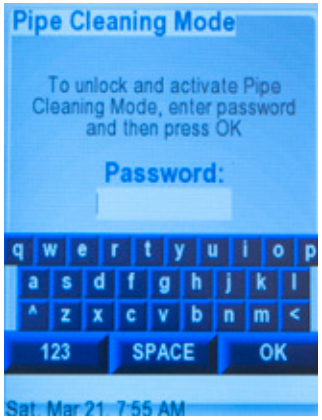
For applications that could benefit from either of these modes, contact CFC Technical Support to register your device *(if you have not already done so)* and request a password to unlock these special modes.

1) Tap "About"

2) Tap "Advanced Features"

3) Tap Desired Mode





You will be Prompted for Password
Enter Password and tap "OK"

To escape out of command:
1) Leave password box blank and tap "OK" or
2) Enter incorrect password tap "OK" and return to previous menu.

Section 7: FAQ

7.1 GENERAL

What is the Commander Handheld Programming Unit?

- Commander allows you to change settings quickly and easily on your Chicago Faucets HyTronic®, ELR and E-Tronic® products.

Why did you create a new device?

- The existing Commander tools are based on PALM platform, which is obsolete. In order to ensure future continuity, CFC created our own device.

Is there a Commander App? If not, will there be one?

- No. There is no Commander App and there are no plans to introduce an App at this time.

What fittings are supported by the new device?

- HyTronic, E-Tronic and ELR CFC faucets
- Turbo is only compatible with the previous PALM version of the software

DEVICE FIRMWARE/SOFTWARE

Do I need to register my device?

- Yes. Please go to chicagofaucets.com/commander to register the device in order to receive automatic update notifications.

Does unit come preloaded with software?

- Yes. Unit is ready to go directly out of the box. Refer to the included "quick start guide."
- To ensure that you are using the latest version, go to chicagofaucets.com/commander and view the *readme* file.

Can I update the device myself?

- Yes. Go to chicagofaucets.com/commander and view the *readme* file. Note: your PC must run Windows 7, 10, XP, and Vista in order to use the update program.

DEVICE FIRMWARE/SOFTWARE (Continued)

Do I need to load any software onto my PC?

- Yes. But only to perform firmware updates. See chicagofaucets.com/commander and view the *readme* file OR to load the optional Commander Desktop software.

What software do I need?

- Renesas Flash Development Toolkit (FDT), Evaluation version (free)*, is required: https://www.renesas.com/us/en/document/swe/evaluation-software-flash-development-toolkit-v409-release-03

  *Requires PC running Windows 7, 10, XP, and Vista

Will I lose the program or my data if I lose power?

- No. The device uses flash memory for both the program and the data.

Are my data files transferable and viewable?

- Yes. The data files (.pdb) are transferable and viewable via our Commander Desktop software or using a spreadsheet program. See chicagofaucets.com/commander to download the program if desired.

I am an existing PALM user and don't want to switch to a new device, can I still use my PALM?

- Yes. However, CFC will not support updates to the PALM version software, and new products will not be compatible.

Is my PALM data file okay to use on the new device? Can I transfer the data file to the new device?

- Yes. See PALM user transition guide at chicagofaucets.com/commander for more details.

Can I use existing versions of the Commander Desktop software?

- Data files from the Commander Handheld are not compatible with Desktop version 1.31 and below.
- Data files from PALM devices are compatible with ALL versions of the Commander Desktop Software.

Section 7: FAQ

DEVICE HARDWARE

I'm an Apple user. What are my options?

- Contact TecTrue or your local sales representative.

Are batteries included?

- Yes. 2x "AA"

Can I use an AC adapter to power my device?

- No.

Is the device USB compatible?

- Yes. The device can be put into "USB Mode" and recognized by a Windows "hard drive" device. USB cable is included with the device. Refer to chicagofaucets.com/commander user guide.

I put my device under the water stream and got it wet. Is it waterproof?

- No. Water can damage the PCB and other internal hardware components, voiding the warranty and disabling the unit. If the device does get wet, immediately remove and let the unit dry out before trying to use again.

What happens if I drop it?

- The device is designed and tested to withstand falls from standard commercial sink heights.

Section 7: Troubleshooting the Commander Device

7.2 DEVICE TROUBLESHOOTING

ISSUE	REASON	SOLUTION
When I aim and scan, I get Scan Errors or other unexpected scan results.	Scan distance is too short	Stand and aim a foot away. Closer does not mean better
	Low batteries	Replace batteries
It's hard to see the screen.	Display brightness setting too low	Adjust "Display Brightness" setting to increase percentage
	Low battery	Replace batteries
Device is acting weird for no apparent reason	Low battery	Replace batteries
	Unit is in programming mode	Reset unit
I cannot turn the device on	Low battery	Replace batteries
	Unit is in programming mode	Reset unit
	Unit got wet	Purchase new unit
	Button is damaged	Contact CFC if within warranty period. Else purchase new unit.
I left my device on overnight in USB mode, and batteries are drained. Why didn't AutoSleep turn on?	AutoSleep doesn't work when device is in USB mode	

7.3 UPDATES

ISSUE	REASON	SOLUTION
I cannot get the device into "programming mode" with a single quick tap	Device is powered on when attached to PC	Unplug device from PC. Turn off Commander device and reconnect to PC. Try again
		Use a double quick tap
		Reset unit
I do not hear audible tone to let me know device is in "programming mode"	May be first time Windows has detected the device	Unplug device from PC. Reconnect to PC. Try again
		Reset unit
	Device is powered on when attached to PC	Unplug device from PC. Turn off Commander device and reconnect to PC. Try again
		Use a double quick tap
		Reset unit
Windows does not recognize the unit as a device	May be first time Windows has detected the device	Unplug device from PC. Reconnect to PC. Try again
		Reset unit
	Device is powered on when attached to PC	Unplug device from PC. Turn off Commander device and reconnect to PC. Try again
		Reset unit

Section 7: Troubleshooting the Commander Device

7.3 UPDATES (Continued)

ISSUE	REASON	SOLUTION
Windows gives the message “found new hardware” or “new USB device is being installed”	May be first time Windows has detected the device	Stand by until complete. Good to go
I get a warning screen that “the unpack directory for this file already exists”	Prior flash update performed	Click “YES” and continue
I cannot see the resource.bin file when I view my Commander device as a drive on my PC.	File is normally hidden	To view, select Folder options from Windows explorer and select “view hidden files”
When I click the flash file, the utility does not run, or I get an error.	Flash toolkit version is out of date	Download and install Renesas Flash Development Toolkit (FDT), Evaluation version (free)* from http://am.renesas.com/products/tools/flash_prom_programming/fdt/downloads.jsp *Requires PC running Windows 7, 10, XP, and Vista

7.4 FILE TRANSFER

ISSUE	REASON	SOLUTION
Windows does not recognize the unit as a device	May be first time Windows has detected the device	Unplug device from PC. Reconnect to PC. Try again
		Reset unit
	Device is powered on when attached to PC	Unplug device from PC. Turn off Commander device and reconnect to PC. Try again
		Reset unit
Windows gives the message “found new hardware” or “new USB device is being installed”	May be first time Windows has detected the device.	Stand by until complete. Good to go.
I have transferred data from one device to another, but I have lost all my notes, locations, and names.	UNIT-GEB.PDB file has not been transferred.	Transfer both files: DATA-GEB.pdb and UNIT-GEB.pdb
My Commander Desktop software does not read the data file from my new Commander Unit.	Commander Desktop is version 1.31 or below	Replace batteries
	Download and install the latest version from chicagofaucets/com/commander.	Reset unit
I just finished file transfers and upon tapping “USB Disconnect/ exit” I see a warning screen showing “files regenerating”	.pdb data files (and resource.bin) were cut-and-paste or deleted from the device	Wait until the files regeneration is complete. Powering down the unit or performing a RESET causes the regeneration to start over from the beginning.

Section 7: Troubleshooting the Commander Device

7.5 NAVIGATION

ISSUE	REASON	SOLUTION
When I power down or the unit goes into “AutoSleep”, the unit does not return to the same screen when I add power.	Unit always returns to MAIN MENU.	
When I issue a SET or OK command, the device seems to return back to the immediately prior screen.	After a command completes, the unit returns the immediately prior screen in all cases.	Default in order to provide visual feedback that command was received and executed.

7.6 TAPPING/SETTING

ISSUE	REASON	SOLUTION
When I use a slider bar to set parameters, the” custom” box does not “check”	Swiping motion ends outside the bar graphic.	Stay within bar when ending the swipe. Do not swipe upwards or downwards away from the bar.
Screen does not respond as expected when tapped or swiped. Keyboard typing produces incorrect letters.	Screen out of calibration.	Calibrate screen.
	Resource.bin file may not match firmware version.	Go to chicagofaucets.com/commander to download latest files. Be sure to transfer resource.bin to device.
	Finger too big.	Try using a stylus or a pen.
I just did an update and buttons appear to be missing, unusually sized or spaced.	Resource.bin file may not match firmware version.	Go to chicagofaucets.com/commander to download latest files. Be sure to transfer resource.bin to device.
When I power on, my display is all white.	Resource.bin file is missing.	Device goes into USB to allow you to transfer file. See Section 5, file transfer for more information.
The Calibrate Screen sequence keeps restarting.	Corner selections are not registered as close or strong enough.	Restart calibration sequence and try using a stylus or a pen.

Section 7: Troubleshooting the Commander Device

7.7 FITTINGS

ISSUE	REASON	SOLUTION
I'm trying to scan a Turbo Electronic Flush Valve, but nothing happens.	Turbo is not supported by Commander Handheld.	Turbo is only compatible with the previous PALM version of the software.
My Commander Unit is working, but I cannot scan the fitting.	Fitting power is too low (< 3.2V).	Set power to proper level ASAP.
	Fitting is set to an unusual running mode.	Wait 2 minutes and try again. If still not working, Perform FAC or CUR RESET.
	Fitting module is defective.	Replace module.
	Fitting sensing is malfunctioning or environment is affecting sensing.	Remove and reinstall shut-off screw, allow for calibration.
When I scan, and fitting is in CLEAN MODE or PIPE CLEAN MODE, I do not see the mode register as the current setting.	These modes are not recorded in scan records.	These modes are temporary and so no record is made. Only the current mode settings will show, i.e. what the fitting will return to at the end of the execution of the CLEAN command.
When I try to set both upper and lower beams to "OFF", the upper beam always stays "ON".	Not possible to have upper and lower beams off at the same time.	Allowed configurations are: • upper/lower ON/OFF • upper/lower and OFF/ON
When I scan, the Status ERROR does not match the visual cues. Example: continual blinking light from module, ERROR = "LOW BATTERY"	Fitting module is defective.	Replace module.

Section 7: Troubleshooting the Commander Device

7.8 Fitting Power

FITTING POWER ISSUE	REASON	SOLUTION
My DC unit scans as AC.	When DC units are above 7.5 V, their scan records behave as AC.	This is normal for Commander. However, this could be an indication of a short in a power system component. Refer to fitting troubleshooting at chicagofaucets.com
My AC unit scans as DC.	When AC units are below 7.5 V, their scan records behave as DC.	This is normal for Commander. However, this could be an indication of a short in a power system component. Refer to fitting troubleshooting at chicagofaucets.com
My SSPS unit scans as DC.	This is normal.	
My SSPS unit scans as AS.	Defect power cell.	Replace power cell
When I scan the fitting, I don't see real fitting numbers. I get some crazy S/N and model information like: S/N:100001 Model:181.535.21.1	Fitting module has been replaced.	This is normal. The model and serial number are programmed when fitting is first manufactured. Use visual inspection cues to assist with identification, including hose tag. Or contact TecTrue.
Sometimes when I scan my fitting, the fitting locks up.	When voltage is 7.5 < 7.7 V, the module may lock up.	Increase or decrease power out of the given range OR Replacement module and check power system components.
I am used to seeing continuous red light from my fitting when power is really low (dead), but I don't see that anymore.	Feature included only with HyTronic modules version 1.8 and below OR E-Tronic modules ver 1.3 and below.	Later versions do not have this indicator. Instead the fitting goes into "sleep mode" to conserve power, to prevent rechargeable batteries from going into deep draw (no longer chargeable).
After I RESET my fitting (ex: pulling and replacing shut off screw, remove and add power, manual or Commander RESET), the fitting acts as if power is dead. Scanning is possible, but solenoid does not actuate.	Even with only "LOW BATTERY" (6x blinks after activation), any RESET to the fitting causes it to behave as if in "DEAD BATTERY" situation, i.e. possible scanning, but no valve operation.	Set power to proper level ASAP. Always check power first before resetting if low power situation is suspected.