



Reference Manual

CBIT Application v2.10 &
CBIT CENTRAL UPLOADER v2.10

Table of Content

<u>1. OVERVIEW</u>	<u>3</u>
<u>2. CBIT CENTRAL OVERVIEW</u>	<u>3</u>
2.1. COMMUNICATION METHOD	3
<u>3. CONFIGURATION</u>	<u>4</u>
3.1. CLICKON BUS ADDRESS CONFIGURATION	5
3.2. CBIT PRODUCT FILE CONFIGURATION (SPECIFICATION & USAGE)	6
3.3. CLICKON PRODUCT FILE	11
3.4. CBIT CENTRAL (CBIT UPLOADER) OVERVIEW	12
3.5. CBIT UPLOADER VIA BUS NETWORK.	13
3.6. CBIT UPLOADER VIA THE RS232 COM PORT	21
<u>4. DIAGNOSTICS</u>	<u>24</u>
4.1. CBIT.EXE VERSION AUDIO REPORT	24
4.2. FATAL ERROR AUDIO REPORT	25
4.3. NON-FATAL ERROR AUDIO REPORT	26
4.4. GENERAL ERROR AUDIO REPORT	27
4.5. ERROR MESSAGE TABLE	28
<u>5. OVERVIEW FOR HAI MODE</u>	<u>29</u>
5.1. CHECK LIST PRIOR TO INSTALLING THE CBIT MODULE WITH THE HAI CONTROLLER	29
5.2. PLAN AHEAD FOR THE UNIT ADDRESSES TO BE GIVEN TO CLICKON DEVICES.	30
<u>6. OVERVIEW FOR GENERIC MODE</u>	<u>31</u>
<u>7. HARDWARE SPECIFICATIONS</u>	<u>32</u>

1. Overview

The ClickOn Bus Interface Translator (CBIT) (Part No.: CB-IFT-10) module is a ClickOn Product that allows 3rd party controllers (e.g. HAI, AMX, ELAN) to interface with an existing ClickOn Bus Network. This is achieved by setting the CBIT module in specific modes depending on the application requirement.

The interface to the 3rd party controllers is done via the CBIT RS232 port utilising a unique RS232 cable wiring configuration for each type of application. The software setup and configuration caters for the various modes by making changes to the CBIT configuration (cbit.prd) file.

The modes supported are: Generic mode (AMX, ELAN)
 HAI mode

2. CBIT CENTRAL Overview

The CBIT Uploader software (CBIT CENTRAL) is a windows application that needs to be installed on a pc to allow for the configuring and up-loading of the required version to the CBIT module.

2.1. Communication Method

The CBIT CENTRAL software is used to configure and upload the required version and configuration files to the CBIT module via two different methods.

The default communication method is via the ClickOn Bus network (ClickOn CAT5 network) using the ClickOn Bus PC interface module to configure and up-load the required files to the CBIT module.

This communication method of the CBIT CENTRAL software can also be opened from within the latest ClickOn Bus Software application (i.e. Tools, CBIT CENTRAL) (Version 1.2.7 onwards).

The alternate communication method is via the RS232 port on the PC to the RS232 port on the CBIT module. When using this method the CBIT CENTRAL software can only be opened independently from all other applications.

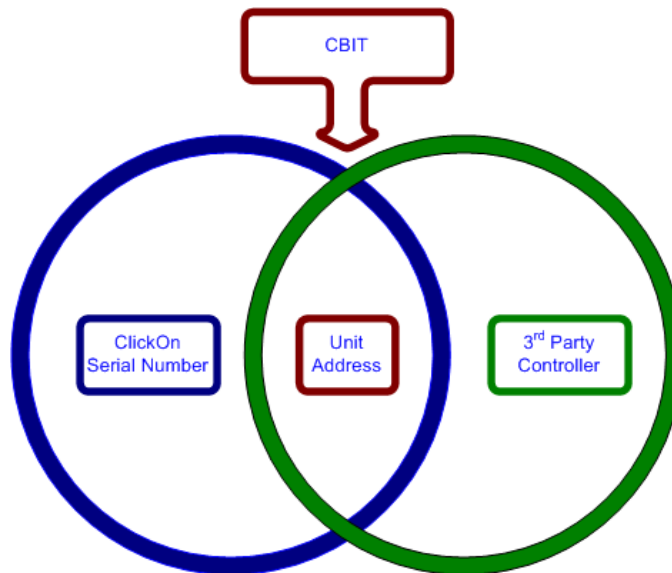
Ensure that you have the latest version of CBIT CENTRAL and the latest version files by checking the version of your CBIT module against the latest version available on the ClickOn website www.clickon.co.za under the downloads section.

3. Configuration

The integration of the ClickOn products to the 3rd party controller is done via the installation of a ClickOn Bus Interface Translator (Part No.: CB-IFT-10). The ClickOn Bus Interface Translator (CBIT) module is used as a translator between the ClickOn protocol and the 3rd party protocol to allow two way communications between the ClickOn Products and the 3rd party Products.

The ClickOn Bus Interface Translator (CBIT) connects to the ClickOn Bus via a normal ClickOn Bus Cable (CAT5 UTP) and via a RS232 cable to the serial port of the 3rd party Controller.

The system operates by creating a relationship between the ClickOn products and the 3rd party products. This relationship between the two products is achieved by cross referencing the serial number of the ClickOn product to a unit number that correlates to the same unit number on the 3rd party controller or that is addressable from the 3rd party controller.



There are three different methods that can be used to achieve the required cross reference between the two product ranges. The method to be used will largely depend on the type of ClickOn products that will be cross referenced to the controller and the capabilities of the controller.

The three methods of configuring the units are:

- ClickOn Bus Address
- CBIT Product (Configuration) file
- Combination of both the above

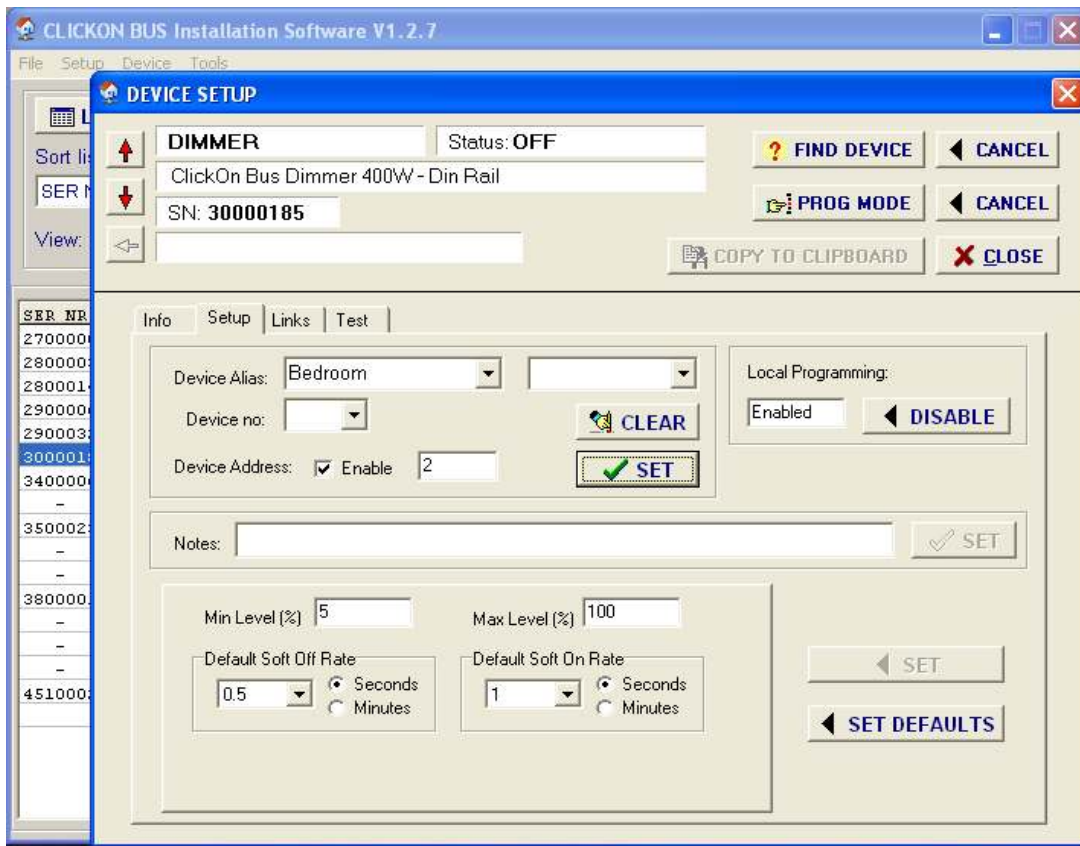
3.1. ClickOn Bus Address configuration

This method is used when there is a cross reference relationship to ClickOn Bus products only and there is no need for any radio frequency (RF) control from or to the 3rd party controller. Remote controls can still be configured for direct control of ClickOn Bus products.

This method is the easiest of the three to use as all the cross referencing configurations are done automatically once the unit numbers have been entered into the ClickOn Bus devices that correlate to the corresponding controller unit numbers.

The CBIT Product file always needs to be created / modified to set the mode of the translator and to configure the parameters. The CBIT Uploader (CBIT CENTRAL) software application is utilised to configure and upload the cbit*.prd file that was created / modified.

Open the ClickOn Bus Installation application and open the required device's (e.g. dimmer) setup window. Tick the block next to Device Address to enable this feature for this particular device and then fill in the number of the corresponding controller unit number (e.g. If the dimmer was in the bedroom and it is referenced as unit 2 in the controller units section then enter 2) and then select the Set button.



All the other corresponding unit numbers can be entered in a similar manner. The unit number can then be used to address the device directly in the Generic mode or the CBIT module will automatically build its own cross reference between the two product ranges in the active mode once they are both powered up correctly.

Resetting of the CBIT module by doing a power cycle reset is always required if any changes are made to any bus device address to enable the new data to be updated.

The CBIT module will reboot itself automatically 5 minutes after the last change has been made to the ClickOn Bus devices.

3.2. CBIT Product file configuration (specification & usage)

The CBIT product file is used to define the cross reference relationship between the ClickOn Bus products and the controller units manually or to define the relationship between ClickOn RF products (e.g. remote controls, wall-mount remote controls, etc.) and the Controller Unit numbers.

The CBIT product file is also used to modify / change the mode, baud speed, assumed default password, number of assumed cross reference units, repeater settings, start up status and the dead zone.

The product file name that needs to be created / modified must start with **cbit** (e.g. cbitsmith01.prd). Once the file has been created / modified it will need to be uploaded to the CBIT module using the CBIT Uploader (CBIT CENTRAL) Application.

If there is no product file created / defined and uploaded to the CBIT module or stored on the CBIT module then the following defaults will be assumed as soon as the CBIT module is powered up.

The following default attributes are assumed:

```
#TEMPLATE FILE, DEFAULT SETTINGS FOR HAI CNTRL MODE
MODE,HAI
BAUD,9600
PASSWORD,1234
UNITS,36
REPEATER,2,2000
STARTUPSTAT,HAI
DEADZONE,5
```

Definition:

Any remarks can be added to the file by starting the line with a # character.

When creating a product file, keep the following in mind;

The MODE must be specified at all times before any other declarations, followed by BAUD, PASSWORD, the highest unit number that is cross referenced with the controller that needs to be addressed by the CBIT module, the repeater values, start up status and finally the dead zone value.

The MODE is to set the type of communication protocol that will be required for the CBIT to translate to and from. By default the HAI mode is assumed.

The BAUD setting sets the baud speed of the RS232 port on the CBIT module. The baud speeds range from 9600 to 115200.

The PASSWORD specified is the unique password (Code) in the controller if required.

The UNITS is the highest unit number that is cross referenced in the controller that needs to be addressed by the CBIT module.

The REPEATER functionality is to set the number and duration of the RF packets to be placed in the RF queue that will be sent for each command received. The first parameter is for the number of repetitions between 2 and 9 times, and the second parameter is for the time duration between each repetition from 2000 milliseconds and 9000 milliseconds.

The STARTUPSTAT (start up status) is the method that the CBIT module is going to use to initialize its unit statuses, i.e. must the CBIT module retrieve the unit status from the ClickOn Bus network or the Controller during the start-up procedure following a normal start-up or following a power interruption.

Options are: HAI or BUS

The DEADZONE is the value assigned to a unit by the CBIT module after a command has been issued to it. The duration can be from 0 up to 30 seconds. During that time the CBIT will ignore any feedback from that device.

3.2.1. ClickOn Bus product manual assignment

You may manually declare a cross reference between the ClickOn Bus devices and the controller unit numbers in the CBIT product file by using the following syntax;

[Device Type], [Unit number], [Bus device SN], [Description]

Definition:

- Device Type: **“UNIT”** for bus devices.
- Unit number: This is the unit number that the controller will use to cross reference to the ClickOn Bus device. i.e. the unit number on the controller that will be used to trigger or be triggered by the cross referenced ClickOn Bus device.
- Bus device SN: This is the ClickOn Bus device serial number that will be cross referenced to the controller unit number. The ClickOn Bus device must be on the ClickOn Bus network connected to the CBIT module.
- Description: A one word description of the cross reference.

Example:

UNIT,2,30000005,BEDROOM

The CBIT will store a ClickOn bus device to controller unit cross reference as follows:

Controller unit number “2” to ClickOn Bus serial number “30000005” (dimmer) and the cross reference description “BEDROOM”

Note: ClickOn Bus devices with multiple channels will require the addition of an extra numeric digit at the end of the serial number (e.g. a 4 channel relay module with a serial number “38000014” has 4 separate channels and would thus need to be cross referenced as follows:

- “380000141” for a cross reference to channel 1
- “380000142” for a cross reference to channel 2
- “380000143” for a cross reference to channel 3
- “380000144” for a cross reference to channel 4

Example:

UNIT,18,380000141,GATE

The CBIT will store a ClickOn bus device to controller unit cross reference as follows:

Controller unit number “18” to ClickOn Bus serial number “380000141” (Channel 1 of the 4 channel relay module) and the cross reference description “GATE”

3.2.2. ClickOn Remote Control assignment

A cross reference between a ClickOn remote control and the controller unit number can only be assigned manually via the product file (cbit*.prd), by using the following syntax;

[Device Type] , [Unit Number] , [Transceiver SN:Optional Transceiver SN] , [Remote Control SN] , [UID] , [Layer] , [Channel] , [Description]

Definition:

- Device Type: “**RC**” for Remote Control.
- Unit number: This is the unit number that the controller will use to cross reference to the ClickOn Bus device, i.e. the unit number on the controller that will be used to trigger or be triggered by a remote control signal.
- Transceiver SN: This is the serial number of the ClickOn Bus Transceiver located on the bus network that will transmit / receive signals for the CBIT module.
- Optional Transceiver SN: It is possible to specify two transceivers to one RF unit by delimiting the two SN with “:”, keep in mind that this option must only be used in cases where the receiving device is too far to be reached by one transceiver and if not used correctly it will lead to a very slow and long RF queue execution.
- Remote Control SN: This is the serial number of the ClickOn remote control you want to mimic by cross referencing it to the controller unit number.

- UID: This is the User assigned Identity (UID) assigned to the specific remote control button you want to mimic; it is always an 8 digit number. NOTE: You must include an 8 digit UID at all times (even if it is "00000000" i.e. no UID) for the remote control assignment to work.
- Layer: The specific layer of the remote control button you wish to mimic.
- Channel: The specific channel of the remote control button you wish to mimic.
- Description: A one word description of the cross referenced remote control.

Example with UID;

RC,20,28000032,12003695,12344321,1,3,JACKREM3

The CBIT module will store a ClickOn remote control to controller unit number cross reference as follows:

Controller unit number "20" via transceiver "28000032" on the bus network will mimic or receive commands from the following ClickOn Remote Control: remote control with serial number "12003695" and UID "12344321" and the button to mimic or receive commands from layer "1" channel "3" and has a cross reference description "JACKREM3"

Example with No UID;

RC,20,28000032,12003695,00000000,1,3,JACKREM3

The CBIT module will store a ClickOn remote control to controller unit number cross reference as follows:

Controller unit number "20" via transceiver "28000032" on the bus network will mimic or receive commands from the following ClickOn Remote Control: remote control with serial number "12003695" and UID "00000000" and the button to mimic or receive commands from layer "1" channel "3" and has a cross reference description "JACKREM3"

NB. In HAI mode - On start up or restart after power failure the controller will send commands to update the status of the units, certain RF units need to be omitted from this sequence (e.g. Gate receivers) to prevent operation. This is done by using ,Z after the alias in the product file (cbit.prd).

3.2.3. Samples of an CBIT*.PRD file

- For the HAI controller (mode) this would be a typical configuration:

```
#This is an example file for HAI mode
# John Doe Residence
MODE,HAI
BAUD,9600
PASSWORD,4586
UNITS,256
REPEATER,2,5000
STARTUPSTAT,HAI
DEADZONE,5
UNIT,1,380000141,RELAY1
RC, 22,28000032,12003695,44332123,1,2,REM2
RC, 25,28000032,06003860,00000000,3,2,GATE2,Z
RC, 26,28000032:28000142,06003860,00000000,4,3,GATE3,Z
```

!!NOTE!! The baud rate parameter is ignored in the HAI mode and is fixed @ 9600

- For the Generic mode, this would be a typical configuration:

```
#This is an example file for the Generic mode
# John Doe Residence
MODE,GENERIC
BAUD,115200
UNITS,500
REPEATER,2,5000
STARTUPSTAT,BUS
DEADZONE,5
UNIT,1,380000141,RELAY1
RC, 22,28000032,12003695,44332123,1,2,REM2
RC, 25,28000032,06003860,00000000,3,2,GATE2
RC, 26,28000032:28000142,06003860,00000000,4,3,GATE3
```

3.3. ClickOn Product file

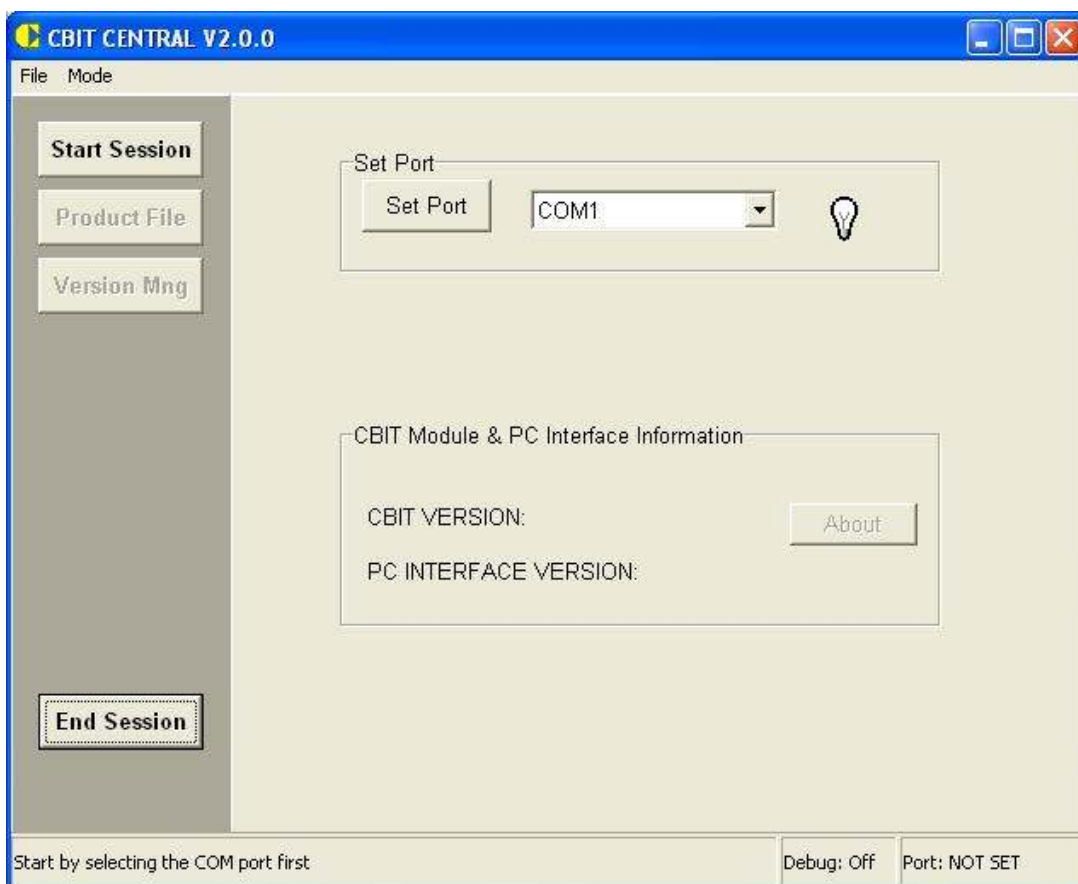
The ClickOn Product file (clbus.prd) is only maintained by ClickOn at all times and must not be altered in any way. The latest ClickOn Product file (clbus.prd) is uploaded via CBIT Central with each new version release.

3.4. CBIT CENTRAL (CBIT Uploader) Overview

The CBIT Uploader software (CBIT CENTRAL) is a windows application that needs to be installed on a pc to allow for the configuring and up-loading of the required version to the CBIT module.

The CBIT CENTRAL (CBIT Uploader) program will start up by default in “Bus PC Interface” mode.

The layout of the application consists of 4 parts; Menu bar, Status bar, Navigation panel and Form.



Make use of the status bar at the bottom of the application for help and general information that will be displayed on the bar.

Help is also available in the form of balloons when hovering over each button with the mouse cursor.

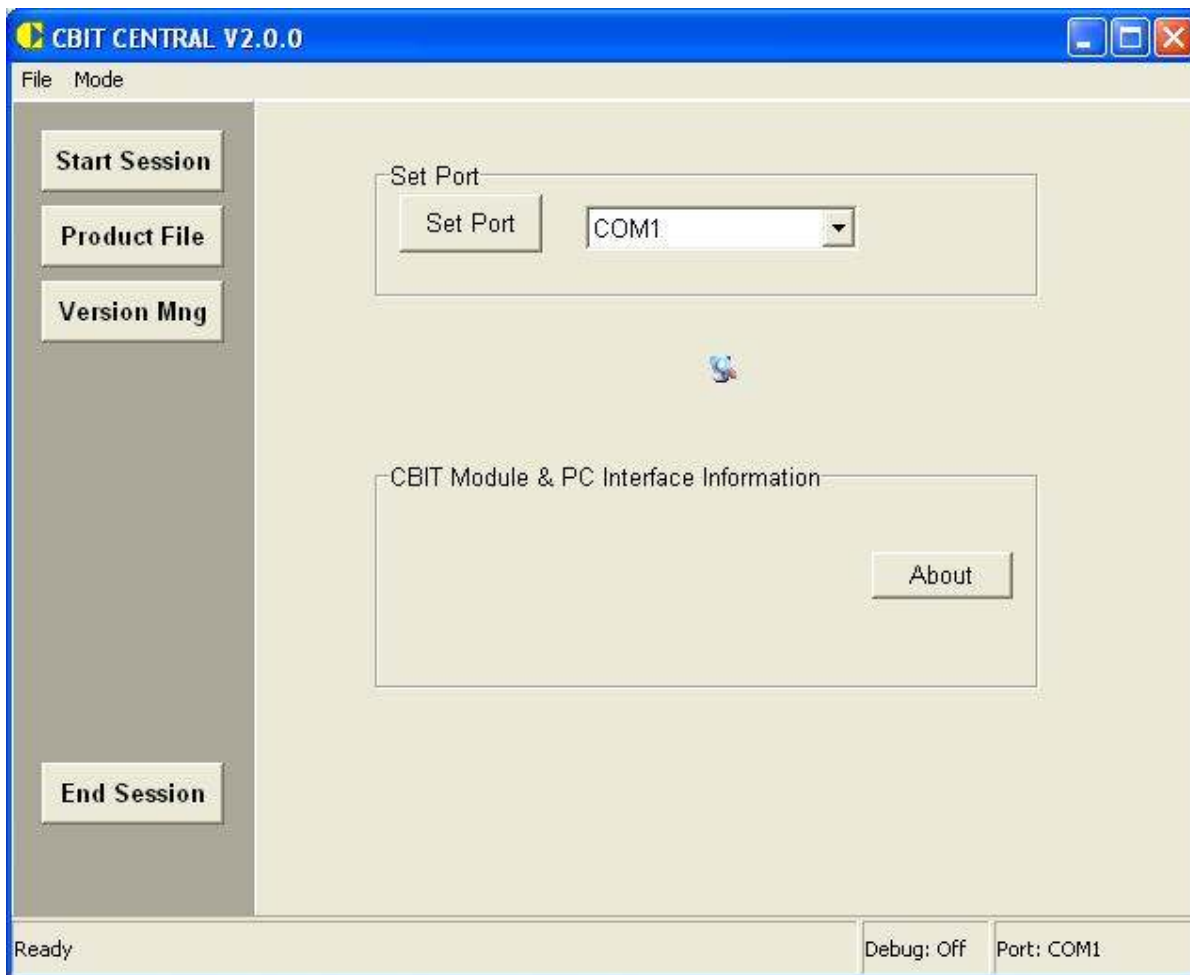
3.5. CBIT Uploader via Bus network.

To configure or Upload to the CBIT module via the bus network requires the use of a ClickOn Bus PC Interface module that is normally used to access the ClickOn bus network.

The CBIT CENTRAL Uploader software can also be opened from within the latest ClickOn Bus Software.

Start by selecting the COM port located on your PC and clicking the “Set Port” button, if the COM port is valid and available the light bulb in the form will glow.

If prompted to select another COM port make sure that the COM port selected is correct, if the COM port is correct make sure that all other programs are closed that could possibly use the same COM port.



The “About” button within the “Start Session” form will display information about the version currently running on the CBIT module selected from the list.

There is also an option in the form to turn “Listen\Debug” on / off, explanation thereof later in the text.

Once a connection between the PC and CBIT module is established, the CBIT module will be listed as one of the devices in the ClickOn Bus Software listing of devices.

3.5.1. Uploading New Versions

The Version Manager Button “Version Mng” in the navigator panel found on the left side of the application is used to update and manage versions of the CBIT application.

Click the “Version Mng” button in the navigator panel to open the version control form.



3.5.1.1. Downloading a New Version

The latest available CBIT CENTRAL and CBIT Version software utility is available on the ClickOn website www.clickon.co.za for download. It is recommended that the latest version available be installed at all times.

Once you have downloaded the latest CBIT CENTRAL from the ClickOn website and installed the latest CBIT CENTRAL software the latest version will be available in the Version Manager form.

3.5.1.2. Release notes about the Version

The “About” button in the “Version Mng” form will display release notes about the selected version.

These notes will contain critical information about the new release and if any hardware upgrades are required.

3.5.1.3. Upload selected Version

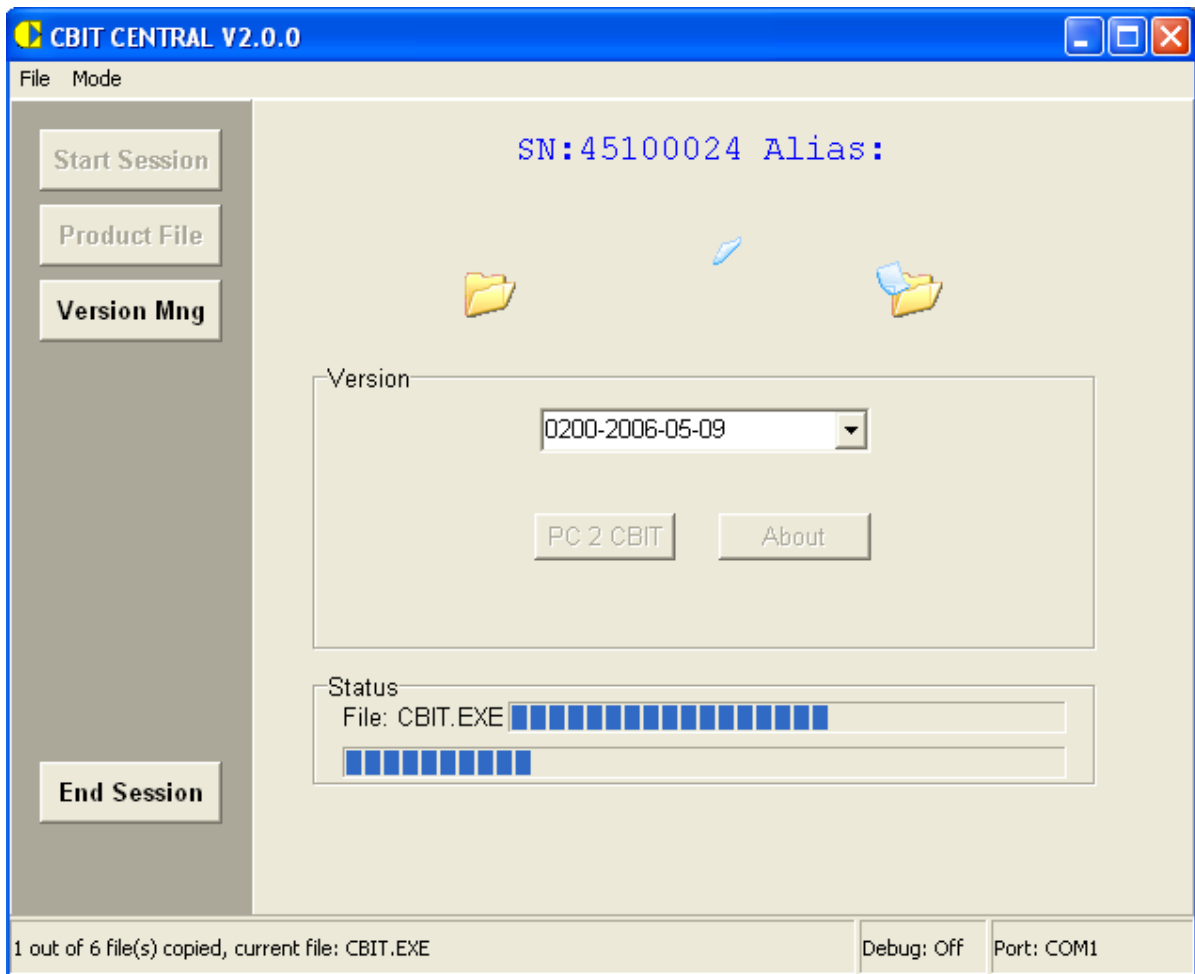
Select the latest or preferred version to be uploaded from the PC to the CBIT module from the list.

Click the “PC 2 CBIT” button, the upload process will start automatically.

The upload procedure will take several minutes depending on the ClickOn Bus PC Interface firmware and the size of selected version.

The progress of the upload process is indicated via the progress bars and the status bar at the bottom.

The files are checked for integrity once they have been uploaded, thus if an error occurred during the uploading you will be prompted to redo the process.



Once the Up-load process has been completed successfully the user will be prompted with a message to either restart the CBIT module now or restart the CBIT module later.

Selecting “Yes” when prompted to restart will display the “Start Session” form with a countdown on the “Set Port” button.

Selecting “No” when prompted to restart will display a “Reboot” button in the navigation bar.

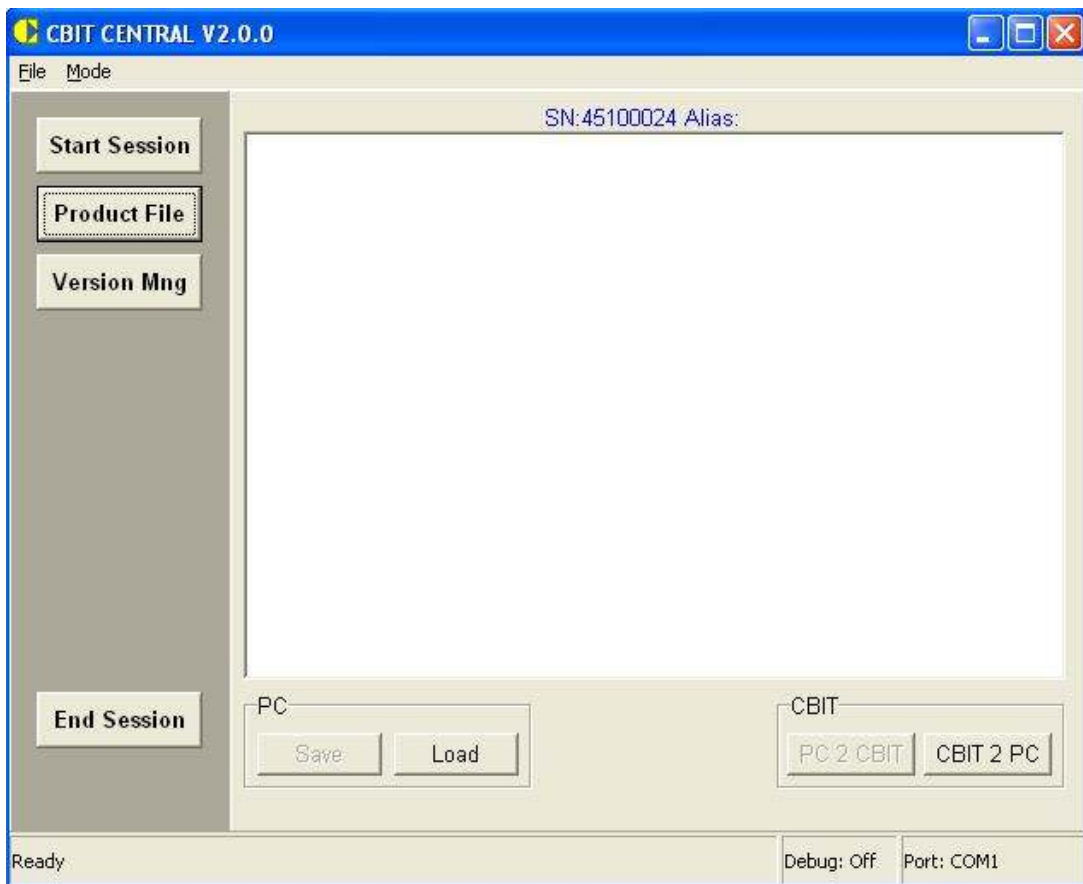
Note: The CBIT module must be rebooted (restarted) for the uploaded version to take affect.

3.5.2. Managing CBIT module product file

3.5.2.1. Viewing a Product file

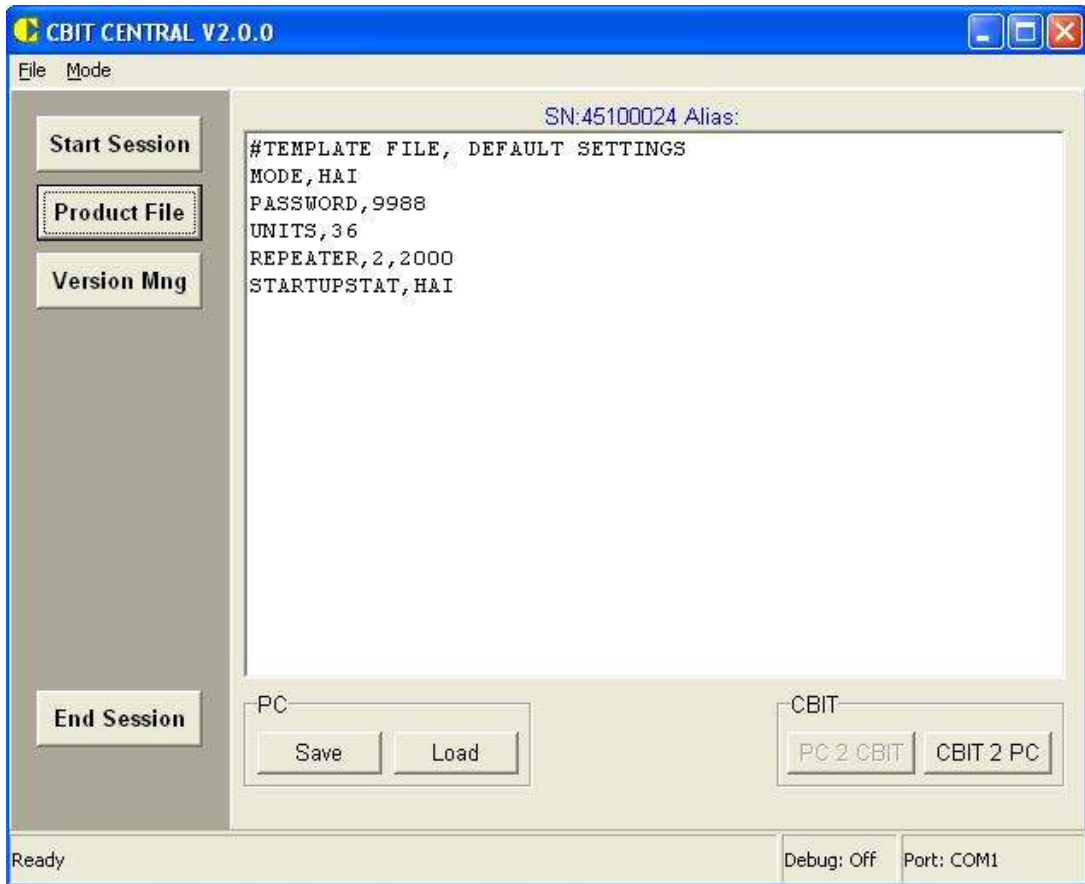
The “Product File” button in the navigator panel found on the left side of the application is used to update and manage the product file (cbit*.prd).

Click the “Product File” button in the navigator panel to open the product file form.



There are two methods of retrieving a product file for viewing and editing.

The first method is to click the “CBIT 2 PC” button which will download the product file currently found on the CBIT module and displays it in the edit box located on the form.



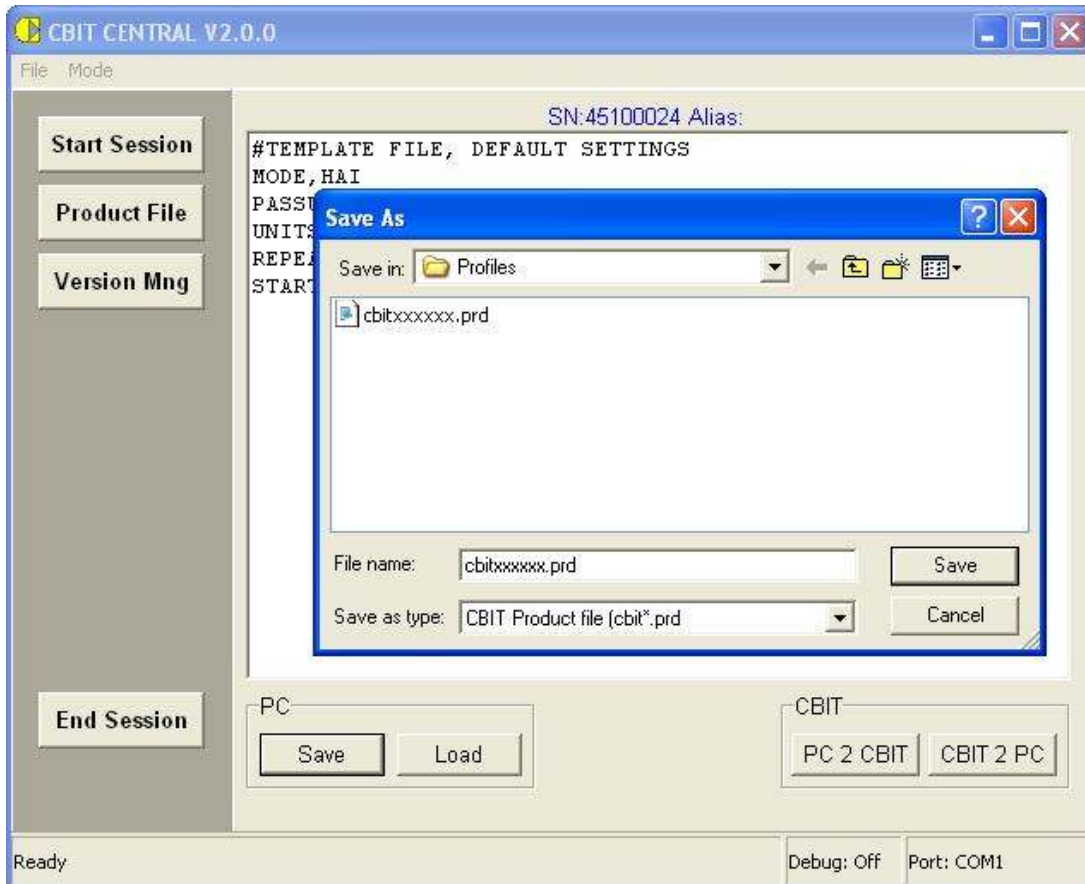
The second method is to click on the “Load” button to load a product file from a different source such as your PC.

You may still load old hai.prd files from your hard drive by simply changing the file filter in the open dialog box to filter files that starts with hai.

3.5.2.2. Edit and Updating the product file

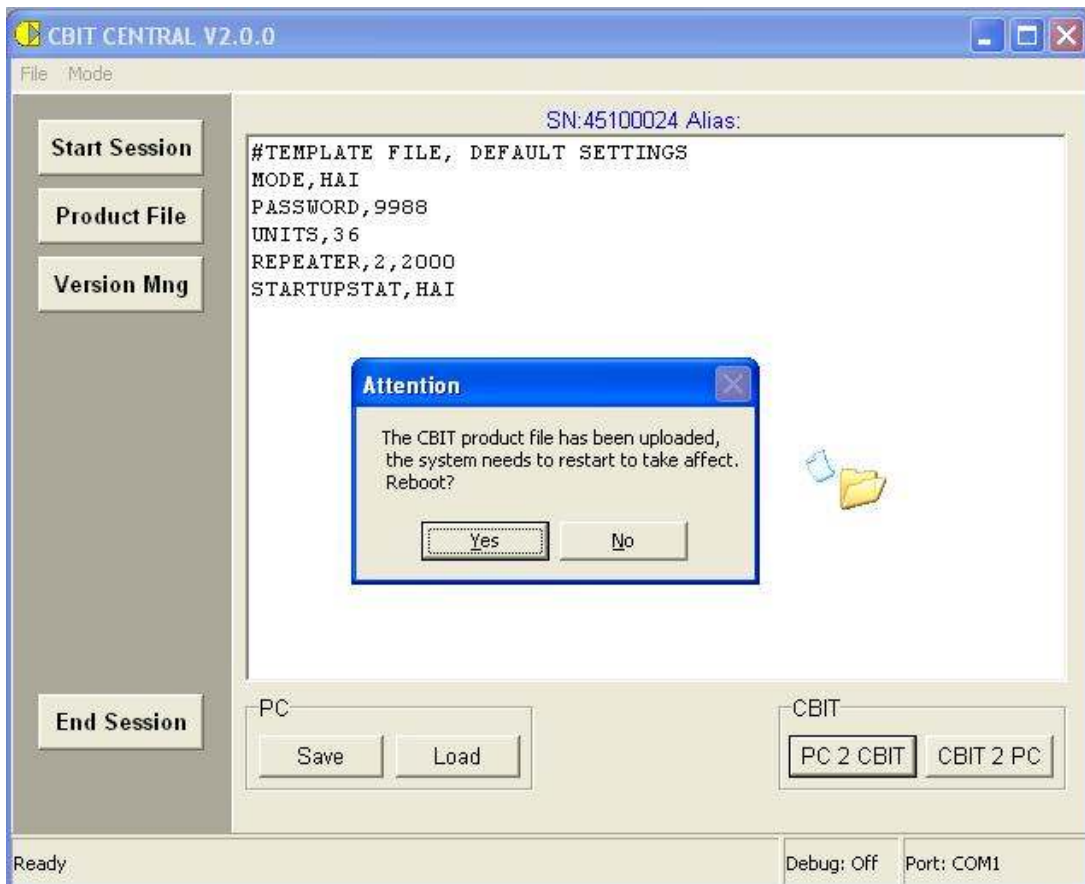
After you have created, loaded or downloaded a product file you may freely edit the product file using the structured syntax format as previously explained under CBIT product file configuration.

To update the product file, first save the product file to the PC hard drive or other storage device. The file name must start with cbit.



Then click the “PC 2 CBIT” button, the product file will then be uploaded from the PC to the CBIT module.

Once the Up-load process has been completed successfully the user will be prompted with a message to either restart the CBIT module now or restart the CBIT module later.



Selecting “Yes” when prompted to restart will display the “Start Session” form with a countdown on the “Set Port” button.

Selecting “No” when prompted to restart will display a **“Reboot”** button in the navigation bar.

Note: The CBIT module must be rebooted (restarted) for the uploaded product file to take affect.

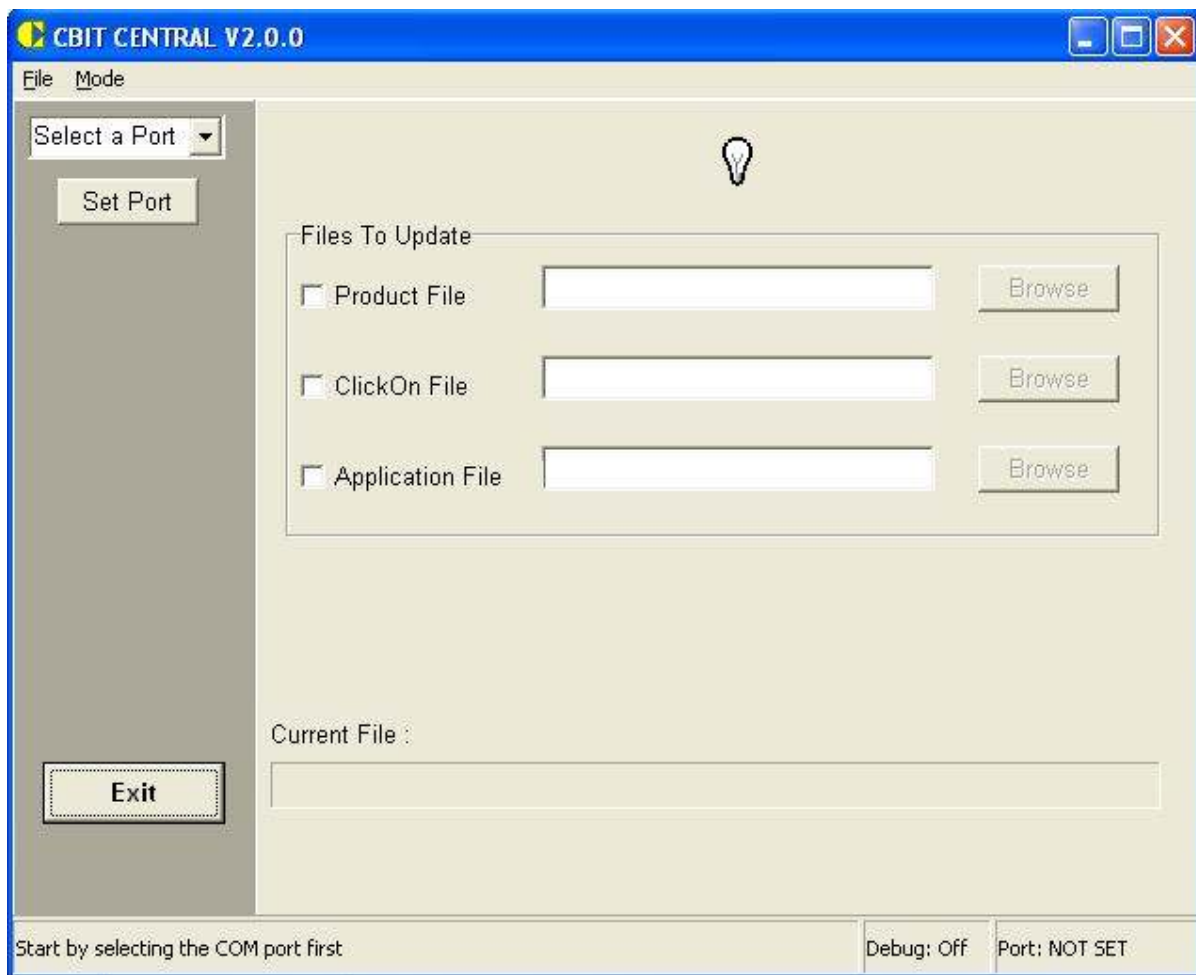
3.6. CBIT Uploader via the RS232 com port

To configure or Up-load to the CBIT module via RS232 Com port from the PC Com port requires the use of a cross over serial cable.

Execute the CBIT CENTRAL (CBIT Uploader) program on your PC.

3.6.1. Switch Mode

Firstly switch mode from the default mode to the RS232 program mode: on the toolbar select, Mode->RS232: COM Port.



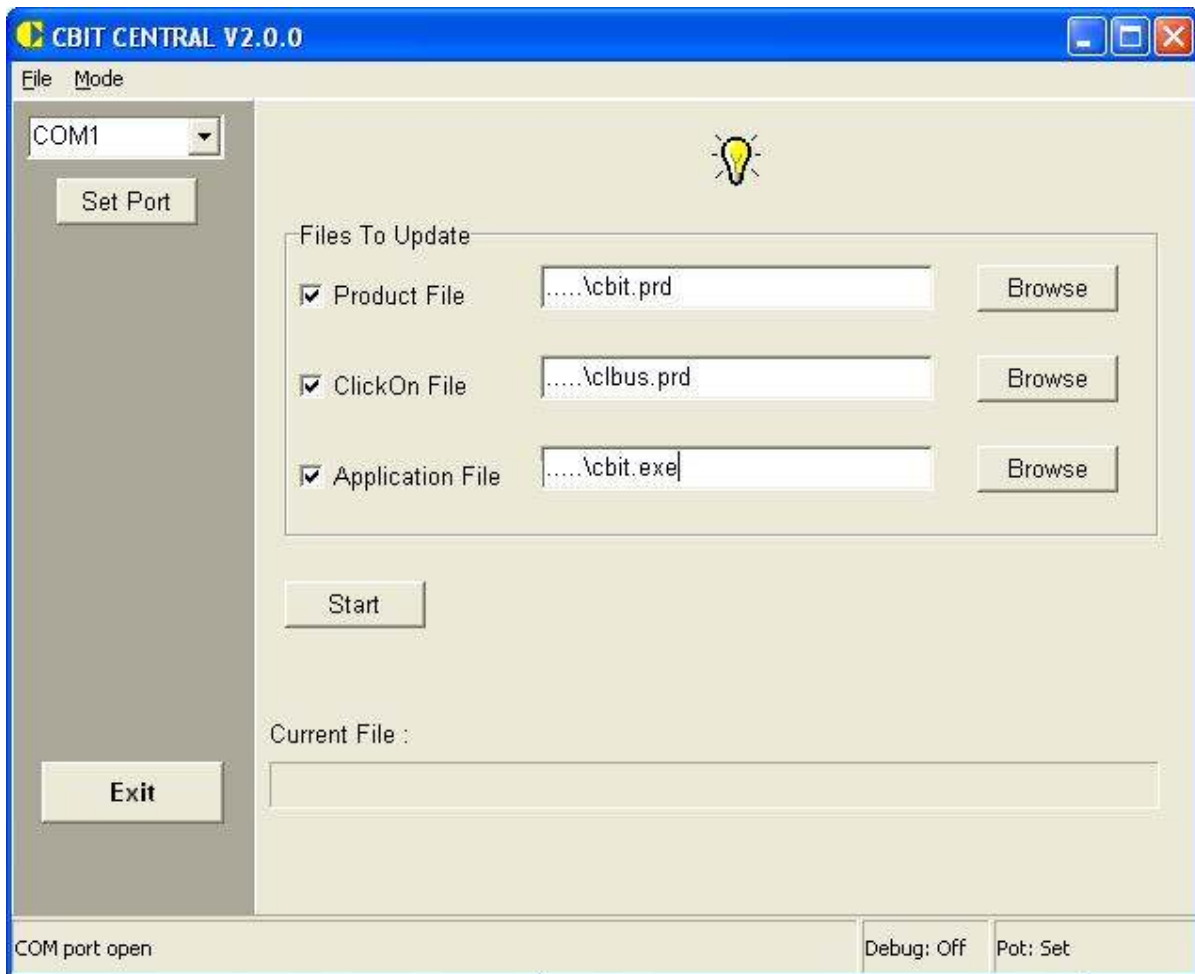
3.6.2. Selecting & Setting a COM port

Start by selecting the COM port located on your PC and clicking the “Set Port” button, if the COM port is valid and available the light bulb in the form will glow. If

prompted to select another COM port make sure that the COM port selected is correct, if the COM port is correct make sure that all other programs are closed that could possibly use the same COM port.

3.6.3. Selecting files to be uploaded

Mark the check boxes on the left hand side of the form beside the file you wish to upload. Then click on the “Browse” button to locate the file to be uploaded. It is not necessary to check all the boxes and update all the files, only check the box next to the files that you want to update.



3.6.4. Starting the upload process

- 3.6.4.1. Select the files you want to update on the CBIT module.
- 3.6.4.2. Reset the CBIT module by power cycling the CBIT module, there will be a sequence of beeps followed by a 10 second pause, file transfer is only possible during the 10 second pause.
- 3.6.4.3. During the 10 second pause press the Start button on the CBIT uploader application on the pc. The file transfer will then commence.
- 3.6.4.4. When the files transfer has completed there will be a 10 second pause before the CBIT application will start. The Uploader program on the CBIT module will terminate with the same sequence of beeps with which it started.
- 3.6.4.5. The CBIT application will start immediately after the Uploader program has closed.

4. Diagnostics

4.1. CBIT.exe Version Audio Report

The cbit.exe version is reported by generating Audible beeps on the CBIT module at the start of the program, there is a pause between the master and release version beeps and then another pause before any other error and/or non-fatal error messages are reported.

Master version number				Release version number				Version
Low	Low	Low	High	High	Low	High	Low	1 10
Low	Low	Low	High	High	Low	High	High	1 11
Low	Low	Low	High	High	High	Low	Low	1 12
Low	Low	High	Low	Low	Low	Low	Low	2 00
Low	Low	High	Low	Low	Low	Low	High	2 01
Low	Low	High	Low	Low	Low	High	Low	2 02
Low	Low	High	Low	Low	Low	High	High	2 03
Low	Low	High	Low	Low	High	Low	Low	2 04
Low	Low	High	Low	Low	High	Low	High	2 05
Low	Low	High	Low	Low	High	High	Low	2 06
Low	Low	High	Low	Low	High	High	High	2 07
Low	Low	High	Low	High	Low	Low	Low	2 08
Low	Low	High	Low	High	Low	Low	High	2 09

4.2. Fatal Error Audio report

Fatal error conditions are reported by generating Audible beeps on the CBIT module.

Fatal errors are verified sequentially, thus if the first fatal error condition is encountered the application will terminate after reporting the error message 5 times, even if the second or subsequent error conditions are present. Correct the relevant error and then reset the CBIT module by power cycling the CBIT module (i.e. remove the bus network cable or the power supply cable if installed).

Fatal errors are reported by a number of long high beeps.

Each beep within the set is separated by a 2 second pause.

Each set of beeps are separated by a 5 second pause before the fatal error message is repeated.

The Fatal Error message will be repeated 5 times, during the error message reporting sequence the user may attempt to repair the cause of the error. If the user succeeds to repair the error within the reporting time, the application will continue its start up procedure. Only errors 1 and 2 can be corrected in this manner.

Fatal Error beeps:

- 1 long high beep: The CBIT module is not connected to the Controller (Check that the product is connected and then reset the CBIT module). In version 2 and above of the CBIT application, this is no longer a fatal error. Instead of restarting the CBIT module after 5 min, the CBIT module will go into a stand alone mode making it possible to manage the CBIT module through CBIT CENTRAL (version 2 and up).
- 2 long high beeps: The CBIT module is not connected to the ClickOn Bus network (Check that the product is connected and then reset the CBIT module).
- 3 long high beeps: The clbus.prd file was not found on the CBIT module (upload the latest clbus.prd files and then reset the CBIT module).
- 4 long high beeps: The serial number on the CBIT module is not valid (Call for further assistance)
- 4 long high beeps followed by a chime: The password specified in the cbit*.prd file is not valid for the log-on procedure to the HAI controller. Correct the password in the cbit*.prd file or on the HAI controller board.

All fatal errors need to be corrected before the CBIT module will continue with the start up procedure. Once the error has been corrected power cycle the CBIT module to reset the CBIT module. If the error is not repaired correctly the error message will be repeated after each power cycle reset.

4.3. Non-Fatal Error Audio report

Non-Fatal error conditions are reported by generating Audible beeps on the CBIT module.

Once the fatal error checking has completed successfully the CBIT module will start checking for non-fatal errors. Non-fatal errors are verified sequentially and reported sequentially; non-fatal error conditions that are encountered will not terminate the application. Correct the relevant errors and then reset the CBIT module.

Non-Fatal errors are reported by an audible code of beeps comprising of an index beep followed by counter beep that indicates the number of the same error occurring.

Non-fatal errors:

The codes are shown as [Index beep(s)] – [Counter beep(s)] where index beep(s) indicate the error code, this beep is followed by a short pause and then followed by counter beep(s) indicating how many of the same error occurred during start up. For example 2 – 3 represents index beep of 2 followed by a pause and then by 3 short beeps. Each error code is repeated 3 times. If there are multiple error types the error message will be separated by a 5 second delay between each type of error.

Index beep 1-X is related to errors encountered within the cbit*.prd file:

1-X: This error is caused by clashing unit numbers in the cbit*.prd product file, one or more of the entries in the files has the same unit number. The number of clashes is represented by the number of X-beeps.

Index beep 2-X is related to errors encountered within the ClickOn Bus Addressing:

- 2-X: This error is caused by clashing address numbers on the ClickOn Bus network; one or more bus devices have the same address number. The number of clashes is represented by the number of X-beeps.

Index beep 3-X is related to errors encountered between the cbit*.prd file and the ClickOn Bus Addressing:

- 3-X: This error is caused by one or more ClickOn Bus devices having a corresponding unit number in the cbit*.prd product file. The number of clashes is represented by the number of X-beeps.

Index beep 4-X is related to specific type of errors encountered:

- 4-1: This error is raised when there is no cbit*.prd file loaded on the CBIT module. The defaults will be assumed to be correct.

4.4. General Error Audio report

Further audible reporting has been incorporated within the CBIT module to facilitate checking for errors and generating a warning while the user is updating the systems or making any changes.

- 2 short beeps: The user added / changed a bus address number (unit number) using an external tool (for example the CL BUS installer program). These audible beeps will only sound once while changes are made to the ClickOn Bus network. The CBIT module will automatically reboot itself (if not done) after 5 minutes since the last change was made on the network.

4.5. Error Message Table

Error message	Problem	Solution
There was no CBIT Module found or the CBIT.exe file running on....	The interface is not connected to the ClickOn-Bus or the CBIT module is running a lower application version.	Check the connections on the ClickOn-Bus network; if no fault is found make sure that the CBIT module is running version 2 or higher.
Please make sure that your pc interface is plugged in.	The uploader program could not establish a connection to a ClickOn-Bus network.	Check the connections on the ClickOn-Bus network and that you selected the correct COM port on which your PC interface is plugged into.
Please select another COM port	The COM port selected is not a valid port on the user PC.	Please select another port and try again.
Select a valid product file	file path or file integrity problem	Please make sure that the path given is still valid.
Select a valid application file	File path or file integrity problem	Please make sure that the path given is still valid.
Select a valid ClickOn file	File path or file integrity problem	Please make sure that the path given is still valid.
Please select a file	There is no file selected to be downloaded, this message and the 3 above only apply to the RS232: COM port mode.	Select any of the three files to be uploaded by checking the check box next to it and specifying a correct path to the file allocated on your PC.
Please select a version	No version is selected from the given list.	Select a version number from the drop down list.
Error trying to copy file, Retry	Write protected media or user is restricted by the Administrator.	Contact the administrator of the PC.
The version already exists. Overwrite?	The profile selected to be imported already exist.	
Could not open version file	Write protected media or user is restricted by the Administrator.	
Could not copy the version	Write protected media or user is restricted by the Administrator.	
Failed to save file	Write protected media or user is restricted by the Administrator.	
Please select a COM port from the list	There is no COM port selected from the list given.	Select a COM port from the list.

5. Overview for HAI mode

The integration of the ClickOn products and the HAI controller is done via the installation of a ClickOn Bus Interface Translator (Part No.: CB-IFT-10).

The ClickOn Bus Interface Translator (CBIT) module must be set-up in the HAI mode (refer to the configuration section) and is used as a translator between the ClickOn protocol and the HAI protocol to allow two way communications between the ClickOn Products and the HAI Products.

The ClickOn Bus Interface Translator (CBIT) connects to the ClickOn Bus via a normal ClickOn Bus Cable (CAT5 UTP) and via a HAI PC Access RS232 cable to the serial port of the HAI Controller.

The system operates by creating a relationship between the ClickOn products and the HAI products. This relationship between the two products is achieved by cross referencing the serial number of the ClickOn product to a unit number that correlates to the same unit number of the HAI controller.

The following HAI controllers have been tested for compatibility:

- OmniLT
- Omni
- Omni II
- Omni IIe
- OmniPro
- OmniPro II

The compatibility of other and future controllers from HAI can be evaluated on request.

5.1. *Check List prior to installing the CBIT module with the HAI Controller*

The following check list is critical for correct operation:

- Ensure that all units within the HAI controller are configured to the same protocol, namely the extended format. Use the HAI PC Access software under "Setup, Misc..., Control tab". The protocol of the units in groups of 16 will be displayed. Ensure that they are all the same, i.e. extended.
- Configure a unique password (Code) in the HAI controller that will not be changed by the user (it is recommended that the code address above the duress code be used)

- Ensure that the unique code has a master code status.
- Ensure that the password (Code) in the HAI program matches the password specified in the cbit*.prd file or visa versa.
- Ensure that the password is a valid master code as specified on the HAI controller board, if not the controller will exit the log-on procedure with a distinct chime, the HAI controller will then lock the serial port for an hour if the wrong password is given 3 times.
- Ensure that the number of units specified in the cbit*.prd file is correct with reference to the HAI controller being used and the programming requirements.
- Ensure that the events programmed into the HAI controller are valid and do not cause any oscillation that may slow down the HAI controller.
- Ensure that the latest available version is uploaded to the CBIT module; check the ClickOn website at www.clickon.co.za for the latest available version.

5.2. Plan ahead for the unit addresses to be given to ClickOn devices.

Certain of the units on the HAI controller board are only flag units or on / off types and are therefore not suitable for dimmers or any other devices that require enhanced command set structures.

These units are usually the last units on the HAI controller board and may differ between different controller boards.

Ensure that the “All ON / All OFF” command sets are specified correctly for the units that require to be turned on / off via these buttons and are specified as “OFF” for the remainder of the units. (This saves processing time).

The CBIT Uploader (CBIT CENTRAL) software application will be used to configure and up-load the cbit*.prd file that was create / modified. Ensure that the cbit*.prd file reflects the correct change of the password and the number of the highest HAI controller unit that needs to be cross referenced (the assumed default is 36).

The Unit address number given to the ClickOn Bus device correlates to the Unit number in the HAI controller, thus the CBIT module will automatically build its own cross reference between the two product ranges once they are both powered up correctly.

6. Overview for Generic mode

The integration of the ClickOn products and the HAI controller is done via the installation of a ClickOn Bus Interface Translator (Part No.: CB-IFT-10).

The ClickOn Bus Interface Translator (CBIT) module must be set-up in the Generic mode (refer to the configuration section) and is used as a translator between the ClickOn protocol and the Generic CBIT Protocol Specification for use by 3rd party controllers to allow two way communications between the ClickOn Products and the 3rd Party Products.

The CBIT (ClickOn Bus Interface Translator) module, when configured in the Generic mode, awaits commands from a host. The CBIT module provides simplified access to a networked ClickOn Bus installation / configuration.

The host is responsible for issuing all commands.

The ClickOn Bus Interface Translator (CBIT) connects to the ClickOn Bus via a normal ClickOn Bus Cable (CAT5 UTP) and via a cross over RS232 cable to the host.

The system operates by creating a relationship between the ClickOn products and the HOST. This relationship between the two products is achieved by cross referencing the **serial number** of the ClickOn product to a **unit number** that the HOST will utilise to address the ClickOn product (refer to the configuration section for details of unit configuration).

The CBIT product file is used to modify / change the mode, baud speed, number of assumed cross reference units, repeater settings and start up status.

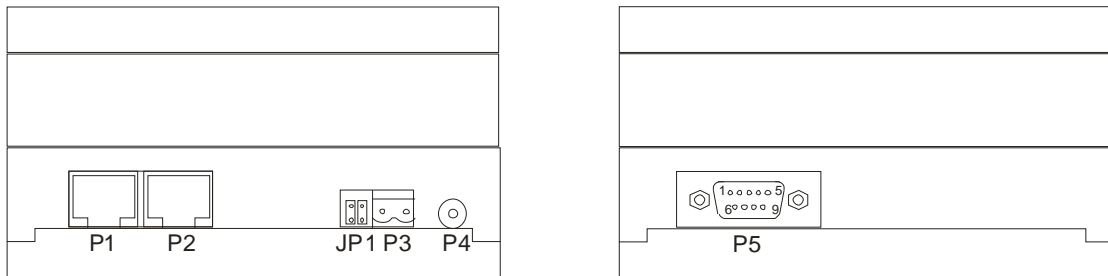
The CBIT product file is also used to define the cross reference relationship between the ClickOn Bus products and the HOST units manually or to define the relationship between ClickOn RF products (e.g. remote controls, wall-mount remote controls, etc.) and the HOST Unit numbers.

The product file name that needs to be created / modified must start with **cbit**. Once the file has been created / modified it will need to be uploaded to the CBIT module using the CBIT Uploader (CBIT CENTRAL) Application.

The RS232 protocol structure to be used is defined in the Generic CBIT Protocol Specification manual.

7. Hardware Specifications

Hardware Connections

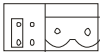


P1, P2 RJ45 CAT5 connection to ClickOn Bus Network.

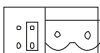
P3 16 – 24VAC/DC supply input

P4 16 – 24VAC/DC supply input

JP1 Power supply options jumper:



Unit is supplied power from the ClickOn Bus network (no need for a supply input on P3 / P4)

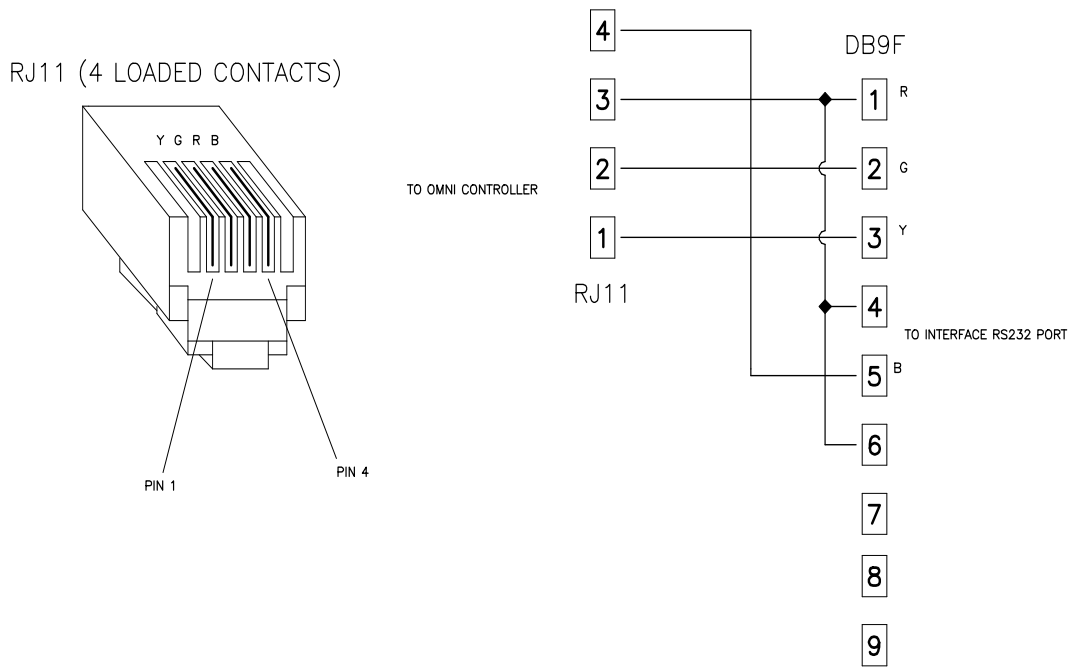


Unit supplies power to the ClickOn Bus Network (300mA max) (must have a supply input on P3 or P4)

P5 RS232 Port:

- Pin 1: DCD input
- Pin 2: RXD input
- Pin 3: TXD output
- Pin 4: DTR output
- Pin 5: GND
- Pin 6: DSR input
- Pin 7: RTS output
- Pin 8: CTS input
- Pin 9: RI input

INTERFACE CABLE TO HAI OMNI CONTROLLER



DOWNLOAD CABLE

