



Synergy Configuration Software
Users Guide



An **AcuityBrands**™ Company

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I. Introduction

This document is intended as a guide for using the Synergy SYSW CONFIG software application to program, control and monitor a Synergy lighting control system. This document is not intended as a guide to the functionality of the Synergy system. It is strongly recommended that the user first become familiar with the operation of the Synergy controller by reading the *Operation and Programming Guide* for the controller. It is also assumed that the user is reasonable literate in the use of Microsoft Windows. If you are not a regular user of Windows, you may find it helpful to first review Microsoft Windows using one of the many books available for this purpose.

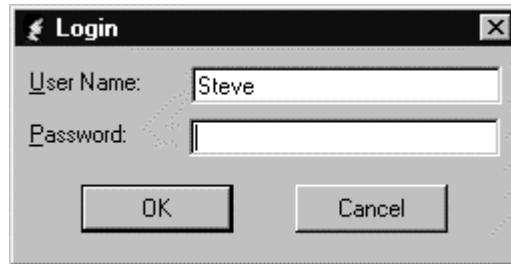
The task of entering data for the user program is performed “off line”. That is, the PC on which you are working does not need to be connected to a Synergy system to perform this task. The data you enter into the program is automatically saved to the hard drive on the PC in the form of a data base with the file extension *.mdb*. The process of installing the user program into the Synergy controller(s) is called downloading. It is necessary for the PC to be properly connected to the front of the controller or to the Synergy network for this process to be performed. Once the user program is transferred to the controller(s), it is stored there as a text file called *script.txt*.

The Synergy CONFIG application is comprised of several software modules. The screens for entering and editing the user program off line make up most of the application. CONFIG also contains two online modules that are used to communicate with the controllers. The *Network Services* module is the primary means to download and upload user programs, view the actual status of controlled loads, and manually control loads in real time. The *Terminal Window* is provided for system diagnostics and maintenance. It is intended for use by advanced users. Both the *Network Services* and *Terminal Window* functions require that the PC be connected to the system for operation.

II. Getting Started

Starting the Application

To start the CONFIG application double click the Synergy icon on the desktop or navigate to `Synergy.exe` and double click the file. The *Login* box will immediately appear prompting you for a *User Name* and a *Password*. Enter the User Name and Password that have been assigned to you and click OK. If no user names have previously been created, this box will be bypassed and the application will launch without first prompting for login information.



The Project Closed Main Menu

Once the application is running, a blank screen titled *Project Closed* will be displayed. The *User Name* of the current operator will be displayed in the lower left corner and the current date and time from the PC will be displayed at the lower right. The main menu will appear at the top left of the screen. The main menu functions are as follows:

File

New – Use this selection to begin a new project. Clicking this selection opens the *New Project* dialog box. Here you will name the project and provide a location where the project will be saved. The default location is the Projects directory in the home directory for the CONFIG application, usually `C:\Program Files\Synergy Configuration\`

Open – Opens the Projects dialog box. Select a project from the list and click *Open* or double click on your selection to open the project.

Delete – Use this selection to delete a project that is currently saved. Select a project from the list and click *Open* or double click on your selection to open the project. When prompted, confirm the deletion by clicking *Yes* or cancel the deletion by clicking *No*.

Database Utils

Compact Database -- Use this selection to compact the current database making the file smaller. It is good practice to do this prior to exporting.

Repair Database – This tool should be used if you have encountered any database errors while using CONFIG.

Options

Enable Graphics Module, Enable Usage / Trend -- These selections are used to enable the optional Graphics and Usage / Trend modules. If these selections are grayed out, then they are currently enabled on your system. Contact the factory for pricing and information regarding enabling these modules if they have not been already.

Passwords -- See *Setting up CONFIG Passwords* below to establish password protection for you system.

Open Last File – When this option is selected, the CONFIG application will bypass the Project Closed screen and automatically open the last database that was worked on whenever it is launched.

Logon – Opens the password *Logon* box and allows a new user to log on and use CONFIG.

Help

Contents – Displays the *Help* file Table of Contents.

Search for Help On... - Opens the *Help* file search dialog box.

About – Displays information about CONFIG.

Setting up CONFIG Password Protection

From the *File* menu of the Project Closed screen, select *Options*, than *Passwords*. The *User Administration* box will open.

	User Name	Password	Access
1	Steve	Mpy7uJnm	Administrator
2	Joe	Lke56Trg	View
3	Rich	9pLknbgSS	Operate
4	Pete	009Uytnba	Configure
5			
6			
7			
8			
9			
10			
11			
12			
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20			

From this box, you can enter a list of users, each with a unique password, and each assigned an access level that will restrict what functions will be available to them. **If you will be using the Password feature, be sure to set up at least one Administrator.**

If any users are set up without there first being an Administrator, it will be impossible to open the User Administration box again.

The four available access levels are:

Administrator – no restrictions, can edit User Names, Passwords, and Access levels.

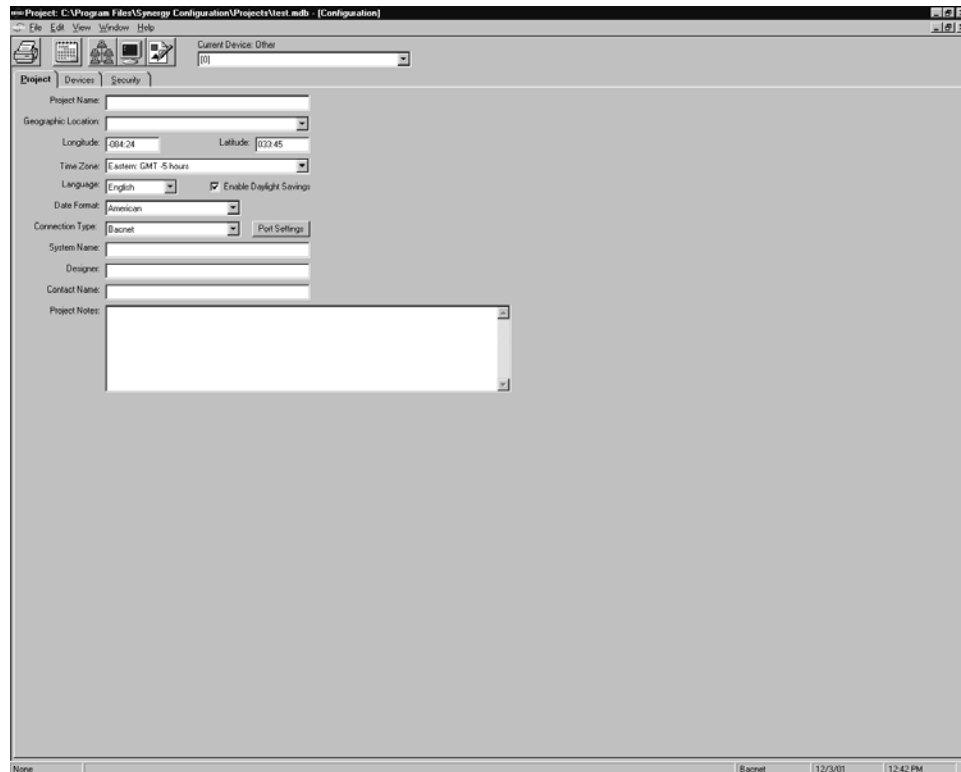
Configure – can perform all functions except edit User Names, Passwords, and Access levels.

Operate – can control and monitor the lighting only, can view but not edit the programming

View – can view the programming and monitor lighting status but affect no changes to the programming or lighting.

Starting a New Project

From the *file* menu, click *New*. The *New* project box will open. Enter a name for the project than click *Open*. Depending on the speed of your PC, a progress indicator box will appear for a few seconds as the data base structure is created. The project will then open with the *Project* tab selected and visible on the screen.



The Project Main Menu

File

Import Script – Use this selection to import a saved script file from a location or drive other than the *Projects* folder.

Export Script – Use this selection to save a script file to a location or drive other than the *Projects* folder.

Network Services – Opens the *Network Services* screen. A *Network Services* shortcut icon is also located on the tool bar line below the main menu.

Graphics - Opens the *Graphics* screen. A *Graphics* shortcut icon is also located on the tool bar line below the main menu.

Terminal – Opens the terminal emulation module. A *Terminal* shortcut icon is also located on the tool bar line below the main menu (see the Appendix for use of the terminal emulation module).

Print – Opens the print dialog box. Select one or more controller to print data from. Check the box next to the data you wish to print for each selected controller. The data can be viewed prior to printing by clicking the *Preview* button.

Settings – Opens the communication port dialog box (see the Appendix for communication port settings).

Close Configuration – Use this selection to close the current *Project* and return to the *Project Closed* screen.

Edit (the *Edit* menu is not used on this screen)

View

Logs

Archive Upload Log – Use this selection to view the *Archive Upload Log* (see the Appendix for using the auto archive features of CONFIG).

Tabs – Displays a list of the CONFIG tabs. A check to the left of a selection indicates that the tab will be displayed. Click on a selection to toggle the check mark on or off. Un-checking a tab selection will hide it from view. Hiding a tab will not affect the data.

Window – Displays the current active screen mode. If the Graphics mode has previously been used, this menu selection can be used to toggle between the normal Configuration screen and Graphics. A check mark indicates the current screen mode.

Help

Contents – Displays the *Help* file Table of Contents.

Search for Help On ... - Opens the *Help* file search dialog box.

About – Displays information about CONFIG.

The Project Tab

The text fields on the project tab screen are all optional. Fill these in as appropriate.

Pull down the *Geographic Location* selector and select the location closest to the actual site that the system is installed. Once selected, the *Longitude* and *Latitude* fields will automatically update. This information is used by the clock in the Synergy controller(s) to calculate sunrise and sunset times for scheduling purposes. If a suitable location is not listed, manually enter the longitude and latitude of the installation.

Under *Connection Type*, select *Serial* if your PC is to be connected to the DB-9 connector on the face of a Synergy controller with a serial cable. Select *Bacnet* if the PC will be connected directly to the network wire. Consult the installation instructions for information on *Port Settings* and installing the network drivers necessary for an BACnet connection.

Before you can actually begin entering data, CONFIG must know the hardware (modules) present in your system. This information can be entered manually. However, the most expedient method is to have CONFIG discover your hardware automatically. **In either case, it is necessary for the hardware (Synergy controller addresses and power module types and addresses) to be properly set in each panel before CONFIG can be used.** Consult the installation instructions and optional factory supplied *As Built Documents* for assistance with setting up the hardware.

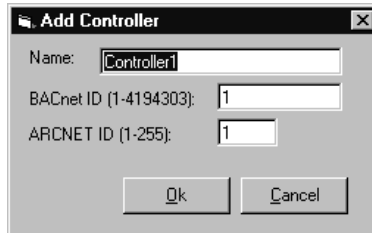
To have CONFIG discover your hardware for the initial set-up:

First, be certain that the PC is properly connected to Synergy, then click the *Network Services* button on the main tool bar or select *Network Services* from the *File* menu. CONFIG will search and display a list of all controllers found in your system. Manually select all controllers or click the *Select All* button. Under *Retrieve Options*, check the *Program* box. Click the *Retrieve* button. Observe the progress on the screen. Dependent upon the size of your system, this process could take several minutes to complete. When the upload is complete, click the *close* button to exit the network services screen.

Click the *Devices* tab. You should now see a complete listing of the controllers in your system and are ready to begin entering data for your project.

To manually enter your hardware configuration:

Click the *Devices* tab. Right click anywhere on the white portion of the screen, or select the *Edit* menu, then select *Add Device* to open the *Add Device* dialog box.



You may give each device a unique name by typing it in the *Name* field, or accept the default name. This name will appear in the LCD display on the user interface panel of the controller. The BACnet ID and ARCNET ID must match the settings in the controller hardware and can only be changed at the controller. Click Ok. Repeat for each device in your system.

If a device in this system is a SYSC GATEWAY, change the entry in the Type column for that address to the appropriate Gateway type for the third-party legacy system that the Gateway will be controlling.

Note: The SYSC GATEWAY must be initially configured via the keypad on the device. Adding the Gateway in the software allow the Gateway points to be included in Synergy controller groups and allows these points to be directly controlled.

Once all of the controllers have been added to the devices tab, you are ready to begin entering data for your project.

The Security Tab

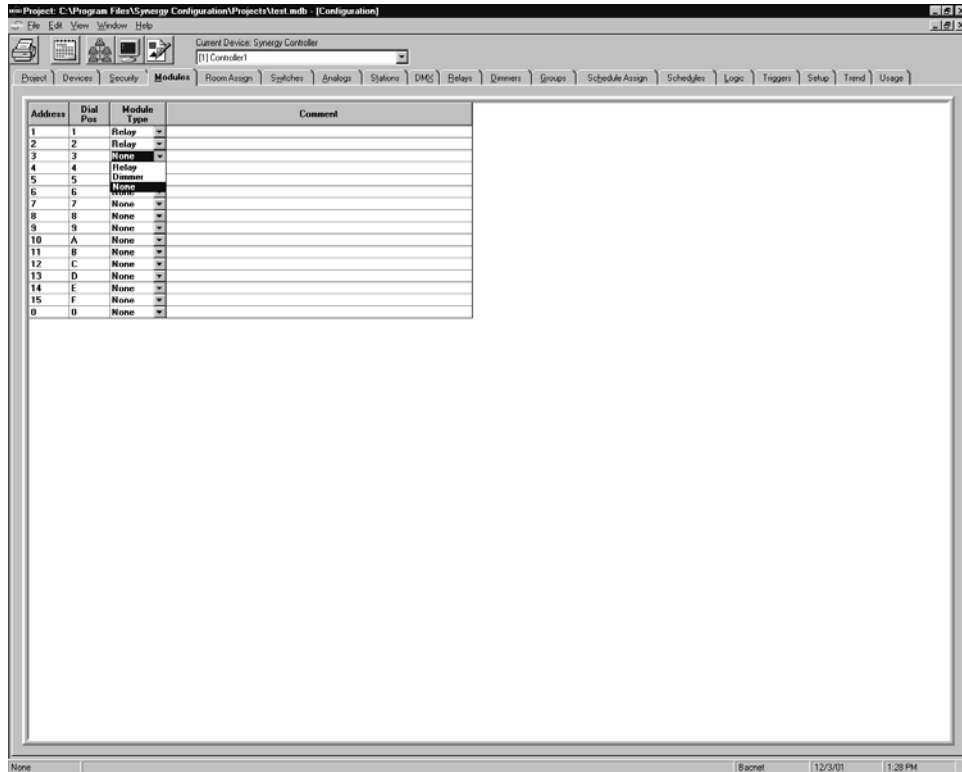
For each controller, use the pull down menus to set the respective passwords for each access level. These password control access to the functions available via the keypad on the controller and have no effect on system access via the software. For complete information about software access control, refer to the section titled ‘Setting Up CONFIG Password Protection’ on page 5.

The screenshot shows the 'Security' tab in the Synergy CONFIG software. The window title is 'Project: C:\Program Files\Synergy Configuration\Projects\Uvcc.mdb [Configuration]'. The current device is 'Synergy Controller' and the selected module is '11 DBM'. The table below lists various device names and their access levels for four categories: Overriding, Programming, Setting Up, and Searching.

Name	Overriding	Programming	Setting Up	Searching
(1) DBM	0000	0000	0000	0000
(2) DBM	0000	0000	0000	0000
(3) DBM	0000	0000	0000	0000
(4) 110N1	0000	0000	0000	0000
(5) 210N3	0000	0000	0000	0000
(6) 210N1	0000	0000	0000	0000
(7) 110N2	0000	0000	0000	0000
(8) 110E1	0000	0000	0000	0000
(9) 110N3	0000	0000	0000	0000
(10) 210N2	0000	0000	0000	0000
(11) 210E1	0000	0000	0000	0000
(12) 110N4	0000	0000	0000	0000
(13) 210N4	0000	0000	0000	0000
(14) 111N1	0000	0000	0000	0000
(15) 211N1	0000	0000	0000	0000
(16) 211N3	0000	0000	0000	0000
(17) 111N3	0000	0000	0000	0000
(18) 211E1	0000	0000	0000	0000
(19) 111N2	0000	0000	0000	0000
(20) 211N2	0000	0000	0000	0000
(21) 211N4	0000	0000	0000	0000
(22) 111E1	0000	0000	0000	0000
(23) 111N4	0000	0000	0000	0000
(24) 112N3	0000	0000	0000	0000
(25) 212N3	0000	0000	0000	0000
(26) 212N1	0000	0000	0000	0000
(27) 112N1	0000	0000	0000	0000
(28) 212E1	0000	0000	0000	0000
(29) 112E1	0000	0000	0000	0000
(30) 112N4	0000	0000	0000	0000
(31) 212N4	0000	0000	0000	0000
(32) 212N2	0000	0000	0000	0000
(33) 112N2	0000	0000	0000	0000
(34) 113N1	0000	0000	0000	0000
(25) 113E3	0000	0000	0000	0000
(36) 113N2	0000	0000	0000	0000
(37) 113N3	0000	0000	0000	0000
(38) 213N3	0000	0000	0000	0000
(39) 213N2	0000	0000	0000	0000
(40) 213N1	0000	0000	0000	0000
(41) 213E1	0000	0000	0000	0000
(42) DBM1	0000	0000	0000	0000
(43) DBM1	0000	0000	0000	0000
(44) DBM2	0000	0000	0000	0000
(45) DBM2	0000	0000	0000	0000

The Modules Tab

For each controller, use the *Module Type* pull down to tell CONFIG what modules are present. Note that the *Dial Pos* for each module must match the settings on the actual hardware. This process will automatically establish the proper quantity of inputs (switches/analog inputs) and outputs (relays/dimmers) that will be available from the respective tabs.



Working With Switches

Naming a Switch

Navigate to the desired switch by selecting the *Switch* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of switches associated with the selected controller will be displayed. Double click in the *Name* field of the desired switch and re-type the name as you wish it to appear.

Setting Switch Input Type

Navigate to the desired switch by selecting the *Switch* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of switches associated with the selected controller will be displayed. Use the *Type* pull down to choose the appropriate type.

Assigning a Switch Input to Control a Group

Navigate to the desired switch by selecting the *Switch* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of switches associated with the selected controller will be displayed. Use the *Group* pull down to scroll through the available groups. Choose the group to be controlled by this switch. Note that a switch can only be assigned to control a single group.

Setting a Switch Input to Timeout

Navigate to the desired switch by selecting the *Switch* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of switches associated with the selected controller will be displayed. Double click in the *Timeout* field for the switch and retype in the desired time.

Setting the Warn (before OFF) Interval for a Switch

Navigate to the desired switch by selecting the *Switch* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of switches associated with the selected controller will be displayed. Double click in the *Warn* field for the switch and retype the desired time or use the increment/decrement buttons to change the value.

Setting the Priority of a Switch Input

Navigate to the desired switch by selecting the *Switch* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of switches associated with the selected controller will be displayed. Use the *Priority* pull down list for the switch to choose the desired priority level.

Working with Analog Inputs

Naming an Analog Input

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Double click in the *Name* field of the desired analog input and re-type the name as you wish it to appear.

Setting Analog Input Type

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Use the *Type* pull down to choose the appropriate type.

Assigning an Analog Input to Control a Group

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Use the *Group* pull down to scroll through the available groups. Choose the group to be controlled by this input. Note that an analog input can only be assigned to control a single group.

Setting an Analog Input to Timeout

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Double click in the *Timeout* field for the analog input and retype in the desired time.

Setting the Warn (before OFF) Interval for an Analog Input

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Double click in the *Warn* field for the analog input and retype the desired time or use the increment/decrement buttons to change the value.

Setting the High Set Point for an Analog Input

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Double click in the *High Set* field for the analog input and retype the desired set point value or use the increment/decrement buttons to change the value.

Setting the Low Set Point for an Analog Input

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Double click in the *Low Set* field for the analog input and retype the desired set point value or use the increment/decrement buttons to change the value.

Note: setting both the *High Set* and *Low Set* points to 0 will cause this analog input to operate in the tracking mode. Checking the *Track* box for the analog input will automatically set the high and low set points to 0 and set the tracking mode.

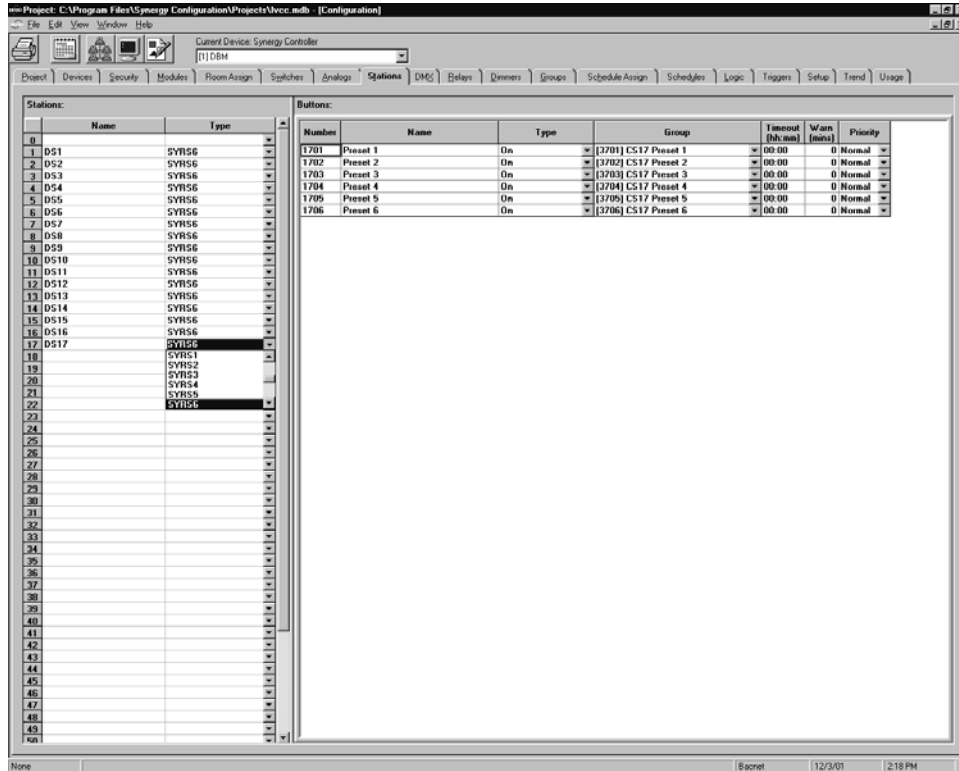
Setting the Priority of an Analog Input

Navigate to the desired analog input by selecting the *Analogs* tab. Choose the controller with which the analog input is associated from the pull down list. A complete list of analog inputs associated with the selected controller will be displayed. Use the *Priority* pull down list for the analog input to choose the desired priority level.

Working with Stations

Adding Stations

Choose the appropriate controller using the pull down list above the tabs, and then use the Type pull down to tell CONFIG what type of station is at each address. Each time a station is added, the appropriate button inputs and relay / dimmer outputs (if applicable) will be added to the appropriate tabs. It may give each station a descriptive name by double-clicking on the cell in the Name column for that station, or you may leave the default name unchanged.



Naming a Button

Navigate to the desired station by selecting it from the list on the left. A complete list of buttons associated with the selected station will be displayed. Double click in the *Name* field of the desired button and re-type the name as you wish it to appear.

Setting Button Type

Navigate to the desired station by selecting it from the list on the left. A complete list of buttons associated with the selected station will be displayed. Use the *Type* pull down to choose the appropriate type.

Assigning a Button Input to Control a Group

Navigate to the desired station by selecting it from the list on the left. A complete list of buttons associated with the selected station will be displayed. Use the *Group* pull down to scroll through the available groups. Choose the group to be controlled by this button. Note that a button can only be assigned to control a single group.

Setting a Button Input to Timeout

Navigate to the desired station by selecting it from the list on the left. A complete list of buttons associated with the selected station will be displayed. Double click in the *Timeout* field for the button and retype in the desired time.

Setting the Warn (before OFF) Interval for a Button

Navigate to the desired station by selecting it from the list on the left. A complete list of buttons associated with the selected station will be displayed. Double click in the *Warn* field for the button and retype the desired time or use the increment/decrement buttons to change the value.

Setting the Priority of a Button

Navigate to the desired station by selecting it from the list on the left. A complete list of buttons associated with the selected station will be displayed. Use the *Priority* pull down list for the button to choose the desired priority level.

Working with Relays

Naming a Relay

Navigate to the desired relay by selecting the *Relays* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of relays associated with the selected controller will be displayed. Double click in the *Name* field of the desired relay and re-type the name as you wish it to appear.

Setting Relay Type

Navigate to the desired relay by selecting the *Relays* tab. Choose the controller with which the relay is associated from the pull down list. A complete list of relays associated with the selected controller will be displayed. Use the *Type* pull down to choose the appropriate type.

Setting the Phase of a Relay

Navigate to the desired relay by selecting the *Relays* tab. Choose the controller with which the relay is associated from the pull down list. A complete list of relays associated with the selected controller will be displayed. Use the *Phase* pull down list for the relay to choose the electrical phase to which this relay is connected.

Setting the Low Set Point for a Relay

Navigate to the desired relay by selecting the *Relays* tab. Choose the controller with which the relay is associated from the pull down list. A complete list of relays associated with the selected controller will be displayed. Double click in the *Low Set* field for the relay and retype the desired set point value or use the increment/decrement buttons to change the value.

Assigning a Connected Load Value to a Relay

Navigate to the desired relay by selecting the *Relays* tab. Choose the controller with which the relay is associated from the pull down list. A complete list of relays associated with the selected controller will be displayed. Double click in the *Load* field for the relay and retype the load in watts or use the increment/decrement buttons to change the value.

Note: *Load* is a user entered value expressed in watts that is used by CONFIG to estimate the kWh usage for the relay since the last reset based on this figure and the accumulated run time.

Relay Strikes/Hours

The Strikes and Hours fields are not user editable. Whenever data is available, CONFIG will display the cumulative hours (run time) for the relay and the number of times it has turned on (strikes) since the last reset.

Resetting Strikes and Hours for a Relay

Navigate to the desired relay by selecting the *Relays* tab. Choose the controller with which the relay is associated from the pull down list. A complete list of relays associated with the selected controller will be displayed. Place a check mark in the *Reset S/H* box for the relay to reset the *Strikes* and *Hours* values back to 0.

Note: The strikes and hours resets will not actually occur until the request has been downloaded and executed by the controller(s).

Working with Dimmers

Naming a Dimmer

Navigate to the desired dimmer by selecting the *Dimmers* tab. Choose the controller with which the switch is associated from the pull down list. A complete list of dimmers associated with the selected controller will be displayed. Double click in the *Name* field of the desired dimmer and re-type the name as you wish it to appear.

Setting Dimmer Curve

Navigate to the desired dimmer by selecting the *Dimmers* tab. Choose the controller with which the dimmer is associated from the pull down list. A complete list of dimmers associated with the selected controller will be displayed. Use the *Curve* pull down to choose the appropriate dimming response curve.

Setting the High Trim for a Dimmer

Navigate to the desired dimmer by selecting the *Dimmers* tab. Choose the controller with which the dimmer is associated from the pull down list. A complete list of dimmers associated with the selected controller will be displayed. Double click in the *High Set* field for the dimmer and retype the desired high trim point value or use the increment/decrement buttons to change the value.

Setting the Low Trim for a Dimmer

Navigate to the desired dimmer by selecting the *Dimmers* tab. Choose the controller with which the dimmer is associated from the pull down list. A complete list of dimmers associated with the selected controller will be displayed. Double click in the *Low Set* field for the dimmer and retype the desired low trim point value or use the increment/decrement buttons to change the value.

Assigning a Connected Load Value to a Dimmer

Navigate to the desired Dimmer by selecting the *Dimmers* tab. Choose the controller with which the Dimmer is associated from the pull down list. A complete list of dimmers associated with the selected controller will be displayed. Double click in the *Load* field for the Dimmer and retype the load in watts or use the increment/decrement buttons to change the value.

Note: *Load* is a user entered value expressed in watts that is used by CONFIG to estimate the kWh usage for the relay since the last reset based on this figure and the accumulated run time.

Dimmer Strikes/Hours

The Strikes and Hours fields are not user editable. Whenever data is available, CONFIG will display the cumulative hours (run time) for the Dimmer and the number of times it has turned on (strikes) since the last reset.

Resetting Strikes and Hours for a Dimmer

Navigate to the desired Dimmer by selecting the *Dimmers* tab. Choose the controller with which the Dimmer is associated from the pull down list. A complete list of Dimmers associated with the selected controller will be displayed. Place a check mark in the *Reset S/H* box for the Dimmer to reset the *Strikes* and *Hours* values back to 0.

Note: The strikes and hours resets will not actually occur until the request has been downloaded and executed by the controller(s).

Working with Groups

Naming a Group

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Select the desired group, then right click on the group or click on the *Edit* menu. Choose *Rename Group* from the menu. Re-type the name as you wish it to appear and click OK.

Adding a Group

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Select the desired group, then right click on the group or click on the *Edit* menu. Choose *Add Group* from the menu. A new group will be added to the group list with a default name equal to it's group number. CONFIG will assign the new group a number equal to the lowest available sequential group number.

Note: In a new data base, the first group added by CONFIG will be given the number (0001) and will be named *Group 1*.

Deleting a Group

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Select the desired group, then right click on the group or click on the *Edit* menu. Choose *Delete Group* from the menu. You will be prompted to confirm the delete. Click *Yes* to delete the group.

Renumbering a Group

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Select the desired group, then right click on the group or click on the *Edit* menu. Choose *Renumber Group* from the menu. Type in the new group number and click OK.

Editing the Members of a Group

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Double click on the desired group or select the group and click the *Edit* menu. Choose *Edit Group Members* from the menu. The *Editing Group* box will open.

The currently selected controller will be displayed in blue text in the *Available Controllers* column. However, all other available controllers in the system will also be listed in black text. All possible group members that are available in the selected (blue) controller, will be listed in columns to the right. Click on the desired members to change them to blue text and include them in the group. To remove members, simply click on the member to return the text to black.

If the group is to contain members associated with other controllers or with a Gateway, select the appropriate controller(s) from the *Available Controllers* list and repeat the above process for each.

Note: It is possible to nest groups. That is, include groups as members of groups. This feature can be very useful at a single level of nesting. The user is cautioned to use this feature sparingly beyond a single level of nesting so as to not overly complicate the database.

Setting The Level of a Group Member

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Click on the desired group. Double click in the *Level* field of the group member and retype the level expressed as a percentage value or use the increment/decrement buttons to change the value.

Setting the Fade Time of a Group Member

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Click on the desired group. Double click in the *Fade Time* field of the group member and retype the level expressed as *minutes:seconds* or use the increment/decrement buttons to change the value.

Copying a Group

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Right click on the group you wish to copy or select the group and click the *Edit* menu. Choose *Copy Group* from the menu. Select the group number that will be the target for the copy. Right click on the target group and choose *Paste*. You will be prompted to confirm the copy. Click *Yes* to replace the members of the selected group with the members of the copied group. If you wish to copy to a new group rather than an existing group, select *Paste New Group* from the menu instead. A new group will be created at the lowest available sequential group number.

Viewing the Members of a Group

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the group is associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Click on the desired group. The members of the selected group will be displayed to the right.

Removing Empty Groups

Navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the groups are associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Right click in the groups field or click on the *Edit* menu. Choose *Remove Empty Groups* from the menu. You will be prompted to confirm this choice. Click *Yes* to remove all groups from this controller that have no members.

Check for Group Loops

A common programming error for large or complex systems is to create groups that indirectly reference themselves through other groups that they contain. For example, if group 0001 contains group 0002, and group 0002 contains group 0001, then a group loop is created, which can cause anomalous system behavior and heavy network traffic. To check for these loops, navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the groups are associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Right click in the groups field or click on the *Edit* menu. Choose *Check for Group Loops* from the menu. A status message will appear at the bottom of the screen that will show the progress of the routine. If the routine completes and no error message is displayed, no group loops are present for this controller.

Removing Group Orphans

A group orphan is created when a group contains outputs from another controller that is then deleted. These group members then appear with the name “Unknown Relay”, “Unknown Dimmer”, or “Unknown Controller”. To remove these orphans, navigate to the desired group by selecting the *Groups* tab. Choose the controller with which the groups are associated from the pull down list. A complete list of groups associated with the selected controller will be displayed at the left of the screen. Right click in the groups field or click on the *Edit* menu. Choose *Remove Orphans* from the menu. You will be prompted to confirm this choice. Click *Yes* to remove all orphans from this controller.

Schedules

Creating a Schedule

Click on the *Schedules* tab. Choose the controller for which the schedule is to apply from the pull down list. Right click anywhere in the *Schedules* column or click *Edit*. Choose *Add Schedule* from the menu. A new schedule will be created at the next available number and added to the *Schedules* list.

Deleting a Schedule

Click on the *Schedules* tab. Choose the controller for which the schedule is to apply from the pull down list. Right click on the desired schedule or click the *Edit* menu. Choose *Delete Schedule* from the menu. You will be prompted to confirm the deletion. Click *Yes* to delete the selected schedule.

Naming a Schedule

Click on the *Schedules* tab. Choose the controller for which the schedule is to apply from the pull down list. Right click on the desired schedule or click on the *Edit* menu. Choose *Rename Schedule* from the menu. Re-type the name as you wish it to appear and click OK.

Adding a Time Event to a Schedule

Click on the *Schedules* tab. Choose the controller for which the schedule is to apply from the pull down list. Right click anywhere in the *Schedules* column or click the *Edit* menu. Choose *Add Time Event* from the menu. Double click on the *Time* field of the event and type in a time or use the increment/decrement buttons to select a time. Double click on the *Level* field of the event and type in a level for the event (for relays, 100 – ON and 0 – OFF) or use the increment/decrement buttons to select a level. Choose the group to be controlled by the event from the *Group* pull down list. To give this event a name, double click in the *Name* field of the event and type in the desired name. If this is an OFF event, you may wish to warn the occupants. To add a warn time to the event, double click the *Warn* field of the event and type in a time (before OFF) expressed in minutes or use the increment/decrement buttons to select a value.

Adding a Dusk/Dawn Event to a Schedule

Click on the *Schedules* tab. Choose the controller for which the schedule is to apply from the pull down list. Right click anywhere in the *Schedules* column or click the *Edit* menu. Choose *Add Dusk/Dawn Event* from the menu. Double click on the *Time* field of the event and type in a time or use the increment/decrement buttons to select a time. To add an offset, double click on the *Offset* field and type in an offset expressed in minutes or negative minutes or use the increment/decrement buttons to select an offset. Double click on the *Level* field of the event and type in a level for the event (for relays, 100 – ON and 0 – OFF) or use the increment/decrement buttons to select a level. Choose the group to be controlled by the event from the *Group* pull down list. To give this event a name, double click in the *Name* field of the event and type in the desired name. If this is an OFF event, you may wish to warn the occupants. To add a warn time to the event, double click the *Warn* field of the event and type in a time (before OFF) expressed in minutes or use the increment/decrement buttons to select a value.

Deleting Events from Schedules

Click on the *Schedules* tab. Choose the controller for which the schedule applies from the pull down list. Right click anywhere in the *Schedules* column or click the *Edit* menu. Choose *Delete Time Event* or *Delete Dusk/Dawn Event* from the menu.

Assigning Schedules to Days of the Week

Click on the *Schedule Assign* tab. Choose the controller for which the schedule is to apply from the pull down list. Select the day for which you wish to assign a schedule from the list in the *Daily Assignments* column. Choose a schedule for the selected day from the *Schedule* pull down list.

Note: If no schedules appear in the *Schedule* pull down list, none have been created. You must create schedules before you can assign them to days of the week. See *Creating a Schedule*.

Assigning a Holiday Schedule

Click on the *Schedule Assign* tab. Choose the controller for which the schedule is to apply from the pull down list. Click on *Holiday* in the *Daily Assignments* column. Choose a schedule to be used for holidays from the *Schedule* pull down list.

Note: This assignment is actually just a convenience place holder for your “holiday schedule”. The actual holiday schedule is simply a schedule (usually given the name Holiday) assigned to a series of dates (holidays). If no schedules appear in the *Schedule* pull down list, none have been created. You must create schedules before you can assign them to days of the week. See *Creating a Schedule*.

Assigning Schedules to Calendar Dates

Click on the *Schedule Assign* tab. Choose the controller for which the schedule is to apply from the pull down list. Right click in the *Date Assignments* column. Select a date from the calendar. Choose a schedule to be run on that date from the *Schedule* pull down list.

Note: If no schedules appear in the *Schedule* pull down list, none have been created. You must create schedules before you can assign them to days of the week. See *Creating a Schedule*.

Assigning Schedules to Reoccurring Calendar Dates

Click on the *Schedule Assign* tab. Choose the controller for which the schedule is to apply from the pull down list. Right click in the *Reoccurring Assignments* column. Select a date from the calendar. Choose a schedule to be run every year on that date from the *Schedule* pull down list.

Note: If no schedules appear in the *Schedule* pull down list, none have been created. You must create schedules before you can assign them to days of the week. See *Creating a Schedule*.

Deleting Dates from Schedules

Click on the *Schedule Assign* tab. Choose the controller for which the schedule applies from the pull down list. Right click in the column where the date appears. Choose *Delete Date* or *Delete Reoccurring*. You will be prompted to confirm the action. Click *Yes* to delete the date.

Global Device Settings

Naming a Device

Click on the Devices tab. Double click in the Name field of the desired controller. Type in the desired name for the controller.

Note: The controller name will appear on the first line of the LCD display on the user interface panel of the controller.

Setting the Analog Resolution for a Controller

Click on the Devices tab. Double click in the *Analog Resolution* field of the desired controller. Type in a new analog resolution value expressed as a percentage value for the controller or use the increment/decrement buttons to increase or decrease the value.

Note: The analog resolution is the percent of change that must occur at an analog input before a value will be sent to the system.

Setting the Duration of the Warn Blink

Click on the Devices tab. Double click in the *Blink* field of the desired controller. Type in a new time value expressed as seconds and tenths of seconds or use the increment/decrement buttons to increase or decrease the value. This setting is global for all inputs set to warn.

Changing the Device Type

Click on the Devices tab. Use the pull down menu in the Type column for the desired device to change the device type. Available types are

Synergy – this should be used for all SYSC MLX controllers on the network

Lutron Gateway – this type should be used for all SYSC GATEWAY devices on the system that are to control Lutron Grafik 6000 systems.

PCI Gateway – this type should be used for all SYSC GATEWAY devices on the system that are to control PCI SwitchKeeper and WatchKeeper systems.

DMX Gateway – this type should be used for all SYSC GATEWAY DMX devices on the system that are to control DMX 512 devices.

Note: Any SYSC Gateway devices must be initially configured at the Gateway itself via the keypad on the front of the unit.

Network Services

Programming the Controller(s)

Click on the *Network Services* button or select *Network Services* from the *File* menu. Highlight the controller(s) to be programmed by the download. Be certain that *Programming* is checked in the *Program Options* box. Also check *Restart After* unless you wish to manually restart the controller(s) at a later time. Click the *Program* button or choose *Program* under the *Services* menu. Observe the progress in the message boxes on the screen.

Note: Programming that is downloaded to a controller does not become effective until after the controller is restarted (rebooted).

Retrieving the Programming from the Controller(s)

Click on the *Network Services* button or select *Network Services* from the *File* menu. Highlight the controller(s) from which programming is to be retrieved. Be certain that *Programming* is checked in the *Retrieve Options* box. Also check *Relay Strike/Hour* only if you are using this function. Click the *Program* button or choose *Program* under the *Services* menu. Observe the progress in the message boxes on the screen.

Restart a Controller

Click on the *Network Services* button or select *Network Services* from the *File* menu. Highlight the controller(s) to be restarted. Click the *Restart Panel* button on the tool bar or choose *Restart* from the *Services* menu.

Synchronize the Time in all Controllers

Click on the *Network Services* button or select *Network Services* from the *File* menu. Click the *Global Time Sync* button on the tool bar or choose *Global Time Sync* from the *Services* menu. Observe that the message was successfully sent in the message box at the bottom of the screen. The time in all the controllers will be set to match the current time in the PC.

View the Status of the Outputs

Click on the *Network Services* button or select *Network Services* from the *File* menu. Click the *Output Status* button on the tool bar. Choose the desired controller from the pull down list. Choose to view the status of either individual *Outputs* (relays and dimmers), *Inputs* (Switches, Analogs, and Buttons) or *Groups*. A shaded scan line will indicate that the status is currently being updated. Under certain conditions, NULL may appear in the *Present Value* field of some groups. This indicates that a valid level has not been sent to that group since the last time the controller was restarted.

Manually Control Outputs

Click on the *Network Services* button or select *Network Services* from the *File* menu. Click the *Output Status* button on the tool bar. Choose the desired controller from the pull down list. Choose to control individual *Outputs* (relays and dimmers), *Inputs* (Switches, Analogs, and Buttons) or *Groups*. A shaded scan line will indicate that the status is currently being updated. Click the *On* or *Off* button to immediately switch the output or group full ON or OFF. Double click in the *New Value* field of an output or group and type in the desired level. Click *Set* to send the new level.

Name	Type	Number	Present Value	New Value			
TASK (DBM 2)	Relay	0601			Set	On	Off
CENTER TUBES (DBM 4)	Relay	0602			Set	On	Off
OUTSIDE TUBES (DBM 5)	Relay	0603			Set	On	Off
TASK (DBM 7)	Relay	0604			Set	On	Off
CENTER TUBES (DBM 9)	Relay	0605			Set	On	Off
OUTSIDE TUBES (DBM 10)	Relay	0606			Set	On	Off
TASK (DBM 12)	Relay	0607			Set	On	Off
CENTER TUBES (DBM 14)	Relay	0608			Set	On	Off
OUTSIDE TUBES (DBM 15)	Relay	0701			Set	On	Off
TASK (DBM 17)	Relay	0702			Set	On	Off
CENTER TUBES (DBM 19)	Relay	0703			Set	On	Off
OUTSIDE TUBES (DBM 20)	Relay	0704			Set	On	Off
OUTSIDE TUBES (DBM 22)	Relay	0705			Set	On	Off
TASK (DBM 24)	Relay	0706			Set	On	Off
CENTER TUBES (DBM 25)	Relay	0707			Set	On	Off
OUTSIDE TUBES (DBM 26)	Relay	0708			Set	On	Off
TASK (DBM 28)	Relay	0801			Set	On	Off
CENTER TUBES (DBM 30)	Relay	0802			Set	On	Off
OUTSIDE TUBES (DBM 31)	Relay	0803			Set	On	Off
TASK (DBM 33)	Relay	0804			Set	On	Off
CENTER TUBES (DBM 35)	Relay	0805			Set	On	Off
OUTSIDE TUBES (DBM 36)	Relay	0806			Set	On	Off
TASK (DBM 38)	Relay	0807			Set	On	Off
SPARE (DBM)	Relay	0900			Set	On	Off
CENTER TUBES (DBM 40)	Relay	0901			Set	On	Off
OUTSIDE TUBES (DBM 41)	Relay	0902			Set	On	Off
TASK (DBM 43)	Relay	0903			Set	On	Off
CENTER TUBES (DBM 45)	Relay	0904			Set	On	Off
OUTSIDE TUBES (DBM 46)	Relay	0905			Set	On	Off
TASK (DBM 48)	Relay	0906			Set	On	Off
CENTER TUBES (DBM 50)	Relay	0907			Set	On	Off
OUTSIDE TUBES (DBM 51)	Relay	0908			Set	On	Off
DOWNLIGHTS (DBM 1)	Dimmer	0101			Set	On	Off
DOWNLIGHTS (DBM 5)	Dimmer	0102			Set	On	Off
DOWNLIGHTS (DBM 11)	Dimmer	0103			Set	On	Off
DOWNLIGHTS (DBM 16)	Dimmer	0104			Set	On	Off
DOWNLIGHTS (DBM 21)	Dimmer	0105			Set	On	Off
DOWNLIGHTS (DBM 27)	Dimmer	0106			Set	On	Off
DOWNLIGHTS (DBM 33)	Dimmer	0201			Set	On	Off
DOWNLIGHTS (DBM 37)	Dimmer	0202			Set	On	Off
DOWNLIGHTS (DBM 42)	Dimmer	0203			Set	On	Off
DOWNLIGHTS (DBM 47)	Dimmer	0204			Set	On	Off
DOWNLIGHTS (DBM 52)	Dimmer	0205			Set	On	Off
DOWNLIGHTS (DBM 58)	Dimmer	0206			Set	On	Off
DOWNLIGHTS (DBM 64)	Dimmer	0301			Set	On	Off

Part. No. CDCS000269 Rev B 03/2003



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