

Designing Basics 3

This chapter provides an overview of LiteTouch design components. For specific information about LiteTouch products, refer to the appropriate LiteTouch documentation.

Loads *Loads* refers to electrical loads. Any device to be controlled by the LiteTouch control system is considered a load. Loads are described by type (e.g., incandescent, fluorescent, low voltage, etc.) and their wattage and voltage ratings. Loads are normally identified from blueprints.

Modules A *control module*, or *module* for short, is a switching or dimming device capable of handling up to eight loads, depending on the type. All loads that are to be controlled by the LiteTouch control system must be attached to an appropriate module.

LiteTouch manufactures a broad range of modules including:

- Eight-channel Dimmer Module
- Eight-channel Relay Module
- Interlock Relay Module
- Fluorescent Dimmer Module
- Low Voltage Relay Module
- DC Motor Control Relay Module

In addition, special purpose control modules are available, as follows:

- Momentary Contact Data Input Module (used for security, home automation, radio frequency, etc.)
- Maintained Contact Data Input Modules (used for photo cells, motion sensors, and garage door openers)

Power Supply

A DC *power supply* is required for each central control unit and is used to power all LiteTouch control devices. One power supply can power up to 35 control stations. A power supply must be within 50 feet of the central control unit.

Enclosures

A rough-in *enclosure* is a surface or recess mounted box, which encloses the modules. Two sizes are available: a four-module model and a two-module model. Each enclosure comes with a hinged lid for easy access.

You will need to determine early in the design process where you will locate enclosures. You can best utilize the modules if all enclosures are placed in the same location. However, wiring can often be simplified by establishing two or more enclosure locations within the structure. You will need to consider both issues when locating enclosures.

Control Stations

A *control station*, or *station* for short, contains one or more switches used to control loads. Each station is a single-gang unit that may contain from one to nine buttons. Each button is an independent switch that can control any number of loads in the system. Multiple stations may be ganged together (up to eight) if required. Stations come in various designs and colors. LiteTouch prints descriptions of each button's function on the buttons.

Each button is equipped with an LED. When not in use, a button glows at 5% intensity; when in use, at 100% intensity.

Master Control Stations

A *master control station* (MCS) is capable of simulating up to 32 existing control stations, or it can be customized. An MCS can be located anywhere in a home (e.g., master bedroom, exits, etc.). If control is based on existing stations located throughout the home, each station is identified by name or location through the master menu. An MCS is programmed using a control program that can be downloaded to the MCS via a serial port.

Central Control Unit

The *central control unit* (CCU) receives all control station requests, interprets them, and then switches the specified load(s). A system only requires one CCU. The CCU uses non-volatile memory to retain programming indefinitely. In addition, current system status is retained through power interruptions of up to three days.

The CCU employs an astronomical clock/calendar that can be used to turn system loads on or off. By using an astronomical clock, load schedules can be linked to sunrise and sunset and can adjust automatically to the seasons.

A CCU is programmed using a control program that is downloaded to the CCU via a serial port. Some models are equipped with a modem, which provides access via the telephone.

Checklist of Design Steps

When designing a new lighting control system using LiteWare, you will normally take the following steps.

- Decide whether the module enclosures will be at one or multiple locations, and determine the location(s).
- Use LiteWare to create a new job (refer to page 16).
- Use LiteWare to create a load list (refer to page 27).

- Print the load schedule and review it carefully (refer to page 34).
- Decide on the location of the CCU, which must be within 50 feet of an enclosure location.
- Use LiteWare to assign the loads to modules. Loads can be auto-assigned or manually assigned. Loads are assigned by enclosure location (refer to page 41).
- Print the enclosure schedule and review it carefully (refer to page 47).
- Create a bill of materials, which covers enclosures, modules, power supply, CCU, etc. (refer to page 79).
- Modify the design as needed.
- During the finishing phase of the project, determine the stations needed for each location in the home. Assign the appropriate loads and settings for each button. Enter the description for the button engraving so the stations can be ordered (refer to page 59).
- Print the station design schedule and review it carefully (refer to page 70).
- In the LiteWare Job Preferences dialog box, change “Control Stations” from “Estimated” to “Actual.”
- Regenerate (or complete) the bill of materials (refer to page 86).
- Export the program file for the job from LiteWare (refer to page 76). Use the LT Support program (provided) to convert and download the data to the CCU (refer to the LT Support documentation).

Jobs 4

A job is typically defined as one complete lighting control system. You can have only one job open at a time in LiteWare. The name of the open job is shown on the Information Bar.

- For step-by-step instructions on creating a new job, refer to the next section.
- For information on opening an existing job, refer to page 18.
- For information on deleting or renaming a job, refer to page 18.
- For information on saving a job, refer to page 19.
- For information on saving a job to a new name (duplicating a job), refer to page 20.
- For information on backing up a job for security purposes, refer to page 21.
- For information on the Job Preferences option, refer to page 22.
- For information on importing and exporting jobs, refer to page 24.

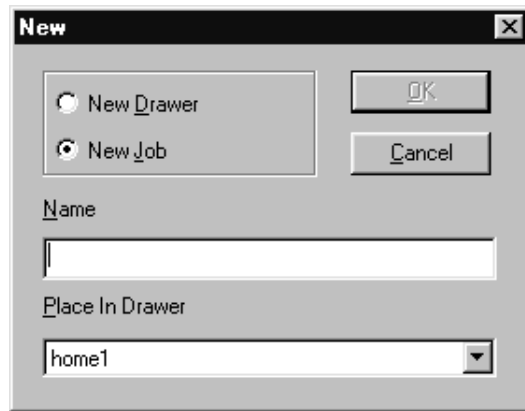
Create a New Job (New Drawer/Job)

A job is typically defined as one complete lighting control system. When creating a new job, the program guides you through a series of windows and dialog boxes with the information to be completed before you can start entering a load list. Take the following steps to create a new design job.

1. Start LiteWare (click on **[Start]** and select it from the Programs menu). The LiteWare main window is displayed.



2. Click on the New button on the Speed Bar, or select **New Drawer/Job** from the File menu to open the New dialog box.



This dialog box is used to create a “New Drawer” and a “New Job.”

New Drawer

A drawer is used to file and organize your jobs. You can create as many drawers as you need, giving each a unique description. It is up to you how you use drawers and which jobs you place in each drawer. Click on the radio button next to “New Drawer” to create a new drawer, type in the drawer name, then select **[OK]**.

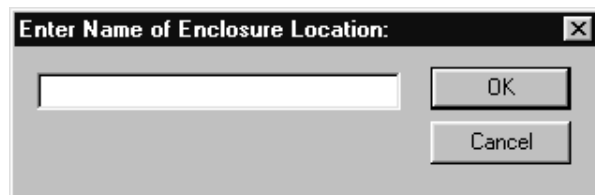
After you have created a new drawer, the dialog box refreshes so you can create a new job to place in the drawer.

New Job Click on the radio button next to “New Job” to create a new job, and type in the job name. The new job will be placed in the drawer displayed in the “Place in Drawer” field.

Name Type the name of the new drawer or new job in this field.

Place in Drawer When you create a new drawer, its name is placed in this field and added to the list of drawer names. Any new jobs are placed in the drawer displayed in this field. To change the drawer name displayed, click on the drop-down arrow next to the field, and select a drawer from the list.

3. Select [OK]. The Job Preferences dialog box appears.
4. The Job Preferences dialog box is used as a starting point in defining a system. Complete the fields in the Job Preferences dialog box. Refer to page 22 for instructions.
5. Select [OK], and the Enclosure Location dialog box appears.



The Enclosure Location dialog box is used to identify the location of module enclosures. A job can have one enclosure location or several, depending on the design.

Each enclosure location is identified by the name entered here. Load lists, for example, are entered and identified by enclosure location.

6. Enter a description for an enclosure location and select [OK]. The Loads window is displayed.

NOTE 

If you want to assign the enclosure location name later, select [Cancel], but you will need to give the enclosure location a name before entering loads for a second enclosure location.

7. Complete the fields in the Loads window. Refer to page 27 for instructions.

Open Job

From the LiteWare main window with no task selected, do the following to open an existing job.



1. Click on the Open button, or select **Open** from the File menu. All drawers that you have created are displayed.
2. Double-click on a drawer to display a list of jobs in the drawer.
3. Double-click on the job that you want to open, and a list of tasks for that job is displayed.
4. Double-click on the task that you want to open. The appropriate task window is opened, and any information that has been entered for the task is displayed.

You can also rename or delete a drawer or job from the Open dialog box, as follows.

Rename Drawer/Job

To rename a drawer or a job, do the following.

1. In the Open dialog box, select the drawer/job to be renamed.
2. Click on [Rename] and the New Label dialog box appears.
3. Type the new drawer/job name.