



Cutler-Hammer

Pow-R-Command™ 1000 — LCD Display Quick Start Guide

Instruction Leaflet IL01412010E

Effective June 2006



Introduction

This is the Quick Start Guide for the PRC1000 LCD programming display. A worksheet of information that will be needed to complete this startup is found on **Page 6** of this guide. Make sure you have all the listed information available before starting, either by filling in the worksheet, or from job documents.

Several conventions are used in this document. **COURIER** text indicates screen output or screen menu items. **BOLD COURIER** indicates user button presses.

Navigation through the LCD programming tool menus is via the four buttons to the right of the screen as shown above. They are **BACK**, **UP**, **DOWN** and **SEL**. Generally, **BACK** is used to cancel a selection or to move back up through the menu hierarchy. **UP/DOWN** are used to scroll through selections on a menu or to change values. **SEL** is used to choose a menu item or to enter a setting. Some menu screens will have an arrow symbol (↕) in the lower right corner. This indicates there are additional menu items for this screen. Use the **UP/DOWN** keys to scroll down to view the additional items.

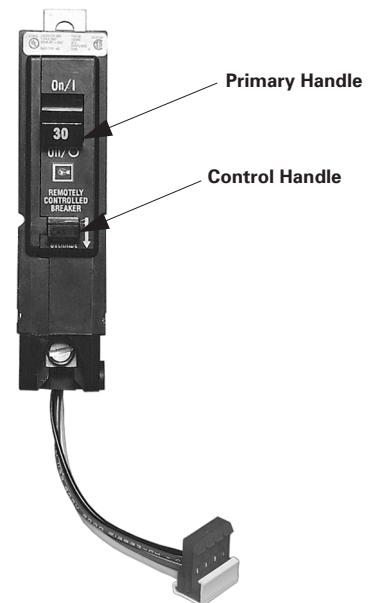


FIGURE 1. CONTROLLABLE CIRCUIT BREAKER

Eaton's Cutler-Hammer® controllable circuit breakers have two handles, as shown in **Figure 1**. The larger black handle is referred to as the primary handle. The primary handle can be turned to the on or off positions by manual control. The smaller green handle is referred to as the control handle. The control handle can be moved to the off or on position by electronic control or to the on position by manual override.

LCD Programming Procedure

1. Press any key to begin. The Eaton logo will be displayed:



After a few seconds, the firmware version will be displayed:

```
FIRMWARE VERSION A1
```

After a few more seconds, the initial status screen will be displayed:

```
Aug 25, 2006 11:28A
Group Status:
ON:  ABC          N
OFF:  DEFGHIJKLM OP
Press SEL for menu
```

Press **SEL** to get to the MAIN MENU.

2. Login

If user passwords have been created on your system by your distributor/installer, you will see the following screen. Use **UP/DOWN** to enter the letters of your password and the **SEL** key to advance to the next letter. Advance the cursor past the end of the blanks to submit the password.

```
Aug 25, 2006 11:28A
User ID:
_____
```

If this LCD tool has just been powered up, it will have to download a database from the PRC1000 controller. You may see the following screen with the progress indicator:

```
Aug 25, 2006 11:28A

Refreshing Database
Please wait... 57%

Press BACK to quit
```

The database may take up to 10 minutes to download during initial startup. Afterwards, the MAIN MENU will be displayed:

```
MAIN MENU
Command Groups ON/OFF
Panel Status Screen
Configure Groups
Configure Date/Time  _
Group Status:
ON:  ABC          N
OFF:  DEFGHIJKLM OP
```

3. Set Date/Time/DST/Location

From the MAIN MENU, select Configure Date/Time. The following menu will be displayed:

```
CONFIGURE DATE/TIME

Change Date__08/23/06
Change Time  11:37 AM
Change DST   MANUAL
  St: mm/dd End: mm/dd
Change Astro Loc.
```

Use **UP/DOWN** to select Change Date. Use **SEL** to move through the date digits. Use **UP/DOWN** to set the month, day and year, respectively. After setting the year, hit **SEL** one more time. The new values will be displayed on the PRC1000.

Use **UP/DOWN** to highlight Change Time. Use **SEL** to move through the time digits. Use **UP/DOWN** to set the hour, minute and AM/PM, respectively. After setting the AM/PM, hit **SEL** one more time. The new values will be displayed on the PRC1000.

Use **UP/DOWN** to highlight Change DST. Use **SEL** to start editing the DST setting. Use **UP/DOWN** to choose NONE, AUTO or MANUAL. If MANUAL is chosen, settings for start and end date will appear. Hit **SEL** to jump to the start date. Use **UP/DOWN** to set the month and day values. Use **SEL** to move through the digits. After setting the DST setting (or dates for MANUAL), hit **SEL** one more time. The new values will be displayed on the PRC1000.

Use **UP/DOWN** to highlight Change ASTRO-LOC. Hit **SEL** to start editing the location. The following screen will be displayed:

```
ASTRO LAT: 33.00
          LON: 84.00
          TIMEZONE: 5
RISE 06:30 SET 07:00
```

Use **UP/DOWN** to set the latitude value in degrees. The latitude range is -90 (South) to +90 (North).

Note: Sunrise/sunset calculations lose accuracy outside the -62 to +62 range. Hit **SEL** to move to the longitude setting. Use **UP/DOWN** to set the longitude value in degrees. The longitude range is +180 (Alaska) to -180 (Western Pacific). Hit **SEL** to move to the timezone setting. Use **UP/DOWN** to set the timezone value in hours. The timezone range is +12 hours (west of GMT) to -12 hours (east of GMT). After setting the timezone, hit **SEL** one more time. The new values will be displayed on the PRC1000. The RISE and SET times will update with the new values calculated from the input latitude and longitude and the screen will return to the Configure Date/Time menu. Use **BACK** to return to the MAIN MENU.

4. Configure Breaker Group A

From the MAIN MENU, select Configure Groups. The following screen will be displayed:

```
SELECT GROUP
TO CONFIGURE:
Group A GRPA OFF
GROUP A LIGHTS
15 loads in group.

Use up/down/sel to
change selection
```

The group is shown, followed by its current status (OFF in this example). The next line is the group description, if it exists (GROUP A LIGHTS in this example), followed by the number of loads (breakers) that has been associated with this group (15 in this example).

Hit **SEL** to select Group A. The following menu is displayed:

```

CONFIGURE GROUP A
Group A GRPA ON
OFFICE LIGHTING
Associate Loads_____
Associate Inputs
Modify Schedules
Modify Description

```

A. Associate Loads With the Group

Hit **SEL** to select Associate Loads. The following screen is displayed:

```

ASSOCIATE LOADS
With Group A
Select loads for this
group individually
Add all loads which
are currently ON
Clear all loads from
this group

```

There are two ways to choose which loads are associated with the group. Hitting **SEL** on the Select loads for this group individually will present the following screen:

```

PICK GROUP A LOADS
USE SEL to TGL LOAD
PNL1 Load 16 BK16 YES
LIGHTING - R101
PNL1 Load 17 BK17 YES
LIGHTING - R102_____
PNL1 Load 18 BK18 NO

```

Each load (breaker) will be listed by panel, followed by its current membership in this group (YES/NO) and by its description, if one has been entered (LIGHTING - R102 in the above example). Use **UP/DOWN** to scroll up and down through the breaker list and **SEL** to change to membership setting to YES or NO. After all loads have been selected for this group, hit **BACK** twice to return to the CONFIGURE GROUP A screen.

The second option for associating loads is the Add all loads method. To use this option, turn ON the primary handle and the control handle for all loads that will be part of this group. Turn OFF the primary handle for all loads that will not be part of this group. Then **UP/DOWN** to move to the Add all loads... option. Hit **SEL** to choose all currently ON breakers. This may take several minutes while all breakers are scanned. After all loads have been selected for this group, hit **BACK** twice to return to the CONFIGURE GROUP A screen.

B. Associate Inputs With the Group

If a switch input will be associated with this group, use **UP/DOWN** to highlight the Associate Inputs. Hit **SEL** to move to the input select screen:

```

INPUT for GROUP A
is currently #7
Change input to:
Input 7 DI01 (OFF)
Maintained + 5 min_
Use up/down to change
Input, SEL to accept

```

Use **UP/DOWN** to cycle through the available inputs. When the correct input is displayed, hit **SEL** to associate it with the group. The input type screen will then be displayed:

```

Select the type of
switch on Input 7
Maintained_____
Maintained(inverted)
Momentary ON / OFF
Maintained Change
Motion Sensor
Photocell

```

The list of input types extends beyond one page. Use **UP/DOWN** to scroll through the choices and highlight the correct switch type. Hit **SEL** to choose it.

Note: Three-way and 3-wire momentary switches require two physical inputs paired together. Inputs 1 and 2, 3 and 4, 5 and 6, etc., are paired together by the system. Selecting either one of them as the input will cause the other to be automatically selected for these types of switches.

The delay time screen will be shown next:

```

Select the delay time
time for Input 7
-15 minutes
None_____
15 minutes
30 minutes
45 minutes
(enter exact time)

```

To have the load stay on for a certain number of minutes after the input has turned off, use **UP/DOWN** and **SEL** to pick a number of minutes. Otherwise, hit **SEL** on the None value. A value other than 15, 30 or 45 can be entered by choosing the enter exact time selection. Hit **BACK** three times to return to the CONFIGURE GROUP A screen.

C. Set Group Description

Use **UP/DOWN** to highlight the **MODIFY DESCRIPTION** option and hit **SEL**. The **SELECT DESCRIPTION** screen will be displayed:

```
SELECT DESCRIPTION
For Group A
None
Offices
Hallways
Parking
Exterior
Signs
```

The list of predefined descriptions is several pages long. Use **UP/DOWN** and **SEL** to scroll through the screens and choose a predefined description or choose **enter** characters (at the end of the list) to enter a custom description:

```
ENTER DESCRIPTION
_ <
```

Use **UP/DOWN** to scroll up or down through the alphabet and **SEL** to enter one letter at a time. Continue hitting **SEL** across to the right screen of the line to enter the description.

Hit **BACK** once (or twice for custom descriptions) to return to the **CONFIGURE GROUP A** screen.

D. Test Group

The group has now been configured and is ready to be tested. Verify that all breaker primary handles have been returned to the **ON** position. Hit **BACK** to return to the **MAIN MENU**:

```
MAIN MENU
Command Groups ON/OFF
Panel Status Screen
Configure Groups
Configure Date/Time
Group Status:
ON:  ABC          N
OFF:  DEFGHIJKLM OP
```

Use **UP/DOWN** and **SEL** to select **Command Groups ON/OFF**. The **COMMAND GROUPS** screen will be shown:

```
COMMAND GROUPS
ON:  A BC          N
OFF:  _ DEFGHIJKLM OP
GRPA  ON
Cleaning Lights
Use BACK/SEL to select
UP - ON, DOWN - OFF
Hold down BACK to exit
```

Use the **BACK** and **SEL** to highlight the desired group (in this case, A). Use **UP** to turn the group on and **DOWN** to turn the group off. Verify that the correct set of breakers is turned on and off with the group. If not, repeat Step 4A — **Configure Breaker Group A — Associate Loads With the Group**.

If there is an associated input for this group, turn the group off again with the **COMMAND GROUPS** screen above. Use the actual input — switch, motion detector, etc., to trip the input. Verify that the proper group is turned on. If not, repeat Step 4B — **Configure Breaker Group A — Associate Inputs With the Group**.

Verify that the group description on the fifth line of the **COMMAND GROUPS** screen is the correct description for this group. If not, repeat Step 4C — **Configure Breaker Group A — Set Group Description**.

5. Repeat Step 4 for each Group B through P

6. Schedule Groups

The final step in initial setup is to enter the schedules for each group. From the **MAIN MENU**, select **Configure Groups**. The following screen will be displayed:

```
SELECT GROUP
TO CONFIGURE:
Group A GRPA OFF
GROUP A LIGHTS
15 loads in group.
Use up/down/sel to
change selection
```

Hit **SEL** to select **Group A**. The following menu is displayed:

```
CONFIGURE GROUP A
Group A GRPA ON
OFFICE LIGHTING
Associate Loads
Associate Inputs
Modify Schedules
Modify Description
```

Select **Modify Schedules**. The following screen is displayed:

```
MODIFY SCHEDULES FOR
Group A OFFICE LIGHT
Use SEL to edit sch.
Days --ON-- --OFF-
(empty schedule)
```

Hit **SEL** to choose the **empty schedule** item. The following screen is displayed:

```
ENTER SCHEDULE DETAIL
For GROUP A
DAYS: _____
Start time: 12:00 AM
End time: 12:00 PM
Clear Schedule
Press BACK when done
```

Hit **SEL** to choose the **DAYS:** item. The following screen is displayed:

```
PICK SCHEDULE DAYS
Weekdays_____
Weekends
Clear All Days
Pick specific days:
Yes:
No: SMTWTFS
```

To choose all weekdays (MTWThF) or weekends (Sat/Sun), use **UP/DOWN** to highlight **Weekdays** or **Weekends** respectively and hit **SEL**.

To clear all days from this schedule, but leave the hours intact (perhaps for future use), highlight **Clear All Days** and hit **SEL**.

To schedule only specific days of the week, highlight **Pick specific days** and hit **SEL**. The cursor will jump to Sunday of the specific days list. Use **UP/DOWN** to move specific days back and forth between the **YES** and **NO** rows. Use **SEL** to move across the row. Once in the specific days row, you must move all the way across the row with **SEL** to return to the previous menu.

Hit **BACK** to return to the **ENTER SCHEDULE DETAIL** screen.

Use **UP/DOWN** to highlight the **Start time** item. Hit **SEL** to begin entering a start time for this schedule. The hours column will be highlighted as shown below.

```
ENTER SCHEDULE DETAIL
  For GROUP B
Days: Weekday
Start time: 12:00 AM
End time: 12:00 PM
Clear Schedule

Press BACK when done
```

Use **UP/DOWN** to advance the hours column to the correct hourly starting time. Hit **SEL** to move to the minutes column. Use **UP/DOWN** to advance the minutes column to the correct minute starting time. Hit **SEL** to move to the AM/PM column. Use **UP/DOWN** to select AM or PM for the starting time. Hit **SEL** to complete entering the start time.

Use **UP/DOWN** to highlight the item. Follow the same procedure as above to enter the schedule end time.

When the days, start time, and end time have all been entered, hit **BACK** to return to the **MODIFY SCHEDULES** screen. The newly entered schedule will now be in the list, as shown in the following example:

```
MODIFY SCHEDULES FOR
Group A OFFICE LIGHT
Use SEL to edit sch.
Days --ON-- --OFF-
Weekday 09:30A 05:30PP
(empty schedule)
```

Use **UP/DOWN** to select **empty schedule** and repeat the aforementioned steps to enter more schedules for this group if needed. If more than three schedules are entered for a particular group, they will extend to the next page. Use **UP/DOWN** to scroll the list to select schedules or **empty schedule** on the next page.

Hit **BACK** twice to return to the **SELECT GROUP** screen. Use **UP/DOWN** and **SEL** to choose another group to schedule. Repeat the above steps to enter schedules for each remaining group in turn.

The PRC1000 is now programmed. Hit **BACK** four times to return to the top level and log out.

PRC1000 Programming Worksheets

1. Programmer password: _____

2. Date/Time:

Daylight Savings Time Used: NONE / AUTO / MANUAL

DST Manual dates: Start: __/__/__ (mm/dd) End: : __/__/__ (mm/dd)

3. Location

Latitude (-90 to +90): __° __'

Longitude (-180 to +180): __° __'

Timezone (-12hrs to +12hrs): __ hrs

4. Breaker Groups

Mark the groups each circuit is part of. Copy this page as needed for additional panels.

TABLE 1. BREAKER GROUPS

GROUPS														GROUPS																			
CIRCUIT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	CIRCUIT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1																	22																
2																	23																
3																	24																
4																	25																
5																	26																
6																	27																
7																	28																
8																	29																
9																	30																
10																	31																
11																	32																
12																	33																
13																	34																
14																	35																
15																	36																
16																	37																
17																	38																
18																	39																
19																	40																
20																	41																
21																	42																

5. Schedules

Mark schedule details. Copy as needed for additional schedules

Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM
Group ___:	Weekends	Weekdays	S M T W T F S	Start __: __ AM / PM	End: __: __ AM / PM

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