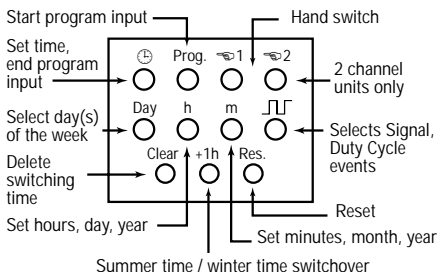


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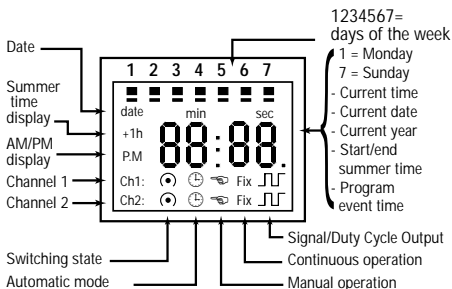
## DIN101B & DIN201B

### Operating Instructions

#### KEYPAD



#### DISPLAY



## Introduction

The unit has three different daylight-savings modes. For North American operation we will use only two of these: User-set dates, and no daylight savings mode.

The unit can be operated in either 12 hour, or 24 hour settings. To change, press and hold the "h"

button, and then press the “Reset” button. The entire display will be shown, and the unit will change from one to the other each time you press the reset button.

**00:00** = 24 hour format

**PM 12:00** = 12 hour format


## Resetting the Unit

We suggest that when installing the unit, press the “Reset” button before programming. This will cause the unit to delete all previously stored information on current time and date. The display will fully show, and the unit will be ready for programming. The unit will first ask you to set time and date information. *If you do not want to use daylight savings, skip now to section marked “No daylight savings time”.*

## Setting current date, and daylight savings information

You must proceed thru this section without delay. If no entries are made for 30 seconds, the unit will automatically go to the run mode and you will need to go back to step #1.

**NOTE:** If you are setting the date immediately after pressing the “Reset” button, skip to step #2.

- 1: Press the  button. The unit will display the default time, and day.
- 2: Press the “+1h” button. The unit will display “AU”. This mode is not used in North America.
- 3: Press the “+1h” button until the display says “cHA”, then press the “Prog.” button.
- 4: The default year of 1997 will be displayed. Press the “m” button to increment the year until the current year is reached. Then press the “Prog.” button to store the year.

- 5: To set the current month, press the “m” button. To set the current date, press the “h” button. The display is in “MM DD” format – for example, July 4 is displayed as “07 04”.
- 6: When you have set the desired date, press “Prog.” to store it.

**NOTE:** The unit automatically calculates the day-of-the-week, and stores that too in memory.

### **Daylight Savings Start and End Dates**

The following dates mark the beginning and end of daylight savings time in North America

Year	Beginning date	Ending date	Year	Beginning date	Ending date
2000	April 2	October 29	2006	April 2	October 29
2001	April 1	October 28	2007	April 1	October 28
2002	April 7	October 27	2008	April 6	October 26
2003	April 6	October 26	2009	April 5	October 25
2004	April 4	October 31	2010	April 4	October 31
2005	April 3	October 30	2011	April 3	October 30

### **Setting daylight savings start date**

- 1: To set the start of daylight savings time, press the “m” key for month and “h” key for date. In much of North America, this date is the first Sunday in April.
- 2: When you have set the desired date, press “Prog.” to store it. The unit automatically calculates the day in which the changeover occurs. So if you have entered the first Sunday in April, the unit will remember, and update this day each year.

### **Setting daylight savings end date**

- 1: To set the end of daylight savings time, press the “m” key for month and “h” key for date. In much of North America, this date is the last Sunday in October.

- 2: When you have set the desired date, press "Prog." to store it. The unit automatically calculates the day-of-the-week, in which the changeover occurs. So if you have entered the last Sunday in October, the unit will remember, and update this day each year.
- 3: When you finished setting the current date, and the beginning and the end of daylight savings time, press the ⌚ button to return to run mode.

### **No daylight savings time**


**Skip this section if you have already set daylight savings information.**

- 1: If you do not want to use daylight savings time press the "+1h" button until the display says "no"
- 2: Press the ⌚ button to tell the unit not to use daylight savings time. The unit will go into run mode.
- 3: To set the day of the week, press the ⌚ button again. The channel status indicators will disappear. Press the "Day" button. The cursor under the numbers "1" – "7" indicate the day, with "1" for Monday, "2" for Tuesday, etc.. and "7" for Sunday. Press the ⌚ button.

### **Setting current time**

- 1: To change the current time, first enter the set mode. Press the ⌚ button. The channel status indicators will disappear.
- 2: Press the "h" and "m" buttons to set the current time.

**NOTE: The difference between AM and PM is a small dot near the "P" which indicates AM (P.M)**

When you have set the desired time, press the  button to store it in memory, and go back to run mode.

## Setting schedules for programmed load events

- 1: In the run mode, press the “Prog.” button. We will assume that no previous events are set. The following display will be shown. This is called the “free memory location”;


- - + - -

- 2: To choose which day or days the program will run: Press the “day” button: All 7 days-of-the-week will appear. Press the day button again. The cursor will appear under the number 1.

If you press the “Day” button again, the day will be deselected and the event will not be executed on that day. Each time you press the “Day” button, the day of the week corresponding to the number over the cursor will switch from active to deactive, or visa-versa.

To move the cursor, press the “Prog.” button.


Continue with this pattern of selection, and activation/deactivation until all seven days are as you need.

- 3: Using the “h” and “m” buttons, set the desired start time of the event.
- 4: Press the  1 button(s) to set the load status.

CH1  = ON

CH1  = OFF

- 5: When you have finished selecting the schedule, press the prog. button to store the schedule.

- 6: Repeat steps 2-5 for as many schedules as you need. When you have finished setting the programs, press the  button to return to execute schedules.

### **For 2 channel DIN201B only**

The loads can be programmed either individually, or simultaneously. An “on” event for one load can also be an “off” event for another load. Load status is displayed by these symbols:

CH1  = Channel 1 “ON”

CH2  = Channel 2 “OFF”


In this example, Channel 1 is “ON”, Channel 2 is “OFF”.

### **Setting schedules for programmed signal events.**

Signal events can have a programmed duration from 1-99 seconds, or 1-99 minutes. Each signal needs to have a start time and day, the active channels for the signal, and duration. We will program each of these in order.

- 1: In the run mode, press the “Prog.” button until next “free memory location” is arrived at.



- 2: Using the “Day” and “Program” buttons, choose the day(s) for program execution as in the last section.
- 3: Using the “h” and “m” buttons, set the desired start time of the event.
- 4: To select a signal event, press the  button

once. A  $\square$  symbol appears on the screen.

- 5: Press the “Prog.” button to confirm the signal event.
- 6: Press the “m” button to toggle the signal duration between minutes, or seconds.
- 7: In this example, we will set a signal duration of 7 seconds. Press the  $\square$  button 6 times until the display reads “07”.
- 8: Press the “Prog.” button to confirm the signal duration. The next free location is displayed for further settings.

### Setting schedules for duty cycle programs

Duty cycle events can have a programmed on and off duration totaling from 1-99 seconds, or 1-99 minutes. It needs to have a start time and day, and the on and total durations. *(The total duration must be greater than the ON duration.)*

**NOTE: You do not set an actual off duration. The off duration is the total duration less the on duration.**

We will program each of these in order. A duty cycle program ends when the next on or off event is encountered. If there are no other on or off events, the cycle will operate endlessly.

- 1: In the run mode, press the “Prog.” button until the next “free memory location” is arrived at.



- 2: Using the “Day” and Program buttons, choose the day(s) for program execution as in the section “Setting Schedules for Programmed Load Events”.
- 3: Using the “h” and “m” buttons, set the desired start time of the event.

- 4: To select duty cycle, press the  $\square\square$  button twice. A  $\square\square$  appears on the screen.
- 5: Press the “Prog.” button to confirm the duty cycle.
- 6: Press the “m” button to toggle the on time duration between minutes, or seconds.
- 7: In this example, we will set an on time duration of 5 minutes. Press the  $\square\square$  button 4 times until the display reads “05”.
- 8: Press the “Prog.” button to confirm the on time duration. The duration for the total time is set in the same manner. You can press the “m” button to switch the total time duration to either minutes, or seconds.
- 9: In this example, we will set a total time duration of 8 minutes. Press the  $\square\square$  button 7 times until the display reads 08.
- 10: Press the “Prog.” button to confirm the total time duration.

**NOTE:** The total time less the on time becomes the off time.



- 11: A default time of 12:00 will appear on the screen (00:00 if you are using military time).





**A. If you want the duty cycle to end with the next scheduled ON or OFF event,** (this assumes there is at least one other event scheduled in the memory) press the clear button and a free memory location is displayed. Either program another event or press the  $\odot$  button to go to run mode.

**B. If you want to schedule a specific end time for this duty cycle,** you can do so now in the same manner as any previous off event, including time and days.

- C. **If you want the duty cycle to continue endlessly**, there can not be any other events in the unit's memory.


## **Override the load status**

Load status can be overridden by the user. Pressing the  button in the run mode overrides the channel from its programmed state. The  sign appears on the display.

The load will remain in its current state until a programmed event switches it. Pressing the  button again locks the load ON. The word FIX will appear on the screen. It will not change with the next programmed event. The channel will only change when the  button is pressed again. Pressing the  button again will “fix” the load “OFF” . It also will remain “OFF” until the  button is pressed, returning control of the load to the program.

## **Reviewing, editing, and deleting programmed load events**

### **Review**

- 1: In the run mode, press the “Prog.” button step by step. Each individual stored program will be displayed until the last event. Then the free memory location is displayed. Press the  button to return to execute schedules.

### **Edit**

- 1: In the run mode, press the “Prog.” button step by step, until the desired schedule is displayed. Use the same procedures to create a program or to edit one. You may change the

time, active days, or event status by pressing the appropriate buttons. When you have made the desired changes, press the “Prog.” button to store them, and to proceed to the next schedule. Press the ⌚ button to return to run mode.

### **Delete individual events**

- 1: In the run mode, press the “Prog.” button step by step, until the desired schedule is displayed.
- 2: Press the “Clear” button once to delete the schedule. The next schedule will be displayed. If there are no other schedules, the free memory location will show. Press the ⌚ button to return to run mode.

### **Delete all schedule events**

- 1: In the run mode, press the “Prog.” button step by step, until the display shows “Fr xx”.
- 2: Press the “Clear” button once until the display shows “CL”.
- 3: Press and briefly hold the “Clear” button. All events are now erased. The display will show the maximum number of permissible events. Continue by scheduling a new sequence of schedules.

### **Resetting the unit**

- 1: Press the “Reset” button once. The entire display will show. This will clear the time and date settings. For instructions to set date, time and daylight savings information, please refer to page 1.