

# EC4000 Single-Channel Electronic Time Control

## GENERAL INSTRUCTIONS

The EC4000 is a single-channel, electronic time control that provides simple, inexpensive control of lighting, heating, ventilation, air-conditioning, security systems, motors, pumps, fans or any load with a time-of-day schedule. A Skip-A-Day feature allows any day or days to be skipped during the week. With 16 setpoints available, this time control provides programming versatility.

## SPECIFICATIONS

### PROGRAMMING CAPABILITIES

- 16 Setpoints - Each event can either be an ON or OFF event.
- Skip-A-Day - Allows any day(s) to be skipped. All events are ignored on a skipped day.
- Selectable Clock Format - 12 hour (AM/PM) or 24 hour format.
- Manual Override - Reverses current output state; begins immediately when initiated and remains until overridden again or until next setpoint is reached.
- 1 Minute Interval

### ELECTRICAL WIRING -

Terminals can accommodate 10-16 AWG wire.

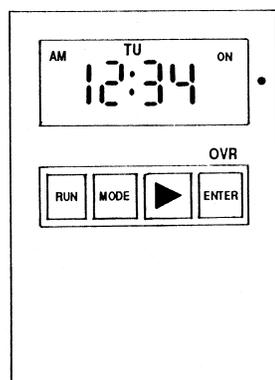
### POWER OUTAGE CARRY-OVER

The program and time-of-day are maintained during a power outage for a minimum of 7 days. A built-in special capacitor eliminates the inconvenience of battery replacement.

## ENVIRONMENTAL

The control should be mounted indoors in an environment that is free from excessive contaminants such as oil, moisture and dirt. Controls mounted in a non-metallic, NEMA Type 3R enclosure are suitable for both indoor and outdoor use.

## KEYPAD DESCRIPTION



- RUN-** Returns timer to the RUN mode. The timer will only control the load when in the RUN mode.
- MODE-** Advances from one programming mode to the next. The order of programming modes is as follows: Clock Format Select, Run, Set Time, Setpoint Programming, Set Duration 1 and Set Duration 2. After the last mode, the control will loop back to the Run Mode.
- %** Rolls through the parameter currently being programmed.
- ENTER-** In all programming modes, what is shown in the display is what exists in memory. Pressing the ENTER key simply advances to the next parameter to be programmed (i.e., hours to minutes).

## PROGRAMMING INSTRUCTIONS

These timers initially power up in the Clock Format Select Mode. This mode is only accessible once. If the clock format needs to be changed, the timer will have to be reset. To reset the timer, insert a pointed object into the reset hole to the right of the display.

### CLOCK FORMAT SELECT mode

STEP	KEY	DESCRIPTION
1.		Apply power to timer. Control displays 12 Hr, indicating 12 hour clock format.
2.	%	Toggles between 12 hour (AM/PM) and 24 hour (17:00 = 5:00 P.M.) clock formats. Choose the format desired.
3.	ENTER	Advances to RUN mode.

### SET TIME mode

STEP	KEY	DESCRIPTION
1.	MODE	Advances to SET TIME mode. Control displays time with hours flashing. TOD is also displayed to indicate that Time of Day is being set.
2.	%	Advance to current hour.
3.	ENTER	Minutes begin flashing.
4.	%	Advance to current minute.
5.	ENTER	Day of week begins flashing.
6.	%	Advance to current day of week, then go directly to setpoint programming mode below.

### SKIP-A-DAY PROGRAMMING mode

STEP	KEY	DESCRIPTION
1.	MODE	Advances from the SET TIME mode to the SKIP-A-DAY PROGRAMMING mode. The time control displays "SU" (Sunday). If "SCIP" is displayed, then Sunday is skipped. Otherwise, the programmed schedule is followed on Sunday.
2.	%	Display toggles between "SCIP" and " ".
3.	ENTER	Advances to next day. Repeat steps 2 and 3 to program Skip-A-Day for the rest of the week.

### EVENT PROGRAMMING mode

STEP	KEY	DESCRIPTION
1.	MODE	Advances to Skip-A-Day PROGRAMMING mode to the EVENT. The timer displays "1" at bottom of display and "_ _:_ _". The "1" indicates that the first of 16 events is being programmed. The dashes indicate that this event is clear.
2.	ENTER	Display shows the day(s) enabled (not skipped). The time control also displays "_ _:00" with the dashes flashing.
3.	%	Advance to desired hour.
4.	ENTER	Minutes begin flashing.
5.	%	Advance to desired minute.
6.	ENTER	Event type begins flashing.
7.	%	Display toggles between ON and OFF event types. Choose the event desired.
8.	ENTER	Advances to the second event. Repeat steps 2 through 8 to program additional events. When all events required are programmed, advance to the next step.
9.	RUN	Returns to the RUN mode when programming is complete.

## TO REVIEW SETPOINTS

STEP	KEY	DESCRIPTION
1.	MODE	Advances from RUN mode to SET TIME mode. (TOD displays.)
2.	MODE	Advances from SET TIME mode to SKIP-A-DAY PROGRAMMING mode.
3.	MODE	Advances from SKIP-A-DAY PROGRAMMING mode to EVENT PROGRAMMING mode. The control will display the first event (1 displays at bottom.) To modify the event, go to step 2 of the EVENT PROGRAMMING mode instructions.
4.	⏏	Advance through the remaining setpoints.
5.	RUN	Returns to RUN mode when done reviewing setpoints.

## OVERRIDE:

Manual override reverses the current output state. Loads that are ON turn immediately OFF; loads that are OFF turn immediately ON. The timer displays OVR to indicate that the current load state is the result of an override. The override remains in effect until overridden again or until the next setpoint is reached. To initiate override, press OVR (ENTER) key while in the RUN mode.

NOTE: After an override has been initiated, the OVR will display until the next programmed setpoint is reached, even if the timer is overridden again. Display will show if the load is ON or OFF.

## TROUBLESHOOTING TIPS

### Problem

Nothing happens when a setpoint occurs to turn the load ON or OFF.

### Solution

Review programmed setpoints making sure the day has not been skipped.

### Problem

You wish to clear the control's memory and start over.

### Solution

Depress the reset switch to the right of the display.

### Problem

Manual override does not work.

### Solution

Check the load for proper wiring. Remember, the contacts on these units only switch what is applied to them. (Dry or isolated contacts.)

### Problem

Blank display

### Solution

Check the input power source, ensure proper connection.

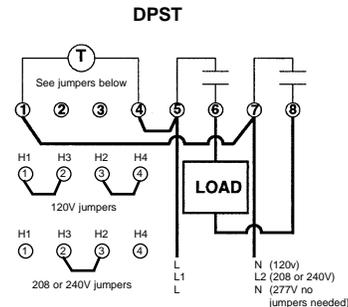
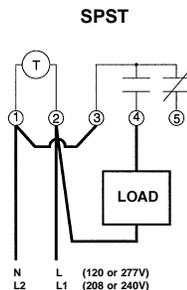
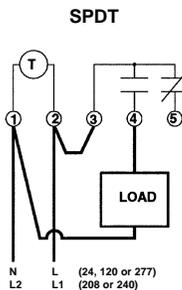
### Problem

Control does not operate after programming.

### Solution

If programming was not performed (changing clock time or entering a setpoint), the control will not update itself. Press the ENTER key and override the load until the next scheduled setpoint.

## Typical Wiring Diagrams



**Maple Chase Company**  
2820 Thatcher Road  
Downers Grove, Illinois 60515  
Made in Mexico

**Paragon Electric Canada, Ltd.**  
5785 Kennedy Road  
Mississauga, Ontario L4Z 2G3

Customer Service 800-951-5526  
Technical Support 800-732-8400

From outside North America  
630-719-5500

ISO 9002 registered