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.
- 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).
- OVR- Displays the day(s) enabled (not skipped).
- % Displays toggles between “ON” and “OFF”.

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
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. Advances to RUN mode.

SET TIME mode
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. Display advances to current hour.
3. Minutes begin flashing.
4. Display advances to current minute.
5. DAY of week begins flashing.
6. Day of week begins flashing.

SKIP-A-DAY PROGRAMMING mode
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
1. MODE Advances from the SET TIME 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. Display shows the day(s) enabled (not skipped). The time control also displays “_ _ :00” with the dashes flashing.
3. Advance to desired hour.
4. Minutes begin flashing.
5. Advance to desired minute.
6. Event type begins flashing.
7. Display toggles between ON and OFF event types. Choose the event desired.
8. 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. 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.

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.

OVERVIEW:
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.

Typical Wiring Diagrams

![Typical Wiring Diagrams](image)

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

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

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

From outside North America 630-719-5500

ISO 9002 registered