

TORK[®]

nsi
INDUSTRIES

INSTRUCTION MANUAL

EWZ101 EWZ103 EWZ120

DIGITAL TIME SWITCH

CLOCK OPERATED SWITCH




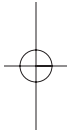
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MLI-205 (C)



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**TORK MODEL EWZ101/103/120
7 DAY DIGITAL TIME SWITCH**

READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL TIME SWITCH. SEE WARNING ON FRONT PANEL – Failure to comply with instructions could result in personal injury and/or property damage.

INSTALLATION:

UNIT IS TO BE INSTALLED BY A LICENSED ELECTRICIAN

1. To remove unit from enclosure: Push the tab on right to swing unit the left and remove.
2. Mount the enclosure at eye level using screws or other suitable fastening device. Bring supply and load wires in through or side knockouts. DO NOT USE TOP.
3. Reinstall unit by reversing step #1 above and connecting wires to units as per suggested wiring diagrams. See illustration and warning on back page.

CAPABILITIES

- 7 Day scheduling.
- ON and OFF set points:
Total number of events - 20 per day / week.
- Minimum setting – 1 minute
- Capable of different schedules each day of the week
- Astronomic Option. For automatic ON at sunset, OFF at sunrise for outdoor lighting.

FEATURES

Daylight Saving	Automatic (can be adjusted).
Leap Year	Automatic compensation.
Display	LCD
Manual Override	Until the next schedule ON or OFF. Automatic operation then resumes.
Power Outage	Permanent schedule retention Super capacitor maintains real time up to 4 days.

PROGRAMMING YOUR EWZ 101/103/120

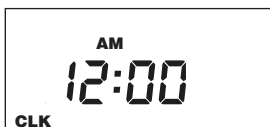
NOTE: AFTER MAKING ANY CHANGES TO THE PROGRAM, PRESS **MODE** TO GO TO RUN MODE AND THEN PRESS **EVENT** TO UPDATE THE LOAD STATUS.

AT POWER UP:

Unit should be program with AC power. Do not program under super cap back up power. When powering up the unit for the first time, allow 1-2 minutes for supercap to charge, then 12:00 will flash on the display. Press reset button after 2 minutes if screen is blank.

Press **MODE** to go to the CLK mode.

After pressing the **MODE** key the display will show:



1.0 TO SET CLOCK

Press **HOUR** and **MIN** to advance to the present hour and mins. Check AM/PM, and press **ENTER**.

1.1 TO MODIFY CLOCK

Press **MODE** until the display shows: CLK. Press **HOUR** an **MIN**. to modify clock and press **ENTER**.

2.0 TO SET DATE

If you are setting for the first time, display will show:



Press **MONTH**, **DATE**, and **YEAR** key to advance to the desired Month, Date and Year, then press **ENTER**.

NOTE: The day of the week will be automatically set once the date is set.

2.1 TO MODIFY DATE

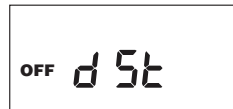
Press **MODE** until the display shows DATE. Press **MONTH**, **DATE** and **YEAR** to modify present settings and then press **ENTER**.

3.0 DAYLIGHT SAVING TIME

After setting or modifying the date, display will show:



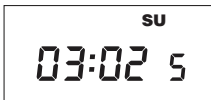
- a. For standard USA daylight savings (DSt), press **MODE** and go to step 4.0.
- b. For dates other than standard USA dates, press **MONTH** and go to step 3.1.
- c. If daylight saving time (DSt) is NOT required, press **DEL** and display will show:



Press **ENTER** then go to step 4.0.

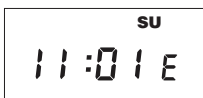
3.1 TO MODIFY STANDARD USA DAYLIGHT SAVINGS DATES

NOTE: The first two digits represent the month and the second set of digits represent the week in the month. Choices for week are 01 (1st), 02 (2nd), 03 (3rd) or L (Last) week of the month. The default day is Sunday (SU). Once modified date is set, the unit will automatically calculate the correct start dates in the future.



Now press **MONTH** and **DATE** buttons to modify the starting DSt settings. Pressing **DAY** changes default day. EXAMPLE: A screen showing “04:01 SU S” represents April (04), the first week (01), Sunday (SU), and the Start (S) of daylight savings time.

Press **ENTER** to save and the display will show:



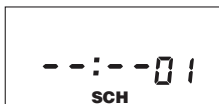
Now press **MONTH** and **DATE** buttons to modify the ending DSt settings. Pressing **DAY** changes default day. EXAMPLE: A screen showing “10:L SU E” represents October (10), the last week (L), Sunday (SU), and the End (E) of daylight savings time.

Press **ENTER** to save and the display will show the modified DSt starting date.

Press **MODE** twice to go to step 4.0.

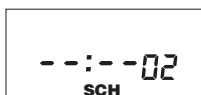
4.0 SCHEDULE SET MODE

Press **MODE** until display shows:



4.1 SETTING HOURS, MINUTES AND DAYS

- a. Press **HOUR** and **MIN** to set desired time.
- b. Press **EVENT** to set desired event (ON/OFF). Press **DAY** to select desired days and the press **ENTER**. The display will show:



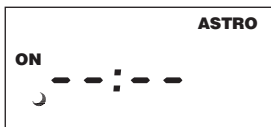
Follow the same procedures above to set more schedule entries.

5.0 TO SET ASTRONOMIC SCHEDULE

Press **MODE** until display shows:



Press **LAT** key to advance to the desired degree of latitude, from 0° to 60° north or 0° to 60° south. Press **ENTER**.



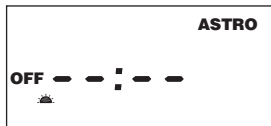
5.1 SELECTING ASTRO DAYS

Press **DAY** to select desired days in which you want the load to turn ON at sunset and then press **ENTER**. **NOTE:** Sunset Time will be based on Date and Latitude entered. The display will show:



If an offset to sunset time is required, press **HOUR** and **MIN**. Offset can be set to 4 hours and 59 minutes max. Press **EVENT** to select + or - and then press **ENTER**.

NOTE: A + sign will turn load ON that many hours and/or minutes after sunset. A - sign will turn load ON that many hours and/or minutes before sunset. The display will show:



Press **DAY** and then **ENTER** to activate sunrise time. **NOTE:** To turn load OFF at a preset OFF

time, leave this field blank. Press **ENTER**. The display will show:



If an offset to sunrise time is required, press **HOUR** and **MIN**. Offset can be set to 4 hours and 59 minutes max. Press **EVENT** to select + or - and then press **ENTER**.

NOTE: A + sign will turn load OFF that many hours and/or minutes after sunrise. A - sign will turn load OFF that many hours and/or minutes before sunrise. Press the **MODE** to return to the **AUTO** mode.

6.0 ASTRONOMIC ON AND TIME OFF

Set astronomic ON per sections 5.0 and 5.1

TIME OFF:

Press **MODE** until "sch01" appears. Press **ENTER** until a blank schedule appears. Press **HOUR**, **MIN** and **EVENT** to set desired OFF time. Press **DAY** to select desired days and then press **ENTER**.

6.1 TIME ON AND ASTRONOMIC OFF

Press **MODE** until "sch01" appears. Press **ENTER** until a blank schedule appears. Press **HOUR**, **MIN** and **EVENT** to set desired ON time. Press **DAY** to select desired days and then press **ENTER**.

ASTRO OFF:

Set astronomic OFF per sections 5.0 and 5.1

6.2 TO DELETE ASTRONOMIC SETTINGS

Press **MODE** until the display shows:

a. To delete individual settings.



Press **ENTER**. Press **DEL** and then **ENTER** to delete sunset settings. Press **ENTER** to advance

sunrise settings. To delete sunrise setting, press **DEL** and **ENTER**.

- b. To delete the astro schedule for sunset and sunrise. Press **MODE** until the display shows:



Press **DEL** and **ENTER**. The display will show:



Press the **MODE** key to return to the **AUTO** mode.

7.0 REVIEW, MODIFY AND DELETE

Press **MODE** to advance to any of the following MODES:

1. **CLOCK MODE**: Press **HOUR** and **MIN** to modify existing settings. Press **ENTER**.
2. **DATE MODE**: Press **MONTH**, **DATE** and **YEAR** to modify existing settings. Press **ENTER**. **DAY** is automatically adjusted.
3. **DST Daylight Saving Time**: To review press **ENTER**. To modify press **MONTH**, **DATE** and **DAY** to change existing setting. Press **ENTER**.
4. **SCHEDULE MODE**: Press **HOUR**, **MIN** and **EVENT** to modify time settings. Press **DAY** to modify days, **DEL** to delete. Press **ENTER** after each modification.
5. **ASTRO MODE**: Press **LAT** to change latitude. Press **ENTER**. Press **DAY** to add or delete days in the sunset mode. Press **ENTER**. Press **HOUR** and/or **MIN** to change offset time for sunset. Press **EVENT** to change offset from + to -. Press

ENTER and follow the same procedure above to modify or review sunrise settings.

6. **RUN MODE**: The time, day, seconds, the load status and **AUTO** is displayed.

8.0 OVERRIDE

OVR (Override) is effective in the **AUTO mode** and the **manual mode**. **OVR** on the **AUTO mode** is effective until the next event. **OVR** on the **manual mode** is effective indefinitely.

9.0 **EVENT** (in the **RUN mode**) key is used to update the load status. It will execute the last scheduled event. If there is no schedule programmed, the display will show —:—

10.0 NOTES:

1. **MAN mode**: Under this mode the unit disregards the settings in the schedule mode and remains in its manually set status **ON** or **OFF**. **NOTE**: To resume regular schedule execution press the mode key to return to **AUTO mode**.

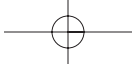
2. Unit will go to **RUN MODE** automatically (except on the **MAN mode**) if no key is pressed for five minutes.

3. Clear all memory. All memory can be cleared using the following procedure: While in the **RUN mode**, press **ENTER**, display will show:



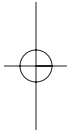
Use **EVENT** key to display:






Now press **ENTER** briefly and everything in the timer memory will be erased, including real time and date. **NOTE:** Unit has permanent memory and will not be erased unless done through procedure above.

4. Upon powering up your timer the display will show at what frequency the unit is operating, 50 will determine 50Hz or 60 for 60Hz. **NOTE:** While in the AUTO mode, if AC power is absent, the display will show a “PF” (power failure) instead of the seconds scrolling up.
5. A “Lo” on the display indicates that the super cap has run low and the unit needs to be powered with AC. A minimum of 8 hours is required to fully charge the super cap.



NOTE: AFTER MAKING ANY CHANGES TO THE PROGRAM, PRESS **MODE** TO GO TO RUN MODE AND THEN PRESS **EVENT** TO UPDATE THE LOAD STATUS.



ASTRONOMIC SCHEDULE

Latitude _____									Sunset	Sunrise	
		Sch. #	MO	TU	WE	TH	FR	SA	SU	Offset	Offset



TORK
INSIDER

ASTRONOMIC LATITUDE ZONES

