TORK® nsi INDUSTRIES

INSTRUCTION MANUAL

EWZ101
EWZ103
EWZ120

DIGITIAL TIME SWITCH

CLOCK OPERATED SWITCH
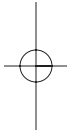
U L

LISTED 469D

FOR TECHNICAL SUPPORT:
888.500.4598

MLI-205 (C)

TABLE OF CONTENTS

Section **Page**

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

READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPT-
ING 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 con-
    necting wires to units as per suggested wiring dia-
    grams. 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:

```
      AM
   12:00
CLK
```
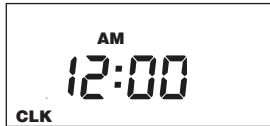
1.0   TO SET CLOCK
Press **HOUR** and **MIN** to advance to the present hour and mins. Check AM/PM, and press **ENTER**.

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:

```
MO
   01:01 07
      DATE
```
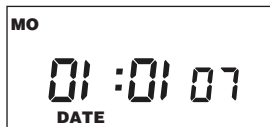
Press **MONTH, DATE,** and **YEAR key** to advance to the desired Month, Date and Year, then press **ENTER**.

2

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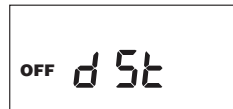
Press **ENTER** then go to step 4.0.

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.

```
          su
  03:02 5
```
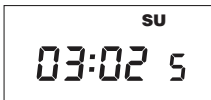
Now press **MONTH** and **DATE** buttons to modify the starting DSt settings. Pressing **DAY** changes default day. EXAMPLE: A screen showing "04:01 SU S" represents April (04), the first week (01), Sunday (SU), and the Start (S) of daylight savings time.

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

```
          su
  11:01 e
```

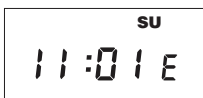Now press **MONTH** and **DATE** buttons to modify the ending DSt settings. Pressing **DAY** changes default day. EXAMPLE: A screen showing "10:L SU E" represents October (10), the last week (L), Sunday (SU), and the End (E) of daylight savings time.

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:

```
  --:--01
      SCH
```
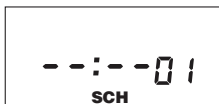
4.1 SETTING HOURS, MINUTES AND DAYS
    a. Press **HOUR** and **MIN** to set desired time.
    b. Press **EVENT** to set desired event (ON/OFF). Press **DAY** to select desired days and the press **ENTER.** The display will show:

```
  --:--02
      SCH
```

4
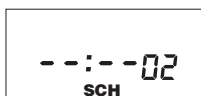
Follow the same procedures above to set more schedule entries.

5.0   TO SET ASTRONOMIC SCHEDULE
Press **MODE** until display shows:

```
                        ASTRO

    LA tn--
```

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

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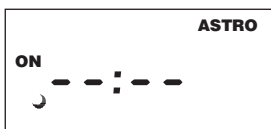
5.1   SELECTING ASTRO DAYS
Press **DAY** to select desired days in which you want the load to turn ON at sunset and then press **ENTER. NOTE:** Sunset Time will be based on Date and Latitude entered. The display will show:

```
 MO TU WE TH FR SA SU  ASTRO
                       OFFSET
 ON 00:00
   ☾
```

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:

```
                        ASTRO

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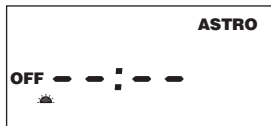
Press **DAY** and then **ENTER** to activate sunrise time. **NOTE:** To turn load OFF at a preset OFF

5

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

```
MO TU WE TH FR SA SU  ASTRO
                      OFFSET
OFF 00:00
```

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.

```
CH1              ASTRO
    LA tn40°
```

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

6

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:

```
                          ASTRO
 CH1
           LR Ln40°
```

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

```
                          ASTRO
 CH1
           LR Ln--
```

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

7

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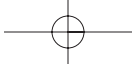
2. Unit will go to RUN MODE automatically (except on the MAN mode) if no key is pressed for five minutes.

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

```
OFF CL EAr
           AUTO
```
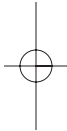
Use **EVENT** key to display:

```
ON  CL EAr
           AUTO
```

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.

Sch.#	Load Description	Time	ON	OFF	MO	TU	WE	TH	FR	SA	SU

ASTRONOMIC SCHEDULE

Latitude _____

Sch. #	MO	TU	WE	TH	FR	SA	SU	Sunset Offset	Sunrise Offset
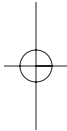
TORK ®

ASTRONOMIC LATITUDE ZONES

12