

KEY  
B  
O  
T

# TORK<sup>®</sup> nsi INSTRUCTION MANUAL

CLOCK OPERATED SWITCH



## DIGITAL TIME SWITCH **EWZ201**



**FOR TECHNICAL SUPPORT:  
888.500.4598**

MLI-212(B)

## TABLE OF CONTENTS

Section	Description	Page
	Installation Instructions and Capabilities .....	1
1.0	Set Clock .....	2
1.1	To Modify Clock (After previously Set) .....	2
2.0	Set Date .....	2
2.1	To Modify Date (After previously Set) .....	3
3.0	Daylight Saving Time .....	3
3.1	To Modify Daylight Saving Time .....	4
4.0	Schedule Set Mode .....	4
4.1	Setting Hour, Minutes and Days .....	5
5.0	To Set Astronomic .....	5
5.1	Selecting Astro Days .....	5
6.0	Astronomic ON and Time OFF .....	6
6.1	Time ON and Astronomic OFF .....	7
6.2	Delete Astronomic settings .....	7
7.0	Review, Modify, Delete Schedule .....	8
8.0	Manual Override .....	8
9.0	Update Status .....	8
10.0	Use as Momentary Unit .....	9
11.0	Notes: Clear memory .....	9
	Schedule Sheets .....	11,12
	Astronomic Latitude Zones .....	13

**TORK MODEL EWZ201  
2 CHANNEL 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
- Field convertible from Maintained to Momentary
- Capable of different schedules each day of the week
- Astronomic Option. For automatic ON at sunset, OFF at sunrise for outdoor lighting.

**FEATURES**

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

## PROGRAMMING YOUR EWZ 201

**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, wait 1-2 minutes to charge the supercap, then 12:00 AM will flash on display.

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** and **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:



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



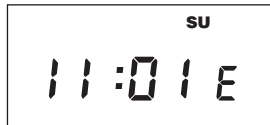
Press **ENTER** then go to step 4.0.

### 3.1 TO MODIFY STANDARD USA DAYLIGHT SAVINGS DATES



Press **MONTH** and **DATE**, to modify S (starting) DST settings. **NOTE: DATE** will choose the week of the month to be assigned. Choices are 01 (1st), 02 (2nd), 03 (3rd) or L (Last) week of the month. The default day in SU (Sunday). Pressing **DAY** changes default day. **EXAMPLE:** 04:01 SU S represents the first Sunday in April.

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



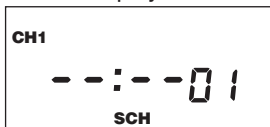
Press **MONTH** and **DATE**, to modify E (ending) DST settings. **NOTE: DATE** will choose the week of the month to be assigned. Choices are 01 (1st), 02 (2nd), 03 (3rd) or L (Last) week of the month. The default day is SU (Sunday). Pressing **DAY** changes default day. **EXAMPLE:** 10:L SU E represents last Sunday in October.

Press **ENTER** and the display will show the modified Dst starting date.

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

### 4.0 SCHEDULE SET MODE

Press **MODE** until display shows:



Press **CH1/CH2** to select channel 1 or 2.

#### 4.1 SETTING HOURS, MINUTES AND DAYS

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



Follow the same procedures above to set more schedule entries for channel 1. At the next blank screen press **CH1/CH2** to select desired channel and proceed with the steps above to set more schedule entries.

#### 5.0 TO SET ASTRONOMIC SCHEDULE

Press **MODE** until display shows:



Press **CH1/CH2** to select channel 1 or 2. Press **LAT** key to advance to the desired degree of latitude, from 0° to 60° north or 0° to 60° south. Press **ENTER**. The display will show:



#### 5.1 SELECTING ASTRO DAYS

Press **DAY** to select desired days in which you want the indicated channel 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 bank. 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 then press **CH1/CH2** to select channel 1 or 2. 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 then press **CH1/CH2** to select channel 1 or 2. 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

a. To delete selected channel

Press **MODE** until the display shows:



Press **CH1/CH2** to select desired channel and press **ENTER**. Press **DEL** and then **ENTER** to delete all unwanted entries.

b. To delete the astro schedule for both channels  
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**, **DAY** and **DATE** to change existing setting. Press **ENTER**.
4. **SCHEDULE MODE:** Press **ENTER** to advance to desired channel. 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 **CH1/CH2** to select desired channel. 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 status of both channels 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 for **CH1** and **CH2**.

The display will only show the last scheduled event for **CH1**. To view the last schedule event for **CH2**, simply press the **EVENT** key again. If there is no schedule programmed for **CH1** or **CH2**, the display will show —:—

## 10.0 USE AS MOMENTARY UNIT

This unit can also be field converted to be used as momentary unit. To make this conversion, remove jumper in back of the unit. Reset the unit by inserting a small pin or paper clip into the small hole next to the **EVENT** key and re-setting the clock and date.

### NOTES:

1. Upon removing the jumper and re-setting the unit, CH1 will be configured as momentary On and OFF. ONLY CH1 will need to be programmed. CH2 can still be viewed and programmed but will not take effect.
2. 2 second closure between terminals 3 and 4 at ON event and 2 second closure between terminals 5 and 6 at OFF event.

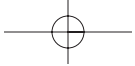

## 11.0 NOTES:


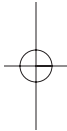
1. MAN mode: Under this mode the unit disregards the settings in the schedule mode and remains in its manually set status ON or OFF.  
**NOTE:** To resume regular schedule execution press the mode key to return to **AUTO** mode.
2. Unit will go to RUN MODE automatically (except on the MAN mode) if no key is pressed for 5 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:



- 
- 
4. 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.
  5. Upon powering up your EWZ201 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.
  6. 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.



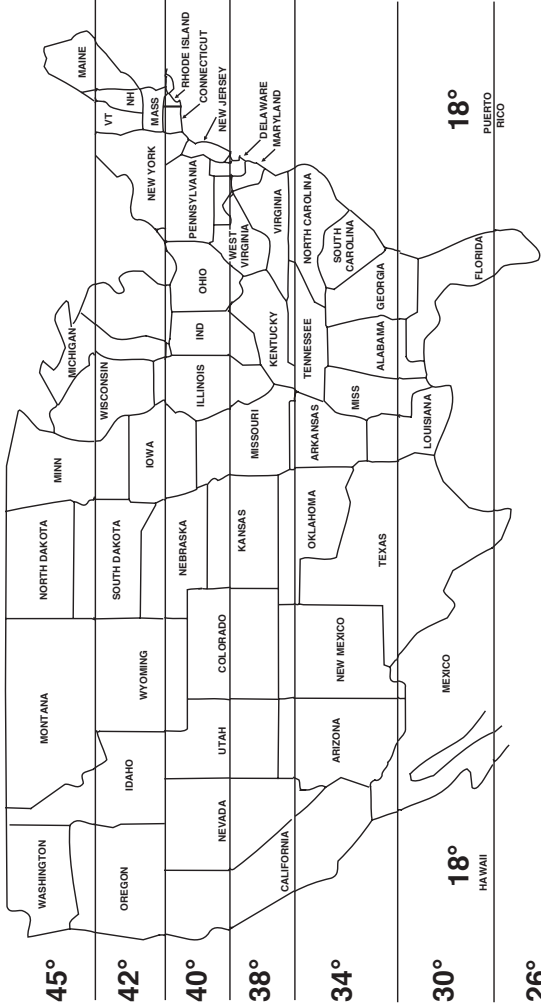
**NOTE:** AFTER MAKING ANY CHANGES TO THE PROGRAM, PRESS **MODE** TO GO TO RUN MODE AND THEN PRESS **EVENT** TO UPDATE THE LOAD STATUS.

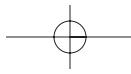


# ASTRONOMIC SCHEDULE

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

**TORK** INSPIRE  
**ASTRONOMIC LATITUDE ZONES**





**TORK**<sup>®</sup> **nsi**  
INDUSTRIES

888.500.4598 • [www.nsiindustries.com](http://www.nsiindustries.com)

