TORK® nsi INDUSTRIES

INSTRUCTION MANUAL

EW101B
EW103B
EW120B

DIGITIAL TIME SWITCH

CLOCK OPERATED SWITCH

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LISTED 469D

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TORK MODELS EW101B / EW103B / EW120B
24 HOUR 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. Unit should be programmed with AC power only and not while on super cap back up power.
4. Reinstall unit by reversing step #1 above and connecting wires to units as per suggested wiring diagrams. See illustration and warning on back page.
5. To reset the timer, insert a paperclip on the small hole next to the EVENT key. This procedure will allow you to reset the time but will not clear the memory.

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

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. Supercapacitor maintains real time up to 4 days.

KEY FUNCTIONS:
Unit should be programmed with AC power. Do not program on super cap back up power.
Mode: Press to go to the next mode.
Enter: Stores or saves current entry.

OVR:
a. Press to change the load status in the AUTO (automatic) and the MAN (manual) mode.

DEL/PREV:
a. Press to delete the displayed entry.
a. Decrement the last selected entry.

HOUR/MONTH:
a. Press to set hour in CLK (clock) mode and the SCH (schedule) mode.
b. Press to set month in the DATE mode and DST (Daylight Savings Time) mode.

MINUTE/DATE:
a. Press to set minutes in CLK (clock) mode and SCH (schedule) mode.
b. Press to set date in the DATE mode.
c. Press to select the week of the month in DST (Daylight Savings Time).

SEC/DAY/YEAR:
a. Press to set the YEAR in the DATE mode.
b. Selects the desired day of the week in the DST (Daylight Savings Time) mode.
c. Press to select the desired day or days in the SCH (schedule) mode.

EVENT:
a. Press to select ON/OFF in the schedule.
b. Press to update the load status In the AUTO (automatic) mode.

PROGRAMMING YOUR EW101B / EW103B / EW120B

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:

When powering up the unit for the first time, allow 1-2 minutes to charge the supercap, then 12:00 AM will flash on the display. Press reset button after 2 minutes if screen is blank.

Press the **MODE** key 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 and 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**.
NOTE: The day of the week will 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 SAVINGS TIME

After setting or modifying the date, display will show:

$$\boxed{\text{ON} \quad d\,5t}$$

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:

$$\boxed{\text{OFF} \quad d\,5t}$$
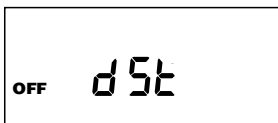
Press **ENTER** then go to step 4.0.

3.1 TO MODIFY STANDARD USA DAYLIGHT SAVINGS TIME

NOTE: The first two digits represent the month and the second set of digits represents 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.

$$
\boxed{03\text{:}02 \quad ^{\text{SU}}_{} 5}
$$

Now press the **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:

$$
\boxed{11\text{:}01 \quad ^{\text{SU}}_{} E}
$$

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:

$$- -:- - 0 1$$

SCH
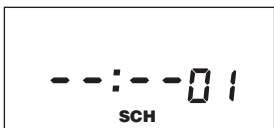
4.1 SETTING HOURS, MINUTES AND DAYS

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 then press **ENTER**. The display will show:

$$- -:- - 0 2$$

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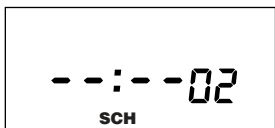
Follow the same procedures above to set more schedule entries.

5.0 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 change existing settings press **MONTH**, **DAY** and **DATE**, then press **ENTER**.

4. SCHEDULE MODE: Press **HOUR**, **MIN** and **EVENT** to modify time settings. Press **DAY** to modify days, and **DEL** to delete. Press **ENTER** after each modification.

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

6.0 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.

7.0 UPDATE STATUS

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

8.0 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**, and display will show:

$$CL\ EAr \quad \text{OFF}$$
$$\text{AUTO}$$

Use **EVENT** key to display:

$$CL\ EAr \quad \text{ON}$$
$$\text{AUTO}$$

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 EW101B/103B/120B 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

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

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

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

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