The New Standard in Rally Checkpoint Clocks...



THE TIMEWISE 650

Designed with the requirements of rallymasters, rallyists, and checkpoint workers in mind, the TIMEWISE 650 is a highly accurate, easy to use, multi-split clock. Extensive engineering, quality component selection, and careful manufacturing assure ultra-reliable operation of this essential checkpoint timing instrument.

The TIMEWISE 650 uses a liquid crystal display (LCD) and ultra-low power, custom programmed micro-computer to provide over five months operation from four "AA" batteries. The half-inch high digits are easily read in full sunlight; and "on demand" backlight illumination enables nighttime use. The 650's small size and light weight make it easy to hold and operate.

In addition to providing an accurate clock, the 650 can store the time of day at which a rally car enters a checkpoint. When **Split** is actuated, the clock visibly freezes, and the displayed time is stored in memory. Actuating **Split**, again, stores the second split time in memory. Actuating the **Recall** switch upward allows you to retrieve each split time in the order saved. Pressing **Recall** down lets you scan previously viewed data. Selecting **Live/Sync** allows you to temporarily look at the live clock when any split time is showing.

A remote split input connects to most roll-over or optical sensors for automatic checkpoint timing. Upon being split,

whether via the **Split** switch or the remote split input, a buzzer briefly sounds. Intelligent debounce circuitry on the remote input prevents multiple splits from a single vehicle.

A secure, but simple, clock setting procedure safeguards against a checkpoint worker accidentally changing the time of day. You cannot turn the 650 off.

The clock is easily set to any hour, minute, and second (or hundredth of a minute). You can alternate between seconds and hundredths after the clock is set. This makes alignment to broadcasted time standards particularly easy...after setting the clock in seconds, change to hundredths of minutes to run the rally. The clock can be displayed in either a 12 or 24 hour format. You can also view time to a resolution of tenths of seconds or thousandths of minutes.

A 650 can automatically set the time (and counting mode) in another Timewise clock via a master/slave arrangement. After one 650 has been set to the time of day, several more units can be set in a matter of moments. A lead car with the event's "master 650" can, therefore, quickly set (or simply re-establish) the time in each checkpoint's clock.

Superb construction, unparalleled accuracy, unsurpassed versatility...that's why the TIMEWISE 650 is the standard in rally checkpoint clocks.

650 FEATURES

- Twelve hour or twenty-four hour time of day clock
- Fifty register memory (first in first out) for multiple SPLITs
- Lap split timer with concurrent time of day split
- 0.5" tall, extended temperature range, high humidity tolerant, 6 digit LCD
- LCD backlight for nighttime use
- Clock accurate to one second over 24 hours (48 hours typical)
- Secure, yet simple, clock setting procedure protects against accidental time changes
- Clock can be set to any hour, minute, or second/hundredth of minute
- Seconds/hundredths and 12/24 hour clock selection at any time
- 10ths of seconds (59:59.9) or 1000ths of minutes (59.999) display resolution at any time
- Clock re-adjustments at any time
- Fractional seconds/hundredths synchronization at any time
- Master/Slave procedure for synchronizing several clocks at any time
- Restricted datalog access mode for inexperienced checkpoint workers
- No on-off switch
- Battery saving, automatic display shut-off when not used for 24 hours
- REMOTE SPLIT input with intelligent debounce circuitry
- Audible buzzer when SPLIT or REMOTE SPLIT activated
- Optional DC input jack for continuous LCD backlighting
- Optional RS232-C output of data
- Compact, sturdy case
- Two-year warranty (parts and labor) on entire unit

TECHNICAL SPECIFICATIONS

CPU type: Design MC68HC705C8A operating @ 307.2 KHz

Data: 304 bytes Program: 7584 bytes Operating memory: 0.5" tall, extended temperature range, high humidity tolerant, 6 digit LCD Display:

Multi-split storage: 50 memories (first in - first out)

Displayed Information 12:00.00 to 11:59.99 (:59) or 59.999 (minutes.thousandths) or 59:59.9 (minutes:seconds.tenths)

Clock Accuracy ± 1 second after 24 hours

Electrical

Power source: 4 "AA" alkaline batteries 4 to 6 VDC; 150 to 250 μamp while running; 100 to 200 μamps during standby; 15 μamps in sleep mode (off); 50 mamps

when LCD backlight activated.

3600 hours (5 months) during normal use. (Battery life is significantly decreased when the LCD backlighting is operated -

activating the LCD backlighting for 5 seconds decreases the battery life by approximately 1 hour.) Optional external power for continuous LCD backlighting: 9 or 12 VDC (specify); 40 - 70 mamps

Storage temperature: **Environmental** -40°C to 90°C

-25°C to 80°C Operating temperature: 90%, non-condensing Humidity:

Enclosure: Phenolic **Physical**

Scratch protected polycarbonate over aluminum Front panel: 4.025" x 2.925" x 2.3" (including height of switches) Approximately 11.5 oz. (including batteries) Size: Weight:

5.0mm OD, 2.1mm ID; + on pin, - on sleeve Optional DC input jack for continuous backlighting:

Model 650 Multi-Split Chronometer Option 1: Input for DC Power for Continuous Backlight Illumination.....

