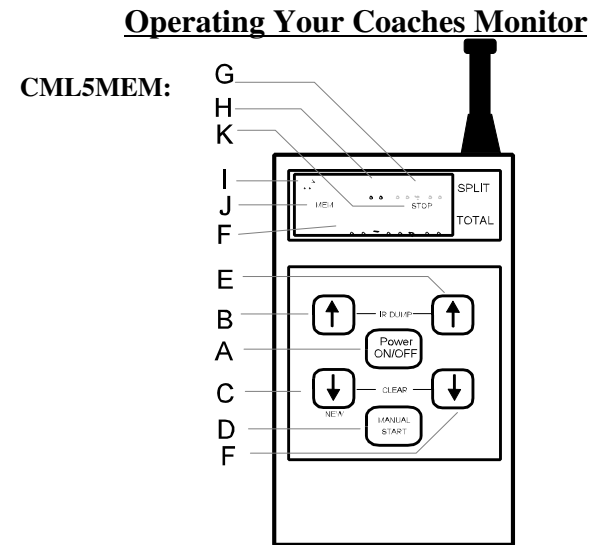


**Brower Timing Systems**  
*Speedtrap 2*  
2004

User's Manual



**Power Up:** To power up the CML5MEM, press and hold the [A] button for approximately 2 seconds until the LCD turns on. The data from the last session is still in memory until the clear memory function is used. The clock is now ready to receive radio signals.

**Memory Clear:** Press and hold [C] and [F] at the same time for approximately two seconds, the display will change while it clears the memory. the clock will then be reset to first athlete.  
**\*\* all past times will be lost \*\***

**New Athlete:** When an athlete has finished, a new timing window must be opened (9 splits per athlete max). To start a new athlete, press the [C] button until a reset clock appears. This is the only time the athlete # can be adjusted (*see Athlete Number Adjust*).

**Athlete Memory Review:** To review an athletes times press the [B] or [C] keys. The order # [I], will adjust accordingly. The athlete # [H] will be displayed until split review is activated. Holding down either review button for 2 seconds will engage the high speed scroll.

## CML5MEM:

**Split Review:** To review an athlete's split times (if applicable), press the [E] or [F] keys to view the appropriate split time. The total time between start and the selected split is displayed on line [F]. The elapsed time between the selected split and the previous split is displayed on line [G]. The selected split number is [H]. When split 1 is reached the athlete # will replace the split #.

**Athlete Number Adjust:** The athlete # [H] allows you to assign an identifier to each athlete. The athlete's number [H] may only be adjusted before the clock starts for that athlete. To adjust the number, make sure the display is showing the new athlete's window, then press the [E] or [F] buttons until the desired number is reached. Holding down either button for 2 seconds will engage the high speed scroll feature.

After the desired number is reached, the start signal will lock the athlete # to the time. If no adjustment is made for the next athlete, the same number will be assigned to it as well.

**Manual Start:** To manually activate the clock, press the [D] button, the clock will treat this the same as an electronic signal.

**Printing Times:** To print times to HP82240B IR printer, Remove the antenna from the clock and point the IR LED (small hole in top of case adjacent the antenna) at the lens of the printer. Press and hold [B] and [E] for 2 seconds, the LCD will indicate that the clock is printing. At this point the printer should be responding. Wait until the printer is finished before replacing the antenna on the clock.

**Battery Low:** If the small battery symbol on the LCD display is lit, the battery needs replacement. The unit requires a 9v Alkaline battery. Times will not be lost while replacing the battery.

### **Specifications:**

- Nonvolatile memory
- 126 athletes times
- 9 splits per athlete
- 150 hours battery life
- .5 mile radio range

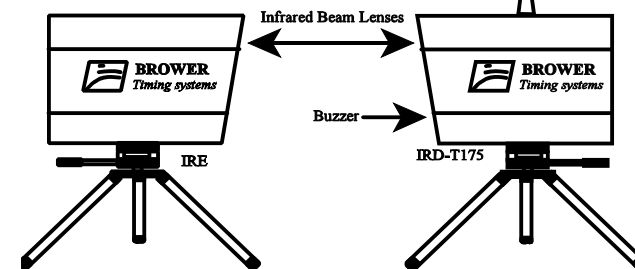
## Setting up your Speedtrap 2:

### **Beam Setup:**

- Set up the beam set as displayed below at the "SPLIT" or "FINISH" location.

- Turn on the IRD-T175 by pressing and holding the power button for three seconds, it will beep, then buzz continually. If the battery is low (after 100 hours of use) the buzzer will make a series of low tones before the continuous buzz.

- Point the IRD-T175 in the direction of the IRE.



- Turn on the IRE by holding down the power button until the desired power level is selected. The IRE has three power settings (the distance allowed between IRE, and IRD-T175).

- One beep indicates low (50 feet - 200 hours battery life)
- Two beeps indicate medium power (75 feet - 100 hours)
- Three beeps indicate high power (150 feet - 50 hours)

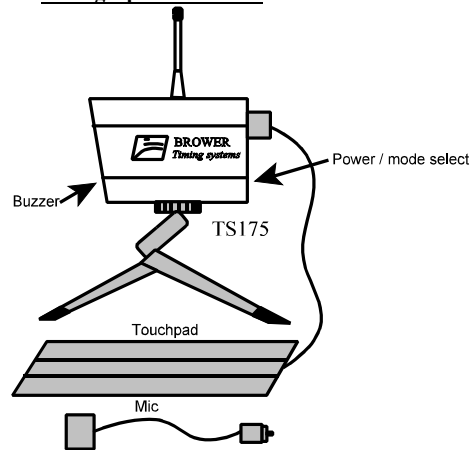
Make sure the unit is turned off before changing power levels. To power down, press and hold down the power button for 2 seconds. A low tone beep will indicate power off.

- Align the IRE by directing it toward the IRD-T175 until it stops beeping. Note the position of the IRE unit, continue rotating the IRE until the IRD-T175 starts beeping again. Note this position, then rotate the IRE to the middle of these two positions. Repeat process for vertical positioning.

- \* Medium and high power settings will consume the battery faster. The low battery feature will send out a series of low tone beeps immediately after power up if the battery is low.

\*\*\* USE ONLY ALKALINE BATTERIES IN ALL UNITS\*\*\*

## Setting Up Your TS-175



**Setting up the TS175:** Setup the TS175 as shown above. To power up the unit, press and hold the power button until the desired mode is selected. The TS175 has 4 modes to choose from:

- One beep: Touch and Release
- Two beeps: Ready Set Go
- Three beeps: Hit
- Four beeps: Microphone

**Touch and Release:** In the Touch and Release mode, when the athlete presses the touch-pad, the unit will beep. When the athlete releases the pad, the unit will send the radio signal to the clock.

**Ready Set Go:** In this mode the unit will send out at random intervals "Ready" beep, "Set" beep, "Go" beep. When the "Go" beep is heard, the unit sends a radio start, when the athlete releases the touch-pad, the unit sends a second signal. This allows the athlete to evaluate his reaction time to the "Go" beep.

**Hit:** In this mode the unit will transmit when the pad is first touched.

**Microphone:** The microphone will trigger a transmission when a loud sudden noise is detected by the microphone. The intended use for this option is with a cap gun. Hold the microphone in the same hand as the gun. Experiment with the location for best results.

\*\*\*TOUCHPADS WILL WEAR OUT WITH USE. TO AVOID PROBLEMS PLEASE HAVE A BACKUP TOUCHPAD.

## Product Specifications

**Radio:** Radio transmission distances of ½ mile can be received in line of sight applications. Do not place the CML5FM near any large electric motors or welders while trying to receive signals, large amounts of electromagnetic noise can cause interference.

### Battery:

**CML5MEM:** Power down unit. Remove the battery cover on the lower back of the unit. Install a fresh 9V alkaline battery (Energizer recommended). Replace the battery cover.

**IRD-T175 and TS175:** Power down the unit. Remove the antenna from the top, and remove the set screw from the base of the unit. Apply pressure to the front of the unit between the lens and buzzer to slide the unit out of its case. Insert a small screwdriver in the pry hole on the bottom side of the unit and pry the battery from its snaps. Replace with **ALKALINE** 9v Battery (Energizer recommended). Place the unit back into the case and replace the set screw and antenna.

**Warranty:** The BROWER TIMING SYSTEM is backed by a 1 year warranty covering manufacturing defects. Service, whether covered by the warranty or not can be performed and returned quickly. When returning a BROWER component, be sure to describe the problem and include a return shipping address. Also leave a phone # and VISA #/EXP Date if there are non-warranty repairs or over night shipping requirements.  
**\*\*\* Touchpads and tripods wear out with use and are generally not covered by the warranty.**

Return to: Brower Timing Systems  
12660 South Fort Street #102  
Draper, UT 84020  
(801)572-5540

## **Troubleshooting**

**Problem:** One of my timing units does not power up.

**Solution 1:** All units require you to press and hold the power button for at least 2 seconds to initiate the power up sequence.

**Solution 2:** Check the battery. On power up the unit will warn of a low battery by letting out a long sequence of beeps (the CML5MEM has a low battery symbol on the LCD). If the unit shows no signs of turning on, Check for dead battery.

**Problem:** My timing system is setup correctly, but the clock won't receive a signal.

**Solution:** Make sure all the antennas are correctly installed. Also don't try to use the receiver near a large motor, or near a computer. The electromagnetic interference from these devices will interfere with the receiver.

**Problem:** My touch-pad is correctly installed, but doesn't beep when I press it.

**Solution:** Put the TS175 in mode 4 and install the microphone. If the unit operates properly in this setup, you may need a new touch-pad.

**Problem:** My touch-pad works right, but my microphone doesn't work when the TS175 is in mode 4.

**Solution:** Make sure the microphone is properly installed into the TS175 and the TS175 is in mode 4.

**"I have found a problem, What do I do now?"**

\* If you are able to isolate the malfunctioning component in your timing system, return that component to:  
Brower Timing Systems  
12660 South Fort Street Suite #102  
Draper, UT 84020

Include a short letter describing the nature of the failure, a phone # where you can be reached and a return address. If the product is not in warranty, include VISA, or Mastercard # with expiration date. \*\* COD shipments will be refused \*\*

\* If you cannot locate the problem, but the system still doesn't work call Brower Timing Systems directly at (801)572-5540.