# **CHRONY BETA-MASTER**

<u>CAUTION:</u> Do not leave your Shooting Chrony® in a car on a warm to hot day. The liquid in the LCD may change to some degree (because of heat build-up) and fail, showing [8888].

<u>NOTE:</u> At any time you can leave the unit alone for approximately 15 seconds and it will return to "ready to shoot mode.

# Setup:

# Step-1

- Ensure safe shooting backstop
- Make sure the battery has a min. of 7.5 VDC
- Place the Chrony so shots fired will 4" to 6" above the top of the photo-sensors (black boxes). 4" for open sights, 6" for scoped rifles

# Step-2

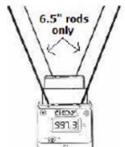
Minimum distance of Chrony from muzzle:

- Air gun & .22 rim fire 3'
- Bow & Arrow -4'
- Shot gun 5'
- Small calibre centre fire 8' (low velocity rounds)
- High calibre centre fire 10' to 15' (the bigger blast, the longer distance)

# Step-3

- For indoor shooting ensure no fluorescent lights are used, & install only 6.5" rods as guides.
- For outdoor shooting, make sure nothing is between the Chrony and the sky (branches, roofs)
- On hazy, cloudy days install only the 6.5" wire rods as aiming guides

# <u>Indoor/"hazy weather" set-up:</u>



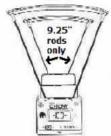
• On clear, sunny days, common set-up would include installing 6.5" wire-rods into the sensor housings, followed by 9.25" rods, and use of all 6 diffusers pieces. Bench-rest shooters may opt. to only use the 9.25" rods, leaving out the centre section of the white diffusers for more reliable, accurate readings.

#### Common set-up:



#### Bench-rest set-up:





# **Functions:**

Having turned on the unit it will identify itself as a Beta model by flashing "[BE]" with symbols on either side. You have 6 memory strings available, with 10 shots in each string. The Chrony starts to register shots in the first empty string. Shots are all recorded in temporary memory that will be lost when the unit is turned off unless the shots are stored in permanent memory by pressing the red "ST" button. After 10 shots the Chrony will alternately flash "=LN=" three times which means "Last Number" available in this string. If you continue to shoot you will overwrite the information recorded as shot #1 in this string, and the display will alternately flash "=SO=" after each shot meaning "Shot Over".

#### •Red "ST" Button:

Press & release to record all shots in your current string to permanent memory, and move to the next string to start recording (the number of the next string will be displayed as long as you hold the red "ST" button).

### • "FU" Button:

Press and release to cycle through string data. You can return to shooting mode by pressing "ST" at any time.

- "Sn" Shot number
- "Lo" Lowest velocity
- "Hi" Highest velocity
- "Av"-Average velocity
- "ES" Extreme Spread
- "Sd" Standard deviation
- "I'o" Total # of shots fired since unit was turned on
- "10" though "1" Cycles though shots fired in the current string
- "[]" End of cycle, ready to shoot again

#### •"Forget" Button:

Used only to delete an entire string from temporary memory. Select a string number using the "ST" button, press & release "Forget" to delete all shots in that strings temporary memory.

#### **Deleting a single shot:**

Press & release the "FU" button until the desired shot number is displayed then hold the "FU" button until the display flashes.

#### **Deleting all permanent memory:**

Press & release the "FU" button until "HI" appears, then hold the button in until "CL" appears, release the button until "CLR" appears, press & release the button twice and "CLE" appears, press & hold the button until the display flashes & release the button immediately. Turn the unit off.

#### Troubleshooting:

False or incorrect readings are usually caused by either light conditions, or muzzle blast.

The display may flash any one of the following codes:

- "Lb" Low battery
- "Err 1" The first sensor did not detect the passage of the bullet.
- "Err 2" The second sensor did not detect the passage of the bullet.
- "Err 3 thru 9" Poor light conditions. Installing, adjusting, or removing the diffusers may help.

# **Calculating Energy:**

Average velocity  $\mathbf{X}$  average velocity  $\mathbf{X}$  weight of bullet in grains  $/450,240 = \underline{\phantom{0}}$  **ft. lbs.**