Time & Tide Clock

Item # TT2

✯ *Guaranteed For Life!* ✯ *Solid Brass* ✯

✯ Installing the Outdoor Time & Tide Clock

First, select a suitable window or wall mount position in a permanently shaded and sheltered area. Then, follow the 3 steps in Figure 1.

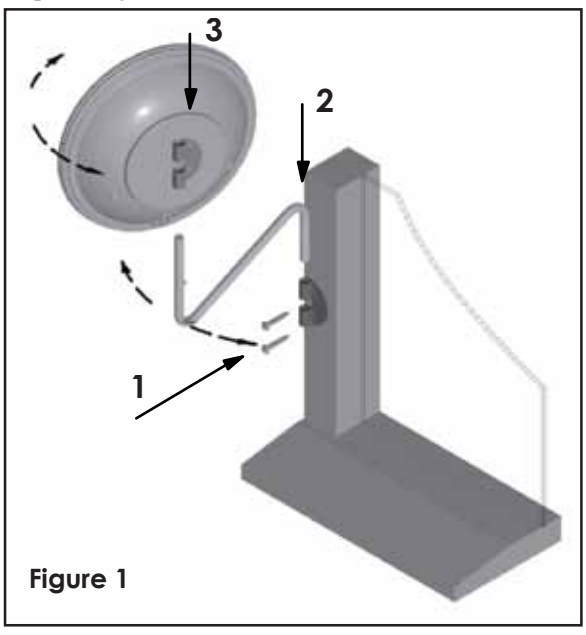

Figure 1

1. Attach the 'D' shaped hinge bracket to a window frame with 2 x 5/8" screws (provided).
2. Insert the shorter leg of the long swing arm into mount bracket. Check swing arm will pivot through approximately 140˚ to 180˚.
3. Gently place the pivot bracket at the instrument rear onto the upward facing longer leg of the swing arm and lower until touching the vertical stop side lug. Check the instrument pivots on the swing arm in excess of 180˚.

NOTE: With this longer swing arm the instrument can be positioned to face the window pane so that it can be read from the opposite side of the window pane, inside the dwelling.

Figure 2B

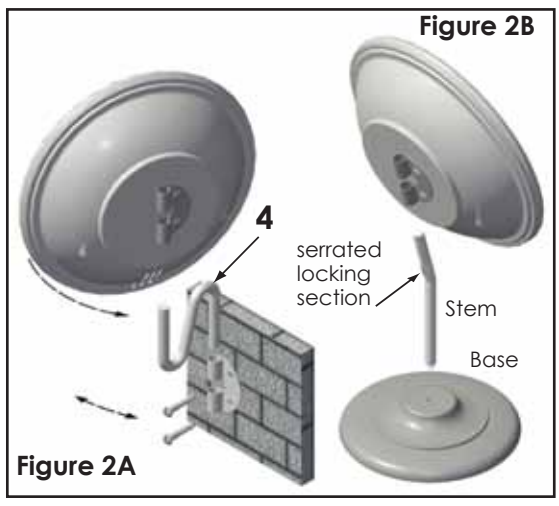

Figure 2A

Alternate mounting arrangements are available. Figure 2A shows a short 'S' bracket supplied in the pack that allows the instrument to always and only face away from a wall mounting position. For this, remove the long swing arm in Figure 1 and replace with the shorter swing arm # 4 Figure 2A repeating the above STEPS 2 & 3. A further option is available to use this product indoors. Figure 2B shows a table stand available (not included) for portable use. The Stem first screws to the base. The instrument can then be lowered onto the stem with the rear tubular bracket pushing onto the serrated stem to lock into place.

✯ About the Temperature Dial

The thermometer in this instrument utilizes a bimetallic coil to sense the atmospheric temperature. As the temperature increases, the coil expands and unwinds, turning the shaft upon which the indicator needle is fastened. Since the action depends on the expansion and contraction of metallic components, the response to ambient temperature changes is not immediate. This product does not contain mercury.

✯ About the Humidity Dial

The hygrometer in this instrument utilizes a mechanism similar to the bimetallic coil found in dial thermometers to sense relative humidity. As the moisture (water vapor) in the air increases, the coil expands and unwinds, turning the shaft upon which the indicator needle is fastened. Since the action depends on the expansion and contraction of metallic and moisture sensitive components, the response to changes in humidity is not immediate. Many variables affect the accuracy of this instrument and, for that reason, it should not be used for delicate scientific purposes but rather as an indicator of changes in relative humidity (RH).

✯ About the Time & Tide Clock

The Time & Tide Clock has a brass colored second hand, black hour and minute hands, and a blue tide hand. The dial is divided into 12 hours. While the black hour hand makes one dial rotation every 12 hours, the blue Tide hand makes one dial rotation approximately every 12 hours and 25 minutes, which is the average time interval between any 2 high tides or 2 low tides. Therefore, against a normal 12 hour divided dial, it is possible to see at a glance what interval must elapse to the next tide turn. The mechanism is operated by a 1.5v Alkaline 'AA' size battery (supplied). When fitting the battery, check to ensure it is inserted in the correct direction according to the embossed logo inside the battery recess. The battery will last for approximately one year.

✯ Resetting All Three Instruments

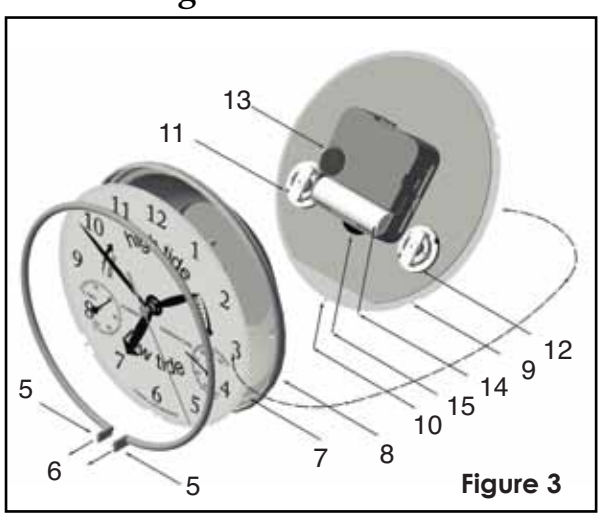

Figure 3

Prolonged steady indications may cause a calibration shift of the temperature and humidity sensors and a need to reset the instrument. This can be achieved by removing the instrument from its outer casing. First remove the instrument from its swing arm mount, (this is a reverse of #3 above), and lay rear face down on a table. Now squeeze the lens retaining ring forks at #5 between thumb and forefinger and lift out #6. Then gently shake the lens and dial assembly #7 from the outer casing #8. The glass lens is held in place by dial plate tags. Lens removal is not necessary and should be avoided.

On the rear of the dial face #9, there are 2 mechanisms in white plastic housings #11 & #12. On the edge, there are 6 raised setting pegs and opposite them, an inner circle that rotates under friction. To make a temperature adjustment first leave the assembly in a draft free place with a comparator thermometer for a period of 15 minutes to allow stabilization. Then insert a small screwdriver such that it is between 2 of the 6 pegs at 'A' and engaging sideways into the groove 'B' of the inner circle. See Figure 4 for enlarged views.

Screwdriver rotation between the setting pegs causes the inner drum to rotate and with it, the sensing coil and indicating hand on the front side. Care must be taken to minimize any radiant heat from hands or exhalation which can cause the sensing coil to alter unseen while performing this adjustment. Otherwise a new error will be inserted into the instrument.

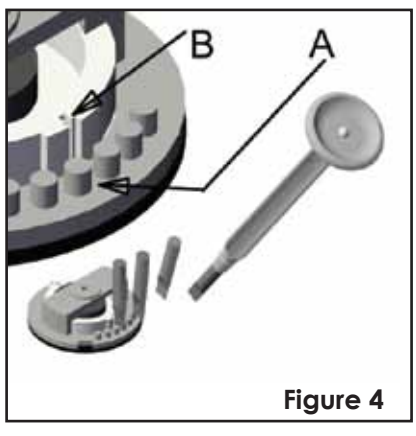

Figure 4

Errors in the humidity coil are usually due to prolonged existence in a low humidity environment where the membrane dries out, loses sensitivity and does not readily re-absorb heavier concentrations when they occur. Resetting is best corrected by wrapping the instrument in a damp cloth for up to 4 hours. This saturates the moisture sensitive membrane to 100% RH and effectively re-activates it. Check the dial reading after unwrapping. If the instrument is not registering 100% then make a screw driver adjustment in the same way as described for the temperature sensor.

To make a first time setting, battery change or later adjustment, remove the unit from the swing arm as described above and proceed to remove the lens unit from the outer case. Turn the unit over to reveal the rear face. Now insert the 1.5 v AA battery supplied in the direction specified by the embossed logo in the battery recess #14. Next set the Time of Day black hands using the flat ribbed button #13. Finally adjust the Tide hand by means of the partially visible black wheel #15. This is best carried out at a known High or Low Tide when the blue hand should be set to coincide with 12 o'clock as the marker point for a high tide or with 6 o'clock as a marker point for low tide. When a new battery is required replace with a similar AA 1.5volt cell ensuring it is inserted in the correct direction according to the embossed logo inside the battery recess.

✯ Reassembly of Instrument

To reassemble, place the metal housing in front of you (concave side up), with the ventilation slots toward you. Place the instrument sub assembly with dial-to-case locator tag #10 Figure 3 resting in the depression and slot at center bottom of metal housing. Now squeeze the forks of the lens retaining ring and place on the lens with the forks locating in the edge space of the metal case and release the squeeze pressure. Some careful working of the ring into and under the case edge lip all the way around may be necessary to ensure the instrument assembly and retaining ring are fully in position. The instrument can now be remounted on the swing arm as in step #3.