

**Pre-Race Setup:**

- 1) Set the post for the start wand (the 2x4 with the hinged crosspiece).
  - a) The post holding the start wand should be set to the racers left.
  - b) Drive the post into the snow using only the rubber mallet.
  - c) The hinged crosspiece should be situated to the left-side and just below snow level. This provides proper height of the post above the snow (no higher than 50 cm, or 19.7 inches).
- 2) Mounting the start wand on the post:
  - a) Chain the start wand box at the mark near the top of the post, on the front side of it. The swing arm side of the box should be at top.
  - b) Remove start wand from the protective tube and insert it into the swing arm fixture until it clicks. **NOTE: Do not ever turn the start box swing arm fixture without the wand in place.**
  - c) Make sure the wand is horizontal. Tighten the clamp securely. With the post set at its snow line mark, the wand will be at a height roughly  $\frac{3}{4}$  between typical ankle and knee.
- 3) Set the right-hand start post with any sponsorship advertising facing forward. It should be located just beyond the tip of the wand when it is in the closed position (creating a start gate approximately 2 feet wide).
- 4) Make the timing connections to transmit start signal to finish area, either by **HARDWIRE** (if available) or by **RADIO**. In all cases, be sure to keep wire connections free of snow and moisture! When transmitting to the finish area by **RADIO**:
  - a) Connect wiring from the start wand to the transmitter:
    - i) Plug one end of wiring into either the left-hand or right-hand pair of output jacks of the start wand box (either output pair will work) -- connect green plug to green output jack, black plug to black output jack.
    - ii) Plug the other end of wire into green & black inputs of the transmitter.
  - b) Antenna connection:
    - i) Remove antenna wand from the radio carrying case and connect it to the end of the antenna extension cable (black coaxial wire) using the coupling piece.
    - ii) Clip antenna wand into the top (orange) PVC mast segment. Put together the mast from the remaining PVC segments and set the mast in the snow to elevate the antenna wand. The antenna cable can be clipped to mast.
    - iii) Connect bottom end of the antenna extension cable to the transmitter (the connection point is on the opposite side of the box from the on/off switch).
  - c) Check that the setting of the code switch on transmitter matches the number specified on the label on the transmitter box (it should already be preset that way). Confirm with the electronic timing person that the receiver at the finish line also has this same code setting.

- d) Turn the transmitter on/off switch to “Impulse”. The box will beep once when you do this and the “battery” light will illuminate steadily.
- e) Note: The transmitter will also beep each time the start wand is opened.

When transmitting to the finish area by a HARDWIRE connection:

- a) Determine which of the hill hardwires will correspond to green and black and communicate this to the electronic timing person.
  - b) Using the alligator clip banana plugs, connect the designated green and black wires to the corresponding channel input jacks of the start wand box.
- 5) When the finish area is ready to receive, test the transmission of start impulses by flipping open the start wand.
- 6) Position the hand timing volunteers. Make sure they understand instructions on their clipboard and that they have the sheets to record start times on.

#### During the Race:

- 1) The TAG Heuer start wand does not automatically return to the closed position. To avoid unnecessary false tripping of the wand by a racer, manually close the wand only after the racer has established a stable position at the start line.
- 2) Before each racer is released, announce the bib number on the course radio. Be sure to get confirmation that any out-of-sequence numbers are understood by timing personnel at the finish area.
- 3) After the racer is away, be sure to clearly announce “Racer # is on-course”, in a uniform manner for all racers. Note: The TAG Heuer start wand does not emit a tone when triggered.

#### Post Race:

- 1) Collect stop watches and time sheets from the hand-time volunteers.
- 2) Store equipment as it was originally packed. Be sure to:
  - a) Turn off the transmitter.
  - b) Store the antenna wand in the case to keep it from getting damaged. Take care to not lose the coupling piece between the wand and extension cable (keep it attached to the cable).
  - c) Close the start wand, remove the wand from the start arm and store it in the protective tube (yellow PVC).
- 3) Please wrap the right-side start post in the towel to prevent any painted advertising from getting scratched up.