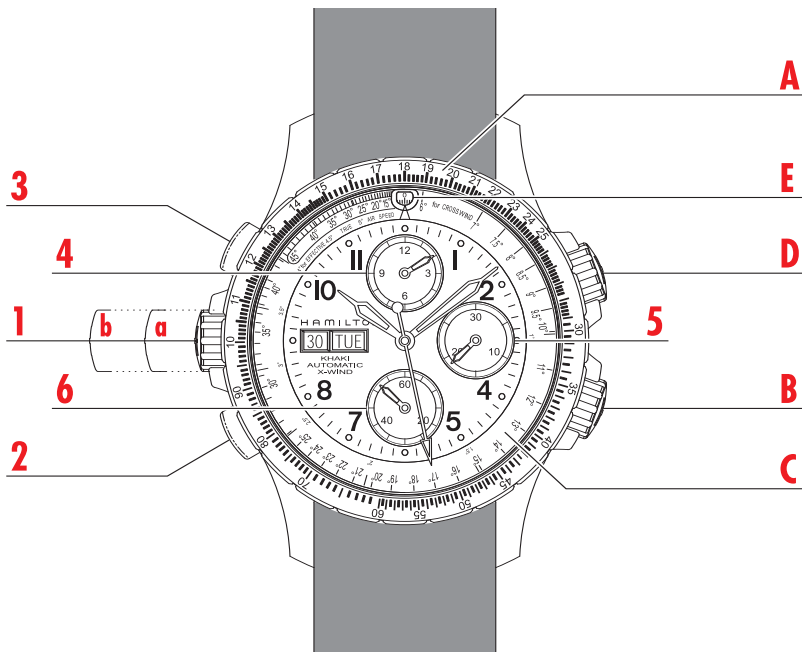


# HAMILTON KHAKI AUTOMATIC X-WIND INSTRUCTION MANUAL



**1) Time/date/day setting crown**

**2) Chronograph start/stop button**

**3) Chronograph resetting button**

**4) 12-hour counter**

**5) 30-minute counter**

**6) Small second hand independent of chronograph**

**A) Exterior rotating bezel**

**B) Crown for adjusting C**

**C) Upper interior rotating bezel**

**D) Crown for adjusting E**

**E) Lower interior rotating bezel**

Hamilton is delighted that you have chosen a time-piece from its collection. You have acquired a small technological marvel that will serve you faithfully for many years. The most advanced technologies were used throughout its manufacture and it underwent stringent controls before it was released for sale.

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#### **Instructions for use**

The Hamilton Khaki Automatic X-Wind has three screw-down crowns and two push-buttons.

- (1) crown for setting the time, the day and the date
- (B) crown for adjusting the upper interior rotating bezel (C)
- (D) crown for adjusting the lower interior rotating bezel (E)
- (2) button to start and stop the chronograph
- (3) button to reset the chronograph to zero

#### **Setting the time**

- Unscrew setting crown (1).
- Pull out the crown completely to position (1b).
- Adjust the time by turning the crown in the desired direction.
- Push back the crown completely then screw it down again.

#### **Setting the date / day**

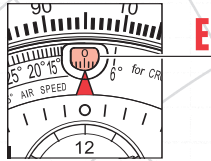
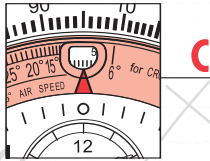
- Unscrew setting crown (1).
- Pull out the crown to the intermediate position (1a).
- Turn the crown anticlockwise until the desired date appears, or clockwise for the desired day. Do not perform this operation between 2000 and 0200 (8 p.m. and 2 a.m.).
- Push back the crown completely then screw it down again.

## Chronograph functions

- First push of start/stop button (2) starts chronograph hand and counters.
- Second push of start/stop button (2) stops chronograph hand and counters.
- Subsequent operation of start/stop button (2) starts and stops the chronograph as many times as required to measure a total time.
- Pushing reset button (3) resets the chronograph hand and counters to zero.

## Crosswind

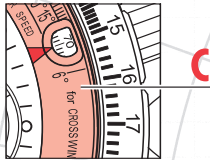
1. Position the red arrow of the upper interior rotating bezel (C) at 12 o'clock by adjusting with crown (B). Adjust the lower interior rotating bezel (E) to 0° by adjusting with crown (D).



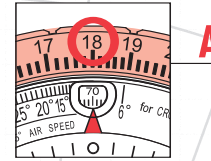
2. Obtain **wind speed** and **direction** from control tower or weather chart.

Ex. **Wind speed:** 40 mph  
**Wind direction:** 70°

Indicate **wind direction** (70) in the window with the upper interior rotating bezel (C) by adjusting with crown (B).

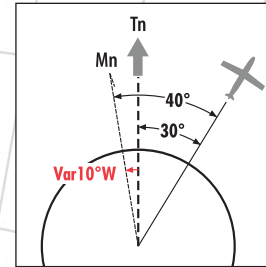


3. Adjust the exterior rotating bezel (A) so that one tenth of the speed of the aircraft is indicated opposite the red arrow.

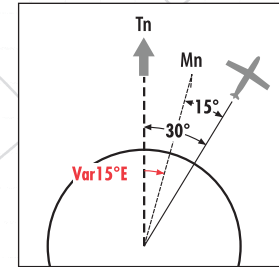


Ex. **Aircraft speed:** 180 mph – indicate **18**.

4. From the geographical bearing, calculate the **magnetic bearing** of the aircraft:  
The variation (Var) depends on the current location, which can be determined from an aviation chart.



If the variation (Var) is to the West, it is added to the geographical bearing to obtain the magnetic bearing. Ex.  $30^\circ + 10^\circ = 40^\circ$



If the variation (Var) is to the East, it is subtracted from the geographical bearing to obtain the magnetic bearing. Ex.  $30^\circ - 15^\circ = 15^\circ$

Tn: True North | Mn: Magnetic North | Var: Variation

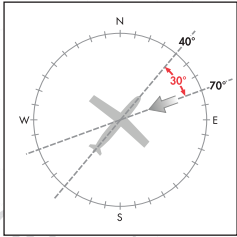
Ex. Geographical bearing:  $30^\circ$   
Variation (Var):  $10^\circ$   
**Magnetic bearing:**  $30^\circ + 10^\circ = 40^\circ$

5. Calculation of **crosswind angle**.

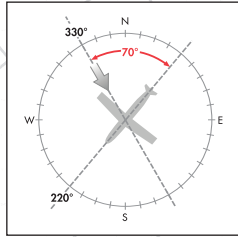
Ex. Wind direction: 70°

Magnetic bearing of aircraft: 40°

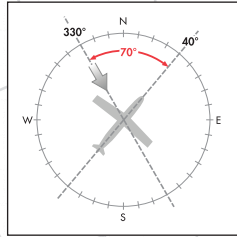
**Crosswind angle:**  $70^\circ - 40^\circ = 30^\circ$  (headwind)



$70^\circ - 40^\circ = 30^\circ$   
(headwind)



$180^\circ - (330^\circ - 220^\circ) = 70^\circ$   
(tailwind)



$360^\circ - (330^\circ - 40^\circ) = 70^\circ$   
(headwind)

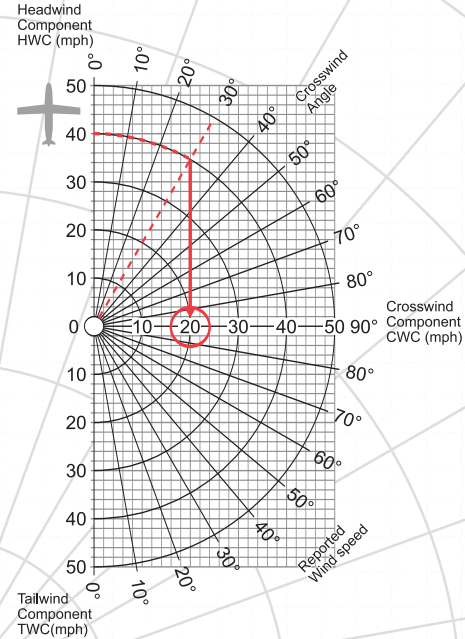
6. Calculation of **crosswind**:

Using the graph (plastic card) determine the point of intersection of the wind speed (head/tailwind component) and the crosswind angle and the crosswind angle  
Going from the point of intersection, read the value of the **crosswind component** on the horizontal axis.

Ex. Headwind component: **40 mph**

Crosswind angle: **30°**

**Crosswind component: 20 mph**

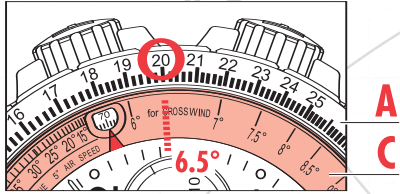


Tailwind Component TWC (mph)

7. Calculate the **angle of drift**:

Locate the crosswind component (20) on the exterior rotating bezel (A) and read the value indicated on the interior bezel (C).

Ex. **Angle of drift**: approx. 6.5°



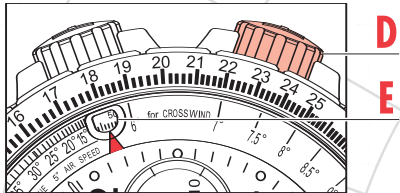
8. Calculation of **corrected bearing**:

If the wind is blowing from the right, add the angle of drift to the magnetic bearing.

If the wind is blowing from the left, subtract the angle of drift from the magnetic bearing.

Ex. **Corrected bearing**:  $40^\circ + 6.5^\circ = 46.5^\circ$

For memorization, use the crown (D) to indicate the **corrected bearing** (46.5°) on the lower interior rotating bezel (E).



## Recommendations

Like all micro-mechanical precision instruments, your Hamilton watch should be checked at least once every two years. Entrust your watch only to an authorized Hamilton agent. To keep your watch water-resistant, make sure that its sealing features are tested at every check-up.

The water-resistance of your watch is 10 ATM = 100 meters = 330 feet.

## Five basic rules for maintaining the water-resistance of your watch

1. Have your watch checked regularly (once a year).
2. Do not move the crown when you are in water.
3. Rinse off your watch after having been in the sea.
4. Dry your watch whenever it gets wet.
5. Have your watch checked for water-resistance by an authorized Hamilton agent each time the case is opened.

Your watch is fitted with an automatic movement. The mechanism of the watch includes an oscillating rotor that winds the mainspring via the movement of your wrist. The running reserve is approximately 46 hours. If necessary, the watch may be rewound manually. The beauty of the inner working of the watch movement can be admired through the transparent case back.