BRICON

Radio-clock synchronisation

How does a HKW Radio-clock work under normal conditions ?

The external radio-controlled clock receives a 60kHz radio-wave signal transmitted by the NPL radio mast in Anthorn, Cumbria and controlled by a caesium atomic clock.

Shortly after midnight each day, the radio-clock will as a matter of course carry out a search for the radio signal. If the radio signal can be found, then the radio-clock will auto-synchronise its time and will confirm that this has been achieved by showing a solid status mast in the bottom left-hand corner of its display.

Once the radio-clock has auto-synchronised and is showing the status mast, then the radio-clock is ready to be used to synchronise a Bricon Club-Master system at anytime during the remainder of that day.

What can affect the reception of the radio signal ?

The radio-clock can be adversely affected by interference coming from such items as TVs, computers, electrical appliances, fluorescent lighting, human bodies and other radio-clocks. The reach of the signal indoors can also be reduced by metal objects such as metallic window frames and the signal will also be weak or non-existent inside steel-framed or reinforced concrete buildings. The angle of the clock in relation to the radio mast may also have an effect of the quality of the signal received.

Where should the radio-clock be kept ?

If it is intended that the radio-clock should be able to receive the signal, then the clock should be placed in the open or in a window and away from interference. It should not be stored in a metal cabinet.

What should be done if the radio-clock is not showing its status mast ?

This would indicate that the radio-clock failed to find is signal and has not auto-synchronised for the day. In these circumstances, a blunt object such as a match stick should be inserted into the hole in the back plate of the radio-clock to activate a re-set synchronisation. The time and date will then disappear from the display and you should place the radio-clock down away from interference and allow 5 minutes for the signal to be found. The time and date will reappear when the re-set synchronisation is complete.

How can the radio-clock continue to be used during periods of maintenance to the radio mast ?

There should be no problem using a radio-clock during standard mast maintenance periods, as the radio mast is then only turned off during daylight hours. Simply ensure that the radio-clock is kept in an open interference free position overnight, ideally in a window, and then in the early hours of the morning the radio-clock should be able to auto-synchronise. The status mast will show on the display of the radio-clock and it can then be used at any time throughout the remainder of that day to synchronise the Bricon Club-Master regardless of whether the radio mast is transmitting a signal. Under no circumstances should a re-set then be carried out during the daytime maintenance period, as the time synchronisation that has already been gained for the day will be lost and a fresh synchronisation will then not be available.

If it is announced however, that the radio mast is to be turned off permanently including overnight, then it will not be possible to use the radio-clock, and an alternative option should be used.

What can be done to ensure that the radio-clock is showing the most accurate time ?

For ultimate accuracy it may be desired that a re-set synchronisation is carried out shortly before the radio-clock is used, though this should never be done when the signal is turned off for mast maintenance.

What else should can be done to ensure optimal operation of the radio-clock ?

The radio-clock is powered by 2 x AAA batteries. These should be changed on a regular basis, ideally before the start of each season, and can be accessed by unscrewing the back plate. Fresh batteries give the radio-clock increased time accuracy and greater power when searching for a synchronisation signal.

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