

## Instructions for Radio-controlled Clock • MSF

**1. Insert a 1,5 v LR 6 battery**, checking that it is inserted the right way round. The clock hands will move automatically to 4, 8 or 12 o'clock and the clock will then switch to receive mode. On receiving the MSF time signal and after processing the data internally (approx. 3-5 minutes), the clock will automatically set to the correct time. During reception the clock should not be moved. If the clock is unable to achieve successful reception it will stay set at 4, 8 or 12 o'clock and attempt to receive the time signal again after 2 hours. If this happens try placing the clock in a different location, but remove the battery first for about 1 minute and then replace it.

### 2. Technical data

Integrated radio receiver to receive MSF time signal from Rugby, England.

Operating voltage range 1.25 - 1.75 v

Operating temperature range - 5c to + 50c

Current consumption 150 µA

Typical battery life approx. 1 year

Battery type LR 6

Time check with transmitter 12 times a day

Automatic resetting to summer/winter time, time required approx. 2-5 minutes

### 3. Possible causes of interference or faults

Domestic electrical appliances without radio interference suppressors.

TV receivers and computers within two metres of clock.

Machinery with high frequency leakage.

Within the outer limits of the radius around the transmitter of 1200 km or more, topographical and meteorological conditions can have an adverse effect on reception due to the particular coverage of long waves.

### Fault

Hands do not move after battery has been inserted or clock does not automatically show current time may be because it has not received any time-setting signal within 10 minutes of the battery being inserted. Even after repeating the starting procedure several times, changing the position of the clock and removing sources of interferences, no time setting signal is received. There is a breakdown at the transmitter. Wait a few hours then repeat the procedure.

### Procedure

Check the battery voltage, contacts and correct polarity. Re-position the clock, e.g. turn it through 45-90 degrees, or put it near a window. Check to see if any HF interference source such as a TV or computer is too close to it. Reinsert the battery.

### Important notes

The performance of the clock is subject to its ability to receive the radio signal that is transmitted from Rugby. Difficulty in reception will be experienced in metal clad buildings. Signal strength improves at night, it is recommended to leave the clock overnight with the battery inserted, ideally near a window if you are having difficulty with setting it.

This clock will not function outside the U.K.

Please note that the Rugby transmitter is shutdown for maintenance the first Tuesday of every month, and during the summer the signal can be interrupted for up to two weeks in normal working hours after which the service will be restored.

If you have any problem with setting up this product please call our helpline on 01252 331311.

"SHOULD YOU REQUIRE ANY FURTHER AND MORE UPTO DATE TECHNICAL INFORMATION REGARDING THE 'MSF RADIO CONTROLLED SIGNAL', YOU CAN CONTACT THE NATIONAL PHYSICAL LABORATORIES WEBSITE AT - [npl.co.uk](http://npl.co.uk)."

## OPERATING INSTRUCTIONS

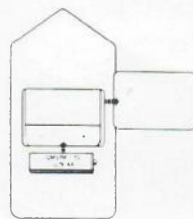
### Automatic time setting

Your new clock is designed to set time automatically via radio signal emits in your country. D o I

1. Remove battery cover if your clock has one at the back as shown.
2. Insert a fresh AA battery (Alkaline is recommended) into the battery compartment according to polarity symbols as shown.
3. This is all you have to do as the clock will try to pick up radio signal to set time correctly. Just leave the clock to do the rest.
4. Following the above steps, the clock will set all the hands to the correct time, even to the exact second. The entire setting may take up to 30 minutes to complete.

### Important Notes:

- a. In case of a time deviation, the clock will adjust the time to radio signal received once everyday.
- b. If the clock shows time deviation routinely, this is time to replace with a fresh battery.
- c. You should not place your radio controlled clock near an electrical raceway, radio transmitter/ receiver, PC monitor or any other appliance that could interfere with the clock's reception of the radio signal.



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