Names and Function of Parts

1. LCD Display
2. MODE Key
3. “C”/“F” Key
4. Up/LOCK Key
5. Meas. Key
6. Laser
7. Battery cover
8. Battery cover

Replacing Batteries

When replacing the batteries, be careful not to acciden-
tially push the laser trigger key. This may cause the
laser marker to enter the eyes and is extremely danger-
ous. After replacing the batteries, be sure to close the
cover before using the instrument.

WARNING
Do not mix old and new batteries, or different types of bat-
teries. Also, be careful to observe battery polarity during instal-
lation. Otherwise, poor performance or damage from battery
leakage could result.

When you replace the batteries:

• Battery may explode if mistreated. Do not short-circuit,
recharge, disassemble or dispose of in fire.
• Handle and dispose of battery in accordance with local
regulations.

WARRANTY MALFUNCTIONS OCCURRING UNDER CONDITIONS OF NORMAL USE IN CON-
FORMITY WITH THE FRENCH DIRECTIVE AND PRODUCT PRECAUTIONARY MARK-
INGS will be repaired free of charge. This warranty is valid for a period of one (1) year from the date of purchase. Please contact the distribu-
tor from which you purchased the product for further information on
warranty provisions.

Inspection and Maintenance

Initial Inspection
When receiving the instrument, inspect it carefully to ensure
that no damage occurred during shipping. In particular, check the
accessories, the liquid crystal display, the control keys, and the
lens. If damage is evident, or if it fails to operate according to the
specifications, contact your dealer or HIOKI representative.

Maintenance and Service

To clean the instrument, wipe it gently with a soft cloth moistened
with water or mild detergent. Never use solvents such as benzene, alcohol,
acetone, ether, ketones, thinners or gasoline, as they can deform and
decolor the case.

If the instrument seems to be malfunctioning, contact the
manufacturer and request service by an authorized HIOKI representa-
tive.

Do not allow the laser light beam to impinge upon any
injury or death, as well as damage to the instrument. Be
certain that you understand the instructions and precau-
tions in the manual before use. We disclaim any respon-
sibility for accidents or injuries not resulting directly from
instrument defects.

This manual contains information and warnings essential for safe opera-
tion of the instrument and for maintaining it in safe operating condition.
Before using it, be sure to carefully read the following safety precautions.
Measurement

Changing the Mode

Pressing the MODE key while the instrument is on causes it to cycle through the following modes:

- E Emissivity display
- LAL Alarm lower limit setting
- H AL Alarm upper limit setting
- MAX Maximum value display
- MIN Minimum value display
- AVG Average value display
- δ δDifference between maximum and minimum value.

Max/Min/Dif/Avg measurement

The instrument will display the maximum, minimum, value, difference between the maximum and minimum values, and average value since measurement began.

1. Press the MODE key to display "MAX", "MIN", "DIF" or "AVG" on the sub-display.
2. Press the MAX/MIN/DIF/Avg key to set the alarm upper limit.
3. Press the MODE key to display "LAL" on the sub-display.
4. Press the key to set the alarm lower limit temperature.

Alarm Function

The alarm can be set off whenever a value which is higher or lower than a threshold value inputted beforehand is reached. The alarm is in the form of a display and a buzzer.

1. Press the MODE key to display "H/L" on the sub-display.
2. Press the key to set the alarm's upper limit.
3. Press the MODE key to display "L/L" on the sub-display.
4. Press the key to set the alarm's lower limit.

Error Indication

Error code Description Remedy

E 2 The change in ambient temperature is too great.

Allow the instrument to acclimatize to the ambient temperature for about 30 minutes before use.

E 3 The ambient temperature is outside the operating temperature range.

Use the instrument within the operating temperature range (0°C to 50°C).

E 5 or E 5 System error

Remove the battery, wait at least 1 minute, and then replace the battery. If you are unable to resolve the error, the instrument may need to be recalibrated. Contact your dealer or HOKO representative.

Warning Labels

Location of labels used in the HOKO FT3700-20, FT3701-20 Infrared Thermometer is as follows.

Specifications

Basic Specifications

Function

- Infrared temperature measurement
- STL measurement
- Alarm function

Additional Function

- Maximum/minimum value measurement
- Alarm function
- Backlight function

Power Supply

- LR03 alkaline battery + 2

Dimensions

- Approx. 48 W × 172 H × 119 D mm (1.89"W × 6.77"H × 4.69"D) (excluding projections)

Mass

- Approx. 250 g (9.3 oz.) (Instrument + LR03 alkaline battery + 2)

Storage temperature and humidity

- -50°C to 50°C (122°F to 140°F), 70%RH or less (non-condensation)

Temperature coefficient

- ±70°C at 3 V/m

Auto Power Off

Approx. 15 seconds

NOTICE

- The laser marker indicates the diameter of the measurement view field.
- The measurement field of view is defined as the measurement diameter in which the optical response is 90%. The object whose temperature is to be measured needs to be larger than the measurement diameter by an adequate margin. (1.5 to 2 times or more)

ON/OFF setting for laser marker

The laser marker is set to OFF in the factory default or immediately after replacing the batteries. To turn ON the laser marker, press and hold the (key) for 1 second while pulling the measuring trigger key. To turn OFF the laser marker is the same operation again.

Continuous measurement mode

Pressing the MODE key while the instrument is on activates continuous measurement mode, except when using the emissivity setting, HAL mode, or LAL mode. This mode lets you take measurements continuously without needing to pull the measurement trigger.

Continuous measurement mode

The instrument will turn off automatically about 60 minutes after continuously measuring mode is activated.

NOTE

- Varyings in the surface condition and color of the object whose temperature is to be measured may cause the thermal emissivity (ε) to be somewhat different from the values in the above table. An accurate temperature measurement is desired for an object whose thermal emissivity is not known, black body tape (commercially available) should be used. In this case the setting for thermal emissivity (ε) should be the value indicated on black body tape.
- Iron and other objects with low thermal emissivity reflect their surrounding temperature, causing inaccuracies in measurement. The black body tape (commercially available) is also recommended when measuring non-conductive low thermal emissivity (ε) objects.
- A black body is an object that represents a standard emissivity, and may not necessarily be black in color.