



Optical Fiber Identifier ID-H/Rv4 Instruction Manual

Thank you for purchasing the Optical Fiber Identifier ID-H/Rv4.
Read this manual carefully before use.

Second Edition



FURUKAWA ELECTRIC CO., LTD.

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1 . For Safe Use

1 - 1 Notes on Use

This instruction manual describes the handling and operation of the Optical Fiber Identifier ID-H/Rv4.

To ensure safe and proper use, read this manual carefully and fully understand its contents before use.

This instruction manual is provided in electronic format. Please print it or save an electronic copy as necessary, and keep it readily available for future reference.

This instruction manual provides important information to prevent personal injury and property damage and to ensure the safe use of this device. The precautions to be observed are indicated using labels and symbols. Refer to Section “[1-2 “Safety Information”](#)” to understand the relevant information before reading the main text.

1 - 2 Safety Information

 Ignoring safety symbols and improper use may result in personal injury or property damage. Be sure to follow all instructions.

 Warning	This indication denotes information that, if ignored and handled improperly, may result in death or serious injury.
 Caution	This indication denotes information that, if ignored and handled improperly, may prevent the device from performing as intended or may result in malfunction.
	This indication provides useful information and tips for handling this device.
	This indication refers to sections or page numbers where more detailed explanations can be found.

We are not liable for any economic losses or damages resulting from malfunction, improper operation, defects in this device, or external factors.

The contents of this instruction manual are subject to change without prior notice.

1 - 3 Warnings and Cautions

Warning

Do not allow water to come into contact with this device. If water or any foreign object enters the device, immediately contact the dealer from whom the product was purchased or the contact address listed on the back cover of this manual. Continued use in such a condition may result in fire, electric shock, or malfunction.

Do not use the device if it is malfunctioning. Doing so may result in fire or electric shock. If a malfunction occurs, remove the batteries and contact the dealer from whom the product was purchased or the contact address listed on the back cover of this manual.

Do not insert or drop metal objects, flammable materials, or any other foreign objects into the openings of this device. Doing so may result in fire, electric shock, or device failure.

Do not disassemble, repair, or modify this device. Doing so may result in fire, electric shock, or device failure. Contact the manufacturer for any disassembly or repair.

Caution

This device is a precision instrument. Do not subject it to strong impacts, shocks, or drops, as this may cause malfunction.

The supplied soft case does not provide complete protection against impacts. Handle the device with care even when using the soft case.

If the device will not be used for an extended period, remove the batteries from the unit before storage. Battery leakage may occur and cause device failure.

When using this device, take care to prevent dirt, rainwater, or other contaminants from adhering to the fiber detection section. If it becomes dirty, gently wipe it with a cotton swab moistened with alcohol.

Do not leave this device in high-temperature or high-humidity environments for extended periods.
Store it in a cool, dry, and dark place.

Even when the ambient temperature is within the operating range (-10 to 50° C), if the temperature of the unit itself differs significantly from the ambient temperature, allow the unit to stabilize to the ambient temperature before use. Failure to do so may result in improper operation.

2. Overview and Specifications

2 - 1 Overview

This device is designed to identify optical fibers using a reference light source. It features low insertion loss, allowing safe use even when clamped onto a live fiber.

It is also equipped with a direction indication function to determine the direction of the optical signal.

Examples of typical use are shown below.

Inside a termination rack

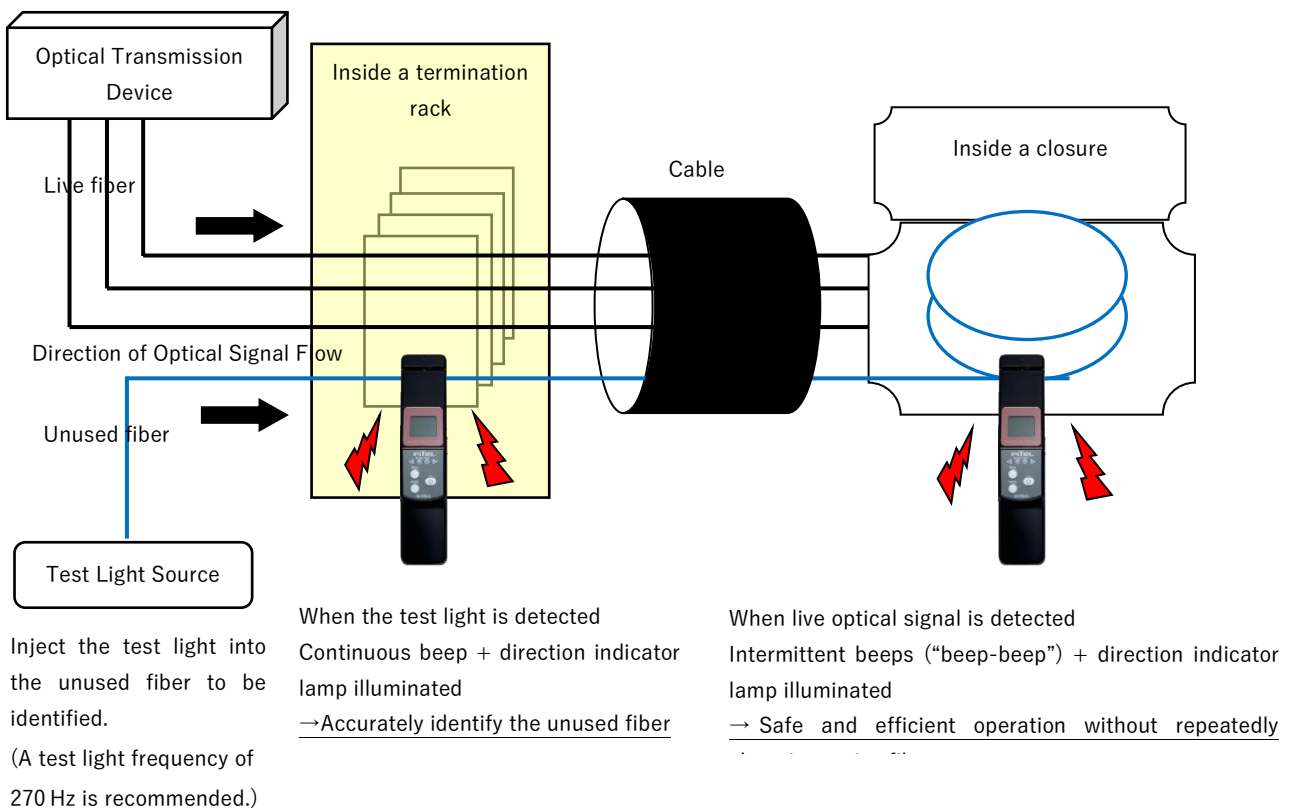
Confirm that the fiber is unused with the ID-H/R before removing it.

→ Prevention of Incorrect Disconnection or Removal

Inside a closure

Compare the unused fibers in the central office with the fibers in the closure.

→ Prevention of Incorrect Connection or Cutting



2 - 2 Specifications

Optical Characteristics

Item		Specifications			
Applicable Optical Fiber		Single-mode optical fiber (equivalent to ITU-T G.652 and G.657 A1/A2)			
		Single-mode optical fiber ribbon (equivalent to ITU-T G.652 and G.657 A1)			
		Single-mode optical fiber cordage (equivalent to ITU-T G.652)			
Receiving Wavelength		900 to 1700nm			
Receiving Frequency		CW , Traffic 270Hz/1kHz/2kHz (square wave $50 \pm 10\%$ duty cycle)			
Measurement Range		0 to -80dBm * 1			
Maximum Insertion loss / Minimum detectable level (typ) * 2	Optical Fiber		1310nm	1550nm	1650nm
	ITU-T G.652 Equivalent	250 μ m single fiber	0.1dB	1.0dB	2.5dB
		Up to SM12-fiber ribbon SM	-40dBm	-50dBm	-50dBm
		Up to 3mm Cordage * 3	0.5dB -30dBm	2.0dB -40dBm	3.0dB -40dBm
		900 μ m single fiber * 4	0.5dB -15dBm	2.0dB -15dBm	3.0dB -15dBm
Indication for traffic signal		Direction LED illuminates Intermittent buzzer Displays the optical power measurement range on the LCD			
Indication for tone signal		Direction LED and Tone signal LED illuminates Continuous buzzer Displayed an optical power measurement range and Frequency by LCD			

* 1. leakage light detection level from the optical fiber.

* 2. These specifications are based on our optical fiber with our test method.

Detection may be difficult depending on the manufacturer, coating color, or other conditions.

* 3. Only ϕ 0.25 mm UV-coated optical fibers are supported.

* 4. Not an applicable optical fiber; for reference only.

Environmental Specifications

Item	Specification
Storage Environmental Conditions	Temperature: -20 to 60°C Humidity: 0 to 95% (non-condensing)
Operating Environmental Conditions	Temperature: -10 to 50°C Humidity: 0 to 95% (non-condensing)

Other

Item	Specification
Power *5	2 AA Alkaline Batteries 2 Ni-MH Rechargeable Batteries for ID-H/Rv4 (Optional)
Operating time	Approx. 8 hours *6
Dimensions	Approx. 40 (W) × 67 (H) × 177 (D) mm
Weight	Approx. 180 g (including batteries)

* 5. Use two batteries of only one type: either AA alkaline batteries or the dedicated ID-H/Rv4 Ni-MH rechargeable batteries.

Using different types of batteries together may cause leakage, overheating, rupture, or equipment failure.

* 6. When using new AA alkaline batteries at room temperature

3. Components

The following items are included with the ID-H/R.

Check that all components are present before use.

Table 1_Configuration of the Optical Fiber Identifier ID-H/Rv4

Item	Model No.	Qty	Other
Main unit	IDHRv4-01	1Pc	
Soft case	AI02H-001	1Pc	
Batteries	-	2Pc	Alkaline AA batteries
Online Instruction Manual Guide	IDHRv4-02I	1Pc	

4 . Names and Functions of Each Part

4 - 1 Names and Functions of Each Part of the Main Unit

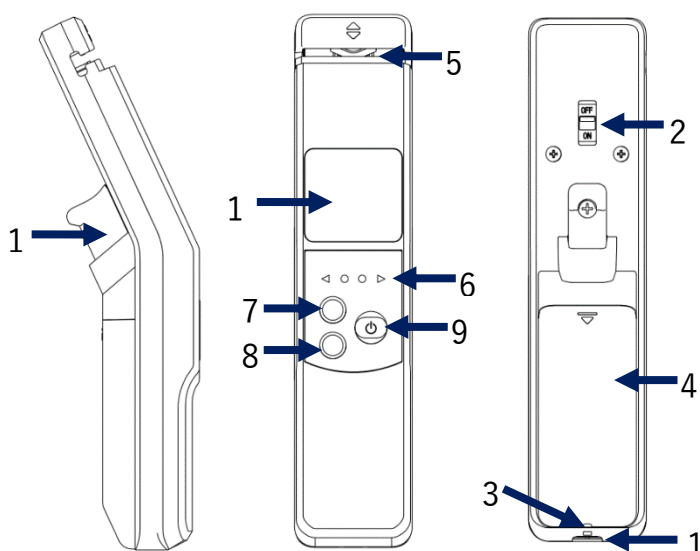


Table 2_ Names and Functions of the Device

Name		Functions
1	Lever	Used when setting the fiber and performing
2	Lever Lock Switch	Used to enable or disable the lever lock.
3	Strap Hole	Used to attach the strap cord.
4	Battery Compartment	Open the cover and insert the batteries. ⚠ Use AA-size alkaline batteries or the dedicated nickel-metal hydride (Ni-MH) rechargeable batteries specified by our company.
5	Fiber Detection Section	The internal light-receiving section measures leakage light.
6	LED Indicator	Indicates the current status.
7	Zero Switch	Performs zero adjustment.
8	Mode Switch	Switches between Full mode, Tone mode, and parameter settings.
9	Power Switch	Turns the Power On and OFF.
10	LCD Screen	Displays the device status and measurement results.
11	USB Port	USB Type-C Port (for charging only) ⚠ Do not connect anything other than the dedicated AC adapter (optional). Doing so may cause device malfunction.

4 - 2 LCD Screen

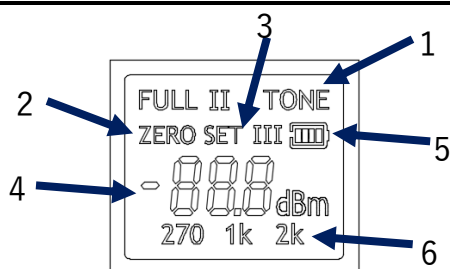


Table 3_ Names and Descriptions of the LCD

Name		Description
1	Mode	Displays the current identification mode.
2	Zero-Set	Displayed during zero-set operation.
3	Set	Displayed during parameter setting.
4	Optical Power	Displays the optical power measured by the light-receiving section in dBm.
5	Battery Level	Displays the remaining battery level in four stages.
6	Frequency	Displays the detected test-light modulation frequency.



Due to the effects of static electricity, the LCD may appear slightly blurred, but this is not a malfunction or defect.

Depending on the viewing angle of the LCD screen, hidden characters may become visible, or displayed characters may be difficult to read.

4 - 3 LED Indications

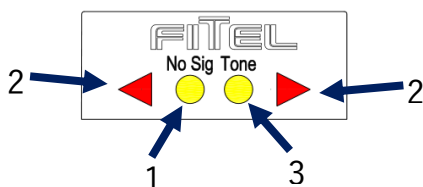


Table 4_ Names and Functions of the LEDs

Name		Functions
1	No Sig Lamp (Yellow)	Lights when no optical signal is detected during identification.
2	Direction Indicator Lamp (Red)	Indicates the direction of the optical signal and lights when a live signal or test light is detected.
3	Tone Lamp (Yellow)	Lights when a test light (270Hz , 1kHz , 2kHz) is detected.

5 . Power Supply

5 - 1 Power Supply

Use 2 AA alkaline batteries or two AA nickel-metal hydride batteries (optional).

 **Caution**

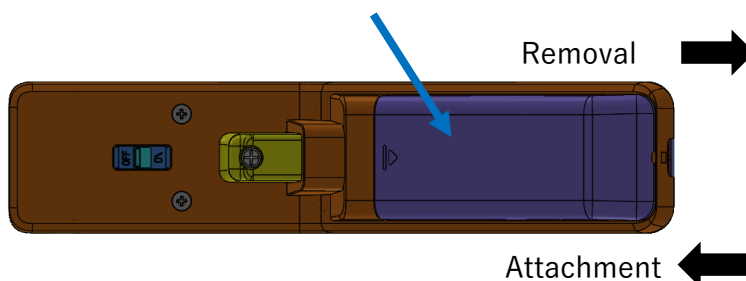
The batteries included at shipment may have a shorter usable life.

5 - 2 Battery Replacement Method

Replace the batteries using the following procedure.

- ① Slide and remove the battery compartment cover from the main unit.
- ② Replace the batteries, making sure to observe the correct polarity.
- ③ After replacing the batteries, slide the battery compartment cover back onto the main unit to attach it.

Slide this part (battery compartment cover) in the direction of the arrow.



 **Caution**

If the battery charge is low, the instrument may not operate properly or perform as specified. Charge the Ni-MH batteries or replace them with new ones before use.

Insert the batteries in the correct direction according to the + and – markings on the bottom of the battery compartment. Incorrect polarity may cause battery leakage or device malfunction.



The battery level indicators on the LCD correspond to the following voltage values. Refer to the following when replacing the batteries.

Battery level indicator	3 bar	2 bar	1 bar	0 bars
Voltage	2.6V	2.4V	2.2V	2.0V

6 . Detectable Signals and Display Indications

6 - 1 Detectable Signals

This device allows you to set two different identification modes for optical signal detection.

Table 5_ Detection Availability by Signal Type and Mode

Mode	FULL mode LCD : FULL	TONE mode LCD : TONE、 270
Tone signal	Detects Tone signals 270 Hz, 1 kHz, and 2 kHz	Detects 270Hz tone signal
Traffic signal	Detects traffic signal	Does not detect traffic signals

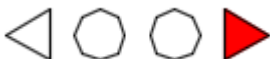
Caution

TONE mode does not detect live optical signals. Handle the device with care.

6 - 2 Display Indications

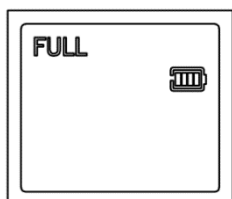
The next page shows a list of display indications for standby and identification states.

Table 6_ Display Indications for Standby and Identification

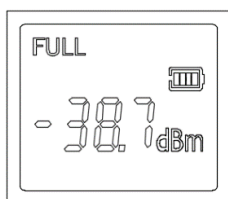
Mode	FULL mode	TONE mode
識別待ち	LCD : FULL	LCD : TONE、270
270Hz Tone signal (Direction:Right)	 LED Direction and Tone Illuminates Buzzer Continuous sound LCD FULL,270 and Power Level	 LED Direction and Tone Illuminates Buzzer Continuous sound LCD 270 and Power Level
1kHz Tone signal (Direction:Right)	 LED Direction and Tone Illuminates Buzzer Continuous sound LCD FULL,1k and Power Level	Same as No signal
2kHz Tone signal (Direction:Right)	 LED Direction and Tone Illuminates Buzzer Continuous sound LCD FULL,2k and Power Level	Same as No signal
Traffic signal (Direction:Right)	 LED Direction Illuminates Buzzer Intermittent sound LCD FULL and Power Level	Same as No signal
No signal	 LED No signal Illuminates Buzzer No sound LCD FULL, ---.-	 LED No signal Illuminates Buzzer No sound LCD 270, ---.-

※Displays the value measured by the light-receiving section on the direction-indicator side.

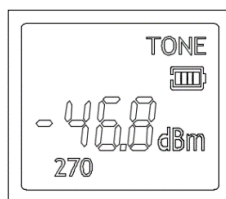
Examples of LCD Indications During Standby and Identification



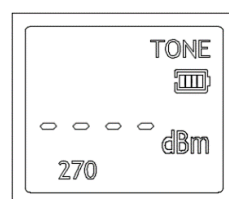
Standby
(FULL mode)



Traffic detected
(FULL mode)



270Hz detected
(TONE mode)



No signal
(TONE mode)

 Caution

“No Signal” may be displayed even if the fiber is in use. Exercise caution.

The power value shown on the LCD is the amount of leakage light measured by bending the fiber, and does not represent the actual optical power passing through the fiber. Therefore, this value shall be regarded as a reference value.



Refer to [“9-1 Detection Mode setting”](#) (page 25).

7. Operation

7 - 1 Turn On the Power

1) Turn On the Power

Press the power switch for 1 second to turn the Power On.

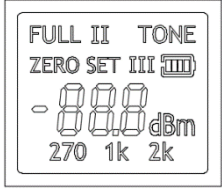


Power switch

2) After pressing the power switch, the device performs a self-check for approximately 2 seconds.

During the self-check, the LEDs and LCD on the main unit display as shown below. Confirm that all LEDs flash, all LCD items are displayed, and the buzzer.

Table 7_ Confirmation of Lamp Illumination and Buzzer

LED illumination	LCD screen	Buzzer
All LEDs blink	All contents are displayed	Intermittent sound
		

3) When the self-check is complete, the following display appears and the device enters standby mode for identification.

Check the currently selected mode.

Table 8_ Condition at standby

Condition	FULL mode	TONE mode
Standby	LCD : FULL, Battery Level	LCD : TONE ,Battery Level, 270

⚠ Caution

If the behavior or buzzer pattern during the self-check differs from the above, or if “Er” appears on the LCD after the self-check, the device may be malfunctioning. Contact the Contact Information listed in Section [“15, Contact Information”](#) (page 34).



Refer to [“9-1 Detection Mode setting”](#) (page 25).

7 - 2 Method for Detection

Set the fiber into the groove as shown below, and pull the lever in the direction of the arrow.

A single “beep” sounds, and identification begins.



Condition for fiber setting



Condition for fiber detecting

Caution

Twisting or bending the fiber may cause breakage. Ensure that the fiber is not twisted or bent when setting it in the device.

7 - 3 Display Indications for Standby and Identification



Refer to “[6 Detectable Signals and Display Indications](#)” (page 12) for details on the display during signal detection, standby, and no-signal conditions.

7 - 4 Turn OFF the Power

Press the power switch for 1 second. A single “beep” sounds and the power turns OFF.



Power switch

This completes the identification process.

Clean the adapter head and the Photo Detector when it is stained.



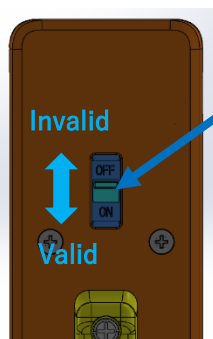
How to clean Photo Detector

Be careful not to allow dirt to accumulate on the light-receiving section. If it becomes dirty, remove the head cover and head, then wipe it with a cotton swab moistened with alcohol. After wiping, dry it with a clean, dry swab.

For cleaning instructions, refer to “[11 Maintenance](#)” (page 31).

7 - 5 How to Switch the Lever Lock Function ON/OFF

This device is equipped with a lever lock function. To switch the lever lock function ON or OFF, slide the switch on the back of the main unit.



Selection Switch

- switch upward : Invalid
- switch downward : Valid

※When the lever lock function is enabled, be sure to pull the lever firmly until a “click” is heard.

Pulling the lever once more will release the lever lock.

Rear view

⚠ Caution

If the device is released while clamped onto the optical fiber with the lever lock engaged, the fiber may be damaged or broken due to dropping or other impact. When using the lever lock, take care not to release the device.

If the device is left clamped onto the optical fiber for an extended period with the lever lock engaged, continuous stress may be applied to the fiber. Use with caution.

Due to the bending characteristics of the optical fiber, the lever lock may become loose. Exercise sufficient caution during use.

Take care to ensure that the selector switch is not accidentally struck or caught by objects, as unintended operation of the switch may occur and could result in a serious accident.

Before operating the lever, ensure that the selector switch is fully set to either the “Enabled” or “Disabled” position. Operating the lever while the switch is in an intermediate position may cause device failure. Exercise caution.

If the selector switch does not operate smoothly, the device may be malfunctioning. Immediately discontinue use and contact your dealer to request repair.

If the lever lock cannot be released due to an unforeseen circumstance or other abnormal condition, perform the emergency release operation by applying a strong force in the direction opposite to that used to pull the lever. This operation is a safety design feature intended to prevent more serious malfunctions. It is for emergency use only, and performing this operation will cause the lever lock function to no longer operate properly. After performing the emergency release operation, contact your authorized dealer for inspection and service.

We shall not be liable for any communication failures or fiber breakage accidents under any circumstances.

7 - 6 Request for Use of the Strap

The strap helps prevent the device from being dropped and plays an important role in preventing accidents.

Install the strap with the following points in mind.



- ① Insert the end of the strap through the strap hole.
- ② Form the end of the threaded strap into a loop, and then pass the strap through the loop once more.
- ③ Pull the strap and adjust it so that there is no slack.
- ④ Confirm that the strap is securely fastened to the ID-H/Rv4 unit. The strap installation is now complete.



A strap is not included with this device. For safe use, purchase a suitable strap separately as needed.

⚠ Caution

Install the strap in accordance with this instruction manual and by using the correct method. Improper installation may impair the function of the strap and prevent it from providing adequate effectiveness.

Check the load capacity of the strap and use it within the appropriate limits. Excessive load may cause the strap to break, which could result in the device being damaged due to dropping or other impact.

Periodically inspect the condition of the strap and check for wear or damage. If any abnormalities are found, replace it promptly.

Adjust the strap to an appropriate length and ensure that it does not loosen or come off during use.

When working at elevated locations, there is a risk of personal injury or property damage due to the device falling. To ensure a safe working environment, take appropriate measures to prevent dropping, such as using a strap or similar devices.

8. Identification Procedure

The following section outlines precautions to be observed before and during operation, as well as the identification procedure using this device.

Refer to this information as necessary.

8 - 1 Precautions Before Operation

● Before starting work, observe the following points.

 Caution
Perform zero setting.
Check the offset value and the minimum detection level.
Check the identification mode (FULL or TONE).
When injecting light from the light source into the target fiber, be sure to use a reference light signal.
Before proceeding with identification, confirm whether the fiber to be measured is in service. If it is being used as a live fiber, handle it with extreme care during the operation.
When identifying ribbon fibers, be sure to confirm whether active fibers and unused fibers are mixed within the ribbon.
If there are any scratches, dents, or other damage on the curved surfaces of the fiber detection head or the optical receiving section of this device, discontinue use immediately, as there is a risk of damaging the fiber. Contact the dealer from whom the product was purchased or the contact address listed on the back cover of this manual.
Light-blocking sponges are attached to the fiber detection section of this device. If these sponges are detached, the device may not function properly. In such a case, discontinue use and contact the dealer from whom the product was purchased or the contact address listed on the back cover of this manual.


For details on the zero setting method, refer to “9-2 ZERO Calibration Setting.” For information on checking the offset value and minimum detection level, refer to “10. Parameter Setting.”


A modulation frequency of 270 Hz is recommended for the reference light signal.
The use of a reference light source with a wavelength of 1550 nm or 1650 nm is recommended. Sensitivity may decrease when using a 1310 nm light source.

8 - 2 Precautions During Operation

- When performing identification, observe the following points.

 Caution
During identification, do not clamp the fiber for an extended period. Doing so may cause deterioration of the fiber or result in damage.

- When cutting the fiber or performing line switching, pay particular attention to the following points.

 Caution
When performing identification, always use a reference light signal. Do not perform identification using only live signal light.
To confirm identification, verify that the TONE indicator lamp is illuminated and that the frequency displayed on the LCD matches the modulation frequency of the reference light signal.
If the reference light signal is detected, additionally turn the reference light source ON and OFF, and confirm that the display and buzzer of the ID-H/Rv4 respond in synchronization with the ON/OFF state of the reference light signal.

- When using this device outdoors, refer to and observe the following points.

 Caution
Due to its high sensitivity, the device may respond to ambient light (such as sunlight). If such ambient light is detected, it may be mistakenly identified as a communication signal. Exercise caution.


When identifying live (communication) signals outdoors, ensure that direct sunlight does not strike the fiber detection section.
If ambient light such as sunlight is detected outdoors, cover both the device and the fiber with a cloth or similar material to reduce the effects of ambient light.
Increasing the minimum detection level can help reduce the influence of ambient light. Adjust the minimum detection level as appropriate for the operating conditions.


For details on how to change the minimum detection level, refer to " 10-3 Minimum Detection Level Setting " (page 29).

- Impact of Surrounding Environment and Countermeasures

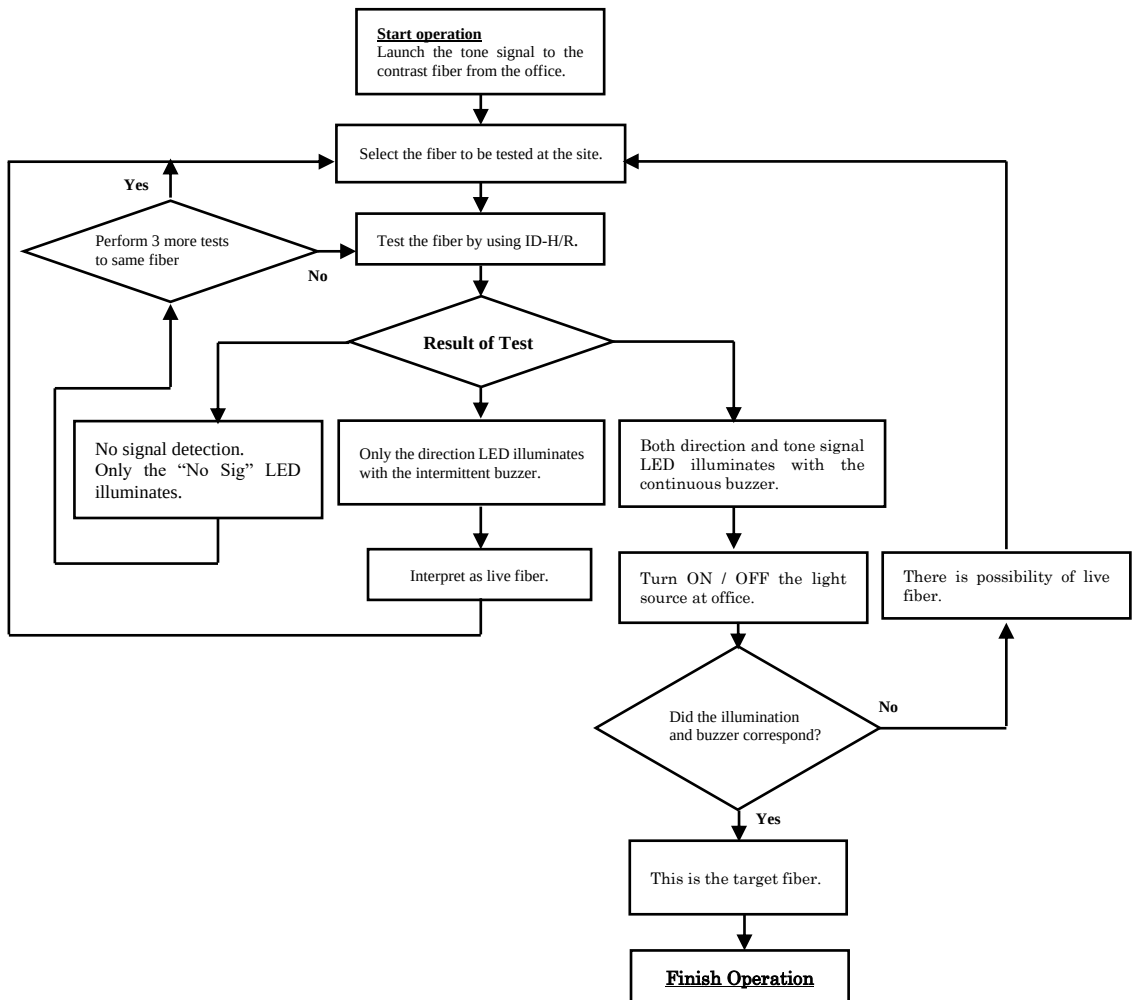
 Caution
Because this device is highly sensitive, it may respond and be identified as a communication signal even when no optical input is present, due to the influence of the surrounding environment. In such cases, perform a zero setting in accordance with " 9-2 ZERO Calibration Setting " (page 26). If the device continues to respond even after performing a zero setting, it is recommended to increase the minimum detection level in increments of 10 dB, following " 10-3 Minimum Detection Level Setting " (page 29). Increasing the minimum detection level reduces the detection sensitivity for both live signals and reference light signals. Exercise caution when changing these settings.

8 - 3 Recommended Procedure for Testing the Single Fiber

It is recommended that identification work be carried out in accordance with the following procedure.

The following decision procedure describes the flow for identifying a single fiber in “FULL mode.”

※“TONE mode” live signal light is not detected; therefore, the procedure differs from this flow.



⚠ Caution

If the result is “No Detection,” perform the identification up to three times and repeat the procedure until the reference light signal is detected.

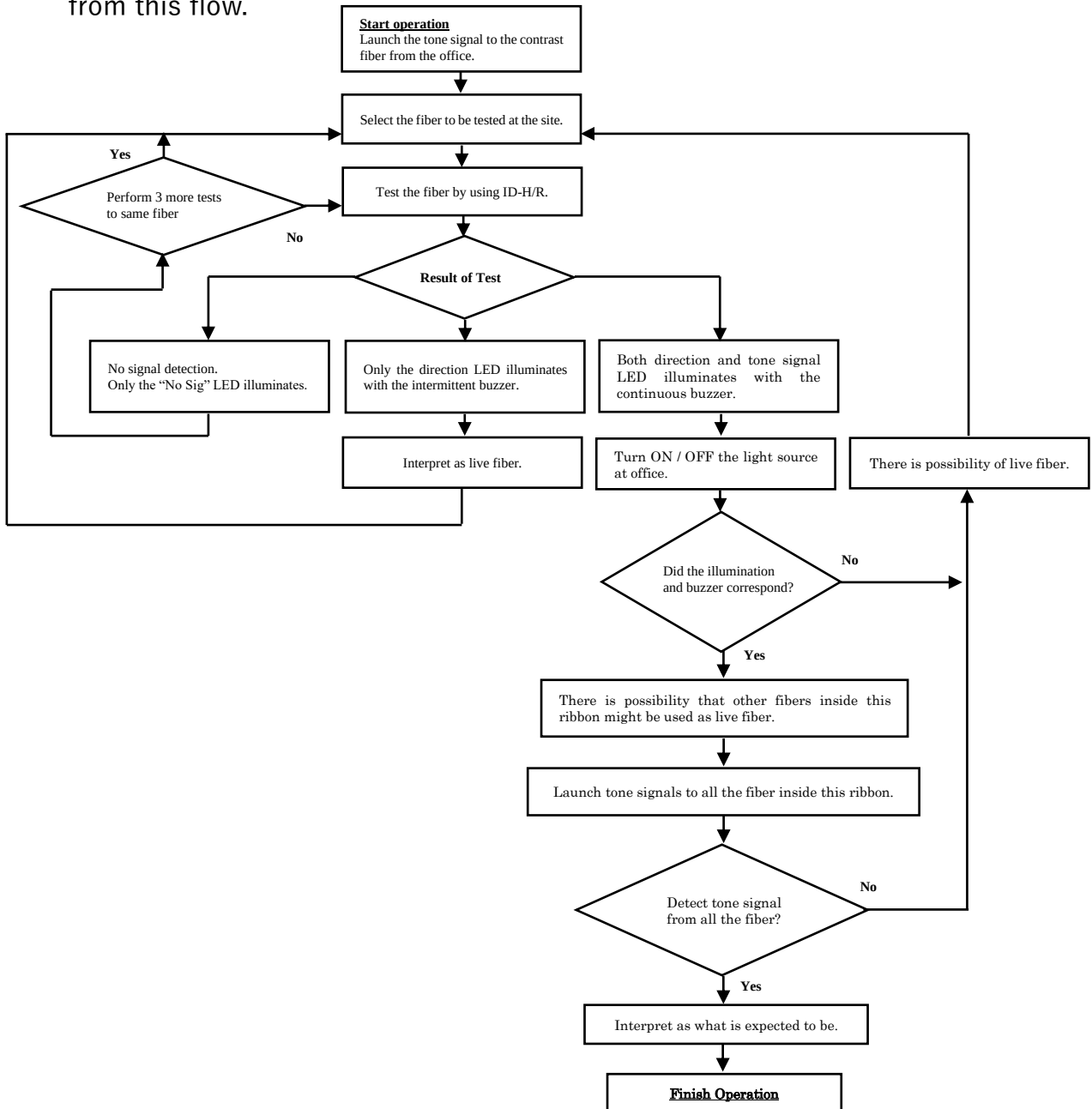
If the reference light signal is not detected, or if the fiber is determined to be a live fiber, select another fiber and repeat the procedure.

8 - 4 Recommended Procedure for Testing of Ribbon

It is recommended that identification work be carried out in accordance with the following procedure.

The following decision procedure describes the flow for identifying ribbon fiber in “FULL mode.”

In TONE mode, live signal light is not detected; therefore, the procedure differs from this flow.



Notes on ribbon fiber identification are provided on the following page.

 Caution

In case the result was “No detection”, perform 3 more tests on same fiber.

In case you still do not detect the signal or you interpret as live fiber after procedure mentioned above, then insert the identifier to other fiber, and repeat these procedures until you detect the tone signal.

In case the traffic signal and tone signal are launched in same ribbon and the traffic signal is more than 10dB stronger than the tone signal, there is possibility that this identifier will not detect the tone signal. Then launch the 270Hz signal light into the fiber, set the identifier to Tone mode and test again.

If live and dark fibers are mixed in the same ribbon, handle them with care after identification.

In case the fiber is transmitting the signal to both directions (upstream and downstream), there is possibility that direction LED will not operate normally.

9 . Detection Mode and ZERO setting

9 - 1 Detection Mode setting

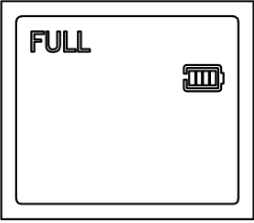
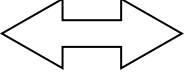
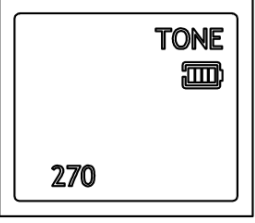
The procedure of the detection mode setting is shown as below.

1) Press the mode switch button on standby.



2) The detection mode and the indication of the LCD will be changed.
Whenever it is pressed, the mode is changed as in the Table 9.

Table 9 Detection mode setting

Mode	FULL mode		TONE mode
LCD screen			

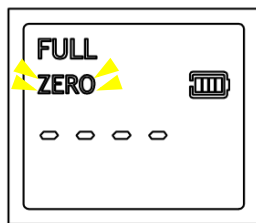


The detection mode is stored in the internal memory.
The saved settings will be applied the next time the power is turned on.

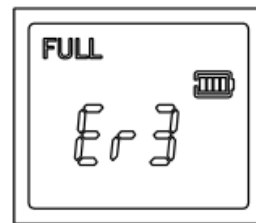
9 - 2 ZERO Calibration Setting

The procedure of zero calibration or “zeroing out” is shown below.

- 1) Pull the lever in standby without inserting a jumper.
There is no light in the detector space of the identifier.
Keep these conditions constant throughout the entire operation.
- 2) Press the Zero switch button after about 1 second, the word “ZERO” will appear on screen signaling the beginning of the process.
- 3) During the calibration, zeroes appear across the screen with the process finishing about 10 seconds later. If no error occurs, the display shown to the left below is onscreen. If one releases the lever during the process, the zeroing will be stopped and the identifier will return to the standby conditions.



Normal



Error

- 4) When an error occurs during this operation, the buzzer will sound three times and the “Er 3” will be displayed onscreen. To reset and start over, press mode switch button once and try again.

Caution

Perform zero calibration in the environment in which the test will be performed. When operating in an outside plant, keep the identifier out of direct light.



ZERO Calibration Setting is stored in the internal memory. The saved settings will be applied the next time the power is turned on.

1 0 . Parameter Setting

1 0 - 1 Parameter Settings

This device allows configuration of three types of parameters.

With the power turned on (in standby for identification, regardless of identification mode), press and hold the Mode switch for 3 seconds or longer to switch to the settings screen as shown below.

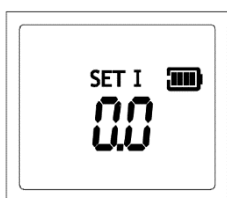
When configuring parameters, make changes and settings in accordance with the description of each item.

- 1、 With the power turned on (standby for identification).
 ↓ Press and hold the Mode switch for 3 seconds or longer.
- 2、 Offset Value Setting · [Refer to Section 10-2.](#)
 ↓ Press and hold the Mode switch for 3 seconds or longer.
- 3、 Minimum Detection Level Setting · [Refer to Section 10-3.](#)
 ↓ Press and hold the Mode switch for 3 seconds or longer.
- 4、 LCD Backlight On/Off Setting · [Refer to Section 10-4.](#)
 ↓ Press and hold the Mode switch for 3 seconds or longer.
- 5、 Return to 1 (standby for identification).

1 0 - 2 Offset Value Setting

This device allows an offset value to be added to the optical power displayed on the LCD.

- 1) With the power turned on (in standby for identification), press and hold the mode switch button for 3 seconds or longer.
- 2) As shown in the figure below, “SET I” and the offset value are displayed on the LCD.



- 3) The displayed offset value is increased by pressing the Zero switch button. The offset value is adjusted in ranges from 0.0 to 50.0 dB (1 dB step). When the display exceeds 50.0, it returns to 0.0.
- 4) After changing to the desired offset value, press and hold the mode switch button for 3 seconds or longer. The value will be saved, and the minimum detection level setting screen will be displayed.



The offset value setting is stored in memory.
The saved settings will also be applied the next time the power is turned on.

The default offset value (factory setting) is set to “0.0.”

By properly setting the offset value, an estimated value of the optical power within the fiber can be displayed on the LCD.

Caution

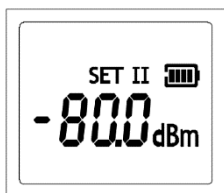
The optical power displayed after setting the offset value does not represent the exact optical power within the fiber. It should be used for reference purposes only.

The appropriate offset value varies not only depending on the type of fiber, but also on the condition of the coating (thickness, color, and material). When using an offset value, it is recommended to verify the appropriate value in advance using the same type of fiber.

1 0 - 3 Minimum Detection Level Setting

This device allows adjustment of the minimum detection level

- 1) In accordance with “10-1 Parameter Settings” (page 27), display the minimum detection level setting screen.
- 2) As shown in the figure below, “SET II” and the minimum detection level are displayed on the LCD.



- 3) By pressing the Zero switch, the minimum detection level can be adjusted from -80.0 to -50.0 (in 10 steps).
Each press of the Zero switch increases the value by 10, and holding the switch down results in continuous increase. When the value exceeds -50.0, it returns to -80.0.
- 4) After setting the desired minimum detection level, press and hold the mode switch button for 5 seconds or longer. The value will be saved, and the LCD backlight on/off setting screen will be displayed.



The minimum detection level setting is stored in memory.

The saved settings will also be applied the next time the power is turned on.

The default minimum detection level (factory setting) is set to “-80.0.”

If the influence of ambient light is significant, or if you wish to avoid detecting weak light that is insufficient for communication, it is recommended to increase the minimum detection level to “-50.0” or a similar value.



Caution

If “Er2” is displayed after setting the parameters, the settings may not have been saved correctly. Perform the settings again.

When the threshold is increased, minimum detecting level (sensitivity) gets worse.

1 0 - 4 LCD Backlight On/Off Setting

This device allows the LCD backlight to be switched on and off.

- 1) In accordance with “10-1 Parameter Settings” (page 27), display the LCD backlight on/off setting screen.
- 2) As shown in the figure below, “SET III” is displayed on the LCD.



- 3) By pressing the Zero switch, the LCD backlight can be toggled on and off.
- 4) After setting the desired backlight state, press and hold the mode switch button for 5 seconds or longer. The setting will be saved, and the display will return to the standby for identification state.



The LCD backlight on/off setting is stored in memory.

The saved settings will also be applied the next time the power is turned on.

The factory default setting for the LCD backlight is set to ON.

Caution

The increased power consumption caused by the backlight being turned on directly affects battery life.

If the backlight remains continuously on, the batteries will be consumed more quickly, resulting in shorter operating time.

The backlight may deteriorate after prolonged use, causing the display to appear dim. If the display becomes dark and difficult to read, contact the dealer from whom the product was purchased or the contact address listed on the back cover of this manual.

1 1. Maintenance

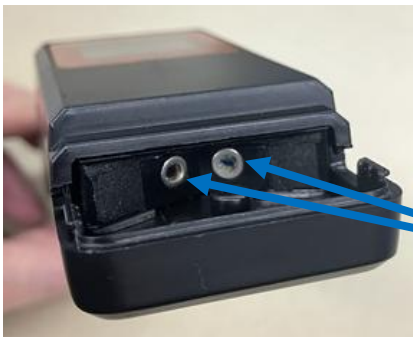
1 1 - 1 Cleaning Method for the Optical Receiver Section



① Remove the head cover by pulling it in the direction indicated by the arrow.

⚠ Caution

When removing the head cover, take care not to pull it in any direction other than that indicated by the arrow.
Doing so may result in damage.



② Wipe off any dirt using a cotton swab lightly moistened with alcohol.
After wiping, perform a dry wipe.

Optical receiver section

⚠ Caution

Take care to prevent alcohol from coming into contact with the light-shielding sponge used around the optical receiver section.

1 2 . Storage and Transportation

Optical Fiber Identifier ID-H/Rv4 is a precision instrument, and its performance may deteriorate due to the effects of dust or debris on the optical receiver section. To ensure optimal performance and stable measurement of this device, observe the following precautions during storage and transportation.

- Do not leave the device in locations with temperatures below -20° C or above +60° C.
- Do not store the device in locations with high humidity or excessive dust.
- During storage and transportation, turn off the power and remove the batteries from the unit.
- During storage and transportation, place the device in its carrying case and protect it from external shock.
- Even when stored in the carrying case, never subject the device to strong impacts.

1 3 . Recycling and Disposal

When disposing of the Optical Fiber Identifier ID-H/Rv4 or its components, follow the applicable local regulations and legal requirements for disposal, or contact Section 14, “Contact Information,” or your dealer from whom the product was purchased.

When recycling, comply with the recycling regulations applicable in your region.

1 4 . Warranty provisions

Warranty Target product
Optical Fiber Identifier ID-H/Rv4

Warranty period
Warranty period of this Product is 3 years from the date of shipment.

Warranty
In the event of a failure of main body of the Product under the usage in accordance with the instruction manual (Normal usage), the Warrantor will repair or replace the Product free of charge in accordance with this warranty provision. Any repairs or replacements of the Product in accordance with this Warranty provision shall not be deemed to extend the Warranty period of the Product.

Warranty Coverage
This warranty covers only the main body of this Product. Software and other accessories are out of coverage. If the main body of the Product becomes defected or failed under the Normal usage within the Warranty period, The Warrantor will repair or replace in accordance with this Warranty provisions.

Out of Coverage of Warranty
The repair or replacement of the Product with defects or failures incurred by the following causes will be charged, despite of the Warranty period.

- extraneous causes (such as damage in transit after purchase, damage caused by shock or impact);
- the case the Warrantor determined that the defects or failure caused by misuses or the uses out of described in the product specification;
- the case of inability to identify the serial number of the Product due to its defacement or damage;
- modifications, repairs and replacements carried out by third parties;
- natural disasters, including, but not limited to, earthquake, fire, lightning strike, storm and flood;
- loss of the Product after the reception by the Customer, and;
- any other causes the Warrantor determines it is out of coverage of warranty.

Disclaimer
THE WARRANTOR IS NOT LIABLE FOR ANY DAMAGES, INCLUDED, BUT NOT LIMITED TO THE DISCONNECTIONS OF OPTICAL FIBERS, INCURRED BY THE FAILURE OR USE OF THIS PRODUCT. UNLESS THE DAMAGES ARE CAUSED BY THE WARRANTOR'S WILLFUL MISCONDUCT OR GROSS NEGLIGENCE, THE WARRANTOR'S LIABILITY FOR THE DAMAGES SHALL BE LIMITED TO THE PRICE EQUIVALENT OF THE PRODUCT FOR ANY REASON.

Other
To obtain performance of any obligation under this warranty, contact the vendor from whom the Product was purchased.
Except for initial defects, shipping costs shall be borne by the customer.

FURUKAWA
ELECTRIC

1 5 . Contact Information

Furukawa Electric Co., Ltd.

<https://www.furukawaelectric.com/en/inquiry/>



Contact us using the web form above.