



KI9800 Light Source Training Manual

KI 9800 SERIES LIGHT SOURCES



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1. TYPICAL APPLICATIONS

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- Basic single mode, multimode or POF/PCS cable loss testing
- Tone generator for fiber identifier
- Tone generator for power meter tone detection
- MultiFiber ID Tone generator for power meter tone detection
- Loss testing with Autotest compatible power meters
- General testing & maintenance
- Visual Fault Finder (VFL) option

2. GENERAL FEATURES

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- Entry level skill with Tamperlock
- Excellent optical power stability
- Excellent re-connection repeatability
- Up to 3 wavelengths
- Test tone & Multi-fibre ID generator
- Autotest compatible with KI2000 / KI7000 meters
- Interchangeable connectors
- Shirt-pocket size, with spring clip
- Battery life: up to 40 hours
- Eye-safe long distance VFL up to 10 Km
- Ruggedized, water & dust resistant
- Captive Dust Cap
- Encircled Flux compliant LED sources
- Large sunlight readable display
- 3-year warranty & calibration cycle
- Made in Australia

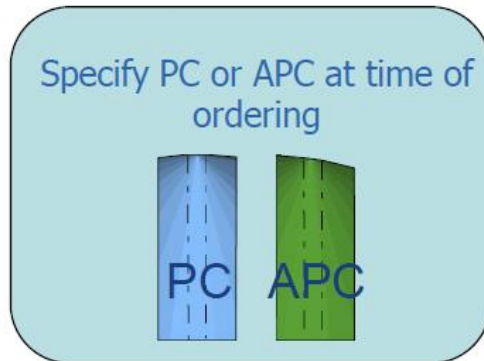
3. MODELS

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There are four model ranges:

- KI982x - Single mode
- KI981x – Multimode *
- KI980x - Specialty POF & Visible
- KI984x – Specialty VCSEL *

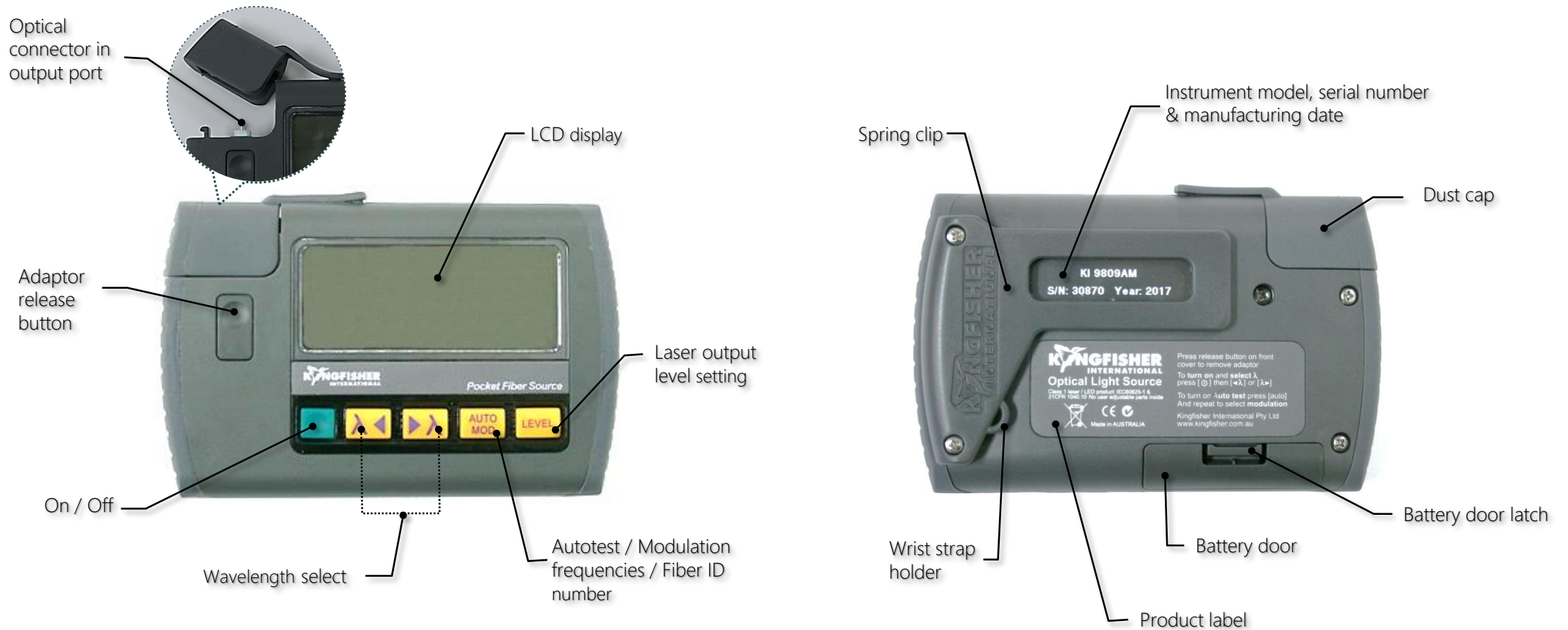
See [Kingfisher website](#) for full list of available models



* MM sources are EF compliant at 50 um working PC & APC connector versions

4. INSTRUMENT OVERVIEW AND KEYPAD LAYOUT

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5. GETTING STARTED

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5.1. Install Batteries

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To install batteries:

- Pinch latch and lift battery door
- Insert 2 'AAA' cells
- Replace battery door

Battery life:

Laser/LED source: 40/35 hours in Autotest, typical using Alkaline batteries. 25 hours typical in CW mode.

Low Battery Display:

The symbol,  is displayed when batteries are low.


Warning!

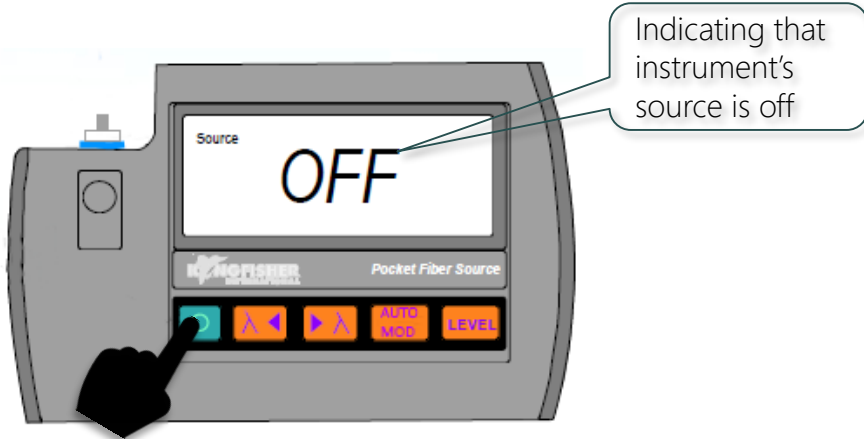
Do not use lithium batteries, or other batteries with a nominal voltage greater than 1.8 V to avoid instrument damage.

5.2. Turn Instrument On / Off


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To turn on,
Press green button, .

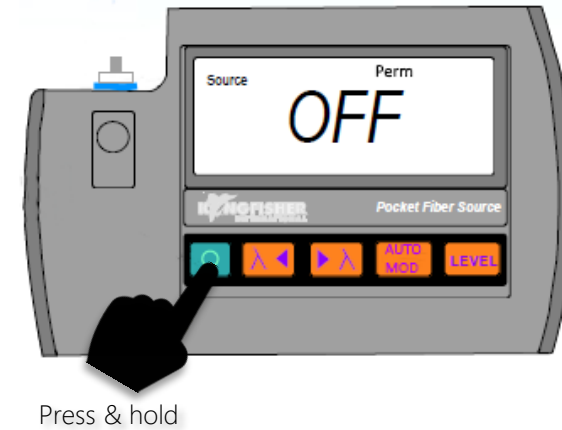


When instrument is on,

- It will automatically turn off 10 minutes (*auto time out*) after the last key press.
- If batteries are low, "  " will be displayed.
- Press green button again will switch off instrument.

To disabled auto time out,
press and hold green button,  when instrument is off.

- *Instrument will beep twice.*
- *"Perm" will be displayed on the upper part of the LCD*



To turn off,
Press green button,  again.

5.3. Select / Determine Test Cord Configuration

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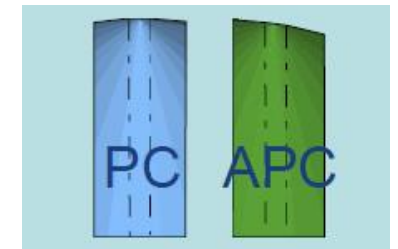
The instruments' optical connectors are coloured code as follow depending on models,

- Green: SM (Single Mode) with APC end face
- Blue: SM PC with PC end face
- Beige: MM (Multi Mode) with PC end face

Identify the type of test cord (connector & end face types) that suit the instrument model.

Note:

- End face type of test cord and instrument must match i.e. PC-PC or APC-APC
- Wrong end face type may reduce performance
- APC end face type is more stable for lasers

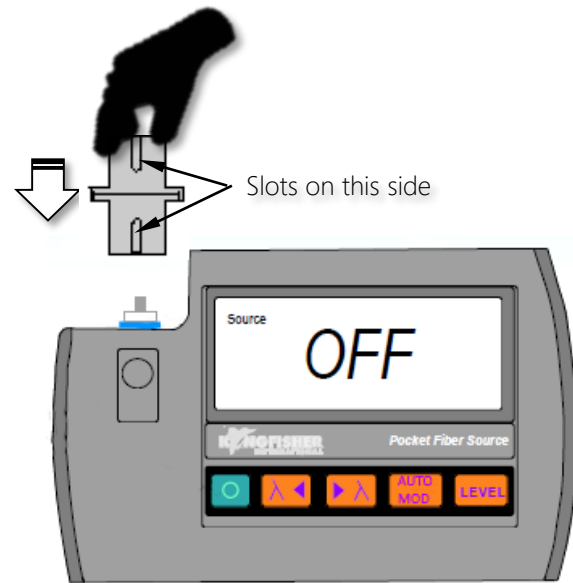


5.4. Install / Uninstall Adaptor On Instrument

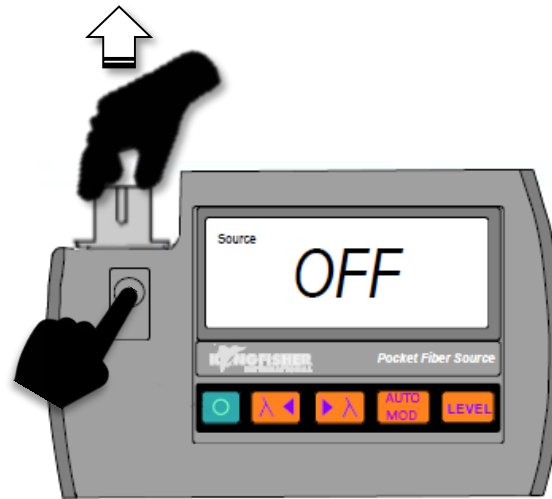
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To install adaptor,
Push adaptor (in the orientation
shown below) into instrument's
connector port.



To uninstall adaptor,
Press down the adaptor release
button, and pull adaptor out of
instrument's connector port.



Note:

All instrument models come with a
SC/SC adaptor (see pic below) as
standard accessory.



See [Kingfisher website](#) for other available
adaptors.

5.5. Cleanliness

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Ensure that all optical connectors especially their end faces are clean.

- Dirty optical connectors will lead to incorrect measurements.
- Dust particles could be similar size to the core diameter of SM fibre.
- Avoid failures due to connector and adaptor contamination!
- Interchangeable adaptor removeable for cleaning



How can I tell if the connection is clean?

- Inspect test cord connectors with optical microscope.
- If clean, insert into instrument.
- Remove test cord and re-inspect.
- If test cord connector is clean then the instrument connector and its adaptor is also clean.



See [Kingfisher website](#) for microscope brochure

5.6. Instrument Operation

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[5.6.1. CW \(Continuous Wave\) Mode](#)

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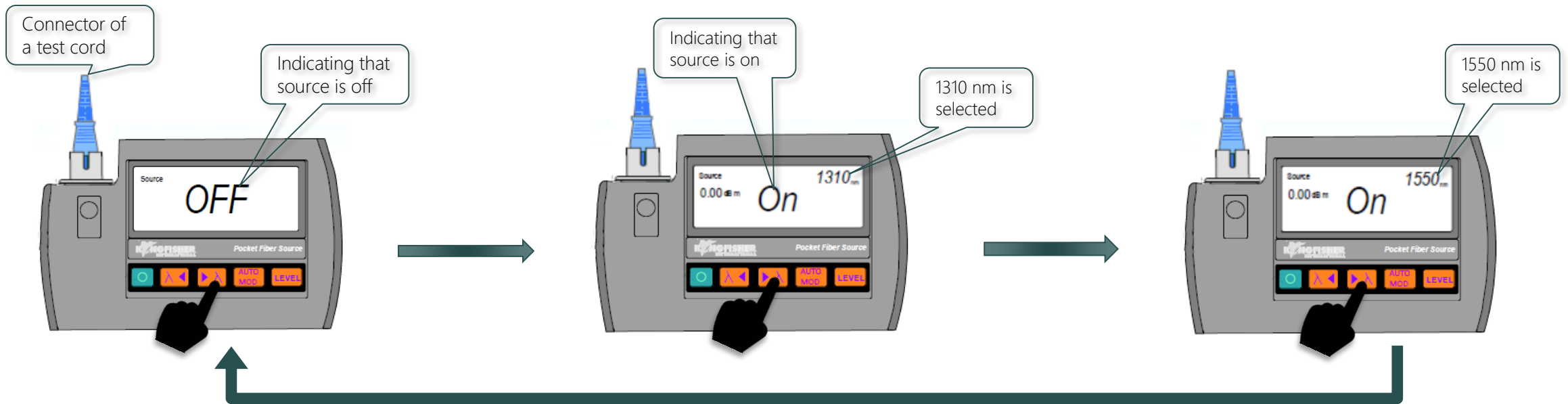
5.6.1. CW (Continuous Wave) Mode

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In this mode, the instrument emits constant optical power at the pre-set wavelength.

With instrument turned on, press  or  to turn on/off instrument's source and to select from the available output wavelengths (e.g. 1310 & 1550 nm) in the sequence as shown below.





Press  turns on/off instrument's emitter and select output wavelength in the reversed sequence of that shown above.


5.6.3. Test Tone / Multifiber ID Mode

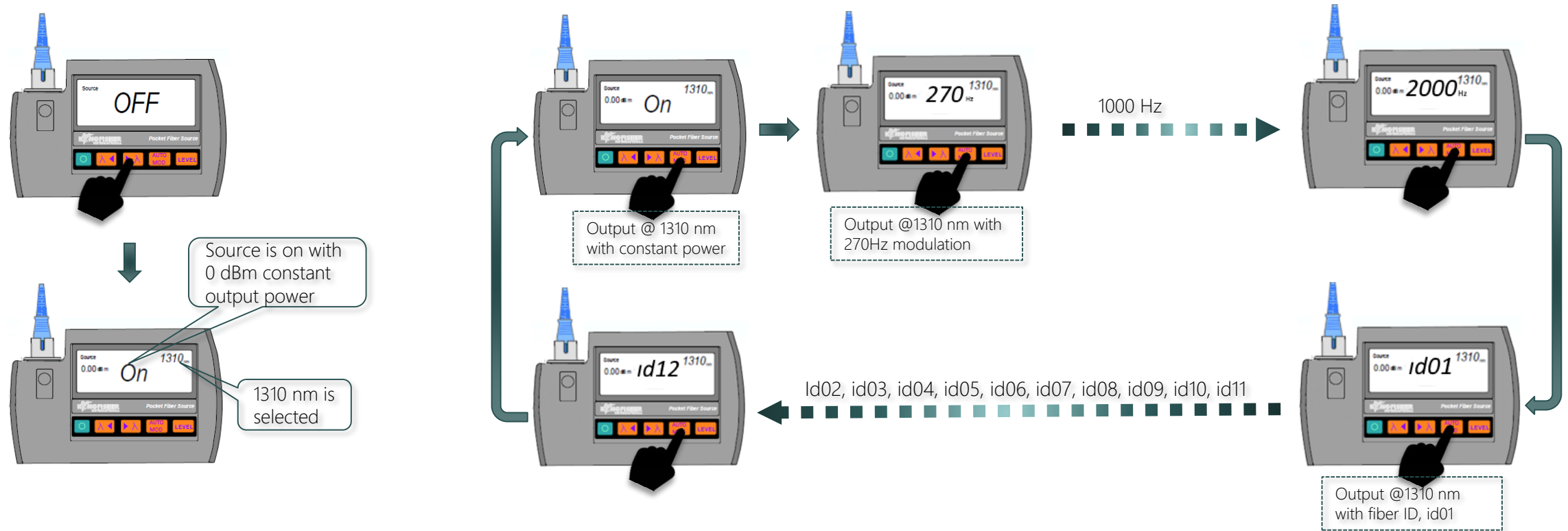
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In this mode, instrument outputs modulated light or a Fibre identification number at the selected wavelength.

1 Turn instrument source on or select Wavelength by pressing  or .

2 Continue to press  in turns, will scroll through all test tones (270, 1000, 2000 Hz) and fiber ID (id01 to id12) in the sequence shown below. See next slide for alternative way to select a test tone / fiber ID more quickly.

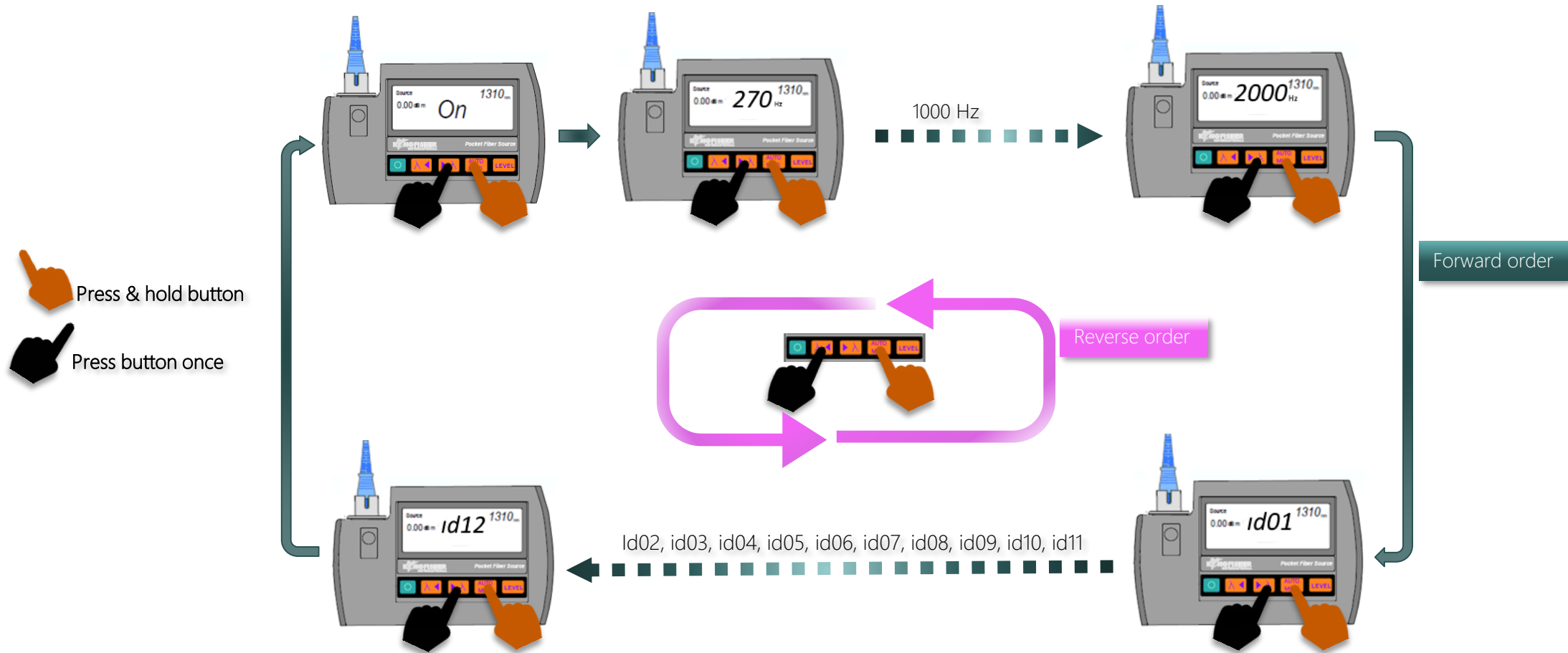


5.6.3. Test Tone / Multifiber ID Mode (... continue)

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To toggle Test Tone / Fibre ID in forward or reverse order of the sequence, press & hold and then press or in turns.



5.6.5. Tamperlock Mode


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This feature enable user (a supervisor) to lock instrument down at selected wavelength and output power for a specific application. It requires user defined keystroke to activate or de-activate.

To activate,

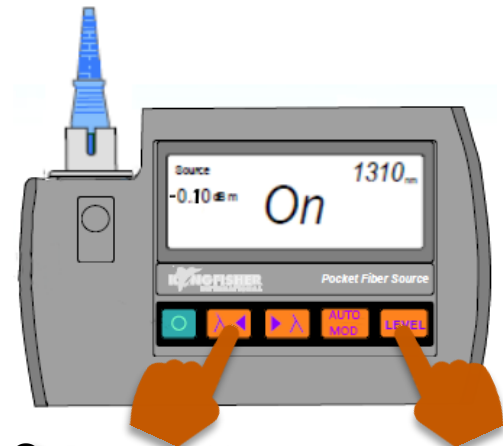
With instrument's source turned on at a selected wavelength and output power level,

- Enter a 6-key sequence using any keys except . Pressing this button will cancel the activation process.

Record down the keystroke sequence for future use.

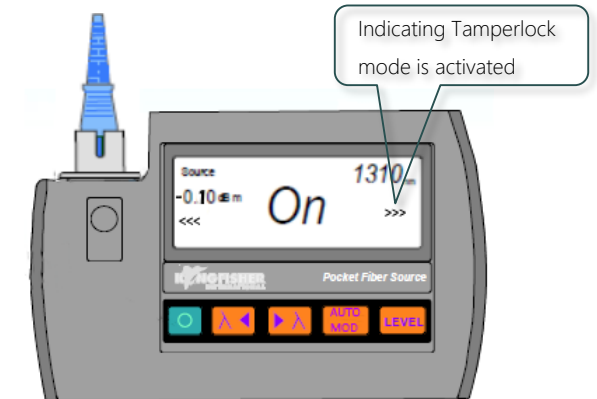
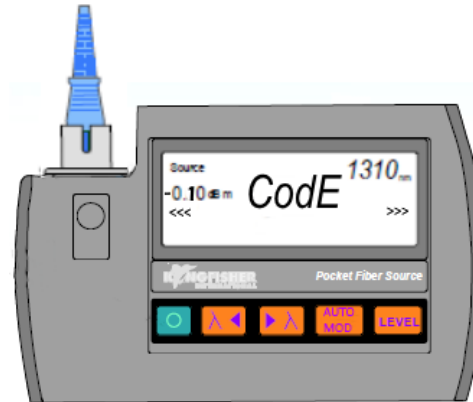
Upon successful activation,

- "Lout" is displayed momentarily
- User can only turn source or instrument on or off
- Temperlock mode remains activated at power off. *See next slide for deactivation of this mode.*



1 Press & hold

2 Press & hold until "Code" is displayed



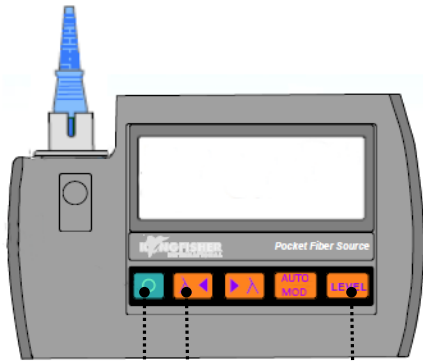
5.6.5. Tamperlock Mode (... continue)

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To deactivate Tamperlock Mode

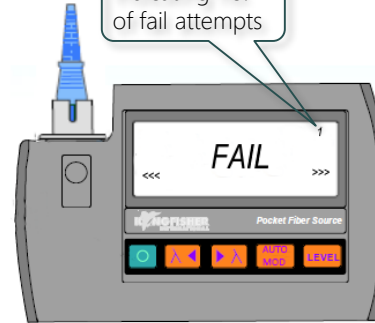
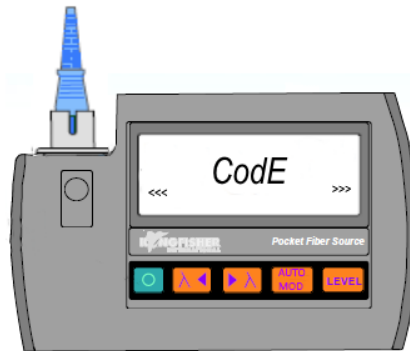
- 1 Turn off instrument.



- 2 Press & hold both buttons.

- 3 Press until "CodE" is displayed.

- 4 Enter the 6-key sequence that was used for Tamperlock Mode activation.

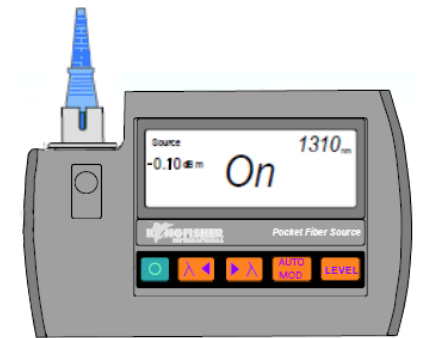
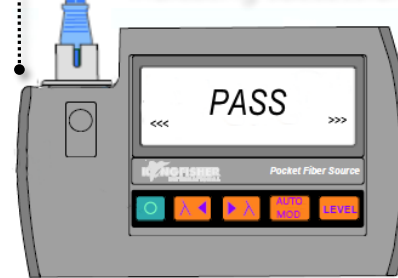


Indicating no. of fail attempts

In case a wrong 6-key sequence is entered, "FAIL" will be displayed indicating unsuccessful deactivation. Instrument will then turn off.

Tamperlock mode will be deactivated after 3 unsuccessful attempts.

"PASS" will be displayed momentarily indicating successful deactivation.



5.6.4. Output Power Adjust

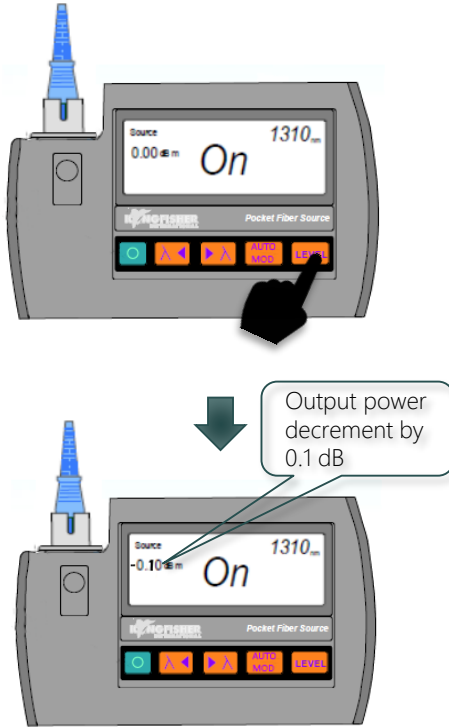
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This feature allow user to adjust instrument's output powers in 0.1 dB step for 3 dBm.

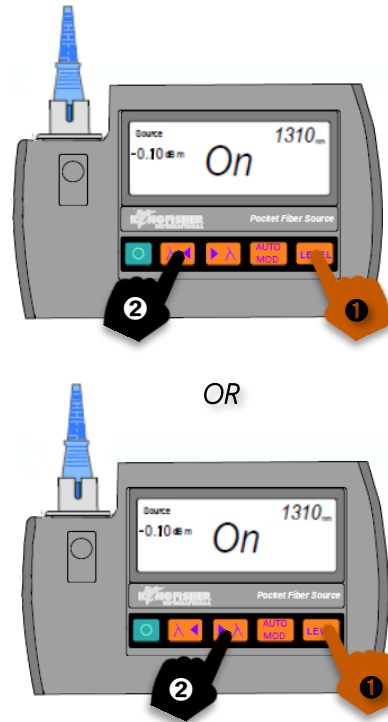
To decrement power,

With source of instrument turned on at any wavelength, press **LEVEL**.



To decrement/increment power,

1 Press & hold **LEVEL**, 2 Press **▲** to increment, or press **▼** to decrement.



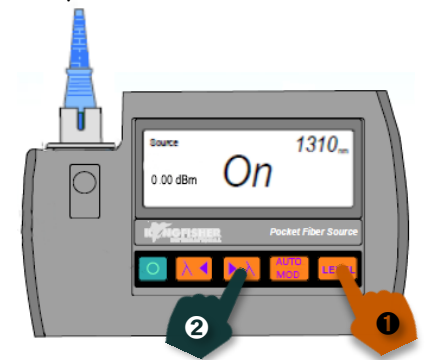
To set to min power,

1 Press & hold **LEVEL**, 2 Press **▼** and hold for 3 seconds.



To set to max power,

1 Press & hold **LEVEL**, 2 Press **▲** and hold for 3 seconds.



Note:

- This feature is applicable to instruments with laser sources only
- Output power resets to factory default at power off

5.6.2. Autotest Mode

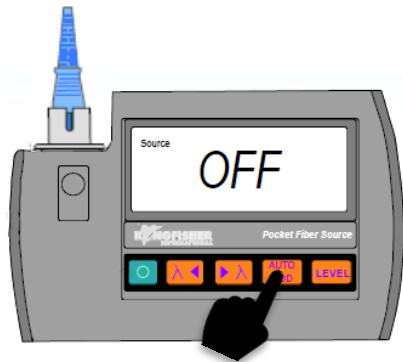
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In this mode, the instrument automatically alternates its output at all available wavelengths.

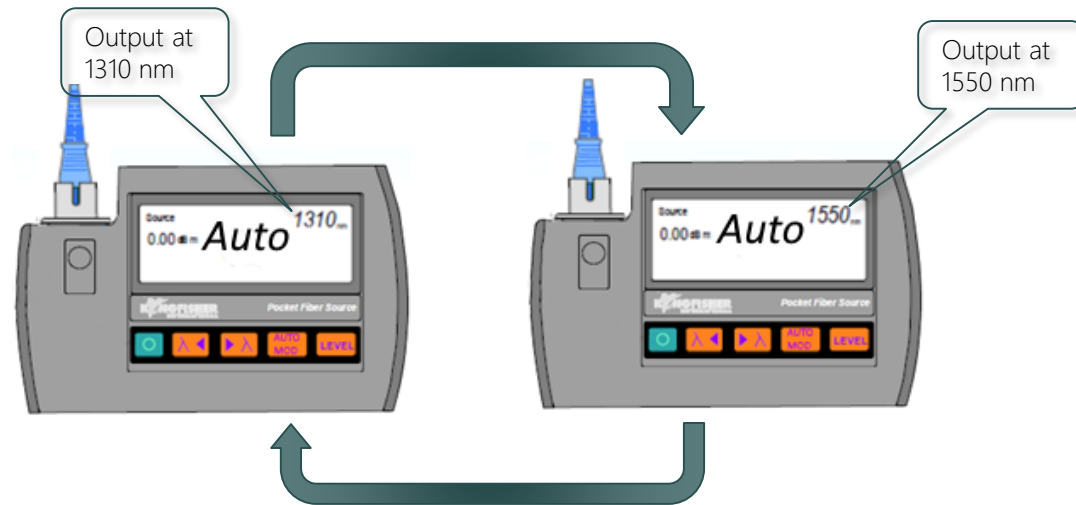
To start Autotest,

Make sure instrument's source is off, then press .



Example,

Diagram below shows a instrument with 2 wavelengths (1310 & 1550 nm) operating in Autotest mode.



To stop Autotest,

Press  again.

Data included in instrument output:

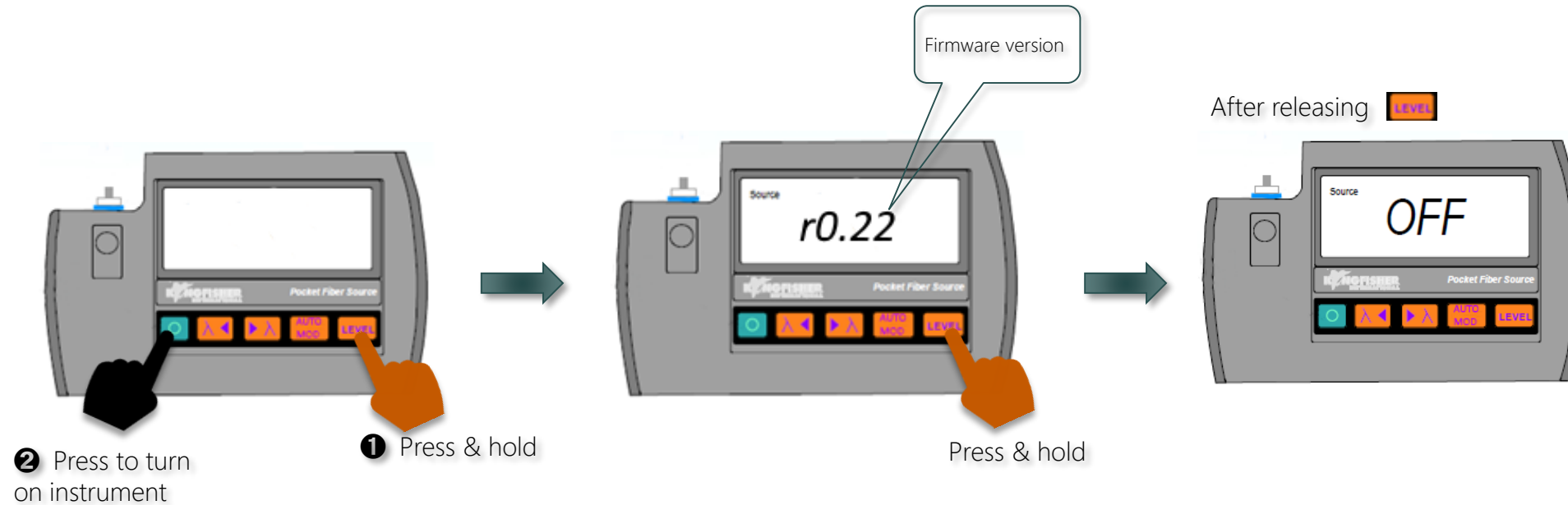
- Pre-set output power, serial number & wavelengths
- A compatible Power Meter connected to this instrument (Light Source) will automatically toggle between these wavelengths

5.6.6. Firmware Display

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This function displays the firmware version of instrument



6. INSTRUMENT CARE [◀ Back to TOC](#)

- Keep the instrument in its carry case during storage and transport
- Use only high quality batteries.
- For prolonged storage remove batteries.
- The instrument is resistant to normal dust and moisture, however it is not waterproof.
- If moisture gets into the instrument, remove batteries & dry it out carefully before using it again.
- Where possible, keep instrument away from strong sunlight.
- Clean the instrument case using Iso-Propyl-Alcohol (IPA) or other non solvent cleaning agents.
- DO NOT use Acetone or other active solvents as damage may result.

Application Notes

Comprehensive selection available at

<https://www.kingfisherfiber.com/Application-Notes.aspx>

The End

Prepared by: TO Ng

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@kingfisherfiber kingfisherfiber.com

