FOCIS Flex

Fiber Optic Connector Inspection System
Quick Reference Guide

Controls, Display, Interfaces

Controls

① Power key - ⏻

② Image Capture key - 📷

③ F1 soft key (typically Back function)

④ F2 soft key (typically Select function)

⑤ Navigation and Edit functional keys

Display (2-inch Color LCD [320 x 240])

⑥ Screen title

⑦ Battery status icon

⑧ Image and information display area

⑨ F1 and F2 soft key labels area

Interfaces

⑩ Optical inspection port

⑪ Adapter tip

⑫ Dust cover

⑬ Micro-USB port

⑭ 5 VDC input jack

⑮ Charging indicator

Properly Installing and Removing Adapter Tips

FOCIS Flex is available with the following adapter tips

Connector	UPC Connectors		APC Connectors	
	Ferrule	Bulkhead	Ferrule	Bulkhead
SC	FFLX-01-U25	FFLX-01-SC	FFLX-01-A25	FFLX-01-ASC
FC	FFLX-01-U25	FFLX-01-FC	FFLX-01-A25	FFLX-01-AFC
LC	FFLX-01-U125	FFLX-01-LC	FFLX-01-A125	FFLX-01-ALC
ST	FFLX-01-U25	FFLX-01-ST	Not applicable	Not applicable

Note: Contact AFL Sales Representative or Tech Support for additional connector adapter tips.

Installing Adapter Tips

- While holding adapter tip in place, raise captive nut (A) until it engages with adapter tip threads.
- Turn captive nut counter-clockwise (viewed from front/top).
- Hand-tighten (do not over-tighten).

Removing Adapter Tips

Probe tips are held in place with a captive nut (A).

- Turn captive nut clockwise (viewed from front/top).
- Continue until captive nut is free of adapter tip.
- Remove adapter tip by pulling it gently straight off the probe base.

Note: For proper viewing, APC connectors must be aligned with the slot (B) in the threaded area of the correct APC adapter tip.

Powering Up/Down

Power-Up

• Press and release the Power key (A).

Power-Down

• Press and hold the Power key (A) until display turns off.

Configure FOCIS Flex to Auto-Off

• From the Main Menu > Settings, select Display & Power Save option.
• Select desired power save option: 2 min, 5 min, 10 min, Never.

Battery Charging and Operation

• Plug the included AC Charger into AC outlet.
• Connect charger plug into 5 VDC jack (B) on FOCIS Flex.
• LED (C) indicates charging status as follows:
  – **OFF** - AC not connected
  – **RED** - Charging battery
  – **GREEN** - Fully charged
  – **RED/GREEN flashing** - Charging error. Verify correct 5VDC 2A charger is used. Allow to cool before charging.
• FOCIS Flex charges while operating.
• Battery icon (D) indicates battery state as follows:
 - AC connected; charging, not fully charged
  - AC connected; charging, fully charged
  - Battery operation, fully charged
  - Battery operation, partially charged
  - <15 min Battery operating time remaining

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Live Image Mode

FOCIS Flex powers-up in the Live Image mode.

- Pressing and holding the Help **?** soft key (A) displays help tips about FOCIS Flex keys usage. **Note:** pressing the Left ◀ arrow key toggles between connector types:
  - **Single** (single fiber connector, UPC or APC)
  - **MPO-PC/APC** (MPO/MTP® multi-fiber connector; PC or APC finish)
  - **MPO-Flat** (MPO/MTP multi-fiber connector; Flat finish [rare])
- Pressing the Menu ≡ soft key (B) displays the Main Menu that allows the user to set preferences, perform general settings, manage saved test results and perform other non-test functions.
- Pressing Menu > Setting (C) > Capture (D) displays the Capture settings menu.
- When the Auto Focus option is enabled (E) in the Capture screen and Capture key 🔘 is pressed:
  - Auto focus is initiated
  - Image is captured when auto focus completes
  - Image is analyzed if Pass/Fail set to On
  - FOCIS Flex transitions to Captured Image mode
- When Auto Focus is enabled or disabled:
  - Press Right ▶ arrow key to auto focus once
  - Press Up/Down ▼▲ arrow keys to manually adjust focus
- When the Auto Focus option is disabled (F) in the Setting screen and Capture key 🔘 is pressed:
  - Image is captured (without adjusting focus)
  - Image is analyzed if Pass/Fail set to On
  - FOCIS Flex transitions to Captured Image mode
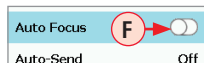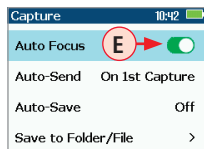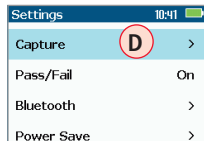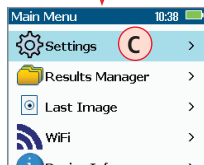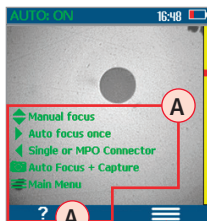
Capture Key Operation

- In the Live Image mode, press the Capture key ⬜️ to perform the following:
    - Auto Focus image (if the Auto Focus option is enabled)
    - Capture the displayed image and enter the Captured Image mode
    - Analyze image (if the Pass/Fail option is enabled)
    - Save results and send image to Bluetooth-paired device (if auto-save and auto-send enabled on "**1st Capture Key**", see page 12 for details)
    - If auto-save or auto-send enabled on "**2nd Capture Key**" (see page 12), press the Capture key again to save and/or send
- In Captured Image mode, press the Capture key to return to Live Image mode.
- In the Main Menu or Settings modes, press the Capture key to return to the most recent Live or Captured Image mode.

User Settings and Controls

The Main Menu is accessed from Live Image mode by pressing the Menu ☰ soft key.

- **While in the Main Menu,** press Up/Down ⬍ arrow keys to navigate and select (highlight) the desired menu option.
    - **Settings:** Configure Auto Focus, Pass/Fail, Bluetooth, etc.
    - **Results Manager**: Navigate and Review or Send saved test results
    - **Last Image:** Recall most recently viewed image
    - **WiFi:** Configure WiFi for remote access (future)
    - **Device Info**: View serial number, software rev, etc.
- Press Select or Right ▶ arrow key to display the selected option sub-screen.
- **While in a sub-screen,** press Up/Down ⬍ arrow keys to navigate and highlight the desired option.
    - Press Select soft key or Right ▶ arrow key to edit highlighted parameter
    - When selected parameter displays On/Off icon 🟢/⚪, press Select to enable/disable
- Press Back soft key to return to the previous menu screen.

Pass/Fail Settings

Pass/Fail menu is accessed from the Live Image mode > Main Menu > Settings.

Enable/disable Auto Analysis
- Highlight Auto Analysis (A).
- Use Select key (B) to enable/disable ⬤/⬤ Pass/Fail analysis.

Change Rule:
- Highlight Change Rule (C).
- Press Select or Right ▶ arrow key to display a list of the available Rules (D).
- Use Up/Down ⬍ arrow keys to highlight the desired Rule group (E).
- Press Select or Right ▶ arrow key to display a sub-list (F).
- Use Up/Down ⬍ arrow keys to highlight the desired rule.
- Press Use (G) to apply the selected Rule in Pass/Fail analysis.
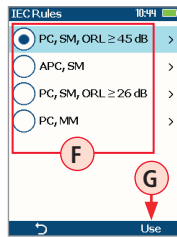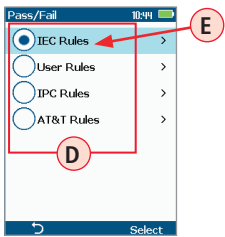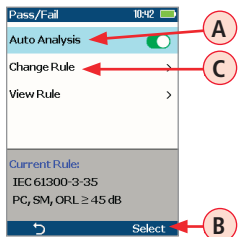
View Rule
1. Highlight View Rule (H).
2. Press Select or Right ▶ arrow key to view details for the current rule.
3. User Rules may be edited while viewing.
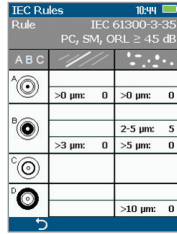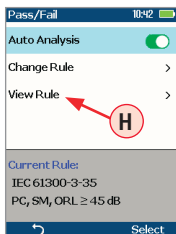
Captured Image Mode Features

**Description**

1 Screen Title: displays File Name (e.g. COO1-003) if saved image is shown or Captured @ hh:mm:ss if unsaved image is shown.

2 Pass/Fail Indication: shown only if Pass/Fail option is enabled in Settings.

3 Display Tabs: select the desired view using the Left/Right ◄► arrow keys.

4 End-face Image: displays end-face image with Pass/Fail overlay (if enabled).

5 Back soft key: press to return to previous screen.

6 Image Layers soft key: use Up/Down ⬍ keys to view image layers as follows,
- End-face image with overlay layer shown (default view)
- End-face image only
- Overlay only

7 Menu ≡ soft key: press to display the Save/Send Menu.
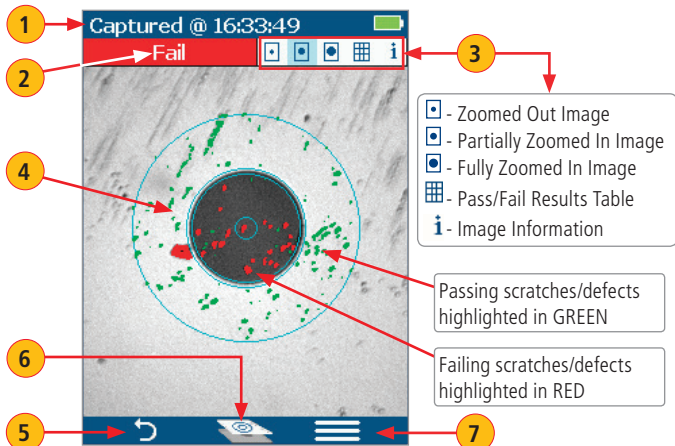
Zoomed in end-face image with Overlay

Captured Image - Pass/Fail Results Table

**Description**

1 Screen Title: displays File Name (e.g. COO1-003) if saved image is shown or Captured @ hh:mm:ss if unsaved image is shown.

2 Pass/Fail Indication: shown only if Pass/Fail option is enabled in Settings.

3 Display Tabs with the Pass/Fail display tab selected.

4 Analysis Rule applied to determine Pass/Fail.

5 Analysis Zones: A - core, B - cladding, C - adhesive, D - contact area.

6 Scratch analysis results for each zone:
- Reports the number of detected scratches exceeding limit for each region
- Highlights failed rules in RED

7 Defect analysis results for each zone:
- Reports the number of detected defects exceeding limit for each region
- Highlights failed rules in RED

8 Back soft key: press to return to previous screen.

9 Menu soft key: press to display the Save/Send Menu.

Saving Captured Images

To save results to the current folder

- While in the Captured Image mode, press the Menu ≡ soft key to display the Save/Send screen.
- Highlight Save (A) and press Select soft key to save image and results to the current folder.
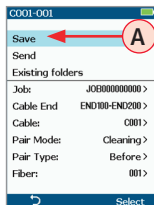
To edit file name

- While in the Save/Send screen, using Up/Down ▼▲ keys, navigate to the desired parameter: Job, Cable End, Cable, Pair Mode, Pair Type, or Fiber.
- Press Select or Right ▶ arrow key to display Editor (B).
- Use ◀▶ ▼▲ arrow keys to edit text field (C).
- Press Ok soft key to save new name (D).
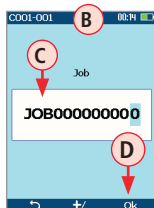
To save results to an existing folder

- Highlight the Existing folders (E) option.
- Press Select or Right ▶ arrow key to display a list of existing folders.
- Use Up/Down ▲▼ arrow keys to select desired Job folder (F).
- Press Right ▶ arrow key to open selected Job folder.
  - Repeat for desired Cable folder and Fiber number as needed.
- Press Use soft key (G) to confirm selection.
- When back in the Save/Send screen, highlight Save (H) and press Select.
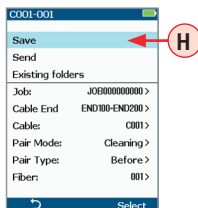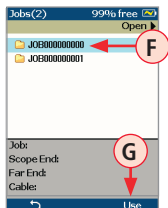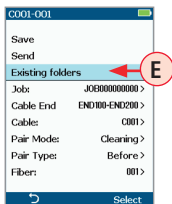
Configuring Image Pairing

Image Pairing functionality allows user to capture and save two images for each fiber.

Available Pairing Modes and Pairing Types

Pairing Mode	Pairing Type
None	**None** – Image pairing disabled
Cleaning	**Before** – image before connector cleaned **After** – image after connector cleaned
Input / Output	**Input** – network input connector image **Output** – network output connector image
Documentation	**As built** – image of connector when network built **As found** – connector as found when troubleshooting
Mating	**Jumper** – image of patch cord connector **Bulkhead** – image of panel-mounted bulkhead connector

TRM 2.0 reporting software allows user to prepare reports containing paired images.

Configuring Auto-Save and Auto-Send

1 From the Main Menu, select Settings > Capture > Auto Focus
- Use ◀▶ to enable or disable the auto-focus option ⬤/◯ as needed.
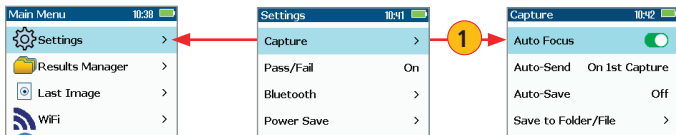
2 Highlight and Select Auto-Send. Use ▼▲ to disable auto-send, enable on 1st Capture key, or enable on 2nd Capture key.

3 Highlight and Select Auto-Save. Use ▼▲ to disable auto-send, enable on 1st Capture key, or enable on 2nd Capture key.

4 Highlight and select Save to Folder/File. Use ▼▲ to select and edit the desired folder/file field.

When Auto-Send/Save is enabled, press Capture from Live Image mode to auto-focus (if enabled), capture image, analyze pass/fail (if enabled), then send image and pass/fail results to paired device and save image and pass/fail results to configured Job/Cable folder.

Note: If Auto-Save or Auto-Send on 2nd Capture key is enabled, you will be prompted to press the Capture key again to save or send. Press the Back key if you do not wish to save or send image.
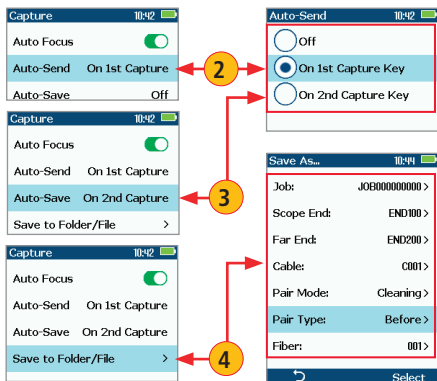
Sending Captured Results to FlexTester or FlexScan

Automatically send results to FlexTester/FlexScan via Bluetooth

On FlexTester/FlexScan

- Configure FlexTester/FlexScan for pairing:
  - Select Settings > Bluetooth
  - Enable Bluetooth with Visibility option setting them to On

On FOCIS Flex

- From the Main Menu > Settings > Bluetooth, select Pair With New Device **(A)** and pair FOCIS Flex with FlexTester/FlexScan:
  - Wait for list of visible devices to be shown
  - Use ▼▲ arrow keys to select FlexTester/FlexScan device to pair with
  - Select Set Default Connection to complete pairing
  - After pairing, set FlexTester Visibility to Off
- From the Main Menu > Settings > Capture, configure FOCIS Flex to auto-send captured images on 1st or 2nd Capture Key. See page 12.
- Press the Capture key to return to Live Image mode.
- Press the Capture key to focus, capture, analyze and send image to FlexTester/FlexScan.

On FlexTester

- After a few seconds, captured image will appear on your FlexTester.
- Press Right ▶ arrow key on FlexTester to view Pass/Fail results table.

On FlexScan

- After a few seconds, captured image and pass/fail results will appear on your FlexScan.

Using FOCIS Flex with FOCIS Flex App

- Download FOCIS Flex App from Google Play or Apple App Store to your smart device.
- Pair FOCIS Flex to your smart device.
  - In smart device Bluetooth Settings, make your device visible.
  - In FOCIS Flex: from the Main Menu, select Settings > Bluetooth Settings > Pair With New Device (A). Press Select.
  - From the displayed Device List screen, select your smart device (B). Press Select.
  - Select Set Default Connection (C). Press Select.
  - Verify that FOCIS Flex indicates that it is paired with your smart device.
- In Capture Settings, configure FOCIS Flex to send on 1st or 2nd Capture Key.
- From Live Image mode, view connector end-face and press the Capture Key
- FOCIS Flex will capture image and send it to your smart device.
- FOCIS Flex App on your smart device will display received image.
- For App details, see FOCIS Flex Inspection | aeRos User's Guide.
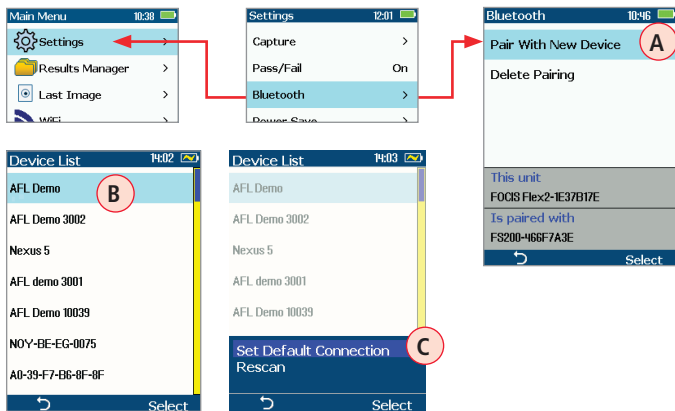
Results Manager – View Saved Images

① From the Main Menu, access the Results Manager by pressing Select or ▶ key.

② Use ▲▼ keys to navigate and highlight the desired Job folder, press ▶ key to open.

③ Use ▲▼ to navigate and highlight the desired Cable folder, press ▶ key to open.

④ Use ▲▼ to navigate and highlight the desired File, then press ▶ to open.
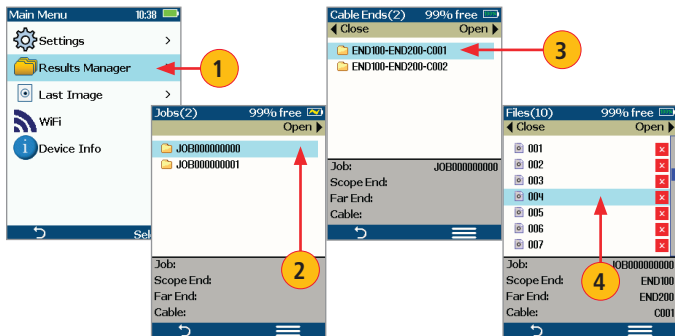
Inspection Reporting using TRM® 2.0

Upload Inspection Results to a PC

On FOCIS Flex

- Turn your FOCIS Flex unit off.
- Using the supplied USB cable, connect the micro-USB port on your FOCIS Flex unit with a USB port on your PC.
- Verify FOCIS Flex powers up and displays:
  – Mass Storage
  – Video
- Select the Mass Storage mode.

On PC

- Select 'My Computer'.
- Verify that device labeled 'PROBE (E:\)' appears in My Computer window
  Note: drive letter assigned to PROBE device may be different.
- Double-click PROBE (E:\) to view contents of the FOCIS Flex internal memory.
- Double-click on RESULTS folder.
- Drag, copy, or move some or all of the results to your PC.
- When finished, disconnect USB cable and turn off FOCIS Flex (since FOCIS Flex will remain on and return to normal operation if USB cable simply disconnected.)

Install and run TRM 2.0

- Select Report Wizard
- Navigate to uploaded FOCIS Flex Results.
- Select entire [Cable] for all results.
- Select individual fiber for single result.
- Select desired inspection template (2 or 12 results per page).
- Select Finish and print or save as PDF file.

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