



# FOCIS Flex Introduction to Operation

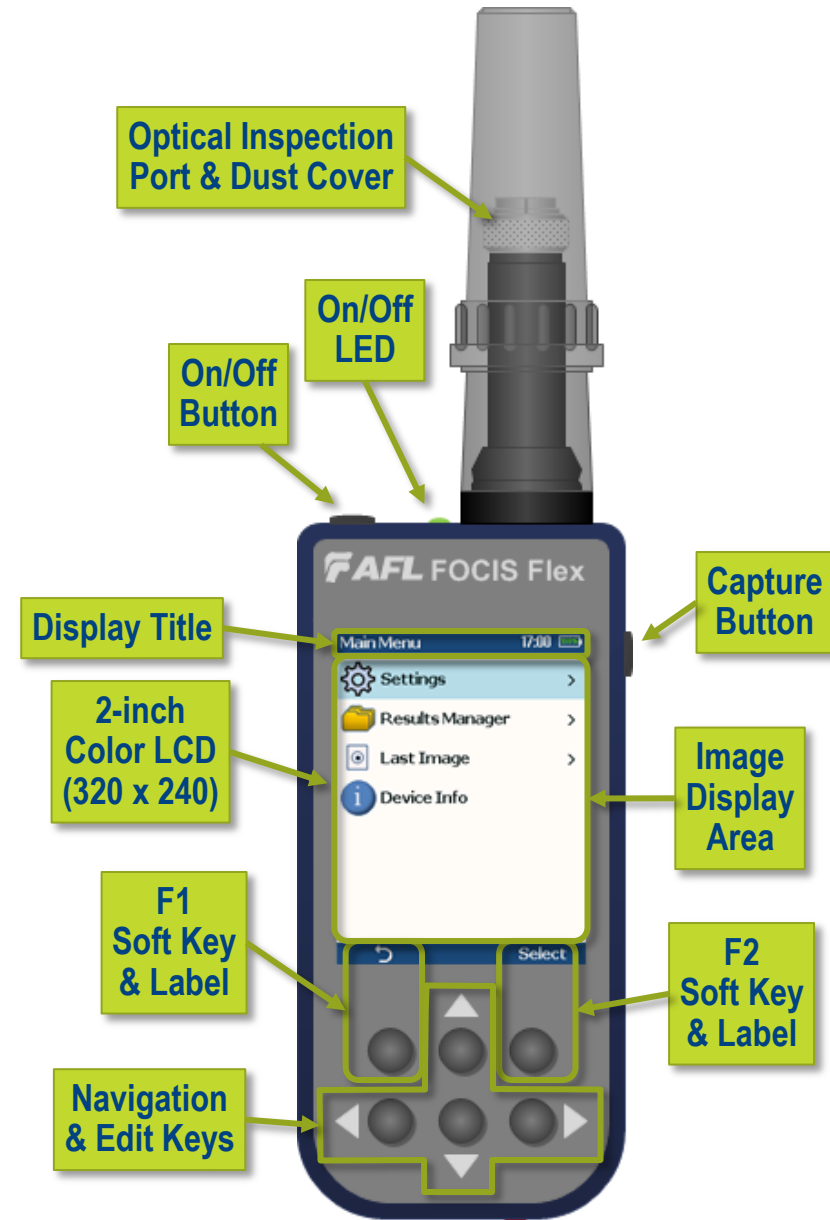
Aug-2014



**We connect.™**

- Controls, Display and Interfaces
- Connector Adapter Tips
- Operation
  - Power-up / Power-Down (including Auto-Off)
  - AC Power and Battery Operation
  - Image Display Modes
    - Live Display Mode: Manual Focus, One-time Auto-focus, Auto-focus & Capture
    - Captured Image Display Mode
  - Main Menu Settings Mode
    - Pass/Fail Analysis Settings
    - Auto-focus Enable/Disable
    - Bluetooth Settings
    - Beeper
    - Time & Date
  - Saving & Sending captured images and pass/fail results
  - Viewing Saved Results using Results Manager
  - File Transfer via Bluetooth and USB

- Controls
  - On/Off Button & LED
  - Capture Button
  - F1 Soft Key (typically 'Back' function)
  - F2 Soft Key (typically 'Select' function)
  - Navigation & Edit keys
- Display
  - Display Title
  - Image & Information display area
- Interfaces
  - Optical Inspection Port & Dust Cover
  - 6VDC input jack and charging LED
  - Micro-USB port

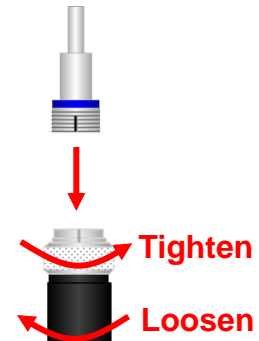


- FOCIS Flex available with the following adapter tips:

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-ASC
LC	FFLX-01-U125	FFLX-01-LC	FFLX-01-A125	FFLX-01-ALC
ST	FFLX-01-U25	FFLX-01-ST	Not applicable	Not applicable

- Removing Adapter Tips:
  - Turn captive nut clockwise (viewed from front / top)
  - Continue until captive nut is free of adapter tip
  - Remove tip
- Installing Adapter Tips:
  - Raise captive nut until it engages with adapter tip threads
  - Turn captive nut counter-clockwise (viewed from front / top)
  - Hand-tighten (do not over-tighten)

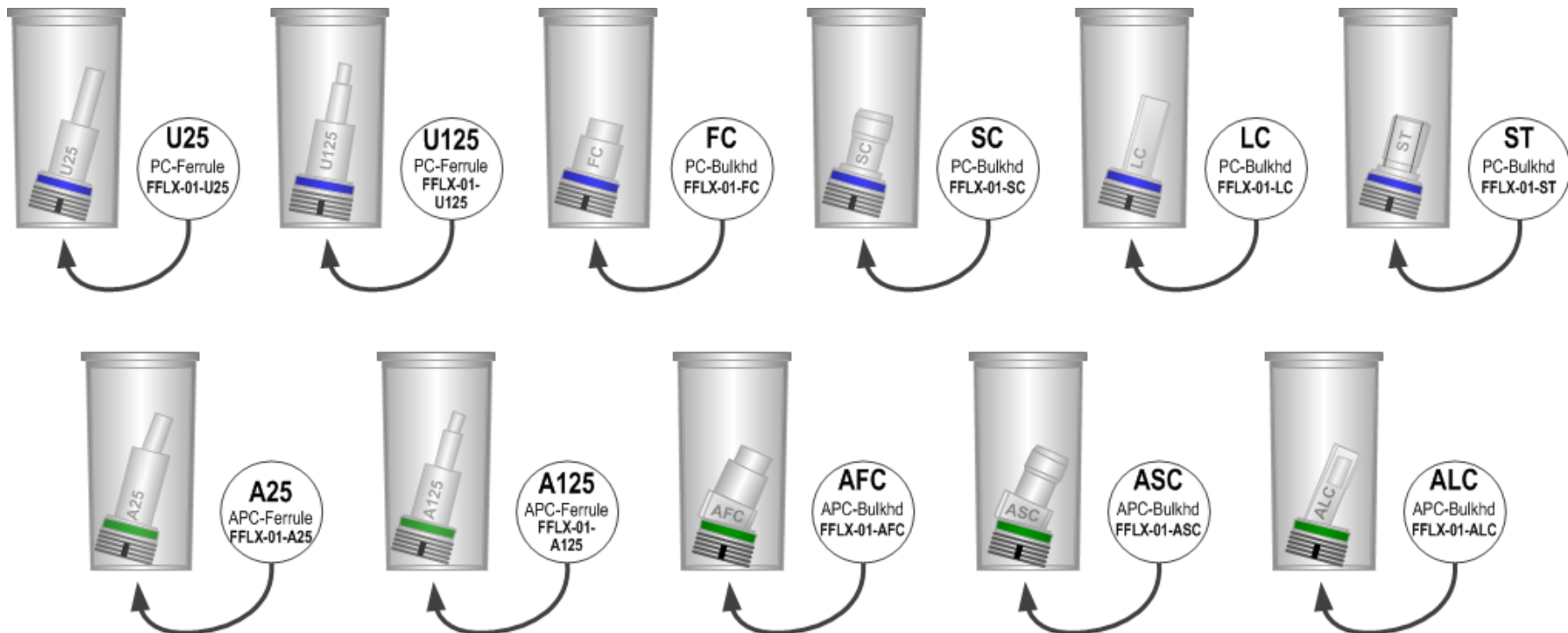
**Note:** For proper viewing, APC connectors must be aligned with the slot in the threaded area of the adapter tip



# Identifying Connector Adapter Tips



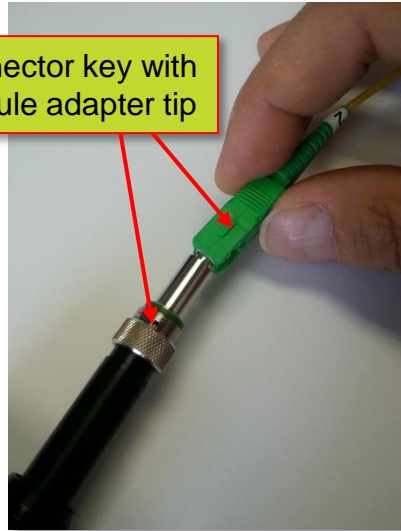
- Tips are engraved and shipped in labeled containers
- Engraving indicates connector type and application
- Labels indicate:
  - AFL Part Number
  - Connector Type – Ferrule Type (UPC or APC) – Application
- Blue ring indicates UPC connector tip; Green ring indicates APC tip



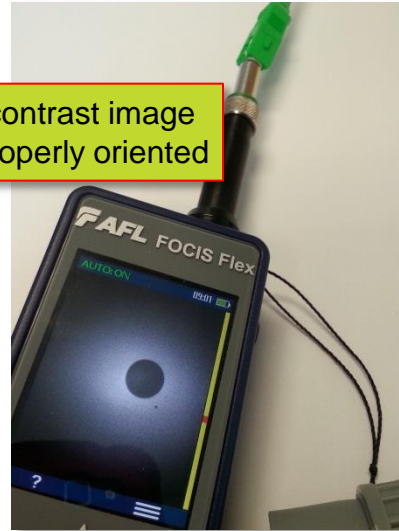


## APC Connector Orientation using Universal 2.5 mm APC Ferrule Adapter:

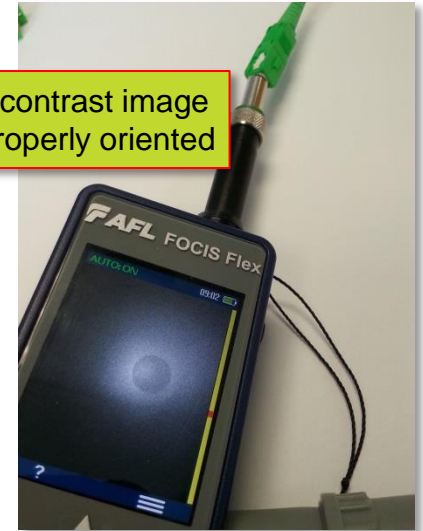
Align connector key with slot in ferrule adapter tip



Good contrast image when properly oriented

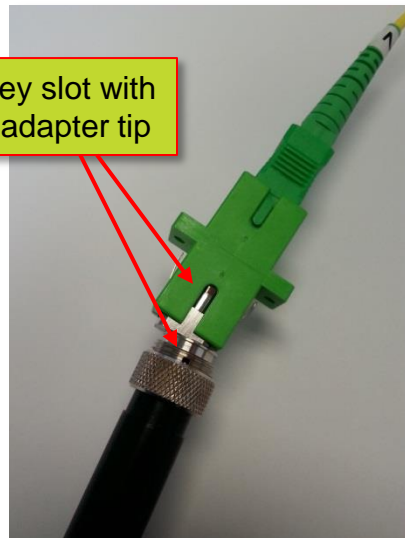


Poor contrast image if improperly oriented



## APC Connector Orientation using SC-APC Bulkhead Adapter:

Align bulkhead key slot with slot in bulkhead adapter tip








Good contrast image when properly oriented



- Power-Up
  - Press and release the On/Off Button
  - On/Off LED illuminates to indicate FOCIS Flex is ON
  - Display remains dark until FOCIS Flex enters Live Image mode (~7 seconds)
- Power-Down
  - Press and hold power button until display turns off
- Auto-off
  - To configure FOCIS Flex to turn off automatically
    - From Main Menu → Settings, select 'Power Save'
    - Select desired power save option (1 min, 2 min, 5 min, Never)

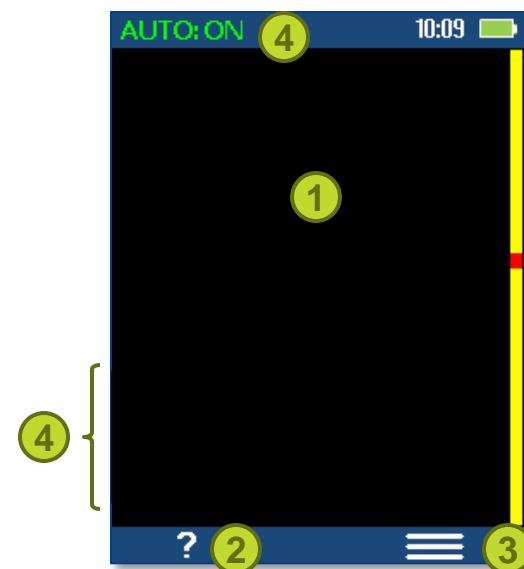


- Operating from AC Power and Charging the Battery
  - Plug the included AC Charger into AC outlet
  - Connect charger plug into 6 VDC jack on FOCIS Flex
  - Charging LED:
    - Off: AC not plugged in
    - Solid red: Discharged battery is being charged
    - Solid green: Battery is fully charged
    - Flashing red/green: Overheated; Cool before recharging
  - FOCIS Flex charges while operating
- Battery Operation
  - Battery status icon indicates battery state:
    -  Charging, not fully charged
    -  Charging, fully charged
    -  Battery operation, fully charged
    -  Battery operation, partially charged
    -  Battery operation, <15 min operating time remaining





1. FOCIS Flex powers up in Live mode
2. Help (?) softkey shows key functions
  - Popup Help displayed while ? key pressed and held
3. Menu (≡) softkey selects Main Menu
4. When Auto-focus enabled & Capture pressed:
  - Auto-focus is initiated
  - Image is captured when auto-focus complete
  - Image is analyzed if Pass/Fail enabled
  - FOCIS Flex transitions to Captured Image Mode
5. When Auto-focus disabled:
  - Press right arrow key (▶) to Auto-focus once
  - Press Up/down keys (▲▼) to manually adjust focus
  - Press Capture Key (📷)
  - Image is captured
  - Image is analyzed if Pass/Fail enabled
  - FOCIS Flex transitions to Captured Image Mode



- From Live Image Display mode:
  - Press Capture to:
    - Auto-focus image (if Auto-focus enabled)
    - Capture image
    - Analyze image (if Pass/Fail enabled)
    - Enter Captured Image Display mode
- From Captured Image Display mode:
  - Press Capture to return to Live Image mode
- From Main Menu or Settings modes:
  - Press Capture to return to most recent Live or Captured Image Display mode

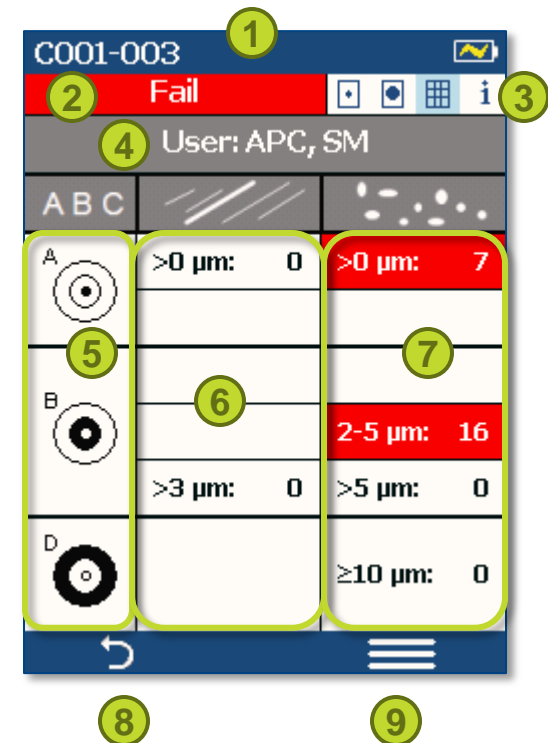


- Captured Image Display (Zoomed In or Out)
  1. Filename (saved image) or 'Captured @ hh:mm:ss' (unsaved image)
  2. Pass/Fail indication (Only if Pass/Fail enabled)
  3. Display Tabs (select using left/right arrows [◀▶])
    - ☐ Zoomed Out Image
    - ☒ Zoomed In Image
    - ☐ Pass/Fail Results Table
    - ☐ Image Information
  4. Endface Image with pass/fail region overlay
    - Failing scratches / defects highlighted in red
    - Passing scratches / defects highlighted in green
  5. Back softkey (↶)
  6. Image Layers (select using up/down keys [▼▲])
    - Endface + Overlay (Default)
    - Endface only
    - Overlay only
  7. Save/Send Menu soft key (≡)

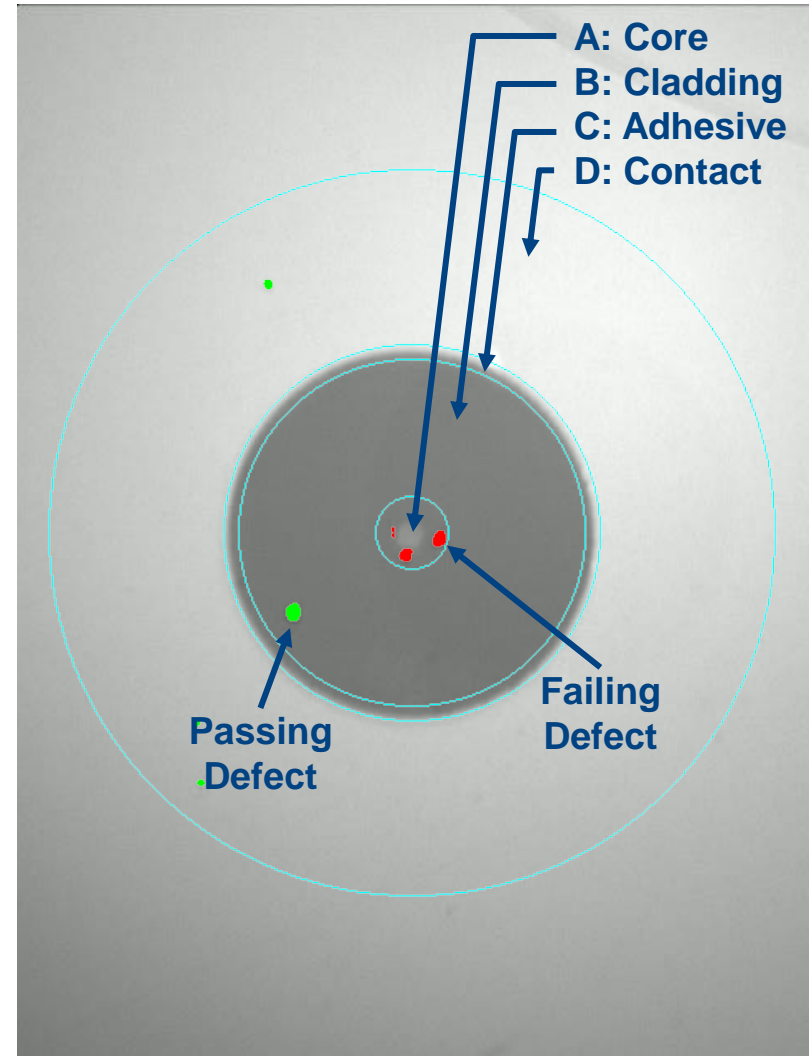


- Pass/Fail Results Table Display

1. Title: Filename (saved image) or 'Captured @ hh:mm:ss (unsaved)
2. Pass/Fail indication (Only if Pass/Fail analysis enabled)
3. Pass/Fail display tab selected
4. Analysis Rule applied to determine pass/fail
5. Analysis Zone IDs (A, B, D)
6. Scratch analysis results for each zone
  - Reports number of detected scratches / defects
  - Failed rules highlighted in red
7. Defect analysis results for each zone
8. Back softkey (↶)
9. Save/Send Menu soft key (≡)



- IEC 61300-3-35 defines connector inspection pass/fail criteria
- Pass/Fail criteria depends on:
  - Fiber type (SMF or MMF)
  - Connector end face regions
    - A region: Core
    - B region: Cladding
    - C region: Adhesive (between cladding and ferrule)
    - D region: Physical contact area
  - Type of end face flaw:
    - Scratches
    - Defects (contamination, particles)
  - Size of flaw





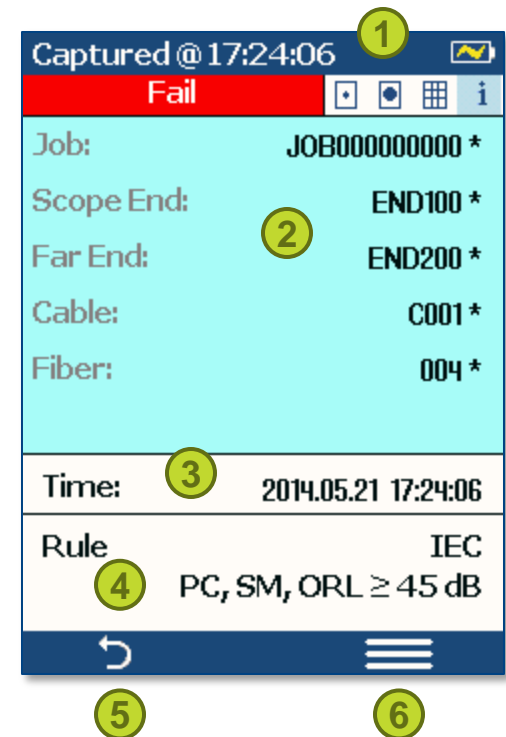
# Example IEC Rule

- Example provided for:
  - Single-mode PC connector with mated connector ORL  $\geq 45$  dB
- Rules provided for each region:

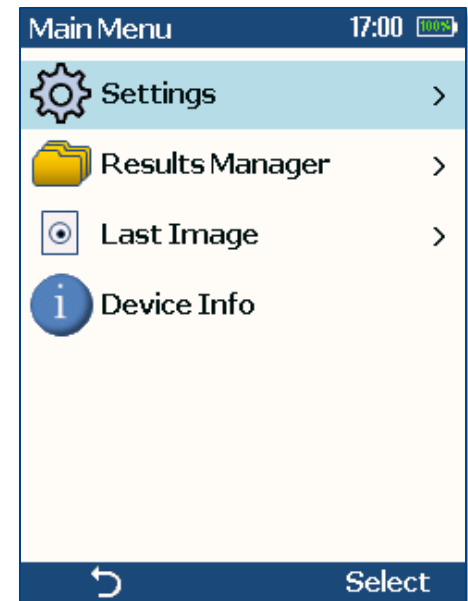
Region	Scratches	Defects
A: Core	>0 $\mu\text{m}$ : 0 (No scratches > 0 $\mu\text{m}$ allowed)	>0 $\mu\text{m}$ : 0 (No defects > 0 $\mu\text{m}$ allowed)
B: Cladding	>3 $\mu\text{m}$ : 0 (No scratches > 3 $\mu\text{m}$ allowed)	2-5 $\mu\text{m}$ : 5 (Up to 5 defects 2-5 $\mu\text{m}$ diameter allowed)
		>5 $\mu\text{m}$ : 0 (No defects > 5 $\mu\text{m}$ allowed)
D: Contact	Blank (No limitations on scratches)	$\geq 10$ $\mu\text{m}$ : 0 (No defects $\geq 10$ $\mu\text{m}$ allowed)

Pass/Fail			14:08	
Rule			IEC 61300-3-35	
			PC, SM, ORL $\geq 45$ dB	
A B C				
A	>0 $\mu\text{m}$ : 0	>0 $\mu\text{m}$ : 0		
B				
		2-5 $\mu\text{m}$ : 5		
D				
	>3 $\mu\text{m}$ : 0	>5 $\mu\text{m}$ : 0		
		$\geq 10$ $\mu\text{m}$ : 0		
			Select	

1. Title indicates saved or unsaved results
  - 'Captured @ hh:mm:ss' if unsaved
  - '<Cable>-<Fiber>' if saved
2. Blue highlighted area indicates default folder / file names if results are saved
3. Time indicates Time & Date image captured
4. Rule identifies pass/fail analysis rule applied
5. Back softkey (↶)
6. Save/Send Menu soft key (≡)



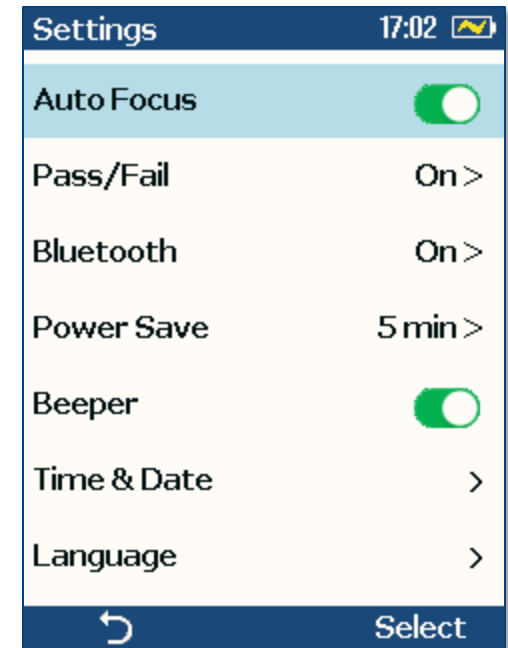
- Press Menu (≡) from Live Mode
- Use up/down arrows (▲▼) to select option
  - **Settings**: Configure auto-focus, pass/fail, Bluetooth, etc.
  - **Results Manager**: View or Send saved results
  - **Last Image**: Recall most recently viewed image
  - **Device Info**: View serial number, software rev, etc.
- 'Select' and right arrow (▶) select highlighted option
- Press Back (↶) to return to Live Image mode



# Settings Menu

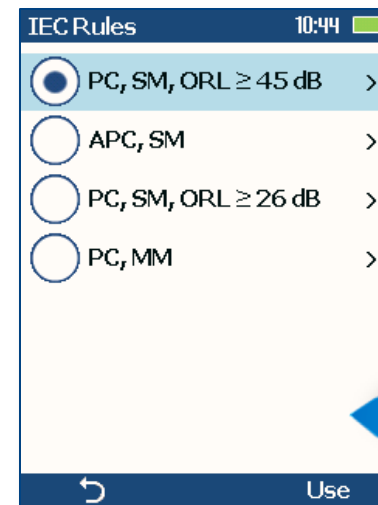
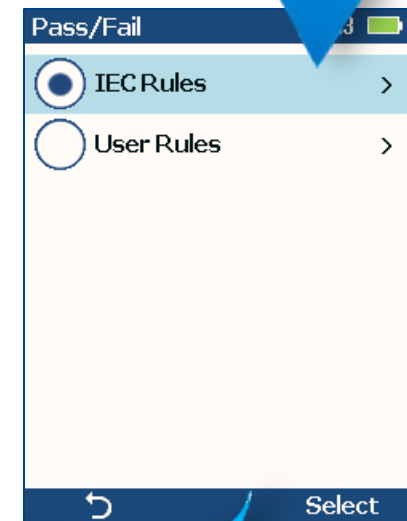
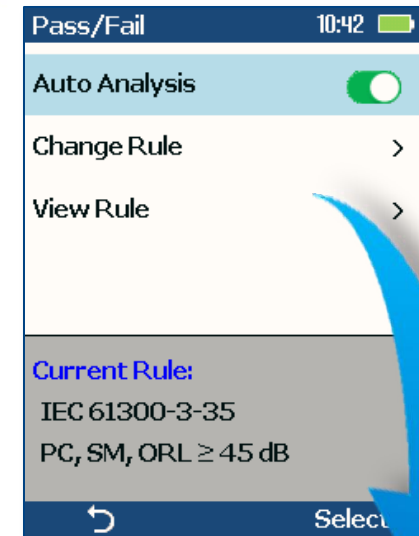


- ▲▼ scroll to highlight setting to edit
- For most settings:
  - Use 'Select' or ► to edit highlighted settings
- When Auto Focus or Beeper highlighted:
  - 'Select' toggles setting
  - ◀ disables setting
  - ► enables setting
- Press Back (↶) to return to Main Menu
- Press Capture to return to previous image display



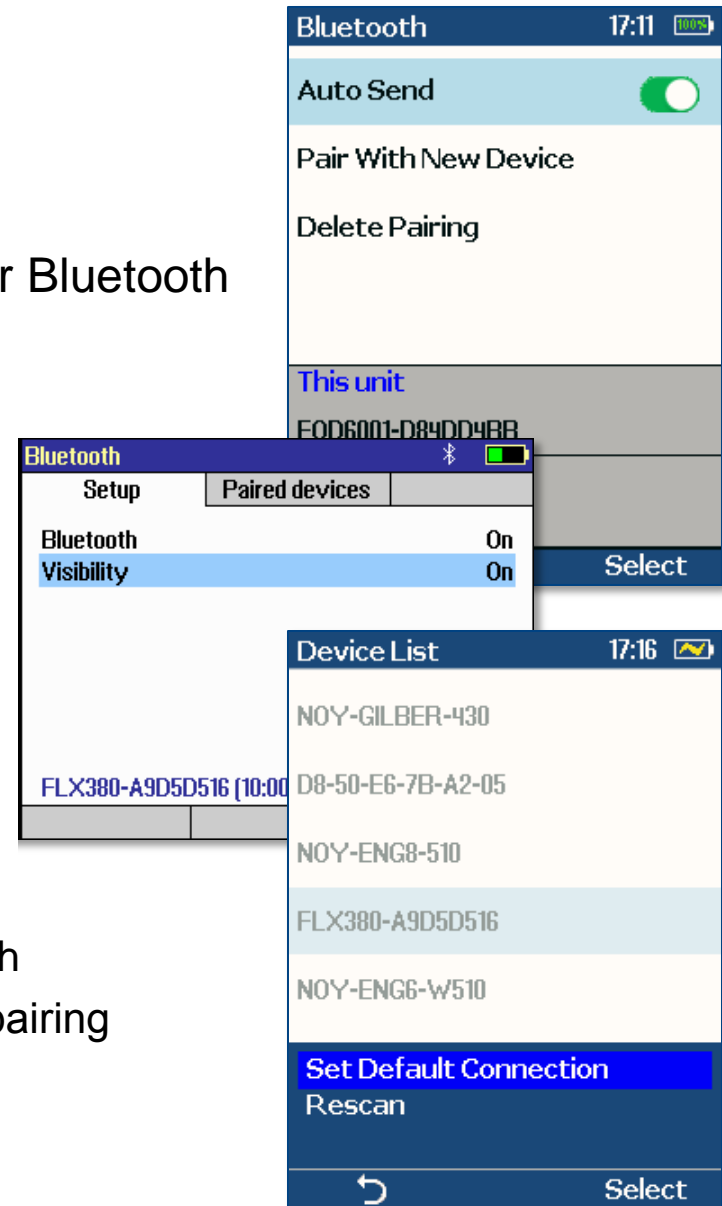
# Pass / Fail Settings

- Auto Analysis:
  - ◀ disables; ▶ enables pass/fail analysis
  - 'Select' soft key toggles pass/fail analysis state
- Change Rule:
  - Highlight 'Change Rule' & press 'Select' or ▶ to change current rule
  - Use ▲▼ to highlight, then 'Select' desired rule group (IEC or User Rules)
  - Use ▲▼ to highlight desired rule, then press 'Use'
- View Rule
  - Highlight & press 'Select' or ▶ to view details for current rule
  - User Rules may be edited while viewing

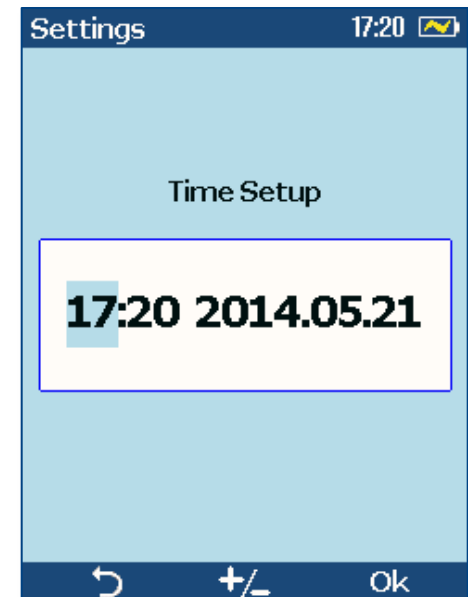
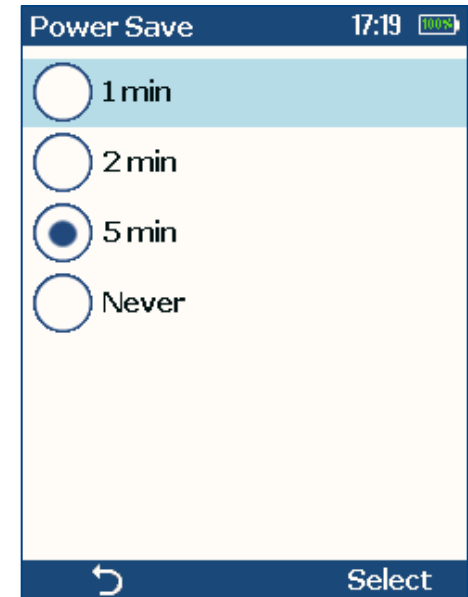




- Auto Send (to FlexTester):
  - ◀ disables; ▶ enables auto send
  - 'Select' soft key toggles auto send state
  - Cannot be enabled unless paired to another Bluetooth device
- To pair with FlexTester:
  - Configure FlexTester for pairing:
    - Select 'Bluetooth' from FlexTester 'Settings' :
    - Set Bluetooth = ON
    - Set Visibility = ON
  - Initiate pairing from FOCIS Flex
    - Highlight and 'Select' Pair With New Device
    - Wait for list of visible devices to be shown
    - Use ▼▲ keys to select FlexTester to pair with
    - Select 'Set Default Connection' to complete pairing
    - After pairing, set FlexTester Visibility = OFF

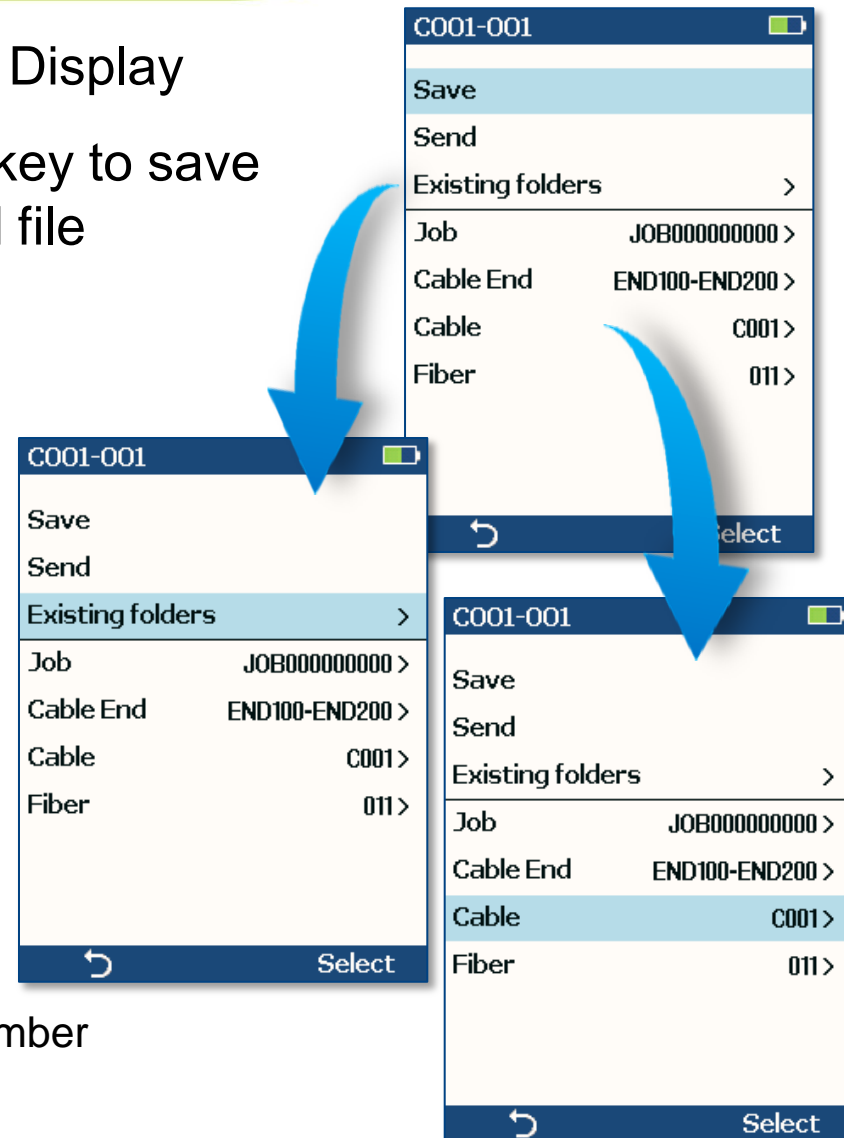


- Select desired Power Save Setting:
  - Use ▼▲ to navigate to desired setting
  - Press 'Select' soft key to complete setting
- Set Time & Date:
  - Use ◀▶ to select time/date field to edit
  - Adjust setting using ▼▲
  - Select 'Ok' to complete time/date setting



# Saving Captured Images

- Press 'Menu' (≡) from Captured Image Display
- Highlight 'Save' and press 'Select' soft key to save image and results to currently indicated file
- To edit file name:
  - Navigate to Job, Cable End, Cable, or Fiber to edit using ▲▼ keys
  - Press ► or 'Select'
  - Use ◀▶▲▼ keys to edit field
  - Press 'Ok' soft key
- To save to an existing folder:
  - Highlight 'Existing folders'
  - Press ► or 'Select'
  - Use ▲▼ to select desired Job folder
  - Press ► to open selected Job folder
  - Repeat for desired Cable folder and Fiber number
  - Press 'Use' soft key
  - Highlight 'Save' and press 'Select'



# Auto Send Captured Results to FlexTester



- Select FlexTester Settings → Bluetooth...
- Enable Bluetooth with Visibility = 'On'
- Pair FOCIS Flex with FlexTester
  - See slide [Bluetooth Settings](#)
  - Enable Auto Send in Bluetooth Settings
- Press Capture key to return to Live Image
- Press Capture key to focus, capture and analyze image
- After a few seconds, captured image will appear on FlexTester
  - Press ⇨ key on FlexTester to view pass/fail results table



# Manually Send Results to FlexTester



- Select FlexTester Settings → Bluetooth...
- Enable Bluetooth with Visibility = 'On'
- Pair FOCIS Flex with FlexTester
  - See slide [Bluetooth Settings](#)
  - Enable Auto Send in Bluetooth Settings
- Capture an Image or Recall Saved Image
  - See slide [Capture Button Operation](#)
  - See slide [Results Manager – View Saved Images](#)
- Press Menu (≡) from Captured Image mode
- Highlight 'Send' and press 'Select'
- After a few seconds, captured image will appear on FlexTester
  - Press ⇨ key on FlexTester to view pass/fail results table

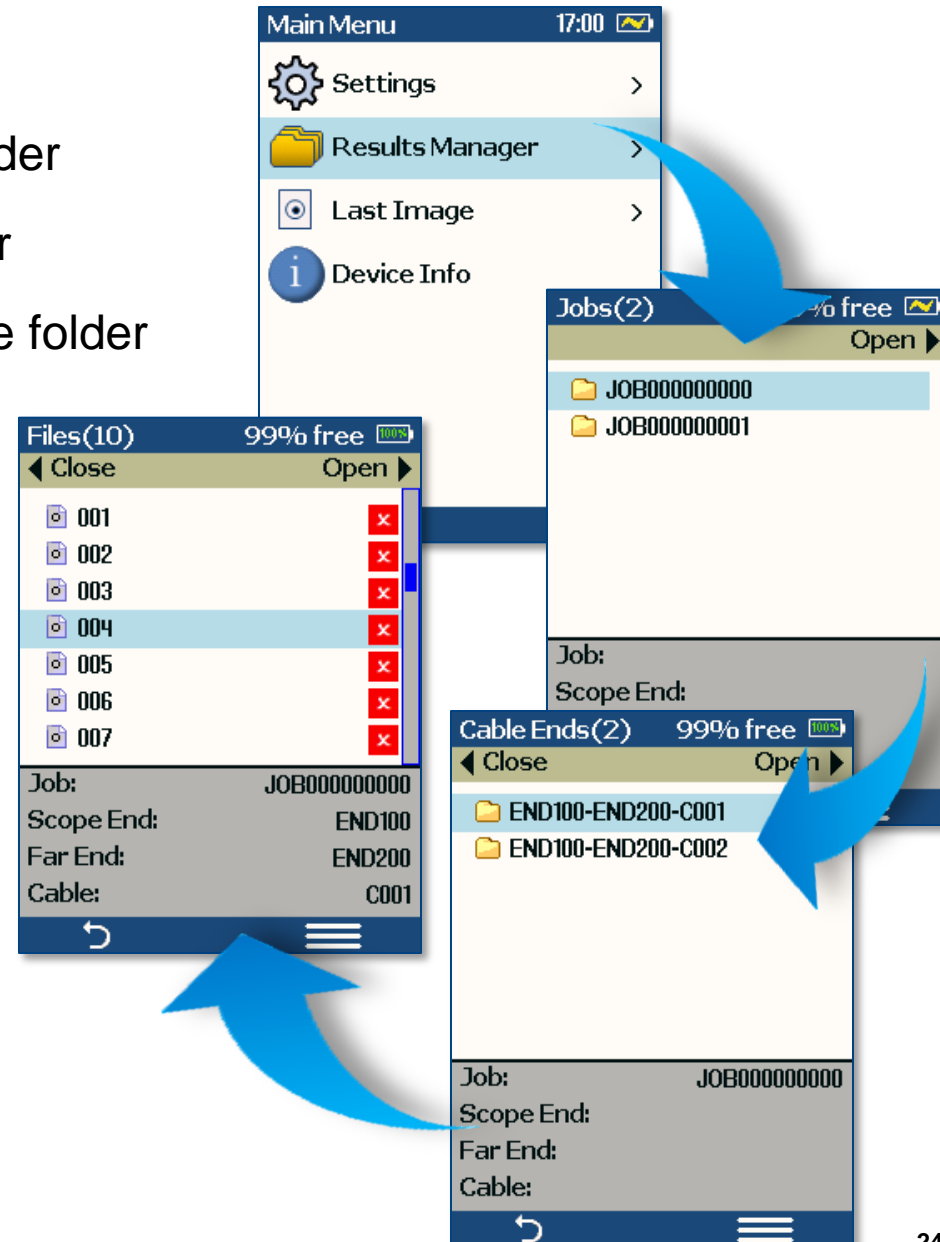




# Results Manager – View Saved Images



- 'Select' Results Manager
- Use ▼▲ to navigate to desired Job folder
- Press ► to select highlighted Job folder
- Use ▼▲ and ► to select desired Cable folder
- Use ▼▲ and ► to select desired File



- Turn FOCIS Flex Off
- Using supplied USB cable, connect FOCIS Flex's micro-USB port to PC's USB port
- Press Power Button on FOCIS Flex and verify green power LED lights
- At PC, select 'My Computer'
- Verify device labeled 'PROBE (E:)' appears in My Computer window
  - Note: Drive letter assigned to PROBE device may be different
- Double-click on PROBE (E:) device to view contents of FOCIS Flex internal USB memory
- Double-click on RESULTS folder
- Drag, copy, or move some or all of the results to your PC
- When finished, turn off FOCIS Flex and disconnect USB cable

## Contact Information

### Fujikura Europe Ltd

AFL has an authorized calibration/repair facility for NOYES products in the USA and in Europe. Please contact customer service for a return authorisation number prior to sending your NOYES test equipment in for repair or calibration.

Fujikura Europe Ltd. is an Authorized European Repair and Calibration facility for NOYES Test and Inspection products from AFL and should be contacted directly for service.

### AFL/Noyes – Technical Support:

Europe Repair and Calibration services

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Phone: +44 (0) 208 240 2020

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Phone: Tel: +44(0)20 8240 2000



THANK  
YOU



Questions?

We connect.™