



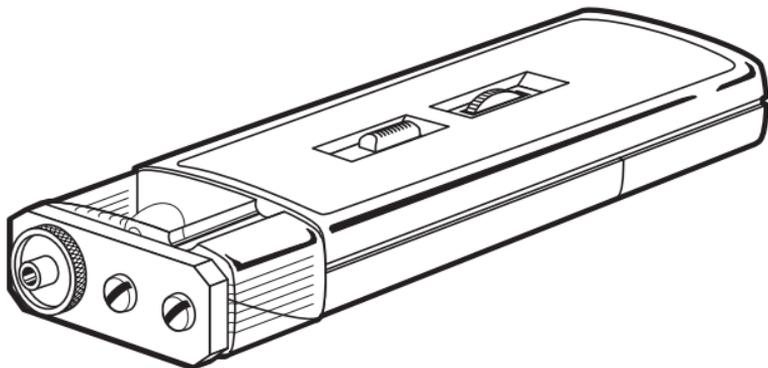
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JUNE 1999
FT990A
FT991
FT992
FT993

Fiber Optic Inspection Scope



CUSTOMER SUPPORT INFORMATION

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TRADEMARKS USED IN THIS MANUAL

Any trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

1. Specifications

Size— $\frac{3}{4}$ " x $1\frac{3}{4}$ " x 6" (1.9 x 4.5 x 15.2 cm)

Weight—Shipping: 2.5 ounces (71 g) without batteries, 4.5 ounces (128 g) with batteries

2. Introduction

View ST[®], SC, and many FC connectors with the Fiber Optic Inspection Scope (part number FT990A). Or remove the threaded knurl to view SMA, Biconic, and D4 connection adapters.

Three adapters are available:

- Angled-Head Scope Adapter (part number FT991)—Attaches to the Fiber Optic Inspection Scope to eliminate the need for backlighting in mark-free inspection applications.
- MT-RJ Scope Adapter (part number FT992)—Attaches to the Fiber Optic Inspection Scope to view MT-RJ connectors.
- LC Scope Adapter (part number (FT993)—Attaches to the Fiber Optic Inspection Scope to view LC connectors.

3. Before You Begin

Installing Batteries

Use two AA batteries to power your Fiber Optic Inspection Scope.

- Remove the cover of the battery housing by placing a slight amount of thumb pressure near the viewing end of the scope body, sliding in the direction of the arrow as shown in **Figure 3-1**.

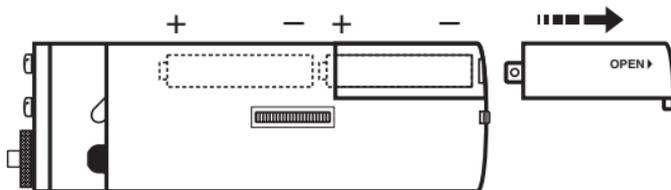


Figure 3-1. Installing Batteries.

- Insert the batteries and replace the cover.

4. Operation

4.1 Using the 100X Adjustable Scope

NOTE

The 100X adjustable magnifier is configured with a field-aligning aluminum head. (See **Chapter 6.**)

- To view the ferrule end of an FC, ST, or SC fiber connector, slide the ferrule into the inspection port until it bottoms out. On SC-type connectors, you might need to apply pressure to the back strain-relief boot to make sure the ferrule end meets the minimum depth-of-field needed for proper viewing.
- To view other types of connectors (for example, MT-RJ and LC), you'll need to order one of the following adapters:
 - MT-RJ Scope Adapter (part number FT992)
 - LC Scope Adapter (part number FT993)

To re-configure your scope for other connector styles, unscrew the existing threaded knurl from the aluminum plate and thread in the replacement knurl.

FIBER OPTIC INSPECTION SCOPE

- You can view the image by focusing with the thumb-wheel adjustment knob. You may first want to switch on the internal light source; however, in bright room lighting conditions, the internal light source may not be necessary.

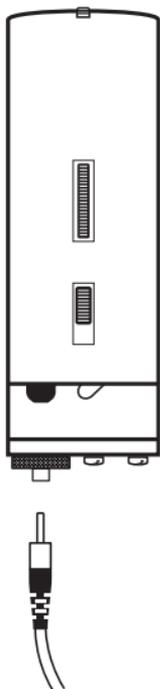


Figure 4-1. Using the Scope.

4.2 Using the 8X Retractable Crown Inspection Loupe

- To perform crown inspections to prepare for fiber cleaving or polishing, simply pull out the 8X loupe from the viewing end of the scope and hold within approximately two inches of your eye. You can get maximum magnification by moving the ferrule back and forth on the opposite side of the lens.

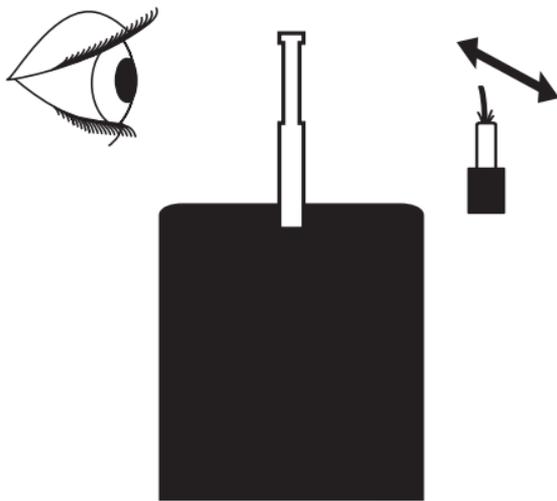


Figure 4-2. Using the Loupe.

5. Replacing the Bulb or Adding Other Scope Head Assemblies

Follow these easy steps to replace the bulb or add optional head assemblies.

- Hold the scope base unit in one hand with your thumb resting on the bulb side of the clear plastic lens.
- Apply thumb pressure against the plastic lens until it pops loose (expect about $\frac{1}{4}$ inch of lateral movement).
- Lift off the plastic lens by prying it open using two fingers on the broad sides of the lens.
- To replace the bulb, unscrew the old bulb and replace it with a new one. If you're changing the head assembly, simply snap on the new head and re-align the plate as indicated in **Chapter 6**.
- Reverse the steps above to restore the scope to its original configuration.

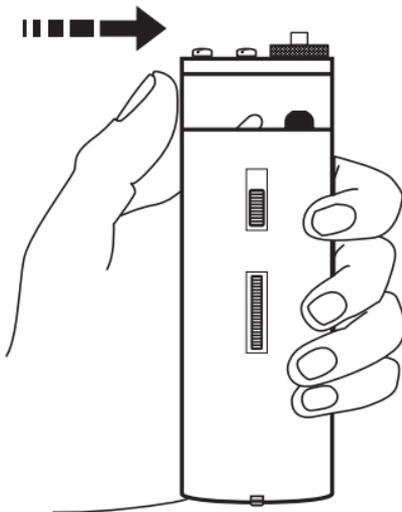


Figure 5-1. Applying thumb pressure to the plastic lens.

FIBER OPTIC INSPECTION SCOPE

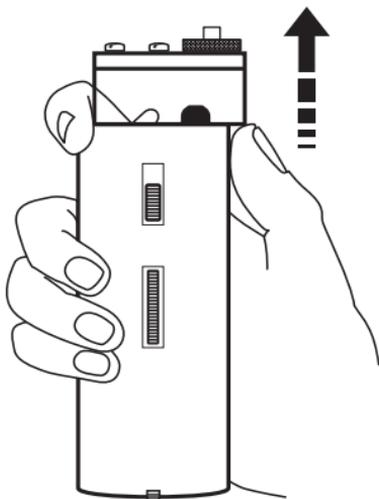


Figure 5-2. Lifting off the plastic lens.

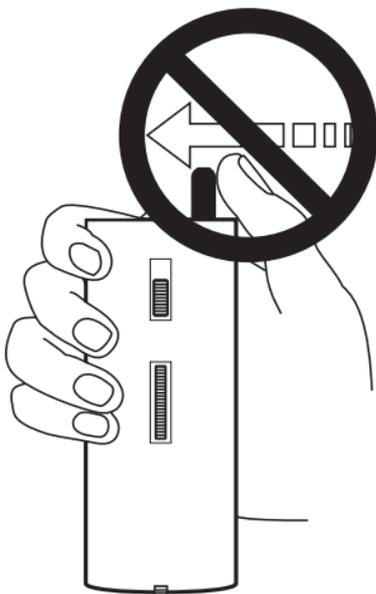


Figure 5-3. Avoid damaging the scope.

CAUTION

Do not apply excessive thumb pressure while you're removing the acrylic head piece. Doing so will damage the scope.

6. Field Alignment of Aluminum Head

NOTE

You'll need a small electronics screwdriver.

Adjustment Procedure

- Insert the connector in the inspection port.
- Loosen the screws on the top of the aluminum-plate head piece.
- Align the image and hold the plate and clear lens together while tightening one of the two hold-down screws.
- Perform fine adjustment by viewing the image and placing thumb pressure on the side of the aluminum plate.

NOTE

The image will move in the opposite direction of the pressure you apply.

CAUTION

Do not over-tighten hold-down screws.

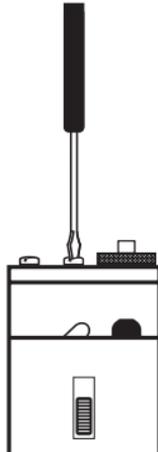


Figure 6-1. Aligning Adjustment.

7. Care and Storage

Store your Fiber Optic Inspection Scope at ordinary room temperature. Extreme temperatures can shorten the life of your instrument.

Dust and dirt can cause premature wear on your scope. Be sure to gently clean the scope with a lint-free cloth after each use.

When not using your scope, store it in a protected case to avoid lens damage from sun, dust, dirt, or moisture.

Do not clean any portion of your scope with a harsh chemical or solvent. Use a dry or slightly dampened (with alcohol) lint-free cloth.

CAUTION

Remove all epoxy from connector ferrules before inserting into scope.