

KOMSHINE FX37

KOMSHINE FX37 Core Alignment Fusion Splicer User Manual

Model: FX37

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and efficient operation, maintenance, and troubleshooting of the KOMSHINE FX37 Core Alignment Fusion Splicer. The FX37 is designed for precise fiber optic splicing, featuring fast splicing and heating times, a high-definition touch screen, and robust construction for various field applications.

Komshine FX37

Core Alignment Fusion Splicer



FEATURES

- ▶ 4.3 Huge Color LCD Monitor
- ▶ Average Splicing Loss:0.01dB
- ▶ Real fiber core visualization technology
- ▶ Up to 330 times of continuous splicing and heating
- ▶ HD CMOS sensor and HD aligner for duple seperate optical fibers
- ▶ Splice 0.25mm/0.9mm/3.0mm/Flat cable
- ▶ Attached Night Light
- ▶ Ideal for both indoor and outdoor aplicing
- ▶ Electrode Life:4,000 times splicing
- ▶ Take only 7 Seconds for Splicing, 18 Seconds for Heating

*Note:The date are measured in the laboratory,the actual use will be slightly different depending on the situation.

Image: KOMSHINE FX37 Core Alignment Fusion Splicer, illustrating its main features including the 4.3-inch LCD monitor, 0.01dB average splicing loss, HD CMOS sensor, 7-second splicing, and 18-second heating.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury and damage to the equipment:

- Ensure the work area is clean, dry, and well-lit.
- Handle optical fibers with extreme care. Fiber shards are very sharp and can cause serious injury. Always use a fiber waste container.
- Do not look directly into the fiber end faces when the splicer is operating, as invisible laser light may be present.
- Use only the provided AC adapter and battery pack. Using unauthorized power sources may damage the device or cause fire.
- Keep the splicer away from water, moisture, and flammable materials.
- Do not attempt to disassemble or repair the unit yourself. Refer to qualified service personnel.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:



Image: The complete KOMSHINE FX37 Fusion Splicer kit, including the splicer unit, carrying case, power adapter, fiber cleaver, strippers, and other essential accessories.

1. FX37 Arc Fusion Splicer (1 unit)
2. AC Adapter (1 unit)
3. FIS Fiber Stripper (1 unit)
4. Spare Electrodes (1 pair)
5. Battery Pack (1 unit)
6. Alcohol Pump Bottle (1 unit)
7. Cleaning Wipes (100 pieces)
8. Flat Cable Stripper (1 unit)
9. Cooling Tray (1 unit)
10. Fiber Cleaver TFC-30 (1 unit)
11. User Manual (1 unit)
12. Carrying Case (1 unit)
13. Protection Sleeves 60mm (100 pieces)

4. PRODUCT FEATURES

The KOMSHINE FX37 Fusion Splicer offers advanced features for reliable fiber optic splicing:

- **Core Alignment:** Precise core alignment method for ultra-low fiber fusion splicing consumption.
- **Fast Splicing & Heating:** 7-second typical fusion splicing time and 18-second typical heating time.
- **High-Definition Display:** 4.3-inch high-definition capacitive touch screen for clear image display.
- **Image Magnification:** 320 times image magnification for detailed fiber inspection.
- **Versatile Splicing Modes:** 300 groups of fusion splicing modes and 100 groups of heating modes.
- **Long Battery Life:** Built-in modular lithium battery supports approximately 330 splicing and heating cycles on a single charge.
- **Data Storage:** Stores 10,000 groups of fusion records and 64 images.
- **Durable Components:** Ceramic presser foot, ceramic V-block, and all-in-one fixture.
- **Automatic Functions:** Dual-direction splicing, automatic splicing, and intelligent pyrocondensation.
- **Connectivity:** USB and SD card interfaces for data transfer and U-disk automatic software upgrades.

5. SETUP

1. **Unpacking:** Carefully remove the splicer and all accessories from the carrying case. Place the splicer on a stable, clean, and level surface.
2. **Battery Installation/Charging:**

The battery pack is typically pre-installed. If not, insert the battery pack into its compartment. Connect the AC adapter to the splicer and a power outlet to charge the battery. The charging indicator will show the status. A full charge supports approximately 330 splicing and heating operations.



Image: Illustration of the FX37's battery, indicating 330 splicing cycles and 6800mAh capacity.

3. **Power On:** Press and hold the power button until the display illuminates. The splicer will perform a self-test.
4. **Initial Settings:** Navigate through the touch screen menu to set language, date, time, and other preferences as needed.

6. OPERATING INSTRUCTIONS

6.1 Fiber Preparation

1. **Stripping:** Use the FIS Fiber Stripper or Flat Cable Stripper to remove the fiber coating to the required length (typically 30-40mm). Ensure the stripping tool is clean and sharp.
2. **Cleaning:** Clean the stripped fiber thoroughly with an alcohol wipe (99% isopropyl alcohol) to remove any residue. Allow the alcohol to evaporate completely.
3. **Cleaving:** Place the cleaned fiber into the TFC-30 Fiber Cleaver. Ensure the fiber is positioned correctly according to the cleaver's instructions to achieve a precise 90-degree end face. Operate the cleaver to cut the fiber.



Image: The TFC-30 Fiber Cleaver, used for preparing fiber ends for splicing.

4. **Inspection:** Visually inspect the cleaved fiber end face for any imperfections using the splicer's magnified view. Recleave if necessary.

6.2 Splicing Process

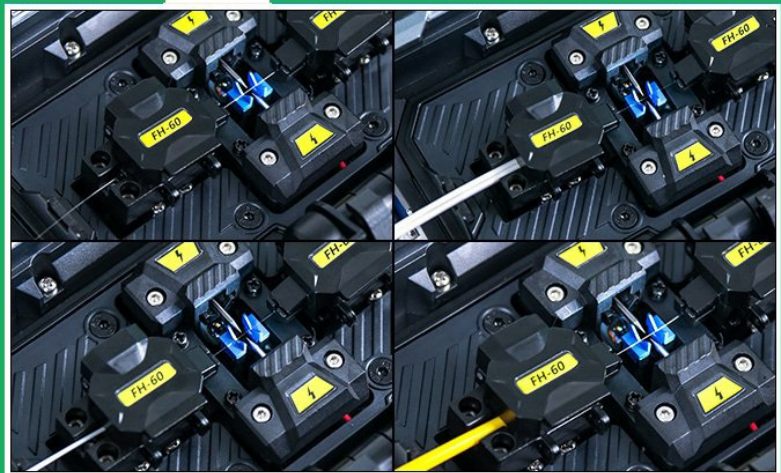
1. **Open Wind Protector:** Lift the wind protector cover of the splicer.
2. **Place Fibers:** Carefully place the prepared fibers into the V-grooves of the splicer. Ensure the fiber ends are positioned correctly between the electrodes.

PRODUCT DETAILS

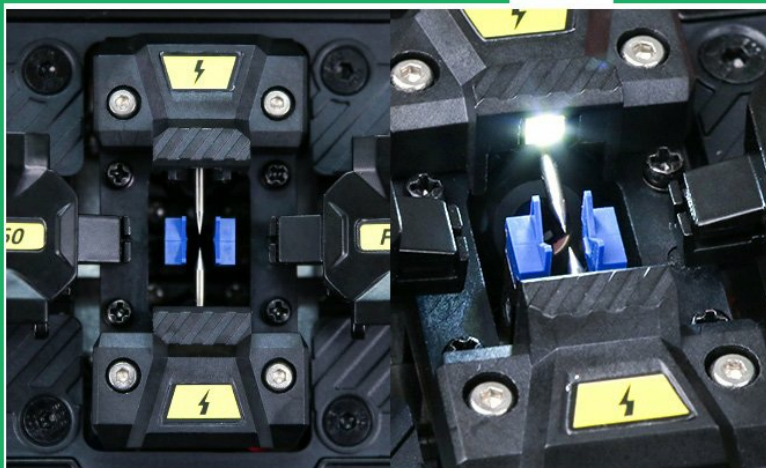
1

COMPATIBLE FIBER/CABLE

0.25mm/0.9mm/3.0mm/
Flat/Drop Cable



2



ELECTRODE

4,000 times splicing
without exchange. Led
lighting, easy to use in
dim environment.

Image: Step-by-step illustration of compatible fiber/cable types and their correct placement within the FX37 splicer's V-grooves.

3. **Close Wind Protector:** Gently close the wind protector. The splicer will automatically begin the alignment process.
4. **Automatic Splicing:** The FX37 will automatically align the fiber cores and initiate the fusion splicing process. This typically takes 7 seconds. The display will show the splicing progress and estimated loss.



Image: The FX37 display showing the splicing process, indicating a 7-second splicing time and 18-second heating time, with a typical loss of 0.01dB.

5. **Inspect Splice:** After splicing, the splicer will display the estimated splice loss. Visually inspect the splice point on the screen for any defects.

6.3 Heating Process

1. **Position Protection Sleeve:** Slide a protection sleeve over the spliced fiber.
2. **Place in Heater:** Open the heating oven cover and carefully place the spliced fiber with the protection sleeve into the heating oven.
3. **Close Heater:** Close the heating oven cover. The splicer will automatically begin the heating process, which typically takes 18 seconds.
4. **Cooling:** Once heating is complete, carefully remove the fiber from the oven and place it in the cooling tray to cool down.

7. MAINTENANCE

7.1 Cleaning

- **V-Grooves and Clamps:** Regularly clean the V-grooves and fiber clamps with a cotton swab dipped in isopropyl alcohol to prevent dust and fiber debris from affecting splicing performance.
- **Electrodes:** Clean the electrodes periodically using a specialized electrode cleaner or a cotton swab with alcohol. Ensure the splicer is powered off before cleaning electrodes.
- **Display Screen:** Use a soft, lint-free cloth to clean the touch screen. Do not use abrasive cleaners.

7.2 Electrode Replacement

Electrodes have a limited lifespan (approximately 4,000 splices). When the splicer indicates electrode wear or splicing performance degrades, replace them:

4 MOTOR CORE, 7 SECONDS QUICK FUSION, 18 SECONDS HEATING.

The welding time is shorter, the quality is better, and the loss is lower.

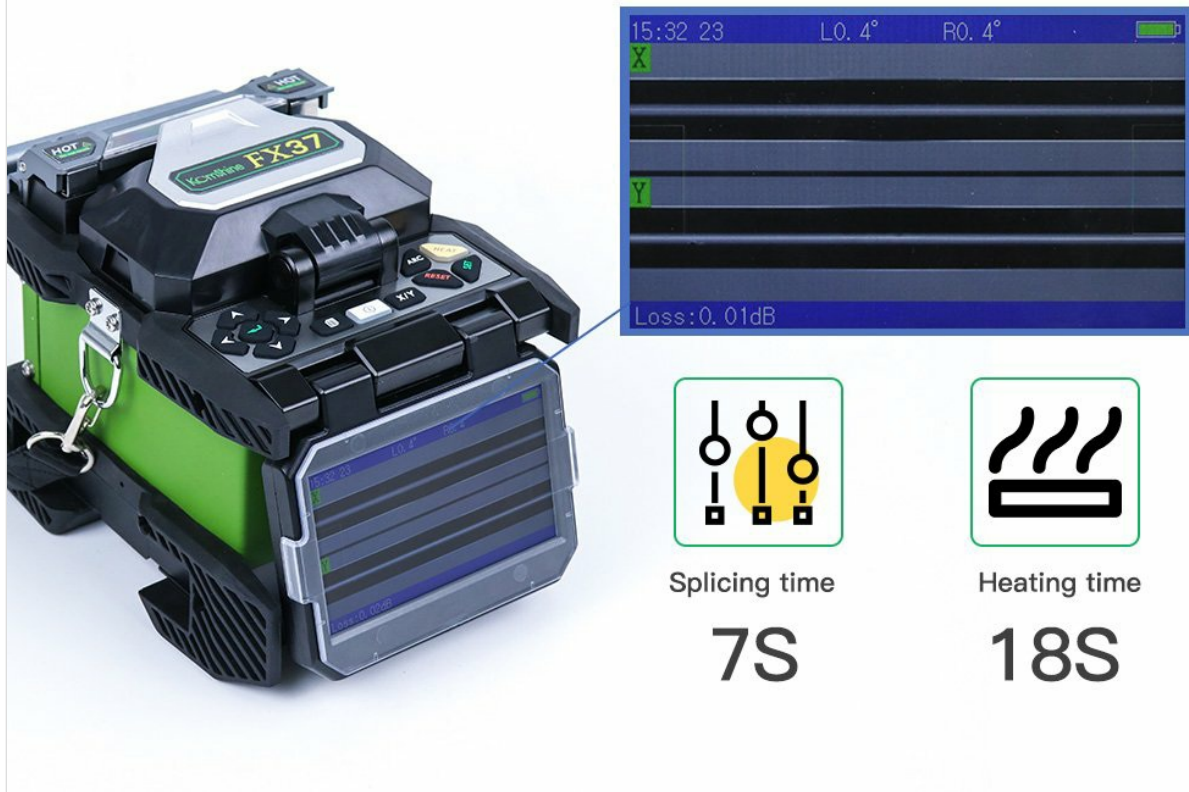


Image: Close-up view of the FX37 electrodes, highlighting their position and the integrated LED lighting for dim environments.

1. Power off the splicer and disconnect the power adapter.
2. Carefully remove the old electrodes using the provided tool or tweezers.
3. Insert the new spare electrodes, ensuring they are correctly seated.
4. Power on the splicer and perform an arc calibration (refer to the splicer's on-screen menu for this function).

8. TROUBLESHOOTING

| Problem | Possible Cause | Solution |
|--------------------|---|--|
| High Splice Loss | Dirty fiber ends, poor cleave, worn electrodes, dirty V-grooves, incorrect splicing parameters. | Clean fiber ends thoroughly. Recleave fiber. Replace electrodes. Clean V-grooves and clamps. Check splicing mode settings. |
| Fiber Not Aligning | Dirty V-grooves, damaged fiber clamps, fiber not seated correctly, motor issue. | Clean V-grooves and clamps. Ensure fiber is properly placed. Contact support if motor issues persist. |

| Problem | Possible Cause | Solution |
|--------------------------|---|--|
| Splicer Not Powering On | Low battery, faulty AC adapter, power button issue. | Charge battery or connect AC adapter. Check power outlet. Contact support if issue persists. |
| Heating Oven Not Working | Heater element failure, sensor issue. | Ensure the heater cover is fully closed. Contact support for repair. |

9. SPECIFICATIONS

| Parameter | Value |
|--------------------------------|---|
| Alignment Method | Precise core alignment and cladding alignment |
| Optical Fiber Diameter | Cladding: 80~150µm, Coating layer: 0.1~3mm |
| Fusion Splicing Time (typical) | 7 seconds |
| Heating Time (typical) | 18 seconds |
| Graphical Display | High-performance 4.3 inch LCD |
| Magnification Time | 320 times / 88 times |
| Fusion Splicing Record | 10,000 groups |
| Battery Service Life | Cycle charging times reach 300-500, replaceable |
| External Port | USB / SD |
| Item Weight | 9 kg (19.84 Pounds) |
| Power Source | Battery Powered |
| Included Components | Fiber cleaver, fiber stripper |

10. WARRANTY AND SUPPORT

The KOMSHINE FX37 Fusion Splicer comes with a **1-Year Warranty** from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use. Please retain your proof of purchase for warranty claims.

For technical support, service, or warranty inquiries, please contact your authorized KOMSHINE dealer or visit the official KOMSHINE website for contact information.

Note: All buyers are responsible for customs clearance in a timely manner. If assistance is needed, please contact the seller in advance.

