

PROBON AI-6A

PROBON Signal fire AI-6A Optical Fiber Fusion Splicer Instruction Manual

Model: AI-6A

1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient operation, maintenance, and troubleshooting of your PROBON Signal fire AI-6A Optical Fiber Fusion Splicer. Please read this manual thoroughly before using the device to ensure optimal performance and longevity.

Key Features:

- **Faster Splicing & Heating:** Achieves an 8-second splice time and 18-second heat time, capable of approximately 160 continuous splices and heats.
- **Professional Design:** Utilizes core alignment technology with auto-focus and six motors for precise splicing and minimal loss.
- **3-in-1 Fiber Holder:** Compatible with SM (G.652 & G.657), MM (G.651), DS (G.657), NZDS (G.655) fibers, including bare fiber, pigtail, rubber-insulated, and multi-fiber cables.
- **Clear LCD & Long Time Standby:** Features a 5-inch high-resolution screen with up to 300x focus magnification (X/Y Axis separately) or 150x (X/Y Axis simultaneously). Equipped with a 5200 mAh lithium battery for approximately 160 continuous splices and heats.
- **Intelligent Interaction:** Connects to a mobile app, supports ten languages (English, French, Russian, Italian, Portuguese, Polish, Spanish, Thai, Arabic), allowing data checking, download, and indefinite storage of splicing records.



Figure 1: PROBON Signal fire AI-6A Optical Fiber Fusion Splicer. This image shows the overall design of the AI-6A fusion splicer, highlighting its compact and robust construction.

2. SETUP

2.1 Unpacking and Inspection

Carefully unpack all components and inspect for any damage. Ensure all accessories listed in the product packaging are present. The package typically includes the fusion splicer, fiber cleaver, wire stripping pliers, miller stripper, and adapter.

2.2 Charging the Battery

The AI-6A is equipped with a 5200 mAh high-capacity lithium battery. Connect the provided adapter to the charging port. A full charge takes approximately 3.5 hours. The device features dual charging paths, allowing continued charging even if one path experiences a fault.

Industrial quad-core chip CPU

1 second startup will enter the working state without waiting

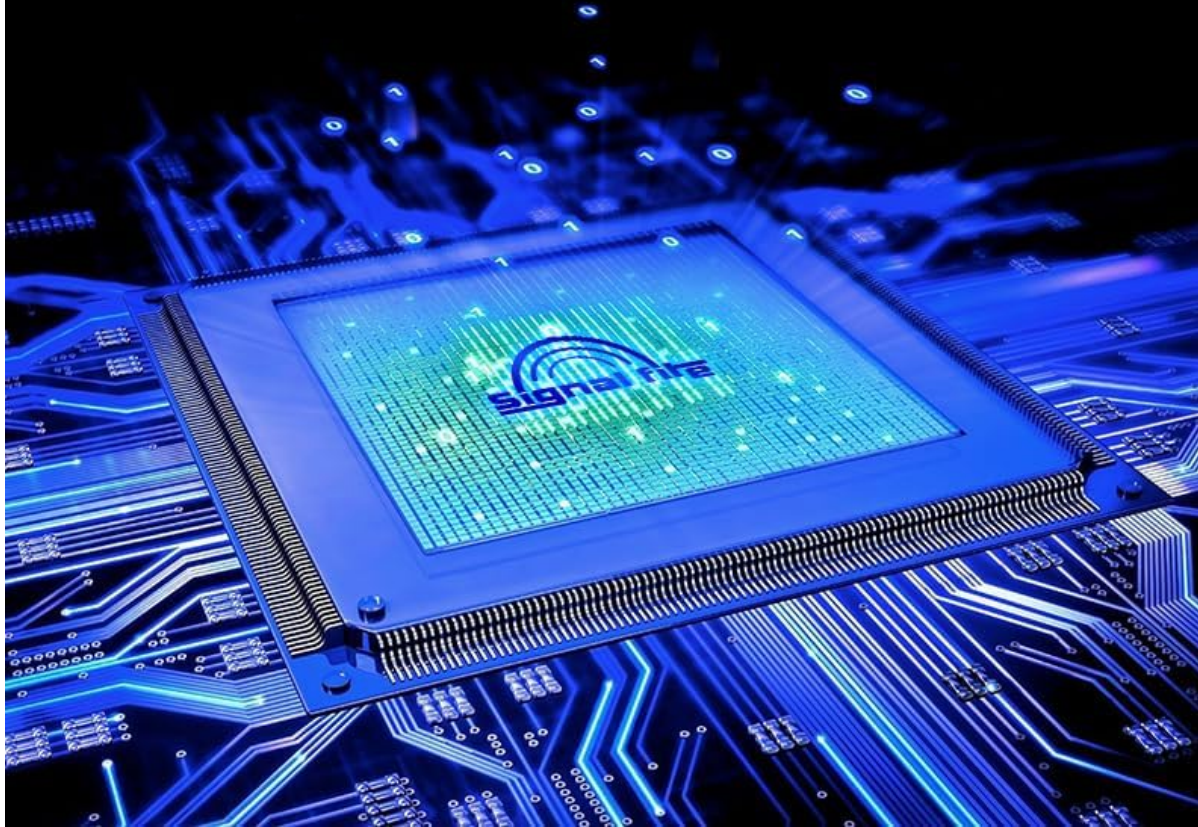


Figure 2: AI-6A Splicer with charging ports. This image illustrates the dual charging channels of the splicer's battery, ensuring reliable power supply.

2.3 Mobile App Connection (Optional)

For enhanced functionality, download the "SignalFire2" mobile application from Google Play or the App Store. This allows for viewing, setting parameters, managing data, and upgrading the device via your mobile phone. Refer to the on-screen QR code for direct download links.

Your browser does not support the video tag.

Video 1: AI-6A Fiber Fusion Splicer Overview. This video demonstrates the key features and operation of the AI-6A splicer, including its compact design, 3-in-1 fiber holder, fast splicing and heating, USB charging capability, and built-in night light.

3. OPERATING INSTRUCTIONS

3.1 Preparing the Fiber

1. **Strip the Fiber:** Use the provided wire stripping pliers or miller stripper to remove the outer jacket and coating from the fiber, exposing the bare fiber.
2. **Clean the Fiber:** Clean the stripped fiber with an alcohol wipe to remove any residue.

3. **Cleave the Fiber:** Place the cleaned, stripped fiber into the fiber cleaver (e.g., S07 Fiber Cleaver) and perform a precise cleave to create a clean, perpendicular end face.



AI-6A

OPTICAL FIBER FUSION SPLICER



Six
motors



Core
alignment

8s

8 seconds
fast splicing

18s

18 seconds
fast heating

320

320 times
magnification
auto focus

Figure 3: AI-6A Splicer with fiber preparation tools. This image displays the splicer alongside essential tools like a fiber cleaver and stripper, used for preparing optical fibers for splicing.

3.2 Splicing Operation

1. **Place Fiber in Holder:** Open the splicer lid and carefully place the prepared fibers into the 3-in-1 fiber holders. Ensure the fiber ends are correctly positioned in the V-grooves. The holder supports bare fiber, pigtail fiber, and drop cable fiber.
2. **Close Lid and Initiate Splicing:** Close the splicer lid. The device will automatically align the fibers using its six motors and perform the fusion splice. The splicing process takes approximately 8 seconds.
3. **Inspect Splice:** After splicing, the estimated splice loss will be displayed on the 5-inch LCD screen. Typical splice loss for SM fiber is 0.025dB.



Figure 4: AI-6A Splicer 3-in-1 fiber holder. This image demonstrates the versatility of the fiber holder, accommodating jumper fiber (pigtail), drop cable, and bare fiber types.

3.3 Heating and Protection

1. **Position Splice in Heater:** Once the splice is complete, carefully move the spliced fiber into the

heating oven.

2. **Initiate Heating:** Close the heater cover. The device will automatically heat the splice protector sleeve. The heating process takes approximately 18 seconds.
3. **Cool Down:** After heating, allow the splice to cool down before handling.

3.4 Additional Features

- **USB Power Output:** The USB interface can provide 5 volts output, allowing you to charge mobile phones or other small electronic devices.
- **Built-in Night Light:** Activate the built-in night light for improved visibility when working in dark environments.
- **Portable Strap:** The splicer comes with a portable strap and a toolbox strap, enabling hands-free operation for high-place installations.

4. MAINTENANCE

4.1 Cleaning

- Regularly clean the V-grooves, electrodes, and objective lenses with a lint-free swab and alcohol to ensure optimal splicing performance.
- Keep the screen clean and free from dust and debris.

4.2 Electrode Replacement

Electrodes have a limited lifespan. When the splicer indicates electrode wear or splicing performance degrades, replace them according to the instructions provided in the full user manual or contact customer support.

4.3 Battery Care

- Charge the battery fully before first use.
- Avoid completely discharging the battery to prolong its lifespan.
- Store the device in a cool, dry place when not in use for extended periods.

5. TROUBLESHOOTING

This section provides solutions to common issues. For more complex problems, refer to the full user manual or contact customer support.

5.1 Common Issues and Solutions

- **High Splice Loss:**
 - Ensure fibers are clean and properly cleaved.
 - Check for dirty V-grooves or objective lenses.
 - Inspect electrodes for wear and replace if necessary.
 - Verify fiber type settings match the actual fiber being spliced.
- **Splicer Not Powering On:**
 - Check battery charge level.
 - Ensure the power adapter is correctly connected if charging.

- **Heating Failure:**

- Ensure the heater cover is fully closed.
- Check for any obstructions in the heating oven.

6. SPECIFICATIONS

Feature	Specification
Model Number	AI-6A
Splicing Time	8 seconds
Heating Time	18 seconds
Fiber Alignment	Core Alignment (Six Motors, Auto-focus)
Applicable Fibers	SM (G.652 & G.657), MM (G.651), DS (G.657), NZDS (G.655), Bare Fiber, Pigtail, Rubber-insulated, Multi Fiber Cable
Typical Splice Loss	0.025dB (SM), 0.01dB (MM), 0.04dB (DS/NZDS)
Screen	5-inch High-Resolution LCD
Magnification	300x (X/Y separately), 150x (X/Y simultaneously)
Battery Capacity	5200 mAh Lithium Battery
Battery Life	Approx. 160 continuous splices and heats
Charging Time	≤ 3.5 hours
Power Source	Battery Powered
USB Output	5V (for charging mobile devices)
Included Components	Fusion splicer, Fiber Cleaver, Wire stripping pliers, Miller stripper, Adapter
Manufacturer	Signal fire

7. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the warranty card included with your product or contact the manufacturer directly. For technical support, service, or spare parts, please reach out to PROBON customer service through their official channels.

You can visit the PROBON Store on Amazon for more information:[PROBON Store](#)