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INSTRUCTION MANUAL



910FS Optical Fiber Fusion Splicer



Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Register this product at www.greenlee.com

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Preface

Description

The Greenlee Communications 910FS Optical Fiber Fusion Splicer is intended to fuse fibers, resulting in low splice loss and long-term stable splices. Splice loss depends on certain conditions such as fiber preparation, splicing parameters, and fiber condition.

The 910FS fusion splicer uses a CDS (Core Detection System), which is also widely known as PAS (Profile Alignment System). Two cameras sense the center of the core of the fibers, with the fusion splicer then adjusting in the X, Y, and Z dimensions to automatically and precisely align the two fiber cores. A fusing arc is applied, which then provides the lowest loss fusion splice.

The 910FS with PAS technology is designed for splicing many types of optical fibers. It is small in size and lightweight, making it suitable for any operating environment. It is easy to operate, and it splices fast while maintaining low splice loss.

Contents List

- 910FS fusion splicer
- 250 micron adapter pair
- 900 micron adapter pair
- SC/LC splice-on connector adapter
- Spare electrodes (one pair)
- AC adapter (power supply) with line cord
- Battery pack (installed in 910FS)
- Carry case
- 1.5 mm hex wrench
- Plastic tweezers
- Cooling tray
- Electrode polisher with 10 polishing strips
- Cleaning brush
- USB Cable
- RS-232 serial cable

Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This instruction manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

Purpose of This Manual

This instruction manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the Greenlee Communications 910FS Optical Fiber Fusion Splicer.

Keep this manual available to all personnel. Replacement manuals are available upon request at no charge at www.greenlee.com.

All specifications are nominal and may change as design improvements occur. Greenlee Textron Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

fiberTOOLS is a trademark of Textron Innovations Inc.

Important Safety Information

General

Use this unit for the manufacturer's intended purpose only, as described in this manual. Any other use can impair the protection provided by the unit. Do not use the splicer on live fibers.

Environmental Conditions

This tool is designed to operate at a maximum relative humidity of 95% and at altitudes up to 5000 m (16,400 ft).

Before Applying Power

Verify that the tool is set to match the available line voltage and the correct fuse is installed.

Do Not Operate in Explosive Atmosphere

Do not operate the tool in the presence of flammable gases or fumes.

Do Not Remove Instrument Cover

Do not remove the cover of the unit for any reason. It contains no user-serviceable parts.



SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

DANGER

Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

WARNING

Hazards which, if not avoided, **COULD** result in severe injury or death.

CAUTION

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.




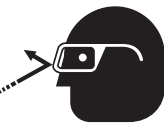
WARNING

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to observe this warning could result in severe injury or death.

Important Safety Information

	⚠ WARNING
	<p>Electric shock hazard: Contact with live circuits could result in severe injury or death.</p>

	⚠ WARNING
	<p>Wear eye protection when using this tool. Fiber fragments can be extremely dangerous if they come into contact with eyes or skin or are ingested.</p>

⚠ WARNING
<p>Disconnect AC power cord from AC adapter inlet or wall socket (outlet) immediately if user observes the following or if the splicer receives the following faults:</p> <ul style="list-style-type: none"> • Fumes, bad odor, noise, or overheat occurs. • Liquid or foreign matter falls into cabinet. • Splicer is damaged or dropped. <p>If these faults occur, return unit to Greenlee service center for repair. Leaving splicer in a damaged state could cause equipment failure, electric shock or fire, and could result in severe injury or death.</p>

⚠ WARNING
<p>Electric shock hazard:</p> <ul style="list-style-type: none"> • Use only AC adapter or battery charger designed for this splicer. Using an improper AC power source could cause fuming, electric shock, or equipment damage. • Do not disassemble or modify splicer, AC adapter, or battery. Do not remove or bypass any electrical or mechanical device (e.g., fuse or safety switch) incorporated into design and manufacturing of this equipment. • Never operate tool in an environment where flammable liquids or vapors exist. Risk of fire or explosion could result from the tool's electrical arc in such an environment. • Do not use compressed gas or canned air to clean tool. They may contain flammable materials that could ignite during electrical discharge. • Do not touch electrodes when splicer is on and power is supplied to unit. The electrodes generate high voltage and high temperatures that could cause a severe shock or burn. • Turn tool off and disconnect AC power cord before replacing electrodes. <p>Failure to observe these warnings could result in severe injury or death.</p>

Important Safety Information

⚠ WARNING

Electric shock hazard: Use only proper power source.

- Check AC power source before use. Proper AC power source is 100–240 VAC, 50–60 Hz. Proper DC power source is 10–12 VDC. Improper AC or DC power source could cause fuming, electric shock, or equipment damage.
- AC generators commonly produce abnormally high AC output voltage or irregular frequencies. Measure output AC voltage with a circuit tester before connecting the AC power cord. Such abnormally high voltage or frequency from a generator could cause fuming, electric shock, or equipment damage. Make sure generator is regularly checked and serviced.

Failure to observe these warnings could result in severe injury or death.

⚠ WARNING

Electric shock hazard:

- Do not modify, abuse, heat, or excessively pull on power cord. Use of a damaged cord could cause fuming, electric shock, or equipment damage.
- This tool uses a three-prong (core) AC power cord that contains an earthed ground safety mechanism. This tool must be grounded. Use only the supplied power cord. Never use a two-prong (core) power cord, extension cord, or plug.
- Connect AC power cord properly to splicer (inlet) and wall socket (outlet). When inserting AC plug, make sure there is no dust or dirt on terminals. Engage by pressing the female plug into the splicer (inlet) and the male plug into the wall socket (outlet) until both plugs are fully seated. Incomplete engagement could cause fuming, electric shock, or equipment damage.
- Do not short-circuit the terminals of AC adapter and optional battery. Excessive electrical current could cause fuming, electric shock, or equipment damage.
- Do not touch the splicer, AC power cord, and AC plugs with wet hands.
- Do not operate splicer near hot objects, in hot temperature environments, in dusty/humid atmospheres or when condensation is present on the tool. This may result in electric shock, splicer malfunction, or poor splicing performance.

Failure to observe these warnings could result in severe injury or death.

Important Safety Information

⚠ WARNING

Explosion hazard: Follow these instructions when using lithium-ion battery:

- Do not charge battery with other methods than instructed.
- Do not dispose of battery in an incinerator or fire.
- Do not charge or discharge battery near a flame or in direct sunlight.
- Do not excessively shake or jar battery.
- If battery leaks liquid residue, be careful handling battery so liquid does not contact skin or eyes. If skin or eyes are contacted, immediately wash thoroughly and seek medical attention. Dispose of battery and order replacement from Greenlee.
- If charge did not complete in four hours or the “CHARGE” LED is constantly on, stop charging immediately and call Greenlee service center for repair.

Failure to observe these warnings could result in severe injury or death.

⚠ CAUTION

Battery safety:

- Do not allow anything to contact the battery terminals.
- Do not immerse batteries in liquid. Liquid may create a short circuit and damage the battery. If batteries are immersed, contact your service center for proper handling.
- Do not place the battery into a pocket, tool pouch, or tool box with conductive objects. Conductive objects may create a short circuit and damage the battery.
- Do not place a battery on moist ground or grass. Moisture may create a short circuit and damage the battery.
- Do not store the battery at more than 122 °F (50 °C) or less than -4 °F (-20 °C). Damage to the battery can result.
- Do not use another manufacturer’s charger. Other manufacturers’ chargers may overcharge and damage the battery.
- Do not attempt to open the battery. It contains no user-serviceable parts.

Failure to observe these precautions may result in injury and may damage the unit.

Important Safety Information

⚠ CAUTION

- Do not store tool in areas of extremely high temperature and humidity.
- Do not touch protection sleeve or tube heater during or immediately after heating. These surfaces are very hot and touching them may result in burns.
- Do not place tool in an unstable or unbalanced position. Tool may shift or lose balance, causing unit to fall.
- This tool is precision adjusted and aligned. Do not allow unit to receive a strong shock or impact. Use supplied carrying case for transportation and storage. Carrying case protects tool from damage, moisture, vibration, and shock.

Failure to observe these precautions may result in injury and may damage the unit.

⚠ CAUTION

Follow these instructions for handling electrodes:

- Use only specified electrodes.
- Set new electrodes in correct position.
- Replace electrodes as a pair.

Failure to observe this precaution may cause abnormal arc discharge, which may result in equipment damage or degradation in splicing performance.

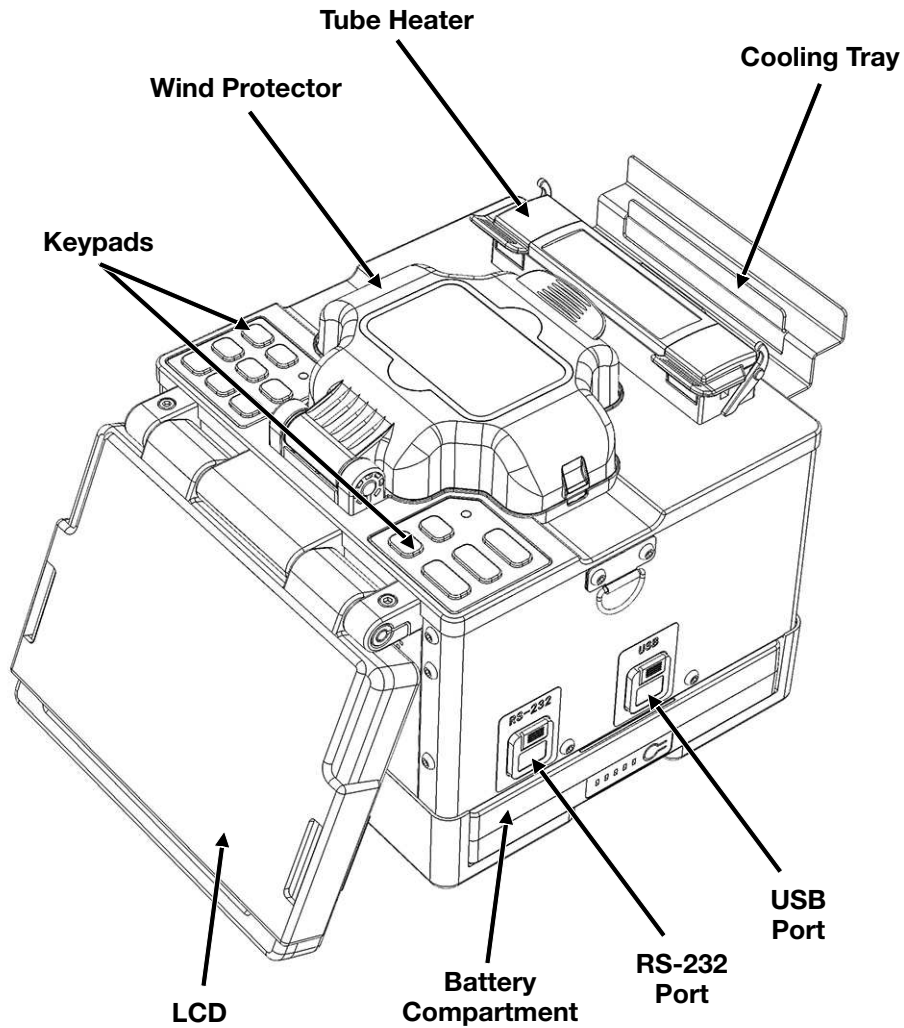
⚠ CAUTION

- Do not use any chemical other than pure alcohol (99% or greater) to clean the objective lens, V-groove, mirror, LCD monitor, etc. Use of other chemicals may cause blurring, discoloration, damage, or deterioration.
- This tool requires no lubrication. Oil or grease may degrade the splicing performance and damage the splicer.
- This equipment must be repaired or adjusted by a qualified technician or engineer. Incorrect repair may cause fire or electric shock. Contact Greenlee service center for repair.

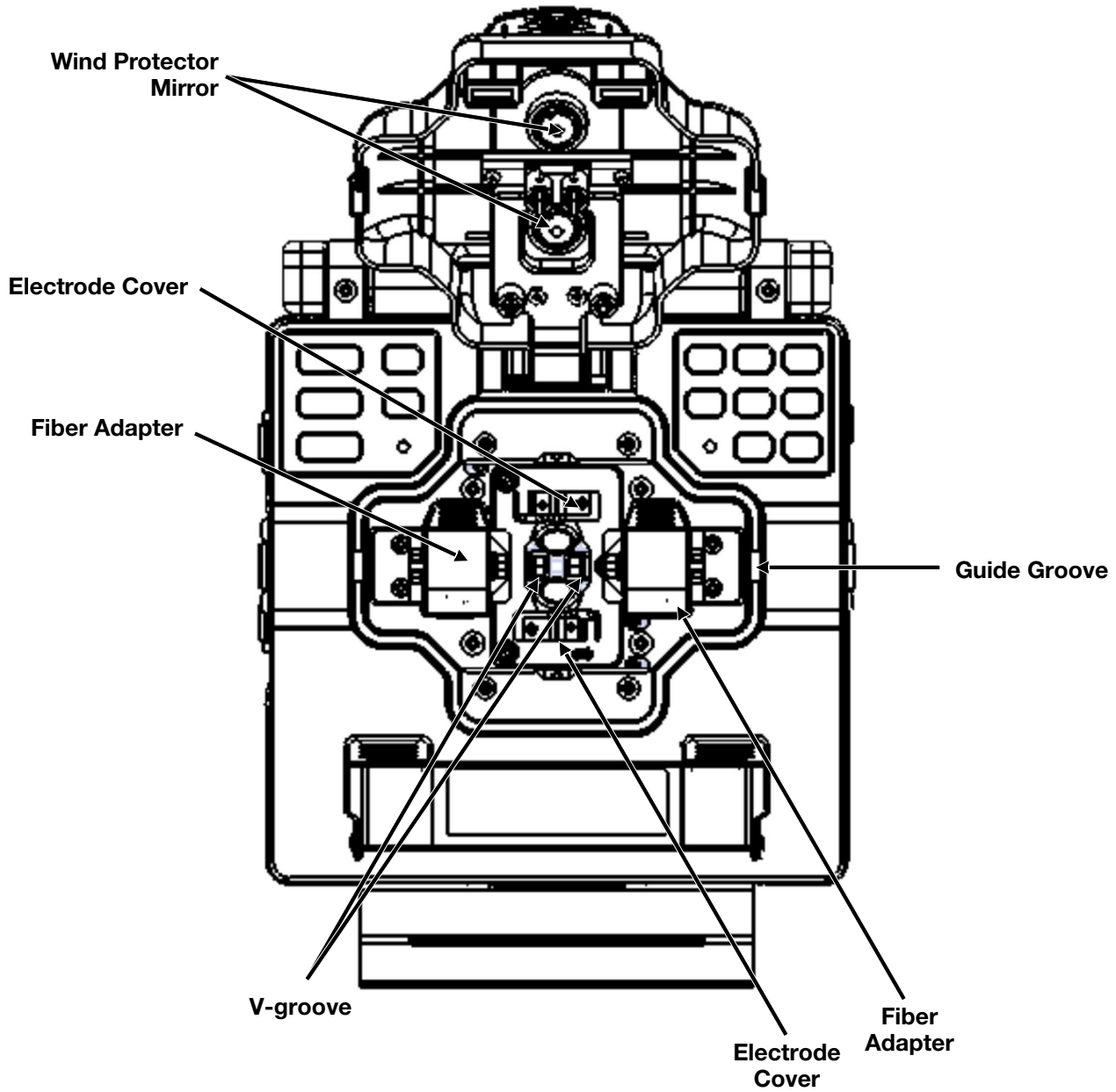
Failure to observe these precautions may result in injury and may damage the unit.

Section 1. Identification

Components of Splicer



Top View



Section 2. Operation

Setup

Installing Battery in Splicer

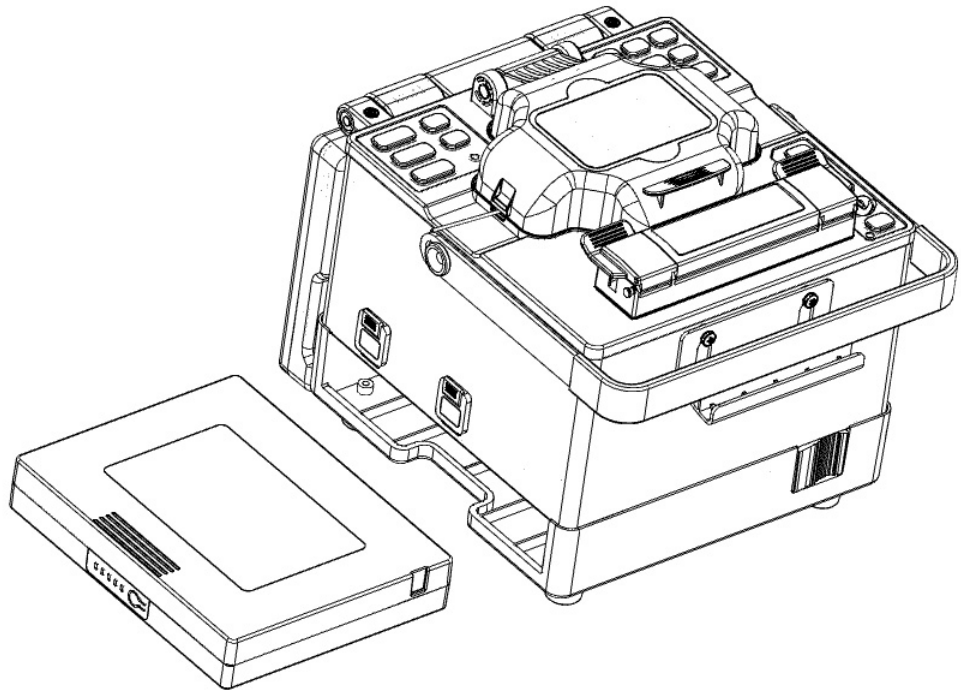
The 910FS can be powered by an external power adapter and battery.

Inserting the Battery

Remove the protective cover from the battery contacts. Insert the battery into the battery compartment until it clicks into place.

Removing the Battery


Turn off the splicer. Push the release button, located on the side of the splicer body, and remove the battery.

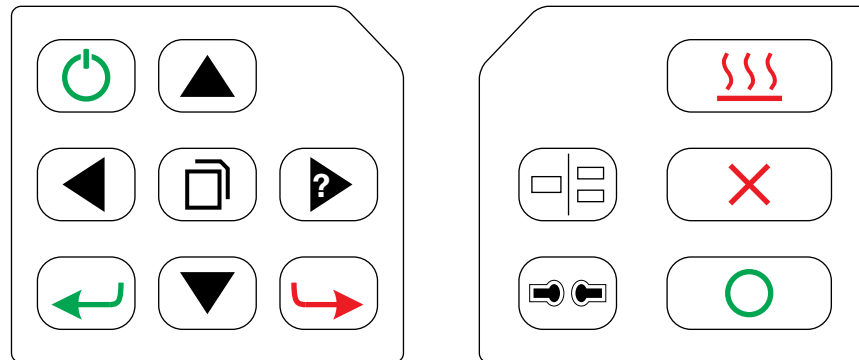


Two Methods of Checking Remaining Battery Capacity

- If the battery is already installed in the splicer, turn the splicer ON. The battery is automatically identified, and the remaining battery capacity is displayed on the “Ready” screen.
- Press the battery check button on the battery pack. The remaining battery capacity is indicated on the LED indicator.

Turning Splicer ON

Press and hold  until the LED on the keypad turns ON (green color).



The “Ready” screen is displayed after all the motors reset to their initial positions.

The power source type is automatically identified. If the battery is used, the remaining battery capacity is displayed.

Splice Mode

Use SM splice mode for standard SM fiber (ITU-TG.652) splicing. It performs splices in 9 seconds and is the quickest mode for SM fiber splicing.

Use AUTO splice mode if fiber type is not identified. Splice takes 2 seconds longer but it covers most conventional fiber splicing for the following reasons:

- AUTO mode first identifies fiber type by analyzing fiber profile, and the splicing condition is chosen for the type of fiber. The types of fibers covered by AUTO are all the conventional fibers, such as SMF (G652), BIF (G657), NZDSF (G655), MMF (G651), etc. AUTO mode takes longer than the SM processes but is recommended in cases where the fiber type is not positively identified or if the user is new to fusion splicing.
- AUTO mode uses an automatic arc calibration function, which monitors the splicing process and ensures adequate arc power for the splice.

Automatic Arc Calibration Function

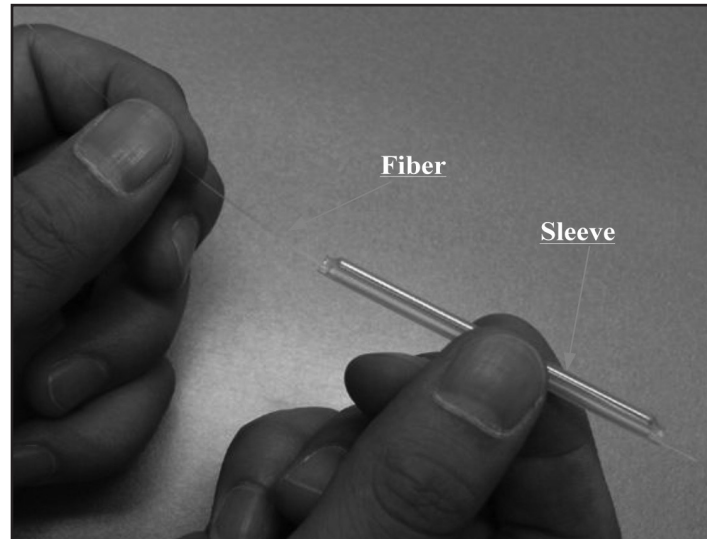
When the automatic ARC calibration function is enabled the previous splice’s ARC power is used. If the ambient conditions or type of fiber has changed an ARC calibration may be required. The automatic arc calibration function works in AUTO modes only. It is not active in the standard splice modes. When using those modes, performing arc calibration before splicing is strongly recommended.

Fiber Preparation

Placing Protection Sleeve over Fiber

Place the protection sleeve over the fiber. Clean optical fiber with alcohol-soaked gauze or lint-free tissue approximately 100 mm (4 in) from the tip.

Note: Splice-on connectors are pre-cleaved. Do not attempt to clean the fiber on the splice-on connector. Follow the instructions supplied with the splice-on connectors.



⚠ CAUTION

- Clean optical fiber with alcohol-soaked gauze or lint-free tissue. Dust particulates can enter the protection sleeve, resulting in a fiber break or attenuation increase.
- Make sure fiber is passed through the protection sleeve.
- When protection sleeve core tube is longer than the length of outer sheath, cut off excess sleeve to avoid micro bend after heating.

Failure to observe these precautions may result in injury and may damage the unit.

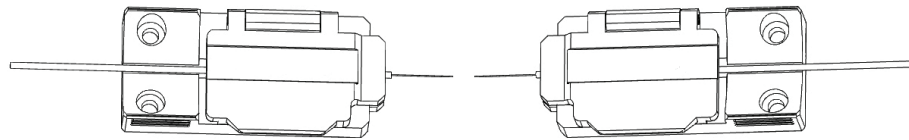
Stripping and Cleaning Fiber

Use the supplied fiber stripping tool to strip the outer coating 30 to 40 mm (1.25 to 1.5 in) from its tip. Thoroughly clean the fiber with alcohol-soaked (99% or greater) gauze or lint-free tissue.



Fiber Cleaving

Do not let the fiber end-face touch anything. Place the fiber into the universal adapter, and insert the adapter into the 910CL. Follow the instructions for the 910CL to cleave the fiber.



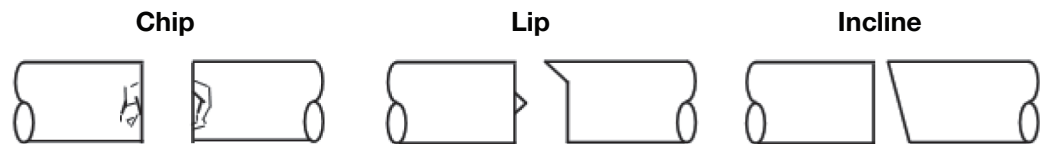
Loading Fiber into Splicer

1. Open the wind protector and install the fiber adapters into the splicer, making sure the fiber is positioned into the center of the V-grooves.
2. Close the wind protector.

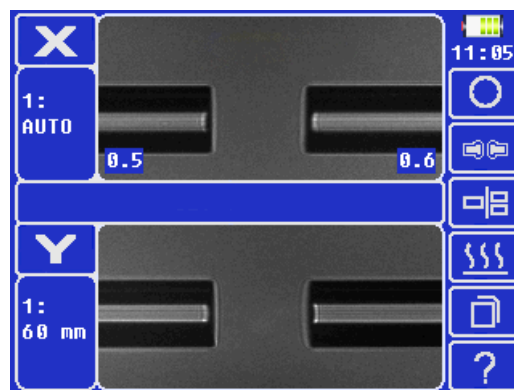
Splicing Procedure

To ensure a good splice, the optical fiber is observed with the image processing system equipped in the 910FS. However, in some cases the image processing system cannot detect a faulty splice. Visual inspection with the monitor is often necessary for better splicing yield. Observe the following standard operating procedure:


- After fibers are loaded into the splicer, press **O** and the fibers will move toward each other. The fiber motion stops and the cleaning arc is performed. The cleave angle and end-face quality are checked. If the measured cleave angle is greater than its set threshold or fiber chipping is detected, the beeper sounds and an error message warns the operator. The splicing procedure pauses. If no error message is displayed, the below stated end-face conditions are used for visual inspection. If observed, remove the fiber from the splicer and repeat fiber preparation. These fiber cleave defects may cause a faulty splice.



- After fiber inspection, the fibers are aligned core-to-core or cladding-to-cladding. Cladding axis offset and core axis offset measurements can be displayed.
- After completion of fiber alignment, an arc discharge is performed to splice the fibers.
- Estimated splice loss is displayed upon completion of splicing. Splice loss is affected by factors stated in Section 5. These factors are taken into account to calculate, or estimate, splice loss. The calculation is based on dimensional parameters, such as MFD, cleave quality, and fusion splice shape after the splice. If either the cleave angle measured or the estimated splice loss exceeds its set threshold, an error message is displayed. If the spliced fiber is detected as abnormal, such as “Fat”, “Thin” or “Bubble”, an error message is displayed. If no error message is displayed but the splice looks poor by visual inspection through the monitor, it is strongly recommended to resplice.




Notes:

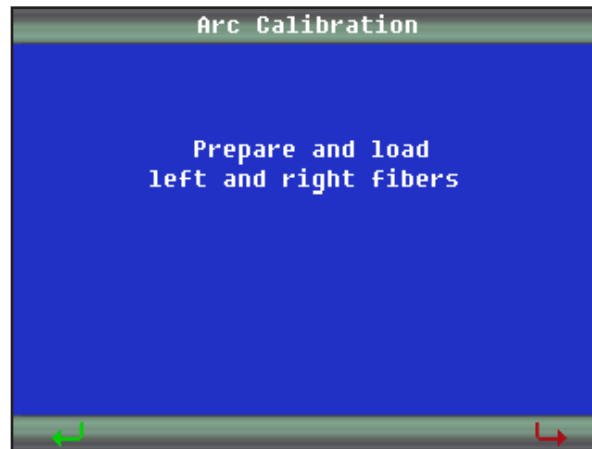
- Splice point sometimes looks a bit fatter than other parts. This is considered a normal splice and does not affect splice loss.
- To change threshold for estimated splice loss or cleave angle, refer to “Splice Mode” in this manual for details.
- Splice loss may be improved in some cases by additional arc discharges. Press  for an additional arc discharge (re-arc). Splice loss estimate and splice check are performed again. Splice loss may be worsened in some cases by additional arc discharges (re-arcs). Additional arc discharge can be set to “disabled”, or limited to the number of additional arcs.
- Splicing result is automatically saved in splicer memory.

Arc Calibration

When a splicing session is first started or if the splicing environment has changed, it is recommended that the technician perform an arc calibration.

1. Place cleaved fibers into the splicer.
2. Press  and navigate to the “Maintenance” menu. Select “Arc Calibration.”
3. Follow the on-screen prompts.

Note: It might be necessary to push  up to three times until “the arc adjust OK” prompt is achieved.



Heating Protection Sleeve

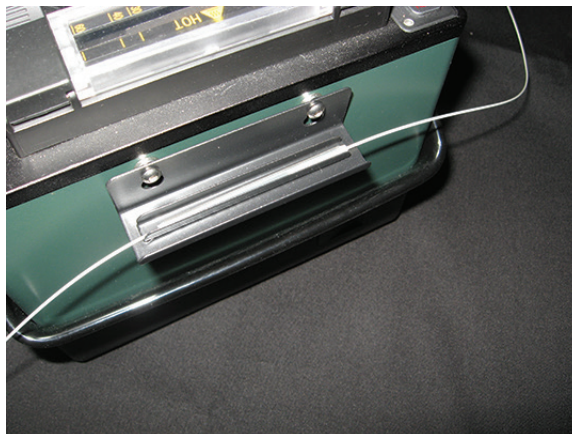
1. Transfer the fiber with protection sleeve from the centering device to the tube heater.
2. Close the tube heater lid.

Notes:

- Make sure the splice point is located at the center of the protection sleeve.
 - Make sure the strength member in the protection sleeve is placed downward.
 - Make sure the fiber is not distorted.
 - The splice-on connector must be installed on the right-hand side of the splicer heater. Use heater profile #1 for the SOC.
3. Press **⏏** to start tube heating. The beeper sounds and the HEAT LED (red color) turns off when tube heating is completed.
 4. Open the tube heater lids and remove the protected fiber from the tube heater. Apply some tension to the fiber while removing it from the tube heater.
 5. Visually inspect the finished sleeve to verify that no bubbles or debris/dust is present in the sleeve.

Cooling Tray

Place the splice into the cooling tray on the back of the 910FS splicer.



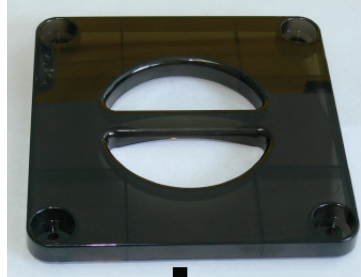
Splice-on Connectors

The 910FS uses the Greenlee version of splice-on connectors. The 910FS currently supports SC, LC, FC, and ST versions (both PC and APC finish, where applicable).

Follow the instructions supplied with the SOC packaging.

Carrying Case with Work Table














The top cover of the carrying case can be used as a work table. Place the tray mounting attachment on the top of the case and mount the fusion splicer on top of the mounting attachment, as shown below. This provides a safe and secure work surface.



Upgrading Software

The 910FS software can be upgraded using the online software upgrade tool at www.greenlee.com.

Button Functions

Button	Description
	Turns the splicer ON/OFF
	Menu key
	Enter key
	Return/Exit key
	Left key
	Right key/Help key
	Up key/Bright key for LCD
	Down key/Dark key for LCD
	Start/Stop heating protection
	Re-calibrates arc power
	Resets the motor position
	Starts splicing work
	Switches between X, Y and X/Y views

Appendixes

Refer to the following appendixes at the end of this manual for additional operating information:

- Appendix A—910FS Fusion Splicer Cleaning
- Appendix B—Practice Splicing
- Appendix C—Greenlee Splice-on Connectors

Section 3. Menu Operation

Press  to enter the splicer menu. There are six main menus:

1. Splice Mode Menu (S-Mode)
2. Heater Mode Menu (H-Mode)
3. Maintenance
4. Splice Set
5. Data Save
6. Set



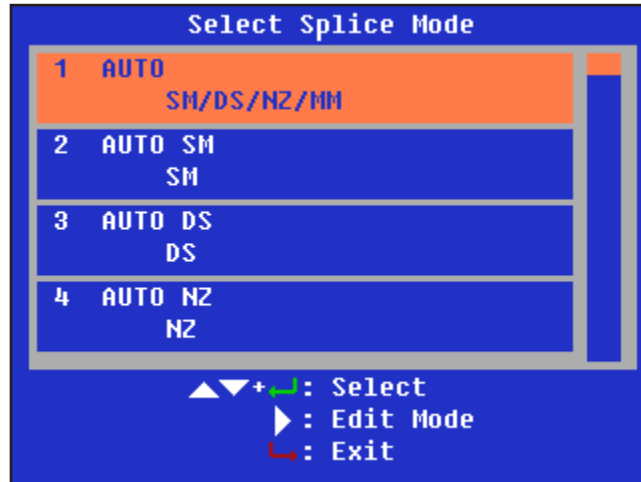
Explanation of Splice Modes

Mode No.	Splice Mode	Description
1	AUTO	For splicing in most cases; the splicer will automatically adjust splice parameters according to fiber type. Automatic arc calibration works in this splice mode.
2	AUTO SM	For splicing standard single-mode fiber (ITU-T G652). The MFD is 9 to 10 μm at wavelength of 1310 nm. Automatic arc calibration works in this splice mode.
3	AUTO DS	For splicing dispersion-shifted fiber (ITU-T G653). The MFD is 7 to 9 μm at wavelength of 1550 nm. Automatic arc calibration works in this splice mode.
4	AUTO NZ	For splicing non-zero dispersion-shifted fiber (ITU-T G655). The MFD is 9 to 10 μm at wavelength of 1550 nm. Automatic arc calibration works in this splice mode.
5	AUTO MM1	For splicing multi-mode fiber (ITU-T G651). Core diameter: 50.0 to 62.5 μm . Automatic arc calibration works in this splice mode.
6	SM	For splicing standard single-mode fiber (ITU-T G652). The MFD is 9 to 10 μm at wavelength of 1310 nm. User can edit all parameters of this splice mode such as prefuse power, prefuse time, arc power, arc time, align, proof test, etc. The manual splicing operation is provided. Automatic arc calibration does not work in this splice mode.
7	DS	For splicing dispersion-shifted fiber (ITU-T G653). The MFD is 7 to 9 μm at wavelength near 1550 nm. User can edit all parameters of this splice mode such as prefuse power, prefuse time, arc power, arc time, align, proof test, etc. The manual splicing operation is provided. Automatic arc calibration does not work in this splice mode.
8	NZ	For splicing non-zero dispersion-shifted fiber (ITU-T G655). The MFD is 9 to 10 μm at wavelength of 1550 nm. User can edit all parameters of this splice mode such as prefuse power, prefuse time, arc power, arc time, align, proof test, etc. The manual splicing operation is provided. Automatic arc calibration does not work in this splice mode.
9	MM1	For splicing multi-mode fiber (ITU-T G651). Core diameter: 50.0 to 62.5 μm . User can edit all parameters of this splice mode such as prefuse power, prefuse time, arc power, arc time, align, proof test, etc. The manual splicing operation is provided. Automatic arc calibration does not work in this mode.
10	AT1(SM)	User can set the attenuation value in the range of 0.1 to 15 dB. Set the desired splice loss. If after the splice is completed the desired loss is not achieved, the user can adjust the splicing coefficient. Increasing the coefficient will increase the desired loss; decreasing the coefficient will reduce the splice loss.
11	SM FAST	For splicing standard single-mode fiber (ITU-T G652). The MFD is 9 to 10 μm at wavelength of 1310 nm. It is the fastest splice mode at 9 seconds splicing time. This mode process does not analyze fiber geometry.
12~60	BLANK (other modes)	User can assign these as their own custom splicing profiles.

Splice Mode Menu (S-Mode)

(1) Select Splice Mode

Select “S-Mode” to access the available splicing modes. Use ▲ and ▼ to highlight the desired splicing mode. Then press ↵ to confirm.



Select an appropriate splice mode for the type of fiber to be spliced, and press ▲ or ▼ to select the splice mode. Then press ↵ to confirm.

Note: “1 AUTO SM/NZ/DS/MM” mode is recommended for splicing in most cases. In this mode, the splicer automatically adjusts splice parameters according to the fiber type.

(2) Edit Splice Mode

Splicing parameters in each splice mode can be modified.

In “Select Splice Mode” menu, press ▶ to enter “Edit Splice Mode” and modify the splice mode as shown below.

Edit Splice Mode	
Fiber Type	SM
Mode Title1	SM
Mode Title2	ITU-T G6
Align	Core
Proof Test	Enable
Cleave Limit	3.0 °
Loss Limit	0.20 dB
Axis Offset Limit	1.0 °
Cleaning Arc	150 ms
Gap	15 um
Gap Set	Center
Prefuse Power	40 bit

Edit Splice Mode	
Gap Set	Center
Prefuse Power	40 bit
Prefuse Time	170 ms
Overlap	12 um
Arc1 Power	40 bit
Arc1 Time	2000 ms
Arc2 Power	40 bit
Arc2 Time	CLOSE
Arc2 ON Time	180 ms
Arc2 OFF Time	CLOSE
Rearc Time	800 ms
Est. Mode	Core

Press ▲ or ▼ to select the parameter to be modified, and then press ↵ to enter the parameter setting.

Press ▲ or ▼ to modify the parameter, and then press ↵ to confirm.

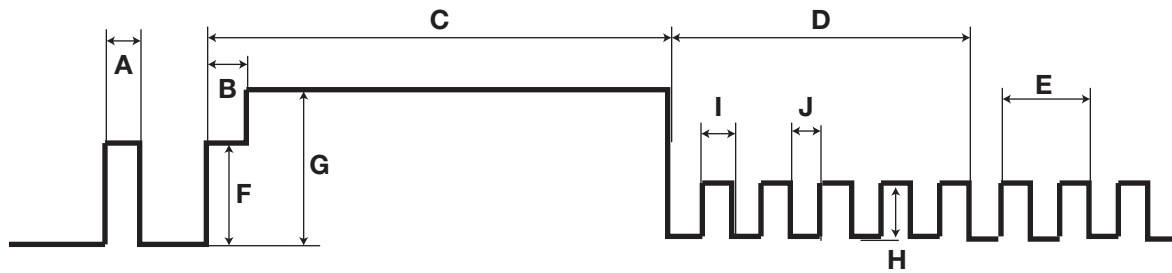
Note: In AUTO mode, certain parameters cannot be changed.

Parameter	Description
Arc Power	In SM/DS/MM/NZ/AUTO modes the arc power is fixed at 40 bits.
Arc Time	Arc time is fixed at 1500 ms for SM and DS modes, 2000 ms for NZ mode, and 3000 ms for MM mode. This is automatically set depending on the fiber type when AUTO mode is selected.

Edit Mode for Splicing

- Fiber Type: Select or enter the name of fiber being spliced.
- Mode Title1: Enter type of fiber.
- Mode Title2: Enter alternate name of fiber type.
- Align: Select Core, Clad or Manual options. In manual mode the user can control the motors by hand.
- Proof Test: Enable or disable the tension test after splicing. Disable this for splice-on connector use.
- Cleave Limit: Set or disable the cleave error limit in degrees.
- Loss Limit: Set or disable the splice loss notification level.
- Axis Offset Limit: Set or disable the axis offset error limit in degrees.
- Cleaning Arc: Set or disable the duration of the cleaning arc.
- Gap: Increase the gap if the fibers are “soft” and melt too easily. Decrease the gap if the fibers are “hard to melt”.
- Gap Set: Set the gap closer to the larger diameter core fiber when splicing dissimilar-sized fibers. This may also be necessary when splicing what the user may consider to be the same size fiber but the two fibers are from different manufacturers.
- Prefuse Power: Set or disable the power to the electrode during the initial fusing cycle.
- Prefuse Time: Set or disable the duration of the prefuse cycle.
- Overlap: Set or disable the overlap closer if the fibers are hard to splice or the core diameter is thick. (The harder the closer, the thicker the closer; the softer the farther, the thinner the farther.)
- Arc1 Power: Increase or decrease or disable the Arc1 power.
- Arc1 Time: Increase or decrease or disable the Arc1 duration.
- Arc2 Power: Increase or decrease or disable the Arc2 power.
- Arc2 Time: Increase or decrease or disable the Arc2 duration.
- Arc2 ON Time: Set or disable the Arc2’s working (arcing) duration.
- Arc2 OFF Time: Set or disable the Arc2’s off duration.
- Rearc Time: Set or disable the duration of the Rearc.

Summary of electrode activation:



- A:** Cleaning Arc
- B:** Prefuse Time
- C:** Arc1 Time
- D:** Arc2 Time
- E:** Rearc Time
- F:** Prefuse Power
- G:** Arc1 Power
- H:** Arc2 Power
- I:** Arc2 ON Time
- J:** Arc2 OFF Time

Note: Not all settings are available in the AUTO modes.

This is a general guideline for the user to control the fusion settings. Every type of fiber has its own characteristics and properties that may require the manual setting of these parameters. The user will have to perform careful experiments with their individual fibers to obtain optimum results.

Heater Mode Menu (H-Mode)

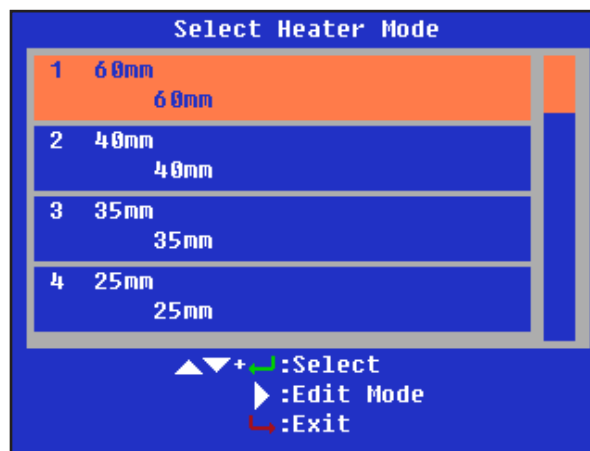
There are 20 user-programmable heating modes. Select the one most suitable for the protection sleeve used.

Each tube-heating mode is optimized for a type of protection sleeve. These modes can be found in the database area for reference. Copy the appropriate one and paste it into the user-programmable area. The operator can edit the user-programmable modes.

(1) Select Heater Mode

Select “H-Mode” to access the available heater modes. Use ▲ and ▼ to highlight the desired heater mode. Then press ↵ to confirm.

Select the heater mode most suitable for the protection sleeve to be used.



Press ▲ or ▼ to select a heater mode. Then press ↵ to confirm.

(2) Edit Heater Mode

Tube-heating conditions stored in heater mode can be edited or changed.

Editable parameters include Heat Time and Heat Temp (heating temperature). Heat Time will automatically adjust according to atmospheric conditions, e.g., ambient temperature. The real Heat Time may vary from set Heat Time.

Sets Heating Temperature: Fiber coating may melt if Heat Temp is over 190 °C (374 °F).

Sets Finish Temp (Finish Temperature): When heater approaches this temperature, the buzzer beeps, announcing the sleeve is cooled down and is ready to be removed from the heater.