



USER'S GUIDE

Fusion Splicer

Warning

Any undefined change or modification of this manual will deprive you of the right to operate the equipment.

To reduce the risk of fire or electric shock, do not expose the equipment to rain or humidity.

To prevent electric shock, please do not open the shell, and it must be repaired by qualified personnel.

This product is designed for splicing the glass fiber of optical communications and cannot be used to splice other materials.

To reduce the risk of fire or electric shock, do not allow liquid such as water or metallic substances to enter the machine.

It is forbidden to use the fusion splicer in the flammable and explosive environment, otherwise it will lead to fire or explosion.

When the fusion splicer is working, do not touch the electrode, avoid the hurt caused by the discharge of the electrode. When replacing the electrode, you must turn off the power and disconnect the power cord.

Please follow the operation manual strictly to use the battery:

*Please do not charge the battery by using methods other than in the manual;

*Don't throw the battery into the fire;

*Don't reverse positive and negative poles;

*Do not charge or discharge under high temperature, fire or direct sunlight;

*Do not throw or impact the battery;

*If the battery electrolyte leaks out, please handle it carefully. If you contact the skin or eyes accidentally, please must clean it thoroughly and seek medical advice immediately. Please also inform the maintenance center of handling the battery.

Cautions

Do not use and store the fusion splicer in a high temperature and humidity environment. Otherwise, it may cause damage to the equipment.

Do not touch the heat-shrinkable tube during the heating or just ending, because the heatshrink is hot and may cause burns.

Do not touch the fusion splicer, AC power cord and AC plug when wet hand, otherwise it may cause electric shock.

Do not use any chemicals other than alcohol to clean microscope lenses, V-grooves, LCD screen, etc., otherwise it may cause blurred images, stains, etc., and may even cause equipment's corrosion and damage.

In the dusty environment, dust-proof measures must be taken to prevent dust from entering the machine and causing trouble.

Do not allow the fusion splicer to be subjected to strong vibration and shocks, otherwise the machine will be damaged. Please use a dedicated carrier to transport or store the fusion splicer.

Using the battery:

The equipment can use a disposable alkaline battery or rechargeable battery, and can not be mixed with different types or different capacity batteries. Only rechargeable batteries can be charged.

Avoiding condensation:

Sudden changes in temperature should be avoided. Do not use the device immediately after moving the device from the cold area to the hot area, or when the room suddenly heats up, because the device may have condensation phenomenon. If the temperature changes abruptly, stop using it and take out the battery, and the power can be switched on after at least an hour.

Storage:

When the device is not used for a long time, please take out the battery to avoid the damage caused by battery leakage.

※All is subjected to the physical products, the manual here is just only for reference.

Standard Package



AC/DC adaptor



Fiber stripper



Carrying case



Fiber cleaver



Spare electrode



User manual

Host



- | | |
|----|------------------------|
| 1 | Electrode |
| 2 | Objective lens |
| 3 | Clamp slot |
| 4 | V-groove |
| 5 | Cooling tray |
| 6 | Multi-functional clamp |
| 7 | Heater V-groove |
| 8 | Heat shrinker cover |
| 9 | Electrode cover |
| 10 | USB connector |
| 11 | Power supply socket |
| 12 | Windshield cover |
| 13 | Optical fiber presser |
| 14 | LED |
| 15 | Battery |
| 16 | Anti-collision batten |

How to Use Keyboard

ON/OFF Key

- Power on/off

LEFT/RIGHT Key

- Modify settings

UP/DOWN Key

- Move the cursor



ENTER Key

- Enter into the menu
- Save settings

X/Y Key

- Back to previous menu
- Switch X/Y images

HEAT Key

- Start heating

RESET Key

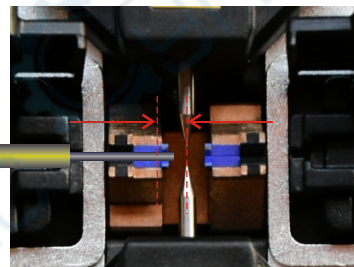
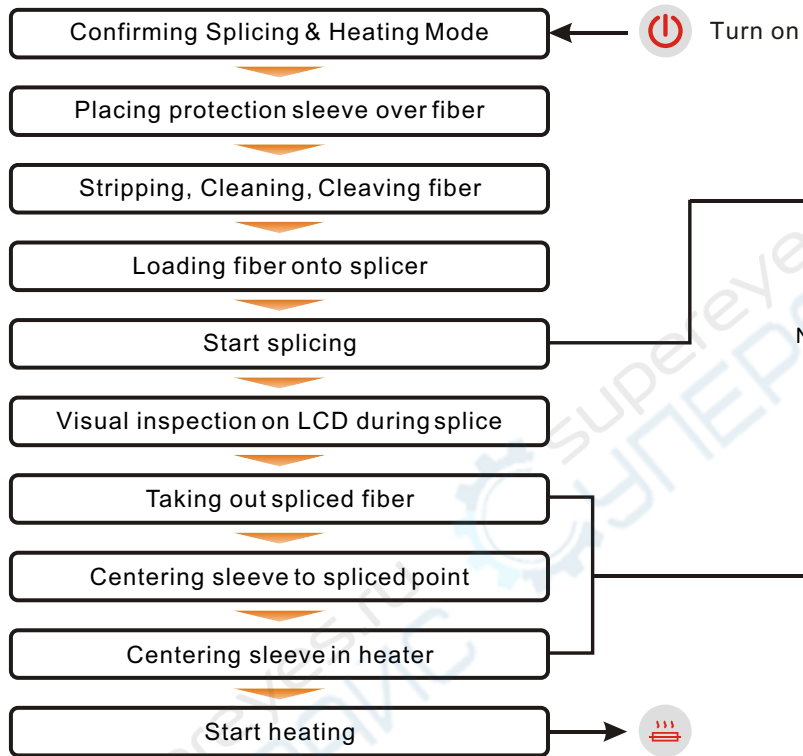
- Motor reset

START Key

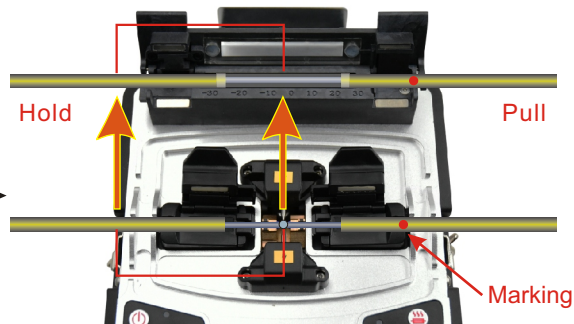
- Start splicing





Splicing Operation

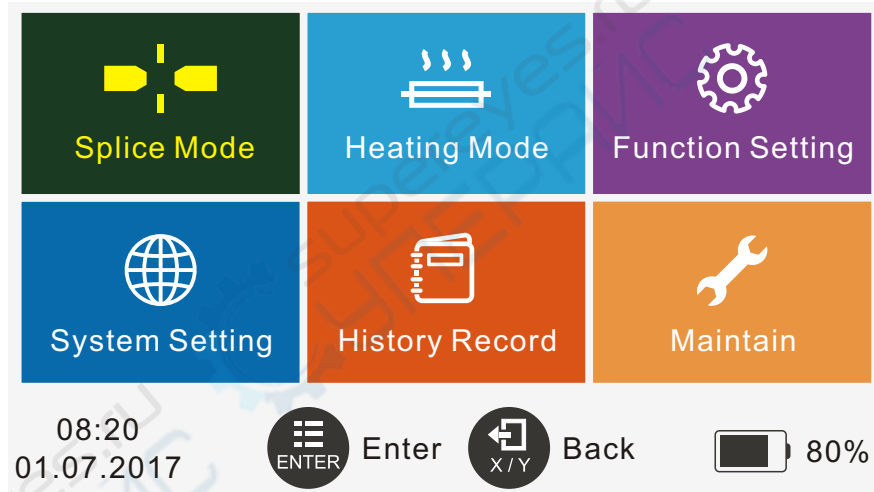


Note: Place fiber between electrodes tip and V-groove end.



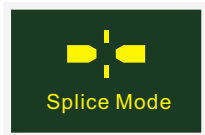
Main Menu

Press  key to open the menu, then using navigation key to choose the different sub-menu, then press  key again to enter into the sub-menu.









Splice Mode




Press  /  key to choose the line, and use  /  key to set the detailed configuration.










Splice Mode

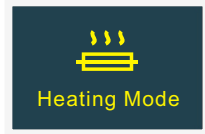
Fiber type	SM		SM, MM, DS, NZDS...
Splice operate mode	Manual Enter		Manual, Auto, Half-auto
Splice program No.	SM-1		Set current splicing program number
Edit splice program	Enter		Edit splicing parameters under current program No.
Clean arc time	120ms		Clean tiny dust on fiber end by a short arc discharging
Surface angle threshold	3.0°		Set the limit value of fiber end surface angle

08:20
01.07.2017

 Enter  Back  80%

Cutting angle threshold	1.0°		Set fiber alignment limitation
Align offset threshold	0.4um		Set fiber alignment offset threshold
Loss threshold	0.10dB		Set splicing loss limit value
Compensation arc time	1.0s		Set compensation arc time
Fiber alignment mode	Core align		Fine align, Cladding align, Core align
Fast splice mode	Off		On or Off
Forced splice mode	Off		On or Off

Heating Mode



Heating Mode

Heating program No .	6	▲
Casing type	40mm	●
Casing diameter	4 mm	●
Heating temperature	150°C	
Heating time	19s	
Auto heating	On	▼

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01.07.2017

ENTER Enter X/Y Back 80%

-----Select the protection sleeve type
-----Diameter of fiber protection sleeve

Function Setting



Function Setting

Reset waiting time	6s	<input type="checkbox"/>
Fast arc test mode	On	<input type="checkbox"/>
Tension test	On	<input type="checkbox"/>
Auto starting	On	<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

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01.07.2017

Enter Back 80%

- Only valid when "Tension test" is "Off"
- If "On", splicer will auto adjust the discharge current
- If "On", it will execute tension test automatically after splicing
- If "On", it will auto start splicing

System Setting



System Setting

Help information	Enter
Brightness adjustment	100%
Language selection	English
Screen flip	Flip
Time setup	Enter
Restore factory settings	Enter

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01.07.2017

ENTER Enter X/Y Back 80%

Power saving mode	Enter
Silent mode	Off

Time setup

Year	2017
Month	7
Date	1
Hour	12
Minute	30

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01.07.2017

ENTER Enter X/Y Back 80%



Power saving mode

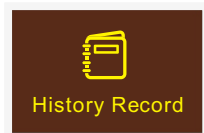
Auto sleep	Off
Auto shutdown	10min

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01.07.2017

ENTER Enter X/Y Back 80%

History Record



Press  key to enter into the detailed interface, while  key to back to previous menu.



History Record

Total arc number	103
Clear arc count	Enter
Total records	53
View records	Enter
Delete records	Enter
Query fault records	Enter

08:20
01.07.2017

 Enter  Back 80%



Delete fault records Enter

View records

No.	Date	Angle	Fiber type	Loss
0001	01.07.2017	0.0	SM	0.00
0002	01.07.2017	0.0	SM	0.00
0003	01.07.2017	0.0	SM	0.00
0004	01.07.2017	0.0	SM	0.00

Total 42 Pages:11 Current: 1

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01.07.2017



 Enter  Back 80%

Query fault records

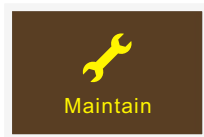
Date / Clock	No.
01.07.2017 12:30	0X00003115
01.07.2017 12:30	0X00003115
01.07.2017 12:30	0X00003115
01.07.2017 12:30	0X00003115

Total 42 Pages:11 Current: 1

08:20
01.07.2017

 Enter  Back 80%

Maintain



Maintain

Arc correction	Enter
Clean electrodes	Enter
Replace electrodes	Enter
Detect system parameters	Enter
Correct led	Enter

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01.07.2017

ENTER Enter X/Y Back 80%

Arc correction

Help

1st: Place fiber and covering the wind cover.
2nd: Press 'ENTER' key and follow the prompts.

NOTE: Several times is needed. Please wait patiently.

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ENTER Enter X/Y Back 80%

Manual SM-1
60-6mm

Discharge

Reset

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01.07.2017

X

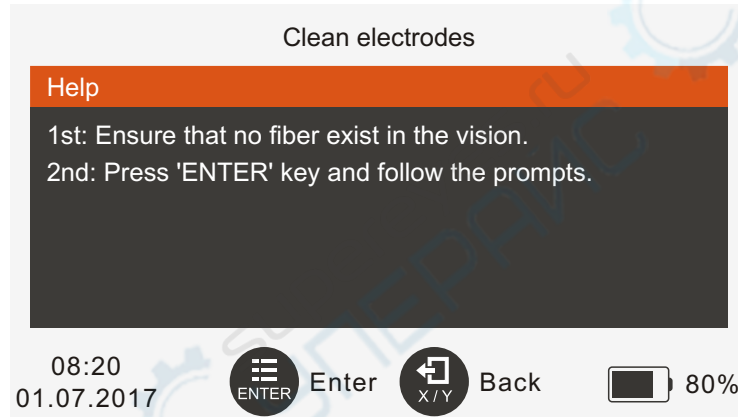
Y

Left Fiber

Start

80%

Maintain-Clean Electrodes



Note: To get the best splicing result, please don't touch the electrode tip with hard objects while cleaning.

Maintain-Replace Electrodes

Replace electrodes

Help

- 1st: Turn off and replace the old electrodes.
 - 2nd: Ensure that no fiber exist in the vision.
 - 3rd: Press 'ENTER' key and follow the prompts.
- NOTE: After the operation is completed, the number of discharge will be set to 0.

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01.07.2017



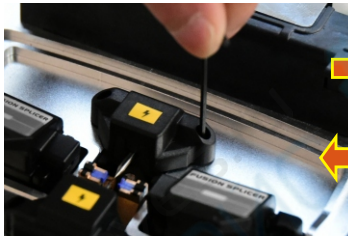
Enter



Back

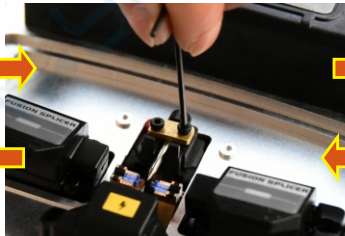
80%

Remove the electrode cover



Place the electrode cover

Loosen screws



Tighten screws

Remove the old electrode

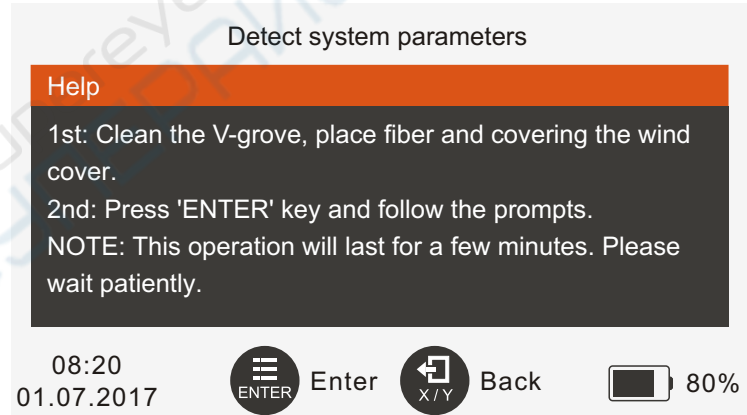


Install the electrode cover

Maintain-Detect System Parameters

To get better splicing result, we suggest you detect system parameter under following situations:

1. System upgrade;
2. Replace or move electrodes;
3. Long-distance transportation and strong vibration;
4. Continuous splicing failure or high loss;
5. Continuous overshoot during alignment.

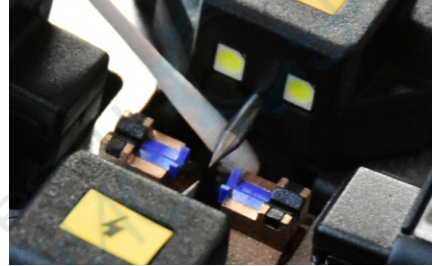


Fusion Splicer Cleaning

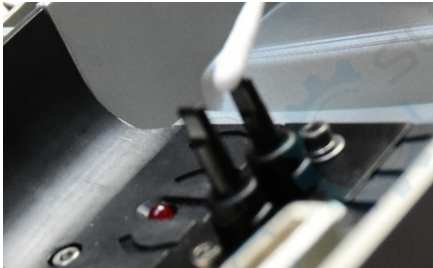
V-groove



Objective Lens



Fiber Presser



The Heater



- When cleaning, keep the device Off
- Use cotton swab moistened with purity alcohol

- Do not touch the electrode tips
- Use dry swab to clean the excess alcohol

Battery Information

In lower right of the interface is the battery state and battery indicator. The battery will display different colors and shapes in various states. Here are some examples of icons. Battery information can also be viewed in the system menu.



Remain 100%



less than 10%
shows red icon



Charging



Fully charging

Warning Information

Warning(English hints)	Reason	Treatment method
Left / right / left and right fiber placement error (LFPC / RFPC / LRFPC)	Fiber cutting length is too short	Cut the fiber again and ensure the cutting length
	The fiber placed in the V-groove has been broken	
	Fiber is not placed in the middle of the V-groove	Replace the fiber
	Propulsion motor connection problem	Please detect system parameters
Left / right / left and right fiber disqualification (LFNQ / RFNQ / LRFNQ)	Dust on the fiber's surface	Use alcohol to clean fiber again
	Poor quality of cutting, core defect, cladding damage	Remake the fusion fiber
Left / right / left and right fiber's end face disqualification (LFEANQ / RFEANQ / LRFEANQ)	Optical fiber end angle exceeds preset limit value	Cut the fiber again, if the quality is poor, please replace the fiber cleaver
Optical fiber angle disqualification(FANQ)	The angle error in both horizontal and vertical direction is greater than the set threshold value	Replace the fiber on both sides
Large loss	Splicing loss exceeds the set upper limit or choose an unmatched optical fiber type fusion program.	Please clean the V-groove, redo the discharge correction, and splice again
Lack of electricity	Current battery power is less than 2%	Please insert the adapter to charge
Replace electrodes	The Arc count exceeds the upper limit	Replace electrode and detect system parameters
Record overrun	The splicing record exceeds the upper limit	Please use the USB derive the original splicing record, then delete them
Alignment abnormal	Fiber end face has dust or quality is poor	Please cut and clean the fiber again and make the alignment. If it doesn't work, please detect system parameters or restart the machine
	The windshield cover is too tight and the brightness of LED lights is not suitable	

Warning Information

Warning	Reason	Treatment method
Timeout abnormal	Long time during align splicing	Restart align splicing
Field abnormal	Improper installation position of electrode	Detect system parameters first, if continue to prompt abnormal, please re-install the electrode
	The mechanical structure was destroyed	
Data abnormal	The fusion splicer is working in the abnormal state	Continue to align splicing, and it have no affect
Light source abnormal	Improper setting of luminance of LED	Please detect system parameters
	Improper installation position of windshield cover	
Detection abnormal	Failures in detecting system parameters	Please check if the fiber is properly placed and the connection is in good condition
Heat Shrink abnormal	Heat shrinkable heater do not work properly	Restart the fusion splicer
Storage abnormal	Data can't be saved	Please contact the after-sales service
Storage abnormal	Communication anomaly, data has a packet loss	Restart the fusion splicer
Image abnormal	The camera may have been damaged or connector interface is loose	Restart the fusion splicer
Sense abnormal	The abnormal working of the sensor built-in the fusion splicer	This abnormal does not affect the normal working
Electrode abnormal	Abnormal installation of electrode on both sides	Please ensure that electrodes of both sides are aligned when installed, also ensure that both sides are in the center of the V-groove

Specifications

Applicable fibers	SM, MM, DS, NZDS, EDF
Average splice loss	0.02dB(SM), 0.01dB(MM), 0.04dB(NZDS), 0.04dB(EDF)
Fiber aligning method	Core alignment
Splicing time	Typical 8s with standard SM fiber
Heating time	24s
Electrode life	
Battery capacity	Typical 200 cycles (splicing and heating)
Monitor	5.0 inches colorful LCD display
Storage of splice result	10000 results
Tension test	2.0N (Standard)
Splicing mode	Auto & Manual & Half Auto
Protection sleeve length	40mm, 60mm or others
Environmental conditions	-10~+50°C(operation temperature), 0~95% RH(humidity), 0~5000m(altitude)
Power supply	Li-ion battery or AC/DC input: 13.5V
Size(H*W*D)	164mm * 141mm * 138mm
Weight	1.83kg

