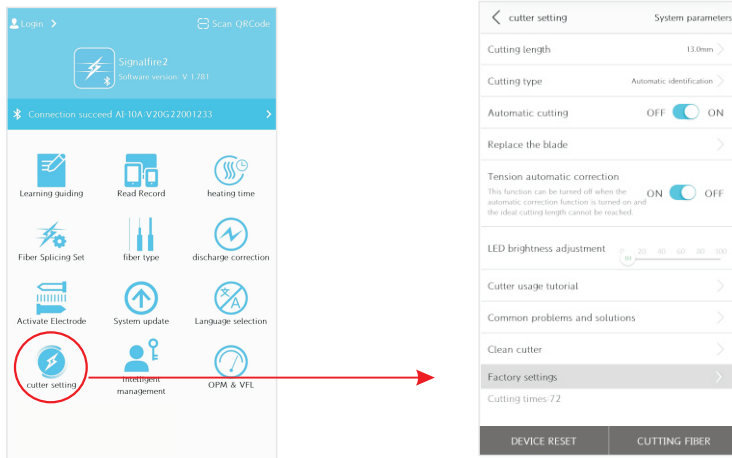


Cutter setting: Setting the cutter is done through Bluetooth connection of the welding machine, which sets the cutter, including cutting length, cutting type, LED light brightness adjustment, etc



### I. Pay attention to dustproof and remove dust

V-grooves, electrodes and Lens must be kept clean usually and windshield cover should be closed if you don't use it.

#### 1. V-groove Cleaning

If the V-groove has dirty, then the fiber can not align and dislocation and give you an error message. Thus in the daily work, you should always check the V-groove and regular cleaning V-groove.

the method to clean V-grooves:

- 1) use the utility knife to scratch the V-grooves one direction, and make for about 3 times. both side need to clean like this.
- 2) use alcohol swab to clean the V-grooves again.

#### 2. Cleaning the electrode

If the electrode is dirty or the electrode tips become dark, you need to clean the electrode:

- 1) use the knife to scrape the tip's dirt and keep it clean.
- 2) use alcohol swab to clean the tips.

**3. If the outside lens which is under electrode is dirty**, the fiber may be blur then give you an error message, or the fiber can be spliced but it will give you a high loss fusion.

#### Follow the steps below to clean the lens :

- (1) make sure that the machine is turn off.
- (2) Use alcohol swab to gently wipe the lens. Then wipe with a dry cotton swab to remove extra alcohol.
- (3) Turn on the power, make sure that the display is not visible dust and stripes.

### II. Prevent Strong Shock or Vibration

When you need to move or transport the fusion splicer, please be careful and gently. For long-distance transportation, please wrap it with foam to prevent collision

### III. Storage

When you do not use the machine for a long time, please must turn on the machine once half a year. if in high moisture environment, please use the machine often and put the desiccant into the carry case to prevent mildew microscope head.

**IV. Precautions**

- (1) When the fusion splicer is using AC power, please take attention to protect the adapter, and the power supply is properly grounded.
- (2) When the fusion splicer is in the ARC discharge process, there are several kV high voltage between the electrodes, please do not touch the electrode rod at this time!
- (3) Please be sure that there is no gasoline, biogas, Freon gas and other flammable gas in the environment to avoid the poor fusion or accident.
- (4) When you wipe to clean the fiber holder and lens, please must use cotton swab to wipe in one direction.
- (5) There are many structural precision components in the fusion splicer. Except the electrodes, the other part is banned for user to disassemble and change. Because these parts' position are precision-calibration, once there is any changes, it is difficult to return to its original position.
- (6) The objective lens, V-groove, display screen, etc should be kept clean. Clean only with cotton swab or alcohol swab, you can not use other chemicals.

**V. Troubleshooting and solutions** The table lists a general troubleshooting method for the user reference. When the user can not solve the situation, please contact with the suppliers directly.

Troubleshooting	Reason	Solutions
No image after placing fiber	<ol style="list-style-type: none"> <li>1. Not power on</li> <li>2. Fiber isn't in V-groove or v-groove has dirt</li> <li>3. Fiber put too short on V-grooves or fiber is broken</li> <li>4. The align mechanism is not initialized</li> <li>5. No signal detected for close windshield cover</li> </ol>	<ol style="list-style-type: none"> <li>1. Press the power key</li> <li>2. Re-place the fiber or clean the V-groove</li> <li>3. Re-cleave the fiber</li> <li>4. Press RESET key</li> <li>5. Check if the magnet on wind cover left side is fall off or the correspond position Allen screw on the panel is loosen.</li> </ol>
splicing loss is too high	<ol style="list-style-type: none"> <li>1. The cleaving quality of the fiber is poor</li> <li>2. Splice parameters unreasonable</li> <li>3. discharge center offset (rarely occurs)</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-cleave the fiber</li> <li>2. Repeat the ARC calibration</li> <li>3. Repeat the ARC calibration</li> </ol>
The ARC does not discharge or has scars	<ol style="list-style-type: none"> <li>1. The cleaving quality of the fiber is poor</li> <li>2. The splice parameter is too small</li> <li>3. The electrodes has adsorbed dust</li> <li>4. Running data error</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-cleave the fiber face</li> <li>2. increase the cleaning voltage; do ARC calibration again</li> <li>3. Clean the electrode with a brush</li> <li>4. Turn off and restart.</li> </ol>
The spliced area becomes thinner	<ol style="list-style-type: none"> <li>1. Splicing parameters unreasonable, splice voltage is too high</li> <li>2. Splicing overlap is too small</li> </ol>	<ol style="list-style-type: none"> <li>1. ARC calibration</li> <li>2. Increase the amount of splicing overlap</li> </ol>
splicing zone is thicker	<ol style="list-style-type: none"> <li>1. Splice parameters unreasonable, splice voltage is too small</li> <li>2. Splicing overlap is too big</li> </ol>	<ol style="list-style-type: none"> <li>1. ARC calibration</li> <li>2. Reduce the amount of splicing overlap</li> </ol>
Splicing has bubbles (usually occurred in the multi-mode fiber splice)	<ol style="list-style-type: none"> <li>1. Fiber end with burr, not flat</li> <li>2. Fiber quality is not good</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase the cleaning voltage</li> <li>2. Re-cleave fiber</li> <li>3. Replace to qualified fiber or cut off a part of the existing fiber and try again.</li> </ol>


Troubleshooting	Reason	Solutions
Splicing points have vertical shadow line	1.Fiber core does not match (type or core diameter is different) 2.Multimode fiber appear very light shadows after splicing	1.use the same type fiber on left and right side 2.it's normal, will not influence the fusion quality.
Fiber in screen is dislocation	1.Fiber not enter the V-groove completely 2.V-groove is dirt	1.Re-place the fiber 2.Clean the V-groove with alcohol and brushes
The image is on the top or bottom of the display	1.V-groove is dirt 2.Fiber not enter the V-groove	1.Clean the V-groove with alcohol and brushes 2.Re-place the fiber
The image is blurred	1.Fiber not enter the V-groove 2.V-groove is dirt	1.Re-place the fiber 2.Clean the V-groove
Cleave can not cut off the fiber	1.Cladding layer is not stripped 2.Cladding layer stripped too short and the rubber pressure on both sides of the blade did not compress the fiber 3.The cutting point of the blade becomes blunt or broken	1.Use a Miller clamp to peel off the cladding 2.The length of the stripped cladding should be longer than 30 mm 3.Loosen the retaining screw in the middle of the blade and turn the blade at an angle

### VI: when you use the machine, normally it may happened the below problem:

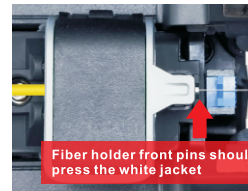
Fiber Splicer is precision machine, when you daily use the machine, please avoid the dirt get into the machine, and keep daily clean of the machine.

1. Fiber has put on the V-grooves, but the machine prompt icon shows you that fiber is not on the V-grooves



1)fiber holder is not in the initial position, press the reset button  (the left first one), then put the fiber again on the v-grooves.

2)when you put the jumper fiber on the fiber holder, the white jacket is not hold by the fiber holder, the fiber holder front end need to press the white jacket.



Fiber holder front pins should press the white jacket

2. fiber is put in the right way on the V-grooves and fiber end face is good position to the electrode tips. but machine still remind you the fiber put too long.

1)check the display is there dirt display in the screen page. if have then we need to clean the outside lens which is below the electrode. if the display still show the dirt on the screen, then please contact after sales service.

2)when the lens is fog also will happened this, then we need to clean the outside lens which is under the electrode, and you can use the hair dryer to blow the lens to remove the fog.

**3. fiber has aligned but it didn't process the fiber fusion.** It remind you to press the start button(the left second one) to continue the fiber fusion process.

1) if the screen show you the fiber end face error icon, then you need to re-cleave the fiber again.

2)If the screen didn't show any error icon, then check the function of the "Splice process pause". turn off it, it will auto process fiber fusion again.

[APP Page: Fiber Splicing Set->Function Configuration->Splice process pause]

### 4. focus failure

1)clean the outside lens which is under the electrode. Clean the V-grooves. Then press the reset button(the left first one).

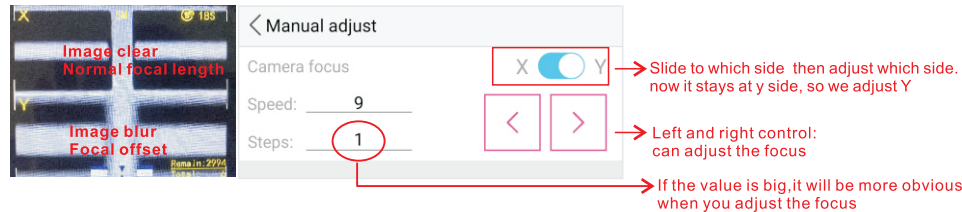
2)Do machine self-checking, check that is there any error of the "focusing motor" error.

### 5.machine show you error icon:

Left and right side fiber is different types fiber, need to change to same type fiber to do the fiber fusion process.

Also if you thought that doesn't matter and your project can permit the different type fiber, then you can press the start button (the left second one) to continue the fiber fusion.

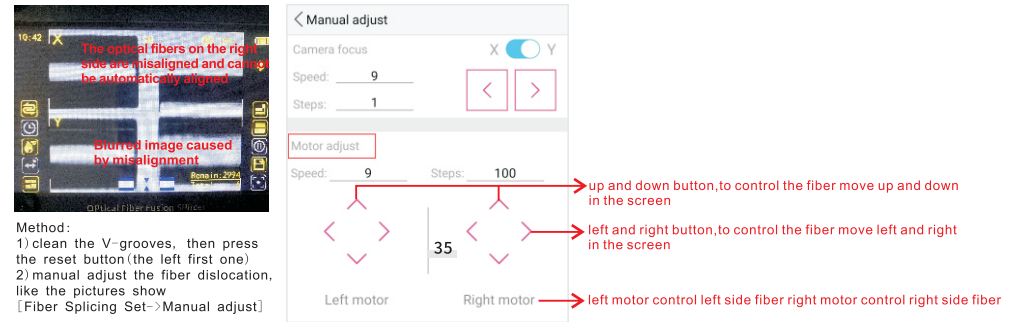
## 6.fiber is blur in same screen(X or Y screen)



### Method:

- ① get into app and connect the machine, turn on the function auto focus [Fiber Splicing Set→Function Configuration→auto focus], save it. And then open the wind cover and close it, check the machine can it make the fiber show clear.
- ② If above can not solve it, then we turn off the auto focus, get into the page of the manual adjust[Fiber Splicing Set→Manual adjust], like the picture show you.
- ③ Do machine self-checking, check that is there any error of the “ focusing motor” error.

## 7.Fiber all show in the screen but one side fiber is dislocation, X or Y screen one of them show the fiber blur.



## 8.fiber fusion quality is high loss

There are many reasons will make the High loss of the fiber fusion: machine status, machine discharge level, fiber end face quality, is the fiber clean, is the fiber's type same, fiber quality, and the fiber tension status.

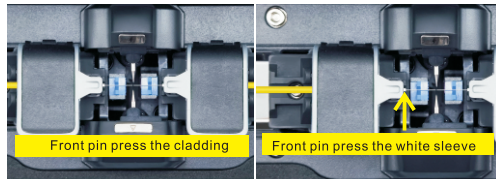
### Method to solve the high loss of the fiber fusion:

- 1) check that did the fiber fusion make the high loss. You can use a jumper fiber to do a test of the fusion loss: test the initial jumper fiber loss with OPM, then cut the jumper fiber and do a fiber fusion on it, then test again the loss of the fiber fusion. If the loss change too much, then we do the follow steps to check the fusion problem.
- 2) clean the V-grooves, clean the outside lens which is below the electrode, clean the electrode tips. After you have done the clean job, then we do an arc calibration until the machine remind you the arc calibration is succeed.
- 3) Pay attention to the fiber clean: after removing the fiber cladding, please clean with alcohol cotton, then cleave the fiber end face good (no burr and flat end surface), when you put the fiber on the V-grooves, fiber end face please don't contact the V-grooves.

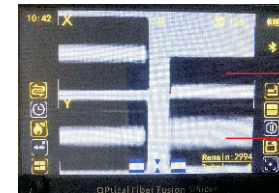
- 4) Left and right side fiber, we recommend you to use the same type and specification fiber to do the fiber fusion.
- 5) Adjust the cleaver in good condition, so that we can low down the fiber end face influence.
- 6) Fiber fusion has done but the fiber will break in the near future and fusion has a high loss:
  - ① Please clean the V-grooves and the electrode tips, do an arc calibration until it reminds you the arc calibration is succeed.
  - ② Adjust the heating oven heating time
    - If the heating time is short, the sleeve will slide and can not protect the fusion point.
    - If the heating time is too long, will make the sleeve to extruded fiber then make the fiber hurt which we can not see.
  - ③ when you heat the protection sleeve after you have done the fiber fusion of Drop Cable Fiber, please use double steel wire protection sleeve.
  - ④ when you heat the protection sleeve, please don't tight the fiber too hard, take the fiber normally into the heating oven.

### 9 spliced fiber is easy broken

- 1) Broken from the fusion point, that means the arc-discharge is not suitable for the local environment, please clean the electrode tips, clean the outside lens which below the electrode, clean the V-grooves then do an arc calibration until it reminds you succeed.
- 2) if fiber broken from the fiber holder front pin. Then we need check that did the fiber holder front pin press the fiber where the cladding has removed. Make sure that fiber holder front pin should press the jumper fiber white sleeve, should press the bare optical fiber cladding.



Frequently remind you need to cleave the fiber again, remind you that machine can not recognize the fiber1)fiber end face is not good, please check the fiber cladding did it have been removed, remember to clean the fiber, and check the cleaver did it well work.  
 2)Fiber is blur and give you the error remind: like the fiber is dislocation, focus is blur.(Solution please check previous content)



There is a lot of fiber misalignment on the right side, which cannot automatically align the core

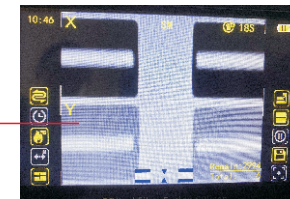
Image blurring caused by misalignment



Normal focal length Clear image

Focal offset Image blur

3)Lens have fog and dirt on it, make the machine misleading the error. Or you can see one of the screen display is a little white. Solution:wipe the lens or use hair dryer to blow dry.



The fiber focus is same like Y side but the X screen shows more dark and blur

## **FCC STATEMENT :**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

**Warning:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

## **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.