



**NEW**  
Product  
LAUNCH

# AI-30

## THE FOURTH GENERATION TRUNK LINE OPTICAL FIBER FUSION SPLICER

*Built-in high precision*

*Delay return electric one-step fiber cleaver*



Higher precision motors

Clearer lenses

More powerful chips

More efficient algorithms

More accurate fiber core recognition

Accurate of fiber alignment:  $0.05\mu\text{m}$

# Full link integration design

## Highly integrated

The AI-30, the fourth generation fiber fusion splicer developed by Signal fire, is the latest generation of fiber fusion splicer designed for full link integration. It combines Signal fire's latest research and development of a delayed return electric one-step cleaver with fiber fusion splicing, while integrating OPM and VFL functions. Combined with a nine in one signalfire fiber stripper, a combinable workbench and worktable, it truly becomes a compact, lightweight, and easy to operate fiber fusion splicer, which will greatly improve your work efficiency.



SIX MOTORS



FIBER CORE  
ALIGNMENT



6S SPLICING



15S HEATING



WITHIN OPM  
FUNCTION



WITHIN VFL  
FUNCTION



DELAY RETURN ELECTRIC  
ONE-STEP FIBER CLEAVER



SIGNAL FIRE  
STRIPPER



# Humanized design meets different Construction environments



Compact and portable



Climbing high is also easy



Bench+support platform



Can be used as a bench



Host support /protection console



Equipped with signal fire stripper



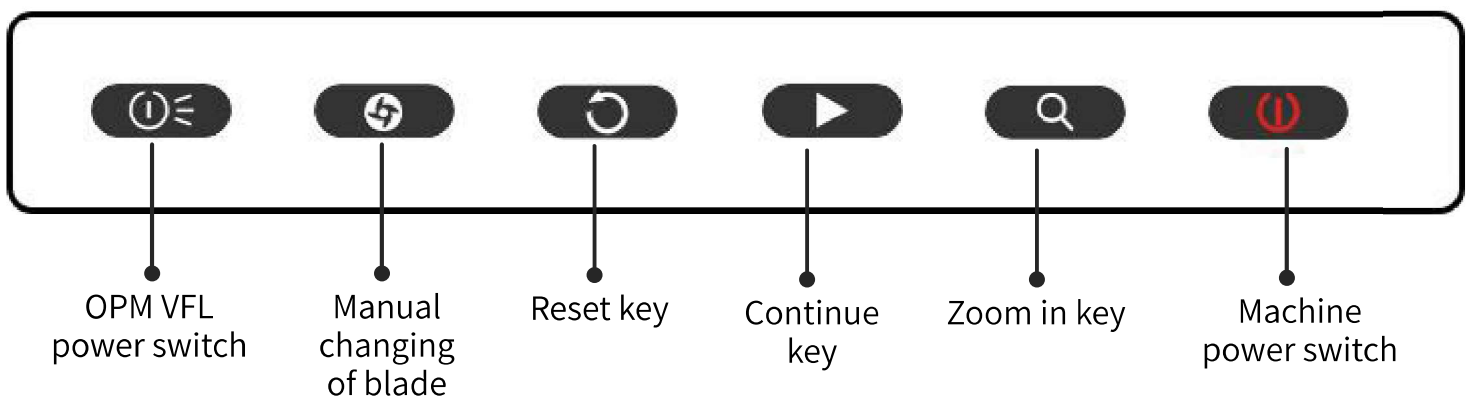
Signal fire AI-30 fusion splicer applies multiple of the latest patented technologies of Signal fire, and adopts a more advanced central processing unit, more advanced algorithms, and higher precision cameras. Especially, the AI-30 fiber core is clearer and more visible, and the fusion loss and stability are better. It is fully capable of longer distance mainline fiber optic cable fusion splicing projects. The weight of bare machine, tool case and complete set of accessories only 4.5kg, size of tool case is 25.5cmx16.5cmx23cm. In such a compact and compact situation, the combination design of workbench and bench has been achieved simultaneously. 1 second startup, 6 seconds rapid fusion, 15 seconds heating, 5-inch color high-definition LCD screen, 320x magnification, 7800mAh large capacity lithium battery can fuse and heat 240 cores, still performs well in harsh environments such as high altitude, dry, and cold.



# Exquisite craftsmanship High standard design

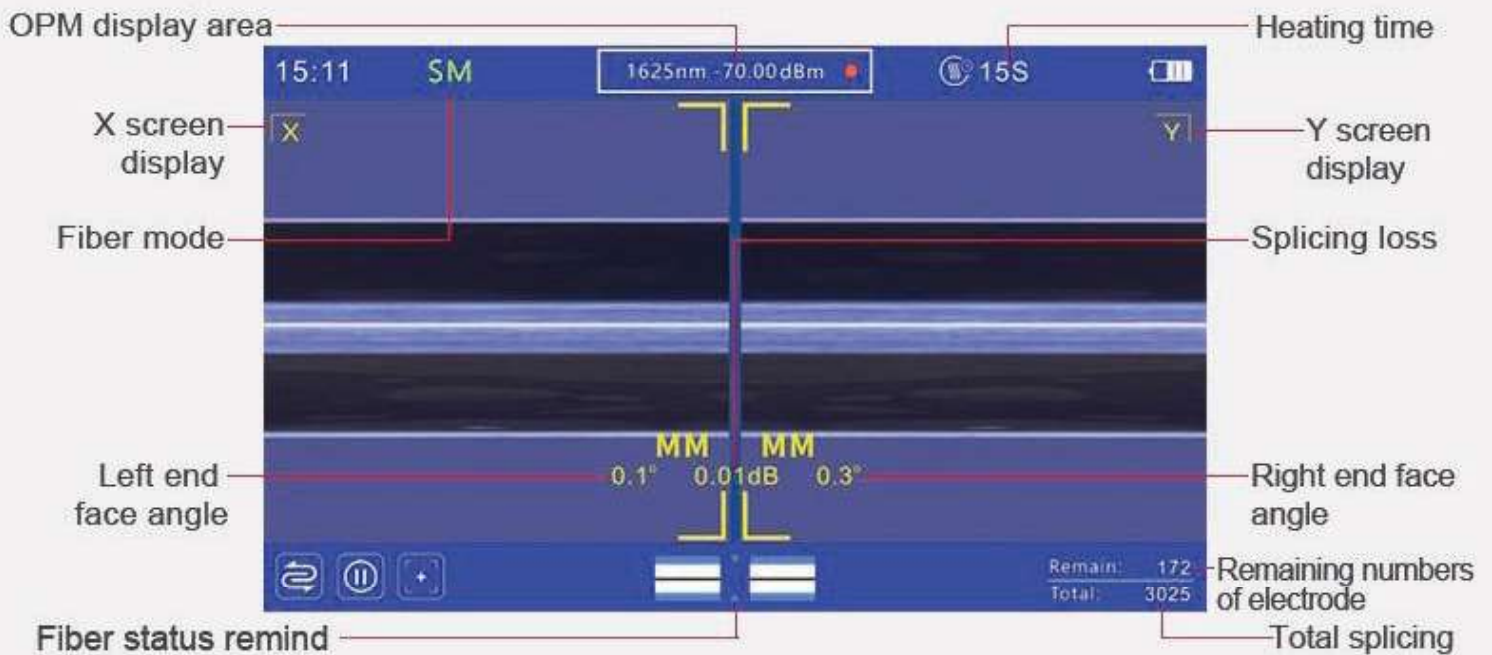


## The buttons are clear and beautiful



# Display 5 inch TFT color display screen

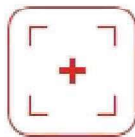
320X (X or Y axis single display) 200X (X and Y axis dual display)



Camera failure



Core align failed



Focus failed



ARC calibration failed



Left and right fiber does not match



The lens is foggy or foreign body interference

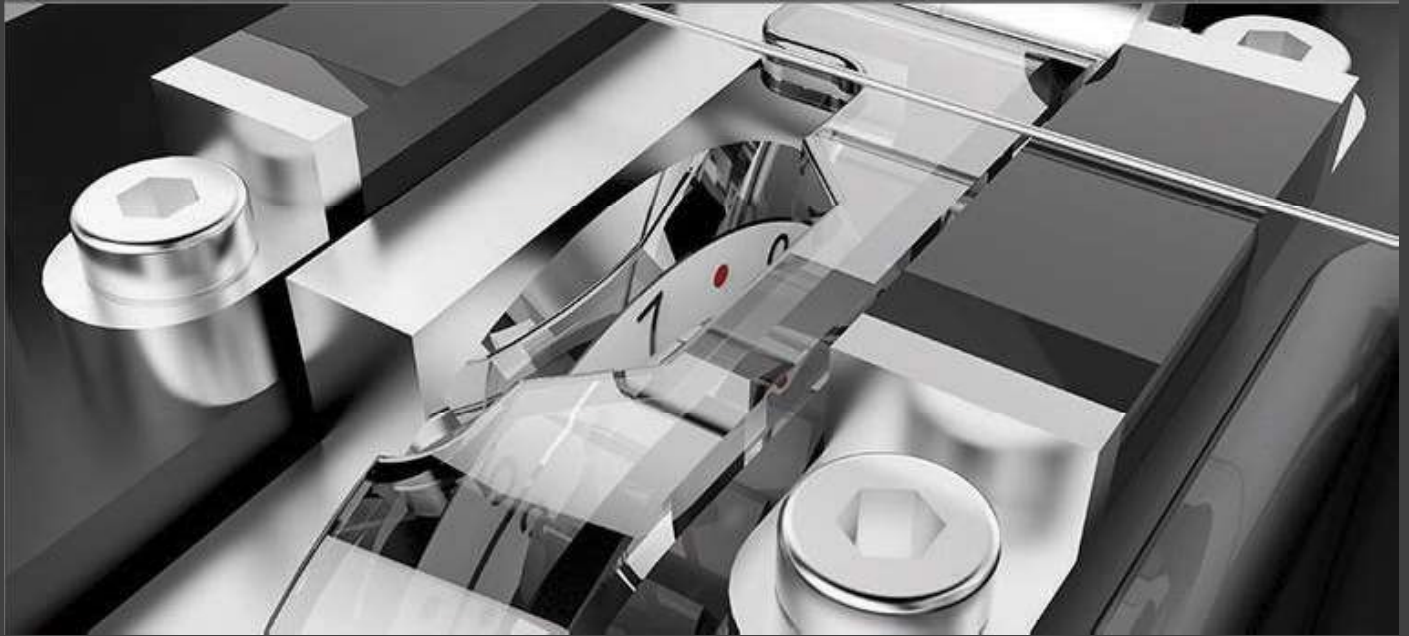


# Built-in high precision delay return electric one-step fiber cleaver



Signal fire new generation fiber fusion splicer has significantly reduced the actual weight and volume of the entire equipment by reducing auxiliary tools and improving the automation level, ultimately achieving a true improvement in fusion quality and efficiency. This is the fourth generation fiber fusion splicer that we first launched, and the core is full link integration design, highly integrated.

# Blades surface automatically manually change delayed cleaver return



## AUTOMATIC CHANGE

Cleaver blades surface automatically change when the current cutting point cut fiber more than 1000 times and continuously shown three times unqualified cutting results.

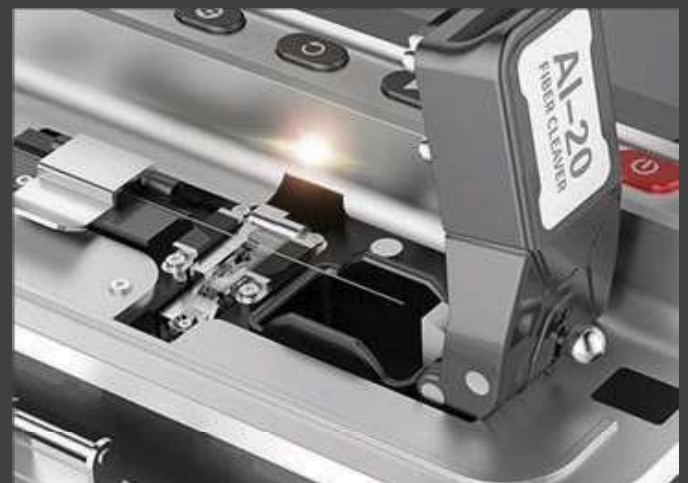
## MANUAL CHANGE

Manual button operation, cleaver blades surface will change. Cleaver has 24 cutting points in total, current cutting point cut numbers, blades total cut numbers, Available within the APP.



## AUTOMATIC DELAYED CLEAVER RETURN

Perfectly solves the problem of traditional mechanical one-step cleaver back cutting scratching the fiber end face. The factory standard delay time is set to 0.5 seconds, and the adjustable range is 0.2 seconds to 2 seconds.



## CLEAVER LED AUXILIARY LIGHTING

Brightness can be adjusted through APP.



# APP Bluetooth connection

< System parameters Save

Blade change stroke  Value range 10 ~ 100

Cutter face change stroke  Value range 10 ~ 100


Cutting speed  Value range 1~5

Return blade delay  ms Value range 200 ~ 2000ms

Blade usage details and rotating blade face >

Replace the blade >

How to adjust blade height >

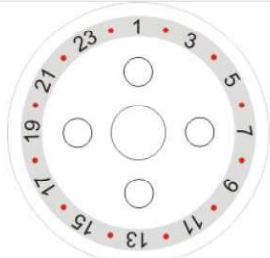
LED brightness adjustment 

< cutter setting

Total number of cuts 12598

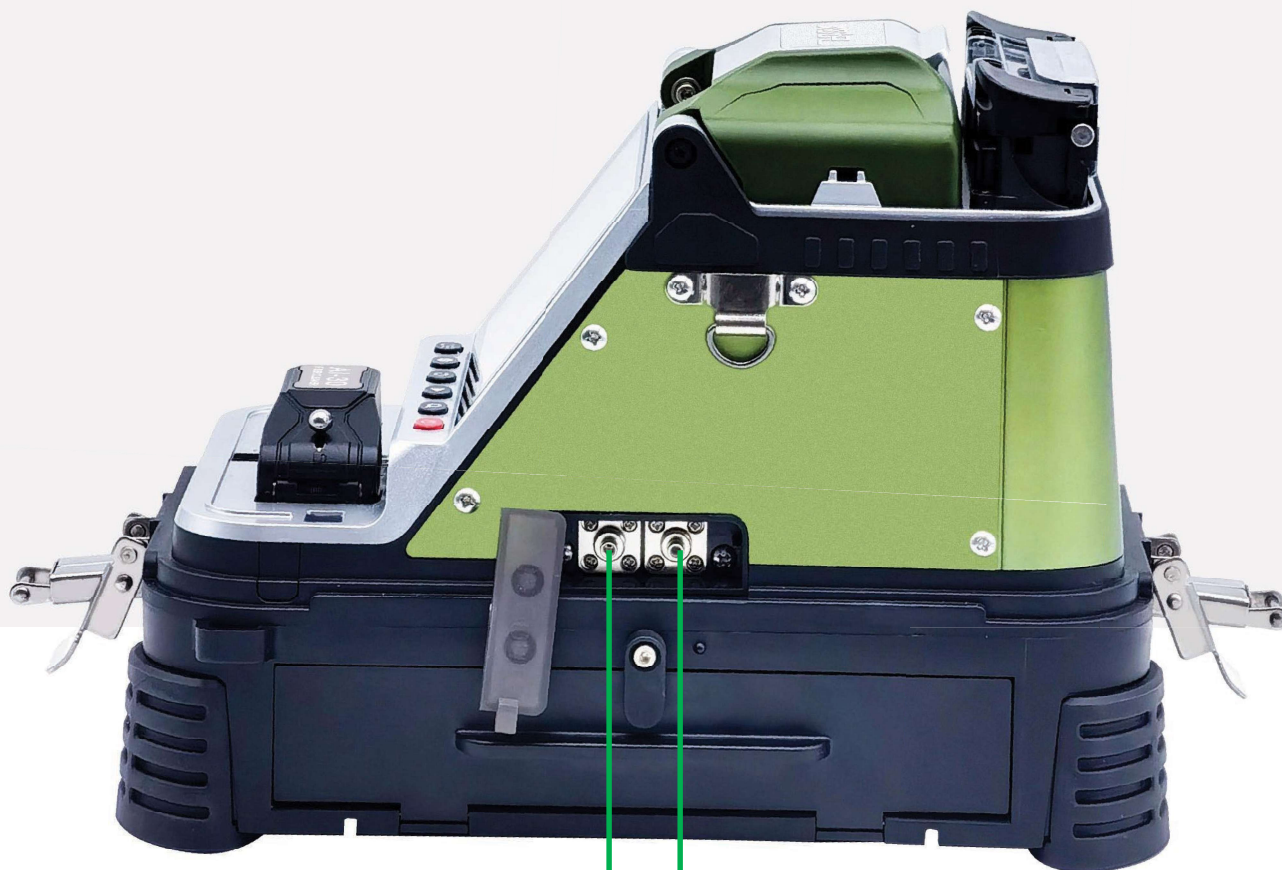
Number of times the current blade has been used: 2610

Current point: 5



# Built-in VFL and OPM function

Measure fiber link loss/luminous flux  
Fiber line tracking, breakpoint/light leakage detection



**OPM**(Measurement range: -50+30dbm)

**VFL**(10km)

**OPM**

**Switch between ten states**

Wavelength: 850nm、1300nm、1310nm  
1490nm、1550nm、1625nm、980nm  
1270nm、1577nm、1650nm

**VFL**

**Switch between three states**

power: 15mW, 2Hz flashing and steady on mode

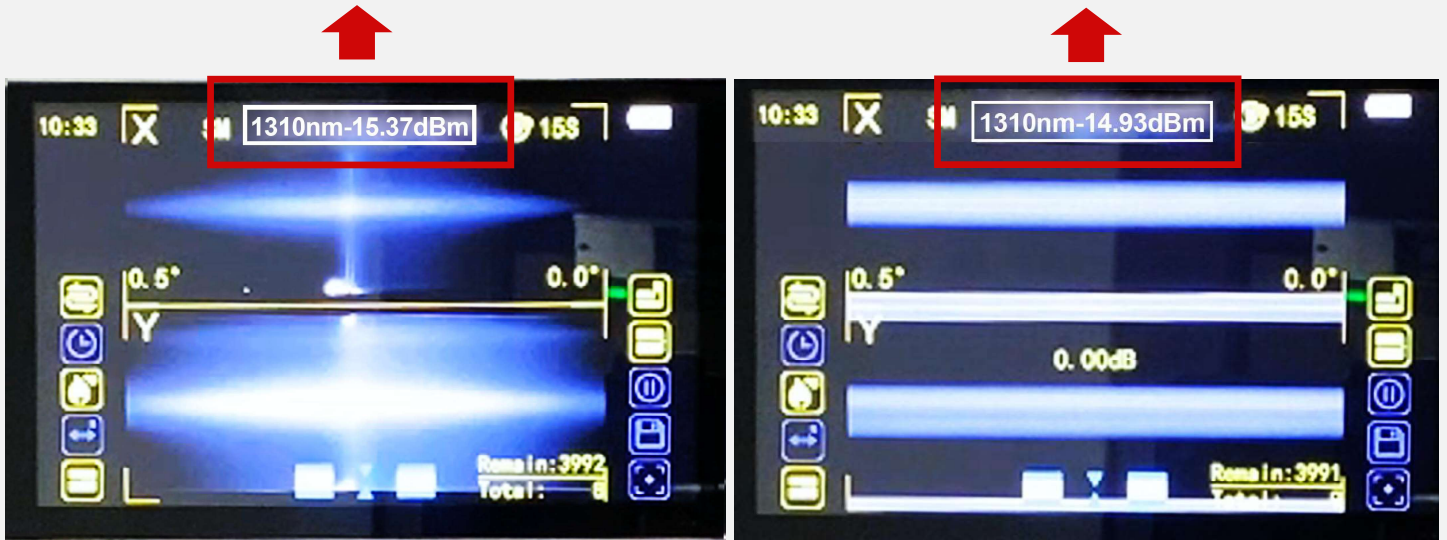


# Real-time luminous flux assisted alignment

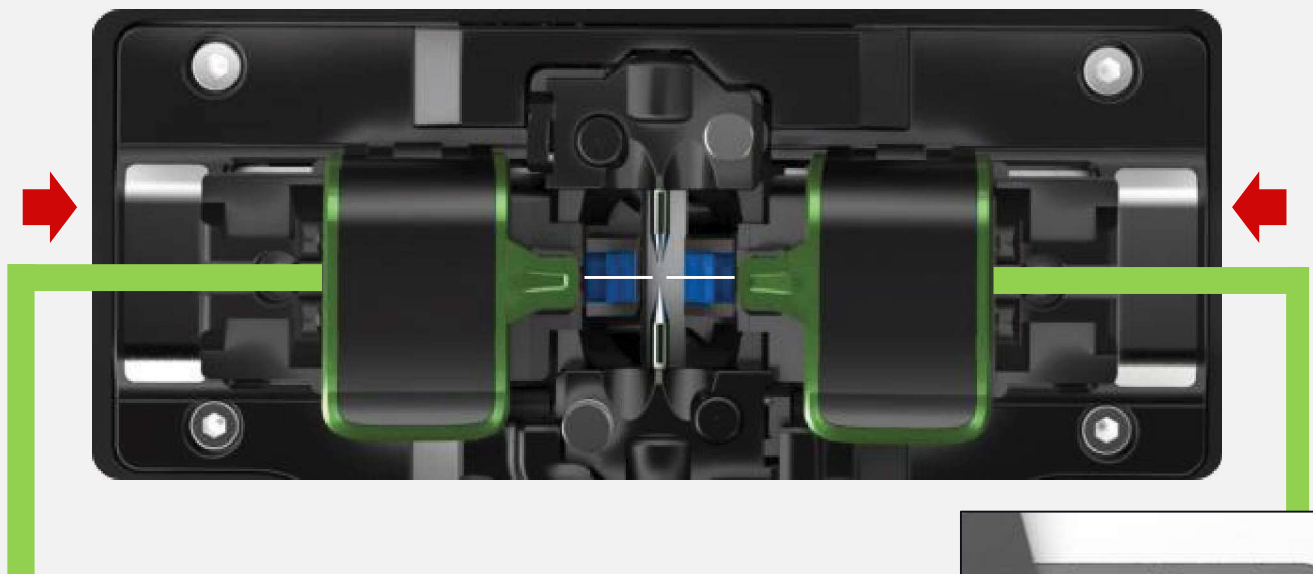
Only applicable to environments with stable optical signal link from front

Intelligently analyze the alignment point with the lowest splicing loss and then splice the fiber

Splicing is completed



Real-time luminous flux assisted alignment technology developed by Signalfire, which intelligently analyzes the alignment point with the least loss to minimize the fiber fusion loss.



Optical fiber on the left which is stable optical signal link

Optical Fiber on the right with fast connector which has plugged to OPM Port

# Equipped with signal fire stripper



## A GOOD STRIPPER NINE FUNCTIONS

- kevlar scissors
- Three-port Miller stripper
- 5G FTTH Drop cable
- Both regular FTTH Drop cable
- FTTH Drop cable steel wire pliers
- Rotary ruler
- Cleaning cotton

# Signal fire stripper

## 5G FTTH Drop cable

Caliber: 2mm x 1.6mm

## Both regular FTTH Drop cable

Caliber: 3mmx2mm

## Rotary ruler

## FTTH Drop cable steel wire pliers

Can not cut FRP steel wire/else steel wire  
Blade maybe will scratch and have trace,  
It's normal and will not influence you to use it  
If you are care about this, Then please buy with cautions.

## kevlar scissors

(prohibit cutting steel wires)

## Three-port Miller stripper

## Cleaning cotton





# 7800mAh lithium battery

## Dual charging path

In full state, 240 cores can be continuously fused and heated



### Charging channel ①

Input voltage :  $13.5 \pm 0.5V$

Input current : 4.8A

### Power indicator light Charge indicator light

Indicator light turns off when fully charged

### Press to check the power level

### Press to popup the battery

Press the button and the battery will pop up slightly Can charge the battery separately

### Charging channel ②

Charging time  $\leq 3.5$  hours

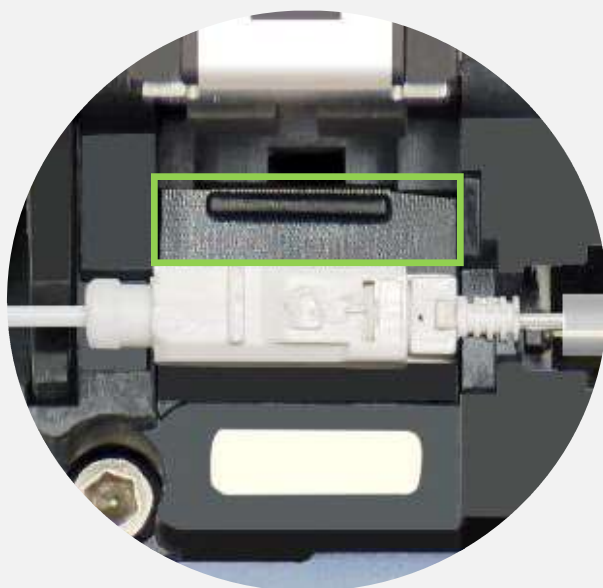
# 15S automatic heating



## Preheating

Successful fiber spliced. When opening the windproof cover to take out the fiber, the machine turns on pre heating for up to 6 seconds

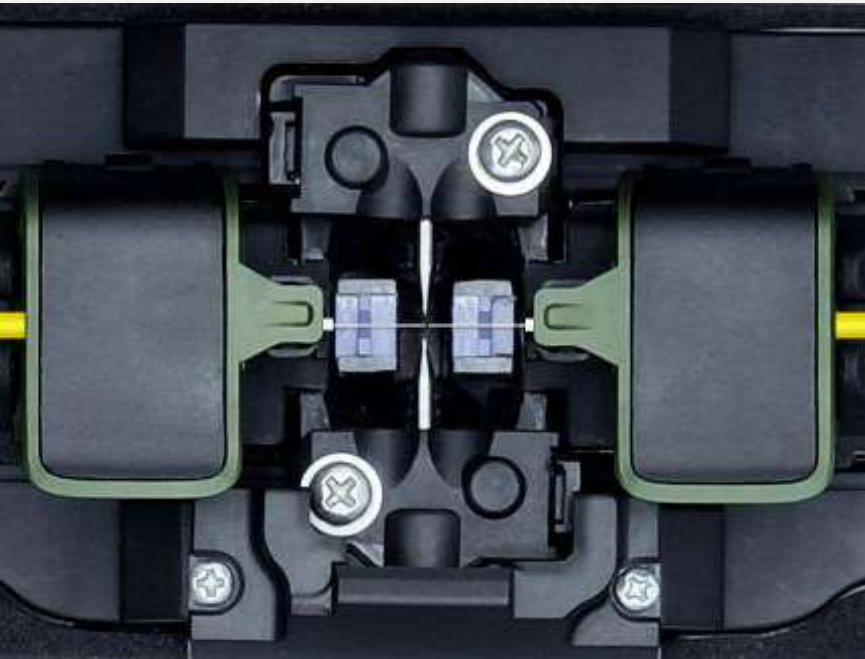
## Heating part automatic lid closing



## Heating part compatible with SC fiber

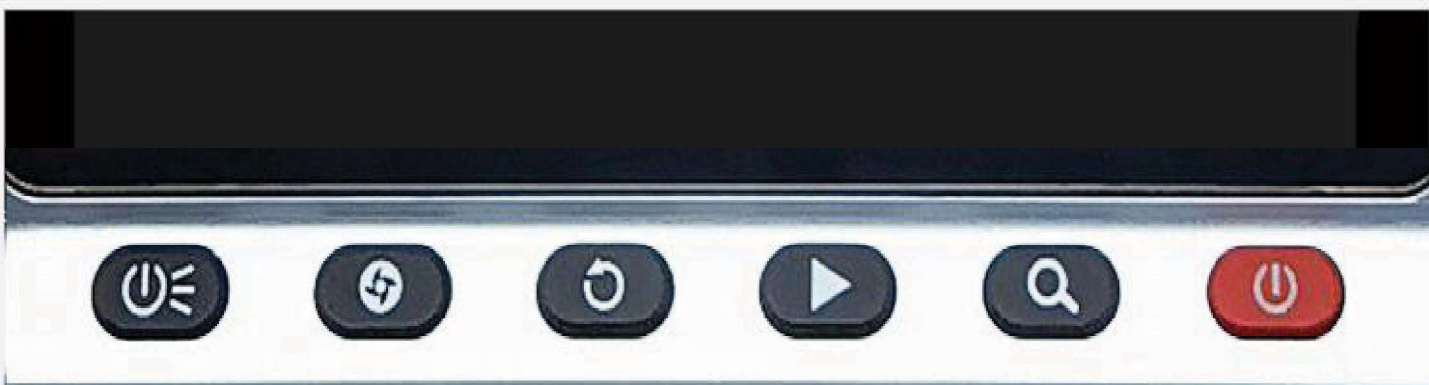
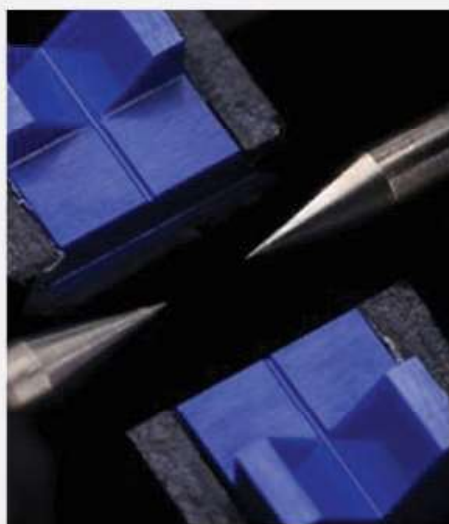
SC Fiber: Push up

Ordinary fiber: Push down



# 3-IN-1 UNIVERSAL FIBER HOLDER

SM, MM, bare fiber, pigtail,  
Drop cable , multi fiber cable



## EXQUISITE DETAILS

THE BUTTONS ARE CLEAR AND BEAUTIFUL



**COOLING RACK  
EXPANDABLE  
AND CLOSABLE**



**ULTRA THICK  
PROTECTIVE  
RUBBER PAD**

Thickened buffer structure  
provides maximum protection





# Outdoor fiber splicing Compact and portable



Bench+support platform



Compact and portable



Combination hanging chain  
Climbing homework



Compact and easy to carry

# 10 languages available

Multilingual Settings, covering the global market



**Chinese**



**English**



**French**



**Russian**



**Italian**



**Portuguese**



**Polish**



**Spanish**



**Thai**



**Arabic**

## Exported to nearly 100 countries and regions worldwide

Get unanimous praise from customers!





# Basic parameter

<b>Fiber alignment</b>	Core/cladding; Real-time luminous flux assisted alignment (Only applicable to environments with stable optical signal link from front)
<b>Motor number</b>	6 motors <b>Accurate of fiber alignment :0.05μm</b>
<b>Splicing time</b>	6s
<b>Heating mode</b>	15s, can be customized according to the external environment
<b>Fiber type</b>	Single-mode fiber (SMF/G.652), BIF/G.657); Suitable for single mode, multi-mode, bare fiber, tail fiber, drop cable, jumper, invisible optical fiber.
<b>The cladding diameter</b>	80-150μm
<b>Splicing loss</b>	0.02dB (SM) 、 0.01dB (MM) 0.04dB (DS/NZDS)
<b>Splicing mode</b>	Automatic focusing core alignment, conventional/high precision splicing
<b>Splicing way</b>	Automatic, semi-automatic,manually
<b>Fiber cleaver</b>	High precision delay return electric one-step fiber cleaver
<b>Fiber holder</b>	Three in one fixture, no need to change, suitable for single/multi-mode, multi-core cable/bare fiber, tail fiber, jumper fiber,drop cable
<b>VFL</b>	The machine comes with power: 15mW, 2Hz flashing and steady on mode
<b>OPM</b>	Wavelength: 850nm、 1300nm、 1310nm、 1490nm、 1550nm、 1625nm、 980nm、 1270nm、 1577nm、 1650nm/Measurement range: -50+30dbm Absolute error: <0.3dB (-50dbm ~+3dBm range)
<b>Battery capacity</b>	7800mAh large capacity lithium battery charging time ≤3.5 hours; It can continuously weld and heat about 240 cores
<b>Magnification</b>	320x (X or Y axis single display) , 200x (x and Y axis dual display)
<b>Fiber diameter</b>	Coating diameter: 80-150μm/Coating diameter: 100-1000μm
<b>Cutting length</b>	Coating layer 250μm below: 8-16mm/coating layer 250-1000μm: 16mm
<b>Heat shrink tube</b>	60mm、 50mm、 40mm、 25mm
<b>Tensile testing</b>	standard 2N
<b>display</b>	5 inch TFT color display screen
<b>Boot time</b>	1s, boot can enter the working mode
<b>Data is stored</b>	Unlimited, machine storage 1000 groups, the excess part can be stored in the server, can export data.
<b>Wireless communication</b>	Based on bluetooth 4.2 protocol standard, the working band is 2.4GHz, the maximum transmission range is 60m
<b>Software upgrade</b>	Mobile phone APP Internet update, enable Bluetooth synchronization upgrade machine software
<b>Management function</b>	The equipment owner can be bound as the highest authority, and can remotely view the splicing records, splicing time, loss, etc. through the mobile phone APP. The number of splicing times or working time of the equipment can be set. The manager can effectively manage a single or multiple equipment.
<b>Return loss</b>	Better than 60 db
<b>Product protection</b>	Waterproof, dustproof and fall proof
<b>Power supply</b>	Input AC100-240V 50/60Hz, output DC13.5V/4.8A, the current power mode can be identified, real-time monitoring of the current battery level
<b>The work environment</b>	Temperature: -15 ~ +50°C, humidity: < 95%RH (no condensation), working altitude: 0 ~ 5000m, maximum wind speed: ≤15m/s

# Accessories in the tool box



- ① Toolcase
- ② Fusion splicer
- ③ Spare electrode
- ④ signal fire stripper  
(Including a bag of cleaning cotton)
- ⑤ Alcohol bottle
- ⑥ Cleaver cleaning cotton swab
- ⑦ Allen wrench
- ⑧ Brush
- ⑨ Climbing combination hanging chain
- ⑩ Toolbox strap
- ⑪ Belt
- ⑫ Power adapter
- ⑬ User's manual / Quality Certificate / Warranty Card / Fiber for ARC

## Size and weight



### Machine size

165mm x 255mm x 185mm

### Machine weight

3.09kg



### Toolbox size

165mm x 255mm x 230mm

### Weight of toolbox

**(complete set)** 4.50kg



### Total size

340mm x 255mm x 325mm

### Total weight

5.50kg

## SERVICE COMMITMENT

**Five years warranty, but these circumstances are not within the scope of this provision.**

**01.** Except for the cleaver, Signal fire stripper, fiber holders and other tools whose life depends on the frequency of use and the use of the environment. Also electrodes are consumption material which are not in the warranty.

**02.** Battery and power adapter are warranty for one year, it is in free warranty where it is damaged or can not be charged in one year.

**03.** Electrodes are consumables, the service life of each pair of electrode is 4000 times.





## Bluetooth Connection

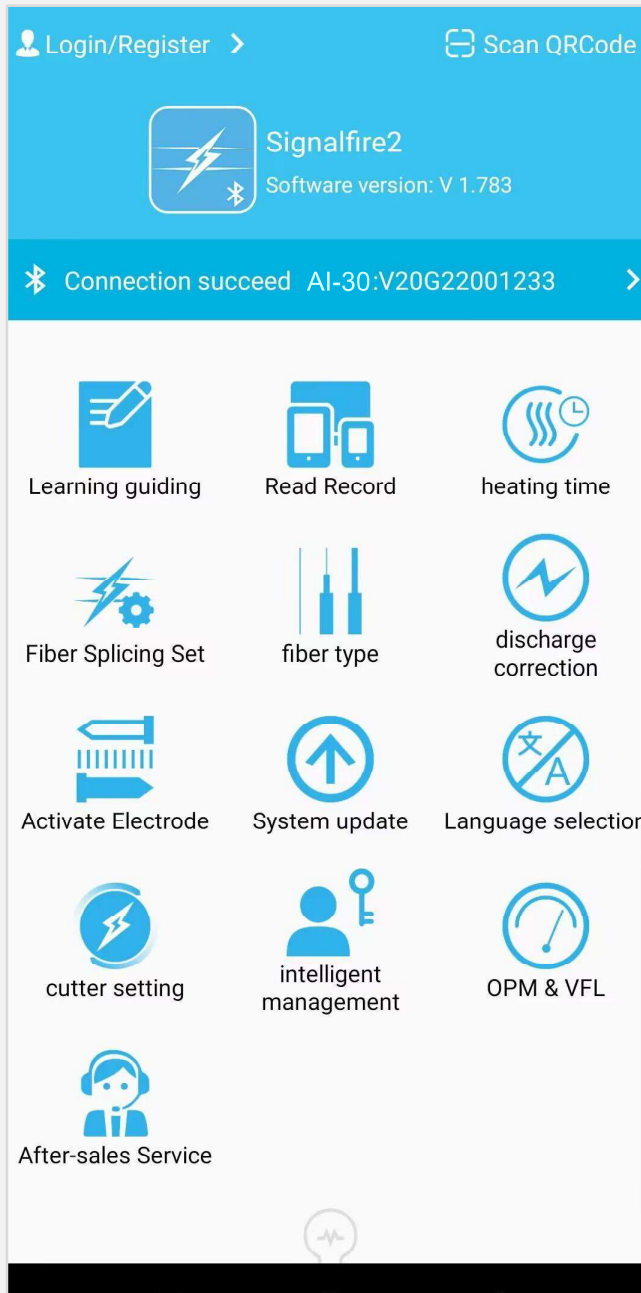
Establishing wireless communication through Bluetooth technology to achieve data transmission



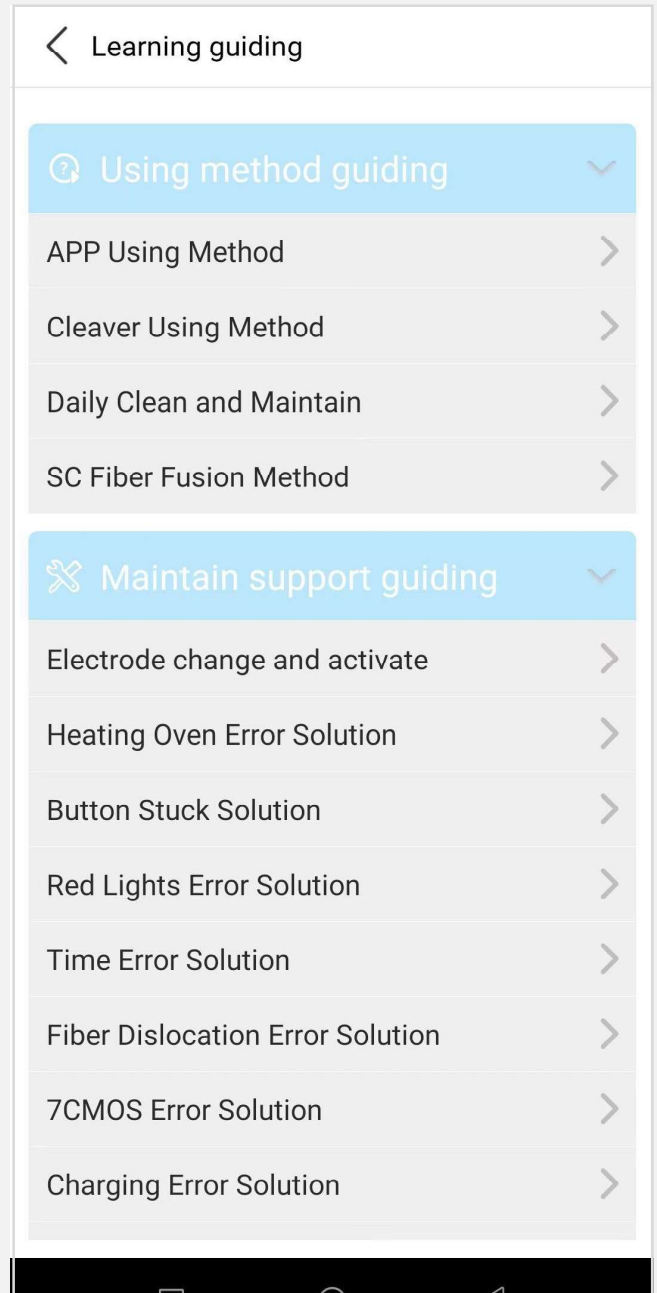
- Welding record can be read through mobile phone, and the data can be exported;
- You can set the parameters of the welding machine, such as selecting the machine language, changing the heating time, selecting the fiber optic alignment mode, etc;
- You can manage the welding machine, such as setting the use time of the machine, welding times, etc;
- Upgrade the phone APP, bluetooth connected to the machine to upgrade the machine software;

# Intelligent interaction, avoid tedious

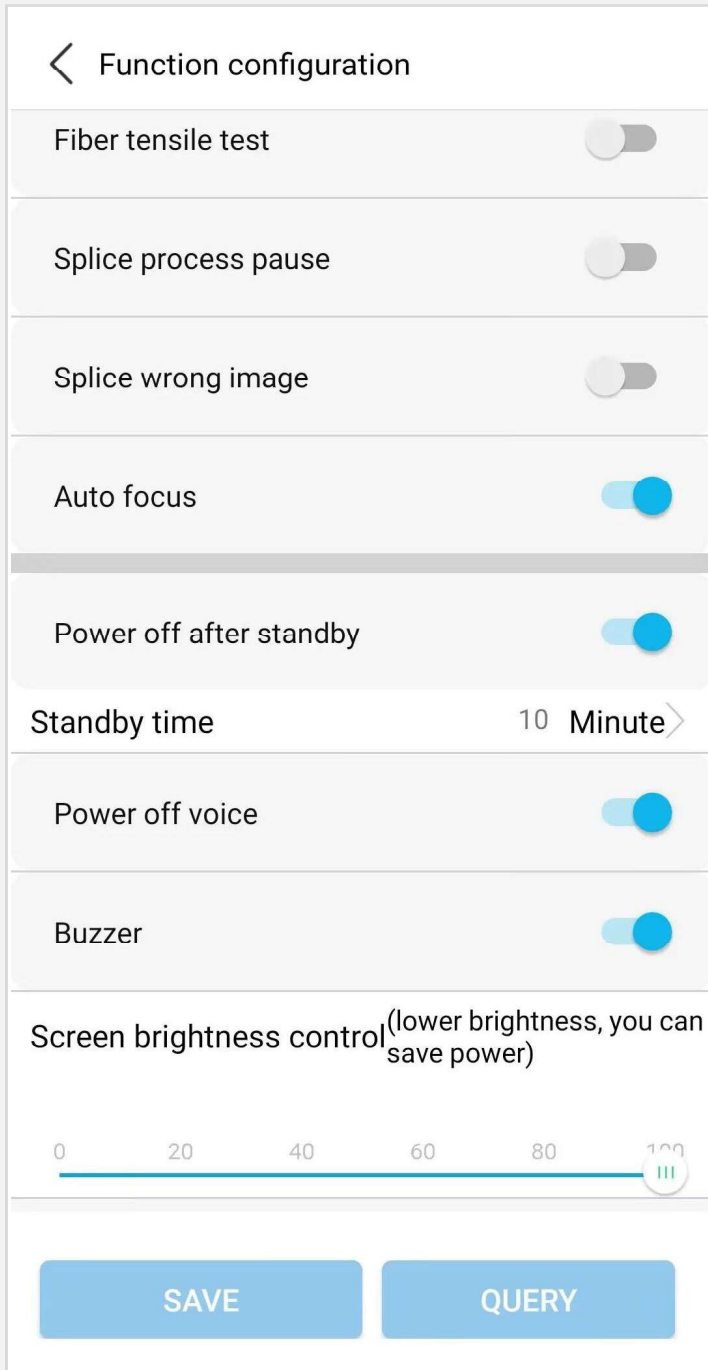
Scan the QR code of the welding machine startup screen to download the Mobile APP. The phone connects to the splicer via Bluetooth.



APP main interface

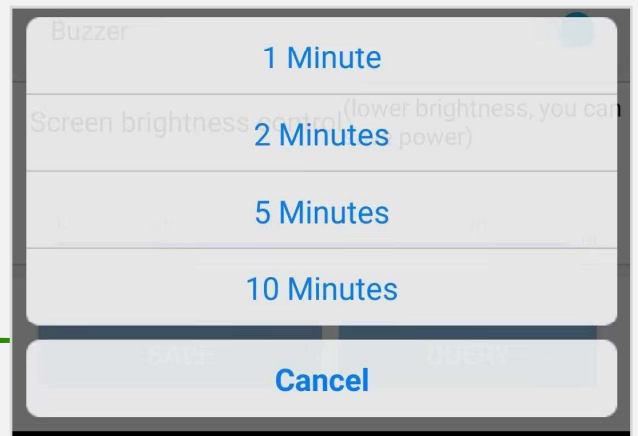


Learning guidance interface



### Energy saving mode

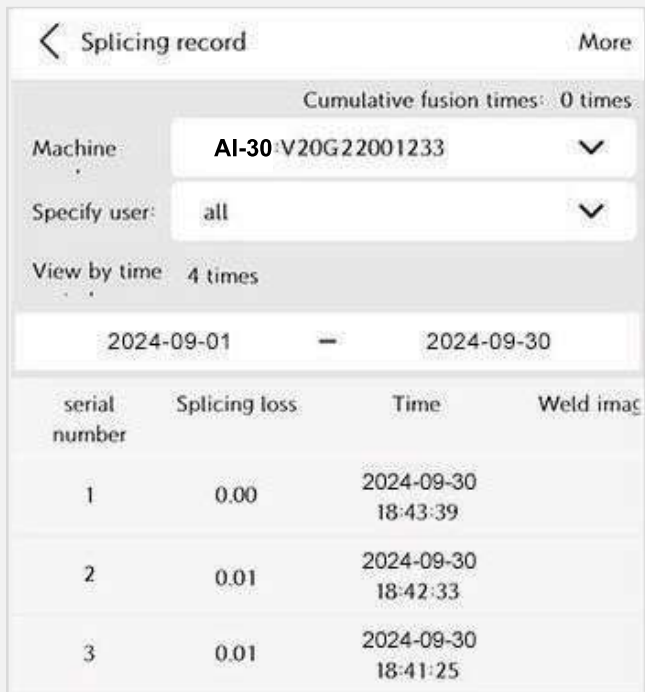
Automatic shutdown of the machine without any action within the set time



After it is opened, there will be voice prompt in the whole process from fiber laying, fiber matching, welding and loss value. In case of unqualified items, it will be directly informed.

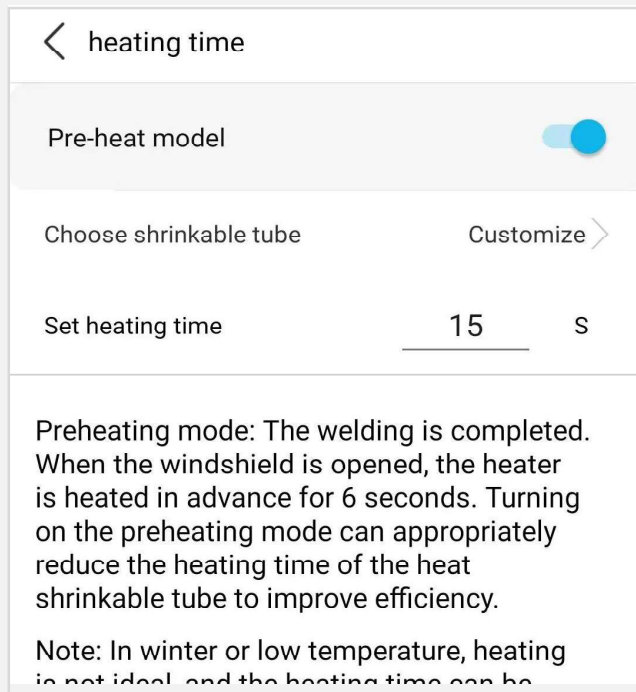
Adapt to bright light, dark and other different outdoor environment





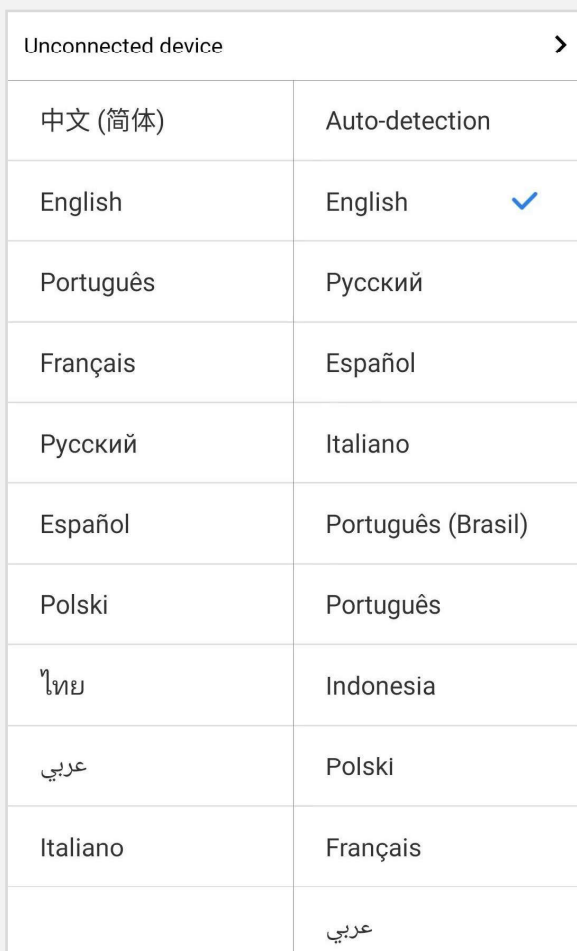
**Splicing records can be downloaded and exported**

Unlimited storage of splicing records  
Can be viewed on mobile devices

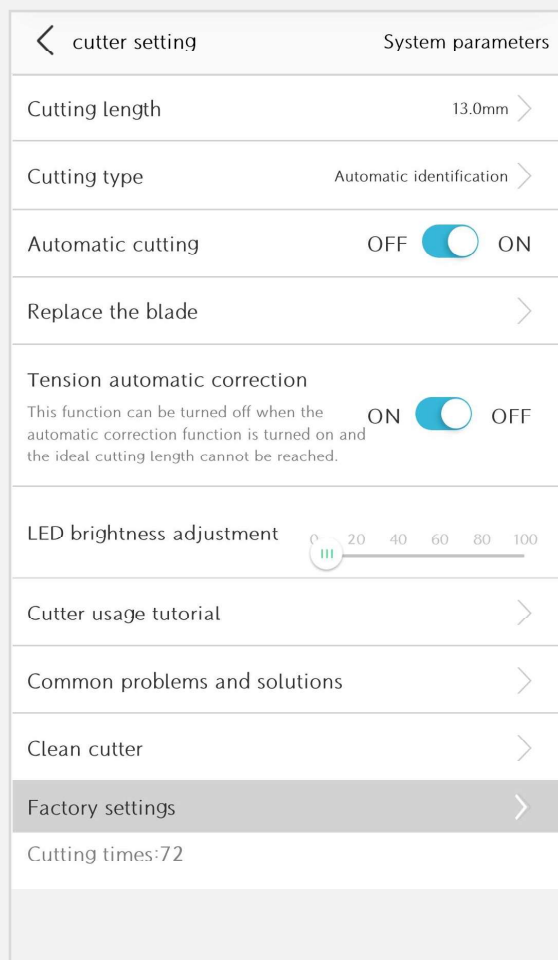


**Heating time customization**

Extreme cold/high temperature can be extended or shortened appropriately



**Fusion splicer language/  
mobile app selection**



**Cleaver Parameter setting  
/adjustment**





The factory is located in Chengdu High tech International Enterprise Port, with a modern production factory and standardized office buildings. We have passed the ISO9001 international quality management system certification, and our products have passed the EU CE, ROHS. International certifications such as FCC in the United States and UKCA in the United Kingdom have been passed by the National Institute of Quality Supervision and Inspection, China Academy of Information and Communications Technology.











The qualified testing of Taier Laboratory has obtained nearly a hundred domestic and international patents at the same time. The "Signal Fire" series products have been sold to over 100 countries and regions including North America, South America, Europe, Africa, and Asia, and have received unanimous praise from customers.



# Operator winning bid brand

Telecom installation  
and maintenance  
skills competition,  
Signal fire fusion  
splicer excellent  
performance, won  
the group first prize



# Exhibition photos





# Intellectual property

system certification. The product has passed international certifications such as the CE, RoHS, the United States FCC, and UKCA in the United Kingdom, and passed the qualified test through National Quality Supervision Institute, China Xintong Institute, and Tel Laboratory. At the same time, we obtained nearly 100 patents.



## CERTIFICATE Of Conformity

### Directive 2014/53/EU On The Radio Equipment Directive

**Certificate No.:** AT18220WC202819  
**Certificate Holder:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
**Address:** Building 18, Chengdu Hi-Tech International Enterprise Park, Liandu U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu, China  
**Manufacturer:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
**Address:** Building 18, Chengdu Hi-Tech International Enterprise Park, Liandu U Valley, 1111 Chanasheno Bridge, Pidu District, Chengdu, China  
**Product Name:** OPTICAL FIBER FUSION SPLICER  
**Model No.:** AI-9, AI-8C, AI-6V, AI-7C, AI-8C, AI-6X, AI-7V, AI-X, 89  
**Trade Mark:** Signal fire  
**Rating:** Input: 13.5V/4.8A DC (with DC 11V, 7800mAh Battery inside)

The radio equipment meets the following essential requirements			Completed
Article 3(1)(a)	EN IEC 62368-1:2020/A11:2020	Yes	Yes
Article 3(1)(b)	EN 50663: 2017, EN 62479: 2010	Yes	Yes
Article 3(1)(b)	EN 301 489-1 V2.2.3 (2019-11)	Yes	Yes
Article 3(1)(b)	EN 301 489-1 V3.2.4 (2020-09)	Yes	Yes
Article 3(1)(b)	EN 301 489-1 V2.2.3 (2019-11)	Yes	Yes
Article 3(1)(b)	EN 301 489-1 V3.2.4 (2020-09)	Yes	Yes
Article 3(1)(b)	EN 301 489-1 V2.2.3 (2019-11)	Yes	Yes
Article 3(1)(b)	EN 301 489-1 V3.2.4 (2020-09)	Yes	Yes

Note: The attached Annex forms part of this certificate which consists of 2 pages.

Authorized by  
  
 Kingkong Jin

Date: Jan 03, 2023




Shenzhen Anbotek Compliance Laboratory Limited  
 1/F, Building D, Songpo Science and Technology Park, Genen community, 11enguheng Street, Bao'an District, Shenzhen, Guangdong, China 518128  
 Tel: (86)755-26005440 Fax: (86)755-26014772  
 Http://www.anbotek.com Email: service@anbotek.com



## CERTIFICATE Of Conformity

### Radio Equipment Regulations 2017 (SI 2017 No. 1260)

**Certificate No.:** AT10220WC202020  
**Certificate Holder:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
**Address:** Building 18, Chengdu Hi-Tech International Enterprise Park, Liandu U Valley, 1111 Changsheng Bridge, Pidu District, Chengdu, China  
**Manufacturer:** SIGNAL FIRE TECHNOLOGY CO., LTD.  
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The radio equipment meets the following essential requirements			Completed
CHAPTER 1 (General) (1)(a)	BS EN IEC 62368-1:2020/A11:2020	Yes	Yes
CHAPTER 1 (General) (1)(a)	BS EN 50663: 2017, BS EN 62479: 2010	Yes	Yes
CHAPTER 1 (General) (1)(b)	ETSI EN 301 489-1 V2.2.3 (2019-11)	Yes	Yes
CHAPTER 1 (General) (1)(b)	ETSI EN 301 489-1 V3.2.4 (2020-09)	Yes	Yes
CHAPTER 1 (General) (1)(c)	ETSI EN 300 328 V2.2.2 (2019-07)	Yes	Yes

Note: The attached Annex forms part of this certificate which consists of 2 pages.

Authorized by  
  
 Kingkong Jin

Date: Jan 03, 2023




Shenzhen Anbotek Compliance Laboratory Limited  
 1/F, Building D, Songpo Science and Technology Park, Genen community, Hangheng Street, Bao'an District, Shenzhen, Guangdong, China 518128  
 Tel: (86)755-26005440 Fax: (86)755-26014772  
 Http://www.anbotek.com Email: service@anbotek.com

TCB
GRANT OF EQUIPMENT AUTHORIZATION
TCB

Issued Under the Authority of the  
Federal Communications Commission

By:

Ray Area Compliance Laboratory Corp. Date of Grant: 02/09/2018  
 1274 Amherst Avenue Application Date: 02/09/2018  
 Sunnyvale, CA 94089

**Signal Fire Technology Co., Ltd.**  
 No.84 Qingyang Zhen, Jiangnan Industrial Park  
 Qingyang District, Chengdu, China  
 Chengdu, China  
 Attention: Jason Yang

**NOT TRANSFERABLE**

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations stated below.

**FCC IDENTIFIER:** 2E93747Y  
**Name of Grantee:** Signal Fire Technology Co., Ltd.  
**Equipment Class:** Digital Transmission System  
**Notes:** OPTICAL FIBER FUSION SPLICER

Grant Notes	FCC Rule Parts	Frequency Range (MHz)	Output Watts	Frequency Tolerance	Emission Designator
	15C	2432.8 - 2483.8	0.3004		

Output power listed as authorized.





## QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No.: 11423Q45347R2M

This is to certify that the Quality Management System of  
**SIGNAL FIRE TECHNOLOGY CO., LTD.**  
 Unified Social Credit Code: 91510100072411028D

Registered Address: No. 1111 Changsheng Bridge, Hongyuan Town, Small and Micro Enterprise Innovation Park,  
North Area of Chengdu Modern Industrial Park, Pidu District, Chengdu  
 Production Office Address: Building 18, Chengdu Hi-Tech International Enterprise Park, Liandu U Valley, No.1111  
Changsheng Bridge Road, Pidu District, Chengdu City, Sichuan Province, China

Has been audited to conform to the following Quality Management System standard  
**GB/T19001-2016/ISO9001:2015**

The Applicable Scope  
 The production of optical fiber fusion splicer

Date of initial issuance: Aug. 22, 2017  
 Date of issuance: Jul. 11, 2023  
 Date of expiry: Jul. 28, 2025

Issued by:  Beijing East Allreach Certification Center Co., Ltd.





The certificate will remain valid only if the certified organization accepts surveillance audits at regular intervals and continues to conform. The maintenance of this certificate is available at EACC website www.eacc.com.cn and CNCA's official website www.cnca.gov.cn, and it is also available by scanning the QR Code on the lower right corner.  
 Address: Floor No. 103 Building No. 11, Jingyuanmen Street, Shuang Shimen & Technology Incubator  
 East Jingyuan Park of Chengde Science & Technology Zone, Tangshan District, Beijing 101312

