

## Hand-Held Core-Alignment Fusion Splicer

### FITEL NEW Fusion Splicer

The FITEL S178A Hand-Held Core-Alignment Fusion Splicer is the latest, state-of-the-art addition to the S17x series of splicers. By combining speed, precision, durability and portability in one unit, the S178A Fusion Splicer ushers in an entirely new range of applications for core alignment splicing.

Equipped with a new alignment system that can save up to 20% splicing time, the S178A Splicer's improved heating mechanism can also reduce protection sleeve shrink time by more than 30%. In addition, a newly incorporated USB 2.0 interface speeds PC communication and image/video transfer, while enhancing reliability.



Although the S178A Fusion Splicer is significantly smaller and lighter in weight than previous models, its canopy design, durable metal body frame and rubber protection corners provide robust protection, enabling use in demanding environments without compromising splicing performance. Along with its rugged durability, the splicer also offers convenience. A new battery system allows up to 200 splicing cycles (Splicing/heating) before additional batteries are needed, and an innovative, mirror-free alignment system makes maintenance work a snap.

While the S178A Fusion Splicer is fast and durable, it continues the FITEL tradition of quality and excellence by delivering precise, accurate splicers even under rigorous conditions in the field.

The S178A Fusion Splicer is your versatile best choice for a wide range of uses including FTTx, LAN, backbone, enterprise, long-haul installations, data-center and/or OEM applications. It is also an excellent option for use in the conventional telecommunications industry, along with other industries (including oil and gas).

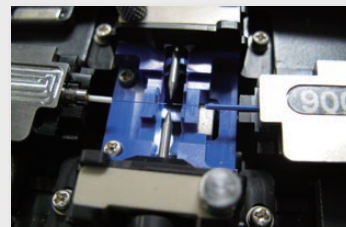
## Key features

- **Rugged and compact handheld design** endure harsh environmental conditions
- **Fast splice (7 sec)** at super low loss and Fast Heating (25 sec)<sup>\*1</sup>
- **200 cycles (Splicing & Heating)** with new battery configuration<sup>\*2</sup>
- **Available for All METRO/LAN/FTTx fibers** including ultra bend-insensitive fibers (e.g. EZ-Bend™)
- **Splicer is compatible with the Seikoh Giken and Diamond Splice-on-connector (SOC)**
- **Easy maintenance** - Easy electrode replacement /mirror free alignment system
- **Easy Software upgrade** via the internet
- **Easily exchanged fiber holder systems** (tight holder/fiber holder/SOC holder)
- **PC interface software** to allow user manage splicing recipes and splicing results
- **Auto-start** shrink sleeve oven feature
- **Improved GUI** to further enhance ease-of-use
- **Large memory** for storing data (2,000 splice data) and image (100 images)
- **RoHS compliant**

<sup>\*1</sup> By using semi-auto mode for splicing and pre-heating mode for heating.

<sup>\*2</sup> By using 2-batteries, semi-auto mode for splicing and regular made for heating.

### Compatible with Splice-on-connector (SOC)



### FITEL Splicer SOC partners



## Under Tough Environment

S178A passed criteria as below <sup>\*3</sup>;

- **Drop Resistance** - 76 cm Drops from 5 different angles
- **Water Resistance** - IPX2 rating drip proof <sup>\*4</sup>
- **Dust Resistance** - IP5X rating dust proof <sup>\*5</sup>

<sup>\*3</sup> Above tests were performed at Furukawa Electric Co., Labs, and do not guarantee that the machine will be undamaged under these conditions.

<sup>\*4</sup> IPX2 rating drip proof means that the machine can be exposed to 3 mm/min drip for 10 min with 15° tilt and still functions.

<sup>\*5</sup> IP5X rating dust proof means that the machine can be exposed to dust particles with a diameter of 0.1 to 25 µm for 8 hours and still functions.



Drop Resistance



Water Resistance



Dust Resistance



## SPECIFICATIONS

<b>Applicable Fibers</b>	SM, MM, DSF, NZD, EDF, BIF/UBIF (Bend insensitive fiber)
<b>Cladding Diameter</b>	80~150 $\mu\text{m}$
<b>Coating Diameter</b>	160~900 $\mu\text{m}$
<b>Fibers Cleave Length</b>	5~16 mm
<b>Average Splice Loss</b>	SM: 0.02 dB, MM: 0.01 dB, DSF: 0.04 dB, NZD: 0.04 dB
<b>Splice Time</b>	7 seconds (semi-auto mode) 9 seconds (regular mode)
<b>Heat Time</b>	25 seconds (S922: 40mm Sleeve, S921: 60mm Sleeve) (Pre-heat mode) 31 seconds (S922: 40mm Sleeve, S921: 60mm Sleeve) (regular mode)
<b>Splice Programs</b>	Max. 150
<b>Automatic Splicing Selection</b>	SM: SM, DSF, NZD, BIF/UBIF, MM: MM
<b>Heat Programs</b>	Max. 18
<b>Automatic Heating Start</b>	Available
<b>Applicable Sleeves</b>	20/40/60 mm
<b>Fiber Holding</b>	Tight holder (Loose tube applicable) or Fiber Holder System
<b>Tension Test</b>	1.96N
<b>Fiber Image Magnification</b>	304X, 608X
<b>Splice Memory</b>	Max. 2,000
<b>Image capture Capacity</b>	Last 100 images to be automatically captured + Up to 24 images to be stored permanently
<b>Dimension</b>	127W $\times$ 199D $\times$ 105H mm (not including shock absorber) 159W $\times$ 231D $\times$ 130H mm (including shock absorber)
<b>Weight</b>	1.9 kg (without battery) 2.3 kg (with two batteries)
<b>Monitor</b>	3.5" color LCD monitor
<b>Data Output</b>	USB ver.2.0 mini
<b>Diaplaying Language</b>	20 languages (e.g. English, Spanish, Japanese, Chinese)
<b>Battery Capacity</b>	Typical 80 splice/heat cycles with single battery* <sup>6</sup> Typical 200 splice/heat cycles with 2 batteries* <sup>7</sup>
<b>Altitude</b>	5,000 mh
<b>Operating Temperature</b>	-10 to +50 $^{\circ}\text{C}$ (without excessive humidity)
<b>Storage Temperature</b>	-40 to +60 $^{\circ}\text{C}$ (without excessive humidity)
<b>Power Source</b>	AC Input 100 to 240 V (50/60 Hz), DC Input 11 to 17 V

\*6 The number of the splicing and heating the machine can produce using a fully charged brand new battery at room temperature of 20  $^{\circ}\text{C}$ , semi-auto mode for splicing and regular mode for Heating. Depending on the condition of the batteries and operation environment, the number can vary.

\*7 The number of the splicing and heating the machine can produce using 2 fully charged brand new batteries at room temperature of 20  $^{\circ}\text{C}$ . Depending on the condition of the batteries and operation environment, the number can vary.

## STANDARD PACKAGE

Item	P/N	Quantity
① S178A Main Body	S178-A-A-0001	1
② Hard Carrying Case	HCC-01	1
③ Battery Pack Depending on the package	S943B	1 or 2
④ Battery Charger	S958B	1
⑤ Spare Electrodes	S969	1pair
⑥ AC Adaptor for S178A	S976A	1
⑦ AC Adaptor for S958B	S977A	1
⑧ AC Cable Cord For S976A/S977A	—	2
⑨ Electrode Sharpener	D5111	1
⑩ Cleaning Brush	VGC-01	1
User Manual	FTS - 347	1



⑤ Spare Electrodes



⑨ Electrode Sharpener



⑩ Cleaning Brush

## Optional Components

Item	P/N	Quantity
① Soft Carrying Case	SCC-01	1
② Cooling Tray	CTX-01	1
③ Angled Stand	AGS-01	1
④ Working Belt	WBT-01	1
⑤ USB Cable	USB-01	1
⑥ Car Cigarette Cable	CDC-01	1
⑦ Tight Holder 16 mm Cleave length	S712T-016	1pair
10 mm Cleave length	S712T-010	1pair
⑧ Fiber Holder 160 μm coating diameter fiber	S712S-160	1pair
250 μm coating diameter fiber	S712S-250	1pair
500 μm coating diameter fiber	S712S-500	1pair
900 μm coating diameter fiber	S712S-900	1pair
⑨ SOC Holders <For Ferrule>		
Seiko Giken FC/SC connector (9 mm)	S712C-SGS9-L	1
Seiko Giken FC/SC connector (5 mm)	S712C-SGS5-L	1
Seiko Giken LC connector (9 mm)	S712C-SGL9-L	1
Seiko Giken LC connector (5 mm)	S712C-SGL5-L	1
Diamond E-2000/F-3000 connector	S712C-DM25-L	1
<For Cordage>		
Seiko Giken Cordage (5 mm)	S712C-SGC5-R	1
Seiko Giken Cordage (9 mm)	S712C-SGC9-R	1
Diamond Cordage (5 mm)	S712C-DMC5-R	1
Smart Fuse Software Interface for Machine	SF-01	1



③ Angled Stand in Action



④ -1 Working Belt in Action

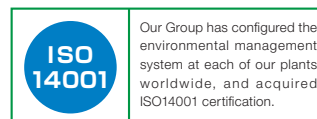
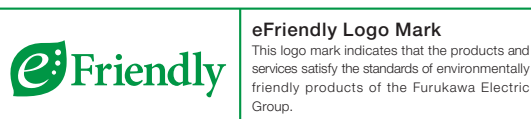


④ -2 Working Belt in Action

## Ordering Number Form S178A-(X1)-(X2)

Category	Code	Remark
X1	Fiber Holder Type	
	1	16 mm Tight Holder S712T-016
	2	10 mm Tight Holder S712T-010
X2	Number of Battery Pack (S943B)	
	1	1 pack (with 1 S958B battery charger and 1 S977A AC adaptor)
	2	2 packs (with 1 S958B battery charger and 1 S977A AC adaptor)

The Furukawa Electric Group strives to develop environmentally considerate products.



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