

S178 ver.2 Fusion Splicers

Hand-Held Core-Alignment Fusion Splicer

NEW



e-Friendly

The FITEL® S178 Version 2 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 S178 ver.2 Fusion Splicer ushers in an entirely new range of applications for core alignment splicing.

The S178 ver.2 Fusion Splicer has been enhanced with new features to promote ease of use. The splicer is updated to automatically charge the battery internally (when connected to AC main power) even during operation. The new illumination lamp lights up a wide area around the V-grooves and improves operation in low light environment. The redesigned and strengthened heater simplifies the protection sleeve loading process.

Equipped with a new alignment system that can save up to 20% on splicing time, the S178 ver.2 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 S178 ver.2 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 S178 ver.2 Fusion Splicer is fast and durable, it continues the FITEL tradition of quality and excellence by delivering precise, accurate splices even under rigorous conditions in the field.

The S178 ver.2 Fusion Splicer is your logical 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

- ***New*** Internal Battery Charging
- ***New*** Illumination lamp lights up a wide area around v-grooves
- ***New*** User friendly LCD display offers 4 different X/Y image layouts
- ***New*** Displays immediate results with simplified splice result indicator red / green icon

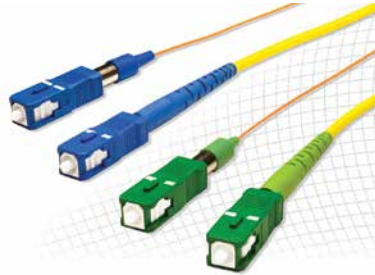
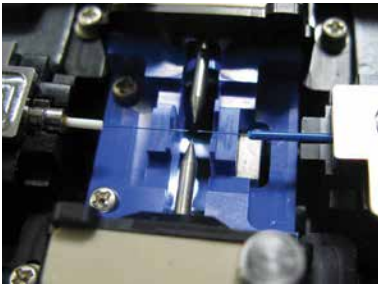


Bound to Innovate

- **Rugged and compact handheld design** endures harsh environmental conditions
- **Fast splicing** (7 seconds) at super low loss and **fast heating** (25 seconds)¹
- **200 cycles** (splicing & heating) with new battery configuration
- **Available for all METRO/LAN/FTTX fibers** including ultra bend-optimized fibers (e.g. EZ-Bend® Fibers)
- **Splicer is compatible with** the OFS, Diamond² and Seikoh Giken³ Splice-on-Connectors (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** provides for user management of splicing programs and results
- **Auto-start** shrink sleeve oven feature
- ***New* Improved Graphical User Interface (GUI)** to further enhance ease of use
- ***New* Simplified splicer and heater** programming
- **Large memory** for storage of splice data (2,000) and images (100)
- **RoHS compliant**

Compatible with Splice-on-Connectors



FITEL Splicer SOC partners



Under Tough Environments

The S178 ver.2 passed testing based on criteria below⁴ :

- **Drop resistant** – 76 cm drops from 5 different angles
- **Water resistant** – IPX2 rating drip proof⁵
- **Dust resistant** – IP5X rating dust proof⁶

¹ By using semi-auto mode for splicing and pre-heating mode for heating

² Diamond is a registered trademark of Diamond SA

³ Seikoh Giken is a registered trademark of SEIKOH GIKEN CO., LTD

⁴ Tests to the left were performed at Furukawa Electric Co. Labs, and do not guarantee that the machine will be undamaged under these conditions

⁵ IPX2 rating drip proof means that the machine can be exposed to 3 mm/min drip from 4 different angles with 15° tilt for 2.5 min each and still function

⁶ 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 function



Drop Resistant



Water Resistant



Dust Resistant

SPECIFICATIONS

| | |
|-------------------------------------|---|
| Applicable Fibers | SM, MM, DSF, NZD, EDF, BIF/UBIF (Bend insensitive fiber) |
| Cladding Diameter | 80 ~ 150 μm |
| Coating Diameter | 160 ~ 900 μm |
| Fibers Cleave Length | 5 ~ 16 mm |
| Average Splice Loss | SM: 0.02 dB, MM: 0.01 dB, DSF: 0.04 dB, NZD: 0.04 dB |
| Splice Time | 7 seconds (semi-auto mode), 9 seconds (regular mode) |
| Heat Time | 25 seconds (S922: 40 mm Sleeve, S921: 60 mm Sleeve) (Pre-heat mode) 31 seconds (S922: 40 mm Sleeve, S921: 60 mm Sleeve) (regular mode) |
| Splice Programs | Up to 150 |
| Automatic Splicing Selection | SM: SM, DSF, NZD, BIF/UBIF, MM: MM |
| Heat Programs | Up to 18 |
| Automatic Heating Start | Available |
| Applicable Sleeves | 20/40/60 mm |
| Fiber Holding | Tight holder (Loose tube applicable) or Fiber Holder System |
| Tension Test | 1.96 N |
| Attenuation Splice Function | Intentional high splice loss of 0.1 dB to 10 dB (0.1 dB step) can be made for an inline fixed attenuator |
| Fiber Image Magnification | 304X, 608X |
| Splice Memory | Max. 2,000 |
| Image capture Capacity | Last 100 images to be automatically captured + Up to 24 images to be stored permanently |
| Dimension | 127W \times 199D \times 105H mm (not including shock absorber) 159W \times 231D \times 130H mm (including shock absorber) |
| Weight | 1.9 kg (without battery), 2.3 kg (with two batteries) |
| Monitor | 3.5" color LCD monitor |
| Data Output | USB ver.2.0 mini |
| Displaying Language | 20 languages (e.g. English, Spanish, Japanese, Chinese) |
| Battery Capacity | Typical 80 splice/heat cycles with single battery ⁷ Typical 200 splice/heat cycles with 2 batteries ⁸ |
| Altitude | 5,000 m |
| Wind Protection | Max. wind velocity of 15 m/s |
| Humidity | 0 to +95% RH (non condensing) |
| Operating Temperature | -10° to +50° C (without excessive humidity) |
| Storage Temperature | -40° to +60° C (without excessive humidity) |
| Power Source | AC Input 100 to 240 V (50/60 Hz), DC Input 11 to 17 V |

⁷ The number of the splicing and heating cycles the machine can produce using a fully charged brand new battery at room temperature of 20 °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.

⁸ The number of the splicing and heating the machine can produce using 2 fully charged brand new batteries at room temperature of 20 °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 | 0, 1 or 2 |
| ④ Spare Electrodes | S969 | 1 pair |
| ⑤ AC Adaptor For S178A and S958C | S976A | 1 |
| ⑥ AC Cable Cord For S976A | — | 1 |
| ⑦ Electrode Sharpener | D5111 | 1 |
| ⑧ Cleaning Brush | VGC-01 | 1 |
| ⑨ Tool Case | TCC-01 | 1 |
| User Manual | FTS - 347 | 1 |



④ Spare Electrodes



⑦ Electrode Sharpener



⑧ Cleaning Brush



⑨ Tool Case

OPTIONAL COMPONENTS

| Item | P/N | Quantity |
|------------------------------------|--------------|----------|
| 1 Soft Carrying Case | SCC-01 | 1 |
| 2 Battery Charger | S958C | 1 |
| 3 AC Adapter for S958C | S977A | 1 |
| 4 Cooling Tray | CTX-01 | 1 |
| 5 Angled Stand | AGS-01 | 1 |
| 6 Working Belt | WBT-01 | 1 |
| 7 USB Cable | USB-01 | 1 |
| 8 Car Cigarette Cable | CDC-01 | 1 |
| 9 Tripod Adapter | TPA-01 | 1 |
| 10 Tight Holder | | |
| 16 mm Cleave length | S712T-016 | 1 pair |
| 10 mm Cleave length | S712T-010 | 1 pair |
| 11 Fiber Holder | | |
| 160 μm coated fiber | S712S-160 | 1 pair |
| 250 μm coated fiber | S712S-250 | 1 pair |
| 500 μm coated fiber | S712S-500 | 1 pair |
| 900 μm coated fiber | S712S-900 | 1 pair |
| Loose Tube Fiber (Left side) | S712S-LT-L | 1 |
| Loose Tube Fiber (Right side) | S712S-LT-R | 1 |
| 12 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 |
| <Tool> | | |
| Diamond Mount | WTX-01 | 1 |
| Smart Fuse | SF-01 | 1 |
| Software Interface for Machine | | |



5 Angled Stand in Action



6 Working Belt in Action



6 Working Belt as Shoulder Pack

Ordering Number Form: Code Syntax: S178A-XY-V2

Variable Category

X Fiber Holder Type

Value Description

| | |
|---|---|
| 1 | 16 mm Tight Holder S712T-016 |
| 2 | 10 mm Tight Holder S712T-010 |
| 3 | Fiber Holder System (Fiber Holders sold separately) |

Y Number of Battery Packs (S943)

| | |
|---|---|
| 0 | Without battery pack |
| 1 | 1 pack (with 1 S958 battery charger and 1 S977 AC adapter) |
| 2 | 2 packs (with 1 S958 battery charger and 1 S977 AC adapter) |

Contact Us:

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