

⚠CAUTION
The calibration will be performed by our service representative. Users should not perform this procedure as incorrect calibration may cause malfunction of the unit.

The touch panel does not function properly.

- Cause : A scratch on the touch panel surface or foreign object entering the touch panel junction may cause misdetection of the key area.
- Solution : The touch panel needs to be replaced. Contact your nearest representative.

The “Display Unit Failure” or “Check Display Unit” message is displayed.

- Cause : A failure to the display unit can be considered.
- Solution : Immediately turn OFF the power and cease the operation. Contact your nearest representative.

The “Display Unit Out of Operating Temp. Range” is displayed.

- Cause : The unit is used in an environment where temperature is extremely high or low.
- Solution : Operate the unit in an environment with operating temperature range 10 to 40°C. If the message is still displayed, a failure can be considered. Contact your nearest representative.

Maintenance

To ensure safety reliability and high performance of the LC-8015T/8015TC and LC-8019T/8019TC, make sure to perform a daily check according to the Daily Check List on the operation manual of the DS-8500 System.

⚠WARNING
Please be aware that Fukuda Denshi is not liable of any accidents arising from lack of daily check.

Cleaning

Cleaning the Housing

Clean the housing using tightly squeezed gauze or an absorbent cotton cloth dampened with alcohol or a neutral cleanser.

Cleaning the LCD Panel

Since this device incorporates a touch panel, fingerprints and other stains are likely to appear on the touch panel.
Wipe the touch panel using the cleaning cloth supplied as accessory.

⚠CAUTION
<ul style="list-style-type: none">● Clean the unit frequently so stains can be removed easily.● To prevent injury, it is recommended to wear gloves when cleaning the unit.● Do not open the housing.● Do not allow liquids or cleaning solution to enter the unit or connectors.● Do not use organic solvents, thinner, toluene and benzene to avoid damaging the resin case.● Do not polish the housing with abrasive or chemical cleaner.● When sterilizing the entire room using a spray solution, pay close attention not to have liquids get into the equipment or connectors.● Use only neutral detergent to clean the housing. Do not use chemical cloth, scrub brush, abrasive, polishing powder, hot water, volatile solvent and chemicals (cleanser, thinner, toluene, benzine, benzol, and synthetic detergent for house and furniture), or sharp-edged tools. The surface resin coating may be damaged, resulting in discoloration, scratches, and other problems.

Specification

- Size**
- LC-8015T/8015TC : 395(W) x 297(H) x 50(D) mm
* not including the hinge and protrusion.
- LC-8019T/8019TC : 468(W) x 371(H) x 56(D) mm
* not including the hinge and protrusion.

- Weight**
- LC-8015T/8015TC : 3.5 kg
(not including the accessory)
- LC-8019T/8019TC : 6.0 kg
(not including the accessory)

- Environmental Conditions**
- Operation Temperature : 10 to 40°C
- Operation Humidity : 30 to 85 % (non-condensing)
- Operation Ambient Pressure : 700 to 1060hPa
- Transport/Storage Temperature : -10 to 60°C
- Transport/Storage Humidity : 10 to 95% (at 40°C)
(non-condensing)
- Storage Ambient Pressure : 700 to 1060hPa

- Safety**
- Type of protection against electric shock : Class I Equipment
(with DS-8500 System)

- Electric Rating**
- Voltage : DC 18V
(Supplied from DSC-8500 Series Main Unit.)

- Display Specifications**
- Display : 15 inch TFT Color LCD (LC-8015T/8015TC)
- Display : 19 inch TFT Color LCD (LC-8019T/8019TC)
- Function Control : Touch Screen Method
- Touch Panel : Eight-Wire Resistive Analog Touch Screen
- Waveform Trace : Stationary Trace
- Jog Dial : With Push Switch
- Fixed Keys : 5 keys (NIBP Start/Stop, Home, Menu, Prev. Disp., Alarm Silence)

- Usable Life**
- 6 years (according to self-certification)

Accessories

Accessories

The standard accessory of this unit is as follows:

Item	Qty.
Operation Manual (this manual)	1
Cleaning cloth	1

Optional Accessories

To ensure product quality, use the specified Optional Accessories.

Item/Model Type	Note
Display Unit Connection Cable: CJ-731B	2.5m
Display Unit Connection Cable: CJ-731C	6m
Display Unit Connection Cable: CJ-731D	10m

Electromagnetic Compatibility

The performance of this equipment under electromagnetic environment complies with EN 60601-1-2 (2007)/IEC 60601-1-2 (2007) (When using with the DS-8500 system).
For the precautions for safe operation under electromagnetic influence and EMC guidance, refer to the operation manual of the DS-8500 system.

<p>Operation Manual LC-8015T/8015TC LC-8019T/8019TC Display Unit</p> <p>CE 0086</p> <p>FUKUDA DENSHI CO.,LTD. 3-39-4 Hongo, Bunkyo-ku, Tokyo, Japan Phone:+81-3-5684-1455 Fax:+81-3-3814-1222</p>
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CE 0086

This device bears the CE label in accordance with the provisions of Medical Device Directive 93/42/EEC.

This device bears the CE label in accordance with the provisions of RoHS Directive 2011/65/EU.

EC REP	Fukuda Denshi UK Unit 7, Genesis Business Park, Albert Drive, Woking, Surrey GU21 5RW, United Kingdom
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Thank you for purchasing our product.
Read the “Safety Precautions” thoroughly before use to ensure correct and safe use of this unit.
Please also refer to the operation manual of the DS-8500 System.

Safety Precautions

Make sure to follow the precautions indicated below, as these are important messages related to safety.

⚠DANGER	Failure to follow this message may cause immediate threat of death or serious injury.
⚠WARNING	Failure to follow this message may result in death or serious injury.
⚠CAUTION	Failure to follow this message may cause injury or failure to the equipment.
NOTE	A note is not related to product safety, but provides information about the correct use and operating procedures to prevent incorrect operation and malfunction of the equipment.

⚠WARNING
Damage to the LCD may cause leakage of liquid crystal. In such case, do not touch the leaked liquid crystal with bare hands, or put it into your mouth as it may cause intoxication. If the liquid crystal accidentally enters the eyes or mouth, wash off immediately with water and consult a physician.

⚠CAUTION
<ul style="list-style-type: none">● Pay attention to the following when installing and storing the unit.<ul style="list-style-type: none">• Do not install or store in an area where this unit will be subject to splashing water.• Do not install or store in an area where the environmental conditions, such as atmospheric pressure, temperature, humidity, ventilation, sunlight, dust, sodium, sulfur, will adversely affect the system.• Store in a level area where the unit is not exposed to vibration and shock (including during transportation).• Do not install or store in an area where chemicals are stored or gasses are evolved.● Do not disassemble or remodel the unit.● The display unit utilizes exclusive LED light for the backlight. Since this LED light deteriorates with life cycle, the display may become dark or may not light with long term use. In such case, contact your nearest service representative.● Although the LCD utilizes highly accurate picture elements, occasionally, there may be a few pixels which do not light or constantly light. Please note that this is not an unit failure, and will not affect monitoring operation.● Due to its material characteristic, the touch panel expands/contracts depending on the temperature/humidity. When the touch panel is left unused for a while, or when the ambient temperature is low, the surface film of the touch panel may expand, but this is not an abnormal condition. This expansion will reduce in a few hours or half a day after the power is turned ON.

⚠CAUTION
<ul style="list-style-type: none">● Use only the optional accessories specified for this unit. Otherwise, proper function cannot be executed.● For further quality improvement, specifications and/or appearance of this unit are subject to change without prior notice.● When disposing of this unit, accessories, or components, use an industrial waste distributor. Do not dispose of as ordinary waste.● Exposing LCD panel to intense light may deteriorates display property. Do not expose the panel to direct sunlight or strong ultra violet (UV) light for a long period of time.

Graphic Symbols

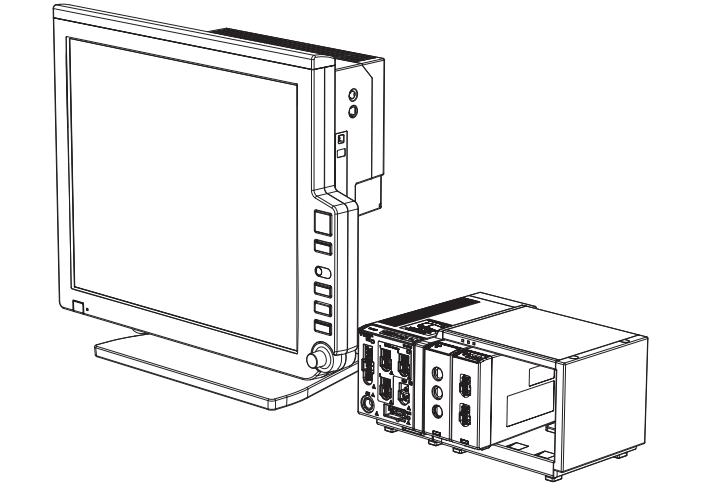
The following are the symbol and their meaning indicated on the unit.

⚠	<u>Caution; refer to accompanying documents</u> Indicates the need to refer to related accompanying documents before operation.
🏭	<u>Year of Manufacture</u> Indicates the manufactured year.
♻	<u>WEEE (Waste Electrical and Electronics Equipment)</u> Indicates a separate collection for electrical and electronic equipment.

General Description

The LC-8015T/8015TC, LC-8019T/8019TC is the display unit for the DS-8500 System. It is connected to the DSC-8500 series Main Unit.

The operation can be performed with Touch panel, fixed keys, and Jog Dial on the display unit.

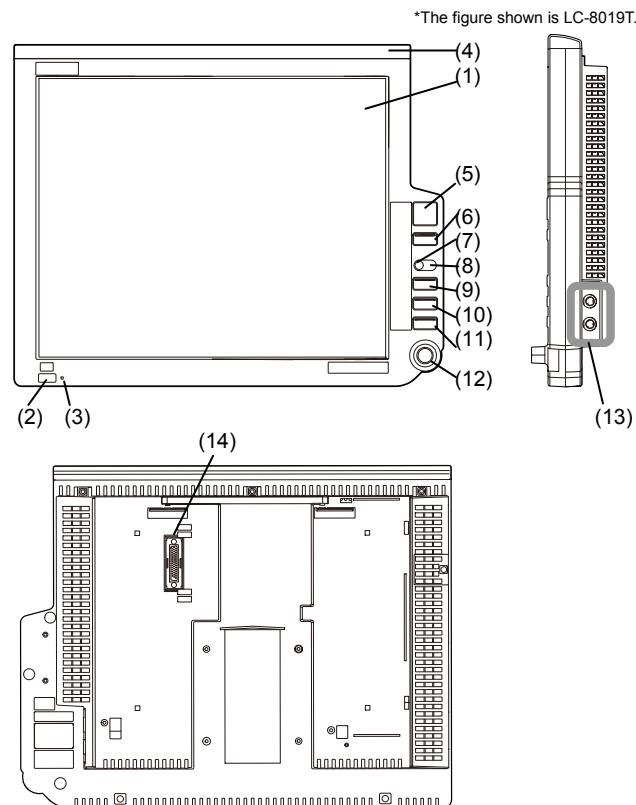


< DS-8500 System >

【Lineup of Display Unit】

Model	Display Size	Circular Polarizing Filter
LC-8015T	15 inch	No
LC-8015TC	15 inch	Yes
LC-8019T	19 inch	No
LC-8019TC	19 inch	Yes

Name of Parts and Their Functions



- (1) LCD Touch Panel
Operation is performed using the touch keys.
- (2) Standby Switch
Sets ON/OFF the Standby Mode.
- (3) Power Supply Indicator
Indicates the power supply status.
Lights when the AC power is supplied and also with the Standby Switch.
In Standby Mode: Orange
In normal operation: Green
Operation error: Red
OFF when the AC power is not supplied.
- (4) Alarm Indicator
Lights when an alarm generates or lights synchronizing to the heartbeat depending on the setup.
- (5) Alarm Silence Key
Silences the Alarm.
- (6) NIBP Start/Stop Key
Starts/stops the NIBP measurement.
- (7) Ambient Light Sensor
Detects the ambient light.
- (8) Remote Control Sensor
Sensor for the infrared remote control.
- (9) Home Key
Displays the Home Display.
- (10) Menu Key
Displays the Menu.
- (11) Prev. Disp. Key
Displays the previous screen.
- (12) Jog Dial
Performs key operations.
- (13) Mouse/Keyboard connector (PS2)
Connects the optional mouse.
- (14) Main Unit Connector
Connects to the DSC-8500 series Main Unit.

WARNING

Do not connect a unit or cable not authorized by Fukuda Denshi to any I/O connector. If done so by mistake, the DS-8500 System cannot deliver its maximum performance and the connected units may be damaged, resulting in a safety hazard.

Connection Procedure

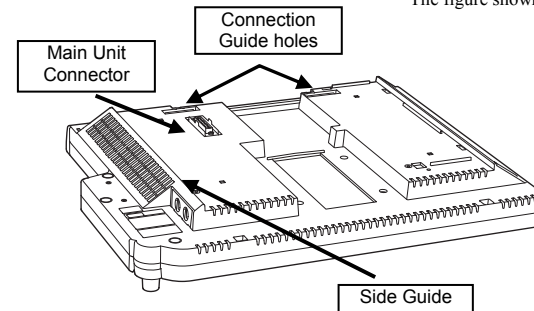
WARNING

- The installation of this unit should be performed by our service representative or a person who is well acquired with this unit.
- Unplug the power cable before the procedure.
- Before the connection, make sure to turn OFF the external equipment.

1. Connection to the DSC-8500 series Main Unit

1. Lay a soft cloth on a table to protect the LCD, and place the display unit facing downwards. Place the display unit so that it will not apply force to the jog dial.

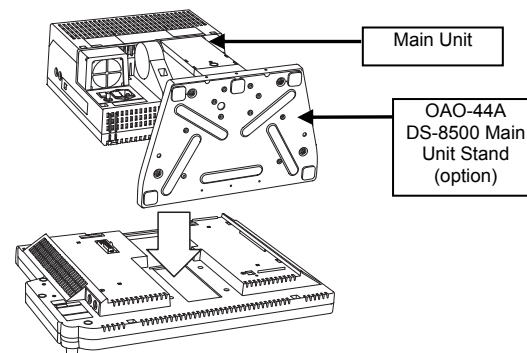
* The figure shown is LC-8019T.



WARNING

In the following procedure, connect the display unit to the DSC-8500 series Main Unit by placing it over the display unit. The main unit weights approx. 5.5kg, so place the display unit on a thick cloth, etc to protect the LCD.

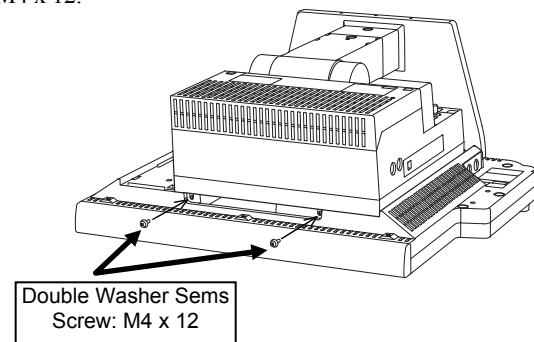
2. Attach the main unit over the unit. Follow the side guide and connection guide holes for proper attachment. Slowly attach the main unit so that it will not apply force to the connector.



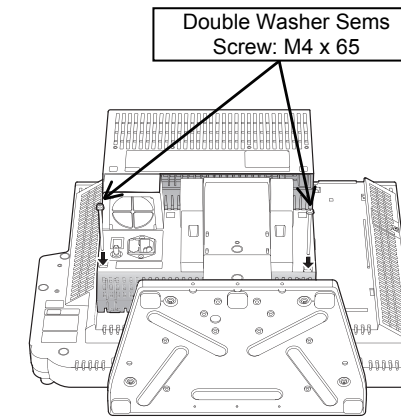
CAUTION

For details on how to attach the OAO-44A, refer to the assembly instruction of the OAO-44A DS 8500 Main Unit Stand.

3. Fix 2 positions from the top side with Double Washer Sems Screw M4 x 12.

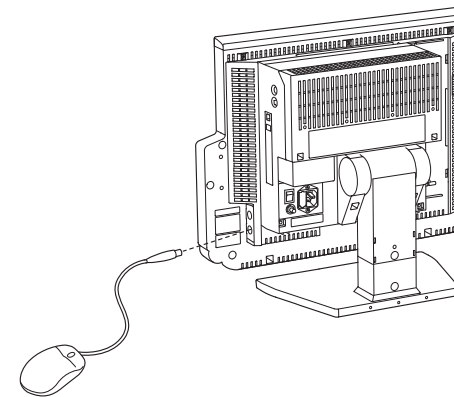


4. Fix 2 positions on the rear of the main unit with Double Washer Sems Screw M4 x 65.



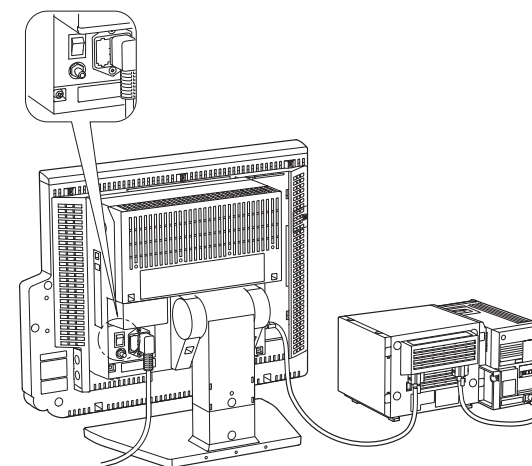
2. Connection to the external devices

Connect the optional mouse, if necessary.

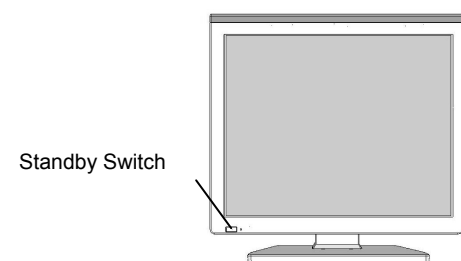


3. Turning the power ON

Turn ON the power supply switch on the rear side of the main unit. The screen will be displayed, and monitoring will start.

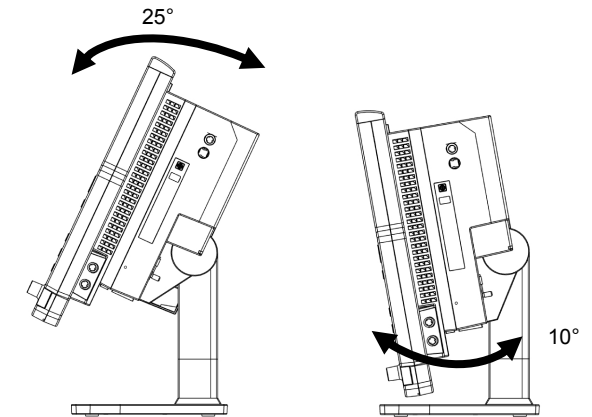


Using the Standby Switch On/Off operation, the power On/Off of the main unit, Super Unit, expansion units, expansion modules and Input Box interlocks. Also, the start/stop of monitoring is available using the Standby Switch. For the benefit of this operation, see "5. Stop Monitoring".



4. Adjusting the angle of the Display Unit

Adjusting the angle of the display unit will be possible after it has been connected to the main unit. The adjustment range is 25 degrees upward and 10 degrees downward. Adjust it for a better view.



5. Stop Monitoring

Press the Standby Switch on the display unit to turn off the display and stop monitoring.

The operation of the Super Unit and the Input Box will also stop. Stopping the monitoring by pressing the Standby Switch will allow resuming the system in a short span by pressing the Standby Switch again. If not monitoring for a long period of time, the power supply switch of the main unit should be turned OFF.

Troubleshooting

Nothing is displayed on the screen, and the power supply indicator is not lighted.

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| Cause 1 | : The display unit is not properly attached to the main unit. |
| Solution | : Reattach the display unit properly following the Connection Procedure. |
| Cause2 | : A failure to the main unit or the display unit can be considered. |
| Solution | : Immediately turn OFF the power and cease the operation. Contact your nearest representative. |

Nothing is displayed but the power supply indicator is lighted in red.

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| Cause | : A failure to the main unit or the display unit can be considered. |
| Solution | : Immediately turn OFF the power and cease the operation. Contact your nearest representative. |

The display is not clear.

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| Cause 1 | : The display brightness is not adjusted appropriately. |
| Solution | : Due to the LCD characteristic, the visible range is limited. Adjust the appropriate brightness on the Brightness Setup under the System Configuration menu. |

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| Cause 2 | : The monitor is set to night mode. |
| Solution | : Cancel the night mode. |

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| Cause 3 | : The LCD light is deteriorated. |
| Solution | : The LCD panel needs to be replaced. Contact your nearest representative. |

NOTE

The display unit utilizes exclusive LED light for the backlight. Since this LED light deteriorates with life cycle, the display may become dark or may not light with long term use. In such case, contact your nearest service representative.

There is an offset in the touch panel.

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|----------|---|
| Cause | : The detecting location may become misaligned due to change over time. |
| Solution | : Calibration needs to be performed. Contact your nearest representative. |