CE

Operation Manual
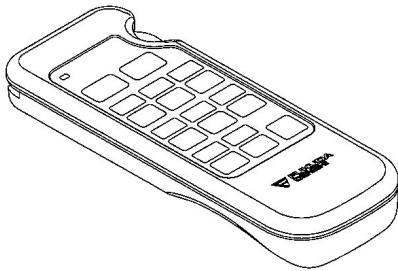# CF-700
Remote Control Unit for DS-7000 Series

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Thank you for purchasing this product.
Before using it, read this operation manual and the operation manual for the patient monitor thoroughly.

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

THE PERSONS RESPONSIBLE FOR PLACING DEVICES ON THE EC MARKET UNDER MDD 93/42/EEC
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Safety Precautions

Be sure to follow the precaution given below. Indication and its meaning is as follows:

⚠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.

Precautions for Safe Operation

The following are the general precautions regarding the safe handling of the product and safety for the operator. The specific precautions to this product are separately stated in the corresponding section of this operation manual.
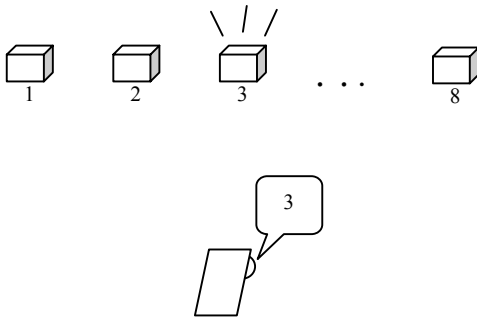
⚠CAUTION

1. Users should have a thorough knowledge of the operation before using this product.
2. Only physician or persons instructed by physicians are allowed to use this product.
3. Pay attention to the following points when storing the product.
· Store in a place where it will not be exposed to splashing water.
· Store in a place where it will not be adversely affected by atmospheric pressure, temperature, humidity, ventilation, sunlight, dust or atmosphere containing salt or sulfur.
· Store in a level area where it is not exposed to vibration and shock (including during transportation).
· Store in a place where there are no chemicals stored or no gas is generated.
4. Before using the product, verify the following items.
· This product is not protected against explosion. Do not use it in flammable atmosphere.
· Check the battery condition (discharge condition, polarity, etc.) When replacing the battery, replace both batteries at the same time. Do not use new battery and old battery at the same time.
· Ensure that the product operates properly and safely.
5. During usage, pay attention not to drop the product or apply impact to it.
6. After using the product, verify the following items.
· Keep the product clean to ensure proper operation for the next use.
· If not using the product for long period of time, remove the battery.
7. If the product fails to operate properly, do not attempt service. Ensure safety by removing the battery, label the unit "OUT OF ORDER", and contact Fukuda Denshi.
8. Do not disassemble or remodel the product.
9. When disposing of this product, accessories, or components, use an industrial waste distributor. Do not dispose of as ordinary waste.
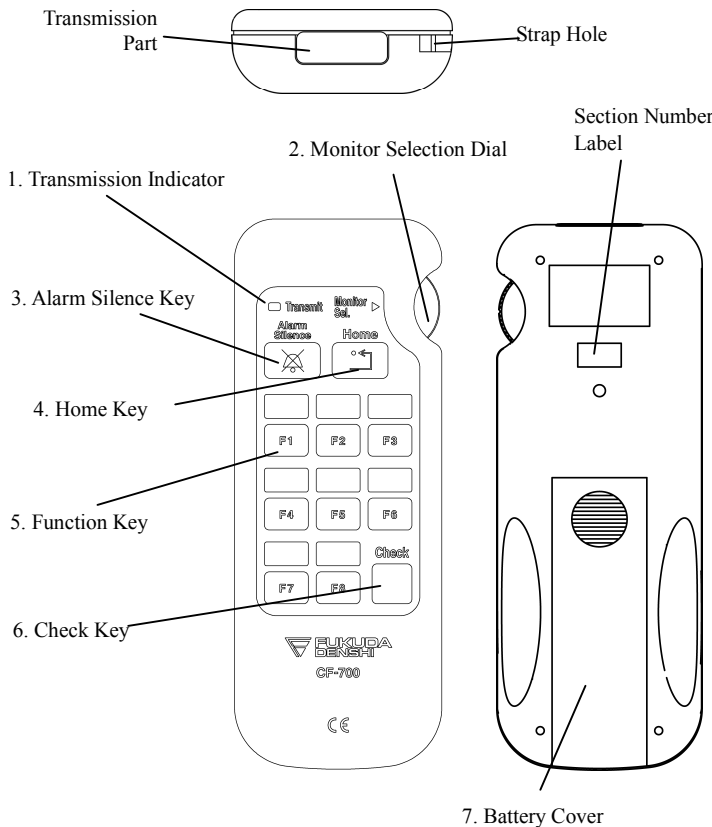
General Description

The CF-700 is used to control some of the functions on the DS-7000 series monitor. These are the following features:

1. The CF-700 remotely controls the DS-7000 series monitors.
2. One CF-700 can control a maximum of 8 monitors. The number is pre-assigned to each monitor which can then be selected using the monitor selection dial.

3. The frequently used functions on the DS-7000 series can be assigned on the CF-700 for easy monitor control.

Names of Parts and Their Functions

Transmission Part
Strap Hole
Section Number Label

2. Monitor Selection Dial
1. Transmission Indicator
3. Alarm Silence Key
4. Home Key
5. Function Key
6. Check Key
7. Battery Cover

1. Transmission Indicator
Lights when any key is pressed for transmission. If it does not light up, the batteries may be depleted. Replace the batteries.

2. Monitor Selection Dial
The monitor to control can be selected. Turning the dial clockwise will switch the numbers in the order of 1 → 2 → 3 → … → 8 → 1 → ….

3. Alarm Silence Key
Same function as the "Alarm Silence" key on the patient monitor.

4. Home Key
Same function as the "Home" or "Home/Enlarge" key on the patient monitor.

5. Function Key (F1～F8)
The function for each key can be set on the patient monitor. For details of each function, refer to the operation manual of the patient monitor.

6. Check Key
Pressing this key will display the monitor number on the monitor. It allows to verify proper function of the remote control, and prevents controlling unintended monitor. Also, pressing one of the function keys (ex. NIBP START/STOP key) will display a confirmation screen on the monitor which will ask you to press the "Check" key.

7. Battery Cover
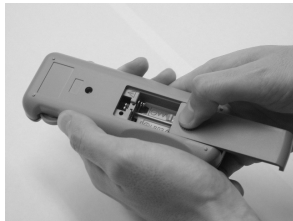Open the cover when replacing the batteries or setting the section number.

Preparation
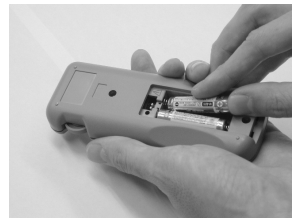
1. Install the batteries.

NOTE
The batteries provided as accessories are intended for operation check. After the operation check, make sure to replace them with new batteries.

(1) Remove the battery cover by shifting it downwards using a finger.

(2) Install 2 new AAA alkaline batteries. Ensure that they are placed in the correct polarity direction. Make sure that the negative terminal of the battery is in contact with the negative terminal spring in the case.

(3) Close the battery cover. Make sure it clicks into position.

2. Set the function key.

Set the function for each function key on the remote control setup menu on the patient monitor. For setup procedure, refer to the operation manual of the patient monitor.
The default functions assigned for the DS-7100 series bedside monitor are as follows:

Key	Function assigned for the DS-7100 series
F1	ECG1 Size
F2	ECG1 Lead
F3	NIBP START/STOP
F4	Record
F5	Night Mode
F6	Tabular Trend
F7	NIBP List
F8	BP Zero Balance

⚠ Caution
The function key setup should be the same for all monitors within the same section.

3. Perform setup on the monitor.

On the patient monitor, set the remote control monitor number.   This monitor number will correspond to the monitor number selected on the "monitor selection dial" of the remote control.
For setup procedure, refer to the operation manual of the patient monitor.
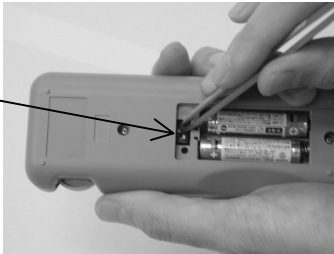
⚠Caution
To prevent controlling unintended monitor, make sure to set the remote control monitor number and check the remote control operation.

4. Set the section number.

(1) Remove the battery cover by shifting it downwards using a finger.

(2) Set the section number by moving the switches. Use a fine-tipped tool such as tweezers.   The default setting is "1".
For setup procedure on the monitor, refer to the monitor operation manual.

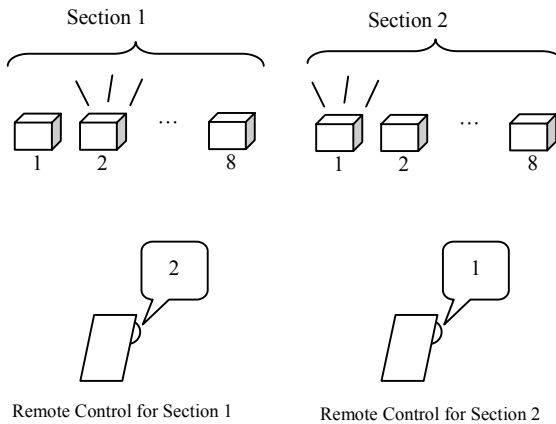| Switch 1	Switch 2	Section No.
OFF	OFF	1
ON	OFF	2
OFF	ON	3
ON	ON	4

Section Number Setting Switch

(3) Close the battery cover. Make sure it clicks into position.

(4) On the back of the remote control, attach the section number label (§1 ~ §4).

About the "Section":
When controlling more than 8 monitors in a unit, it is possible to divide the unit into section by setting a section number onto the monitors.   See example below.

Section 1   Section 2
1 2 … 8   1 2 … 8
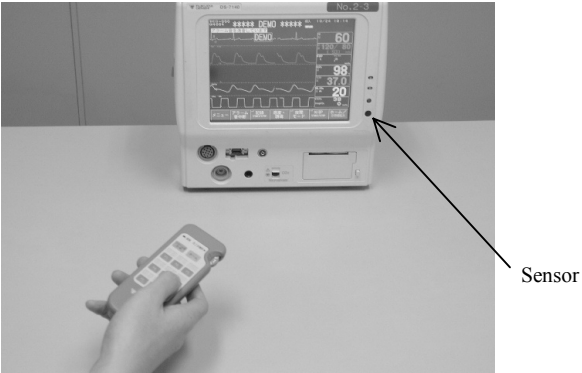2   1
Remote Control for Section 1   Remote Control for Section 2

One "remote control" for each section must be used. The "remote control" for section 1 cannot control any monitors of section 2. When using a "remote control" where it might reach more than 8 monitors, make sure to set the section number on all monitors.

Operation

Aim the transmission part of the remote control to the monitor sensor, and press one of the keys. The control of the monitor can be performed. While the key is pressed, the transmission indicator will be lighted.
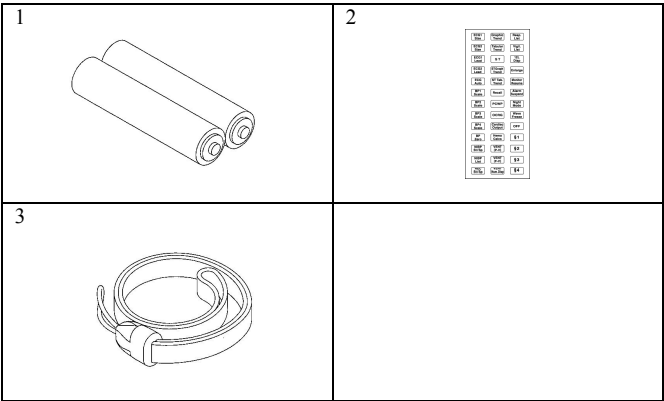

Sensor

Troubleshooting

The remote control does not function.
Cause 1 : The transmission indicator is not lit.
Solution : Replace the batteries.

Cause 2 : The remote control is too far away from the monitor, or is used outside the sensor range.
Solution : The distance between the remote control and monitor should be within 10m. Also, the light receiving angle of the monitor should be approximately 30° (5m from the monitor).

Cause 3 : The transmitted infrared path is blocked.
Solution : Move until you can get a clear path.

Cause 4 : The monitor number selected on the remote control is not correct.
Solution : Select the correct monitor number.

Cause 5 : The section number does not correspond to the monitor and the remote control.
Solution : Set the correct section number.

Cause 6 : The remote control function is set to OFF on the patient monitor, or the functions are not assigned to the function keys on the remote control.
Solution : Set the remote control function on the patient monitor.

Cause 7 : The monitor is exposed to direct sunlight or inverted fluorescent light.
Solution : Avoid direct sunlight or inverted fluorescent light. It will shorten the transmission distance.

Even though the same function key is pressed, different operation is performed according to the monitors.
Cause : Different function is assigned for each monitor.
Solution : Assign the same function.

More than one monitor operates at the same time when using the remote control.
Cause : The same "remote control" monitor number is assigned to more than one monitor.
Solution : Make sure not to duplicate the monitor number within the same section.

Maintenance

● Cleaning
・ Wipe the surface and control buttons using a soft cleaning cloth.
  If stains cannot be removed, use a cloth dampened with diluted neutral cleanser, and then wipe off with a dry cloth.
・ Do not use thinner or benzene, as it may cause deterioration or damage the coating.

● Disinfection
・ If there is danger of infection, wipe with a squeezed gauze or absorbent cotton dampened with cationic soap or alcohol. Do not allow chemicals to get in or enter inside the dial part. It may damage the product.
・ Avoid high temperature disinfection such as autoclave as it may damage the product.

Specifications

Power Supply	: AAA alkaline battery (Q'ty: 2)
Continuous Use Duration	: 1 year or more with usage of 100 times per day.
Size (W × L × Thickness)	: 52 × 138 × 20 (mm)
Weight	: Approx. 90g (including battery)
Reachable Distance	: Approx. 10m
Infrared Irradiation Angle	: ±10°

Usage Environment
Temperature	: 10 ~ 40°C
Relative Humidity	: 30 ~ 85% (without condensation)
Atmospheric Pressure	: 70 ~ 106KPa (700~1060mbar)

Storage Environment
Temperature	: −10 ~ 60°C
Relative Humidity	: 10 ~ 95%
Atmospheric Pressure	: 70 ~ 106KPa (700 ~ 1060mbar)

Accessories

To ensure that the product performs to specifications, use the accessories specified by Fukuda Denshi.

No.	Item	Model No.	Q'ty	Note
1	AAA Alkaline Battery	LR03	2	For operation check only
2	Key Label		1	
3	Hand Strap		1	
4	Operation Manual		1	This sheet