TOA INSTALLATION MANUAL

MASTER STATION BOARD N-8031SB

1. GENERAL DESCRIPTION

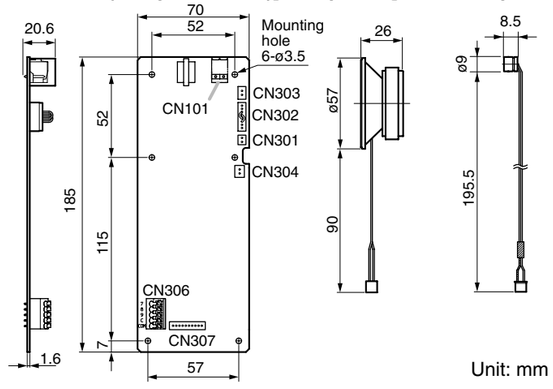
The N-8031SB is a printed circuit board unit for the N-8031MS Flush-Mount Hands-Free Master Station. You can make the master station suitable for applications using the N-8031SB in combination with the operation panel section to be prepared separately.

Use the N-8000 software* to perform settings. Set up the same items as performed to the N-8031MS since the N-8031SB is handled as the N-8031MS on the software.
Key and status indicator operations are exactly the same as those of the N-8031MS.
For settings, functions, and operations, read the descriptions about the N-8031MS in the N-8000 Series instruction manual*.

* Included in the CD supplied with the N-8000EX/8010EX Exchange.

2. DIMENSIONAL DIAGRAM

2.1. N-8031SB



2.2. Accessory

Unit: mm

3. SPECIFICATIONS

Power Source	48 V DC (supplied from the N-8000EX/8010EX IP Intercom Exchange)
Power Consumption	1.8 W (rated), 2.4 W (max.)
Wiring Method	Non-polar one pair stranded wire system
Transmission System	2-wire 160 kbps echo canceller transmission system
Signal Level	Under 0 dB*
Speech Method	Hands-free conversation (Handset conversation can be established in conjunction with the RS-191.)
Audio Frequency Range	300 – 7,000 Hz
Transmission Range	Max. 1,500 m (ø 0.65 mm, Loop resistance 170 Ω or less)
Hands-Free	Speaker (accessory): 5.7 cm cone-type, 0.6 W, 8 Ω Microphone (accessory): Omni-directional electret condenser microphone
Line Connection Terminal	Pin header (2 pins)
Status Indicator LED Connecting Terminal	Solderless connector (2 pins, male), voltage: 5 V, maximum load current: 5 mA
Dial Input	Solderless connector (10 pins, male), open voltage: 3.3 V DC, short-circuit current: 1 mA, screwless connector (5 pins)
External Dial Input	No-voltage make contact input, open voltage: 5 V DC, screwless connector (5 pins)
Operating Temperature	0°C to +40°C
Operating Humidity	Under 90% RH (no condensation)
Dimensions	70 (w) x 185 (h) x 20.6 (d) mm
Weight	205 g (including accessories)
Accessories	Removable terminal plug (2 pins, preinstalled on the unit) ... 1, Handset jumper (8 pins, preinstalled on the unit) ... 1, Ferrite clamp ... 1, Hands-free speaker (with connection cord) ... 1, Hands-free microphone (with connection cord) ... 1

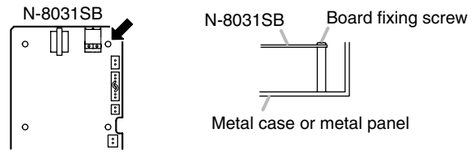
* 0 dB = 1 V

Note: The design and specifications are subject to change without notice for improvement.

4. MOUNTING TO A METAL CASE OR PANEL

4.1. Installation Precautions

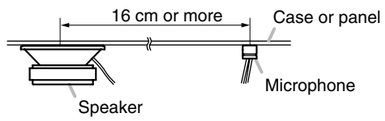
- To prevent a malfunction or breakdown due to static electricity, be sure to use a metal case or metal panel, and screw the board at the indicated hole, so that the board is electrically conducted to the case or panel.



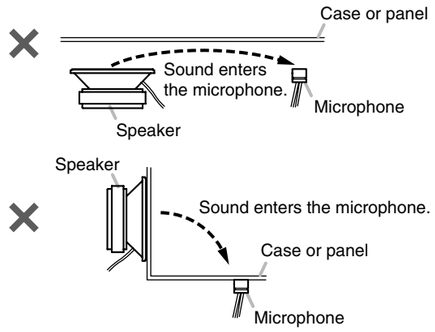
- Cover the whole board with a case when installing.

4.2. Speaker and Microphone Installation

- To prevent acoustic feedback, attach the speaker and microphone closely to the panel and position them at least 16cm away from each other's center as shown below.



- Speaker opening ratio should be 36% (Example: ø4 mm x 61 holes) as a guide.
- Keep the board from coming in contact with the speaker to avoid short-circuit between them.
- Make a microphone opening with the microphone rubber's inside diameter (ø4.5 mm), and position the microphone in the way that its center comes to the opening center.
- Never install them as shown below. Doing so may cause the speaker sound to enter the microphone.

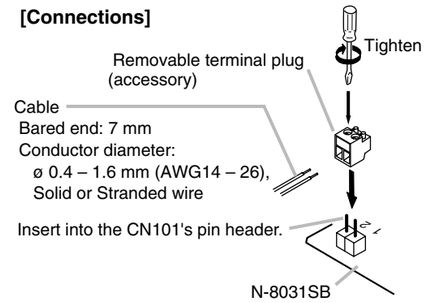


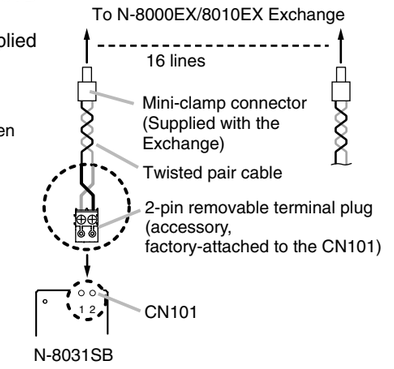
5. CONNECTIONS

5.1. Connection to the Exchange

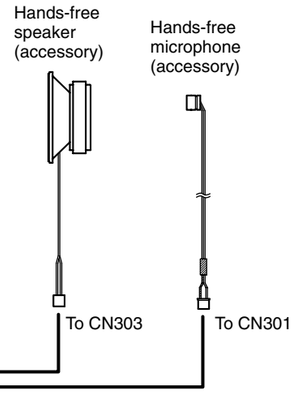
Connect the CN101 terminal to the Exchange's network connection terminal via the E-7000TB Terminal Board.
For details, read the installation manual supplied with the Exchange.

[Connections]





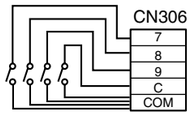
Note
Be sure to use the accessories.



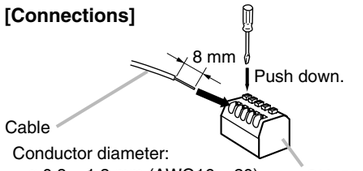
5.2. External Dial Switch Connection

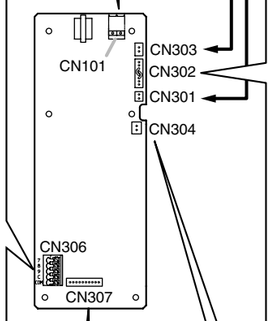
Connecting external switches such as footswitches permits them to perform the same operation as the dial keys "7," "8," "9," and "C".
An electrical current of 1 mA flows through each contact.

Note
The cable length from the external switch should not exceed 3 m.



[Connections]

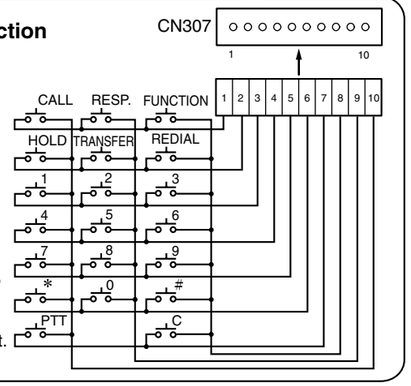




5.3. Dial Key Connection

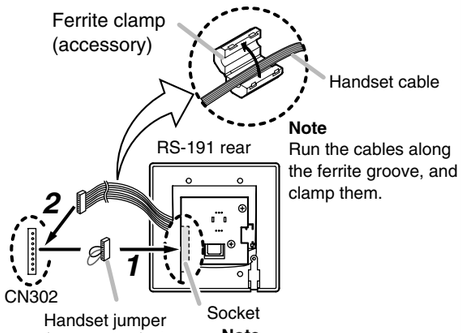
Connect a keyboard of which circuit configuration is as shown in the figure.
An electrical current of 1 mA flows through each contact.

Note
For the CN307 connection, use the PHR-10 connector manufactured by J.S.T. Mfg. Co., Ltd. or equivalent.



5.4. RS-191 Connection

Connecting the RS-191 Option Handset to the N-8031SB permits handset conversation.

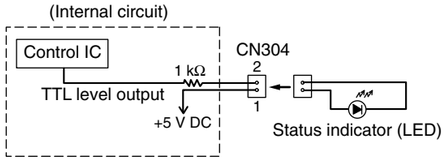


Note
Run the cables along the ferrite groove, and clamp them.

Note
Though the socket on the PC board is faced inside, you can insert the handset jumper into the socket from the side.

5.5. Status Indicator (LED) Connection

Use an LED with high brightness.



Note
For the CN304 connection, use the XHP-2 connector manufactured by J.S.T. Mfg. Co., Ltd. or equivalent.