TOA

INSTALLATION MANUAL

DOOR STATION N-8050DS

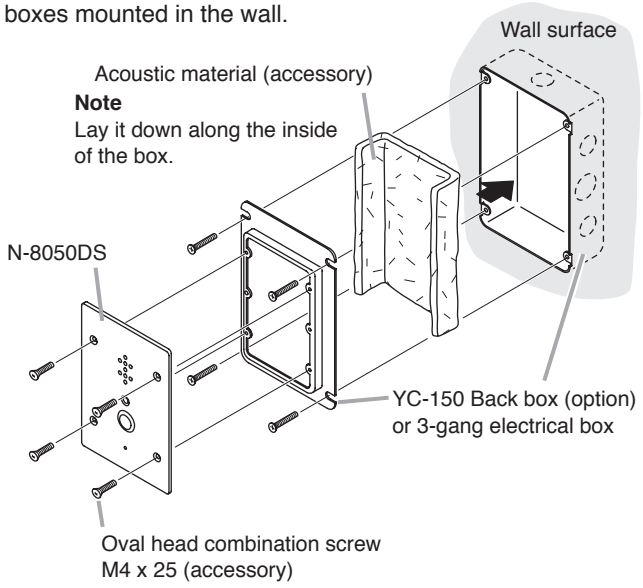
1. GENERAL DESCRIPTION

Designed to connect to the IP Intercom Exchange, the N-8050DS is a door station featuring high quality hands-free conversation and has a contact output (momentarily closed) to remotely control an electronic door lock.
Using with an electrical box or surface mounting box, the station can be mounted to a wall.
The N-8050DS is in full conformity with IP54 water-proof and dust-proof standards. The operating temperature range is –10 to +50°C.
As provided with guard nets inside to cover over the openings of microphone and speaker, the N-8050DS can be installed free from care in public space.

2. WALL MOUNTING

2.1. Mounting to a 3-gang Switch Box (with cover)

Mount the N-8050DS to electrical boxes mounted in the wall.



Notes

- The wall should be over 12 mm thick, and the opening in the wall for an electrical box should be under 115 mm (wide) by 162 mm (high).
- When using for electronic door lock control, fix the N-8050DS with tamper-proof screws such as "Torx" screws to prevent it from being easily removed.
- Be sure to ground the electrical box.

Accessory screws

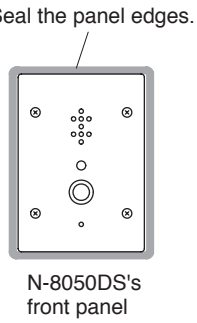
The N-8050DS comes with 2 types of screws: oval head combination screw M4 x 25 and oval head combination screw UNC No.6 x 18. For the electrical box provided with unified threads, use the oval head combination screws UNC No.6 x 18.

2.2. Mounting to the YS-13A Wall Mount Box

Install the YS-13A on a wall and mount the station in the same way as 2.1.

3. INSTALLATION PRECAUTIONS

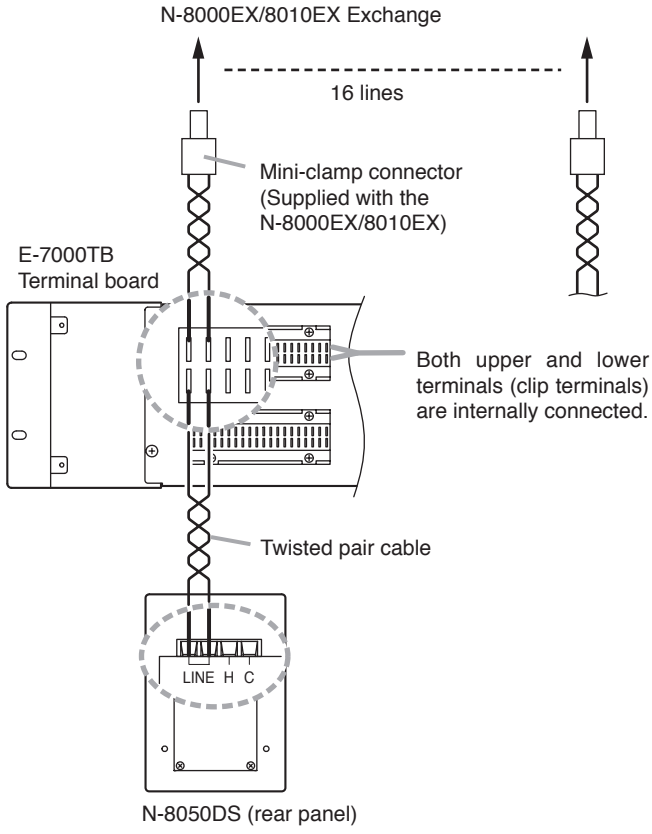
- When installing the N-8050DS outdoors or at locations where it gets wet with water, tightly seal the panel edges. Besides, provide a weep hole at the underside of the mounting box to permit water to drain off.
- When installing the N-8050DS under difficult environmental conditions such as in coastal areas or at humid locations, cover the inside of the N-8050DS with coating. For the coating method, consult your TOA dealer.



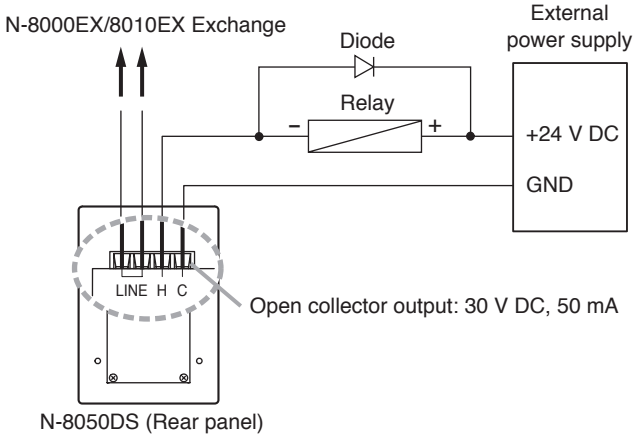
4. WIRING

4.1. Connection to the Exchange

Connect the Exchange to the station's LINE terminals via the E-7000TB Terminal Board as illustrated.



4.2. Connection to an External Relay



4.3. Type of Cable

The types of cables are to be determined according to the following conditions.

- Twisted pair wires (such as those used for electronic push-button telephone) are to be used for wiring between the Exchange and the stations in principle.
- The number of cables pairs laid should be determined considering the possibility of future expansion of the system.
- Outdoor wires should be used where wiring passes through inaccessible areas such as ceilings or under floors where the maintenance is not performed. Indoor wires may also be used, however, in case where there is no risk of deterioration due to exposure to heat, etc.

Note
Specifications related to each junction are as follows.

Mini-clamp connector (N-8000EX/8010EX line terminal)
Conductor diameter: ø0.4 – 0.65 mm (AWG22 – 26), solid wire
Outside diameter: ø1.05 mm or below

Clip terminal (E-7000TB)
Conductor diameter: ø0.4 – 0.8 mm (AWG20 – 26), solid wire
Outside diameter: ø1.5 mm or below

Terminal station (LINE, H, C terminals)
Conductor diameter: ø0.4 – 1.3 mm (AWG16 – 26), solid wire, stranded wire

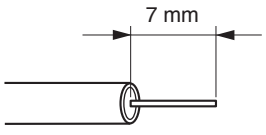
4.4. Relations Between Core Diameter of Cable and Maximum Cable Length

Referring to the following chart as guidelines, design the distance between the Exchange and stations so that loop resistance becomes 170 Ω or less.

Conductor diameter (mm)	Loop resistance (Ω/ km)	Maximum cable length between the Exchange and station. (Assuming that the loop resistance is 170 Ω.)
ø0.4	295	570 m
ø0.5	187	900 m
ø0.65	113	1.5 km
ø0.9	58	2.9 km

4.5. Terminal Station Connection

Step 1. Strip a cable jacket of approx 7 mm to expose inner cable.
For cables, refer to Type of Cable.

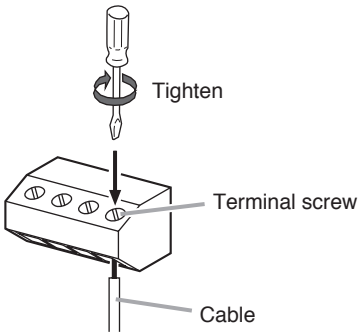


Note
Do not solder plate on exposed inner cables when using a stranded wire.

Step 2. Loosen the terminal screws and insert the cables.

Step 3. Tighten the terminal screws securely.

Notes
- Tug lightly on the cable to be sure that it does not pull free. If the cable pulls free, loosen the terminal screw again and reconnect from Step 2.
- To avoid stripping the screws, use the screwdriver appropriate to the screws tightened into the terminal plug.

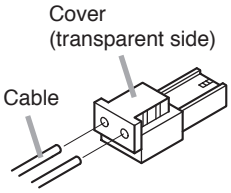


4.6. Mini-clamp Connector Connection

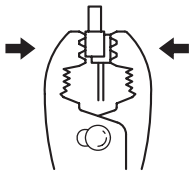
Connect the mini-clamp connector supplied with the N-8000EX/8010EX to a cable using a commercially available tool (pliers).

Step 1. Cut off two-cable ends in equal length, and insert them securely to a cover section (transparent side) of the mini-clamp connector.

Note
Insert the cable without stripping the cable jacket.



Step 2. With a pair of pliers, lightly pinch the mini-clamp cover and, after ensuring that the cable is securely inserted, firmly squeeze on the cover.



Note
Squeeze on the mini-clamp cover until it is correctly locked.

Step 3. Insert the wired connector (plug) into the exchange's connector (socket) until it locks into place.

