

# FLUSH-MOUNT MASTER STATION N-8033MS

Thank you for purchasing TOA's Flush-Mount Master Station.  
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

## 1. GENERAL DESCRIPTION

The N-8033MS is a flush-mount master station designed to operate in conjunction with TOA IP Intercom Exchange and features high quality hands-free conversation.  
Using an optional YC-841 Wall-mount box, this station can be mounted on a wall.  
Connecting a foot switch or other external switch to the external dial input terminal permits one-touch dialing operation by way of such switches.

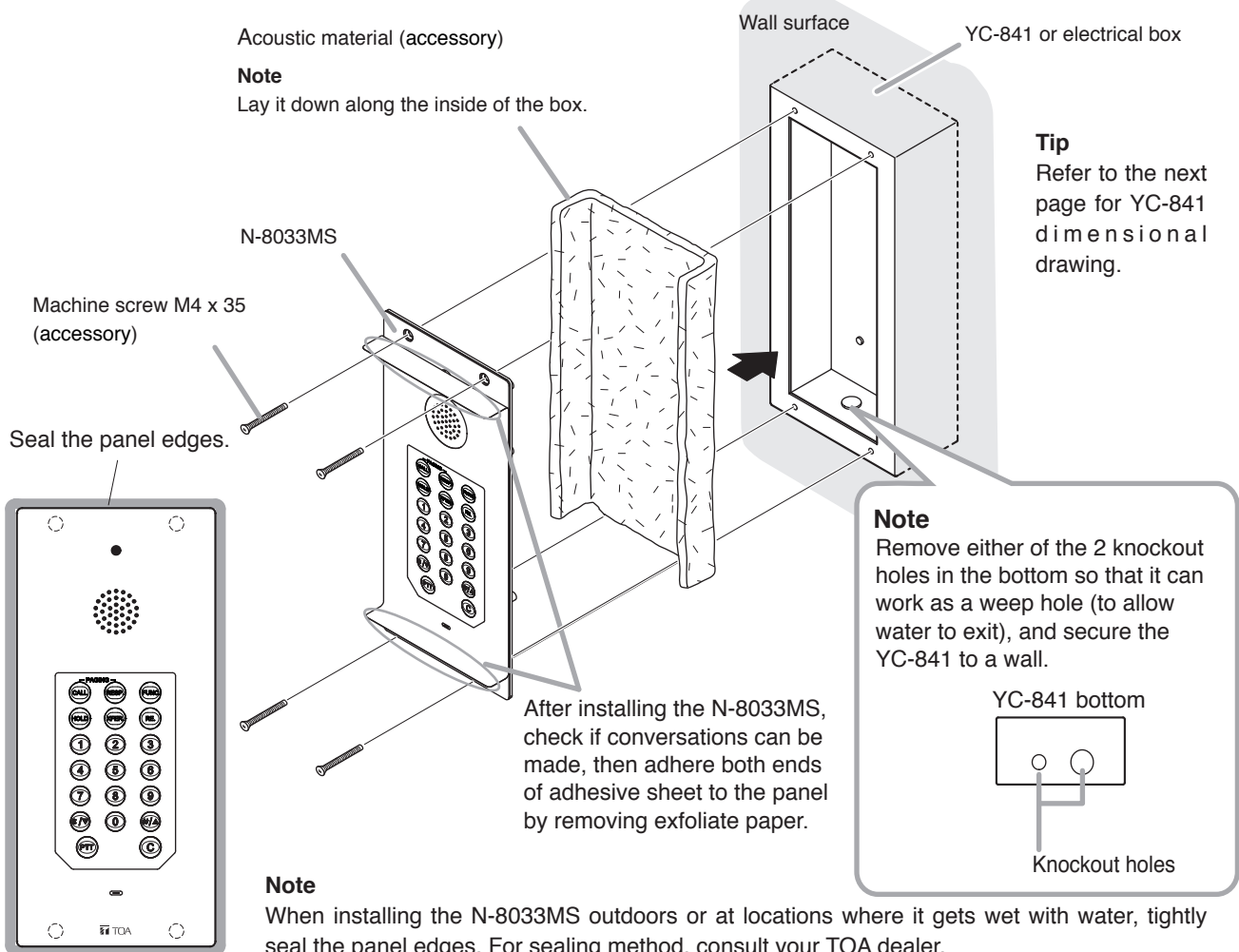
## 2. MAINTENANCE PRECAUTIONS

The front protective sheet is a wear-and-tear item. It is highly recommended to replace it every 100,000 times of operations (approx. 3 years) for any key.  
Part code: 115-51-304-00  
For replacement, please contact your nearest TOA dealer.

## 3. WALL MOUNTING

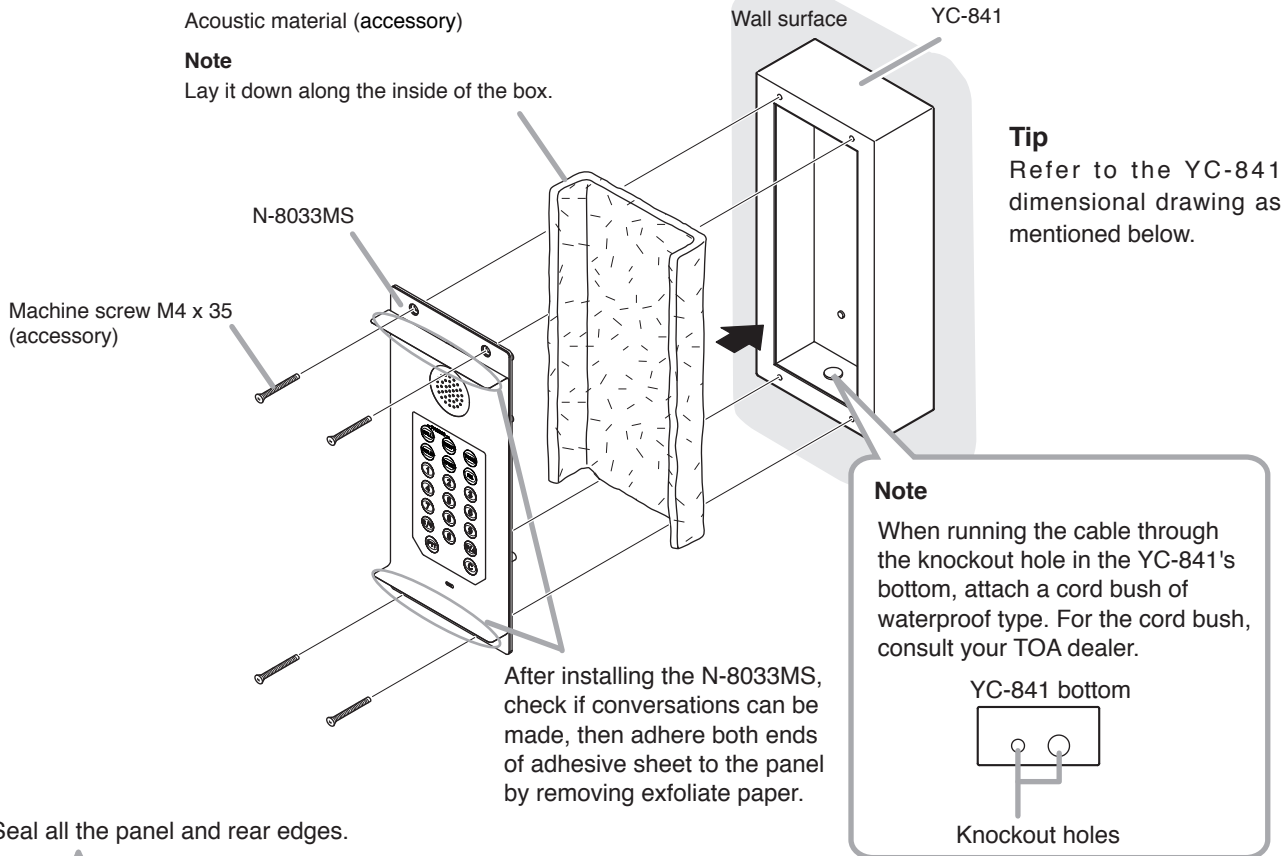
### 3.1. In-Wall Mounting Using an electrical box

Attach the N-8033MS to the YC-841 Wall-mount box or an electrical box installed in a wall.

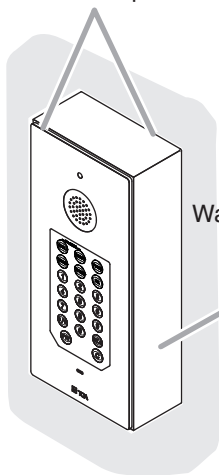


### 3.2. On-Wall Mounting Using a Wall-Mount box

Attach the N-8033MS to the YC-841 Wall-Mount Box installed on a wall.



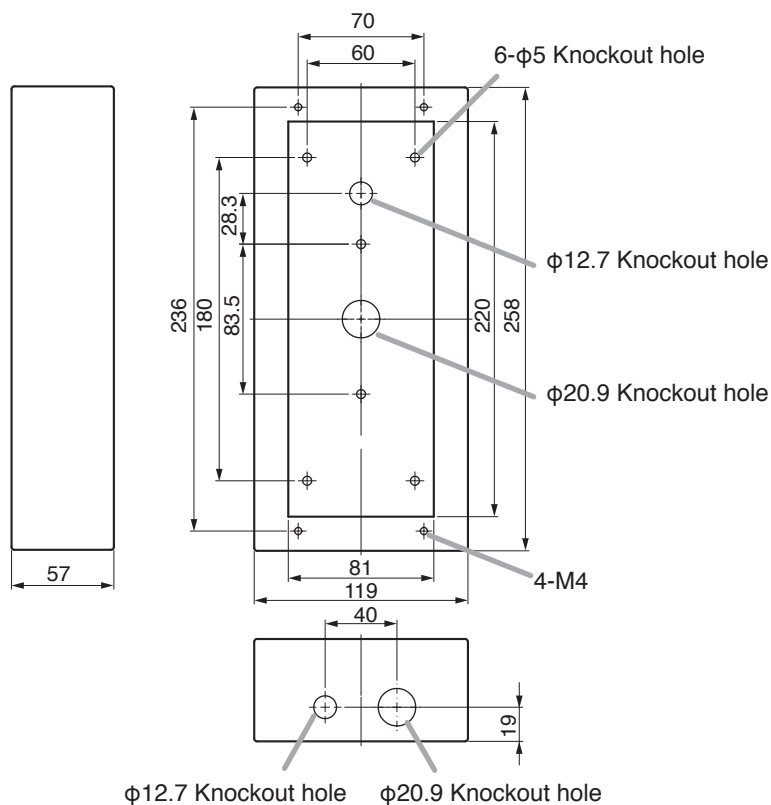
Seal all the panel and rear edges.



**Note**  
Seal the edges of the panel and those of the box's rear surface in contact with the wall surface when installing the unit outdoors or at locations where it gets wet with water. For sealing method, consult your TOA dealer.

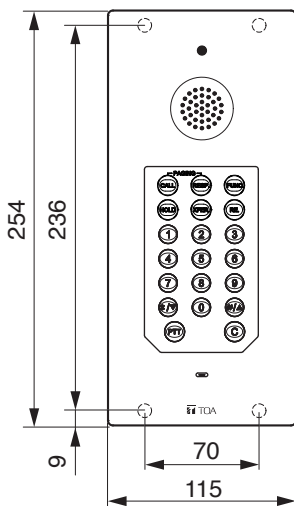
[YC-841 dimensional drawing]

Unit: mm



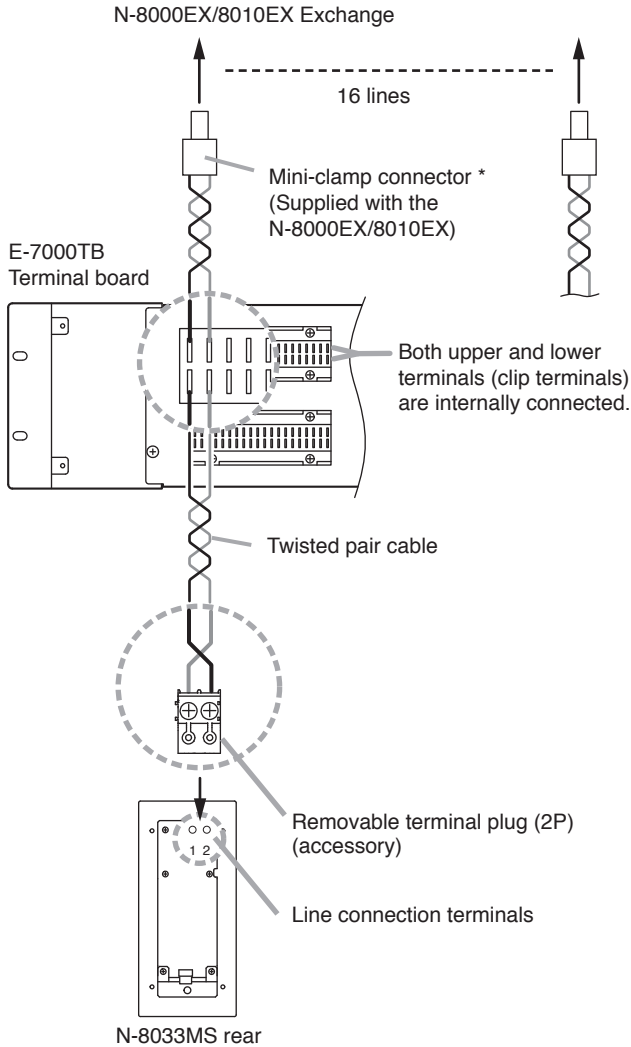
[Installation completion drawing]

Unit: mm



## 4. WIRING

### 4.1. Connection to the Exchange



To connect the cables from the N-8000EX/8010EX Exchange to the N-8033MS, use the removable terminal plug (2P) supplied with the N-8033MS. The cables have no polarity.

\* There are two types of Mini-clamp connectors, either of which is supplied with the N-8000EX/N-8010EX. For details, refer to the next page.

### 4.2. Relations Between Core Diameter of Cable and Maximum Cable Length

Refer to the following chart as guidelines when designing the distance between the Exchange and stations so that loop resistance value becomes 170  $\Omega$  or less.

Conductor diameter (mm)	Loop resistance ( $\Omega$ / km)	Maximum cable length between the Exchange and station. (Assuming that the loop resistance is 170 $\Omega$ )
$\phi$ 0.4	295	570 m
$\phi$ 0.5	187	900 m
$\phi$ 0.65	113	1.5 km
$\phi$ 0.9	58	2.9 km

### 4.3. Connection to External Switch

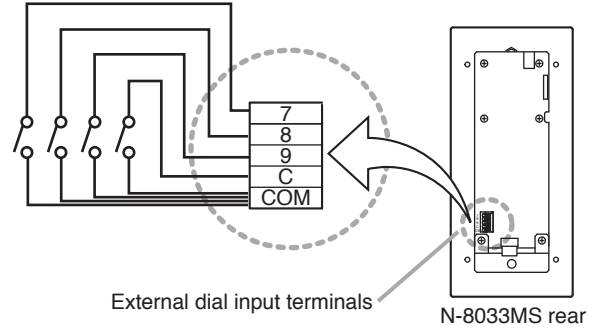
External switches such as footswitches can be connected to the N-8033MS's external dial input terminals.

Turning on each switch connected to the terminal [7], [8], [9], or [C] permits the same operation as performed by pressing the dial [7], [8], [9], or [C].

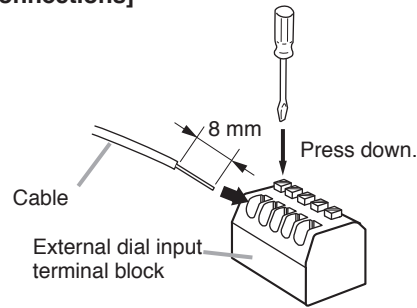
An electrical current of 1 mA flows through each contact.

#### Note

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



#### [Connections]



### 4.4. The Type of Cables

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:  $\phi$  0.4 – 0.65 mm (AWG22 – 26),  
Solid wire

Outside diameter:  $\phi$  1.05 mm or below

Clip terminal (E-7000TB)

Conductor diameter:  $\phi$  0.4 – 0.8 mm (AWG20 – 26),  
Solid wire

Outside diameter:  $\phi$  1.5 mm or below

Removable terminal plug (N-8033MS line terminal)

Conductor diameter:  $\phi$  0.4 – 1.6 mm (AWG14 – 26),  
Solid wire/Stranded wire

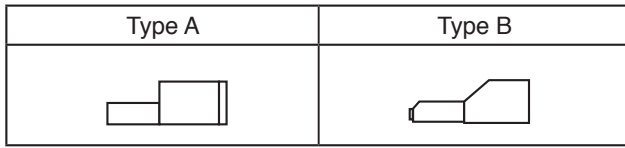
External dial input terminal (N-8033MS)

Conductor diameter:  $\phi$  0.8 – 1.3 mm (AWG16 – 20),  
Solid wire/Stranded wire

## 4.5. Terminal Station Connection

The N-8000EX/8010EX comes with a mini-clamp connector of Type A or Type B as shown below. Both types of connectors differ in their shapes and connection methods.

### [Shape of connectors (Side views)]



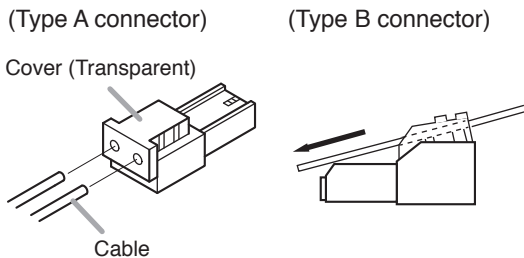
### [Cable connection procedures]

**Step 1.** Connect the cables to the mini-clamp connector.

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

**Note**

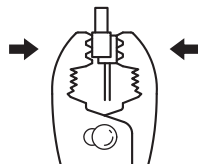
Insert the cable without stripping the cable jacket.



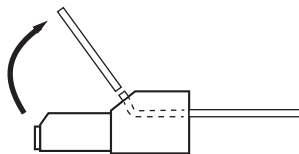
- 1-2.** With pliers, lightly pinch the mini-clamp cover, and after ensuring that the cable is securely inserted, firmly squeeze on the cover.

**Note**

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



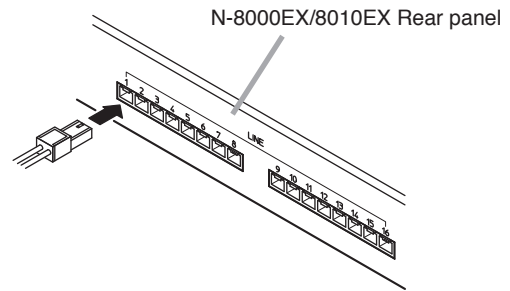
- 1-3.** Cut off the cable sticking out of the connector case with nippers. (Type B connector only.) Raise the cable sticking out as shown below, then cut it off so that it comes out as less as possible from the connector case.



## Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

**Step 2.** Insert the wired connector (plug) into the exchange's connector (socket) until it locks into place.



## 4.6. Terminal Plug Connection

**Step 1.** Strip a cable jacket of approx. 5 mm from the cable end.



**Note**

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

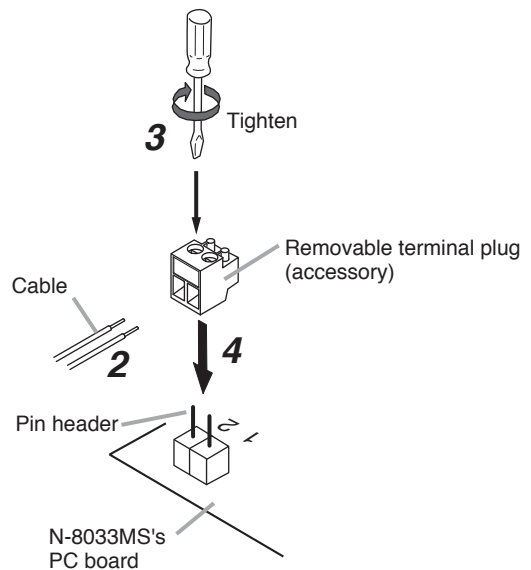
**Step 2.** Loosen the terminal screws and insert the cables.

**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.

**Step 4.** Insert the wired terminal plug into the pin header on the N-8033MS's PC board.



### Traceability Information for Europe (EMC directive 2004/108/EC)

Manufacturer:  
TOA Corporation  
7-2-1, Minatojima-Nakamachi, Chuo-ku, Kobe, Hyogo, Japan

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