

# User Manual

## DIGITAL INTERPHONE TP-90RN



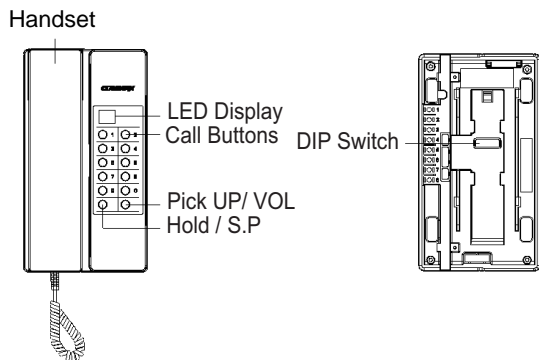
- Thank you for purchasing COMMAX products.
- Please carefully read this User's Guide (in particular, precautions for safety) before using a product and follow instructions to use a product exactly.
- The company is not responsible for any safety accidents caused by abnormal operation of the product.

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## 1. Overview

### Controls and functions



## 2. System Features

For offices, schools, factories, administration buildings, backs, warehouse, institutions and stores in the large capacity of communication, the multiplexed, multi digital channel handset system provides convenient communication over 10 common wiring.

- 2-1. Easy Wiring : Common 10(5p) conductor wiring. Easy to install and saves in costs of installation.
- 2-2. Max 90 stations for versatile uses for officces, schools, factories, etc.
- 2-3. Up to 3 independent Intercom channels available and possible to transfer calls (Follow me function)
- 2-4. Absence indicator allows the caller to know that you are absent, also rejects the incoming call.
- 2-5. Several stations can share same number.
- 2-6. Handfree call : Speaker button allows to call without holding handset.
- 2-7. Group Division : All stations can be divided into four groups. 2 Group paging, Call transfer(Follow Me), and Call answer by another station(Pick up) within a group are possible.
- 2-8. Caller Indicator Caller's station number displayed on LED of the receiving station.
- 2-9. LED Display : The screen shows the status of the system in use. FU is displayed when communication channels are full PF is displayed when paging.
- 2-10. The system will let you know if the station you are calling is engaged or is non-existent.



## 3. Operation

### 3-1. Communication Functions

- Lift the hand set or press the speaker button to hear a dial tone.  
when all channels are engaged, FU is displayed on LED and a busy tone will sound when lift the handset, wait and try to call later.
- Press the station number to call.  
If the number is engaged, the busy tone will sound every second.  
If the number is non-existent, a busy tone will sound every half second.
- Talking can commence when the other station's handset is lifted. Handset must be lifted to talk even though the speaker button was used to dial.

### 3-2. Hold/Mute Function

- Press the hold button to place the receiving station on hold. A simple melody will be played.
- To resume conversation press the hold button again.

### 3-3. Conference Call / Follow Me Function

Up to three stations including yourself can have a conference talk by using the transfer(Follow Me) function.

- Lift handset and press the first station number you wish to conference with.
- Press the hold when this is answered.
- Dial the next station number.
- After both stations are connected depress the hold button again to allow all three stations to communicate.
- When you want to disconnect the last station, put the handset down for 2 seconds then, pick it back up and press the hold button. Continue conversation with the first station.

### 3-4. Paging Function

There are two options for paging.

- 1) All paging which contacts the whole network.
- 2) Group paging which contacts a group of stations in the network.

All paging : this function allows paging to all stations.

- Lift the handset or press No. 0 twice.
- 'PA' will appear on the LED screen and a chime will sound.
- Announce message via handset.

Group paging : this function allows paging to one of four groups(ref. Table 1)

- Lift the handset and press transmit number(01-04) of the group you wish to page.
- An indication number(P1-P4) will be displayed on the LED screen and a chime will sound.
- Announce message via handset.

Group	Transmit No	Page No	Indication No
Group 1	01	10-29(20No)	P1(paging 1)
Group 2	02	30-49(20No)	P2(paging 2)
Group 3	03	50-69(20No)	P3(paging 3)
Group 4	04	70-99(30No)	P4(paging 4)
All paging	00	10-99(90)	PA(all paging)

Table 1.

NB : It is not possible for other groups to page while paging function(PF) is displayed on LED.

### 3-5. Reject Function

- If a station only wants to page and not receive (eg. many stations in one room) turn off the dip switch No. 8 on the back of the unit.

### 3-6. Call Transfer "Follow" Me Function

Within a group, one station can be assigned to answer all incoming calls.

- 1) Lift handset or press the speaker button.
- 2) Press No. 05 (05 will appear on top half of the LED screen)
- 3) Press the station's number. (The number will appear on bottom half of the LED)
- 4) Replace the handset or depress the speaker button again.
- 5) The station number will flash on the bottom half of the LED to indicate the assignment is completed.
- 6) To cancel, repeat steps 1 to 4 without pressing the station's number.

### 3-7. Representative Answer Function

If a station is engaged the call can be diverted to another station in the same group.

### 3-8. Absence Indicator / Reject Function

If a station is unattended or you don't want to take the call, a message will appear on the caller's LED screen.

- 1) Lift handset or press the speaker button.
- 2) Enter your station number.
- 3) Replace handset or press the speaker button again.
- 4) A line will flash on the half of LED screen. The message is now activated.
- 5) To cancel the message, pick up and put down the handset.

### 3-9. Volume Adjust Function

Volume adjustment can only be done in the 'Standby' mode. There are three volume levels, low, mid, max.

- Ensure the unit is in 'Standby' mode.
- Press the volume button to display current volume level.
- Adjust volume level by double pressing rapidly the following :

U1 ..... low volume  
 U2 ..... mid volume  
 U3 ..... max volume

### 3-10. Parallel Connection

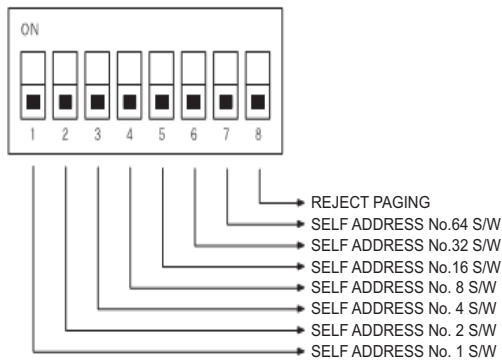
Two or three stations can be operated on the same ID number. This allows more units to be connected to the system.

- Set the same ID number to the units.
- All units will ring when the ID number is called.
- When the call is answered the other station(s) are free.
- The free units can operate as normal.



## 4. How to arrange the self address no.

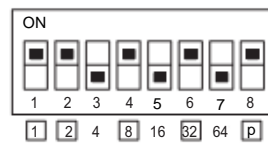
- You can address the self station No. by use the DIP S/W back of the unit.



### [Addressing]

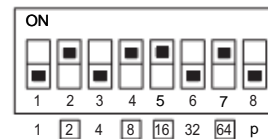
Ex.) Station ID no. 43 dip switch set to receive a paging.

$$\text{No. 1} + \text{No. 2} + \text{No.8} + \text{No.32} = \text{No.43}$$



Ex.) Station ID no. 90 dip switch set to receive a paging.

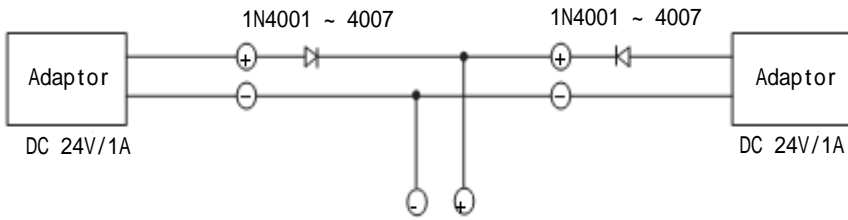
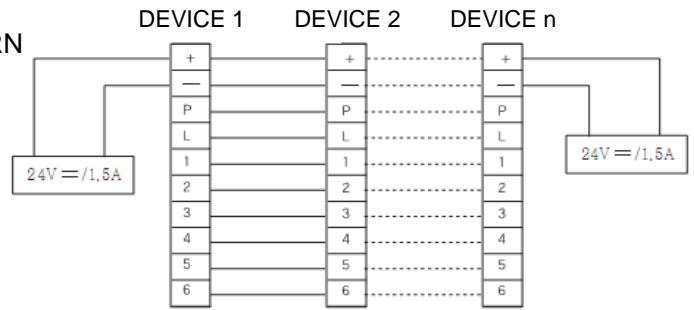
$$\text{No. 2} + \text{No. 8} + \text{No.16} + \text{No.64} = \text{No.90}$$



## 5. Installation

The system is in BUS type of 10 common wiring. Check the cable condition before the connection.

- One adaptor DC 24V can cover up to 8 pieces of TP-90RN
- Units should be within 1Km of the power adaptor.
- Use extra power adaptor if a unit is more than 1Km.
- In use of 0.65mm, install the second unit of TP-90RN over 1Km distance from the first unit with adapter.



Note : When a power adaptor is added to the system, connect a diode with conductor unless the diode is built in the adapter's internal circuit.

Our product, ADAPTER(DC 24V / 1A), is connected with diode

### SPECIFICATIONS

Power Source .....	DC 24V
Current Consumption .....	120mA(Max)
Wiring.....	10 Common Wires
Effective Distance .....	1Km/0.65mm
Talk Paths .....	3 Channels
Dimension.....	116(D) X 208(W) X 67(H)

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