



**TTU-302WX Inside Unit**

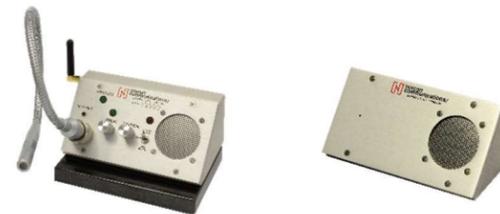
Norcon TTU® -302WX

**Installation & Operating Instructions**

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**TTU-302W Back Office Unit**

**TTU-302 W Outside Unit**

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**TTU-302-W Wireless Series**

**2-Way Wireless Talk-Thru Electronic Communication System**

A wireless voice communications system for High-Security and Isolation Booth Situations. Today's security and isolation booths are often the best step you can take to protect your employees. But do they protect or help maintain your very important good will? Not if clerks and customers have to shout and growl and repeat themselves to be heard or understood.

Norcon's TTU-302W wireless Talk-Thru Communicator is a 2-way, hands-free audio system that provides high-quality personal communication between people separated by security or isolation barriers and communicates with back office wirelessly.

**FEATURES**

- Clear 2-way hands-free voice communication. Avoids shouting, repetition, and misunderstanding.
- 900 MHz digital intercom system provides highly security CD quality sound.
- Simple installation with no wiring between desktop unit and the back office unit.
- Quality electronic design and engineering.
- Rugged, tamper-resistant materials. Anodized aluminum
- Units available for ADA applications.
- Headset jack equipped for using the optional headset.

**HOW IT WORKS ...**

The Norcon TTU system permits hands-free, 2-way communication between the booth attendant and the customer. Unique circuitry facilitates ongoing, clear, 2-way conversation at all times, as if the two parties were together in the same room.

The TTU-3 W XLR wireless Talk-Thru Communicator includes a customer side unit and one desk-top main unit. The customer side unit connect to the main desk-top unit by wire. The units are VOX controlled, the desktop unit is always priority for talking; it interrupts the window unit and forces it to listen. The main desk-top unit and the wireless hand set are paired and works on the same system ID. The working channel is dynamically chosen according to the environment. If the present working channel is jammed, both units will jump to another channel. There are a total of 32 unique system IDs. 32 pairs of units can be installed closely without interference. When the paired wireless headset is switched on it connects to the TTU-3 W XLR unit. The green led on the control panel of the inside unit will switch on. Once the handset is switched off it will automatically switch to the goose neck mic and the green wireless led will switch off. The desktop unit automatically attenuates the outside channel. If the desktop unit is not used for a period of 30 seconds, the listening volume will be reduced approximately 70%. Normal operation is restored as soon as the attendant speaks into the desktop's gooseneck microphone. The TTU-3W XLR provides clear communication even in environments with high ambient noise by shaping the sound for maximum intelligibility.

**HOW TO INSTALL ...**

1. Mount the TTU® unit using the method shown in figure (1).
2. Remove the face plate from the customer side unit's control panel from the prism-shaped housing and the main desk-top unit.
3. Use holes on the housing where required for installation.
4. Route the two pair cable (with connector on one end) from the inside unit to the outside unit. Make sure the connector is in the inside unit. Attach the cable to the terminal block on the outside unit, color to color. Connect shield to black wire. Join the connector with the wire harness from the printed circuit board so the colors line up.
5. For power connection, route one pair cable (with the connector on one end) from the inside unit to the location of the PS-1 Power supply. Connect the conductors to the power supply (red to +, black to -). Plug the connector to its mate from the printed circuit board.
6. The sound absorbing material in the housing may be removed during installation but should be replaced for normal operation.
7. For best result separate inside and outside units as far as possible.

**Recommended cables for wiring :**

For all Spk /mic connections use **West Penn Wire #357**. This is a four conductor 22 gauge wire with two wires, that are shielded and two are without shield. Use the shielded pair for the mic connection. For power and paging connections use **West Penn wire #252241**. This is a stranded single pair 18 awg, Plenecon -II jacket ROHS cable. Keep Mic/Spk and power cable bundles away from other power cable.

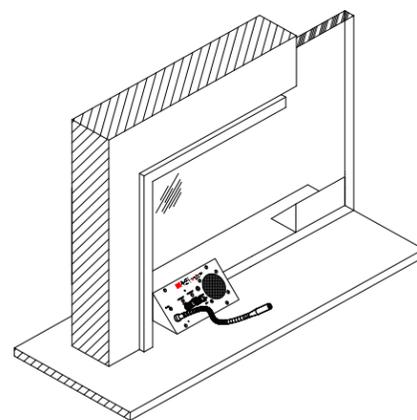


Fig. 1

**HOW TO USE THE TALK-THRU COMMUNICATOR**

**Using the Inside unit:**

- The desk-top inside unit and the wireless handset units are paired at the factory. It is not required to change the ID unless there interference by another devise or you have more than one set of unit with the same ID at the same location.
- There are 32 unique system IDs. To change system ID of the unit. First select an ID number, set the DIP switch on the desk-top unit according to the chart on page 6. Then change the ID on the headset unit to the same ID of the desk-top unit. These two units are paired.
- Turn the Main desk-top unit's TALK and LISTEN volume controls to around 12 o'clock position.

Turn the desktop main unit on. Adjust the TALK volume control until the attendant is clearly heard by the person outside the window when the attendant is speaking 2" to 4" from the gooseneck microphone at a normal speaking level. The green TALKING indicating LED should go on when attendant starts talking and go off when the attendant stops talking. When the green goes on, the customer's voice is muted, If the green LED stays lit constantly, it indicates either the TALK volume setting or the ambient noise is too high, then the TALK volume must turn lower.

**HOW TO USE THE BACK OFFICE UNIT**

1. Turn the Back Office unit's TALK and LISTEN volume controls to around 12 o'clock position, then turn the power switch on.
2. Turn the power switch of main Desk-top unit and the WIRELESS switch to the on position. The "WIRELESS" LED on the Main Desk-top unit will be on. It indicates the Main Desk-top units is connected to the Back Office unit and you are ready to talk to the outside customer.

**HOW TO USE THE "WIRELESS/LOCAL" SWITCH**

1. If you want to talk to the outside customer from the Main Desk-top unit while the "WIRELESS" LED is on, you have to press the WIRELESS / LOCAL switch once, the WIRELESS LED will turn off and the unit will switch to wire mode, then you can talk to the customer from the main desk-top unit.

2. To use the Back Office unit again, you can either press the WIRELESS/LOCAL switch once again or turn the Back Office unit off, wait for 5 seconds then turn it back on again. The WIRELESS LED will turn on indicating unit is on the wireless mode.

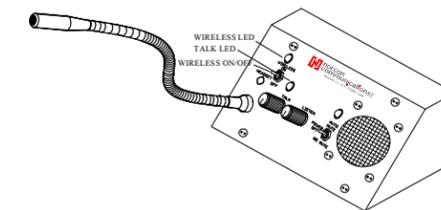


Fig 2.

**Noise Cancelation (TTU- NC Models) optional.**

When using a Talk-thru unit in a noisy area such as heavy traffic street, crowded movie theater hall way or gas station, the noise makes the conversation difficult. A powerful DSP inside the Norcon noise cancelation unit samples an ambient noise environment and attenuate the noise around the desired speech signals. As a result, continuous and repetitive noise is removed; a clear conversation will be ensured even with a truck passing in the background. To take the advantage of this new technology, you can order the TTU NC model or send the existing unit back to us for upgrade.

**Operation Hints**

1. Increasing the talk volume control allows the attendant to speak further from the gooseneck microphone as well as increasing the talk channel volume. The optimum distance from the gooseneck microphone should be maintained at approximately 3" or conversations not directed to customers may be heard outside the booth.
2. The unit will decrease the incoming volume level by approximately 70% in about 30 seconds after the attendant stops speaking into the gooseneck microphone. The purpose of this feature is to decrease the amount of extraneous noise entering the booth when no one is at the booth. Normal volume level is restored when the attendant speaks into the gooseneck microphone. **The muting function can be defeated by switching the POWER switch to NO MUTE position.**
3. Install a headset into the headset jack will allow communications from the headset and disconnect the gooseneck microphone.



Fig 3.

**TROUBLESHOOTING**

You may occasionally encounter a problem with your TTU® system. If this happens, refer to the following list. If additional help is needed, please contact us.

1. **No sound at all**  
  - Is the power cable properly connected to power supply and the power supply plugged into a working outlet?  
 The power cable red wire should be connected to (+) and black wire connected to (-) the power supply. The power supply should be plugged to a working outlet.
2. **Howling ( Feed back)**  
  - Is the TALK or LISTEN volume turned too high?  
 Set the volume control to a proper level. In most cases, both TALK and LISTEN should be set to the position of around 11 to 12 o'clock.
3. **Conversation cutting-off and breaking-up**  
  - Is the TALK volume setting too high?  
 Turn TALK volume to a lower level. make sure the green LED is off when not talking to the gooseneck microphone.
  - Is the attendant talking too far from the gooseneck microphone?  
 The ideal distance is 3" to 4" from the gooseneck microphone.
- Check the DIP switches on both, the TTU-3 w unit and the headset. Make sure they are set to the same ID number.
- Check the antenna RF cable on both units make sure the cable is plugged in the RF cable jack. (Fig 5)

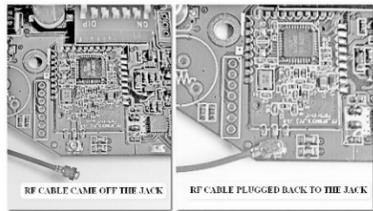


Fig 5.

**HOW TO SET THE SYSTEM ID**

There is a DIP switch on the Printed Circuit Board (Fig.4). SW1 and 2 are for working mode setting, SW 4 to SW 7 are for wireless pairing ID setting. There are 32 system IDs for up to 32 pairs of unit to be used. TTU-3 W XLR is factory paired and ready to use. In case the user has multiple units installed in the same room and if there is interference with each other, you have to select another system ID by setting the DIP switch to a different combination.

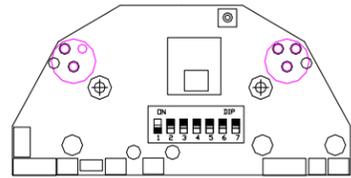


Fig 4.

WORKING MODE SETTING (DIP switch up position is ON and down position is OFF)	
MODE	DIP Switch Setting
TTU-3 W XLR Wireless ready Front Desk unit SW1--- OFF SW2--- ON	ID 1
TTU-3 W XLR Back Office unit SW1 --- OFF SW2--- ON	ID 1

Note: SW3 to SW7 are for ID setting. The above settings, SW3 to SW7 are all set to ON position, this pair of units are set to ID 1.

**ELECTRONIC SPECIFICATIONS**

1. 900 MHz digital wireless connect between main unit and wireless head set.
2. Audio frequency response: Selectively shaped for maximum voice intelligibility.
3. Audio power: 2 watts per channel.
4. Distortion: Less than 2%.
5. Listen mode: 20dB compression
6. Talk mode: VOX (voice operated switch) control.
7. Microphones: Electret
8. Power supply adapter: Input 90V-240V / 60Hz AC  
Output 15V DC, 1 A. UL, CE. Level VI

Talk-Thru systems are shipped complete with cables, power supply and instruction.

Specifications are subject to change without notice.

**Accessories and Options for TTU:  
Professional Wireless Headset System (Optional)**

**TTU® -WHS-D:** Wireless Headset is designed to work with the TTU-WR Wireless ready unit only.

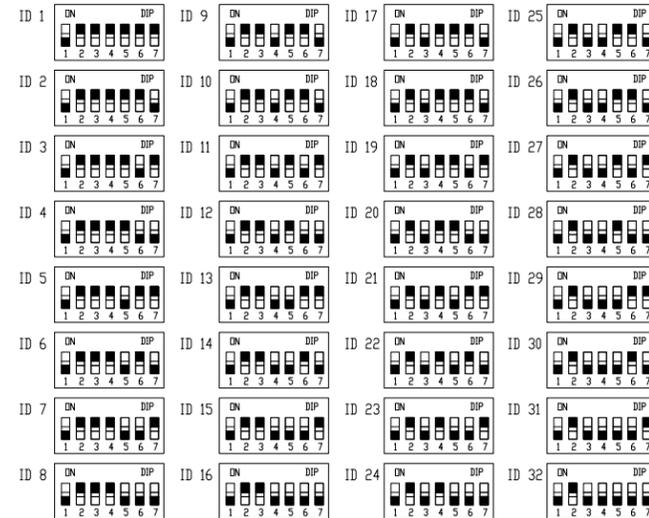
**FEATURES**

- Clear 2-way hands-free voice communication.
- Quality engineering and innovative design
- Walk around freely while talking to the customer.
- Self-powered unit with rapid rechargeable battery



**WIRELESS ID SETTING CHART**

SW3 to SW7 are for wireless ID setting, the DIP switch's up position is ON and down position is OFF.



**ANC 700 Headset (Optional) for use with regular non RF ready units TTU-NCHS:**

- Superior sound quality
- Noise Cancellation microphone
- Long wearing comfort



**TTU-WHS (Optional)**

- Mobile: DECT 6.0 technology hand-free mobile design with range of up to 300 feet from base unit
- Extended Use: Ten hours continuous talk time on rechargeable battery.



**Microphone Grill / Windshield Sponge:**

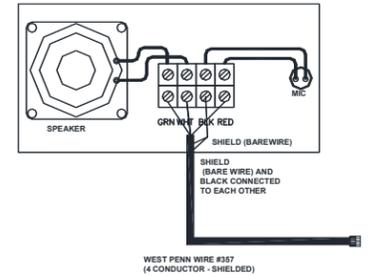
Specification: Material: Foam, Color: Black

- I D: Approx. 12mm Size: Approx. 65x10mm (L\*W)
- High elasticity, durable and soft, Replacement for your worn-out or lost headset microphone pads

Package include:

- 5 x Microphone Covers

**TTU-3 OUTSIDE UNIT WIRING**



**Service Policy  
TALK-THRU SYSTEM WARRANTY  
REPAIRS**

Norcon Communications Inc. warrants the products Manufactured by Norcon to be free from defects in material and workmanship for a period of one year from the date of shipment from the factory provided:

- 1)The product has not been abused, misused or improperly maintained, repaired and /or modified during such period, and
- 2)Such defect is not a result of voltage surges/ burnouts, lightning, water damage / flooding, fire, explosion, earthquakes, tornadoes, acts of aggressions / war or similar phenomenon; and
- 3) The product has been properly installed according to the appropriate Norcon Installation Guide.

Both incoming and outgoing freight charges are at customer's expenses. Domestic repair will be returned to customer by UPS Ground. International repair will be returned to customer using normal shipping arrangements. Any other shipping instructions must be made in writing and will be at the customer's expense