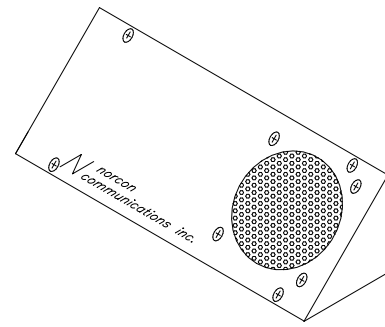




Norcon TTU@-3X Series

Installation & Operating
Instructions.
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TTU@-3X Outside Unit

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TTU@-3X Series 2-Way Talk-Thru Electronic Communication System:

A voice communications system for High-Security and Isolation Booth Situations.

In today's security conscious environment, isolation booths are often the ideal recourse to protect your employees. But does it facilitate and help maintain your very important public image? Not if clerks and customers have to raise their voice and repeat themselves to be heard or understood.

Norcon's Patented TTU@-3X 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.

FEATURES

- Clear 2-way hands-free voice communication.
- Superior quality electronic design and engineering.
- Avoids raising your voice, repetition, and misunderstanding.
- Simple, one-person installation. No need to cut a hole in the barrier.
- Rugged, tamper-resistant materials. Anodized aluminum
- Removable XLR mic for your convenience.
- Units available for ADA applications.
- Headset jack equipped on all models. Headset can be ordered separately.
- Export models available.

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@-3X Talk-Thru Communicator now incorporates circuitry to automatically attenuate the outside channel. If the gooseneck microphone is not used for a period of 30 seconds, the outside channel volume will be reduced approximately 70%. Normal operation is restored as soon as the attendant speaks into the gooseneck microphone. The automatic volume attenuation circuit prevents outside noise from bothering the attendant. The TTU@-3 X provides clear communication even in environments with high ambient noise by shaping the sound for maximum intelligibility. Its compression circuitry decreases loud, annoying sounds.

HOW TO INSTALL ...

1. Mount the TTU@ unit using the method shown in figure (1).
2. Remove the control panel from the prism-shaped housing. The "Inside" unit houses the circuit board for the system, the gooseneck microphone, volume control, power switch, Power indicator LED and speaker. The "Outside" unit has no electronics. A speaker and a microphone are attached to the "Outside" unit.
3. Use holes on the housing where required for installation.

4. 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 #221. This is a stranded single pair 22 awg, Plenecon -II jacket Rohs cable. Keep Mic/Spk and power cable bundles away from other power cable. 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.

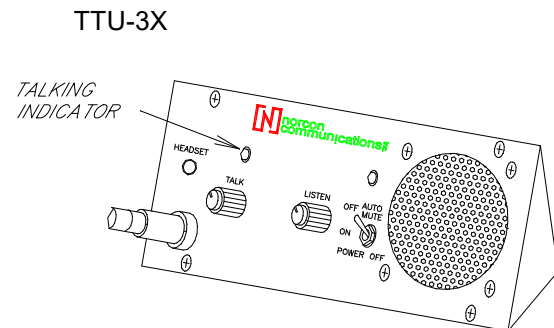
5. For power connection, route one pair cable (with the connector on one end) from the inside unit to the location of the PS-1 Power supply. Connect the conductors to the power supply (RED to +, BLACK to -). Plug the connector to its mate from the printed circuit board.

6. The sound absorbing material in the housing may be removed during installation but should be replaced for normal operation.

7. For best result, maintain maximum separation between inside and outside units.

HOW TO USE THE TALK-THRU COMMUNICATOR:

1. With power switch off, turn Talk and Listen controls completely counter clockwise.
2. Turn the unit on the unit by switching POWER switch to the up position. In this position the unit also in the AUTO MUTE mode.
3. 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 LED should turn on when attendant starts talking and go off when the attendant stops talking. If the green LED stays lit constantly, it indicates either the TALK volume setting or the ambient noise is too high.
4. Adjust the LISTEN control until the person outside the window is clearly heard when speaking at a normal level. In most situations, both the TALK and LISTEN volume are normally set to 11 to 12 o'clock position.

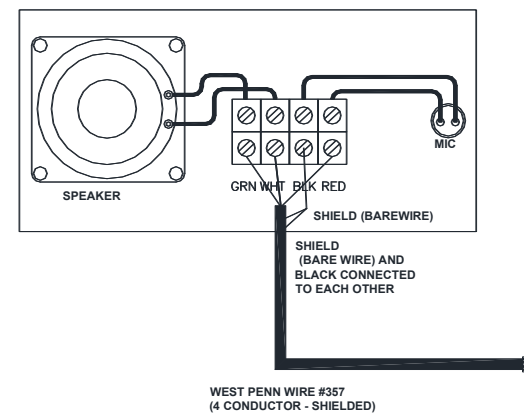


Operation Hints: Increasing the talk volume control allows the attendant to speak further from the gooseneck microphone as well as increasing the talk channel volume. The optimum distance from the gooseneck microphone should be maintained at approximately 3" or conversations not directed to customers may be heard outside the booth.

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.

Install a headset into the headset jack will allow communications from the headset and disconnect the gooseneck microphone.

TTU-3 OUTSIDE UNIT WIRING



WEST PENN WIRE #357
(4 CONDUCTOR - SHIELDED)

SPECIFICATIONS:

MECHANICAL:

- Outside assembly: machined aluminum, anodized finish, Tamper-resistant.
- Inside assembly: Machined aluminum, anodized finish, Tamper-resistant.
- Size (both assembly): 6" W x 2 3/8" H x 2 3/8" D
- Goose neck microphone length 18"
- Weight: 4 lbs.
- Mounting: Countertop.
- Panel control: Listen volume, Talk volume, power on/off, and LED power indicator.

ELECTRONIC:

- Audio frequency response: Selectively shaped for maximum voice intelligibility.
- Audio power: 2 watts per channel.
- Distortion: Less than 2%.
- Listen mode: 20dB compression
- Talk mode: VOX
- Microphones: Electret
- Power supply: Input 90-240V / 60Hz AC
- Output 15V DC, 1A. FCC, UL, CE, level VI.
- Talk-Thru systems are shipped complete with cables, power supply and instruction.

Specifications are subject to change without notice.

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.

No sound at all

- Is the power supply properly plugged into a working outlet?
If the power supply has been plugged into a working outlet for a while, the power supply should be warm, if it is not; the power supply may be defective.

- Howling (Feedback)
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.

- Conversation cutting-off and breaking-up
Is the TALK volume setting too high?
Turn down TALK volume to a proper level.
Is the attendant too far from the gooseneck microphone?
The ideal distance is 3" to 4" from the tip of the gooseneck microphone.

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TTU@-3X Series:

Select from following available models

- TTU@-3X with removable XLR mic continuous power unit complete with 6" housing.
- TTU@-302WX one outside unit communicates with two inside unit. It is designed for calling the back office during the off hours.
- TTU@-3CX is a TTU@-3X without removable gooseneck microphone, for headset use only.



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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



Accessories for TTU@: TTU-NCHS:

NCHS Headset for non-wireless ready units (Optional)

- Superior sound quality with noise cancellation
- Comfortable for continuous wear



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Professional Wireless Headset System (Optional)

for use with regular non RF ready units **TTU-WHS:**

- **Mobile:** DETC 6.0 technology hand-free mobile design with range of up to 300 feet from base unit
- **Duo-Set Headset:** Adjustable for over-the-head stability or over-the-ear convenience with new conformable ear loop
- **Extended Use:** Ten hours continuous talk time on rechargeable battery.

Paging Button (optional) paging over a ceiling speaker:

There are 2 types of speaker to meet your applications

- 1) APF-15 High efficiency ceiling or wall mounted horn speaker for direct connect with TTU@-3X for 1 to 2 speaker application.
- 2) SD72-WV Indoor Ceiling Speaker with 25V/70V transformer for uses with UA 35T II Amplifier (Optional). **It is good for more than two speaker application.**

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Microphone Grill Windshield Sponge

Specification:

- Material: Foam ,Color: Black
- ID : Approx. 12mm Size: Approx. 65mm/10mm (L*W)
- High elasticity, durable and soft, Replacement for your worn-out or lost headset microphone pads

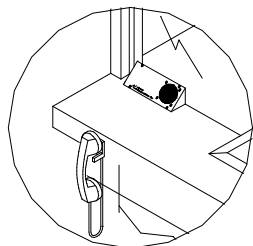
Package include:

- 5 x Microphone Windshield Sponge



Handset with Hook-switch (Optional):

- Amplified handset with volume control
- Heavy duty handset with 29" or 48" armored cord
- Stainless steel plate with chrome hook switch
- Automatically disconnects the speaker and microphone to keep the conversation private.



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Introducing the Norcon TTU@-1 NCX:

When using a Talk-thru unit in a noisy area such as a street with heavy traffic, a crowded movie theater hall way or a 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 even with a passing truck in the background. To take the advantage of this new technology, the existing unit can be sent to us for upgrade.



Introducing the Norcon TTU@-1X Series:

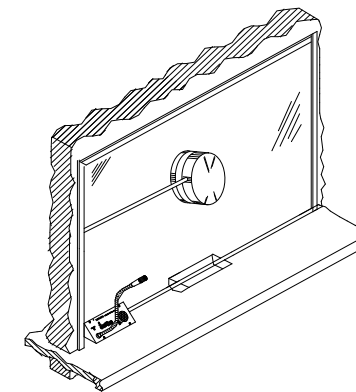
There are times, when the isolation barrier has a 3" to 4" hole on it, the Norcon TTU@-1X is special design for it. The TTU@-1X is a 5" in diameter round unit. The front face and the housing are easily mounted on opposite sides of the barrier. They allow hand free communication through barriers. It is the most widely used system of its type in the U.S. and the world. TTU@-1X series includes TTU@-1AX removable mic basic model; TTU@-1ABX, UL listed level 3 bullet proof unit; TTU@-1DX rechargeable battery operated unit and much more. Norcon provides audio/visual, communications, and secure talk-thru solutions for critical applications around the world.

Please visit our web-site at for the entire series of Norcon's quality products. We are sure you will find one that meets your needs.

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Introducing the Norcon TTU@-7X:

Special design for the window with a secure pull-down gate or shade. In some cases, when it's impractical to mount the inside control section of the TTU@-3X in a window with secure gate or shade the TTU@-7X is your choice. The TTU@-7X incorporates the same high-quality electronics as the basic TTU@-3X, but with a 1" low profile window mount section, and a prism shaped counter mounting control section.



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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

* Two years extended warranty available.

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