

# ... 8 AND 12 STATION EXECUTIVE SERIES INTERCOM INSTALLATION AND OPERATION

## DESCRIPTION:

ESCO's EXECUTIVE SERIES intercom features 8 or 12 station bi-directional communication, high quality gooseneck microphone, voice activated talk circuit and three powerful 20 WATT output amplifiers for clear voice reproduction under the most severe circumstances.

## SPECIFICATIONS:

- ★ Intercom size: 7.5"D x 9.0"W x 4"H (including feet)
- ★ Junction Box size: 4.5"D x 10.0"W x 2.0"H (including mounting tabs)
- ★ Weight: 7.5lbs (including power transformer)
- ★ Two quick disconnect interconnection cables (6' standard)
- ★ 120VAC stepped down to 18VAC via UL approved wallmount transformer

## FEATURES:

- ★ User friendly
- ★ Custom tailored voice spectrum microphone
- ★ VOX (Voice Activated "hands free" talk switching)
- ★ Silent standby (deselected speaker station)
- ★ Simultaneous communication with all remote stations
- ★ Lights to indicate call locations and station status
- ★ Hold memory for multiple conversations
- ★ Flashing indicator and audible tone for customer call in alert
- ★ External input for music or message repeater
- ★ Dedicated listen amplifier
- ★ Three 20 WATT output amplifiers
- ★ Field adjustable talk out volume
- ★ Operator adjustable talk out volume
- ★ Chemical resistant long life membrane keypad
- ★ Dust, moisture and smoke resistant internal speaker
- ★ Grounded chassis for safety

## STATION STATUS L.E.D. CODE AND SWITCH FUNCTIONS:

**OFF LINE** Deactivates all stations. Intercom should remain in this mode when not in use. Red OFF LINE LED flashes indicating OFF LINE mode.

**ALL LINES** Activates all stations simultaneously, enabling monitoring and broadcasting to all remote stations at once.

**HOLD** Depressing HOLD causes station status LED's to illuminate yellow as a reminder of a previously active station.

**1** Eight or twelve station selector switches to activate single stations for two-way communication.

**PRESS TO TALK** Depressing this switch causes the intercom to switch from the listen mode to the talk mode. Station status indicators illuminate green for listen and red for talk mode.

## FOR FURTHER INFORMATION CONTACT THE ESCO OFFICE IN YOUR AREA

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Freedom Electronics

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## **RECOMMENDED SPEAKER CABLE:**

All speaker cable should be of a shielded or twisted-pair type containing 18 or 22 gauge wire. Cable shields should be attached to the shield ground connections in the junction box only. Use of shielded or twisted pair cable provides clearest communication and easiest connection to each Sub-station speaker. All speaker cables must be routed through a conduit that is **SEPARATE** from those containing 120VAC power wiring.

**DO NOT UNDER ANY CIRCUMSTANCES ROUTE AUDIO CABLES IN THE SAME CONDUIT WITH 120VAC WIRING. THIS VIOLATES THE NATIONAL ELECTRIC CODE AND PRESENTS A HAZARD.**

## **INSTALLATION GUIDELINES:**

- A) Wallmount transformer should have a dedicated grounded 120VAC line.
- B) Speaker hook-up wire should be 18-22 gauge shielded or twisted pair cable.
- C) Run speaker cable separately away from high voltage power wiring.
- D) Sub-station speakers mounted in close proximity of the Master-station may result in a howl (acoustical feedback) when either one calls the other. This condition can be corrected by lowering volume or repositioning the substation speaker.
- E) The use of ESCO Speakers and Call switches is recommended for optimum performance.
- F) Mount Speakers and Call switches according to their installation and application guide.

## **INSTALLATION OF THE ESCO EXECUTIVE SERIES INTERCOM:**

- 1) Run an appropriate length of speaker cable from each remote speaker and call switch to the area where the intercom junction box is to be located. (Tagging wire ends is recommended to avoid confusion when the final connections are made)
- 2) Strip 3/16" of insulation from the end of each wire and twist the strands together.
- 3) Remote speakers and call switches should be connected to the terminals of the junction marked Call Connections and Speaker Connections per the drawing provided in this instruction set.
- 4) Connect supplied cables from junction box to intercom.
- 5) Plug wallmount transformer (included) into a dedicated grounded 120VAC outlet.
- 6) Turn on power switch (located on the rear of the intercom) and check the operation of all connected speakers and call switches. If the talk out volume is too low or there is acoustical feedback present, adjust the talk out speaker volume (located underneath the intercom) accordingly.
- 7) Check the sensitivity of the VOX circuit. A proper adjustment should trip the intercom into the talk mode when speaking in a normal voice into the microphone from a distance of 1 to 2 inches. The VOX sensitivity adjustment is located underneath the intercom.
- 8) To ensure proper warranty protection, be sure to fill out the warranty registration information and return immediately.

## **INSTALLATION OF MUSIC OR MESSAGE PLAYER:**

Music and/or prerecorded messages may be transmitted to all remote stations that are deselected (in standby) or off-line.

- 1) Install Model SPK-1010 impedance matching transformer (p/n 0204-0080 sold separately) to the External Input terminals of the junction box. The SPK-1010 prevents multi-speaker loading to the customer supplied amplifier source. See enclosed diagram.
- 2) Attach the 8 OHM output of the message player/external amplifier to the (black) input wires of Model #SPK-1010 impedance matching transformer. Music and/or prerecorded messages will be transmitted to all remote stations that are deselected (in standby) or in off-line mode.

## OPERATING INSTRUCTIONS

- 1) Talk/Listen switching:
  - a) **With the VOX** - Choose the desired station by pressing one of the station select switches. Speak directly into the gooseneck microphone from a distance of 1 to 2 inches. The unit will automatically switch from listen to talk mode and the station status LED will turn from green to red indicating talk mode. When there is a pause in the voice of the operator, the unit will switch back to listen mode and the station status LED will return to green.
  - b) **Without the VOX** - Choose the desired station by pressing one of the station select switches, press and hold down the talk button while speaking into the microphone opening. The station status LED will turn red indicating talk mode. Release the talk button to listen. The status LED will return to green indicating listen mode.
- 2) Hold memory: To activate hold memory, press the hold button before answering the next station. The status LED will turn yellow reminding the operator which stations were last active.
- 3) All lines communication: To communicate with all stations at the same time, press the all lines button. All station status LED's will turn green, indicating all stations are in the listen mode. During the talk mode, all station status LED's will turn red.
- 4) Off line mode: Press the Off Line button to discontinue all activity on the intercom. The off line LED will flash red indicating the unit is in silent standby mode.
- 5) Call In alert: The station status LED will flash yellow and a continuous beeping tone will sound when there is an incoming call. Pressing the corresponding station button will cancel the alert.

## ESCO E-MODEL INTERCOM PARTS/OPTION LIST:

Part #	Esco #	DESCRIPTION
FE-TSC-1008MV.....	0941-0012 .....	E-Model 8 station intercom w/flex-mic & VOX
FE-TSC-1008.....	0941-0010 .....	E-Model 8 station intercom w/internal-mic, no VOX
FE-TSC-1008V-R2.....	0941-0013 .....	E-Model 8 station intercom w/dual remote flex mics & VOX
FE-TSC-1008MV-R1.....	0941-0015 .....	E-Model 8 station intercom w/single remote flex mic & VOX
FE-TSC-1012MV.....	0941-0016 .....	E-Model 12 station intercom w/flex-mic & VOX
FE-TSC-1012.....	0941-0014 .....	E-Model 12 station intercom w/internal-mic, no VOX
FE-TSC-1012V-R2.....	0941-0017 .....	E-Model 12 station intercom w/dual remote flex mics & VOX
FE-TSC-1012MV-R1.....	0941-0018 .....	E-Model 12 station intercom w/single remote flex mic & VOX
FE-0502-0129.....	0502-0129 .....	6' quick disconnect interconnection cable
FE-0502-0135.....	0502-0135 .....	10' quick disconnect interconnection cable
FE-0502-0136.....	0502-0136 .....	15' quick disconnect interconnection cable
FE-0204-0074.....	0204-0074 .....	Wallmount E-model intercom transformer
FE-0502-0148.....	0502-0148 .....	13" (16" true w/flange & mic) External flex microphone
FE-0502-0149.....	0502-0149 .....	19"(21" true w/flange & mic) External flex microphone
FE-SPK-1001.....	0216-0003 .....	Deluxe horn speaker
FE-SPK-1002.....	0216-0002 .....	Economy horn speaker
FE-SPK-1012.....	0216-0008 .....	3.25" pump speaker
FE-SPK-1003.....	0941-0006 .....	Stainless steel speaker/call box
FE-SPK-1005.....	0941-0007 .....	Call switch box
FE-SPK-1009.....	0941-0009 .....	Stainless steel speaker box
FE-SPK-1013.....	0941-0002 .....	Heavy duty handset
FE-SPK-1010.....	0204-0080 .....	Impedance matching transformer
FE-SPK-1011.....	0205-0008 .....	Individual speaker volume control
FE-SPK-1006.....	0408-0035 .....	Shielded speaker wire
FE-SPK-1004.....	0408-0036 .....	Twisted pair speaker wire

### SPECIFICATIONS:

#### **E-Model Intercom:**

7.5"D x 9.0"W x 4"H (with feet) Includes intercom main station, J-Box, (2) DB-25 M/F cables, installation and operating Instructions. 8 or 12 Stations for speakers, 8 or 12 stations for call switches. Available with standard 13" flex microphone and VOX, optional 19" flex microphone and VOX, flush-mounted internal microphone with no VOX or with optional flex mic mounted in a remote location. Dual flex mic combinations are also available. Example: One flex mic mounted on intercom and one mounted remotely, or both flex mics mounted remotely. Receives power from 120VAC to 18VAC power transformer (included). Connects to the external terminal box via two 6' DB-25 shielded cables. Grounded chassis. External music or message repeater input at terminal box. (Must use 0204-0080 impedance matching transformer and customer supplied amplifier.)

**Terminal Box:**

4.5"D x 10.0"W x 2.0"H (with mounting tabs)

8 or 12 station. Terminal strips for speakers and call switches. Terminal strip for external music input, and earth connections of speaker cable shields. Features four 2-size knockouts for conduit coupling. Connects to main intercom unit via two 6' DB-25 shielded cables. Features four mounting holes. Grounded chassis.

**6' quick disconnect cables:**

Interconnection cables from intercom to terminal box. Standard length-6'. Optional length-10' & 15'. Shielded 25 position connectors. Transfers chassis ground. Minimum hole size for thru counter installation = 1- 2.25" diameter hole.

**Wallmount power transformer:**

2.50"D x 3.0"W x 4.0"H (with mounting tab)

UL approved, plug-in, class 2, indoor use only. 120VAC 60 HZ 0.59A three prong primary, 18VAC 50VA fused secondary, w/chassis ground, screw terminal output w/chassis ground. Duplex cover type mounting screw.

**External flex microphone:**

2.75"L x 1.5"DIA. microphone, 13"L or 19"L flexible gooseneck and flange.

Unidirectional and low impedance design. Designed primarily for computer voice recognition applications. Flange type mounting, three mounting holes @ 0.177"ea., with one 0.500"DIA. center wire hole.

**Deluxe horn speaker:**

7.0"H x 10.7"W x 9.1"D

8 Ohm, 15 Watt. Wide angle paging projector. Molded ABS horn and zinc die cast universal swivel mount. Indoor or outdoor applications

**Economy horn speaker:**

5.75"H x 5.25"W x 6.50"D

8 Ohm, 10 Watt. Molded plastic horn, steel tilt mounting bracket. Indoor or outdoor use.

**3.25" pump speaker:**

3.44"W x 1.35"H

8 Ohm, 3 Watt, 7 Watt MAX. Solder terminals. Dust, smoke & moisture resistant.

**Speaker/call box:**

5.25"H x 7.5"W x 2.0"D

Polished stainless steel enclosure with rain lip. Momentary push-button for call. 8 Ohm, 3 Watt, 7 Watt MAX, dust & moisture resistant speaker. 1 rear & 1 bottom dual size conduit knockout. Internal terminal strip for wiring.

**Call switch box:**

4.5"H x 2.75"W x 2.25"D

Standard industrial single gang box enclosure. Suitable for wet locations. Red momentary push button for call.

**Speaker box:**

Polished stainless steel enclosure with rain lip. 8 Ohm, 3 Watt, 7 Watt MAX, dust & moisture resistant speaker. 1 rear & 1 bottom dual size conduit knockout.

**Heavy duty outdoor handset:**

4.5"H x 4.5"W x 2.25"D (Enclosure only)

Standard industrial dual gang box enclosure. Suitable for wet locations. Standard black handset w/polished armored cable. Hearing aid compatible receiver per EIA Standard RS-504. Response-200 to 3200 Hz/Sensitivity-minimum 72db @ 1KHz/Impedance-150 ohms nominal. Internal prewired terminal strip w/location for second external speaker. Handset on when removed from cradle, second speaker on when handset on cradle. "Call" when handset lifted off cradle.

**Impedance matching transformer:**

Four flying leads for installation. Two mounting ears. Necessary when using external music input. Matches 8 or 12 8 ohm parallel loads.

**Individual speaker volume control:**

Single shaft, triple solder lug terminals. 8 Ohm, 25 Watt. Panel or baffle mount.

**Shielded speaker wire:**

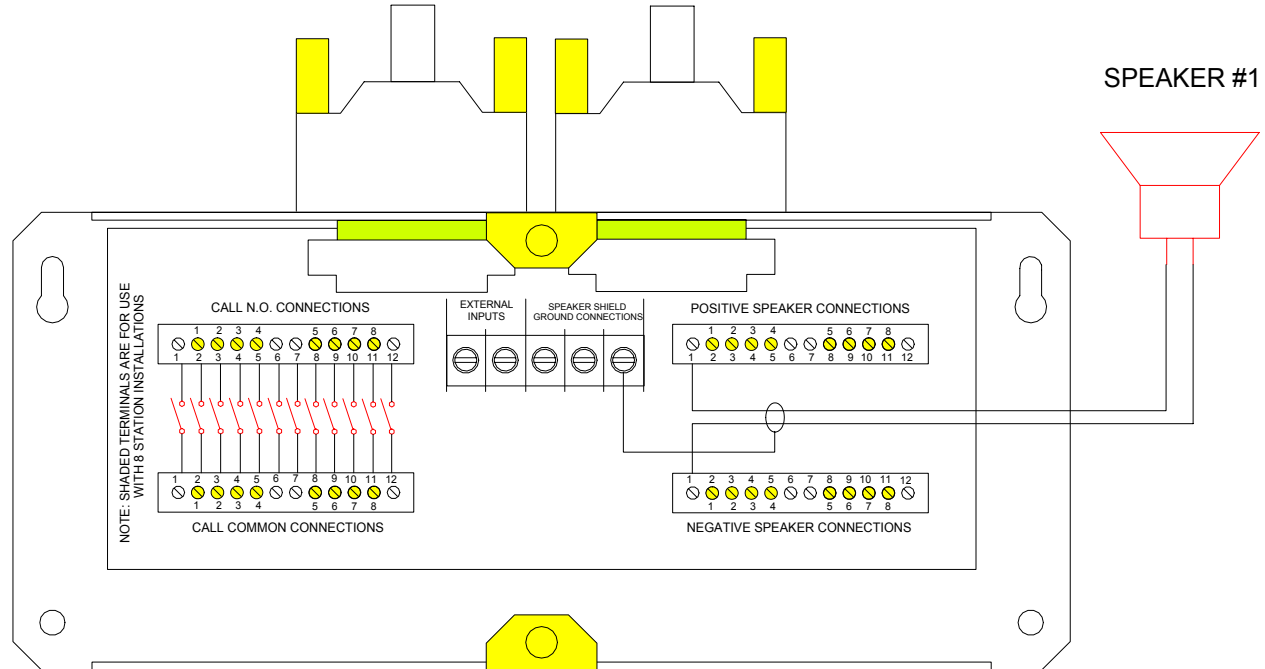
20AWG, one pair w/shield, jacketed

**Twisted pair speaker wire:**

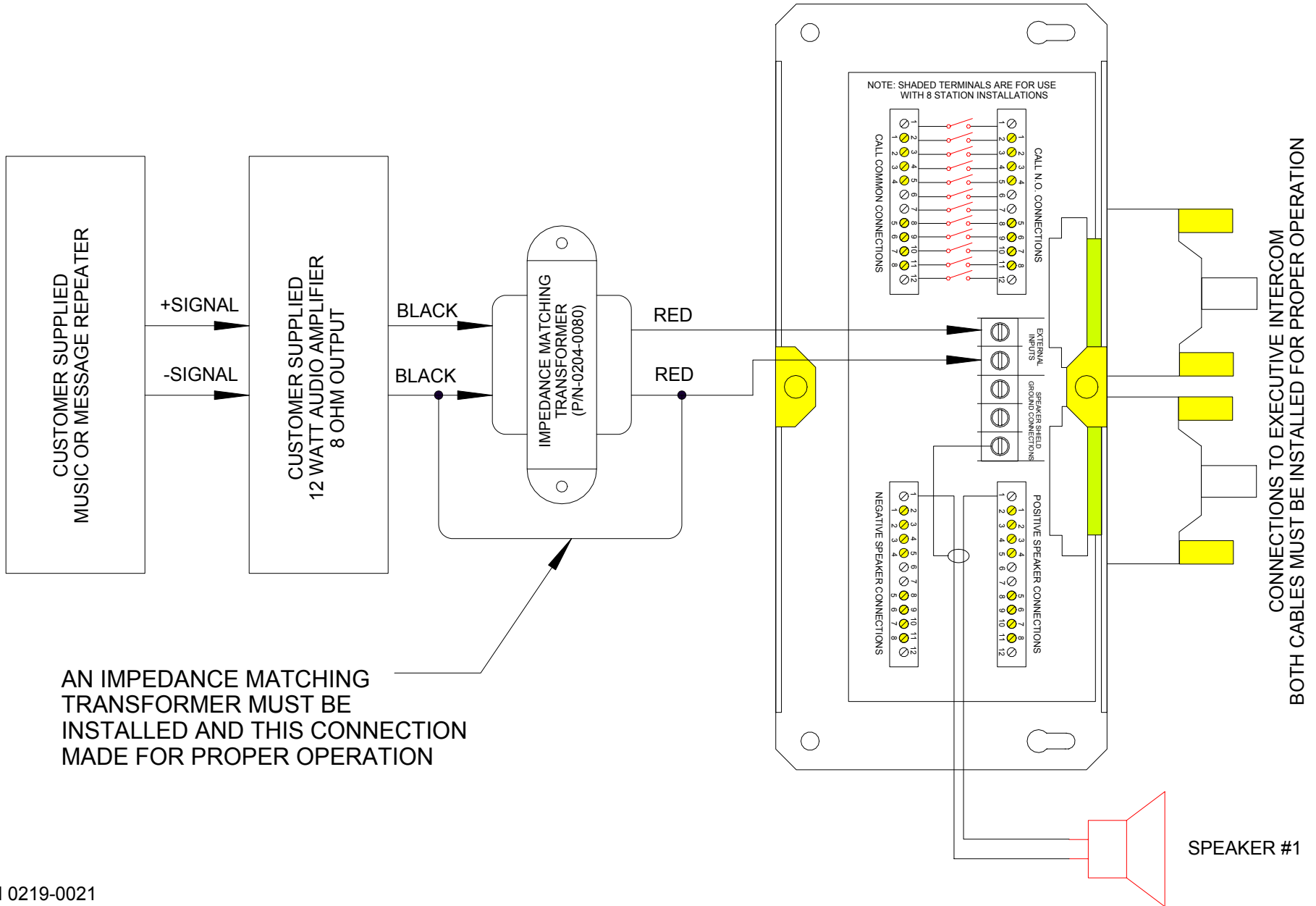
20AWG, 2 conductor, jacketed

# TSC-1008/TSC-1012 intercom junction box wiring

CONNECTIONS TO EXECUTIVE INTERCOM  
BOTH CABLES MUST BE INSTALLED FOR PROPER OPERATION



NOTE: ALL STATIONS WILL RECEIVE MUSIC OR MESSAGES WHILE INTERCOM IS IN STANDBY ONLY.



AN IMPEDANCE MATCHING TRANSFORMER MUST BE INSTALLED AND THIS CONNECTION MADE FOR PROPER OPERATION