



COMFORT. PRIVACY. PRODUCTIVITY.



INSTALLATION MANUAL

PLENUM OPERATING PLATFORM
(Model G525)

IMPORTANT SAFETY INSTRUCTIONS



**RISK OF ELECTRIC SHOCK- DO NOT OPEN THE UNIT.
THERE ARE NO SERVICABLE COMPONENTS INSIDE.**

- 1) Read these instructions.
- 2) Keep these instructions. Instructions are to be framed and placed adjacent to the control unit for ready reference.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 14) **WARNING** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture and do not expose to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus

Preparation

1 Review boxes. Refer to packing list and check equipment in boxes. Be certain you have:

- a** All Operating Platforms – Please secure all OP's to a very safe place.
- b** Speaker boxes. Count all the items to ensure that you have all of your equipment.
- c** Open speaker boxes to properly count the number of speakers you have.

2 Review Wiring and Installation Drawings:

- a** Verify where wiring will be installed BEFORE placing equipment.
- b** Check wiring runs to properly estimate needed quantity of wire for the project. Check quantity for: Power Wire (16/2), Data Wire (CAT 5e, 4 pair), Speaker Wire (CAT 5e, 4 pair). Check that all wiring is Plenum Rated, Only use Plenum Rated wiring in Plenums.

3 Review location for placing the head end equipment (electrical or IT closet) – make sure that you have access to power in the closet. Follow all safety precautions. Use a UPS (uninterruptible power supply) for powering the head end for all emergency paging systems. Check for and identify intended placement for the headend enclosure.

4 Identify any major site impediments such as:

- a** Slab-to-slab wall
- b** Shafts
- c** Risers (wiring raceways from floor to floor)
- d** Obstructions in plenum

OP & Speaker Placement

- 1** Place the i.Net speakers by walking the floor and set the speakers on the floor at approximate installation locations.
- 2** Place OP's on the floor at approximate locations (check drawing for correct sequence). Make sure the OP's are not put in harm's way of people working or walking.

NEVER PLUG AN i.NET OP INTO ANY COMPUTER OR NETWORK EQUIPMENT OTHER THAN ANOTHER OP.

NEVER INSTALL POWER WIRES WHILE THE POWER IS ON. IT IS DANGEROUS AND WILL DAMAGE THE OPs, ONLY TURN THE POWER ON WHEN THE POWER WIRES ARE FULLY AND PROPERLY WIRED AND INSTALLED.

INSTALLATION

IMPORTANT: Lencore suggests installing equipment in this sequence:

- 1** Hang speakers*
- 2** Hang OPs
- 3** Run power wires with power OFF

ATTENTION: DO NOT HOOK UP POWER UNTIL THE SYSTEM IS FULLY INSTALLED. POWER CONNECTIONS MUST BE DOUBLE-CHECKED TO ENSURE PROPER POLARITY.

CRITICAL: CHECK WIRING POLARITY (+ AND -) BEFORE FIRING THE SYSTEM ON, OTHERWISE, IRREVERSIBLE DAMAGE WILL OCCUR TO SOME OR ALL OF THE OPs.

* Speaker units will hang from the ceiling using the attached chain (supplied by Lencore). Chain length should be cut to enable each speaker to hang a minimum of 6" above the ceiling tile and a maximum of 12" above the ceiling tile, unless otherwise noted on the drawing.

NOTE: TO HELP MAINTAIN UNIFORMITY, KEEP THE CHAIN LENGTHS/HEIGHTS CONSISTENT THROUGHOUT THE INSTALLATION AND SPACE.

Hang i.Net Plenum OP

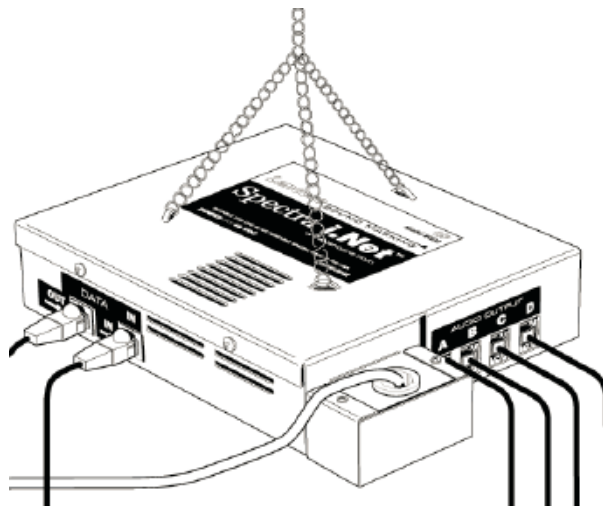
You have received i.Net OPs pre-numbered – see label on each i.Net OP indicating its sequence number. Check and install each respective i.Net OP according to the drawing.

i.Net OPs are hung from the ceiling using the attached chain (supplied by Lencore). Chain length should be cut to enable each speaker to hang 6-12" above the ceiling tile or 3" below the ceiling deck. Make sure air can circulate around the i.NetOP and that the i.Net OP is not touching metal in the ceiling or plenum.

NOTE: Keep the chain lengths/heights consistent throughout the installation and space.

IMPORTANT: Lencore suggests installing equipment in this sequence:

- 1** Climb ladder and access the ceiling plenum
- 2** Hang i.Net OPs in plenum area at marked locations using preferred hanging method (powder action gun such as a Hilti-gun™ or drill and screw; check your local building codes for allowable hanging methods and standards)



- 3** Drive nail holding clip to i.Net OP chain and i.Net OP into ceiling

NOTE: Do not permit the i.Net OPs to touch any other metal in the ceiling. Isolate each i.Net OP with wire ties.

Wiring the Speakers and OP's

- 1 Power cables (16 gauge/2 conductor – Plenum Rated)
- 2 Data cables (CAT 5e or equivalent – 4 pair – Plenum Rated) – Straight Pin 568B Method
- 3 Speaker Cables (CAT 5e or equivalent – 4 pair – Plenum Rated) – Straight Pin 568B Method

PREPARATION

- A Check site drawing for wiring installation diagram
- B Use wiring diagram to determine approximate wiring lengths:
 - a Approximately 15' between speakers (Cat 5e 4 pair)
 - b Approximately 3000' total Data length
(Smart Router needed at that point to extend data cable distance)

IMPORTANT: Double-check for long home runs and runs between floors, as these will require much longer lengths of wire. Check wiring schematics for your project.

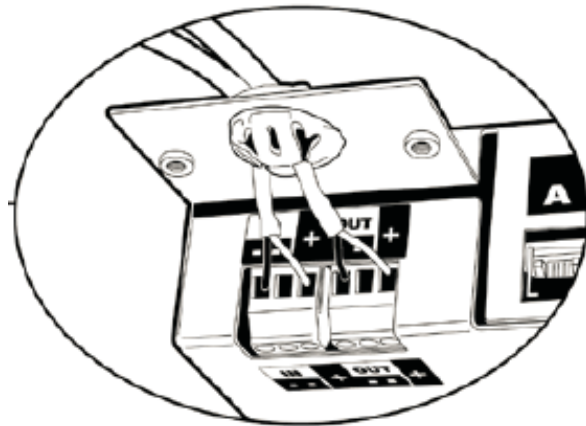
- C For more detail about system wiring, see Section 4 – data cables

POWER CABLES

- Power cables are plenum-rated, 16-gauge, two conductor cable
- One power supply powers 3 i.Net OP's with paging and/or music (6 OP's masking only)
- A common ground must exist
 - a Between the last OP on a power supply and the first OP on the next power supply.
 - b From the MPI which is typically installed at the headend location to the first i.Net OP Between Floors.

Wiring the Speakers and OP's

- 1 First, run power cables to the IN/OUT connections of each i.Net OP, taking care to be consistent with positive and negative screw terminals.



Do NOT cross positive and negative connections while wiring power- irreversible damage will occur.

- 2 Run the power cables (NOT LIVE) from the power supply unit in the electrical/ IT closet to the power +/- screw terminal connections of the first i.Net OP.
- 3 Complete all other wiring (audio and data) and perform wiring checklist BEFORE powering up the system.

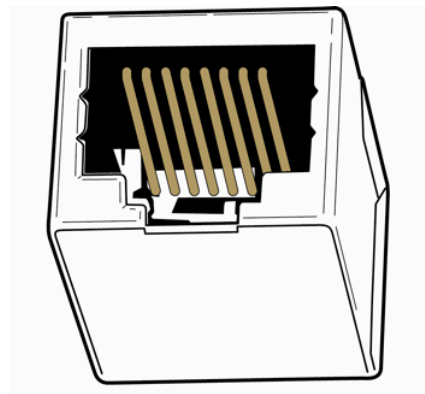
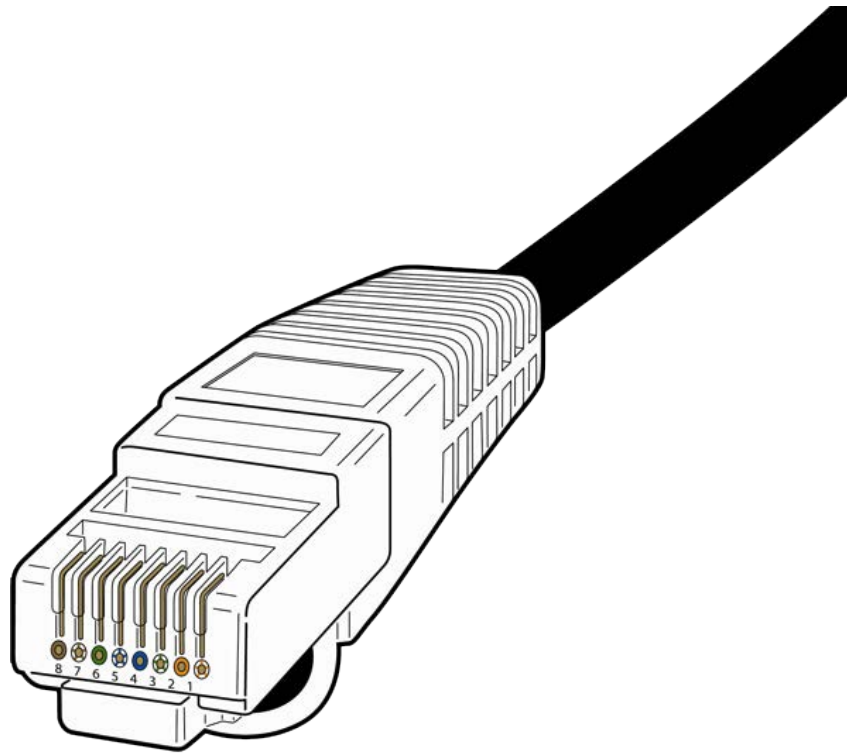
Wiring

Speaker Cable (RJ45) 568B

Speaker Cable connections are from the Quad OP to speakers and from speaker to speaker. The pin out on the RJ45 is 568B. The RJ45 connectors for the SPEAKER cables are non shielded.

PINS - 568 B

- 1 ORANGE|WHITE
- 2 ORANGE
- 3 GREEN|WHITE
- 4 BLUE
- 5 BLUE|WHITE
- 6 GREEN
- 7 BROWN|WHITE
- 8 BROWN



- 1 AUDIO (+)
- 2 AUDIO (+)
- 3 AUDIO (+)
- 4 AUDIO (+)
- 5 AUDIO (-)
- 6 AUDIO (-)
- 7 AUDIO (-)
- 8 AUDIO (-)

Wiring

Data Cable (RJ45) 568B

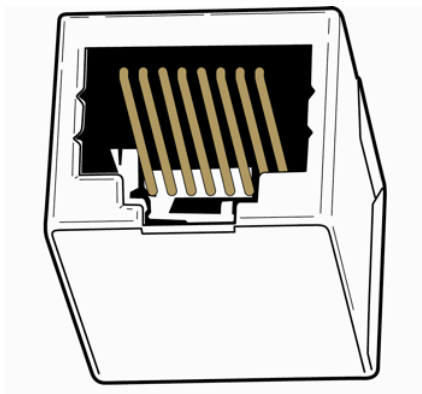
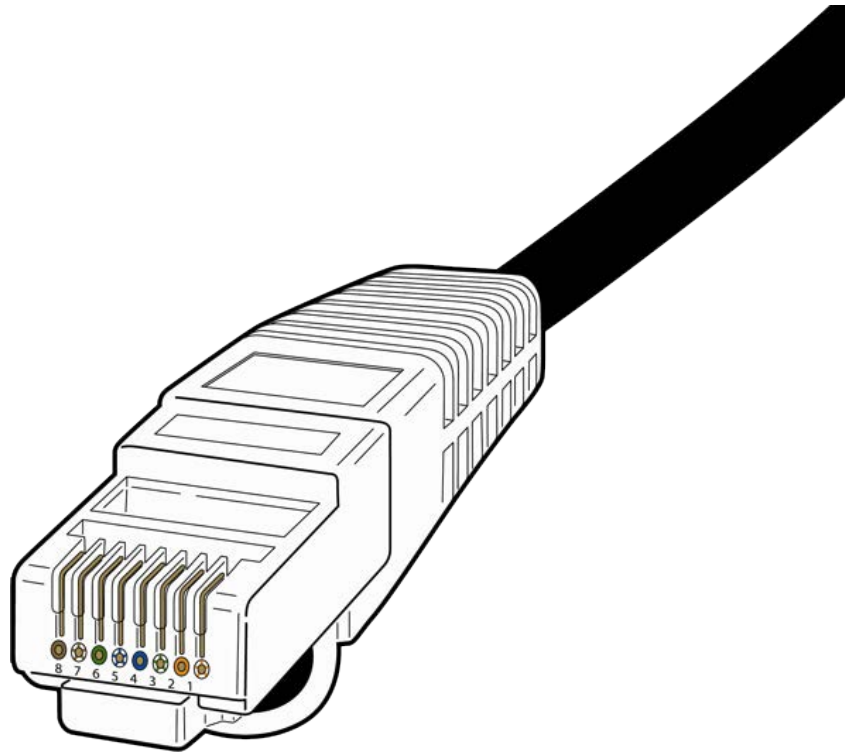
Data Cable connections are from the headend to the Quad OP and from i.Net OP to i.Net OP.

Never use shielded CAT cable for your Data run. The pin out on the RJ45 is 568B.

The RJ45 connectors for the SPEAKER cables are non shielded.

PINS - 568 B

- 1 ORANGE|WHITE
- 2 ORANGE
- 3 GREEN|WHITE
- 4 BLUE
- 5 BLUE|WHITE
- 6 GREEN
- 7 BROWN|WHITE
- 8 BROWN

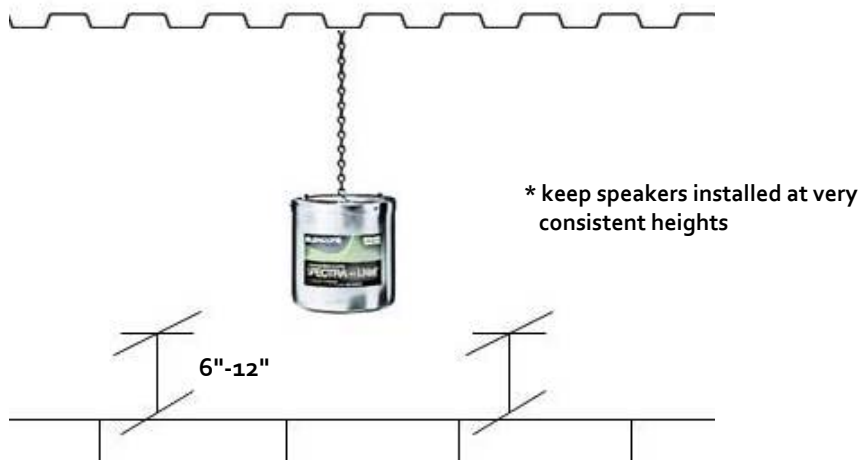


- 1 LON A | DATA NETWORK
- 2 LON B | DATA NETWORK
- 3 INITIALIZATION (SEQUENCER)
- 4 PAGE (+)
- 5 PAGE (-)
- 6 INITIALIZATION (SEQUENCER)
- 7 MUSIC (+)
- 8 MUSIC (-)

Hang Speakers

Data Cable (RJ45) 568B

- 1 Climb ladder and access the ceiling plenum
- 2 Hang speaker units in plenum area at marked locations using preferred hanging method (powder action gun such as a Hilti-gun™ or drill and screw; check your local building codes for allowable hanging methods and standards)
- 3 Drive a nail holding the clip with the speaker chain and speaker into ceiling
- 4 Pull and connect audio cables to speakers by channel



NOTE: If installing Inline speakers, make sure the potentiometer on the bottom of the speaker is set to the MAXIMUM (clockwise) setting.

Final Wiring Checklist

BEFORE POWERING UP SYSTEM	
Have you checked all home runs?	<input type="checkbox"/> YES
Have you checked all wiring between floors (risers)?	<input type="checkbox"/> YES
Are you sure all audio commons are properly tied between power zones?	<input type="checkbox"/> YES
Have you made sure all Data and Audio wires are tested?	<input type="checkbox"/> YES



TIP Check all speaker wires and speakers for good integrity, simply unplug the 1st speaker wire from the OP and connect an RJ45 to a 8 conductor CAT5e wire on one end and twist wire/pins 1,2 & 3 together and 4,5 & 6 together. This will give you two leads + & -. Attach an OHM meter to the wire with the leads and attach the other end into the first or last speaker in a run of speakers. If all is connected correctly, you will approximate the following correct results on your OHM meter:

# of SPEAKERS	OHMs*
1	26
2	13
3	8.67
4	6.50
5	5.20
6	4.33
7	3.71
8	3.25

*Values are approx. based on 25' cable run from OP to speaker and speaker to speaker.

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