



16MM MESSAGE CENTERS

Nevco 16mm Message Centers (One Player) Indoor/Outdoor Installation Manual

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Nevco 16mm Message Centers (One Player) Installation Set

Nevco Message Centers Indoor/Outdoor Installation Manual

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Installation Instructions

Installation consists of four steps, Unpacking the Equipment, Message Center mounting, Connections, and Software setup. Be sure to read and understand all of the instructions before installing the equipment. Consult the "installer's trouble shooting guide" following this section for verifications each step has been installed and is working correctly.

1. Unpacking the Equipment

- Inspect the shipping container for damage. If any damage can be seen, contact the carrier immediately.
- Carefully remove all equipment from its packing carton. **Do not** pry against the message center in any way.

2. Message Center Mounting

- Nevco strongly encourages you to check local codes before beginning the installation. You may wish to contact a local architect, contractor, or sign installer for assistance. Your Nevco Sales Representative may be able to assist you in finding professional installers who are familiar with this type of equipment.
- Always use good mechanical practices when mounting the message center.
- Use plated fastening devices to prevent rust or corrosion.
- Mount the optional photocell out of direct sunlight to avoid an elevated reading.
- Mount the two wireless devices (if present) in clear line of sight with each other.
- For indoor installations, install angle iron on wall or other structure prior to attaching the message center. Angle iron and attachments (bolts, washers, etc.) are not included. See installation drawings for approximate distance between angle iron supports.
- For outdoor installations, install tubing laterals on columns prior to installing the message center. Laterals should be welded or bolted to steel columns. Laterals and attachments (bolts, washers, nuts, etc.) are not included. See installation drawings for approximate distance between lateral supports. Brackets on message centers can be welded or bolted to the laterals.
- Each message center comes with 2 lifting points on the top of the unit. When using the lifting points, make sure cables are vertical and not putting an undue

horizontal force on the lifting points. Use of a spreader bar is recommended when using the lifting points.

- For multi-section message centers, make sure the cabinets and supports line up vertically and horizontally. Cabinets should be installed as tight as possible to each other. Where the sections join together, a bracket shall be installed at the top and bottom. Half of the bracket should support each section.

Your Message Center was designed so that it can be mounted in a variety of ways. Please examine the installation drawings to determine the best mounting method for your location. Access to all internal components is through the front, accessibility to the rear of the cabinet is NOT necessary.

Additional Suggested Mounting Methods

3. Message Center Connections

Outdoor Displays

Each message center, whether it is made up of two cabinets end to end, or two cabinets back to back (double sided), or a single cabinet, requires that power and signal be supplied to each cabinet by the installer. All internal connections have been completed and tested at the factory.

Both power and data should enter each message center cabinet at its lower left corner as viewed from the front. An access panel is provided for these connections. The "signal in" conduit attaches to the panel and a junction box is mounted on the panel for power connections. Similar access panels are installed on the back and bottom of the cabinet. All three panels are interchangeable so that the one with the junction box can be located in the most favorable position. The panel with the junction box can be moved to either of the other locations without disconnecting any cables inside the message center.

NOTE

NOTE: Be sure to reattach all panels so as to maintain a weather tight seal.

The optional light sensor should be mounted near this location and needs to be connected to a cable inside the message center behind the access panel.

At the lower right corner of the message center as viewed from the front is a similar arrangement for the "signal out" if needed. Used for side 2 of a two sided message center, and message centers made up of two cabinets mounted end to end.

NOTE

NOTE: Please see installation drawings for more details.

Indoor Displays

Each message center requires that power and signal be supplied to each cabinet by the installer. All internal connections have been completed and tested at the factory. Both power and data should enter each message center cabinet at its upper left corner as viewed from the front. A 15' Nema 5-15P to C13 power cable is included with the message center.

NOTE

NOTE: Please see installation drawings for more details.

Electrical Connections

- Refer to installation prints for illustration of electrical connections.

Power Service

WARNING

WARNING: This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

- Consult *table 1* for power requirements for your message center model. Provide for a 30% safety factor to guard against tripping of the circuit breaker under low line conditions.
- Be sure to include any lighted signs, and account for double sided displays when sizing the supply wiring necessary to support the circuit load.
- A disconnect switch should be lockable or within sight of the sign per NEC article 600.

Table 1 — Power Requirements

	CABINET DIMENSIONS	CURRENT @120VA	CURRENT @240VA
16mm Color Outdoor	3x8	6	3
	3x10	9	4.5
	3x12	11.3	5.7
	3x16 Left	7.5	3.8
	3x16 Right	7.5	3.8
	4x8	10	5
	4x10	12	6
	4x12 Left	7	3.5
	4x12 Right	8	4
	4x16 Left	10	5
	4x16 Right	10	5
6mm Color Indoor	3x8	5.8	2.9
	3x10	7	3.5
	4x8	7.8	3.9
	4x10	9.3	4.7

Ethernet Cables

- If rigid EMT is used, use ¾" rain-tight conduit fittings to avoid cutting the ends off included pre-made cables.

WARNING

WARNING: Take care not to reverse the connections on the POE adapter as this will damage the controller. Refer to installation print and color coding for details.

Network Configuration Diagrams

NOTE

NOTE: Mobile Device and Customer Wireless Access Point are only required for Live Control of the display.

4. Display Setup

Once the message center is powered up after a minute or so it should display configuration status information similar to *Figure 1- Display Status Information Screen*. This will remain on until the message center has internet connection and the end user has completed setup in their Nevco ONE account.

```
#16316457
Playlists: (NONE)
Display: 150x45 - CUSTOM
10:13:57 GMT-0500 (Central Daylight Time)
Software: UNKNOWN
Cloud Connect: NO
```

Figure 1- Display Status Information Screen

It may be necessary to configure a static IP address depending upon the network requirements of the customer. The following instructions will show how to set the IP address and identify MAC address if needed for the IT

administrator to open up access to reach the internet through a network Firewall.

Using a Mobile Device

- 01 Download and install the Nevco ONE Controller App from the app store to your iOS or Android phone.

- 02 Go stand within 50 feet of the powered message display.

- 03 Open the Nevco ONE Controller App and expand the navigation menu. Then select the *Devices* option. You will notice an entry for the display device's serial number if previously connected otherwise tap the add (+) icon and select the display device from the list.
- 04 Tap the edit icon to open the display device details. Once the device detail page is loaded the MAC address can be found on the Status tab.
- 05 To setup a static IP address on the Settings tab expand the *Advanced Settings* section. Scroll up to the *IP Networks/Ethernet* section and select the *Static IP enabled* slider to activate. Then enter the appropriate networking configuration info.

Installer's Troubleshooting Guide

The figure below labels the connections made by the installer from A – K. The chart below lists the problem that can be identified should each connection be faulty. Should a problem arise on any one component, consult the trouble shooting guide specific to that device.

NOTE

NOTE: All connections inside the Message Center have been made at the NEVCO Factory. Each Message Center requires an Ethernet connection to the local Network. Each Message Center also requires Power (see Table 1).

NOTE

NOTE: For double sided and/or double cabinet message centers. The input signal for subsequent cabinets comes from the output of the previous cabinet. A separate power circuit is required for each cabinet.

SITUATION	SYMPTOM	CONNECTION	SOLUTION
The message Center is not displaying a message	The fans on ALL power supplies are running	F,B	Ensure POE is powered on and cables are connected
	The fans on ALL power supplies are running	G	Ensure an Ethernet straight through cable has been used, is making a good connection at both ends.
	The fans on ALL power supplies are NOT running	J	Check Power Switch on disconnect box inside message center
		J	Check connections in disconnect box (power hookup)
		J	Check branch circuit; was there a photocell on an existing sign install?
	On a double sided Message Center, One side is displaying the message, the other is not	K,I	Ensure an Ethernet straight through cable has been used, is making a good connection at both ends.
I cannot communicate with the message center	No Red Power LED lit on Wireless Bridge POE.	E	Check branch circuit and power at the receptacle. Adapter has LED indicator
	No Red Power LED lit on Wireless Access Point POE.	B	Check branch circuit and power at the receptacle. Adapter has LED indicator
	Message Center does not have network (See Display Install Verification section)	A	Ensure Switch is turned on and working properly
		A,C	Ensure an Ethernet straight through cable has been used and is making a good connection at both ends.
	User's manual with wireless equipment explains how to measure the wireless signal strength	D	Reorient the wireless device's antennas to eliminate obstructions between them

SITUATION	SYMPTOM	CONNECTION	SOLUTION
Light Sensor does NOT work	Not installed	H	Install sensor in message center
	Not enabled	H	Make sure the light sensor is set to auto in V3Pro

NOTE

If the problem persists please contact the Nevco Service Department. 800-851-4040

Glossary

ACCESS POINT (WIRELESS AP)

A hardware device that allows wireless communication devices to connect to a network.

Can also be configured as a

WIRELESS BRIDGE

A hardware device used to connect two or more network segments.

SCAN card

Distributes the data inside the Message Center.

DISPLAY Panel

A group of pixels. Several Display Panels are combined to form the message center.

POE

Power Over Ethernet. Used to inject power for use by a device connected to the Ethernet cable.

POWER SUPPLY

Converts the line voltage to 12 volts or 5 volts.

POWER SWITCH

Disconnects power to a portion of the message center components. Cabinet may contain more than one.

RIBBON CABLE

Flat 16 conductor cable used to carry the data from the SCAN card to the display panels and from display panel to display panel.

V3SS

Distributes the message center data to the SCAN card(s).

Nevco ONE Player

Stores, processes, and distributes the message center data to the V3SS.

Nevco ONE Video Display Install Verification

After installation of the display it can be powered on and checked for networking connectivity. The Nevco ONE Player device that drives the display will cycle through diagnostic information and output it to the display. This will remain on the display until it has internet connectivity and the end user has completed setup in their Nevco ONE online account.

After initial boot up sequence which may briefly display images and, or all white sections, Information similar to the diagnostic example should begin. The actual output may vary slightly and depending on the size of the display not all lines may be visible at once and will cycle through several lines at a time. The important lines to observe are:

- **Ethernet:** - This indicates if the device has connected to a local area network (LAN) and will display the device's *[IP address/IP Mask]* and the *[Gateway IP address]*. If a network was not detected it will show *"No IP"*. The default networking client configuration of the Player is for it to expect to be assigned an IP address via DHCP.
- **Cloud Connect:** - If the device has internet connectivity it will show *"one.nevco.com"*, otherwise it will show *"NO"*

If the Cloud Connect status is good then networking installation to the device is complete and validated. If device has an IP address but is not cloud connected then there likely is additional network configuration to be performed on the customers network.

```
Test Player #123456
Playlists: 0
Display: 1920x1080 - HDTV
08:19:22 GMT-0500 (Central Daylight Time)
Software: Ver: 2.1.13 Act valid Pri
Ethernet: 192.168.1.5/24 192.168.1.1
Cloud Connect: one.nevco.com
Org: 4ca83c1d-79a3-48fa-81da-5a5224f7b292
Org Authorized: NO
Resource Sync: 0/13
```

Figure 2- Display Diagnostic Example

Installation Drawings

Message Center Indoor Mounting Instructions (Drawing No. 241-0391)

NOTE

Important. Read before installation. This is not an engineered drawing. It is intended for representation purposes only. The dimensions called out on this drawing are intended to be used as a guide only, and are not intended to be suitable for all conditions. Information specific to the message center, such as assembly instructions and electrical connections, may be found in the installation manual for that message center. Nevco recommends that you consult a professional engineer or architect familiar with the area before attempting installation. They can verify that the selected mounting beams or posts along with the brackets, screws, and other hardware items provided by you or Nevco are adequate for your local conditions. If procedures are used that are not covered in this drawing, careful analysis of the installation is urged.

Notes:

01 Refer to sheet 3 for cabinet weights and dimensions.

Indoor Mounting – Cabinet Dimensions, Weights, and Column Separation (Sheet 3 of 4)

PIXEL	CABINET	WEIGHT (LBS)	SUGGESTED COLUMN SEPARATION	2"X3"X3/16" ANGLE LENGTH
20mm	3' x 8'	190	72" to 120"	7'-6"
	3' x 10'	245	96" to 168"	9'-6"
	3' x 12'	305	120" to 168"	11'-6"
	3' x 16' Left	186	92" to 186"	15'-6"
	3' x 16' Right	217	92" to 186"	15'-6"
	4' x 8'	238	72" to 120"	7'-6"
	4' x 10'	317	96" to 144"	9'-6"
	4' x 12' Left	186	120" to 144"	11'-6"
	4' x 12' Right	220	120" to 144"	11'-6"
	4' x 16' Left	256	168" to 192"	15'-6"
16mm	4' x 16' Right	280	168" to 192"	15'-6"
	3' x 8'	172	36" to 90"	7'-6"
	3' x 10'	208	36" to 114"	9'-6"
	3' x 12'	258	52" to 138"	11'-6"
	3' x 16' Left	162	92" to 186"	15'-6"
	3' x 16' Right	181	92" to 186"	15'-6"
	4' x 8'	225	36" to 90"	7'-6"
	4' x 10'	273	36" to 114"	9'-6"

PIXEL	CABINET	WEIGHT (LBS)	SUGGESTED COLUMN SEPARATION	2"X3"X3/16" ANGLE LENGTH
	4' x 12' Left	194	52" to 138"	11'-6"
	4' x 12' Right	158	52" to 138"	11'-6"
	4' x 16' Left	214	92" to 186"	15'-6"
	4' x 16' Right	255	92" to 186"	15'-6"
10mm	3' x 8'	204	36" to 90"	7'-6"
	3' x 10'	255	36" to 114"	9'-6"
	3' x 12'	306	52" to 138"	11'-6"
	3' x 16' Left	194	92" to 186"	15'-6"
	3' x 16' Right	214	92" to 186"	15'-6"
	4' x 8'	272	36" to 90"	7'-6"
	4' x 10'	340	36" to 114"	9'-6"
	4' x 12' Left	222	52" to 138"	11'-6"
	4' x 12' Right	186	52" to 138"	11'-6"
	4' x 16' Left	251	92" to 186"	15'-6"
	4' x 16' Right	293	92" to 186"	15'-6"

Indoor Mounting – Bracket Placement (Sheet 4 of 4)

Notes:

- 01 Bracket orientation labels are found on back of message center
- 02 3/8" bolts to attach brackets to message center are provided by Nevco

Indoor Mounting – Cabinet Bracket Placement Dimensions

PIXEL	SIZE	LEFT/RIGHT CABINET	DIM (A)	DIM (B)	DIM (C)	DIM (D)
20mm	3 x 8		36 1/8	31 5/8	12	
20mm	3 x 10		36 1/8	31 5/8	12	
20mm	3 x 12		36 1/8	31 5/8	12	
20mm	3 x 16	L	36 1/8	31 5/8	12	102 1/4
20mm	3 x 16	R	36 1/8	31 5/8	12	102 1/4
20mm	4 x 8		48 1/8	43 5/8	12	
20mm	4 x 10		48 1/8	43 5/8	12	
20mm	4 x 12	L	48 1/8	43 5/8	12	78 1/4
20mm	4 x 12	R	48 1/8	43 5/8	12	78 1/4
20mm	4 x 16	L	48 1/8	43 5/8	12	102 1/4
20mm	4 x 16	R	48 1/8	43 5/8	12	102 1/4
16mm	3 x 8		36 1/8	31 5/8	12	
16mm	3 x 10		36 1/8	31 5/8	12	
16mm	3 x 12		36 1/8	31 5/8	12	

PIXEL	SIZE	LEFT/RIGHT CABINET	DIM (A)	DIM (B)	DIM (C)	DIM (D)
16mm	3 x 16	L	36 1/8	31 5/8	12	106
16mm	3 x 16	R	36 1/8	31 5/8	12	106
16mm	4 x 8		48 1/8	43 5/8	12	
16mm	4 x 10		48 1/8	43 5/8	12	
16mm	4 x 12	L	48 1/8	43 5/8	12	82 1/16
16mm	4 x 12	R	48 1/8	43 5/8	12	82 1/16
16mm	4 x 16	L	48 1/8	43 5/8	12	106
16mm	4 x 16	R	48 1/8	43 5/8	12	106
10mm	3 x 8		36 1/8	31 5/8	12	
10mm	3 x 10		36 1/8	31 5/8	12	
10mm	3 x 12		36 1/8	31 5/8	12	
10mm	3 x 16	L	36 1/8	31 5/8	12	102 1/4
10mm	3 x 16	R	36 1/8	31 5/8	12	102 1/4
10mm	4 x 8		48 1/8	43 5/8	12	
10mm	4 x 10		48 1/8	43 5/8	12	
10mm	4 x 12	L	48 1/8	43 5/8	12	78 1/4
10mm	4 x 12	R	48 1/8	43 5/8	12	78 1/4
10mm	4 x 16	L	48 1/8	43 5/8	12	102 1/4
10mm	4 x 16	R	48 1/8	43 5/8	12	102 1/4

Message Center Outdoor Mounting Instructions (Drawing No. 241-0392)

NOTE

Important. Read before installation. This is not an engineered drawing. It is intended for representation purposes only. The dimensions called out on this drawing are intended to be used as a guide only, and are not intended to be suitable for all conditions. Information specific to the message center, such as assembly instructions and electrical connections, may be found in the installation manual for that message center. Nevco recommends that you consult a professional engineer or architect familiar with the area before attempting installation. They can verify that the selected mounting beams or posts along with the brackets, screws, and other hardware items provided by you or Nevco are adequate for your local soil conditions, wind loads and other conditions. If procedures are used that are not covered in this drawing, careful analysis of the installation is urged.

NOTE

Important: Bracing (angle, tubing, etc.) must fully support message center. Nevco recommends that you consult a local professional architect or engineer to verify the framework the cabinet will be mounted to.

Upper and Lower Laterals should be placed 2¼" from the top and bottom of the message center as shown.

Check Electrical Prints to determine conduit requirements. (Must meet electric codes.)

Coarse aggregate concrete — Minimum 24" diameter, Minimum 5' deep.

Outdoor Mounting – Cabinet Weights and Structural Requirements (Sheet 1 of 5)

PIXEL	CABINET	WEIGHT (LBS)	0-5 FT. OFF GROUND SUGGESTED COLUMN	6-10 FT. OFF GROUND SUGGESTED COLUMN	SUGGESTED LATERAL SIZE
20mm	3' x 8'	190	W8x13	W8x13	HSS3x2.5 x .125
	3' x 10'	245	W8x13	W10x19	HSS3x2.5 x .125
	3' x 12'	305	W8x13	W10x19	HSS3x2.5 x .125
	3' x 16' Left	186	W12x14	W8x21	HSS3x3 x .125
	3' x 16' Right	217	W12x14	W8x21	HSS3x3 x .125
	4' x 8'	238	W8x13	W10x19	HSS3x2.5 x .125
	4' x 10'	320	W8x13	W10x15	HSS3x2.5 x .125
	4' x 12' left	226	W8x18	W10x22	HSS3x3 x .125
	4' x 12' right	260	W8x18	W10x22	HSS3x3 x .125
	4' x 16' left	256	W8x21	W12x26	HSS3x3 x .125
	4' x 16' right	280	W8x21	W12x26	HSS3x3 x .125
16mm	3' x 8'	190	W8x13	W10x19	HSS3x2.5 x .125
	3' x 10'	229	W8x13	W10x19	HSS3x2.5 x .125
	3' x 12'	284	W8x13	W10x19	HSS3x2.5 x .125
	3' x 16' Left	173	W12x14	W8x21	HSS3x3 x .125
	3' x 16' Right	205	W12x14	W8x21	HSS3x3 x .125
	4' x 8'	248	W8x13	W10x19	HSS3x2.5 x .125
	4' x 10'	300	W8x13	W10x15	HSS3x2.5 x .125
	4' x 12' Left	194	W8x18	W10x22	HSS3x3 x .125
	4' x 12' Right	193	W8x18	W10x22	HSS3x3 x .125
	4' x 16' Left	231	W8x21	W12x26	HSS3x3 x .125

PIXEL	CABINET	WEIGHT (LBS)	0-5 FT. OFF GROUND SUGGESTED COLUMN	6-10 FT. OFF GROUND SUGGESTED COLUMN	SUGGESTED LATERAL SIZE
	4' x 16' Right	285	W8x21	W12x26	HSS3x3 x .125
10mm	3' x 8'	204	W8x13	W10x19	HSS3x2.5 x .125
	3' x 10'	255	W8x13	W10x19	HSS3x2.5 x .125
	3' x 12'	306	W8x13	W10x19	HSS3x2.5 x .125
	3' x 16' Left	194	W12x14	W8x21	HSS3x3 x .125
	3' x 16' Right	214	W12x14	W8x21	HSS3x3 x .125
	4' x 8'	272	W8x13	W10x19	HSS3x2.5 x .125
	4' x 10'	340	W8x13	W10x15	HSS3x2.5 x .125
	4' x 12' Left	222	W8x18	W10x22	HSS3x3 x .125
	4' x 12' Right	186	W8x18	W10x22	HSS3x3 x .125
	4' x 16' Left	251	W8x21	W12x26	HSS3x3 x .125
	4' x 16' Right	293	W8x21	W12x26	HSS3x3 x .125

Outdoor Mounting – Bracket Placement (Sheet 2 of 5)

Notes:

- 01 Bracket orientation labels are found on back of message center
- 02 3/8" bolts to attach brackets to message center are provided by Nevco

Outdoor Mounting – Bracket Placement Dimensions

PIXEL	SIZE	LEFT/RIGHT CABINET	DIM (A)	DIM (B)	DIM (C)	DIM (D)
20mm	3 x 8		36 1/8	31 5/8	12	
20mm	3 x 10		36 1/8	31 5/8	12	
20mm	3 x 12		36 1/8	31 5/8	12	
20mm	3 x 16	L	36 1/8	31 5/8	12	102 1/4
20mm	3 x 16	R	36 1/8	31 5/8	12	102 1/4
20mm	4 x 8		48 1/8	43 5/8	12	
20mm	4 x 10		48 1/8	43 5/8	12	
20mm	4 x 12	L	48 1/8	43 5/8	12	78 1/4
20mm	4 x 12	R	48 1/8	43 5/8	12	78 1/4
20mm	4 x 16	L	48 1/8	43 5/8	12	102 1/4
20mm	4 x 16	R	48 1/8	43 5/8	12	102 1/4
16mm	3 x 8		36 1/8	31 5/8	12	
16mm	3 x 10		36 1/8	31 5/8	12	
16mm	3 x 12		36 1/8	31 5/8	12	

PIXEL	SIZE	LEFT/RIGHT CABINET	DIM (A)	DIM (B)	DIM (C)	DIM (D)
16mm	3 x 16	L	36 1/8	31 5/8	12	106
16mm	3 x 16	R	36 1/8	31 5/8	12	106
16mm	4 x 8		48 1/8	43 5/8	12	
16mm	4 x 10		48 1/8	43 5/8	12	
16mm	4 x 12	L	48 1/8	43 5/8	12	82 1/16
16mm	4 x 12	R	48 1/8	43 5/8	12	82 1/16
16mm	4 x 16	L	48 1/8	43 5/8	12	106
16mm	4 x 16	R	48 1/8	43 5/8	12	106
10mm	3 x 8		36 1/8	31 5/8	12	
10mm	3 x 10		36 1/8	31 5/8	12	
10mm	3 x 12		36 1/8	31 5/8	12	
10mm	3 x 16	L	36 1/8	31 5/8	12	102 1/4
10mm	3 x 16	R	36 1/8	31 5/8	12	102 1/4
10mm	4 x 8		48 1/8	43 5/8	12	
10mm	4 x 10		48 1/8	43 5/8	12	
10mm	4 x 12	L	48 1/8	43 5/8	12	78 1/4
10mm	4 x 12	R	48 1/8	43 5/8	12	78 1/4
10mm	4 x 16	L	48 1/8	43 5/8	12	102 1/4
10mm	4 x 16	R	48 1/8	43 5/8	12	102 1/4

Outdoor Mounting – Wall Mounting and Column Mounting (Sheet 3 of 5)

Outdoor Mounting – Double-Sided Mounting (Sheet 4 of 5)

NOTE

\Note:** The installation methods shown above may require the relocation of power/signal panels.

Outdoor Mounting – Two-Section Message Centers (Sheet 5 of 5)

- Cabinets designed to join end to end.
- Make sure panels of joining cabinets line up horizontally and that both cabinets are level. See note 1.
- If installing message center on laterals, shimming techniques can be utilized to align and level the two cabinets.
- Install one cabinet at a time.

- Make sure panels of joining cabinets line up horizontally and that both cabinets are level.

Message Center Wired Installation (Drawing No. 275-0729)

NOTE

Important. Read before installation. Power entrances are located on access panels with 2x4 box. The location of this panel may vary between different message centers. Access panels can be swapped to allow placement of incoming power/signal on the side, back or bottom of the message center typically. This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign. All personnel who work with electrical connections must be educated in the safe procedures for installing and repairing electrical connections before they are given the responsibility of performing such tasks. Conduit and fittings are supplied by installer.

Sign Power Connections

- Black = Line
- White = Neutral
- Green = Ground
- Wirenuts Provided
- Grounded pigtail located inside 2x4 box. Must connect when connecting power.

* National Electric code requires a disconnect switch within sight of the sign or lockable within the building. If neither is available, install a disconnect at the sign.

NOTE

NOTE: It is not necessary to remove message center display panels to make any of the above connections.

- Power/Signal-In panel can be relocated to side, bottom or back of message centers for wall mounts or adjacent signs.
- Feed panel through hole as shown to change location of access panels.

Raintight Box – Fiber Optic Wired Installation (Sheet 2 of 3)

NOTE

NOTE: This Raintight box only applies to installations greater than 325 ft.

Notes:

01 Connect same color fiber optic cable to "TX" in the control room that is connected to "RX" at the outdoor junction box. Connect same color fiber optic cable to "RX" in the control room that is connected to "TX" at the outdoor junction box. Only attempt termination of fiber optic connections if properly trained and qualified.

02 The rain-tight box and components shown above are required at the display and in the control room. Make connections as shown both sides.

ETHERNET CABLE

- Display Side: 25' Signal-In on message center.
- Control Room Side: 3' to Composer PC
- 12V AC/DC adaptor to Media Converter
- Incoming Fiber Optic Signal
- Incoming Power
- Box, outlet and cover supplied by Nevco
- Conduit fittings supplied by others. Use only rain-tight fittings.
- Media Converter Harness
- SFP TO LC FIBER ADAPTER

* Media Converter (mount on back of raintight box)

Mounting Media Converter:

- 01 Install media converter using two 2" pieces of velcro-type fastener provided by Nevco.
- 02 Peel adhesive backing and place a strip on back of raintight box and a strip on the media converter. Press firmly to attach.

Wired Installation – Cabinet Signal Connections (Sheet 3 of 3)

NOTE

Important. Read before installation. Power entrances are located on access panels with 2x4 box. The location of this panel may vary between different message centers. Access panels can be swapped to allow placement of incoming power/signal on the side, back or bottom of the message center typically. This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign. All personnel who work with electrical connections must be educated in the safe procedures for installing and repairing electrical connections before they are given the responsibility of performing such tasks. Conduit and fittings are supplied by installer.

Notes:

- Cabinet to cabinet signal connections are straight through ethernet.
- Cabinet 1 is identified by Nevco logo next to Power/Signal-In panel.
- Remove knockouts in access panels where necessary to make connections.

Single Cabinet Message Center

- Temperature Sensor/Photo Cell
- Power
- Power/Signal-In Panel

- Signal Out (remove plug or knockout to make connection)
- For double sided message centers, connect cable here and run straight through to Signal-In of second message center.

Multi-Section Message Center

- Connect ethernet from Signal-Out of first cabinet straight through to Signal-In of second cabinet.
- Remove panel and re-mount according to label with 2x4 box on outside of cabinet.
- Signal-Out
- Power
- Power/Signal-In Panel

Multi-Section, Double Sided Message Center

Message Center A	Message Center B
Signal Out Signal In Signal Out	Signal In
Power	Power, Signal-In (ethernet connection from media converter)
Child Right	Parent Left
Child Left	Child Right
Power, Signal In	
Signal In	
Signal Out	Power Signal Out

Message Center Wireless Installation (Drawing No. 275-0732)

NOTE

Important. Read before installation. Power entrances are located on access panels with 2x4 box. The location of this panel may vary between different message centers. Access panels can be swapped to allow placement of incoming power/signal on the side, back or bottom of the message center typically. This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign. All personnel who work with electrical connections must be educated in the safe procedures for installing and repairing electrical connections before they are given the responsibility of performing such tasks. Conduit and fittings are supplied by installer.

Sign Power Connections

- Black = Line
- White = Neutral
- Green = Ground
- Wirenuts Provided
- Grounded pigtail located inside 2x4 box. Must connect when connecting power.

* National Electric code requires a disconnect switch within sight of the sign or lockable within the building. If neither is available, install a disconnect at the sign.

NOTE

NOTE: It is not necessary to remove message center display panels to make any connections.

NOTE

NOTE: For indoor installations, a raintight box is not required. Make connections same as above.

- Power/Signal-In panel can be relocated to side, bottom or back of message centers for wall mount or adjacent signs.
- Feed panel through hole as shown to change location of access panels.
- Make connections by removing other access panel near Power/Signal-In panel. Replace all covers when connections have been made.

Signal Strength Meter — 3 bars required for adequate signal. Point client bridge at access point in control room to obtain required signal strength.

Client Bridge — Mount in Clear-Line-Of-Sight to wireless transmitter.

- Ethernet Cable (straight through from receiver to POE)
- Ethernet Signal to Power/Signal-In Access Panel
- Raintight Box (See Sheet 2)
- Power to Raintight Box
- Power from Branch Circuit
- Sign Power to 2x4 Box (consult installation instructions for amperage requirement)
- Disconnect Switch

Wireless Installation – Raintight Box Details (Sheet 2 of 5)

NOTE

NOTE: This Raintight box only applies to installations using wireless connectivity.

Notes:

01 Use raintight fittings.

02 Indoor installations do not require a rain-tight box. Make connections same as above.

Inside Raintight Box (Door Removed for Clarity)

Power Over Ethernet Supply (POE)

Mounting POE:

01 Cut supplied adhesive-backed fastening material into (2) 2" pieces.

02 Peel backing off of one piece and place on back of raintight box in desired location.

03 Place second piece on back of POE.

04 Press POE firmly onto back of raintight box.

- Water-tight bushing supplied by Nevco (for ethernet cable to wireless receiver)
- 25' Ethernet from "POE" to wireless receiver (supplied by Nevco)
- Incoming Power
- 25' ethernet from "LAN" to message center SIGNAL-IN.
- Signal to message center
- Power adapter supplied by Nevco.
- Water-tight fittings required (supplied by others)
- Box, outlet and cover supplied by Nevco.
- Ethernet: Wireless Receiver
- Ethernet: Message Center Signal

Wireless Installation – Cabinet Signal Connections (Sheet 3 of 5)

NOTE

Important. Read before installation. Power entrances are located on access panels with 2x4 box. The location of this panel may vary between different message centers. Access panels can be swapped to allow placement of incoming power/signal on the side, back or bottom of the message center typically. This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign. All personnel who work with electrical connections must be educated in the safe procedures for installing and repairing electrical connections before they are given the responsibility of performing such tasks. Conduit and fittings are supplied by installer.

Notes:

- Cabinet to cabinet signal connections are straight through ethernet.
- Cabinet 1 is identified by Nevco logo next to Power/Signal-In panel.
- Remove knockouts in access panels where necessary to make connections.

Single Cabinet Message Center

- Temperature Sensor/Photo Cell
- Power
- Power/Signal-In Panel
- Signal Out (remove plug or knockout to make connection)
- For double sided message centers, connect cable here and run straight through to Signal-In of second message center.

Multi-Section Message Center

- Connect ethernet from Signal-Out of first cabinet straight through to Signal-In of second cabinet.
- Remove panel and re-mount according to label with 2x4 box on outside of cabinet.

- Signal-Out
- Power
- Power/Signal-In Panel

Multi-Section, Double Sided Message Center

Message Center A	Message Center B
Signal Out Signal In Signal Out	Signal In
Power	Power, Signal-In (ethernet connection from media converter)
Child Right	Parent Left
Child Left	Child Right
Power, Signal In	
Signal In	
Signal Out	Power Signal Out

Wireless Installation – Access Point and Client Bridge Connections (Sheet 4 of 5)

NOTE

Important: Wireless devices should be in Clear Line of Sight from each other. Penetration of obstacles by the wireless signal is dependent on the material of the obstacle as well as the overall distance between devices. Both units are suitable for outdoor installation. If building walls become a problem, mount the access point outside the building.

- Access Point — Remove cover and plug into ethernet port closest to the center of the access point.
- 3' Ethernet (from Access Point to Ethernet Switch)
- 25' ethernet (from POE LAN port to Access Point)
- Power Over Ethernet (POE) Supply
- LAN port on POE
- Client Bridge

- Ethernet Switch (Provided by Customer)

Wireless Installation – Client Bridge Mounting (Sheet 5 of 5)

- Fasten client bridge to mounting bracket using 2 supplied zip-ties.
- Run zip-ties through two holes in bracket and through slot on client bridge.
- Client bridge can be mounted to bracket at various angles to achieve optimum line of sight to access point in control room.
- Bolt or clamp bracket to column or other structure. (hardware supplied by others)

10mm/16mm Photocell Installation (Drawing No. DWG-0893)

Locating the Sensor

- | | |
|----|--|
| 01 | Place in a discrete location. |
| 02 | Do not completely enclose the sensor. |
| 03 | Placing the sensor in direct sunlight can elevate the temperature readings. |
| 04 | Automatically adjusts brightness from 7000-960 NITS. |
| 05 | The software that runs the display will allow the operator to set brightness as well as the display frame speed etc. to meet local ordinances. |

Connect cable from sensor to Sensor Port of V3SS located inside either the message center or a rain tight box. If V3SS is located in rain tight box, drill hole in rain tight box and run cable through. Install raintight fitting.

Sensor can be screwed directly to the side of the cabinet using the attached angle bracket.

* Connections can be made using supplied bushings and nuts or 1/2 conduit.

- \ Power/Signal-In Access Panel** — Remove other access panel to make connections and replace when finished. Wires for connections located inside cabinet.
- **Power**
- **Signal-In**
- cross over from media converter
- remove knockout label 'Signal In' on panel to make connection