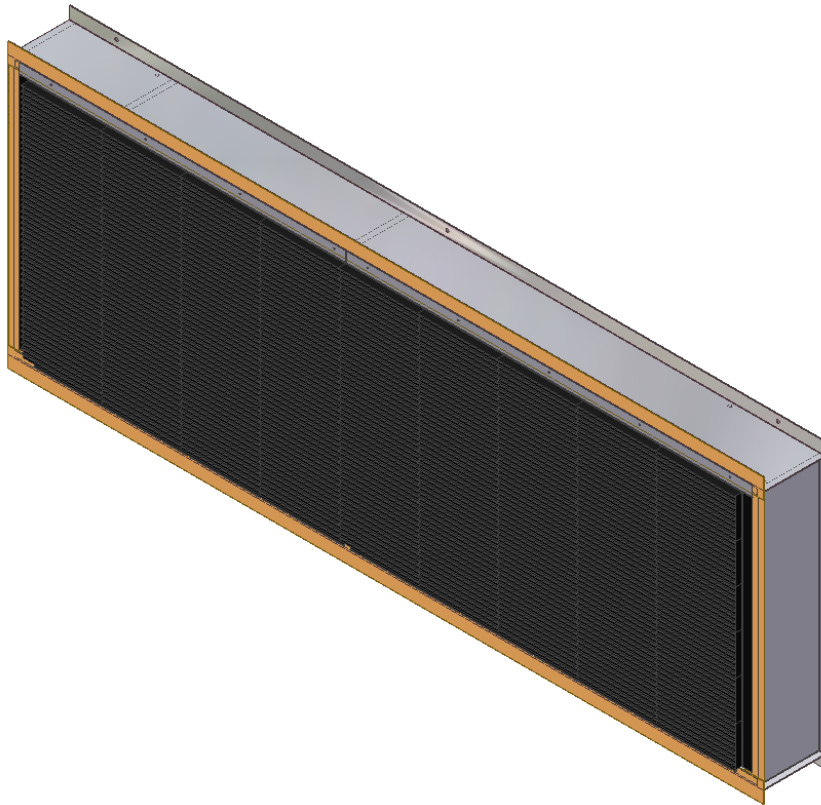# Nevco

Message Center

Installation Manual

MAXIMIZE YOUR IMPACT™

Since 1934

Retain this manual in your permanent file.

INSTALLATION INSTRUCTIONS 1

INSTALLER'S TROUBLESHOOTING GUIDE 5

Installation Instructions

Installation consists of four steps, Unpacking the Equipment, Message Center mounting, Electrical 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. Packaging

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

❑ Refer to installation prints for mounting method.

❑ Mounting methods for a variety of post types are illustrated on the installation print(s). 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 controller rain tight box in a discrete location.

❑ Mount the two wireless devices (if present) in clear line of sight with each other.

❑ Mount the temperature sensor / photocell out of direct sunlight to avoid elevating the temperature

3. Electrical Connections

- Refer to installation prints for illustration of electrical connections.

Power Service

- **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.

- *Denoted values require 2 separate 20A breakers.

- 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.

Ethernet Cables

- In a wired configuration, connect from the PC to the controller with a crossover connection.

- Use ¾" rain-tight conduit fittings to avoid cutting the ends off the included pre-made cables.

- 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.

- The diagrams below show Ethernet connections.(Ethernet Straight through cable ⎯ Ethernet Crossover ⤬)

Table 1

|	Cabinet Dimensions	Current @ 120VAC	Current @ 240VAC
16mm Red or Amber	1x6	0.9 A	0.4 A
	2x6	1.8 A	0.9 A
	3x6	2.7 A	1.3 A
	1x8	1.6 A	0.8 A
	2x8	3.2 A	1.6 A
	3x8	4.8 A	2.4 A
	3x12	6.9 A	3.5 A
	4x8	6.4 A	3.2 A
	4x10	7.8 A	3.9 A
	4x12	9.2 A	4.6 A
	4x16	12.8 A	6.4 A
16mm Color	2x8	7.1 A	3.6 A
	3x8	10.7 A	5.3 A
	3x12	15.4 A	7.7 A
	4x8	14.3 A	7.1 A
	4x10	17.4 A*	8.7 A
	4x12	20.6 A*	10.3 A
	4x16	28.5 A*	14.3 A
31mm Red or Amber	2x8	3.6 A	1.8 A
	3x8	5.5 A	2.8 A
	2x10	4.4 A	2.2 A
	3x10	6.6 A	3.3 A
	2x12	5.6 A	2.8 A
	3x12	8.4 A	4.2 A
	3x16	11.4 A	5.7 A
	4x8	7.4 A	3.7 A
	4x10	9.0 A	4.5 A
	4x12	11.4 A	5.7 A
	4x16	15.3 A	7.6 A
25mm Color	2x8	5.0 A	2.5 A
	3x8	8.1 A	4.1 A
	3x12	12.7 A	6.4 A
	4x8	10.2 A	5.1 A
	4x10	12.9 A	6.4 A
	4x12	15.7 A	7.8 A
	4x16	21.4 A*	10.7 A
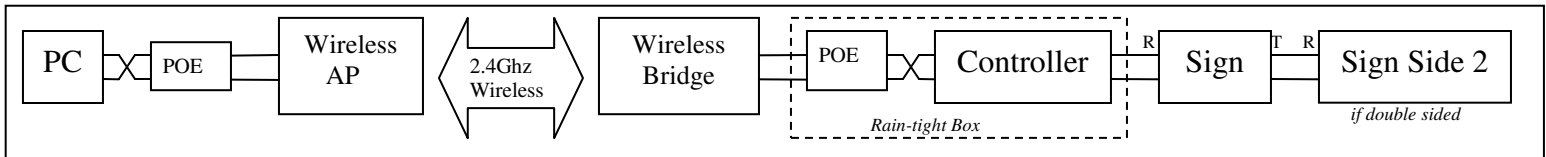
Figure 1 – Wireless Configuration
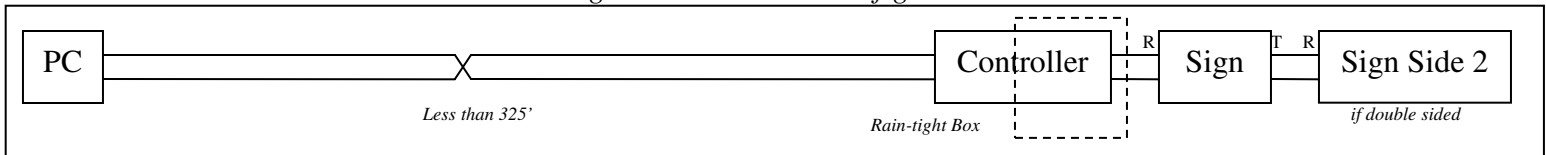
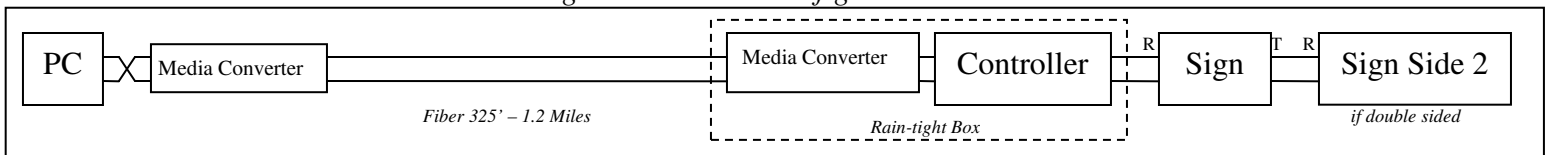*Figure 2 – Wired Configuration Ethernet*

Figure 3 – Wired Configuration Fiber Optic

4. Software Setup

The message center can be connected to a dedicated computer for setting up new messages, or integrated as part of an existing computer network. The system is shipped in the first case as described in "Not connected to existing Network".

Computer is Not connected to existing Network

❑ The message center controller and wireless equipment (optional) are pre-configured to a default network configuration. The IP address of the controller is set to 192.168.0.210. Wireless Bridge and AP are 192.168.0.211 and 192.168.0.212 respectively.

❑ When the software is installed, the default projects are configured to talk to the default controller IP address. Follow these steps to set the controlling PC's IP address to one that can communicate with the message center.

    1. Click the start button and select Control Panel. Double click Network Connections. Double click your network card or "Lan Connection". On Win XP select properties. You will see the window on the left. Select Internet Protocol (TCP/IP) and click Properties. You will see the window on the right.
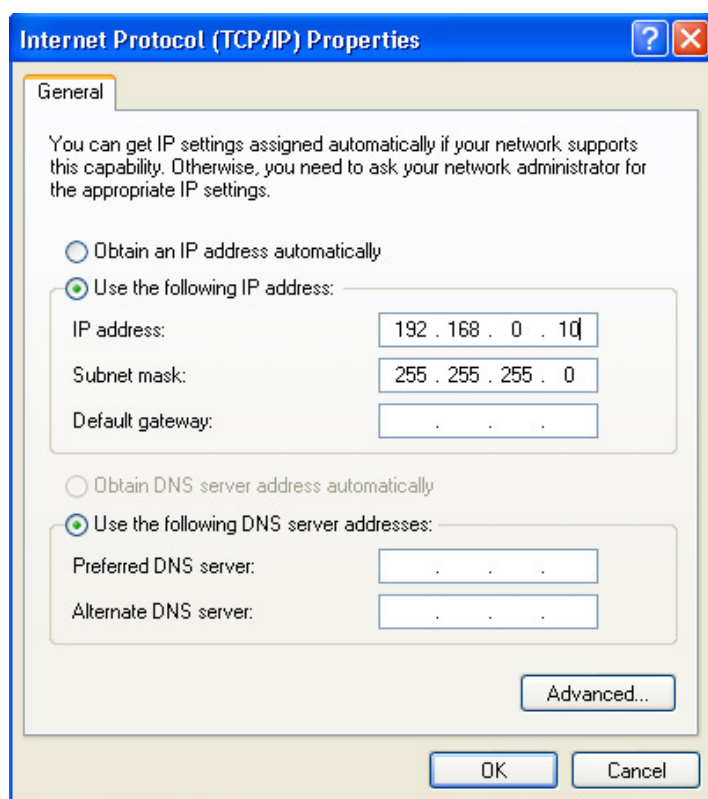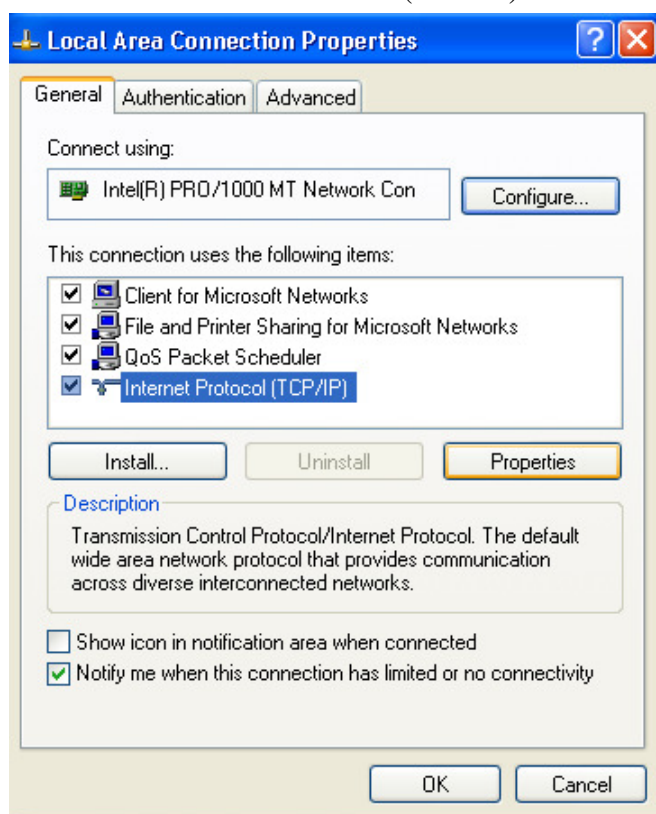
    2. Click the Radio Button "Use the following IP address" and enter 192.168.0.10 and the subnet mask 255.255.255.0 and click ok on each window. You may be prompted to insert your Win98/2000 CD.

    3. When you open Nevco Composer™, the button in the lower right hand corner of the screen should say "Update Message Center" showing that you are connected. (Be sure the license key is in the USB port and the LED is on)

    4. Consult the Nevco Composer™ user's manual for troubleshooting.

❑ If you are using a laptop, make sure to turn off the wireless LAN in the laptop (if present). This can be done on most laptops by pressing a button in the area above the keyboard that looks like an antenna.
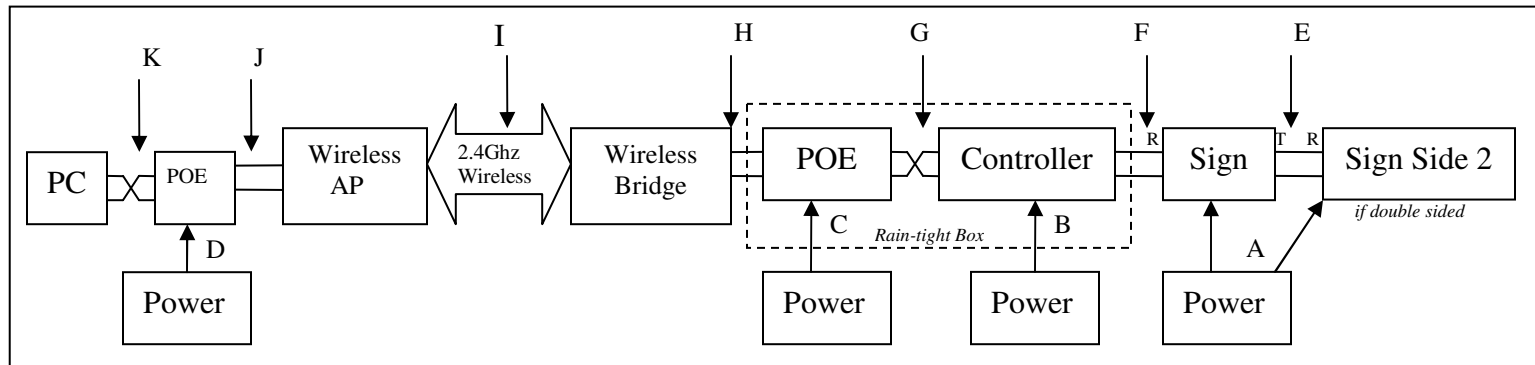
Computer is Connected to an existing Network

❑ The message center controller and wireless equipment (optional) are pre-configured to a default network configuration. The IP address of the controller is set to 192.168.0.210. Wireless Bridge and AP are 192.168.0.211 and 192.168.0.212 respectively.

❑ The steps to change the IP address one each of the devices are explained in detail in the user's manuals for each device. Consult these manuals for more information. The wireless devices support DHCP, but the message center's IP address must be static. To integrate the equipment into your existing network, in this order you must change the IP address on a computer, use that computer to change the message center IP address, change the outdoor bridge IP address, and then change the Access Point IP address. Follow these steps:

1. Connect the access point to the LAN with a straight through Ethernet cable. The unit is shipped with a crossover cable for connecting directly to a PC.

2. Change a PC on the network's IP address as instructed in *"Not connected to an existing Network"* above.

3. Change the Message Center's IP address by following these steps.
   a. Install Nevco Composer™ on the Computer. Be sure to plug the license key into the USB port.
   b. Enter "Password" as instructed in the manual. As long as the password remains "Password" you will be prompted to change it each time the program is loaded.
   c. Go to Message Center=>Configure Password and Message Center
   d. Enter your current password and click connect on the right hand side of the window.
   e. Enter the new IP address and subnet mask and click Update.

4. Change the Outdoor wireless client's IP address by following these steps.
   a. Open internet explorer and in the Address Bar type 192.168.0.211
   b. Refer to the sticker in your user's manual for the username and password.
   c. A web page called Wireless Client Bridge will come up. Click on "TCP/IP Settings" and select "LAN Interface".
   d. Change the network settings as necessary to fit your network topology and click "Apply Changes".
   e. You may also want to change the wireless settings to suit your own security needs. Be sure to change the Access Point to match in the next section.

5. Change the Access Point's IP address by following these steps.
   a. Open internet explorer and in the Address Bar type 192.168.0.212
   b. Refer to the sticker in your user's manual for the username and password.
   c. A web page called Wireless LAN Access Point will come up.
   d. Follow the same steps as 4, steps c - e. Make sure any security settings changed on the Client Bridge match settings on the Access point.

6. You may now change your PC's IP address back to its original configuration. Test the new configuration by opening Nevco Composer™, going to Project=>Configure, enter the new IP address of the message center and click "OK". The status at the bottom of the screen should now be "Display Connection = Ethernet".

INSTALLER'S TROUBLESHOOTING GUIDE

The figure to the right 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.

Situation	Symptom	Connection	Solution
The message Center is not displaying a message	The fans on the ALL power supplies are not running *For 12' and 16' wide message centers(31mm) and 3x8 (25mm), there are multiple power disconnect boxes inside the sign*	A	Check Power Switch on disconnect box inside message center
			Check connections in disconnect box (power hookup)
			Check branch circuit; was there a photocell on an existing sign install?
	"DSP" LED on the controller is not blinking 30 seconds after the controller is switched ON.	B	Check branch circuit and power at the receptacle
			Check Power Switch on controller
	On a double sided Message Center, One side is displaying the message, the other is not	E	Ensure an Ethernet straight through cable has been used, is making a good connection at both ends, plugs into 'T' on sign side 1 and 'R' on sign side 2. Side 1 is the one connected to the controller "DSP"
	"DSP" LED on controller IS blinking, but the control card inside the message center has no LED's blinking rapidly (like DSP on the controller).	F	Ensure an Ethernet straight through cable has been used, is making a good connection at both ends, plugs into 'T' on sign side 1 and 'R' on sign side 2. Side 1 is the one connected to the controller "DSP"
I cannot communicate with the message center	No Red Power LED lit on Wireless Bridge POE.	C	Check branch circuit and power at the receptacle. Adapter has LED indicator
	No Red Power LED lit on Wireless Access Point POE.	D	Check branch circuit and power at the receptacle. Adapter has LED indicator
	LAN LED on Controller not ON solid	G	Ensure an Ethernet crossover cable has been used and is making a good connection at both ends
		H	Ensure an Ethernet straight through cable has been used and is making a good connection at both ends.
	LAN LED on PC Ethernet port not ON, or PC says "network unplugged", "not connected".	J	Ensure an Ethernet straight through cable has been used and is making a good connection at both ends.
		K	Ensure an Ethernet crossover cable has been used and is making a good connection at both ends. Check to see that the network interface is enabled and follow the procedure in "*Not connected to existing Network* above.
	User's manual on CD with wireless equipment explains how to measure the wireless signal strength	I	Reorient the wireless device's antennas to eliminate obstructions between them