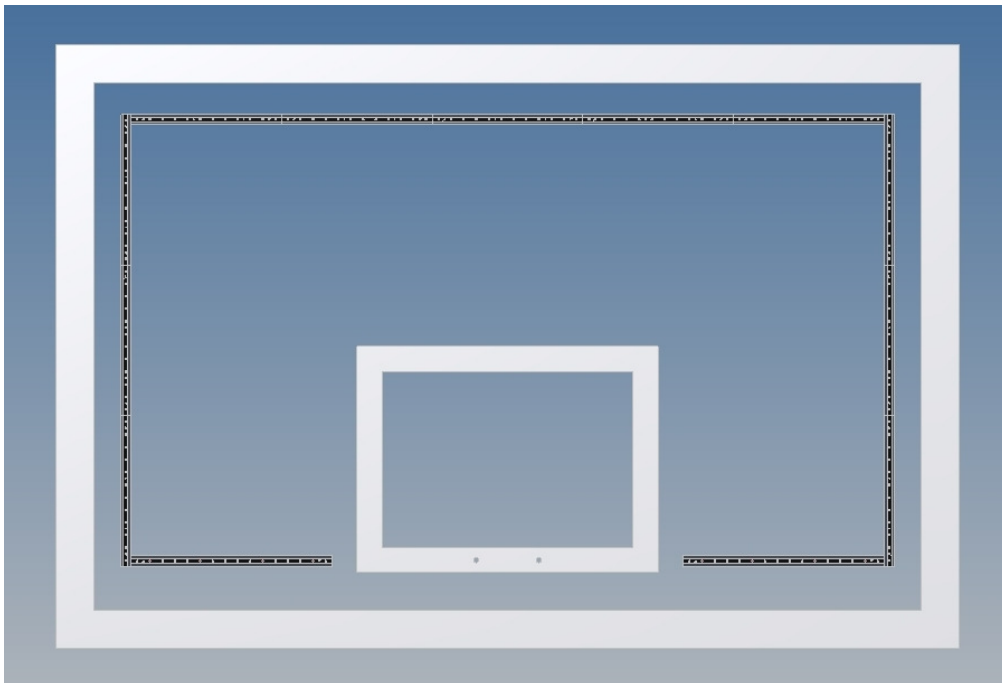




Universal End of Period (EOP) Segment Installation Manual

- Size: 12" Segments are .85"H x 12"L (.022 x .3 meters)
- Size: 16" Segments are .85"H x 16"L (.022 x .4 meters)
- 12" Segment Amperage - .09 Amps @12VDC
- 16" Segment Amperage - .12 Amps @12VDC



Retain this manual in your permanent file.

All Kits Include:

- 1 Surface Mount EOP Segment Installation Manual (This manual)
- 6 page segment installation pattern drawings
- 6 Black Adhesive Backed Pull-Tie Holders (.75" Square)
- 6 Black Pull-Ties (3.25" Long)
- 4 Alcohol Wipes
- 1 Roll of Masking Tape
- EOP Segment to controller/SCD cable sets
- Extra foam mounting tape for repositioning of segments

Parts used for different Backboard Size:

72" x 42" Backboard (Per Backboard*)

- Four 12" EOP Segments
- Six 16" EOP Segments
- One 12" Universal Segment
- Twelve Short Segment Cables (2" Long)
- Two Long Segment Cables (12" Long)

72" x 48" Backboard (Per Backboard*)

- Four 12" EOP Segments
- Six 16" EOP Segments
- Two 12" Universal Segments
- Twelve Short Segment Cables (2" Long)
- Two Long Segment Cables (12" Long)

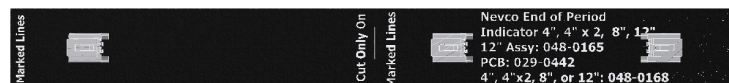
***Please note:** Not all cables and segments will be used depending upon backboard style.

Standard Backboard Installation Instructions

- Determine type of backboard and locate Suggested EOP Segment Installation Print for your particular backboard. The prints detail segment size, location, and NCAA standards for EOP segment location.
- Clean glass backboard with alcohol wipes where segments will be mounted.
- Use a straight edge to mark the outline of the EOP segments on the rear of the backboard. Masking tape may be used as both a straight edge and center line marker to assist in the application of the segments.
- A universal segment is included which can be used as a full 12" segment or cut with a pair of tin snips or scissors as marked on the back of the segment. The Universal Segment can be made into an 8" segment, a 4" segment or a pair of 4" segments.



Full 12" Universal Segment

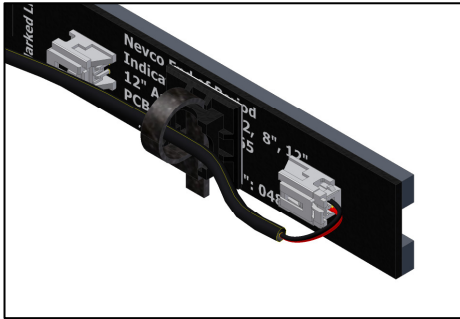


Universal Segment Cut Into One 8" Long Segment

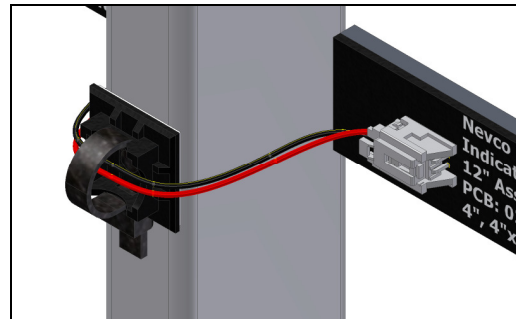


Universal Segment Cut Into Two 4" Long Segments (Used on 48" Tall Backboards)

- To apply segments once all of the locations and sizes have been determined, remove both strips of adhesive backing and apply segments to glass. Apply pressure over the entire length of the segment to ensure full adhesion to the glass.
- Connect segments together using enclosed wiring harnesses.
 - The shorter 2" cables are for segments that are butted against & corners.
 - The longer 12" cables are used for jumping over and around bracing structures.
- 3 pull-tie mounts and pull-ties are included per backboard:
 - One of the pull-tie mounts is to be used to secure the EOP segment power cable that connects the segments to the controller. Clean back of segment with alcohol wipe first.
 - The other two mounts are to be used if the longer 12" cables are needed to connect segments together. The mounts are used to protect and strain relieve the cables so that rear impacts and vibrations do not damage the wiring.



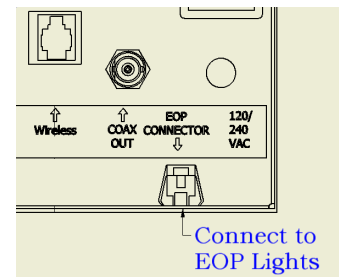
Controller Cable Mounted to Back of Segment



Segment to Segment Connection Over Backboard Structure

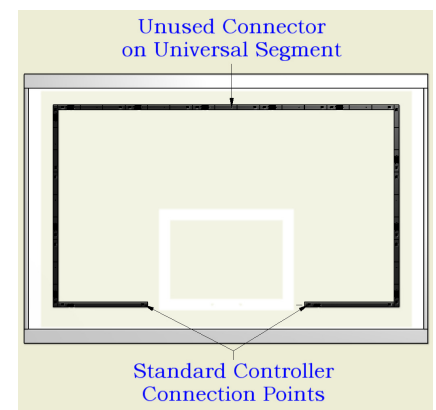
Controller Connection

- If the EOP segments are being connected to a Nevco IAD (Indoor Accessory Driver) two 25ft & two 10ft cables have been included in the kit. Connect the large white connectors of the 25ft cables to the large white connectors on the 10ft cables. Plug the small white connector into the end of an empty connector on the EOP segments. There should be an available connector* at the end of each segment on the bottom of the backboard. For IAD connection information see IAD Installation manual.
- Please note: 14 Gauge 25ft, 50ft, 100ft, 150ft, and 200ft extensions are available for IAD installation configurations. Please contact Nevco for purchasing information.
- If the EOP segments are being connected to a SCD-7 or SCD-T7 shot clock, two 10ft cables have been included in the kit. Connect one end of the cable into an available connector* at the end of a segment on the bottom of the backboard. Connect the other end to the EOP port on the back of the shot clock. See Figure to right.



***Please Note:**

Unused connections anywhere on the backboard can be used to connect to the controller. An uncut 16" segment, a full 12" Universal Segment or an 8" Universal segment all have spare connection points.



Nevco
Indoor Accessory Driver
IAD
Installation Manual



Retain this manual in your permanent file.

Installation Instructions

Installation consists of three steps: Unpacking the equipment, Indoor Accessory Driver (IAD) mounting and electrical wiring. Be sure to read and understand all of the instructions before installing the equipment. Consult the “installer’s troubleshooting 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.

2. IAD Mounting

- ☐ Refer to installation prints for detailed power requirements.
- ☐ The IAD is equipped with two mounting brackets. Always use good mechanical practices when mounting IAD.
- ☐ Install IAD and power supply somewhere protected to prevent damage to the equipment.
- ☐ For conduit connections directly to IAD remove knock-out from desired hole and install appropriate fittings.
- ☐ For wire connections to IAD remove knock-out from desired hole, install one of the included black plastic grommets to protect wires from damage, run the wires inside the IAD and loop the wires through the pull-tie strain relief before making their connections to the IAD.
- ☐ Once all the wires are connected to the inside of the IAD pull on the free end of the plastic pull-tie until all the wires are secured. If changes are required the pull-tie can carefully be cut and replaced.

3. Electrical Connections

Power Service

- ☐ Consult the installation print for power requirements for your scoreboard model. Provide for a 40% safety factor to guard against tripping of the circuit breaker under low line conditions.
- ☐ Be sure to include any lighted signs, and message centers when sizing the supply wiring necessary to support the circuit load.
- ☐ The person performing the installation should be familiar with National and local electric codes.
- ☐ A standard IEC US grounded power cord is shipped with the board for attaching power.
- ☐ A standard IEC to Euro Plug with Ground power cord (009-0257) is available from Nevco

Signal Connections

- ☐ Refer to IAD Signal Input/Output Configuration print
- ☐ Connect coax inputs to the BNC marked “Input”.
- ☐ The BNC marked “Output” can be used to drive other scoreboards/accessories sharing the same display data.
- ☐ By adding a “T” connector at the BNC Output, two accessories can be connected at once with up to 1000 feet of coax each.

Accessory Connections

- ☐ Refer to IAD Accessory Output Configuration print

2-Wire Coax Cable (RG58/U)

All 2-WIRE cable ordered from Nevco is direct burial type. It has a minimum dielectric strength of 300V, and conforms to UL standard 1365.

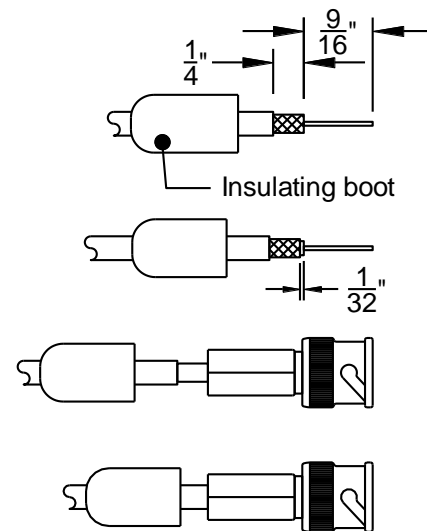
If the wiring is buried above the freeze line, bury the cable with sand to provide drainage and prevent damage from shifting soil.

Installing Cable Connectors

Bulk 2-WIRE cable that does not have connectors attached.

To install connectors on each end of the cable:

- ❑ Slide the insulating boot onto the cable and trim the cable as shown.
- ❑ Twist the outer braid in a **clockwise** direction so that at least 1/32 in. of the inner dielectric is bared and the braid is left flat. Be sure no strands of the outer braid are touching the center conductor.
- ❑ Insert the center conductor into the back of the connector, feeding it into the guide hole.
- ❑ Push the cable as far as possible into the connector.
- ❑ Screw the connector onto the cable in a clockwise direction until the connector stops turning.
- ❑ Slip the insulating boot over the back of the connector.

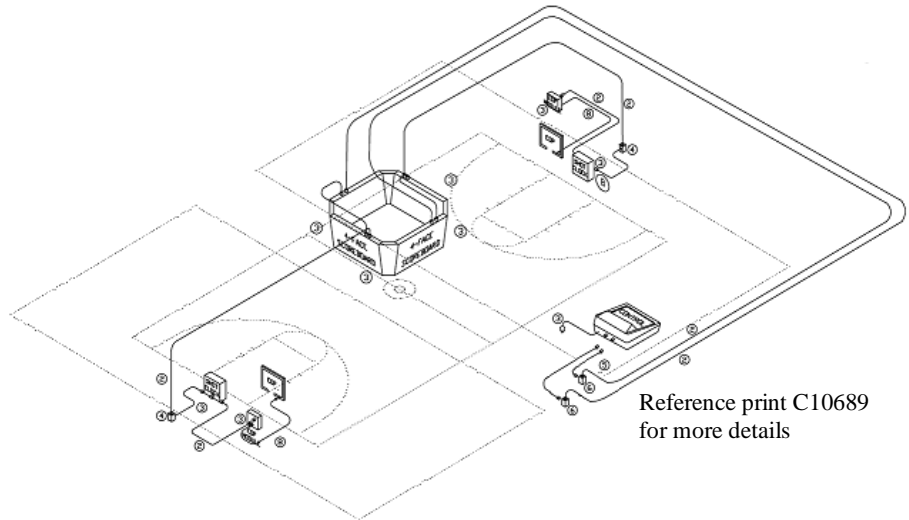


4. Scoreboard Systems

To install a system of scoreboard displays, controls and accessories follow these guidelines. Check the website Nevco.com or contact your local sales rep to obtain other system drawings.

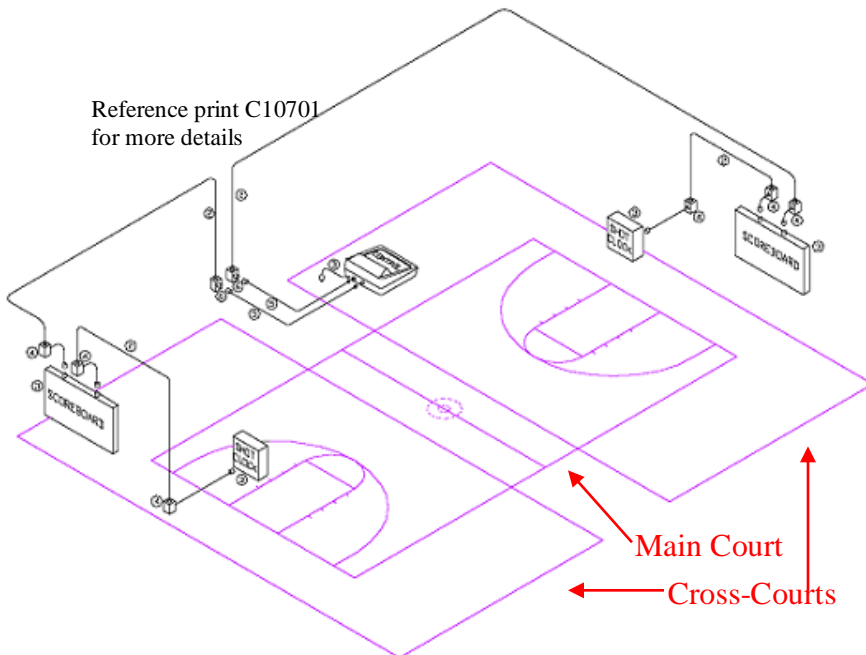
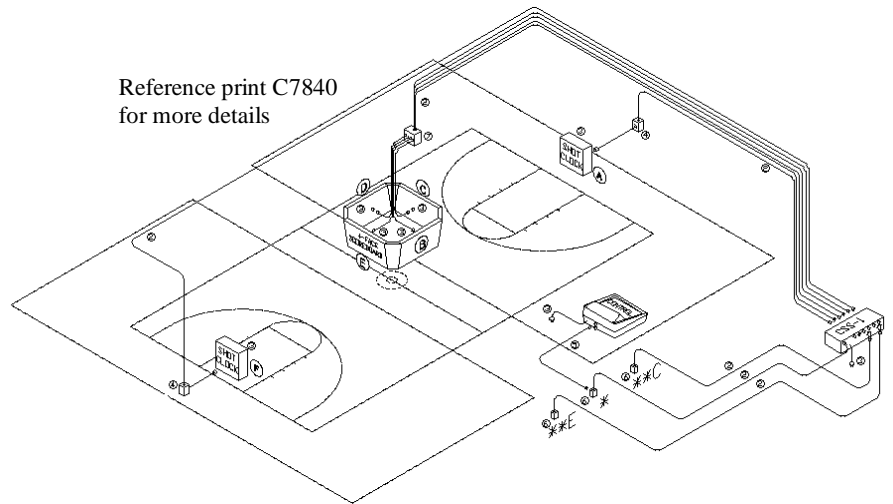
Daisy Chaining

When all or “groups” of scoreboards in the facility are to operate together, installation time and costs can be saved by daisy chaining the coax cable from scoreboard to scoreboard. The diagram to the right shows this operation.



Independent Operation

When the scoreboards are to be operated together, but at other times separated and operated independently, alternate control points or cable selection switch (CSS) units must be used. The diagram to the right shows this operation.



Mixed Operation

When independent operation is required, daisy chaining can still be used to save cost on installation. The diagram to the left shows this operation.

Wireless Operation

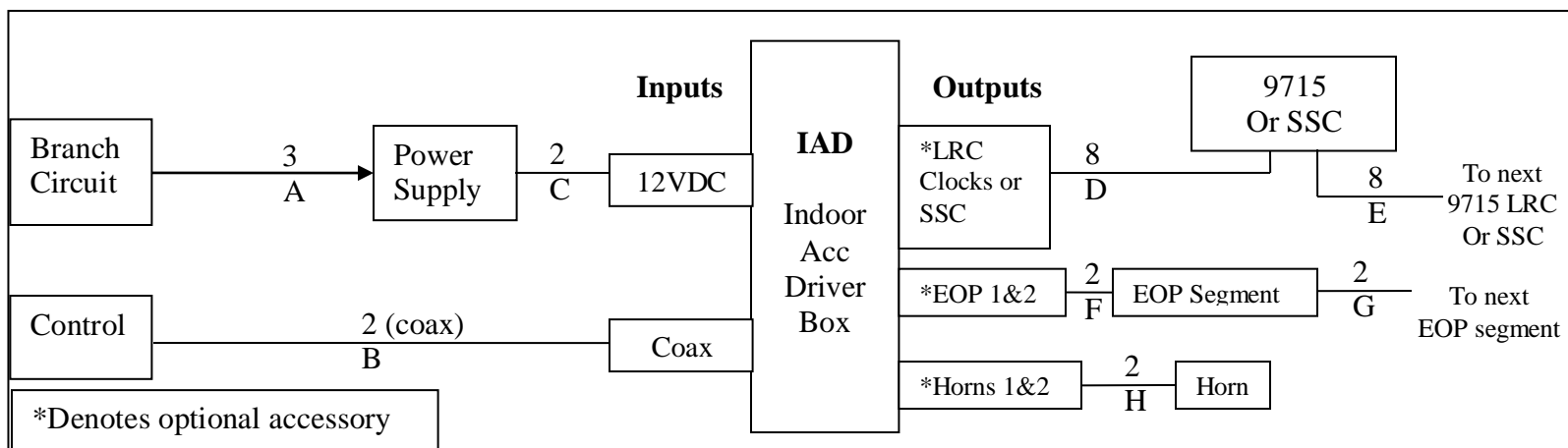
Wireless systems provide the maximum flexibility by allowing the operator the ability to program groups of receivers. A single receiver can drive multiple displays. See wireless device manual for more information.

Plug a control into both jacks for Main Court “All-on” operation (shown) or plug two controls into each jack for independent cross-court operation (not shown).

WIRED TROUBLE-SHOOTING GUIDE

The figure to the right labels the possible connections to the IAD. The chart below lists the problem that can be identified should any connection be faulty.

NOTE: The number that appears above/next to a letter refers to the number of wires or conductors in the cable.

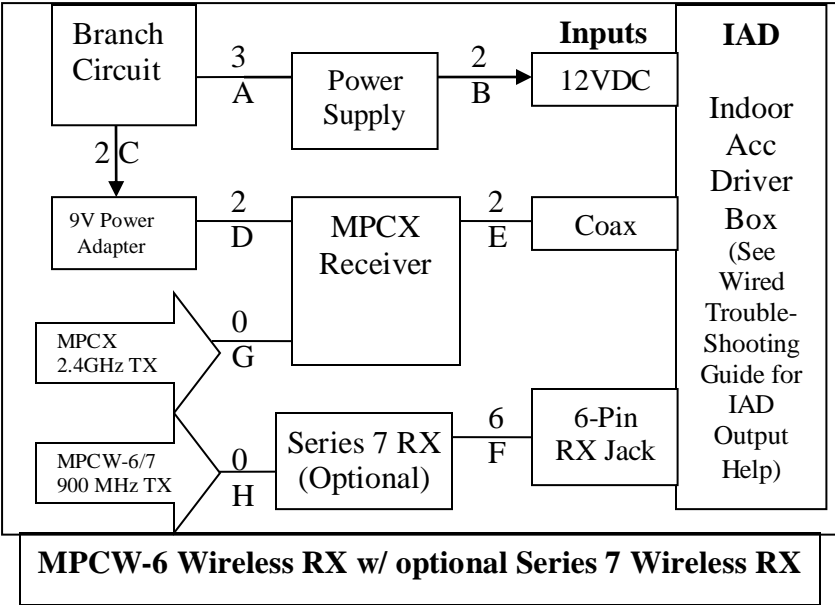
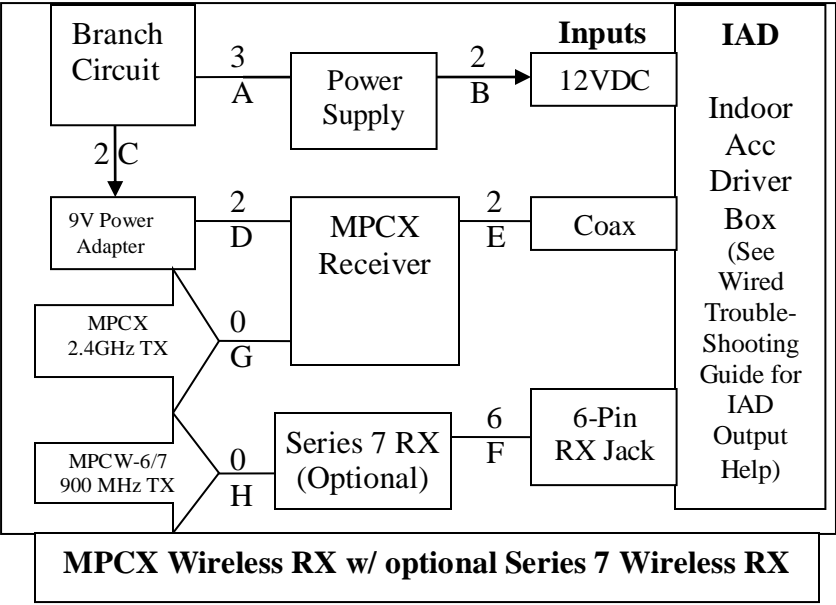


Situation	Symptom	Connection	Solution
The IAD fails to function properly:	The IAD power & signal indicator LED does not light inside of the IAD enclosure.	A	Check branch circuit breaker and power cord connections to power supply
		Power Supply	Verify power supply is “Desktop Style” 12 Volt, 40 watt, 3.3A power supply. Verify LED on top of the power supply is on.
		C	Check 12V connection inside IAD enclosure
	The IAD power & signal indicator LED does NOT change from solid to flashing when a coax signal is connected to the coax input inside the IAD box	B	Check Coax connections. Plug control directly into the IAD to eliminate installed coax cable. If that works, the cable or terminations are bad. Try the 301 Model code, see control users manual on testing.
Problem with EOP End of Period Indicators	EOP indicator turns on when horn button is pressed	F	Plug from EOP segments is in the wrong socket inside IAD enclosure. Only the top two plugs are intended for End of Period Indicators.
		Control	MPCW-7 controls have an option menu to change when EOPs turn on. Verify EOP operation setting.
Problem with Full-Matrix Horns	Horns do not sound when time runs down to 00:00 or when the horn button is pressed	H	Check 2-pin connection to the IAD. Verify the horn(s) are plugged into the two bottom sockets (Horn 1 and Horn 2) inside the IAD enclosure.
		Control	MPCW-7 controls have an option menu to change Horn tone and volume. If the horn tone is set to blank the horn is disabled. Verify horn tone setting.
Problem with 9715 Locker Room Clock	The IAD is on and a good coax signal is present but the 9715 clocks(s) are not turning on.	D	Connect the 9715 directly to the IAD using the included 25 foot straight patch cable. <u>Do not</u> use a crossover style Ethernet cable. Also verify that the cable coming from the IAD is plugged into the 9715 clocks Input and not the signal Output.
	A daisy chained 9715 locker clock isn’t working after the 1 st clock in the chain.	E	Maximum of 4 clocks per channel from the IAD. Plug clock directly into IAD and verify functionality of clock. If clock turns on directly connected to IAD check cable between both clocks. <u>Do not</u> use crossover Ethernet cable.
	Clocks are dim or change brightness during operation	D/E	Total length of wire cannot exceed 175 feet per clock channel when four clocks are daisy chained. If using non-Nevco purchased Ethernet cable verify that it is 8 conductor, 24 gauge. Also verify the proper crimp on connector is being used. There are different connectors depending if the cable is solid or stranded.

Wireless Trouble-
shooting Guide

The figure to the right labels connections useful to troubleshooting. The chart below lists the problem that can be identified should any connection be faulty. Check the control and service manual for more detailed information.

NOTE: The number that appears above/next to a letter refers to the number of wires or conductors in the cable.



Situation	Symptom	Connection	Solution
The IAD fails to function properly when used with Wireless Receivers	LED on wireless receiver does not turn on at all	A, B, C, D	Check branch circuit breaker and power connections.
		9V Power Adapter	Verify that LED on wall mounted power supply is ON and plugged into MPC6/MPCX receiver.
		F	If using Series-7 power for the receiver is supplied by the IAD. Check cable and verify power IAD power is on. (See Wired Trouble-shooting for further information on IAD power supply)
	LED on MPC6/MPCX receiver is flashing indicating good wireless signal but IAD signal LED is staying solid and not flashing indicating that it is getting a good signal.	E	Check Coax connections and cable.
			Use supplied 25 foot cable and plug control directly into the top of the board. Try the 301 Model code, see MPC control users manual for further information on testing.
	Scoreboard/IAD has power and wireless control is turned on but scoreboard digits / IAD accessories are not turning on correctly.	G, H	Receiver should be in clear line of sight of control
			See MPC wireless control manual to verify the receiver has been properly linked to the control
	LED on MPCX receiver doesn't flash when keys are pressed on control	MPCX RX	See MPCX wireless control manual to verify the receiver has been properly linked to the control



NEVCO GUARANTEE

To view or receive the most recent copy of the Guarantee, please visit our website,
www.nevco.com or call 1-618-664-0360

<p>NEVCO, Inc. 301 East Harris Avenue Greenville, IL 62246-2151 USA</p>
<p>USA TOLL-FREE 800-851-4040 CANADA TOLL-FREE 800-461-8550 International Telephone: +1-618-664-0360</p>
<p>Website: www.nevco.com Email: info@nevco.com</p>

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

This class A digital apparatus meets all requirements of the Canadian Interference- Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouleur du Canada.