

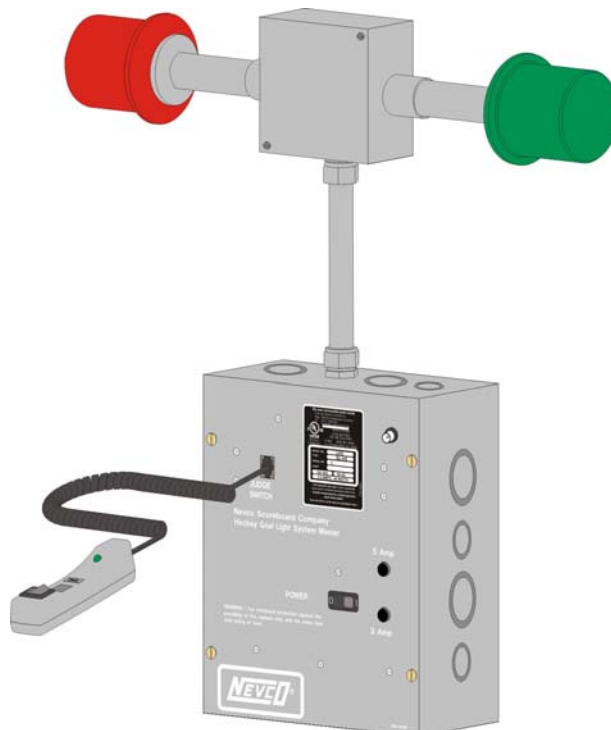
Nevco, Inc.

Installation Manual

Serial No. _____

Model GLH-5

- Size: Each module is 18''L x 19 ¾''H x 4''D (.46 x .50 x .10 meters)
 - Approximate hanging weight: 11 lbs each (5 kg)
 - Power requirements 120V, .4 Amps each
 - UL Listed/CSA Certified



Since 1934

Retain this manual in your permanent file.

Thank You

Thank you for purchasing from Nevco, Inc. Following are some important tips to remember when installing your new equipment.

- Pre-test the equipment as soon as possible after it arrives.
- Consult National Electrical Code and local codes before installation.
- Always use proper mechanical and electrical practices.

The GL-H5 goal light system

The hockey goal light system consists of two goal light trees, each having one red lens and one green lens with low voltage lamps. These trees attach to the GL-H5 box, which houses the electronics, and are mounted near the goal nets. The GL-H5 box plugs into 120V, 50/60HZ outlet and receives timing data from the same control that is operating the scoreboard. A hand held switch plugs into the goal light box and is to be activated by the goal judge when a goal is scored. This switch is disabled when the period ends. The goal light box supplies 12V, 50/60HZ power to the low voltage lamps as needed. Size of each goal light box is 18"L x 19 3/4"H x 4"D (.46 x .50 x .10 meters) Approximate weight 11 lbs. each (5 kg).

Installation Instructions

Unpacking the Equipment

To protect your new equipment from accidental damage, follow the steps below:

- Carefully remove all equipment from its packing carton. Inspect for damage.

Note: If damage to any equipment contact carrier immediately.

Pre-Test Your Equipment

(Goal Light Pre-Mounting Test)

- Connect a length of 2-WIRE cable from the BNC connector on the goal light box to the signal source. (control or receiver)
- Connect the goal light box to a power source. (See installation print for power service requirements.)
- Follow the Control Hookup & Testing Guide to make sure the system operates properly.

Note: The paragraph below explains the operating concept. Use the control with the regular model code to test the system.

GL-H5 operation

The green lights illuminate at the end of the period and, with the default startup settings, will remain on until the beginning of the next period. While the green lights are illuminated the goal lights are disabled.

To signal a score the goal judge turns on the GJS-5 hand held switch. This turns on the red light and disables the end of period lights.

This disabling of lights is to avoid confusion of a score near the end of a period.

Power Service Connections

Consult the National Electrical Code and local codes for the installation of class 2 wiring.

Consult the league rules for the proper location of goal lights.

Since the power requirements of this goal light system is low, it may be connected to the same circuit as the scoreboard.

The low voltage lamp fixtures may be mounted away from the GL-H5 goal light box if desired.. Use #14 ga. two conductor wire (order wire required from Nevco). Maximum length is 250 feet from the GL-H5 box to the low voltage lamp fixture. (see drawings for alternate mounting methods)

Note:

When making connections inside the GL-H5 box, be careful not to damage the fiber optic cable.

Do not bundle 120V wiring with the Class 2 wiring.

If the GL-H5 box is mounted using a conduit installation, then the power cord must be removed.

If conditions permit, the owner may place the power service and the 2-WIRE control cable in the same conduit. The 2-WIRE cable has a dielectric strength of 300 volts or better. Consult the National Electrical Code and local codes for the installation of class 2 wiring.

Connect the 2-WIRE control cable to the GL-H5 box.

Check all connections and assemblies before applying power to the system.

Test the complete scoreboard system. If the GL-H5 or the scoreboard system does not operate properly, refer to the Troubleshooting Guide.

WIRED OPERATION

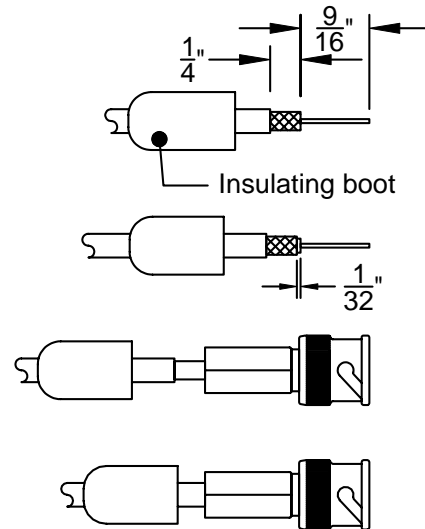
Make connection from GL-H5 box to control.

WIRELESS OPERATION

Run Nevco 2-WIRE cable from GL-H5 box to receiver.

Installing Cable Connectors

The 2-WIRE cable that comes with your scoreboard does not have connectors attached.



To install connectors on each end of the cable:

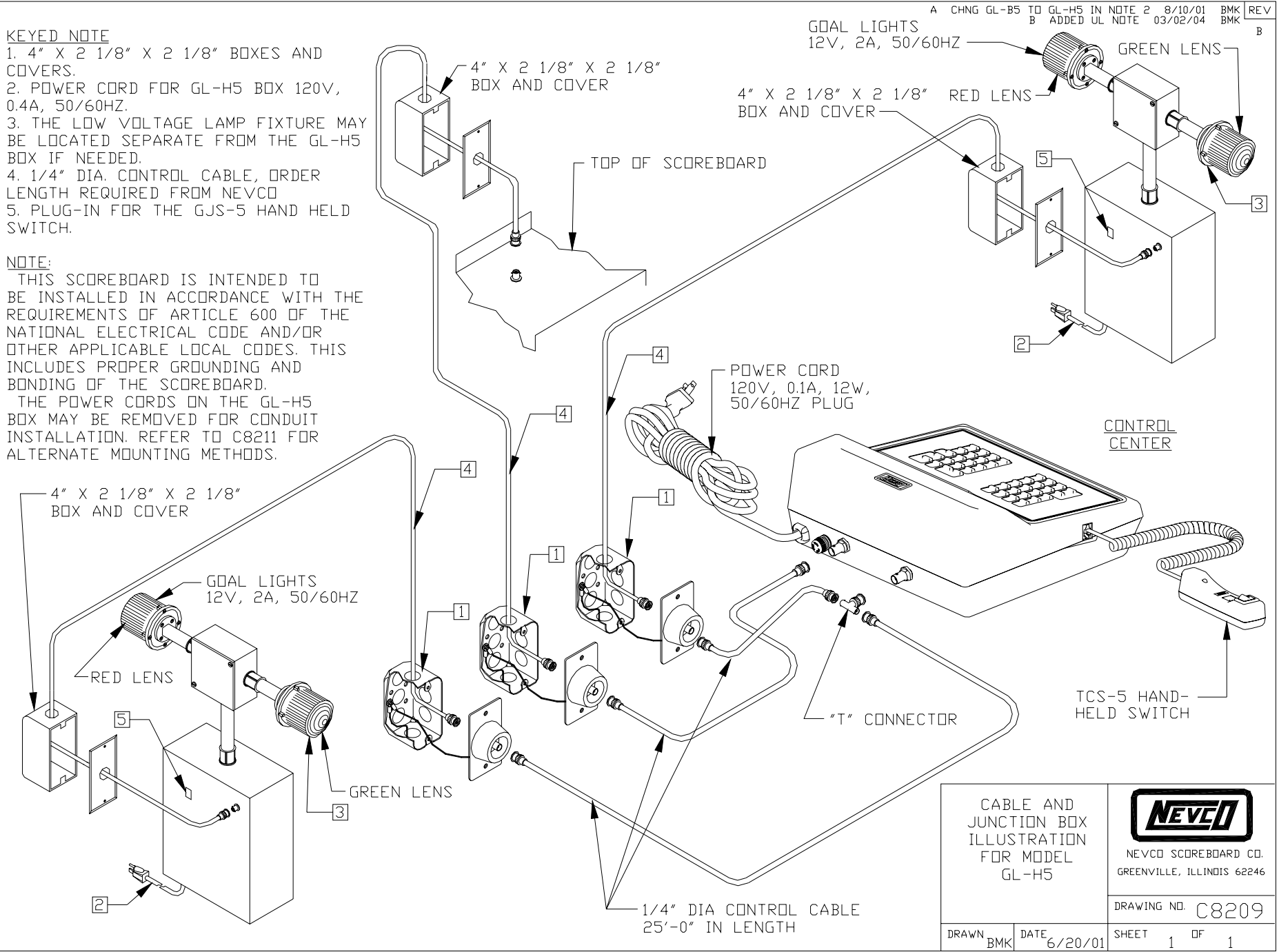
- ❑ Slide the insulating boot onto the cable and trim the cable as shown.
- ❑ Twist the outer braid in a **clockwise** direction so that at least 1/32 in. of the inner dielectric is bared and the braid is left flat. Be sure no strands of the outer braid are touching the center conductor.
- ❑ Insert the 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.


KEYED NOTE

1. 4" X 2 1/8" X 2 1/8" BOXES AND COVERS.
2. POWER CORD FOR GL-H5 BOX 120V, 0.4A, 50/60HZ.
3. THE LOW VOLTAGE LAMP FIXTURE MAY BE LOCATED SEPARATE FROM THE GL-H5 BOX IF NEEDED.
4. 1/4" DIA. CONTROL CABLE, ORDER LENGTH REQUIRED FROM NEVCO
5. PLUG-IN FOR THE GJS-5 HAND HELD SWITCH.

NOTE:

THIS SCOREBOARD 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 SCOREBOARD. THE POWER CORDS ON THE GL-H5 BOX MAY BE REMOVED FOR CONDUIT INSTALLATION. REFER TO C8211 FOR ALTERNATE MOUNTING METHODS.



CABLE AND JUNCTION BOX ILLUSTRATION FOR MODEL GL-H5		 NEVCO SCOREBOARD CO. GREENVILLE, ILLINOIS 62246
DRAWING NO. C8209		
DRAWN BMK	DATE 6/20/01	SHEET 1 OF 1

LOW VOLTAGE RED
LAMP FIXTURE
12V, 2A, 50/60HZ **

4" X 4" X 2 1/8"
BOX AND COVER **

1/2" CONDUIT * FOR
CLASS 2 CIRCUIT

1/4" DIA CONTROL CABLE, ORDER
LENGTHS REQUIRED FROM NEVCO.

GL-H5 BOX **

7/8" GROMMET **

1/2" CONDUIT * FOR
POWER SERVICE

1/2" CONDUIT * FOR
2-WIRE CABLE

LOW VOLTAGE RED
LAMP FIXTURE
12V, 2A, 50/60HZ **

4" X 4" X 2 1/8"
BOX AND COVER **

1/2" CONDUIT * FOR
CLASS 2 CIRCUIT

1/4" DIA CONTROL CABLE, ORDER
LENGTHS REQUIRED FROM NEVCO.

GL-H5 BOX **

7/8" GROMMET **

IF CONDITIONS PERMIT, THE OWNER MAY PLACE THE POWER SERVICE AND THE 2-WIRE CONTROL CABLE IN THE SAME CONDUIT. THE 2-WIRE CABLE HAS A DIELECTRIC STRENGTH OF 300 VOLTS OR BETTER. CONSULT THE NATIONAL ELECTRICAL CODE AND LOCAL CODES FOR THE INSTALLATION OF CLASS 2 WIRING.

LOW VOLTAGE GREEN
LAMP FIXTURE
12V, 2A, 50/60HZ **

1/4" DIA CONTROL CABLE,
ORDER LENGTHS REQUIRED
FROM NEVCO.

GL-H5 BOX **

7/8" GROMMET **

1/2" CONDUIT * FOR
POWER SERVICE

1/2" CONDUIT * FOR
2-WIRE CABLE

LOW VOLTAGE GREEN
LAMP FIXTURE
12V, 2A, 50/60HZ **

1/4" DIA CONTROL CABLE, ORDER
LENGTHS REQUIRED FROM NEVCO.

GL-H5 BOX **

7/8" GROMMET **

ALTERNATE
MOUNTING
METHODS
FOR MODEL
GL-H5



NEVCO SCOREBOARD CO.
GREENVILLE, ILLINOIS 62246

DRAWING NO. C8211

* ITEMS SUPPLIED BY OWNER
** ITEMS SUPPLIED BY NEVCO

DRAWN BMK DATE 6/20/01

SHEET 1 OF 1

GL-H5 System Testing

Because the microcomputer is capable of “masking” weaknesses in the scoreboard system, it is important that it reveal problems so corrections can be made before they get worse. A special command can be sent from the control to start the **scoreboard self-test** program. Please consult the **Control Hookup and Troubleshooting Guide** for instructions on initiating and terminating the following tests.

Control Signal Test

Consult the **Control Hookup and Troubleshooting Guide** for availability and instructions.

Scoreboard Self-test

Consult the **Control Hookup and Troubleshooting Guide** for instructions on initiating this test.

Light Circuit Test

When the **Scoreboard Self-test** is started, There will be a pause for about a second before the **Light Circuit Test** starts. Then the indicators will light, first one then the other. This pattern will continue until you either reestablish communications from the control or turn off the power to the GL-H5.

Troubleshooting Guide

A malfunction normally results from a component failure or a bad mechanical connection. This troubleshooting guide helps to locate the failure. This information can then be reported to the Nevco Service Department.

NOTE: Turning the control off does **NOT** turn the power off to the scoreboard or other devices.

PROBLEM

Control seems to operate correctly, however, the goal lights do not illuminate.

SOLUTION

- ❑ Check circuit breakers associated with the GL-H5 system.
- ❑ With the power off, check the fuses on the GL-H5 box.
- ❑ Use the 25 foot 2-WIRE cable to plug the control directly into the GL-H5 box. Use an extension cord to plug the control into a 120V, 50/60HZ grounded outlet.

PROBLEM

Control display does not illuminate when turned on and the goal lights do not illuminate.

SOLUTION

- ❑ See **Control Hookup and Troubleshooting Guide**.

PROBLEM

One or more of the low voltage lamps will not light.

SOLUTION

- ❑ Replace the lamp.

PROBLEM

The green end of period indicators stay on even after the time is reset.

SOLUTION

- ❑ This is the normal default. An option may be available that will cause the green end of period indicators to turn off as soon as the time is reset. (check your operating instructions)

If the problem persists please contact the Nevco Service Department.

800-851-4040



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

— IN USA —	— IN CANADA —
<p align="center">NEVCO, Inc. 301 East Harris Avenue Greenville, IL 62246-2151 USA</p> <p align="center">Telephone: 618-664-0360 Fax: 618-664-0398 TOLL-FREE 800-851-4040 (From all 50 states and Puerto Rico)</p>	<p align="center">NEVCO, ULC 107 Forestview Rd. Orillia, ON L3V 7C1 Canada</p> <p align="center">Telephone: 703-325-4005 Fax: 705-325-8891 TOLL-FREE 800-461-8550</p>
<p align="center">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 his 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.

Service Request

Scoreboard Serial # _____

Service: Module(s) Serial # _____

Service: Control(s) Serial # _____

Comments: _____

Parts Request

	Quantity	Part No.	Description
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____

Contact, Shipping, and Billing Information

Person to Contact: _____ Phone # _____

E-Mail: _____

Ship To: _____

Street _____

City _____ State _____ Zip Code _____

Ship Via _____

Bill To: _____ Purchase Order # _____

P.O. Box # _____

Street _____

City _____ State _____ Zip Code _____

We will contact you with the amount of your purchase before charging your account.

Charge To: _____

Name exactly as it appears on credit card

Signature

Credit Card: American Express MasterCard VISA

_____-_____-_____
Credit Card Account Number

Expiration Date: ____/____
Month Year

Make a copy of this form to order parts needed and/or to return with item to be serviced.