Scoreboard Operator's Instructions
MPCW6 Control

Model Code 134
Basketball

Horn	Misc. Shot Time	Sub. Horn	Set
Home T.O. Left	Next Poss.	Bonus	Time
Guest T.O. Left			
Time On	Home Team Fouls		Home Player Number
Time Off	Guest Team Fouls		Guest Player Number

Alternate Time Control

Time Out Timer Start	Clear	Options	Yes
7	8	9	No
4	5	6	Chronometer (Time of Day)
1	2	3	Home Score
	Blank	0	Guest Score

Confirm

Cancel
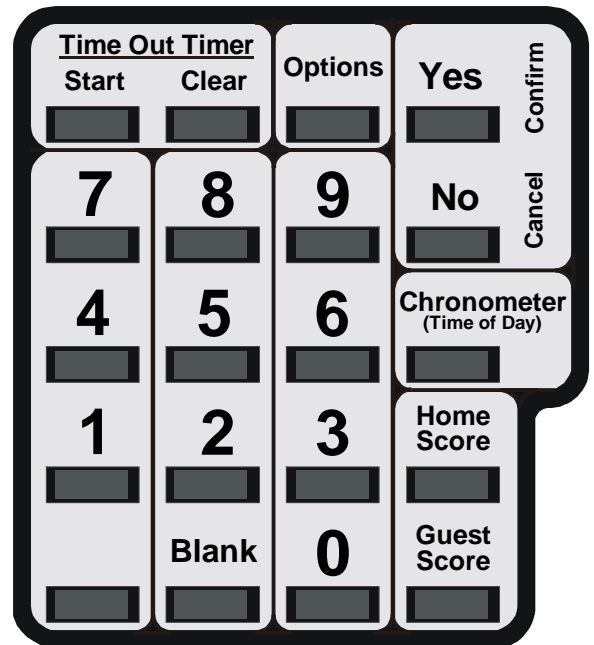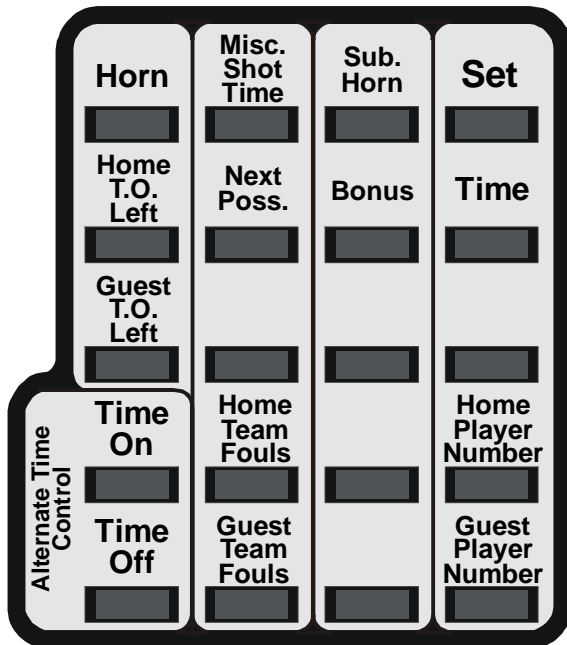
Some features on the keyboard overlay may not be included on the particular model being operated.

NEVCO®

Since 1934

Retain this manual in your permanent files

Instructions for:

Incandescent models:
2400
2400-A4
2440
2440-A4
2450
2455 Main Control
2460
9410

LED models:
2500
2500-D
2500-A4
2500-A4-D
2540
2540-A4
2550
2550-D
2560
2600
2650
2670
9510

FCC Statement

These devices comply with Part 15 of the FCC Rule. Operation is subject to the following two conditions. (1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation.

Nevco Scoreboard Company makes no guarantee this product will function in every installation. Each installation is a unique situation and outside factors may create an environment where a wireless type product will not work properly. See the preceding statement.

Changes or modifications to the MPCW-6 control or receiver not expressly approved by Nevco Scoreboard Company could void the user's authority to operate this product.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

· Reorient or relocate the receiving antenna.
· Increase the separation between the equipment and receiver.
· Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
· Consult the dealer or an experienced radio/TV technician for help.

FCC RF Exposure Statement
These devices comply with FCC radiation exposure limits as set forth for an uncontrolled environment.
These devices should be installed and operated with a minimum separation distance of 20 cm between the radiator and your body.

<u>Introduction</u>

Welcome to the new MPC control. It is loaded with advanced operating features that will simplify and enhance the operation of your scoreboard system. Some of the features include:

- ✍ Large, bright and easy to read dot matrix LED display.

- ✍ Lithium battery powered memory will maintain all of the scoreboard information when turned off, unplugged or after a power failure. Under normal conditions the battery will last in excess of 10 years so you won't have to worry about replacing it. We recommend storing the control in a cool, dry place because extreme heat will shorten the life of the battery. Even if the battery is no longer functional, you can still operate the scoreboard(s); however the control no longer remembers or stores Bookmarks.

- ✍ Five programmable Bookmarks. This feature allows you to set the control now for future basketball, football, track, volleyball, wrestling, baseball, hockey, soccer, in-line hockey and swimming games. Simply change the overlay to the sport you desire and select the correct single digit Bookmark number and you are ready to play.

- ✍ An interval timer and horn (primarily used in junior hockey).

- ✍ Ten different time out timers, all programmable for different times with optional warning horn and an option to display the selected time on the scoreboard timer.

- ✍ Tenth second displayed on the scoreboard timer during the last minute when counting down.

- ✍ The alternate TIME ON and TIME OFF keys are on the control keyboard. These keys are provided in case your remote hand-held time switch is lost, stolen, broken or you simply wish not to use it. When the remote hand-held time switch is plugged into the control it disables the alternate TIME ON and TIME OFF keys.

- ✍ Set the Chronometer (time of day) on the scoreboard(s) clock by simply pressing the CHRONOMETER button on the control keyboard. The chronometer will keep accurate time even after disconnecting the control.

Start Up Procedure

The traveling display prompts you to ENTER YOUR MODEL CODE, START WHERE TURNED OFF LAST or USE A BOOKMARK. To enter a model code, use the example below. If a power failure happens during a game, answer YES to START WHERE TURNED OFF LAST. If someone saved a BOOKMARK, select the Bookmark number.

Enter Model Code: 134

Display will show the sport being played, i.e. BASKETBALL, and then display the time.

NOTE

If you are using Shot Clocks, Delay of Game Timers or other Nevco accessories that require a separate hand-held switch, please use the operating instruction accompanying that hand-held switch for proper usage.

Entry Error

If an error is made, the display will show: ENTRY ERROR

This will remain on for about 2 seconds and then return to the TIME display. If the ENTRY ERROR displays, you may reenter the correct information immediately without delay.

You can return to the time display anytime by pressing the TIME key.

Timer Operation

Main Time

To set the clock, you must start with the SET key then the TIME key. Now enter the time you want. If the display is correct, press the YES key. If not correct, press NO. You will notice that the display will start erasing or backing up one digit at a time every time you press NO. Backup until you delete the incorrect entry and then enter the correct time, then press YES.

EXAMPLE: Press SET, then TIME

The display now shows: SET   MM:SS.s

Press 0800

Press NO

The display now shows: SET   08:0S.s

Press YES

Period

Display now shows: PERIOD   0

Now enter the PERIOD. (i.e. 1)

Display now shows: 8:00.0   DN

As you see by the example, you do not enter zeros that are not significant. In fact, to set the time to zero, just press SET then TIME then YES.

Now plug the remote hand-held "time switch" into the outlet on either side of the control or use the TIME ON button located on the keyboard to activate the timer.

NOTE: If the remote hand-held switch is plugged into the control it will disable the TIME ON and TIME OFF buttons on the control.

Tenth Second

The tenths of second will not display on the scoreboard until the last minute. You can even set the tenths of second. Try this example:

Press SET then TIME now 08005 then press YES

Display now shows: PERIOD   1

Now enter the PERIOD. (i.e. 1)

Display now shows: 8:00.5   DN

2 Second Horn

The horn sounds automatically when the clock reaches zero. It sounds a minimum of 2 seconds. Turning the clock time to "OFF" stops the horn after the 2-second minimum. The control "beeper" also sounds.

Automatic Horn

Sometimes the automatic horn is not desired. Try this:

Press SET then HORN

Display now shows: AUTO HORN? Press YES or NO

If you answered NO, the horn will not sound when the time reaches zero. If you change your mind, do it again and answer YES. This can be done at any time. The control "beeper" will always sound.

Substitution Horn

The substitution horn is used to blow the horn when the timer is turned off and to warn that there is a player substitution.

Press SUB. HORN

It may display either SUB HORN OFF or SUB HORN ON. The first time you press this function it shows you what the status is set to. Pressing it again will change the status.

Score Entries

Enter a score for the HOME team.

Adding to Score

Press HOME SCORE

The display now shows: HOME   +

Now press 2

The display now shows: HOME   +2

The scoreboard displays a "2" in the HOME SCORE. Repeat this a few times.

It can add any number for you from 1 to 9.

Correcting Score

You cannot subtract. Use the SET key.

Press SET then HOME SCORE. Now enter a number.

GUEST SCORE works the same.

Team Fouls

HOME and GUEST TEAM FOULS operate the same as HOME and GUEST SCORE.

Time Outs Left

For HOME and GUEST T.O. LEFT, press either key and the number you want.

Bonus Indicators

Pressing the BONUS key displays the "BONUS" indicators as shown on the scoreboard. When pressed again, the "BONUS" lights will change. Starting with both "BONUS" indicators off, pressing the BONUS key will follow this sequence; "HOME", "GUEST", both on, both off. Remember, the first time the BONUS key is pressed after you have used another function nothing will change, it only shows what is displayed on the scoreboard.

Next Possession Indicators

The NEXT POSSession key works just like BONUS (alternating between HOME and GUEST) except there is no setting with both off or both on, once used for the first time.

Clearing Next Possession
To turn NEXT POSSession indicators off: Press SET and then NEXT POSS.

Player Number and Fouls Memory

The HOME PLAYER NUMBER and GUEST PLAYER NUMBER keys are for entering the player number and fouls for display on the scoreboard. The MPCW6 also remembers the number of fouls for each player entered. It can remember thirty players and their fouls for each team.

First press GUEST PLAYER NUMBER

The display now shows: G. PLAYER #

Player Number
Now press 23 to indicate player number.

The display now shows: G NO. 23 FOULS 0

Player Fouls
Now press 1 to charge one foul to player 23. If you accidentally pressed the wrong number, simply press the correct number.

The display now shows: G NO. 23 FOULS 1

The display shows Guest player number 23 has one foul. The moment you pressed the 1 for number of fouls the player number and fouls were transferred to the scoreboard display. Enter a few more players' numbers with different amounts of fouls.

Player Foul Memory
This is where the memory feature starts to work for you. Enter a player number you have used previously. Try player number 23 as in the above example. It remembered that player number 23 had one foul. You should also note that the scoreboard display did not change when you pressed in player number 23. You can check the player number and fouls memory without affecting the scoreboard. Only when you enter a foul will the information be transmitted to the scoreboard.

Blanking the Scoreboard Display
If you want to remove the display from the scoreboard, you can do the following:

Press GUEST PLAYER NUMBER or HOME PLAYER NUMBER then press BLANK

This blanks the scoreboard display but will not affect the memory.

Number of Players Allowed
You may enter all numbers from blank zero to blank nine and 00 through 99.

Clearing all Fouls
When the game is over, you can clear this memory for the next game by doing the following:

Press SET and then GUEST PLAYER NUMBER or HOME PLAYER NUMBER, either one will work.

The display now shows: RESET (Y-N)

This gives you one chance to say NO if you did this accidentally. If you really want to reset the players' numbers and fouls memory for all players, press YES. The control displays RESET and sounds the control beeper for 3 seconds returning to the main time display when memory is cleared.

Error Correction
If you enter a wrong player number and fouls, call it back up and set the number of fouls to zero.

Using Bookmarks

There are five BOOKMARKS available for your use. Setting a BOOKMARK enables you to save the current settings of the sport you are playing. A good example would be basketball foul panels. After you enter your model code, you will

start setting up the scoreboard such as the time, period, shot clock time, whether your scoreboard display is bright or dim, auxiliary timer and any time out timers that you may want for the game. Next you will enter all the players' numbers that are on the team. Once this is completed using the SET then OPTIONS, you can save all these settings by SETTING A BOOKMARK. The next time you have a game, simply turn the scoreboard control on, select the BOOKMARK number that you saved previously and you are ready to play the game.

You can basically do the same thing by answering YES to START WHERE TURNED OFF LAST. But if you answer NO, then you have to start all over again. We encourage you to try this; you will find that it can save you a lot of time in preparing for the next game.

Chronometer

A chronometer is a timepiece or clock designed to keep time with great accuracy. The chronometer in the MPC control is powered by its own 10-year life battery and keeps the time of day accurate to within 1 minute per month. Because it has its own power source, it will keep time when the control is not in use.

Pressing the CHRONOMETER (Time of Day) key
> This key is used to display the chronometer time on either the control's display or the scoreboard system or even both depending on the settings you choose.

Control of the chronometer is accessed through an interactive dialog of questions initiated by pressing **SET** and then **CHRONOMETER**. The questions asked are based on the model code and your answers to previous questions.
_____
This question requires special consideration.

DO YOU HAVE AN AUXILIARY TIME DISPLAY CONNECTED?

Auxiliary time displays are available from Nevco Scoreboard Company. Currently, models 9405 and 9510 fall into this category. They are separate units for time display only that are used to display main time, time of day, or aux time. Main time (game time), if a clock is available on your scoreboard, and aux time are explained elsewhere in this manual.
Once this question has been answered it will not be asked again until the control is restarted and a model code is entered. If you answer no to this question all questions about the auxiliary time display will be removed from the dialog.
_____

TURN CONTROL OFF BUT LEAVE CHRONOMETER TIME DISPLAYED?
> If you answer yes, you will be asked one or more questions depending on your scoreboard system.

DISPLAY CHRONOMETER TIME ON ALL DISPLAYS?
> Answer yes only if you want time of day to remain on <u>ALL</u> connected scoreboards and displays.

DISPLAY CHRONOMETER TIME ON AUXILIARY TIME DISPLAY?
> Time of day will remain on auxiliary time display(s).

> *All MPC control operations stop and cannot be restarted* until the control power is turned off and back on. You are prompted to first disconnect the control cables from the back of the control and then turn the control power off. This sequence initializes the scoreboard system's internal chronometers to carry on displaying the time of day with the control removed. The scoreboard's chronometers start at the beginning of the minute displayed at the time the prompt to disconnect is displayed on the control.

_____

Below are explanations of other questions you will be asked while setting up the Chronometer on the MPC control. The control will prompt you with different questions as you proceed depending on how you answer each one.

ENABLE CHRONOMETER KEY TO PUT CHRONOMETER TIME ON SCOREBOARD?
> If you answer yes, pressing the CHRONOMETER (Time of Day) key will instantly put the time of day on the scoreboard and the control.

DISABLE CHRONOMETER KEY?
> Restores the Chronometer key to its default condition (displays chronometer time on control only).

SET CHRONOMETER?
>This allows you to set the chronometer time.

DO YOU WANT TO REMOVE CHRONOMETER TIME FROM AUXILIARY TIME DISPLAY?
>Causes auxiliary time display to show main time. You can still display the chronometer on the MPC's display.

DO YOU WANT TO DISPLAY CHRONOMETER TIME ON AUXILIARY TIME DISPLAY?
>Causes auxiliary time display to show time of day.

Time Out Timers

The MPC has 10 time out timers; all are programmable. Time out time zero is preset to 30 seconds with 10 second warning horn but may also be cleared and then preset by the operator.

Press SET - TIME OUT TIMER - START.

Press the number of the time out timer (0-9) that you wish to set. (i.e. 1)

The display now shows: SET MM:SS

Enter 20 seconds. (i.e. 0020) Display now shows: Y/N 00:20

Press YES if the time is correct or NO to back up and enter the correct time, then press YES.

Warning Horn
The display will ask: DO YOU WANT TO USE TIME OUT WARNING HORN?

If you press YES, the control will display: SET MM:SS (i.e. 0005). Display now shows: Y/N 00:05

Press YES if the time is correct or NO to back up and enter the correct time, then press YES.

This will sound the horn 5 seconds before the time out is over and then again when time reaches zero.

Time Out Timer Displayed on the Scoreboard
The display now shows: DISPLAY TIME OUT ON SCOREBOARD?

Press YES or NO. Pressing either will return the display to the main time.

Pressing YES will allow you to display the time out on the scoreboard. Pressing NO, of course, will not allow the displaying of the time out timer.

Resetting Time Out Timers
You can only reset a time out timer when all of the time out timers are inactive.

Displaying a Time Out Timer
To display a time out timer:

Press TIME OUT TIMER – START then select the time out timer that you have preset. (i.e. 1)

This will display the time out timer on the control display.

Selecting a time out timer that has not been set up.

The display will show: TIMER 5 NOT SET. The 5 being the number of the time out timer you selected.

Clearing a Time Out Timer
Display a time out timer on the control. (i.e. 20 seconds with a 5 second warning horn)

Press TIME OUT TIMER - CLEAR. The timer will immediately jump to the warning horn time and sound the horn. Pressing the TIME OUT TIMER - CLEAR again will reset the timer to zero and return the control to main time.

<u>Options</u>

Features	Description
DO YOU HAVE AN AUXILIARY TIME DISPLAY CONNECTED?	For systems with alternate time displays. (Clocks only)
SWITCH TO BRIGHT OR DIM	Allows you to brighten or dim the scoreboard lights.
CHANGE DIRECTION OF MAIN CLOCK	Changes the clock direction to count up or down.
CLOCK TO STOP AT SPECIFIED TIME	When clock is in up count mode, you can specify a time at which the clock will stop and blow the horn.
SET AUX TIMER	Can be used as a second timer or a time of day clock.
SET INTERVAL TIMER	Lets you set the scoreboard horn to blow every 1 to 9 minutes. This is primarily used by junior hockey.
DISABLE .1 SEC. SHIFT TIMER	This allows you to run previous scoreboards incapable of displaying tenth second during the last minute of play.
SET BOOKMARK	Lets you save the scoreboard settings such as the time, player number, period, etc.

Control options are not critical to the normal operation of the scoreboard, but they do allow operation of extra features the MPC has to offer. After the model code is entered, the microprocessor sets the clock to the down count mode unless the clock is used for race timing such as track or swimming. If the scoreboard you are operating is for outdoor use, the control prompted you for bright or dim display after you entered the model code. All indoor scoreboards are set to bright automatically. Pressing the OPTIONS key advises you of current settings. Try this before we go on.

The traveling display told you the PERIOD #, display is either BRIGHT or DIM, the AUX TIMER is off, AUTO HORN IS ON and the current MODEL CODE # being used, etc. AUX is short for "auxiliary" and will be discussed later.

For now try this: Press SET then OPTIONS

The display begins asking a series of questions. It asks if you want to switch to DIM or BRIGHT. If you press YES, the operation will be performed. If you press NO, the display will ask another question until it runs out of things to ask. If you want to change the direction the clock counts for a special application, you may do this by setting the OPTIONS.

Now, more about the "AUX TIMER". An auxiliary timer is provided for your use in any way you wish. In some models this timer displays on the scoreboard. It can be used for time of day, minutes and seconds counting up, or hours, minutes and seconds counting down. When displaying minutes and seconds, the timer may run continuously or start and stop with the time control switch.

Once one of the modes has been selected it cannot be changed unless you turn the AUX TIMER off and turn it back on again. When the AUX TIMER is on, the order in which the control asks questions when setting OPTIONS will be changed to ask questions about the AUX TIMER first.

Rather than go into great detail about setting the AUX TIMER, we encourage you to experiment with the different modes so you are familiar with all of them. The control will prompt you with questions as you proceed.

Once you have the AUX TIMER on, it displays alternately with the main timer by pressing the TIME key. You will think of many uses for the AUX TIMER. One of these may be to set the AUX TIMER to count up and stop with the main timer at the beginning of a playing period. By this method, the time "into" the game of notable events is determined by looking at the AUX TIMER.

<u>Trouble Shooting</u>

The green LED on the TCS-5 will blink once per second if the system if operating correctly. If it stays on constantly or does not flash there is a problem with the system. Refer to the Trouble Shooting Guide located in the scoreboard Installation and Service Manual.

Nevco Guarantee

Nevco scoreboards are guaranteed for a period of five (5) years** from the date of invoice against defects in workmanship or material and will be replaced or repaired without cost to the owner provided the equipment or parts (which includes LED segments) are returned postage-paid to the Nevco factory. Shipping back to the owner will be surface postage prepaid except if air or special method of return is specified, then shipping will be freight collect. Lamp bulbs are excluded from this guarantee. Nevco Scoreboard Company will pay no charges for time or material used by others in making repairs or corrections. Guarantee shall be void if: any alteration or service, other than unplugging modules or controls, is performed without Nevco factory authorization; or if the equipment has been connected to incorrect power, or is improperly grounded or improperly installed. Equipment which is subjected to accident, neglect, abuse, misuse or other natural disasters, including but not limited to: fire, wind, lightning, flood is not covered by this guarantee.

** Nevco wireless equipment is guaranteed for a period of two (2) years from date of invoice. All other terms and conditions of this guarantee remain the same.

NEVCO   SCOREBOARD COMPANY
301 East Harris Avenue
P.O. Box 609
Greenville, IL 62246-0609 USA
Fax: (618) 664-0398
Telephone: (618) 664-0360
Website: www.nevcoscoreboards.com
Email: nevco@nevcoscoreboards.com

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TOLL-FREE (800) 851-4040
USA, all 50 states & Puerto Rico

— IN CANADA —
NEVCO SCOREBOARD COMPANY ULC
107 Forestview Rd., P.O. Box 2629
Orillia, ON L3V 7C1 Canada
Fax: (705) 325-8891
Telephone: (800) 461-8550
Website: www.nevcoscoreboards.com
Email: nevco@nevcoscoreboards.com

Bookmark Program Chart

Bookmark # 1
Model Code

Bookmark # 2
Model Code

Bookmark # 3
Model Code

Bookmark # 4
Model Code

Bookmark # 5
Model Code

REQUEST FOR SERVICE OR PARTS

Scoreboard Serial #_____

Service: Module(s) Serial #_____

Service: Control(s) Serial #_____

Person to Contact_____ Phone # _____

Comments: _____

_____

_____

_____

Parts   Request

	Quantity	**Part No.**	**Description**

1.   _____

2.   _____

3.   _____

4.   _____

5.   _____

Bill To:_____ _____ Purchase
Order # _____

    P.O. Box # _____

    Street _____

    City _____State_____Zip Code_____

Return To:_____ _____

    Street _____

    City _____State_____Zip Code_____

    Ship Via _____

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