



MAINTENANCE GUIDE FOR OUTDOOR LED SCOREBOARDS

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General information

Outdoor Led scoreboards are designed to withstand the elements for extended periods of time. This does not mean however, that some minimal maintenance will not be required to keep your scoreboard ready to use trouble free. In those instances, our product designs make the task of maintaining the scoreboard a simple process, with minimal tools.

There are some things to consider concerning maintaining your scoreboard. The scoreboard, controller, and wireless radio equipment are electronic devices that are susceptible to damage by power surges, water, and impacts. As the owner or caretaker of this equipment, in order to keep your scoreboard in excellent working condition, the following tips will help to ensure a long lasting product.

The ALWAYS

ALWAYS- Turn off the power to the scoreboard and controller after use.

ALWAYS- Disconnect the power adapters and communication cables if you leave the controller in a secured scorer's position. Lighting strikes can have an adverse affect on the equipment.

ALWAYS- Store the controllers and radio equipment in a secure, dry place, especially between seasons.

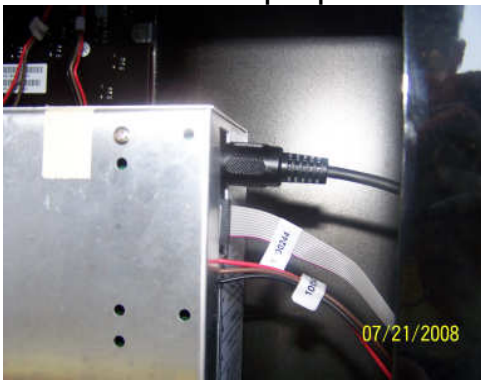
ALWAYS- Protect the controllers and radio equipment from becoming wet.

ALWAYS- Take care to protect cables and power adapters from becoming tangled and out of the way of traffic at the scorer's stand (or location).

IMPORTANT: ALWAYS- Turn off the power or disconnect power cords to any electrical device before servicing.

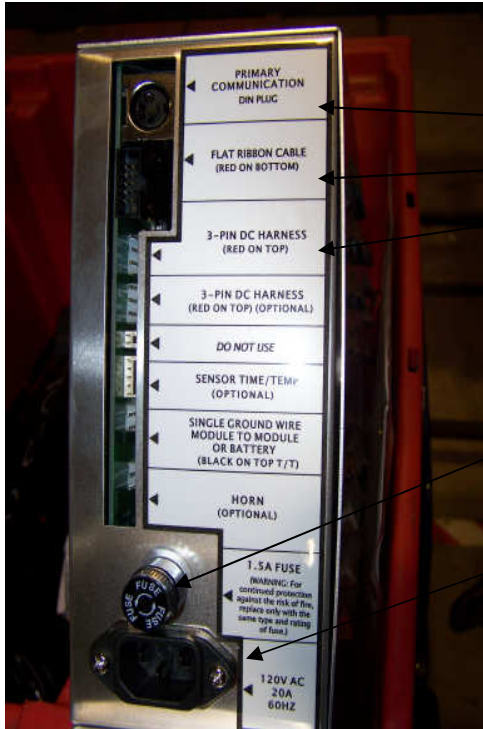
Removing the Electronic Module(s) during Off-seasons

1. Start by having a digital camera to take step-by step pictures for reassembly before the next season starts. If you do not have a camera make notes so connections do not get confused when reinstalling later. The modules are labeled but the some of connections can be reversed.
2. Remove the 13" X 21" module access door(s) located on the back of the scoreboard.
3. Note the position and location of the module(s) before proceeding to ensure proper placement during re-installation.
4. Unplug all module connections including the power cable, signal cable, and all power harness connections from each module. Make sure all connections are properly marked as to where they connect to the module(s) before unplugging them to ensure proper reconnection later.



This is a typical
single module
connection
Signal cable
Ribbon cable
DC power to
digits note wire
color orientation

5.



Notice the back of the module is labeled. This will assist during re-connecting between season and storage. Also you can see the location of the fuse

Fuse

Power connections

- 6.
7. Remove the screws securing each module to the module support brackets and slide the module(s) out along the module guide rails.



- 8.
9. Before replacing the module access door(s), bundle and tie the power cable, signal cable, and all digit cables to prevent them from resting on the bottom of the scoreboard while the module(s) are out. This will aid in preventing corrosion from damaging the connectors.

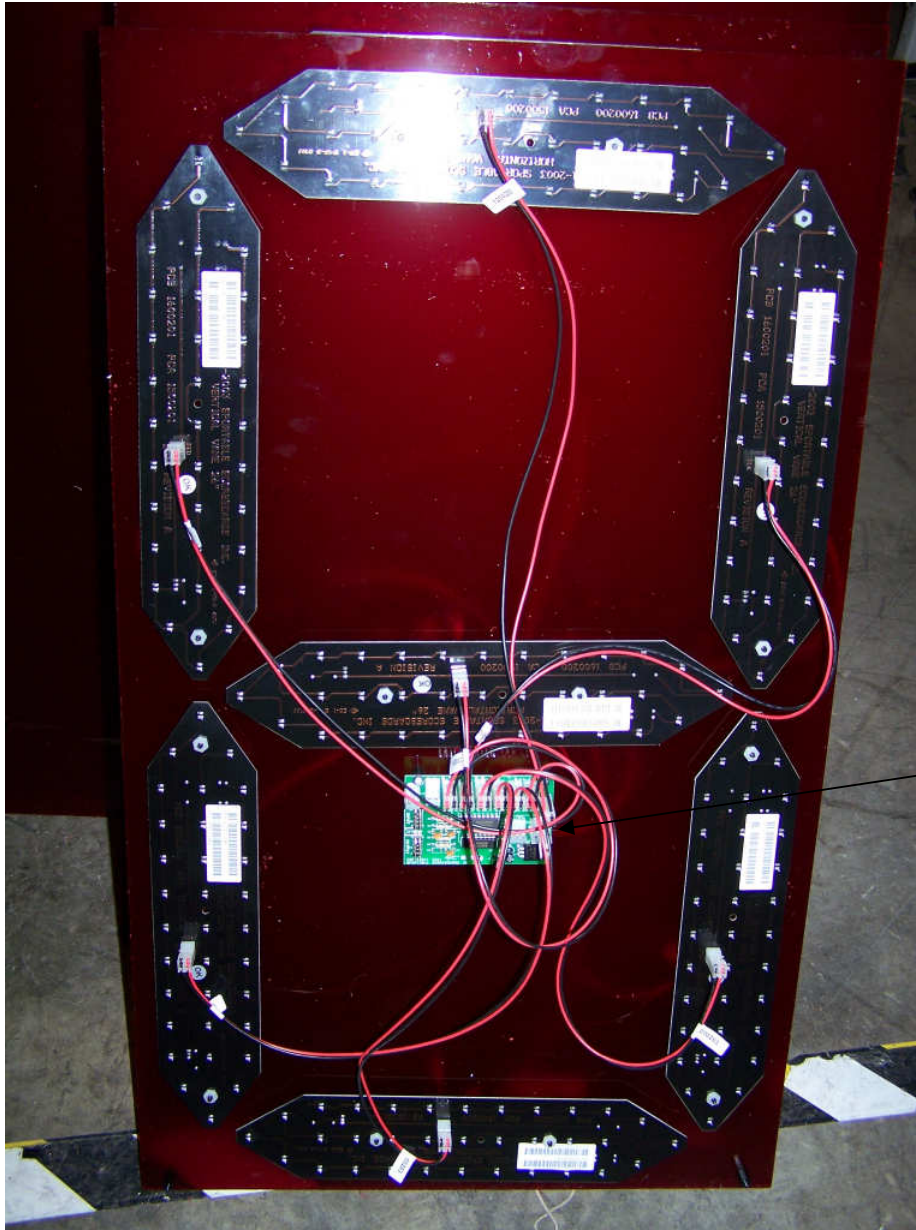
Replacing the Electronic Module(s)

1. Remove the module access door(s).
2. It is easier to plug the harnesses in before sliding the module(s) into the rails. This will give you the ability to ensure that the connections are connected correctly. Connect all digit cables to the module(s) according to the way they were labeled during removal. Viewing the pictures you took before removal would be of great assistance.
3. Slide the module(s) into the appropriate module access door along the module guide rails and secure them to the module support brackets using two screws, one on each side.

Removing and Replacing a “Digit”

Poly Mounted---Typically only the 26” and 32” digits used on large football boards

1. Remove the left, right, and bottom metal strips that outline the poly. It is helpful to have a battery powered with a ¼” magnetic driver attached to remove the screws holding the metal strips around the digit.
2. Remove the digit assembly from its location by gently pulling out and down on the bottom of the digit until it clears the face of the board on the bottom and you can clear the metal strip on the top.



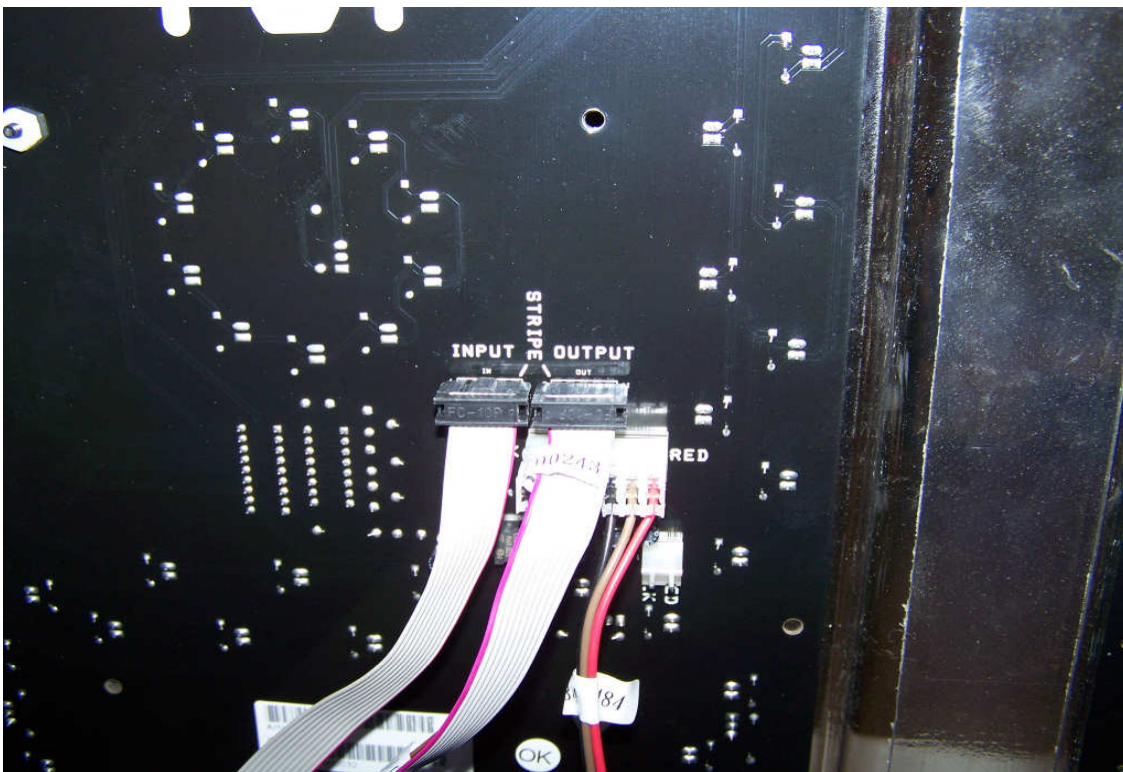
Driver board

- 3.
4. Once clear of the face of the board notice the orientation of the digit as you remove it. Also notice the wiring on the back of the digit. The RED stripe on the edge of the ribbon cables, the Input/Output labels and the 3-wire DC power harnesses on the back of the digit.
5. If the digit has a driver board mounted, follow the instructions below.
 - a. Locate it and remove the three hex nuts that hold the driver board to the digit.
 - b. Disconnect the 3-wire DC harness and Output ribbon cable from the digit that connects to the Input terminal on the driver board.
 - c. Disconnect the 3-wire DC harness and Input ribbon cable from the digit that comes from the left side of the board, typically the home score.

- d. Replace the Digit, Re-mount the driver board if applicable, and make connections in the same manner as originally connected.

CLIP MOUNTED---

1. Remove the left and right metal strips that outline the poly and loosen the bottom strip.
2. Flex the poly to remove it from its location.
3. Remove the digit assembly from its location gently pulling on the tabs to remove the digit. Hold and notice the orientation and location of all the devices attached to the digit.
4. Follow the steps 4-5d above to complete the process of removal.



Digit wiring note the ribbon cable and the DC cable location and orientation.

Troubleshooting-FAQ'S

If the scoreboard is not working properly you may be able to resolve the problem quickly by referencing this troubleshooting guide.

PROBLEM: My permanent L.E.D. scoreboard will not light up at all.

POSSIBLE SOLUTION:

1. Make sure that the proper 120 volt circuit has been run to the scoreboard and that the breaker/disconnect switch is on.
2. Ensure that the power cord is plugged into the scoreboard's module box. The module will be located behind an access door in the back for outdoor models, and behind the home score display for indoor models. If it's plugged in, unplug it and check the 120 volts at the end of the cord with a volt meter.
3. If you detect a problem with the power circuit, contact your installer or electrician.

PROBLEM: My permanent L.E.D. scoreboard on the control cable option will light up, but goes blank after 30-60 seconds and displays a solitary flashing 8.

POSSIBLE SOLUTION:

1. This is a stand-by mode the scoreboard enters when not receiving a signal from the key board. Make sure the keyboard is on and the LCD display is working
2. Bypass the control cable that is buried, or run up the wall by taking your 20' male/male 5 pin din cable and plugging it directly into the scoreboard's module box. If the scoreboard works this way, it means that there is a break in the control cable connections or the cable has been cut. Have someone check the connections and control cable's continuity.
3. If it still doesn't work, contact technical support.

PROBLEM: My permanent L.E.D. scoreboard on the wireless option will light up , but goes blank after 30-60 seconds and displays a solitary flashing 8.

POSSIBLE SOLUTION:

1. This is a stand-by mode the scoreboard enter when not receiving a signal from the keyboard. Make sure the keyboard is on and the LCD display is working,
2. Check the connections on the short interface cable that runs between the keyboard and transmitter box.
3. Be sure that there is a clear line of sight between the keyboard/transmitter antenna and the scoreboard/receiver antenna.
4. Be sure that the two antennas are parallel to each other, not pointing at each other. For the strongest signal, the antennas should be straight up or straight down, not out.

5. Check the receiver assembly inside the scoreboard. It will be located on the inside wall of the scoreboard near the module box and should be plugged into the module box. It will also be attached to the scoreboard antenna.

PROBLEM: I have a L.E.D. sections that are completely out or very dim causing incomplete numbers.

POSSIBLE SOLUTION:

1. With the keyboard power off, press and hold down the OPTIONS key. Turn the keyboard power on while holding it down. Press ENTER to access a digit test. Use the up or down arrow key to scroll until the LCD display show ALL SEGMENTS ON. AT this point, all L.E.D.'s should be lit on the scoreboard. Note how many sections are out and where they are.
2. Locate the model and serial number label on the scoreboard(not keyboard), and call technical support with the information.

PROBLEM: My permanent L.E.D. scoreboard will power on, but the LCD display on my keyboard will not light up or power on.

POSSIBLE SOLUTION:

1. If using an AC wall Adaptor as the power source, be sure that it has an input of 120VAC and an output of 12VDC/500mA. When checked with a volt meter, the adaptor should read between 15-18 volts DC.
2. If using an internal battery as the keyboard power source, the AC wall adaptor serves as a charger. Plug the charger into the keyboard for 24 hours with the power switch off to charge the batteries. The charger should be plugged in at all times when the battery is not in use.
3. If using an external battery as the keyboard power source, plug the battery harness into the charger and the charger into a live 120V wall outlet for 24 hours to charge. The charger should be plugged in at all times when the battery is not in use.

PROBLEM: The LCD screen on my keyboard resets, shows power failure, or shows memory error in the middle of a game.

POSSIBLE SOLUTION:

1. Check the wiring connections coming from the power source, either an AC wall adaptor or battery.
2. If using a battery as the keyboard power source, make sure t he battery is fully charged by plugging the charger in for 24 hours with

the power switch off. The charger should be plugged in at all times when the battery is not in use.

PROBLEM: My keyboard displays the wrong sport on the LCD display screen upon power up.

POSSIBLE SOLUTION:

1. From the scoring screen, press and release “RESET”, and then quickly press and release “OPTIONS” without holding both down at the same time. The screen should change to “SELECT OPTIONS/SELECT GAME”.
2. Press the “ENTER”. Use the up and down arrow keys to scroll through different sports, and stop on the one you want to score. Press “ENTER” to save the change.
3. The screen will automatically jump to another option, but you can press and release “OPTIONS” to exit the options menu.

PROBLEM: The period/inning display will not go as high as I need it to. For instance, we play 4 quarters, but the period/inning is set for 2 halves and will not go higher.

POSSIBLE SOLUTION:

1. From the scoring screen, press and release “RESET”, and then quickly press and release “OPTIONS” without holding both down at the same time. The screen should change to “SELECT OPTIONS/SELECT GAME”.
2. Use the up or down arrow keys to scroll through the different options until you get to “SELECT OPTIONS/PERIODS/GAME”. Press “ENTER”.
3. The default setting will appear. Use the number pad below the screen, or the arrow keys, to change to the desired setting. Press “ENTER” to save.
4. The screen will automatically jump to another option, but you can press and release “OPTIONS” to exit the menu.

PROBLEM: The horn on my scoreboard will not sound at the end of a period, but works fine when the horn key is pressed manually.

POSSIBLE SOLUTION:

1. From the scoring screen, press and release “RESET”, and then quickly press and release “OPTIONS” without holding both down at the same time. The screen should change to “SELECT OPTIONS/SELECT GAME”.

2. Use the up or down arrow keys to scroll through the different options until you get to “SELECT OPTIONS/SET AUTO HORN”. Press “ENTER”.
3. The default setting will appear, either “ON” or “OFF”. Use the arrow keys to change to the desired setting. Press “ENTER” to save.
4. The screen will automatically jump to another option, but you can press and release “OPTIONS” to exit the menu.

PROBLEM: We have lost or broken the AC wall transformer that powers the LCD display keyboard.

POSSIBLE SOLUTION:

1. The specifications for the keyboard’s AC wall transformer are and input of 120VAC/60Hz, and output of 12VDC/500mA, with the outside ring positive.
2. The manufacturer should be able to provide this part for you. Call tech support for price and availability.

PROBLEM: We have lost or broken the 5-pin control cable that plugs into our keyboard.

POSSIBLE SOLUTION:

1. This control cable is pinned specifically for the manufacturer’s keyboard and is not an item that should be purchased locally, although some area electronic stores will sell cables that look similar.
2. The manufacturer will be able to provide this part for you. Call tech support for price and availability.

PROBLEM: The LCD screen on my keyboard displays only small black squares when powered on.

POSSIBLE SOLUTION:

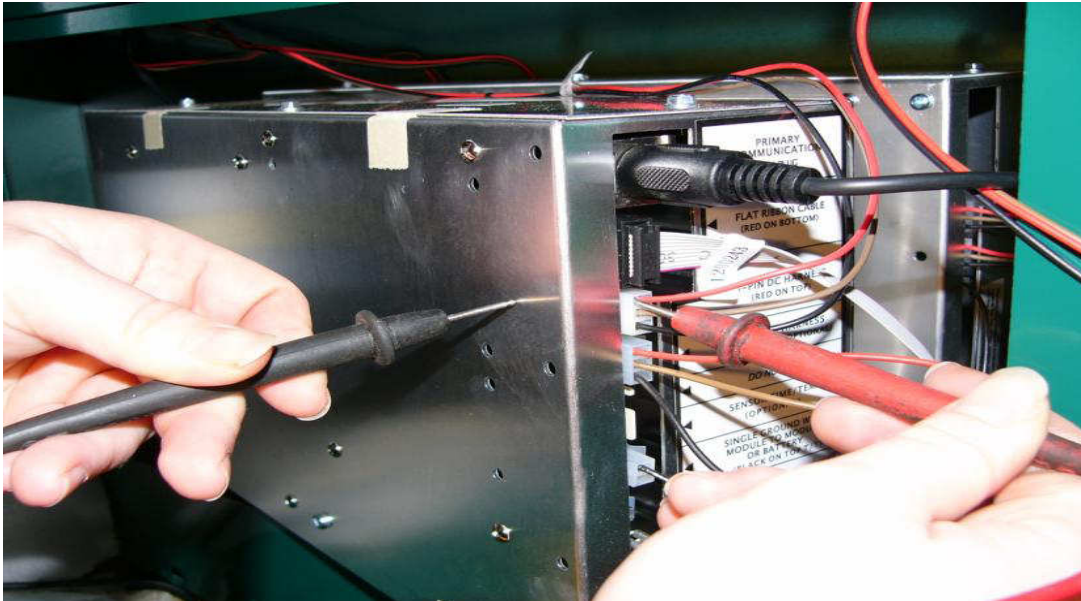
1. Check the contrast setting. Some keyboards will have a turn knob on the underside of the keyboard, while others will have it on top right on the keypad.
2. If not the contrast, the LCD display has been damaged, usually from using a foreign din cable, and will need to be replaced. Contact tech support for a return authorization number.

If this does not resolve the issue, the problem may be with the control module itself. In order to verify this, you will need a DC voltmeter to check the DC voltage that supplies power to the scoreboard components. You will be checking for two (2) Voltages levels at the power harness(s). The power harness is a 3-wire harness with the RED wire on

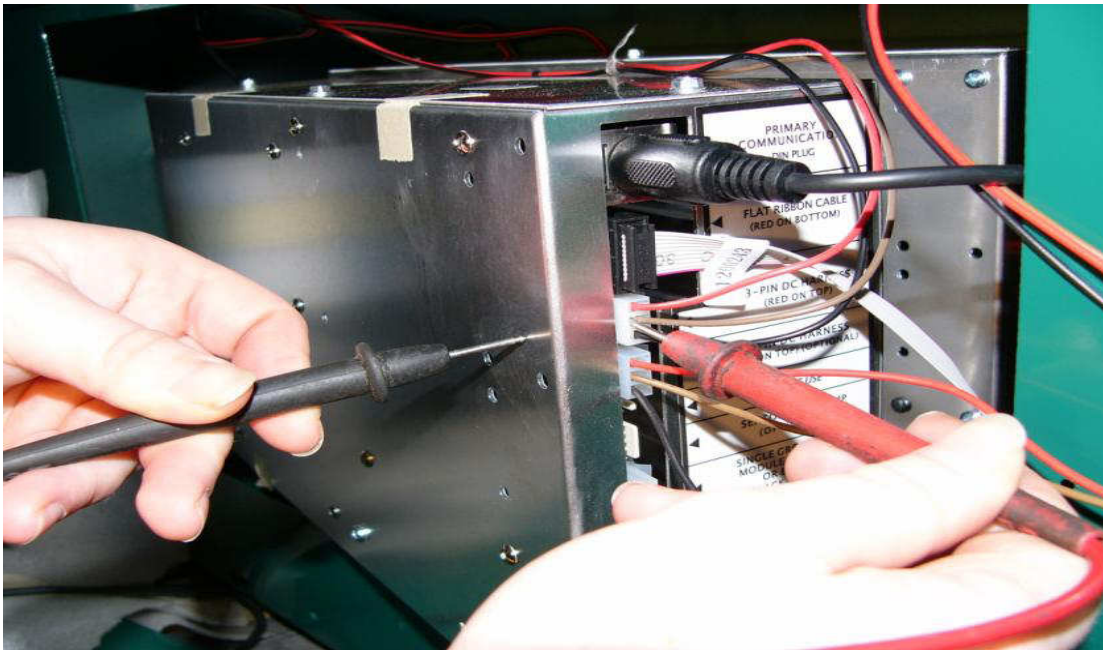
top as it is connected to the module. Refer to the steps that follow to check DC voltage.

CHECKING DC VOLTAGE

Place the tip of the RED lead from the meter inside the back of the power cable on the top (red) wire and press the black lead from the meter against the module case. The meter should read +/- 35VDC.



Next, move the RED lead to the middle wire (brown) with the black lead against the module case and check the meter for +/- 12VDC.



If the meter shows 35VDC when checking across the Red/Ground and 12VDC when checking across the Brown/Ground, the problem lies elsewhere and you will need to contact Technical Support.

CUSTOMER SERVICE

In order to provide quality support and better serve you, please have the following information available when you call for service.

1. Organization Name
2. Scoreboard Model Number
3. Scoreboard Serial Number

You will find a large label on the side of the scoreboard cabinet with the model and serial number listed in large text.

If service is required on your scoreboard, a service technician will work with you to determine which components of the scoreboard have an issue and whether components need to be returned to the factory for repair or replacement. Depending on the nature of the call, this process may require being at the scoreboard for a brief walk-through of the issue. Removing and replacing defective components requires no special tools or technical knowledge. Some general Tools for service at the scoreboard include:

1. Ladder – Size and type depends on your particular scoreboard
2. ¼” nut driver – preferably a cordless drill with a ¼” hex driver
3. Multi-purpose Voltage Tester (where power concerns apply)

It is essential that you call Scoreboard Service Company at the number listed below before returning any parts for repair or replacement. If a technician determines that a part or parts need to be returned for service they will supply you with a **RETURN AUTHORIZATION NUMBER**. This number must be clearly marked on the outside of all packages sent for repair or replacement. Any packages not bearing a Return Authorization number will be returned to the sender.

Scoreboard Service Company
106 Max Hurt Drive
Murray, Kentucky 42071
(800) 411-3136