ELECTRO-MECH SCOREBOARD CO.

MODEL 2056 PLAYER STATISTICS PANEL SET

OWNER'S HANDBOOK

Thank you for choosing an Electro-Mech Scoreboard for your athletic complex. We are confident that your new scoreboard will give many years of reliable service.

Revised 2010-May-13

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SPECIFICATIONS

GENERAL: Customers normally purchase a set of two player statistics panels. This ETL listed product includes the two player statistics panels, mounting hardware, control console, 10 ft. extension cable, and junction box.

DIMENSIONS: 53 inches wide x 72 inches tall x 6 inches deep (each).

WEIGHT: 80 pounds per cabinet.

CONSTRUCTION: The outer frame is made from extruded aluminum. Internal structural parts may be extruded aluminum or formed from aluminum sheet. The face and back are made from aluminum sheet. The face is finished with enamel paint. Black is the standard face color. The captions are white vinyl.

DISPLAY: The 2056 player statistics panel displays six lines of statistical information. Each line shows Player Number 0 to 99, Fouls/Digs 0 to 99, and Points/Kills 0 to 99.

DIGITS AND SYMBOLS: Light emitting diodes mounted on printed circuit boards form the digits and symbols. The Player Numbers use 6-inch tall red digits, the Fouls/Digs are 6-inch tall green digits, and the Points/Kills are 6-inch tall amber digits.

POWER REQUIREMENTS: Model 2065 - 120 VAC, 2.1 A, 60 Hz per cabinet. Each Model 2056 cabinet has an attached 6 ft. power cord. **Control Console** - 120 VAC, 0.5 A, 60 Hz

ELECTRONICS: 100% solid state fully enclosed.

CONTROL CONSOLE: The control console features a microprocessor, 37-key sealed membrane keypad, a LCD display, and an attached 6-foot power cord. The console housing consists of ABS plastic base and top pieces with a steel back plate.

CONTROL CABLE: The cable has two 22 AWG stranded copper conductors with semi-rigid PVC insulation. It also has a braided shield and a foil shield. The polyethylene jacket is rated at 300 volts. The cable is direct burial rated and measures approximately 1/4-inch in diameter. This item is sold separately from the scoreboard.

JUNCTION BOX AND EXTENSION CABLE: A 4-1/4-inch x 2-1/2-inch x 2-inch junction box with a 1/4-inch stereo jack mounted on the face plate is attached to the control cable at the point of operation. A 10 ft. extension cable connects the control console to the junction box.

SCORELINK RF MODEM SYSTEM: This accessory can be used in place of control cable and junction box for this scoreboard. Refer to the SCORELINK RF MODEM INSTALLATION MANUAL for more information.

WARRANTY: Five-year limited warranty.

INSTALLATION

This part of the manual describes the mechanical and electrical installation of the Model 2056 Player Statistics Panels. Figure 1 shows a typical installation in a gym.
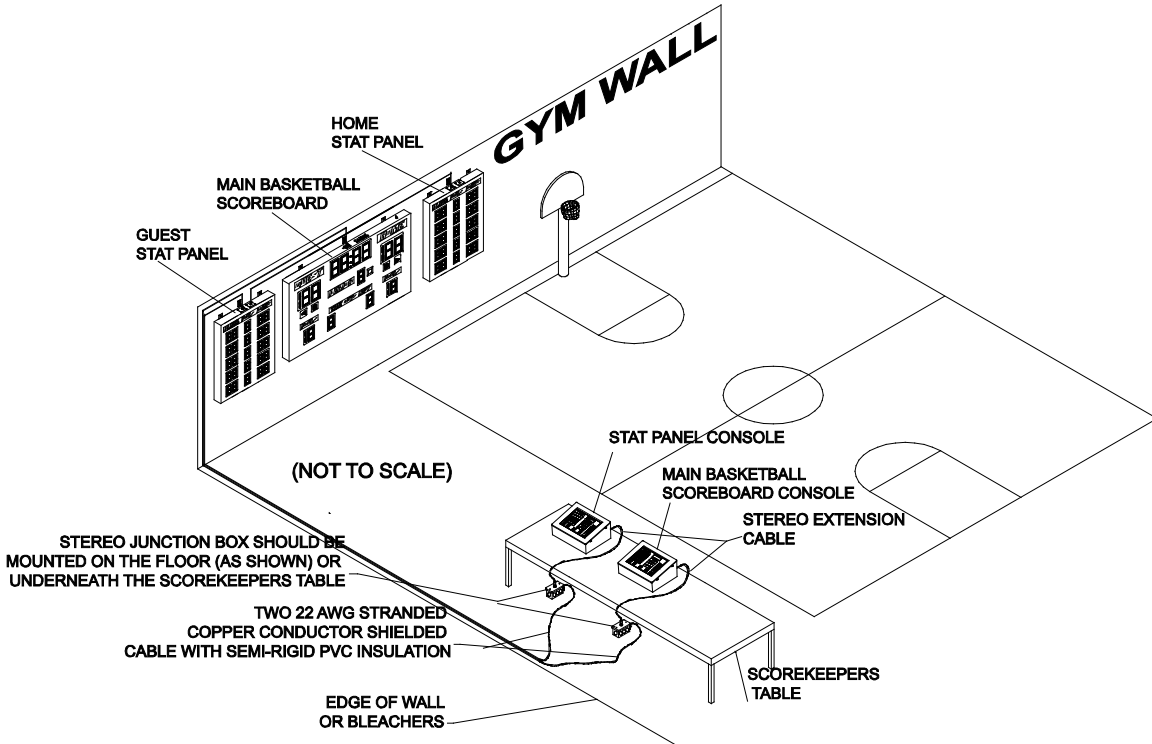

Figure 1 Typical Installation

A typical installation consists of a set of two model 2056 player statistics panels installed on a wall around a basketball scoreboard, as seen in figure 1. Since the model 2056 player statistics panels operate independently of the basketball scoreboard, it is not mandatory to install them in this manner. One of the items listed below must be purchased in order to complete the installation of the model 2056 player statistics panels:

- Control cable (length dependent upon installation site layout, but not to exceed 1000 feet between a console and a player statistics panel)
- ScoreLink RF Modem System

Items not provided by Electro-Mech Scoreboard Company that are necessary for installation:

- Wall fasteners
- Grounded NEMA 5-15R 120 VAC receptacles for the control consoles at the scorekeeper's table.

Installation requirements for the basketball scoreboard are described in the owner's manual for that product. Electro-Mech Scoreboard Company performs installations in some areas. In other areas, we can help you contact an independent installer. In areas in which installation service is not available from Electro-Mech Scoreboard Company, we will make every effort to answer your installation questions. Qualified personnel should perform the scoreboard installation. Consult national and local codes before installation.

MECHANICAL INSTALLATION

The mechanical installation consists of mounting the model 2056 player statistics panels on the wall.

Mounting the Player Statistics Panel

The following steps describe how to mount the model 2056 player statistics panel on the wall:

1. There are two hanger brackets attached to the model 2056 player statistics panel near the top of the cabinet on the rear side. They may have been rotated down to facilitate shipping. Rotate the hanger brackets so that they protrude past the top of the scoreboard and tighten the bolts.
2. Lift the model 2056 player statistics panel to the desired location. There are two eyebolts mounted at the top of the cabinet that can be used to lift it into place. **Be sure to mount the center of the cabinet close enough to the wall receptacle so that you can plug in the 6 ft. power cord**.
3. Insert lag bolts or other suitable fasteners through the hanger brackets and fasten the model 2056 player statistics panel to the wall.

ELECTRICAL INSTALLATION

We recommend a qualified electrician perform the needed electrical connections to ensure proper operation of the model 2056 player statistics panel. These connections include connecting the model 2056 player statistics panel to a power source, installing the ScoreLink RF modem or the control cable, and connecting the control console.

Power Connection

The model 2056 player statistics panel requires 120 VAC service at the wall receptacle to operate properly. **Maximum power consumption: 250 Watts per cabinet.** The model 2056 player statistics panel has a 6 ft. attached power cord located at the top of the cabinet. Plug the power cord into a grounded NEMA 5-15R receptacle. The receptacle should be controlled by a separate circuit breaker so that the model 2056 player statistics panel can be turned off without turning off other electrical devices in the facility, such as lighting. Figure 2 shows the electrical connection points on the model 2056 player statistics panel.
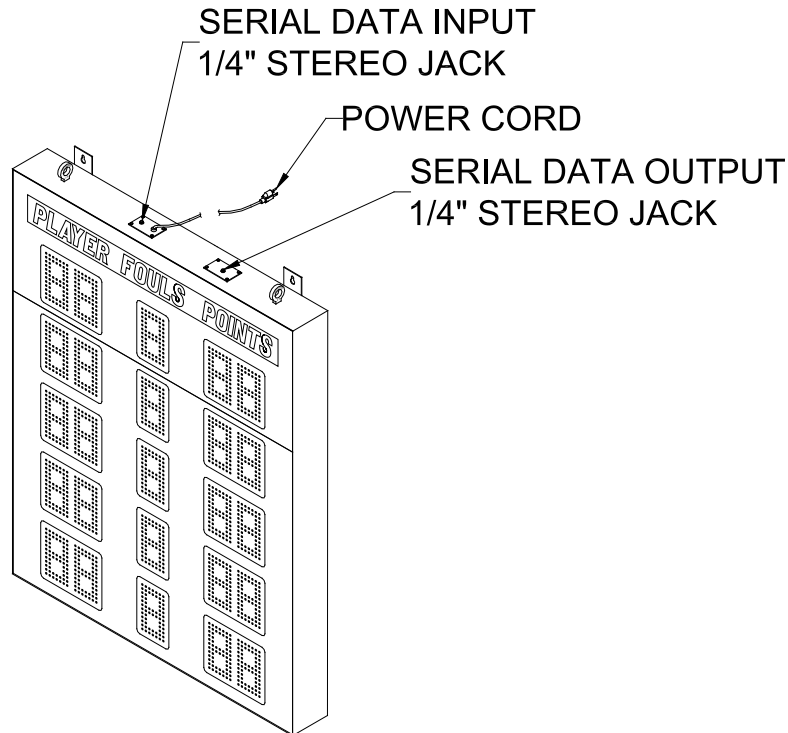
Figure 2 Electrical Connection Points

ScoreLink RF Modem Kit

The SCORELINK RF MODEM SYSTEM is intended to eliminate the control cable between the scoreboard and the control console on Electro-Mech MM and MP series scoreboards as well as all LED scoreboards. If you have purchased this accessory, disregard the section of this manual titled **Control Cable Installation**. Refer to the installation manual provided for this product. Unless you have purchased two ScoreLink receivers, the serial data output jack of the cabinet connected to the ScoreLink receiver will need to be connected to the serial data input jack of the other cabinet.

Control Cable Installation

A control cable must be installed for one of the model 2056 player statistics panels. A small junction box with a 1/4-inch stereo jack mounted on the face plate is attached to the control cable at the point of operation of the 2056 player statistics panels. This junction box should be securely mounted within ten feet of the rear of the control console. Most customers order the control cable with the junction box attached. Some customers prefer to attach the junction box after the cable is installed. Those customers must solder the control cable to the 1/4-inch stereo jack. Figure 3 shows the control cable wire connection points on the rear of the 1/4-inch stereo jack.
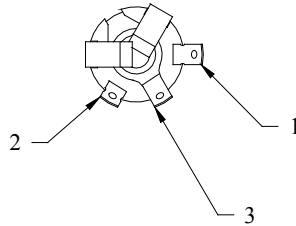
PIN 1 - BLACK WIRE
PIN 2 - RED WIRE
PIN 3 - SHIELD WIRE

Figure 3 1/4-inch Stereo Jack Wiring Diagram

The 1/4-inch stereo plug is inserted into the serial data input 1/4-inch stereo jack mounted on top of the either player statistics cabinet. Most customers order the control cable with the 1/4-inch stereo plug attached. Some customers prefer to attach it after the cable is installed. Those customers must solder the 1/4-inch stereo plug to the cable according to the figure 4. Unscrew the stereo plug cover from the plug body to expose the contact pins.
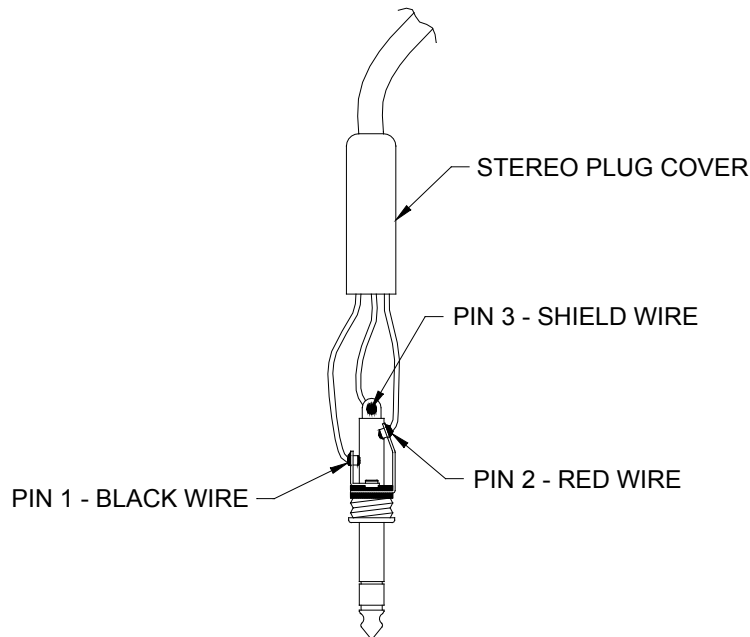

Figure 4 1/4-inch Stereo Plug Wiring Diagram
A second control cable is used to send data from one model 2056 player statistics panel to the other unit. Connect 1/4-inch stereo plugs on each end of this cable according to figure 4. Insert one plug in the serial data output jack of the 2056 player statistics panel that has a control cable connected to it from the control console. Insert the other plug in the serial data input jack of the other 2056 player statistics panel.

Alternate Control Cable Installation

Instead of installing one cable from the control console junction box to one of the 2056 player statistics panels and another cable from the serial data output jack of that panel to the serial data input jack of the other panel, install the second cable from a second junction box located within 10 feet of the control console to the second 2056 player statistics panel. This second junction box and a 10 ft. stereo extension cable will have to be purchased separately.

Control Console Connections

The 10 ft. extension cable has two molded 1/4-inch stereo plugs attached to it. The following steps describe how to connect the control console:
1. Plug one end of the extension cable into the 1/4-incn stereo jack on the junction box.
2. Plug the other end into one of the four 1/4-inch stereo jacks mounted on the control console back plate.
3. Plug the control console power cord into a grounded NEMA 5-15R 120 VAC receptacle.

Control Console Safety Warning

This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact a qualified electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.

2056 PLAYER STATISTICS PANEL OPERATION

STARTUP

1. Place the circuit breaker for the model 2056 player statistics panel in the **ON** position.
2. Plug one end of the extension cable into the 1/4-inch stereo jack on the junction box.
3. Plug the other end into the 1/4-inch stereo jack mounted on the control console back plate.
4. Plug the control console power cord into a grounded NEMA 5-15R 120 VAC receptacle.

GAME TIME OPERATION

This model 2056 player statistics panel is operated with a 37-key control console. Figure 5 shows the keypad layout on the control console.
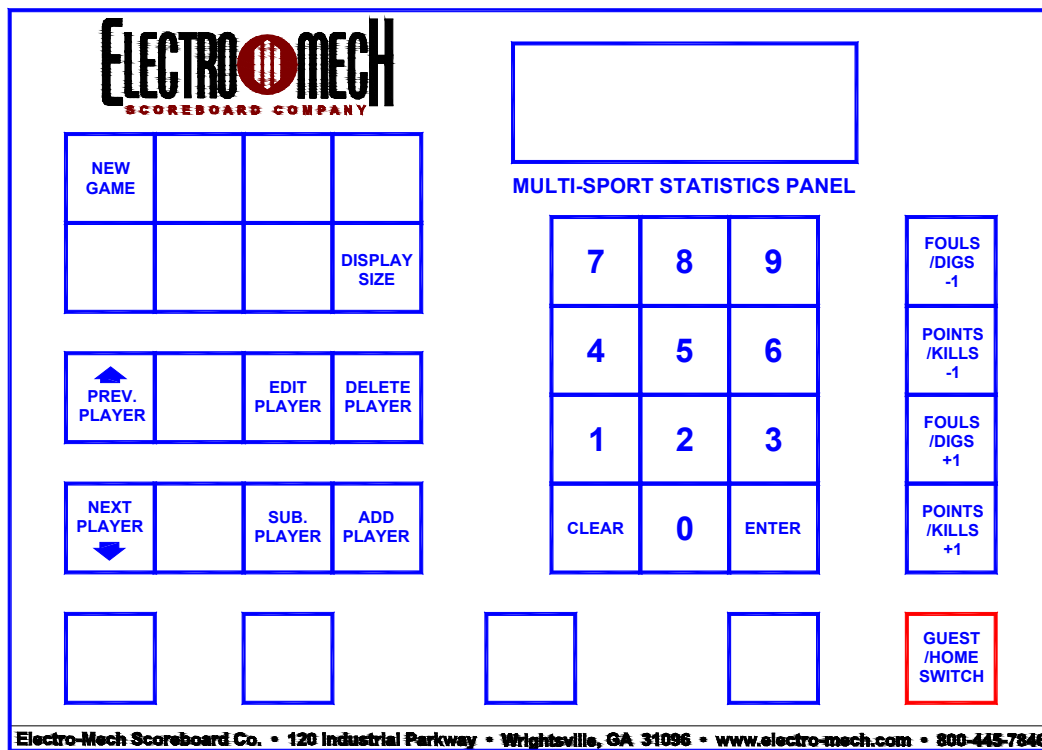

Figure 5 2056 Keypad Layout

Immediately after the control console power cord is plugged into a 120 VAC source, the console LCD display will read:

```
ELECTRO-MECH 803
SCOREBOARD STATP
```

After a few seconds the display will read:

```
    SELECT GAME
VBALL=1  BBALL=0
```

Press [1], [ENTER] to play volleyball, [0], [ENTER] to play basketball. If no key is pressed within a few seconds, the console will be in the basketball mode. After a few seconds the display will read:

```
000 00      00 000
 GUEST   __  00 00
```
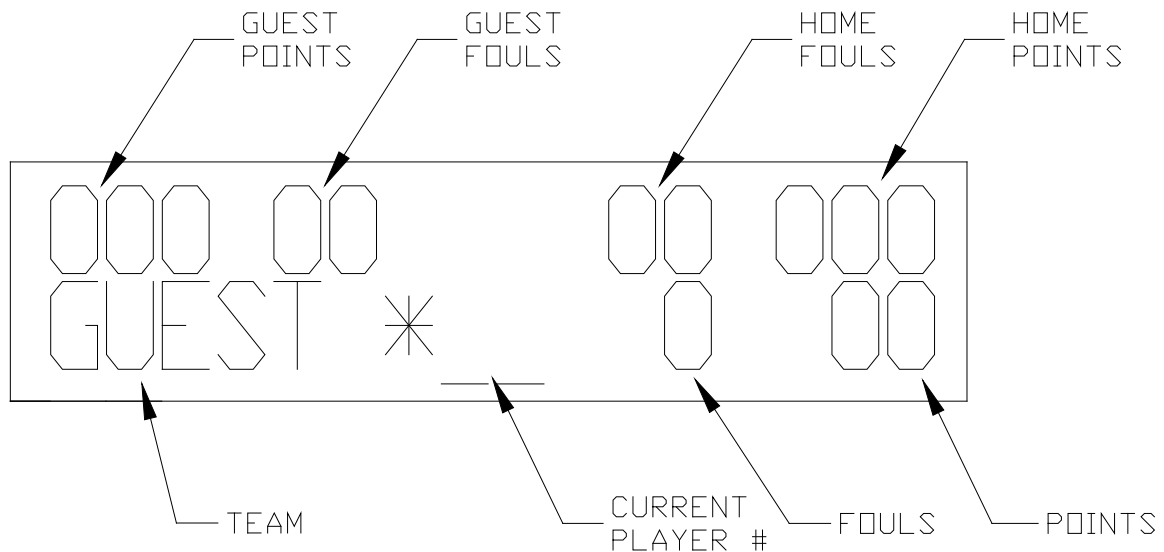
Figure 6 explains the LCD display layout.

Figure 6 2056 LCD Display

Note: An asterisk is displayed next to the current player number when the player is active.

2056 Control Console Key Functions

1. **NEW GAME** – This key is used to reset all the scoreboard functions to their default settings. To reset the scoreboard, press [NEW GAME]. The console LCD display will read:

```
 RESET     YES<1>
SCOREBOARD NO<0>
```

   Press [1], [ENTER] on the control console. The scoreboard will reset its functions.

2. **PREV. PLAYER ↑** – This key is used to display the previous player in the roster as the CURRENT PLAYER. Each time this key is pressed, the previous player in the roster is shown on the control console LCD display. Note: This list may include players not currently in the game.

3. **EDIT PLAYER** – This key allows the operator to modify the statistics for the current player. Press [EDIT PLAYER]. The console LCD display will read:

```
PLAYER  #   <00>
ACTIVE? 1=Y 0=N
```

Press [1], [ENTER] if the current player is active. Press [0], [ENTER], if the current player is not active. The console LCD display will then read:

```
PLAYER  #   <00>
   FOULS?   <00>
```

Press the keypad number for the number of fouls committed, [ENTER]. The console LCD display will then read:

Press the keypad number for the number of points scored, [ENTER]. Note: In volleyball mode the

```
PLAYER  #   <14>
   POINTS?  <00>
```

LCD prompts for fouls and points are replaced with prompts for digs and kills.

4. **DELETE PLAYER** –This function is used to delete the current player from the roster. Press [DELETE PLAYER]. The console LCD display will read:

```
PLAYER  #   <00>
DELETE? 1=YES
```

Press 1, [ENTER] to delete the current player.

5. **NEXT PLAYER ↓** – This key is used to display the next player in the roster as the CURRENT PLAYER. Each time this key is pressed, the next player in the roster is shown on the control console LCD display. Note: This list may include players not currently in the game.

6. **SUB. PLAYER** – This key is used to substitute a player currently in the game. To substitute a player, press [SUB. PLAYER]. The console LCD display will read:

```
000 00      00 000
ENTER SUB # <00>
```

Press the keypad numbers for the player entering the game, [ENTER]. The LCD display will then read:

```
000 00      00 000
   PLAYER  #  <00>
```

Press the keypad numbers for the player leaving the game, [ENTER].

7. **ADD PLAYER** – This function can be used to add players to the roster. Press [ADD PLAYER]. The console LCD display will read:

```
000 00      00 000
   PLAYER  #  <??>
```

Press the keypad numbers for the player, [ENTER].

8. **GUEST/HOME SWITCH** – This function allows the operator to switch between the Guest and Home team rosters.

9. **POINTS / KILLS +1** – This key is used to increment the number of points / kills scored by the CURRENT PLAYER shown on the console LCD display.

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10. **FOULS / DIGS +1** – This key is used to increment the number of fouls / digs committed by the CURRENT PLAYER shown on the console LCD display.

11. **POINTS / KILLS -1** – This key is used to decrement the number of points/ kills scored by the CURRENT PLAYER shown on the console LCD display.

12. **FOULS / DIGS -1** – This key is used to decrement the number of fouls / digs committed by the CURRENT PLAYER shown on the console LCD display.

13. **CLEAR** – This key clears the information being entered into the control console.

14. **DISPLAY SIZE** – This allows you to choose the total number of player stat lines to display. By default, a set of two Player Stat Panels show six lines each, or twelve lines total, of player data. If, for instance, you wanted to only show the first five players and blank the last line of the displays, you could change the Display Size to 10.

You should reset the scoreboard each time that it is turned on. Test out all the functions to ensure that the scoreboard is operating properly.

SHUTDOWN

1. Place the power disconnect for the scoreboard in the **OFF** position.
2. Unplug the control console power cord.
3. Unplug the extension cable.
4. Store the control console in a dry location. This unit is not waterproof.

Proper scoreboard shutdown will help protect the scoreboard and control console from power surges and lightning strikes.

SERVICING THE MODEL 2056

While the model 2056 player statistics panel was designed for years of trouble-free operation, some problems may occasionally occur. Electro-Mech Scoreboard Company offers onsite service in some areas. In other areas, we can help you contact an independent service technician. In areas in which service is not available from Electro-Mech Scoreboard Company, we will make every effort to answer your questions. Our trained personnel at Electro-Mech Scoreboard Company are ready to answer your questions from Monday to Friday during the hours of 8 AM to 5 PM Eastern Standard Time. Be sure to know your model number when calling. Replacement parts are always available. Damaged parts can usually be repaired at a significant cost savings. Our convenient toll free number is listed at the bottom of every page in this manual.

COMPONENT REPLACEMENT

LED Digits Replacement

The LEDs that form digits are soldered on circuit boards mounted behind metal masks. Do not attempt to replace individual LEDs. In case of a malfunction, the entire LED circuit board must be removed. **To avoid damage to the electronics inside the cabinet, always turn off the power when removing or replacing LED digits**. Figure 7 shows the components of a LED digit assembly.
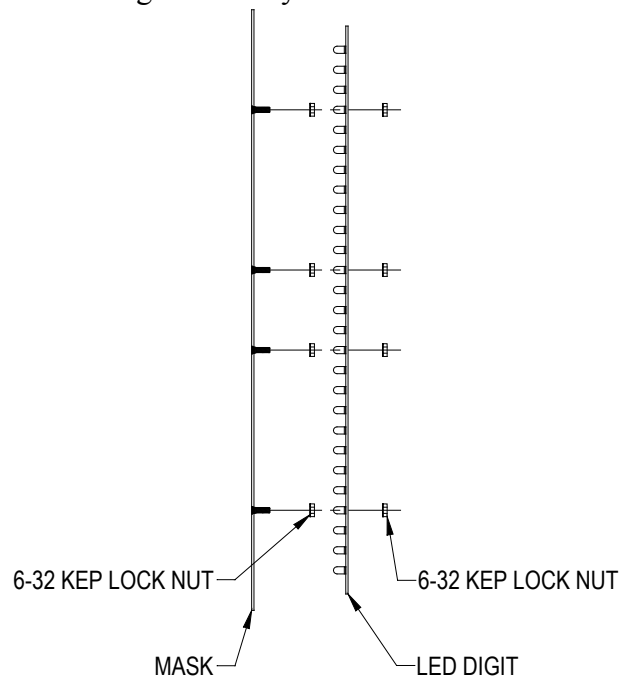

Figure 7 LED Digit Assembly

1. Remove the machine screws that fasten the mask to the face of the model 2056 player statistics panel. **Caution: Support the mask before removing the last screw. The ribbon cable that connects to the rear of the circuit board is not designed to support the weight of the assembly.**
2. Lift the assembly out of the cabinet and disconnect the ribbon cable from the rear of the circuit board. **Caution: Do not let the cable hang outside of the cabinet. It is easily cut by sharp metal edges. Damage to the ribbon cable may create short circuit paths that will damage the LED driver module.**
3. Place the assembly on a flat surface and remove the 6-32 kep lock nuts that hold the circuit board in place.
4. Remove the circuit board.
5. Align the mounting holes in the circuit board with the threaded studs on the mask and install the replacement digit on the mask.
6. Plug the ribbon cable onto the header on the back of the circuit board. Refer to figure 8 in order to plug the ribbon cable IDC connector onto the circuit board in the proper orientation.
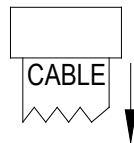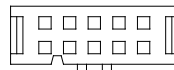
Figure 8 LED Digit Ribbon Cable Connection Diagram

The power components are located behind the second row of Player Statistics in each cabinet. To access the power components, remove the LED digit masks on that row as described in the section above. Figure 9 on the next page shows the arrangement of the power components.

2055/2056 PLAYER STATISTICS PANEL
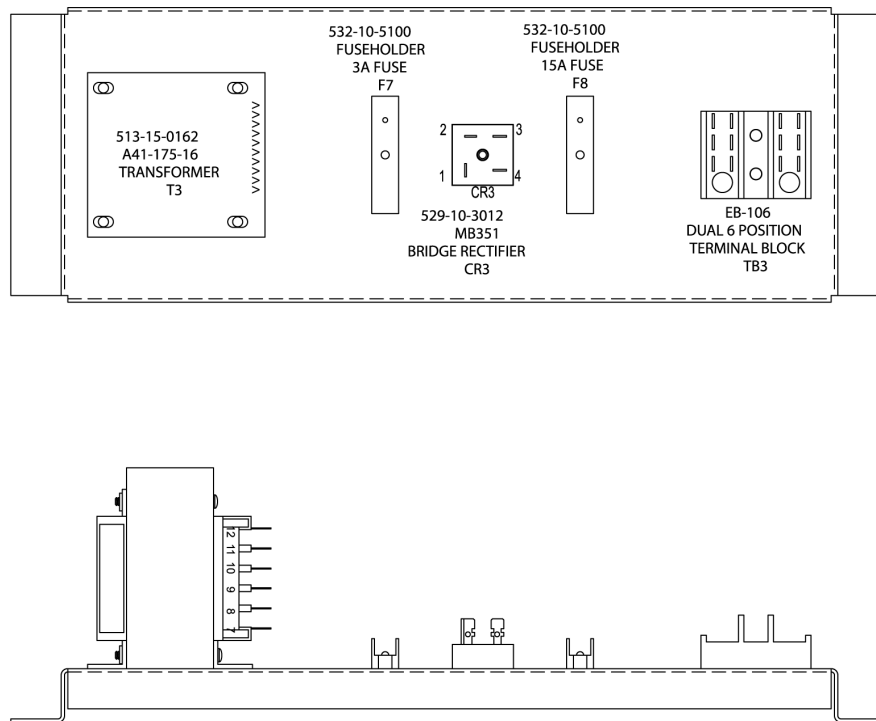## POWER CHASSIS ASSEMBLY

Figure 9 Power Components

Each row of digits in the player stat panels is controlled by its own LX driver board. The driver for each row is located behind the Player Points/Kills display on that row. To access the LX drivers, remove the LED digit masks for Player Points/Kills as described in the section above.

LX DRIVER BOARD FUNCTIONS

DRIVER MODULE JACK	FUNCTION
J3	DATA OUTPUT
J4	PLAYER NUMBER TENS
J5	PLAYER NUMBER UNITS
J6	FOULS/DIGS UNITS
J7	DC POWER INPUT
J8	FOULS/DIGS TENS
J9	POINTS/KILLS TENS
J10	POINTS/KILLS UNITS
SHLD, RED, BLK	DATA INPUT

LX DRIVER BOARDS

LX DRIVER	FUNCTION
LX36	GUEST TEAM PLAYER 1
LX37	GUEST TEAM PLAYER 2
LX38	GUEST TEAM PLAYER 3
LX39	GUEST TEAM PLAYER 4
LX40	GUEST TEAM PLAYER 5
LX41	HOME TEAM PLAYER 1
LX42	HOME TEAM PLAYER 2
LX43	HOME TEAM PLAYER 3
LX44	HOME TEAM PLAYER 4
LX45	HOME TEAM PLAYER 5
LX46	GUEST TEAM PLAYER 6
LX47	HOME TEAM PLAYER 6

LX Driver Board Replacement

Electrical connections to the LX LED DRIVER BOARDS are made with ribbon cable polarized IDC sockets and locking ramp crimp terminal housings that mate with jacks on the circuit board. The circuit board is secured inside the scoreboard on a metal bracket with two hex nuts.

1. Unplug the electrical connections from the circuit board.
2. Remove the two hex nuts.
3. Remove the circuit board from the scoreboard.
4. Insert the replacement circuit board on the metal bracket in the scoreboard.
5. Secure the circuit board with the two hex nuts.
6. Insert the plugs into the jacks on the circuit board.

To avoid damage to the circuit board, always turn off the power to the scoreboard when removing or replacing it.

ELECTRO-MECH SCOREBOARD CO. FIVE YEAR LIMITED WARRANTY

THE ELECTRICAL COMPONENTS OF ALL ELECTRO-MECH 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 ARE RETURNED POSTAGE-PAID TO THE FACTORY IN WRIGHTSVILLE, GA. SHIPPING BACK TO THE OWNER WILL BE VIA UPS GROUND SERVICE EXCEPT WHEN AIR OR SPECIAL METHOD OF RETURN IS SPECIFIED BY THE OWNER, IN WHICH CASE SHIPPING WILL BE FREIGHT COLLECT.

EXCLUDED FROM THIS WARRANTY ARE FUSES.

THIS WARRANTY DOES NOT INCLUDE LABOR CHARGES INCURRED IN THE REMOVAL OF COMPONENT PARTS, SERVICE CALLS, OR DAMAGES RESULTING FROM IMPROPER INSTALLATION, IMPROPER OPERATION, OR PROBLEMS CAUSED BY ANY REPAIR, ALTERATION OR MODIFICATION OF THE SCOREBOARD NOT PERFORMED BY ELECTRO-MECH.

EQUIPMENT WHICH IS SUBJECTED TO ACCIDENT, NEGLECT, ABUSE, MISUSE OR OTHER NATURAL DISASTERS, INCLUDING BUT NOT LIMITED TO FIRE, WIND, LIGHTNING, OR FLOOD, IS NOT COVERED BY THIS GUARANTEE.