FAIR-PLAY
by TRANS-LUX

INDOOR SPORTS

SCOREBOARD
INSTALLATION RECOMMENDATIONS

98-0001-23 • REV 1805.03
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UNPACKING

For convenience and to prevent possible damage to equipment, unpack the shipping containers at the installation site.

CAUTION: The shipping crates and boxes must be unpacked on a sturdy and level floor. Take all precautions to prevent equipment from tipping and cause possible injury to personnel or damage to equipment.

SCOREBOARD & CONTROL

1. Remove one side of the shipping crate. See Figure 1.

2. **DO NOT** use box cutters to cut into the shipping crate cover. Doing so may damage the scoreboard contained in the shipping box.

3. The scoreboard may be top-heavy.

   SAFETY PRECAUTION: To prevent possible equipment damage and/or personal injury, hook cables or chains to the eyebolts or j-brackets located near the top of the scoreboard to prevent it from tipping.

4. The control package is shipped inside the scoreboard behind a digit panel marked with removable labels.

   Loosen the 4 screws to remove the digit panel and remove the control package.

5. Reinstall the digit panel.

6. Carefully slide the scoreboard from the shipping crate.

SIGNS

1. **DO NOT** use box cutters to cut into the shipping box as this may damage the sign contained in the box.

2. Remove the side boards of one side of the shipping crate. See Figure 2.

3. Remove the boxed sign from the shipping crate.

4. Carefully slide the sign from inside the shipping box.

FIGURE 1 – UNPACKING THE INDOOR SCOREBOARD

FIGURE 2 – UNPACKING THE SIGN
EQUIPMENT LOCATION & PLACEMENT

- The sports display (scoreboard, TLVision and optional sign) must be positioned so that the spectators see what is being displayed.
- The control must be located such that the scorekeeper or control operator can monitor the event and see what is being displayed. See Figure 3 below.

VENTILATION

- Install the scoreboard so that air flow is not restricted. Customer’s structure must allow for the free flow of outside ambient air to the product, without recirculation of air from outlet vent to inlet vent.
- Warranty will be void if components fail due to air flow restrictions.
CONTROL

The control must be operated and stored in a dry location. Refer to the user manual for the operation and maintenance of your control.

WIRED CONTROL DATA CONNECTIONS

The data cable(s) from the scoreboard(s) must be connected to the MP-70/50 or MP-80 as shown in the diagram below.
PORTABLE INDOOR SCOREBOARD

FLOOR OR TABLETOP

- Single Sided or Two Sided Tabletop models can be placed on the floor or on a table.
- Single Sided or Two Sided models equipped with wheels are for use on the floor.
- Three sided models are mounted on a Floor Stand or placed on a table. Refer to Figure 4 below.

POWER AND DATA

Portable scoreboard models (single sided, two sided and three sided) are equipped with an attached power cord and provided with data cables with plug connectors. Refer to Figure 4 below.

1. **POWER** – connect the power cord to the 120 VAC grounded outlet.
2. **DATA** – connect the data cable from the control to the DATA IN jack of the scoreboard.

![Figure 4 – Power & Data to Portable Indoor Scoreboard](image-url)
**INDOOR SCOREBOARD**

**FOUR SIDED SCOREBOARD ASSEMBLY**

Four Sided Scoreboards require assembly on ground level before it can be hoisted to its final location. See Figure 5 below.

1. **Arrange the scoreboards as shown.**
   Secure scoreboards to corner angles using hardware supplied.

2. **Reconnect the power harnesses** – side 1 to 4, side 1 to 2, and side 2 to 3.
   Route the power harness coiled inside the scoreboard through the topmost grommet hole located on each side of the scoreboard. See Figure 5 below.

3. **Reconnect the data harness** – there are two methods used in connecting the data harness to the lamp drivers:
   - **Standard Data Chain** – most common method. See information on page 6 then continue with step 4 below.
   - **Data Splitter Option** – see information on page 7 then continue with step 4 below.

4. Attach the corner panels using supplied hardware.

5. **Test connections before lifting entire assembly into position.**
   Test that all harness connections are working by connecting the data cable from the control and supplying temporary power to **SCOREBOARD SIDE 1**. Refer to **Power & Data** on page 12.

6. Proceed to **Mounting the Scoreboard** on page 8.

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**FIGURE 5 – ASSEMBLY OF FOUR SIDED SCOREBOARD**
**INDOOR SCOREBOARD – FOUR SIDED ASSEMBLY**

**STANDARD DATA CHAIN**

1. The data chain harness is the standard connection method used for a four sided scoreboard. Data from **SIDE 1** is fed to **SIDE 2**, from **SIDE 2** to **SIDE 3**, and finally from **SIDE 3** to **SIDE 4**.

2. **Open the internal compartment** – use any of the following methods:
   - **HOME SCORE PANEL** – on each scoreboard, loosen the retaining screws, then move or flip the panel out of the way.
   - **REAR ACCESS COVER** – on the rear of each scoreboard, loosen the retaining screws, then move the cover out of the way.

   **CAUTION:** **DO NOT unplug existing wire connections.**

3. Route and connect the data harness.
   a. **Uncoil the data harness** – located in the upper left corner of the scoreboard.
   b. **Route the data harness** – through the grommet holes along the sides of the scoreboards **SIDE 1** and **SIDE 2**.
   c. **Connect the data harness** – into the K28 data-in terminal of the **SIDE 2 LAMP DRIVER**. See Figure 6 below.
   d. Repeat the same procedure for connecting **SIDE 2** to **SIDE 3**, and **SIDE 3** to **SIDE 4**.

4. **Close the internal compartment** – reinstall the **HOME SCORE PANELS** or **REAR ACCESS COVERS**.

5. Continue with step 4 on page 5.

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**Figure 6 – FOUR SIDED SCOREBOARD DATA CHAIN CONNECTIONS**

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**INDOOR SCOREBOARD INSTALLATION RECOMMENDATIONS**

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**Data Splitter Option**

A splitter is used on a four sided scoreboard when additional lamp drivers required; stat panels for example. Data is distributed from the **DATA SPLITTER** to each scoreboard.

1. **Open the internal compartment** – use any of the following methods:
   - **HOME SCORE PANEL** – loosen the retaining screws, then move or flip the panel out of the way.
   - **REAR ACCESS COVER** – located on the back of each scoreboard, loosen the retaining screws, then move the cover out of the way.

   **CAUTION:** **DO NOT** unplug existing wire connections.

2. Route and connect the data harness.
   a. **Uncoil the data harness** – located in the upper left corner of **SCOREBOARDS SIDE 2, 3** and 4.
   b. **Route the data harness** – through the grommet holes along the sides of the scoreboards and to the **DATA SPLITTER** in **SCOREBOARD SIDE 1**.
   c. **Connect data harness** – from SIDES 2, 3 and 4 to **DATA SPLITTER** in SIDE 1. See Figure 7 below.

3. Close internal compartment – reinstall the home score digit panel or rear access cover.

4. Continue with step 4 on page 5.

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*Figure 7 – Four Sided Scoreboard Data Splitter Connections*
MOUNTING THE SCOREBOARD

SAFETY REQUIREMENTS

- Comply with all applicable city, county, state and federal laws and regulations adopted pursuant thereto.
- Provide all measures necessary to protect the workmen and other persons during construction. Provide all necessary measures to avoid excessive stresses and to hold the structural elements in place during construction. Such measures shall include, but not be limited to, bracing; shoring for construction equipment; scaffolding; safety nets; support and bracing for cranes and hoists; guy ing, etc.

RIGID SUPPORT STRUCTURE

- The scoreboard must be hung from or mounted to a rigid support structure in accordance to local codes. The scoreboard must NOT be hung from or mounted to a non-rigid support.
- Any mounting design provided by others and submitted for review or record shall bear the stamp and signature of a licensed professional engineer registered in the state of installation.

RETROFIT

- The scoreboard can be retro-fitted into an existing enclosure.
- The scoreboard must be anchored using its mounting frame and not the cabinet.

EYEBOLTS OR LIFTING POINTS

- The scoreboard can be easily lifted into place using a crane, boom truck or scissor lift such as used by utilities and sign companies.
- The weight and dimensions of your scoreboard are shown on the installation drawing.
- When lifting the scoreboard, hook the slings or spreader bar cables into the holes of the EYEBOLTS or HANGER BRACKETS attached to the rear of the scoreboard.
- The EYEBOLTS may be removed after the scoreboard is secured.

WARNING: Sectional or scoreboard models containing a “V” (xx-xxxx-V-xxxx) MUST NOT be suspended and must be wall mounted using the WALL BRACKET.

Figure 8 – Lifting Point or Suspension Point

Figure 9 – Lifting Point Only
**WALL MOUNTED**

Wall mounting is the preferred method of installation for SINGLE SIDED SCOREBOARDS, and there are two methods:

- **Tile Wall** – Use a 3/8” toggle bolt with washer. Refer to Figure 10.
- **Masonry Wall** – Use a 3/8” expansion bolt with washer. Refer to Figure 10.

Refer to Hanger Bracket Spacing below for additional information.

**HANGER BRACKET SPACING**

Refer to Figure 11 and corresponding dimensions on Table 1 – Mounting Dimensions & Method on page 10. Confirm dimensions by measuring actual parts.
### TABLE 1 – MOUNTING DIMENSIONS & METHODS

<table>
<thead>
<tr>
<th>MODEL</th>
<th>SIDES</th>
<th>WALL MOUNTED</th>
<th>SUSPENDED</th>
<th>FLOOR/TABLE</th>
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**NOTES:**

2. Unless specified otherwise, single sided scoreboards can be suspended at the u-bolt lift points or wall mounted using hanger brackets.
3. Wall mounted method only. This model is not for suspension. U-bolts are designed for lifting purposes only and not designed for suspension.
**SUSPENDED**

**WARNING:** Sectional or scoreboard models containing a “V” (xx-xxxx-V-xxxx) MUST NOT be suspended and must be wall mounted using the WALL BRACKET.

**WARNING:** Failure to follow these guidelines could result in injury or death.

Except for scoreboard models having a “V” designation, if wall mounting is not possible then an optional suspension installation by cables (or chains) may be accomplished by following these simple guidelines:

- The load rating of suspension cables or chains must be equal to or greater than the actual weight of the scoreboard.
- The suspension cables must be attached to each of the eye bolts located on the top edge of scoreboard.
  - Two (2) suspension cables are required for each scoreboard or two (2) sided scoreboard
  - Four (4) suspension cables are required for a four (4) sided scoreboard. Refer to Figure 12 below.

**CAUTION:** Attaching suspension cables to other parts of the cabinet is NOT permitted; as this may result in possible damage to your scoreboard or unsafe operation.

**CAUTION:** If cables are not vertical and parallel, they may be subjected to higher stress loads which could result in damage to your scoreboard.

A maximum of two (2) lightweight pendant signs of the Fair-Play PDI-XXXX model series are permitted to be attached to a suspended scoreboard.

**WARNING:** Rear illuminated signs or any other display equipment must be suspended separately on their own suspension system. They are NOT to be attached or suspended from a suspended scoreboard.
POWER & DATA

POWER
- Provide a dedicated power circuit to the scoreboard.
- All electrical hookups must meet local building codes including breaker sizing, grounding, and ground rod requirements.
- The power wires from the main service disconnect to the fused disconnect must contain an earth ground conductor. Refer to Ground Wire on page 13.
- Install a line filter, surge protector, or UPS (uninterruptible power supply) in areas of poor power quality.
- Wall mounted or suspended scoreboards must have separate conduits for data wires and power.
- Portable scoreboards require a standard 120 VAC grounded electrical outlet.

CONDUIT AND WIRING REQUIREMENTS
- Electrical load requirements are stated on the ID label — located on the right side of the scoreboard as you are facing the front.
- Refer to wiring diagram supplied with your equipment.
- Final connections are to be completed after scoreboards have been permanently fastened.
- Final connections must be performed by a qualified electrician or service technician.
- Mounting structures must not prevent full opening of hinged or sliding access panels.

WARNING: Make sure power source is disconnected. DO NOT make final connections with live power. Failure to do so could result in serious injury or death caused by electrocution.

FUSED DISCONNECT
- Scoreboard – the customer must provide a fused disconnect for the scoreboard that is easily accessible and is within sight.
- TLVision Option – the customer must provide a separate fused disconnect for the TLVision that is easily accessible and is within sight – refer to 98-0001-22 Indoor Sports TLVision Display Installation Recommendations for information.
GROUND WIRE

The proper grounding of the electrical circuits and the scoreboard is an important aspect of an installation to ensure reliable operation, reduce potential lightning damage and for safety. Refer to Figure 14 below and to Article 250.56 and 600 of the National Electric Code, and ANSI/IEEE 142-1.6.6.

**Figure 14 – Typical Ground Wire Connection**
**DATA IN – WIRED CONTROL**

- **Portable Indoor Scoreboard** – a 10’ foot data cord (with plugs) is provided for connecting from the MP-70/50 control to the scoreboard. Refer to page 4.
- **Single Sided Scoreboard** – a 10’ foot data cord (with plugs) is provided for connecting the MP-70/50 control to the **RECEPTACLE BOX**. Refer page 15.
- **Four Sided Scoreboard** – a 10’ foot data cord (with plugs) is provided with the control for connecting the MP-70/50 to the **RECEPTACLE BOX**. Refer to page 19.
- **TLVision Video Display** – refer to 98-0001-22 Indoor Sports TLVision Display Installation Recommendations for information.

**DATA IN – WIRELESS CONTROL**

The external control cable and conduit are not required for wireless systems. A wireless receiver is installed inside the scoreboard which feeds data to the LED lamp driver(s). However, a wired connection can be installed as a backup connection option.
SINGLE SIDED SCOREBOARD

**CAUTION:** DO NOT route incoming power and data control cable in the same conduit as this may cause interference with the operation of the scoreboard.

**NOTE:** DO NOT route cable through cable passages without using a grommet, plastic bushing, or edge protection. If grommet, plastic bushing or edge protection is missing, seek one from your local supplier or contact Fair-Play.

1. Pry open the conduit knock-outs located at the top of the scoreboard.
2. Access the wiring compartment:
   a. **MINUTES DIGIT PANEL** – loosen the retaining screws, then move the panel out of the way.
   b. **HOME SCORE PANEL** – loosen the retaining screws, then move or flip the panel out of the way.

   **CAUTION:** DO NOT unplug existing wire connections.

3. **POWER** – refer to Figure 15 on page 16.

   **WARNING:** Make sure power source is disconnected. DO NOT make final connections with live power. Failure to do so could result in serious injury or death caused by electrocution.
   
   a. Locate the white, green and black power wires coiled inside the wiring compartment.
   b. Connect incoming power:
      - Neutral – white
      - Line 1 – black
      - Ground – green.

4. **DATA** – refer to Figure 15 on page 16.

   For optimum data transmission, avoid splices in the twisted wires to the scoreboard. The twisted wires must be long enough to reach from the RECEPTACLE BOX to the DATA IN jack of the scoreboard.

   Connect the shield wire at one end only of the data cable. Connecting the shield at both ends may cause a ground loop, which could lead to erratic operation of the scoreboard.
   
   a. Outside the scoreboard:
      i. Install the RECEPTACLE BOX within 10 feet of the control.
      ii. Install a dedicated conduit (1/2” or larger) to the scoreboard.
      iii. Solder the twisted wires to the **DATA JACK**.
      iv. Route the twisted wires through the conduit and into the scoreboard.
      v. Install **DATA JACK** to **RECEPTACLE BOX**.
   
   b. Inside the scoreboard:
      i. Solder the twisted wires to the **DATA PLUG**.
      ii. Connect data plug to the **DATA IN** jack.

5. Reinstall the **MINUTES DIGIT PANEL**.
**Figure 15 - Power and Data Connections for Scoreboard**

- **Conduit by Customer**
- **From Main Power Supply by Customer**
- **120 VAC, 60 Hz Power Fused Disconnect Switch Provided by Customer**
- **Conduit with Shielded and Twisted 2 Wire by Customer**
- **Coiled Power Wires**
- **GND GRN**
- **L1 L2 BLK**
- **Horn Card**
- **Caution 120VAC**
- **Information Label**
- **ETL Label**
- **I.D. Tag**
- **2-3/4" x 1/2" x 2-1/8" Receptacle Box (By Fair-Play)**
- **2 Wire Twisted & Shielded**
- **Solder Connections**
  - Tip - BLK
  - Ring - RED
  - Sleeve - NC
- **Solder Detail**
  - Side View of Receptacle & Data Jack
- **RECEPTACLE BOX**
- **120 VAC**
- **Scoreboard Control by Fair-Play**
- **2 Conductor Twisted Pair**
  - Sleeve - NC
  - Ring - RED
  - Tip - BLK
- **Solder Detail**
  - Data Plug by Fair-Play
- **Knock-Out Detail**
  - Top View of Scoreboard
- **Remove Knock-Outs**

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**Indoor Scoreboard Installation Recommendations**

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**TWO SIDED SCOREBOARD**

**CAUTION:** DO NOT route incoming power and data control cable in the same conduit as this may cause interference with the operation of the scoreboard.

**NOTE:** DO NOT route cable through cable passages without using a grommet, plastic bushing, or edge protection. If grommet, plastic bushing or edge protection is missing, seek one from your local supplier or contact Fair-Play.

1. **Access the wiring compartment** – loosen the retaining screws of the HOME SCORE PANEL and move or flip the panel out of the way.

   **CAUTION:** DO NOT unplug existing wire connections.

2. **POWER** – refer to Figure 16 on page 18.
   a. Remove the hole plug marked POWER located on top of the SCOREBOARD.
   b. Route conduit to the hole, then route wires through conduit and connect to FUSED TERMINAL BLOCK.

   **WARNING:** Make sure power source is disconnected. DO NOT make final connections with live power. Failure to do so could result in serious injury or death caused by electrocution.
   c. Reinstall HOME SCORE PANEL.

3. **DATA** – refer to Figure 16 on page 18.
   For optimum data transmission, avoid splices in the twisted wires to the scoreboard. The twisted wires must be long enough to reach from the RECEPTACLE BOX, through the customer provided JUNCTION BOX, and to the scoreboard.

   **Connect the shield wire at one end only of the data cable.** Connecting the shield at both ends may cause a ground loop, which could lead to erratic operation of the scoreboard.
   a. **RECEPTACLE BOX** to **JUNCTION BOX:**
      i. Install the RECEPTACLE BOX within 10 feet of the control.
      ii. Install the JUNCTION BOX (provided by customer) near the scoreboard.
      iii. Install a dedicated conduit (1/2” or larger provided by customer) from the RECEPTACLE BOX to the JUNCTION BOX.
      iv. Solder the twisted wires to the DATA JACK – refer to Figure 16 on page 18.
      v. Route the twisted wires through the conduit, through the JUNCTION BOX, and to the scoreboard.
      vi. Install DATA JACK to RECEPTACLE BOX.
   b. **JUNCTION BOX** to **SCOREBOARD:**
      i. Secure twisted wires with strain relief at the JUNCTION BOX.
      ii. Solder twisted wires to the DATA PLUG – refer to Figure 16 on page 18.
      iii. Connect the DATA PLUG to the **DATA IN** jack located on the side of the scoreboard.
FIGURE 16 – POWER & DATA TO TWO SIDED SCOREBOARD
**Four Sided Scoreboard**

**CAUTION:** DO NOT route incoming power and data control cable in the same conduit as this may cause interference with the operation of the scoreboard.

**NOTE:** DO NOT pass cable through any cable passages without using a grommet, plastic bushing, or edge protection to protect the cable. If grommet, plastic bushing or edge protection is missing, seek one from your local supplier or contact Fair-Play.

1. Depending on the model, access the internal compartment of **SCOREBOARD SIDE 1** using one of the following methods:
   - **Rear Access Cover** – on the rear of the scoreboard, loosen the screws of the **REAR ACCESS COVER** and move the cover out of the way.
   - **Home Score Panel** – if there is no **REAR ACCESS COVER**, loosen the retaining screws of the **HOME SCORE PANEL** and move or flip the panel out of the way.

   **CAUTION:** DO NOT unplug existing wire connections.

2. **POWER** – refer to Figure 17 on page 20.
   a. Remove the hole plug marked **POWER** located on the rear of **SCOREBOARD SIDE 1**.
   b. Route conduit to the hole, then route wires through conduit and connect to **FUSED TERMINAL BLOCK**.

   **WARNING:** Make sure power source is disconnected. DO NOT make final connections with live power. Failure to do so could result in serious injury or death caused by electrocution.

   c. Reinstall **HOME SCORE PANEL** or **REAR ACCESS COVER**.

3. **DATA** – refer to Figure 17 on page 20.

   For optimum data transmission, avoid splices in the twisted wires to the scoreboard. The twisted wires must be long enough to reach from the **RECEPTACLE BOX**, through the customer provided **JUNCTION BOX**, and to the scoreboard.

   **Connect the shield wire at one end only of the data cable.** Connecting the shield at both ends may cause a ground loop, which could lead to erratic operation of the scoreboard.

   a. **RECEPTACLE BOX** to **JUNCTION BOX**:
      i. Install the **RECEPTACLE BOX** within 10 feet of the control.
      ii. Install the **JUNCTION BOX** (provided by customer) near the scoreboard.
      iii. Install a dedicated conduit (1/2” or larger provided by customer) from the **RECEPTACLE BOX** to the **JUNCTION BOX**.
      iv. Solder the twisted wires to the **DATA JACK** – refer to Figure 17 on page 20.
      v. Route the twisted wires through the conduit, through the **JUNCTION BOX**, and to the **SCOREBOARD 1**.
      vi. Install **DATA JACK** to **RECEPTACLE BOX**.

   b. **JUNCTION BOX** to **SCOREBOARD 1**:
      i. Secure twisted wires with strain relief at the **JUNCTION BOX**.
      ii. Solder twisted wires to the **DATA PLUG** – refer to Figure 17 on page 20.
      iii. Connect the **DATA PLUG** to the **DATA IN** jack located on the back of **SCOREBOARD 1**.
Figure 17 – Power & Data to Four Sided Scoreboard
The data from the scoreboard control is connected directly to the scoreboard.
01-0001-16 Wireless

Data from the scoreboard control is transmitted via G3 wireless radio to the scoreboard.
01-0001-17 Four Sided Direct Wired

Data from the scoreboard control is transmitted via direct wire to the 4-sided scoreboard.
01-0001-18 Four Sided Wireless

Data from the scoreboard control is transmitted via G3 wireless radio to the 4-sided scoreboard.
NOTES