

SECTION 116843

MODEL 3050 OUTDOOR SCOREBOARD SET

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Two single-face electronic scoreboards and control console for outdoor use.

1.02 REFERENCES

- A. Standard for Electric Signs, UL-48, 14th Edition.
- B. Standard for Control Centers for Changing Message Type Signs, UL-1433, 4th Edition.
- C. Federal Communications Commission Regulation Part 15.
- D. National Electric Code.

1.03 SUBMITTALS

- A. Scoreboard owner's handbook provides drawings and other information needed for installation, operation, and maintenance of the scoreboards and accessories.

1.04 QUALITY ASSURANCE

- A. Source limitation: Obtain all components including scoreboards, control console, data cable, mounting hardware, and other accessories from a single manufacturer.
- B. Manufacturer qualifications: Require company specializing in manufacturing electronic scoreboards with a minimum of ten years experience.
- C. Adherence to nationally recognized standards.
 - 1. ETL listed to UL Standards 48 and 1433.
 - 2. NEC compliant.
 - 3. FCC compliant.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Product delivered to installation site unless otherwise specified.
- B. Scoreboards and accessories to be stored in a clean, dry environment.
- C. Special precautions for the scoreboard face.
 - 1. Each scoreboard section will be protected during shipment by a layer of cardboard or other sheet material. Avoid removing this protective sheet until the installation begins.
 - 2. Never lay a scoreboard face down or stack other objects on a scoreboard lying on its back.
 - 3. Avoid sliding objects (like another scoreboard) along the plane of the scoreboard face even if the protective sheet is in place. This can result in LEDs being sheared.

1.06 PROJECT CONDITIONS

- A. Scoreboards and accessories should not be installed until the mounting posts are secure and the concrete footings have set.
- B. The customer determines location of scoreboards, control console, and other accessories.
- C. The customer is responsible for verifying that the mounting structure is capable of supporting the weight and wind load of each scoreboard, additional panels, and other accessories.
- D. The customer is responsible for making certain the installation meets any requirements set forth in local codes, which may include limitations on the height of the structure, specifications of footings, standards for wind loads, approvals by a locally licensed professional engineer, etc.
- E. Installation of outdoor scoreboards and accessories is dependent upon suitable weather conditions.

1.07 WARRANTY

- A. Five year limited warranty includes factory labor and material costs for repairing or replacing defective parts. Refer to the warranty document included in the scoreboard owner's handbook for specific information.
- B. Warranty coverage based on the date of manufacture.

1.08 MAINTENANCE

- A. Replacement parts and factory repair options available from manufacturer.
- B. Product support provided by experienced technicians and online documentation available via phone, web, and email at no cost to customer.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. Electro-Mech Scoreboard Co., 120 Industrial Parkway, Wrightsville, GA 31096.
 - 1. Phone 800-445-7846.
 - 2. Fax 478-864-0212.
 - 3. Email score@electro-mech.com
 - 4. Click www.electro-mech.com

2.02 SCOREBOARD

- A. General.
 - 1. Functions and Features: Model 3050 Outdoor Scoreboard Set is a set of two displays designed to present information pertinent to football delay of game time. The presentation consists of a two-digit Clock that shows from 0 to 99 seconds. Digits are 24 inches tall.
 - 2. Cabinet Size

- a. For the standard model with no ID panel, each cabinet is 37 inches (987 mm) wide, 4 feet (1224 mm) tall, 6 inches (152 mm) deep.
 - b. For the version with a side ID panel (provided in a common alternate configuration), each cabinet is 74 inches (1876 mm) wide, 35 inches (894 mm) tall, 6 inches (152 mm) deep.
3. Cabinet Weight
 - a. For the standard model with no ID panel, each cabinet is 45 pounds (20 kg).
 - b. For the version with a side ID panel (provided in a common alternate configuration), each cabinet is 60 pounds (27 kg).
 4. Electrical Requirements
 - a. Each scoreboard cabinet requires 120 VAC, 1 amp service.
 - b. Electro-Mech recommends mounting a disconnect switch and convenience receptacle in line with incoming AC power on one of the support posts beneath each scoreboard.

2.03 ACCESSORIES

- A. Standard accessories.
 1. Control Console.
 - a. Supports all features of Electro-Mech 32x0 and 35x0 series of football scoreboards (including Models 3230, 3250, 3260, 3270, 3530, 3540, and 3580) without the need to enter codes or other information to configure the device.
 - b. Constructed of a heavy-duty ABS plastic housing holding a 0.1-inch thick keypad panel with stainless steel metal dome switches that provide tactile feedback and are rated for one million actuations.
 - c. Requires one standard grounded 120 VAC electrical outlet.
 - d. The control console may be deleted from the package when Model 3050 is purchased as an accessory to a scoreboard with a compatible control console.
 2. Handheld Controller.
 - a. Plugs into connector on control console.
 - b. Allows an operator to control the delay of game timers during the game without touching the main control console.
 3. Extension Cable: 10-foot long shielded data cable (one per display) with male stereo connectors at each end allows control console to be connected to junction boxes (or ScoreLink transmitters) at the point of operation and later unplugged for storage.
 4. Junction Boxes: Provide a point of termination for the data cables, and each includes a stereo socket for quick connection to the control console.
 5. Mounting hardware: Standard mounting hardware allows each scoreboard cabinet to be clamped at any height along the support posts without the need for drilling holes or fabricating brackets onsite. Standard hardware accommodates round pipes, I-beams, or other post styles with an exterior cross-section no greater than 4-1/2 inches. Optional hardware may be substituted where local codes require larger posts.
- B. Optional accessories.
 1. Data Cable: A shielded two-conductor cable with a drain line is the typical means of providing a path for data from the control console to the scoreboards.

2. ScoreLink Wireless RF Modem System: This RF communications system may be substituted for the data cable at the time of installation or as a replacement for the cable at any time after the installation. ScoreLink requires a standard electrical outlet for the transmitter at the point of operation.
3. Carrying Case For Control Console: Included with the ScoreLink system, this option is also available for scoreboards with hard-wired data cables.
4. ID panels: Each display may be purchased with an ID panel integrated into the cabinet on the left side. ID panels may be purchased blank or with simple text, multi-colored text and graphics, or screen-printed processed-color logos applied to their faces.

2.04 FINISH

- A. Standard scoreboard faces and digit masks are coated with low gloss black polyester resin paint for maximum contrast and resistance to scratches.
 1. Baked on automotive grade low gloss paint in a selection of standard colors is available from the manufacturer for the scoreboard face.
 2. Non-standard colors and finishes may be applied to the scoreboard face at the customer's request.
- B. Scoreboard framing and back are mill-finished aluminum.
- C. Captions and other decorative elements on the face of the scoreboard are vinyl.

2.05 SOURCE QUALITY CONTROL

- A. Tests and inspection.
 1. Manufacturer requires sub-contracted printed circuit board subassemblies to undergo functional testing at the point of manufacture.
 2. Manufacturer inspects incoming components prior to installation in scoreboard and accessories.
 3. Manufacturer functionally tests major electrical subcomponents prior to installation in scoreboard and accessories.
 4. Manufacturer inspects and tests scoreboards and accessories at full power prior to shipment.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that the mounting posts are correctly sized and positioned to match the mounting points on the scoreboards and that their concrete footings have properly cured.
- B. Verify each scoreboard is grounded to one or more 5/8-inch by 8-foot copper clad ground rods driven into the soil near the scoreboard.
- C. Verify 120 VAC power supplying each scoreboard is properly grounded.
- D. Verify 120 VAC outlet at control console location is properly grounded.
- E. If data cable is used, verify continuity from scoreboards to control console location.

- F. Verify data and AC power cables are not run in the same conduit or within six inches of each other in the same trench.
- G. Verify data cable and AC power cable are secure and run in conduit where they might be exposed to abuse or where local, state, or national codes require.
- H. Verify location of scoreboards, junction box, and accessories with customer.

3.02 INSTALLATION

- A. Refer to scoreboard owner's handbook for installation instructions.

3.03 PROTECTION

- A. The most common sources of damage to scoreboards and accessories are electrical surges running through power or data connections. The usual causes are lightning, power equipment problems (floating neutrals, bad transformers, etc.), and improper connections. To minimize these problems:
 1. Ensure electrical wiring is properly grounded.
 2. Ensure each scoreboard is correctly grounded to one or more 5/8-inch by 8-foot copper clad ground rods driven into the soil near the scoreboard.
 3. Unplug control console from power outlet and from data cable when not in use.
 4. Turn off the breakers to disconnect scoreboards from power when not in use.
 5. Label scoreboard data cable junction box and all connectors near junction box, scoreboard, and accessories so that public address systems and other devices with similar connections are not accidentally plugged into the scoreboard.
- B. Avoid loss or damage of control console, extension cable, and other accessories by storing when not in use.

END OF SECTION