

# SPECTRUM ARCHITECTURAL SPECIFICATION

## Model 11016-UL4

August 1, 2005

### PART 1 GENERAL

#### 1.1 GENERAL

- 1.1.1 Scoreboard(s) shall be UL Listed and be remotely operated via three-wire shielded grounded cable from control point(s). Scoreboard(s) shall display the following information: Minutes, Seconds, Home and Visitor Score, Quarter, Down and (yards) To Go. Equipment to be solid-state electronic technology.

### PART 2 PRODUCT

#### 2.1 SCOREBOARD

- 2.1.1 Shall be Spectrum Model 11016-UL4 or approved equal to this specification by the architect. Provide \_\_\_\_\_ units of this model.
- 2.1.2 Overall cabinet shall be 7 feet in height by 16 feet in length by 5 inches in depth including mounting brackets, and constructed of .063 aluminum. Cabinet color shall be as selected from the manufacturers standard colors with appropriate trim colors. Four vertical cabinets to be shipped and constructed for three-column mounting with one bottom and one top steel mounting bracket supplied by manufacturer. Approximate weight is \_\_\_\_\_ pounds.
- 2.1.3 Display digits and indicator spots shall be made of 3 inch by 3 inch circuit card mounted pixels. Each pixel shall be individually replaceable and contain sixteen (16) LEDs each. LEDs shall be red or amber in color. Digit height shall be 24 inches for Clock and Team Scores; 21 inches for Quarter, Down and To Go. Game Clock shall have a display capacity up to "99:59", team score to "99", Down to "9", To Go to "99" and Quarter to "9".
- 2.1.4 Each pixel in conformal coated front and back to protect the electronics from outside elements and are individually serviceable from the front of the scoreboard cabinet.
- 2.1.5 All pixels are interchangeable throughout the scoreboard and are rated at least 100,000 hours of use.
- 2.1.6 Display configuration shall be 4 x 7 for 24 inches and 21 inches.
- 2.1.7 Digits shall consist of the following number of pixels: 24 inches and 21 inches, 20 pixels (16 LEDs per pixel).
- 2.1.8 LED Digit Brightness: 40,000 MCD (millicandela).
- 2.1.9 Finish in Two-Component Polyurethane coating.
- 2.1.10 Captions shall be adhesive backed vinyl permanently attached to the cabinet and Home, Visitor, Down, To Go and Quarter shall be 12 inches in height.
- 2.1.11 Electronics to be packed in a high voltage plug-in processor accessible from the cabinet back.
- 2.1.12 Power to be 522 watts maximum, 120 VAC, 60 Hz.
- 2.1.13 Provide an electronic standard horn rated at 100 dB @ 10'0".

#### 2.2 CONTROL

- 2.2.1 Shall be model MSX housed in a protective, weather resistant carrying case. Construction shall be a plastic case 15 inches long by 3 ¾ inches high by 12 inches deep.
- 2.2.2 Furnished with a 10' low voltage data cable cord to connect to control receptacle junction box and shall unplug and store inside the carrying case. Does NOT require hazardous 120 VAC electrical power.
- 2.2.3 Shall include four lines of 16 large backlit LCD characters showing information as sent to the scoreboard display and allows operator to see LCD in low-light areas.
- 2.2.4 A changeable color coded keypad to allow key identification change to operate multiple scoreboards. Electronic features shall include a program mode allowing change in sport controlled or accommodation of a sport rules change and a memory circuit to retain information if power is interrupted.
- 2.2.5 Red LED indicators to indicate clock-running up or down, auto-horn "on" status for end of period and auto-horn "on" status for substitution of players.
- 2.2.6 Switches have a life of at least 5 million operations. All membrane switches shall be "splash-proof" and environmentally sealed by a combination of layers of a velvet-grain, highly durable, polycarbonate and glossy polyester. All switches are defined by the 0.020 velvet-grain polycarbonate "switch locator" overlay. The numeric keypad, on-off rocker clock and score switches shall give "tactile feedback" to the operator.
- 2.2.7 Operating features include cumulative memory, time-of-day display to allow the scoreboard to display time-of-day for non-sport display, tenth-of-a-second timing to allow more accurate timing during last minute of play and track-timing interface to display track-timing information from automatic timing systems on standard football scoreboard.

#### 2.3 REMOTE CONTROL CABLE

- 2.3.1 Furnish one length of three wire-shielded, grounded cable to connect receptacle junction box to the scoreboard cabinet.

#### 2.4 LIMITED WARRANTY

- 2.4.1 Spectrum Solid State Scoreboards are guaranteed for a period of five (5) years (LEDs are guaranteed for a period of ten (10) years) against any defects in materials. Urethane Finish is guaranteed for a period of ten (10) years against any defects in materials. First year service includes cost of labor and parts when returned prepaid to Spectrum Corporation. Remaining four (4) years cover parts only, when returned insured, prepaid to Spectrum Corporation. Warranty does not cover unauthorized repairs or modifications, abuse, neglect, acts of God, exceptionally high or low voltage, and/or improper grounding, installation, operation, or shipment to the factory.

#### 2.5 OPTIONAL EQUIPMENT

- 2.5.1 Provide one MSX Clock Handswitch for second operator.
- 2.5.2 Provide wireless radio control operation for above equipment.
- 2.5.3 Provide Spirit/Sponsor sign panels for above equipment.
- 2.5.4 Provide electronic team names for above equipment.
- 2.5.5 Provide electronic message display board for above equipment.
- 2.5.6 Provide electronic video display board for above equipment.