



PylonCam 2.0[™] Field Conduit Installation Technical Description

Patent Information

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Additional Patents Pending

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Admiral Video PylonCam[™] Conduit System

Technical Description

Summary

Currently, one of the barriers to widespread PylonCam[™] usage is cost. Television networks are forced to disturb stadium playing surfaces in a labor-intensive effort to place the necessary wires in the field. Admiral Video has patented a system that allows for easy game-day installation and repeated use of PylonCam[™] in stadiums. This system features a permanently installed conduit infrastructure which eliminates the need to continually disturb the playing surface prior to a game. Also included are wall-mounted equipment enclosures ("JBT" or "wall box"), which serve as termination points for the conduit and provide a place to permanently install our electronic and fiber-optic equipment. This comprehensive system eliminates recurring labor costs and makes ongoing usage of PylonCam[™] cost-effective.

Infrastructure Requirements

- Conduit
 - 1-1/2" Schedule 80 PVC Electrical Conduit Local Supplier.
 - Sweeping 90-Degree Elbows for ease of pulling Local Supplier.
 - Custom sweeping 90-degree conduit section at pylon location supplied by Admiral Video.
 - Custom PylonPlug, SealCap, and PylonCap fittings at pylon location supplied by Admiral Video.
- Wall Box
 - Continuous conduit run from pylon location, terminating in wall box.
 - To facilitate the use of a shallow box, equipment may be mounted sideways on swing-out rails.
- Electrical Outlets
 - \circ $\;$ At least one 120VAC, 15A circuit in each wall box.
- Fiber-Optics
 - At least one 12-strand single-mode fiber terminated with ST/UPC connectors in each wall box, connecting to control room or central patch location. Capacity for future enhancements.

Recommended Part Numbers

- Wall Box
 - Bulloch Fabricating AV-RP-36x22x10-CPT-DS-SS-S
 - 11.163" total depth with door.
 - Surface or semi-recessed mounting options.
 - Sufficient height to mount 19" width equipment in a sideways, vertical orientation.

Conduit Layout and Pylon Locations

Conduit can be installed for all goal line and back line pylons – totaling eight pylon locations (two pylon locations per corner).

To reduce the number of trenches required to be dug, the conduits in each corner can be laid out so that they extend next to each other along the sideline of the end zone and continue straight to the wall (FIG. 1).



FIG. 1 Example conduit layout and box location. End zone length and distance between pylon locations are not shown to scale.



Each pylon must be precisely located on the field with respect to the boundary lines (FIG. 2). Thus, each conduit must also be precisely located, since the conduit location becomes a reference point for the pylon location. Measurements for locating a back line pylon (FIG. 2a) and an end zone pylon (FIG. 2b) are shown.

FIG. 2 Overhead view, pylon locations.

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FIG. 2a Detail view, back line pylon location.



FIG. 2b Detail view, goal line pylon location.

At each pylon location, the final 90-degree conduit section (supplied by Admiral Video) is installed so that the vertical portion of the conduit is centered at the pylon location (**FIG. 3**).



FIG. 3 Side view of custom conduit section at pylon location.



FIG. 4 Side view, Wall Box conduit termination.

Wall Box Locations

(FIG. 4) Preferred wall box locations are on the end zone walls. One box must be placed at each corner. Total conduit length from any pylon location to termination at the wall box, including vertical distances, must not exceed 75'.

PylonPlug

At the pylon location, a plug sub-assembly (FIG. 5) supplied by Admiral Video is installed in the end of the custom conduit fitting. Specific parts of the plug assembly are made of rubber to provide for impact force absorption and to satisfy Clegg Hammer readings. The PylonPlug assembly can be removed and replaced, allowing access to the conduit without disturbing the surrounding earth.



FIG. 5 PylonPlug exploded view.

SealCap

A SealCap is installed onto the plug subassembly. The pass-through SealCap allows use of Admiral Video PylonCam[™] systems configured with a USB3 or similar connector (FIG. 6).



FIG. 6 Installed SealCap with example flexible cable and USB3 connector in place.



PylonCap

A PylonCap can be installed when the PylonCam[™] system is not in use. The installed cables remain in place but are pushed down into the top section of the assembly. The cap sits slightly below finished grade so that it does not interfere with mowing or other field maintenance or provide an obstacle to any other activities taking place on the field **(FIG. 7)**.

FIG. 7 Installed PylonCap.



The area above the PylonCap can be infilled with sand or rubber crumb to create a seamless playing surface (FIG. 8). Additionally, the PylonCap can be fitted with tufts of artificial turf if desired.

FIG. 8 Cross-section view, installed cap. The sand or infill material sits on top of the cap, creating a surface level with the surrounding ground.



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