



# A-CBA-LTE

## CELLULAR BURIAL ANTENNA INSTALLATION INSTRUCTIONS

The Telog Cellular Antenna model A-CBA-LTE provides a means of cellular communications between Telog Data Recorders and the local cellular network. The A-CBA-LTE (Cellular Burial Antenna) is intended for burial beneath the road surface adjacent to a manhole or vault that is monitored. This document provides recommended installation instructions for this antenna.

### Recommended Equipment List

- ▶ Telog Data Recorder communications
- ▶ Remote host computer operating Telogers Support Software and appropriate communications interface or Portable computer operating Telogers support software
- ▶ Telog A-CBA-LTE antenna
- ▶ Asphalt saw or auger – Saw capable of cutting 1-inch-deep into road surface
- ▶ Heavy duty asphalt chisel
- ▶ Hammer drill with  $\frac{3}{4}$  to 1-inch asphalt drill bit (for antenna cable installation – Connector is approximately 0.6" in diameter).
- ▶ Asphalt mix/patch.
- ▶ Bondo; Mar-Hyde P606 Traffic Detector Wire Loop Sealer, or equal

### Road surface preparation

Locate the antenna approximately 6 to 8 inches from the manhole or vault. Using the asphalt saw and chisel, excavate a hole in the road surface approximately 5.5" x 3.5" inches and 1" deep. Prepare the base of the cutout to allow the antenna to sit flush to the surface approximately 0.8" below the road surface. See Figure 1 and 2.

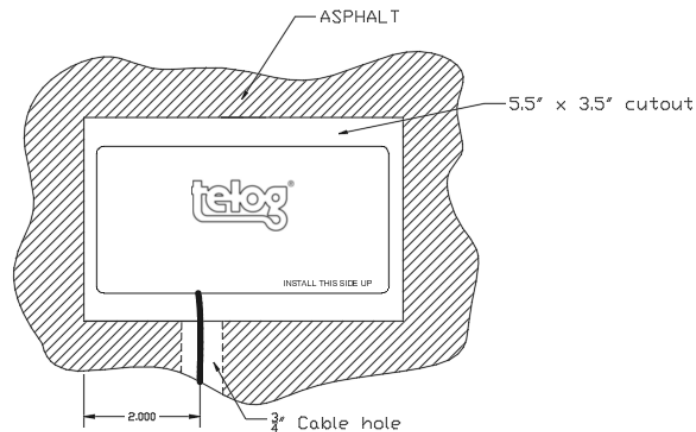


Figure 1

# A-CBA-LTE CELLULAR BURIAL ANTENNA INSTALLATION INSTRUCTIONS

## Antenna installation

Using the hammer drill, drill a  $\frac{3}{4}$ " to 1" hole from the bottom of the excavated hole closest to the manhole into the manhole below the steel manhole cover support ring. Hole shall be located approximately 2" from edge of cutout closest to the manhole. See Figure 1.

Route the antenna cable through the drilled hole into the manhole or vault. Install the antenna in the excavated hole, Telog logo facing up, then pull the antenna cable taut. The antenna should be located in the hole so that the top surface of the antenna is approximately  $\frac{1}{4}$ " below the surface of the road. See Fig. 2.

## Antenna test

With the Telog recorder sitting on the road surface next to the manhole, connect the antenna to the recorder. Depress the recorder's tamper pushbutton to initiate a cellular connection from the recorder to the remote host computer. The success of the call can be verified by downloading data from the recorder locally to the portable computer or from the remote server. **NOTE:** This requires the recorder to be programmed to call the host PC before deployment to the field.

## Bury the antenna

Once the operation of the antenna has been confirmed, it may be permanently buried. First insert asphalt mix around the antenna and pack it in place, making certain the antenna is firmly sitting on a solid base and parallel to the road surface. The asphalt mix should be installed around the antenna to the level of the road surface, but not over the top surface of the antenna.

Pour the Bondo sealer into and over the asphalt mix and over the top of the antenna. Allowing the Bondo to get under the antenna to help level the area; there should **no more than  $\frac{1}{4}$ " of Bondo sealer over the top of the antenna.**

Connect the desired sensor inputs to the recorder and install the recorder in the manhole.

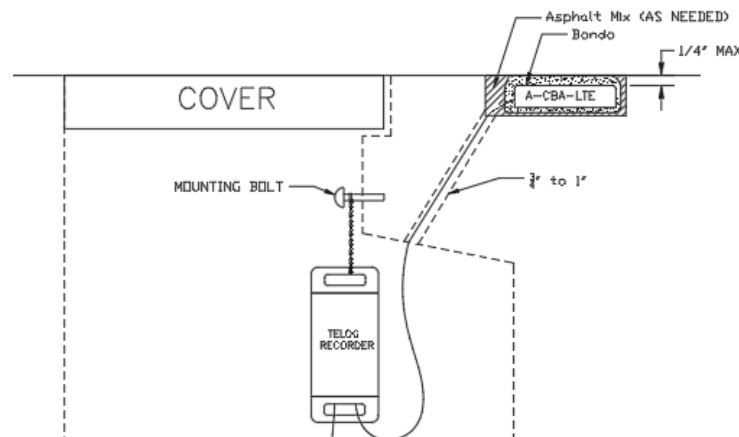


Figure 2.

Note: Material between antenna tile and free air should not exceed  $\frac{1}{4}$  (0.25) of an inch.

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