Cellular Specialties, Inc.

Model *PCS2000* Miniature In-Building Amplifier

Operation and Users Manual

3. Inspection and Installation

Inspection

Inspect the equipment as soon as possible after purchase. If any part of the equipment has been damaged in transit, report the damage to the transportation company and also to the company where purchased.

Contents

The unit package contains the following:

Model *PCS2000* Mini-IBA
Power Transformer, 110 volt to 5 volt
User Manual

Optional Accessories

Accessories are available directly from Cellular Specialties, Inc. or any of CSI's distributors.

Exterior High Gain Antenna
Interior Omni Antenna

Installation

Note:
The Installer should refer to the ***Safety Precautions,*** in the following section, for proper antenna selection and installation

The installation of the Mini-IBA is relatively simple. If possible, measurements of the Received Signal Strength Indicator (RSSI) should be recorded as close as possible to the proposed exterior antenna location. Optimum performance will be obtained with RSSI readings greater than –85 dBm.

With the exact location of the exterior antenna and the coordinates of the cell sits closest to the building in which the unit is being installed, the distance and bearings to each of the local cells can be determined. The first choice would be the closest site unless there is blockage in the form of buildings or terrain. If blockage exists, an alternate site may be available.

If coordinates are not available, measure the RSSI at the external antenna output by connecting a phone to the external antenna and slowly rotating the antenna until a maximum reading is obtained.

The Mini-IBA and interior antenna should be centrally located, keeping coaxial cable runs to a minimum. A maximum length of 100 feet of low loss cable is recommended. The actual coax used should be RG-8 type with a flame retardant rating as a minimum. If the coax is run through an area where heating and/or cooling air is channeled, a plenum rated coax should be used. When mounting the amplifier, take care to avoid areas of high heat or extreme cold. In general, do not place the unit on or near the top of high ceilings, by heaters or in cold storage areas.

During installation, care must be taken to provide the maximum isolation between interior and exterior antennas. This isolation should be at least 70 dB to prevent any re-generative feedback in the system. Feedback of this nature may cause the amplifier to emit a continuous signal at maximum amplitude and could, in some cases, interfere with the normal operation of the cell site.

There are no installation or user adjustments or tuning on this unit.

Safety Precautions

CAUTION

For INDOOR use, an Omni-Directional Antenna with a maximum gain of 8dBi is authorized for use with this unit.
Inside antennas must be positioned to observe minimum separation of 20 cm. (~ 8 in.) from all users and bystanders. For the protection of personnel working in the vicinity of inside (downlink) antennas, the following guidelines for minimum distances between the human body and the antenna must be observed.

The installation of an INDOOR antenna must be such that, under normal conditions, all personnel cannot come within 20 cm. (~ 8.0 in.) from any inside antenna. Exceeding this minimum separation will ensure that the employee or bystander does not receive RF-exposure beyond the Maximum Permissible Exposure according to section 1.1310 i.e. limits for General Population/Uncontrolled Exposure.

For OUTDOOR use, a Directional Antenna up to a maximum gain of 13dBi is authorized for use with this unit.
The Outside antenna must be positioned to observe minimum separation of 20 cm. (~ 8 in.) from all users and bystanders. For the protection of personnel working in the vicinity of outside (uplink) antennas, the following guidelines for minimum distances between the human body and the antenna must be observed.

The installation of an OUTDOOR antenna must be such that, under normal conditions, all personnel cannot come within 20 cm. (~ 8 in.) from the outside antenna. In all installations, the antenna should never be mounted such that the main beam is directed toward an area where workers or bystanders may be present. Exceeding this minimum separation will ensure that the worker or bystander does not receive RF-exposure beyond the Maximum Permissible Exposure according to section 1.1310 i.e. limits for General Population/Uncontrolled Exposure.