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STATEMENT THAT HZB-S58-04 (Model 31260) RADIOS MUST BE PROFESSIONALLY INSTALLED AND SO IS EXEMPT FROM THE ANTENNA RESTRICTIONS OF FCC PART 15.203, INCLUDING INFORMATION ON ANTENNAS USED FOR TESTING

This letter is submitted with regards to professional installation of the HZB-S58-04 (Model 31260) radio and the antennas used for testing. The HZB-S58-04 (Model 31260) radio must be professionally installed and so is exempt from the antenna restrictions of FCC Part 15.203. The HZB-S58-04 (Model 31260) is a product manufactured by Western Multiplex in Sunnyvale, California.

The HZB-S58-04 (Model 31260) is a spread spectrum device, to be certified for operation under Part 15.247 of the FCC Rules in the 5725-5850 MHz bands. This equipment is designed for point-to-point communications and will carry two CEPT-1 signals. The CEPT-1 signals have a telecommunications CEPT-1 interface that is only provided by professional telecommunications equipment. General user-oriented equipment does not provide this interface and cannot be easily installed with the HZB-S58-04 (Model 31260).

The HZB-S58-04 (Model 31260) is not designed for use by the general public, and will be sold as follows:

- either through the Western Multiplex sales force to professional communications users in the following categories: electric power utilities, cellular telephone operating companies, personal communication service operating companies, regional Bell operating companies, oil and gas exploration and transmission companies, railroad companies, federal, state and local government agencies, or
- through designated and professionally trained Western Multiplex Value Added Resellers (VARs) to business users under individual reseller agreements.

These companies will either use their professional telecommunications engineering staff to carry out the installation or will subcontract to professional installation firms. On occasion, a professional installation firm will purchase the HZB-S58-04 (Model 31260) radios directly.

The HZB-S58-04 (Model 31260) will be used for fixed, permanent or temporary, outdoor links requiring the use of directional antennas at 5.8 GHz which tend to be mounted on towers. These antennas will be 2', 4', 6' or 8' dishes that have narrow beamwidths (ranging from 7 degrees to less than 2 degrees) and require professional installers to align them.

The output power of the HZB-S58-04 (Model 31260) radio will be adjusted to meet the power limit (as required) by the professional installer during installation. The method of adjusting the output power is described in the manual written for use by professional trained installers.

The HZB-S58-04 (Model 31260) is a full duplex device with a common transmit and receive port. The addition of an external amplifier to boost the transmit power would disable the receive signal, thus rendering the HZB-S58-04 (Model 31260) inoperable. In addition, high power amplifiers (not generally available at 5.8 GHz) cannot be used without ensuring that signal saturation does not occur (because this would produce unrecoverable deterioration of the receive signal). Thus, the addition of an amplifier could not be accomplished by a non-professional installer.

The HZB-S58-04 (Model 31260) is typically sold without an antenna, and the customer and/or installation engineer chooses from commercially available antennas. From time to time, Western Multiplex may sell a commercially available antenna along with the HZB-S58-04 (Model 31260) upon customer request.

Prior to testing of the LYNX.sc series of radios, Greg Czumak and Ed Gibbons of the Federal Communications Commission reviewed a list of commercially available antennas, which Western Multiplex provided, for the purposes of determining which antenna would be appropriate for compliance testing. The Comsat RSI Mark Antenna Model #P-57C24N-1 was chosen for the HZB-S58-04 (Model 31260) test as it is a reasonable representation of a typical antenna that would be used with this radio. Evaluation of the results with this antenna can be easily extrapolated for larger size antennas.

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