

1196 Borregas Ave., Sunnyvale, CA 94089-1302, USA Tel: +1 (408) 542-5200, Fax: +1 (408) 542-5300

March 23, 2001

Intertek Testing Services 1365 Adams Ct. Menlo Park, CA 94025

## STATEMENT THAT HZB-U53-45 (UNII) 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-U53-45 (UNII) radio and the antennas used for testing. The HZB-U53-45 (UNII) radios must be professionally installed and so is exempt from the antenna restrictions of FCC Part 15.203. The HZB-U53-45 (UNII) radio is a product manufactured by Western Multiplex in Sunnyvale, California.

The HZB-U53-45 (UNII) radio is to be certified for operation under Part 15.407 of the FCC Rules in the 5.25-5.35 band. This equipment is designed for point-to-point communications and will carry data signals using a DS-3 interface. Due to the unique requirements of installation and integration of these systems, typical consumers or businesses will not have the proper training required for successful implementation of these systems.

The HZB-U53-45 (UNII) is not designed for use by the general public, and will be sold as follows:

- 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 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-U53-45 (UNII) radios directly.

The HZB-U53-45 (UNII) radio will be used for fixed, permanent or temporary, outdoor links requiring the use of directional antennas at 5.2-5.8 GHz, which tend to be mounted on towers. These antennas will have narrow beamwidths and require professional installers to align them.

In addition, the HZB-U53-45 (UNII) radio must be set up for the specific line interface required during installation. This procedure must be carried out by a qualified professional installer for the equipment to operate properly.

The output power of the HZB-U53-45 (UNII) radio will be adjusted to meet any applicable EIRP limits by the professional installer during installation. The method of adjusting the output power is described in the manual written for use by professionally trained installers. To ensure the worst-case situation is covered, the equipment was tested at the maximum output power.

The HZB-U53-45 (UNII) radio 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-U53-45 (UNII) radio inoperable. In addition, high power amplifiers (not generally available at 5.2-5.8 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-U53-45 (UNII) radio 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-U53-45 (UNII) radio upon customer request.

Western Multiplex has also included detailed instructions on how to determine the maximum output power based on EIRP limits for all professional installers to follow.

la

Caroline Yu

Homologation Product Manager Western Multiplex Corporation