

Measurement Report
In Support of
Application for Permissive Change
AirNet Communications Corporation
Model RE 3000 for PCS-1900

FCC ID: MZKRE3000-1900

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EXHIBIT 1 - GENERAL DESCRIPTION

This application is being submitted as a Class II permissive change to FCC ID: MZKRE3000-1900. That authorization is for a PCS-1900 translating repeater, the AirNet "AirSite Remote Radio". The ARR extends the range of a large capacity basestation to remote cells. As described in the original authorization, the ARR has a high power basestation to mobile transmit path authorized at 20 Watts at the antenna terminal. Test data for two different amplifiers was submitted in the original application.

The amplifier from Plessey has undergone a redesign to increase it's internal gain, providing more RF "headroom" than the original design. The amplifier's internal power level is increasing from a maximum of 22 Watts to 28 Watts. The module has the same physical footprint and packaging as the original unit. The NEMA-4 outdoor enclosure the ARR is packaged in likewise is not changing.

AirNet is not seeking to increase the authorized power output of the ARR -- it will stay at a maximum of 20 Watts. This permissive change merely seeks to approve use of the re-designed internal amplifier module from Plessey. To that end, new schematics, list of active components, and a photograph of the module are included in this application. Test data showing conducted spurious emissions at the antenna terminals is also included.

EXHIBIT 2 - PLESSEY AMPLIFIER DETAILS

1. Function of Active Devices
2. Schematic
3. Photograph

This exhibit is attached in a sealed envelope labeled EXHIBIT 2. AirNet is withholding this list from public inspection under the confidentiality agreement as outlined in CFR 47 §0.459.

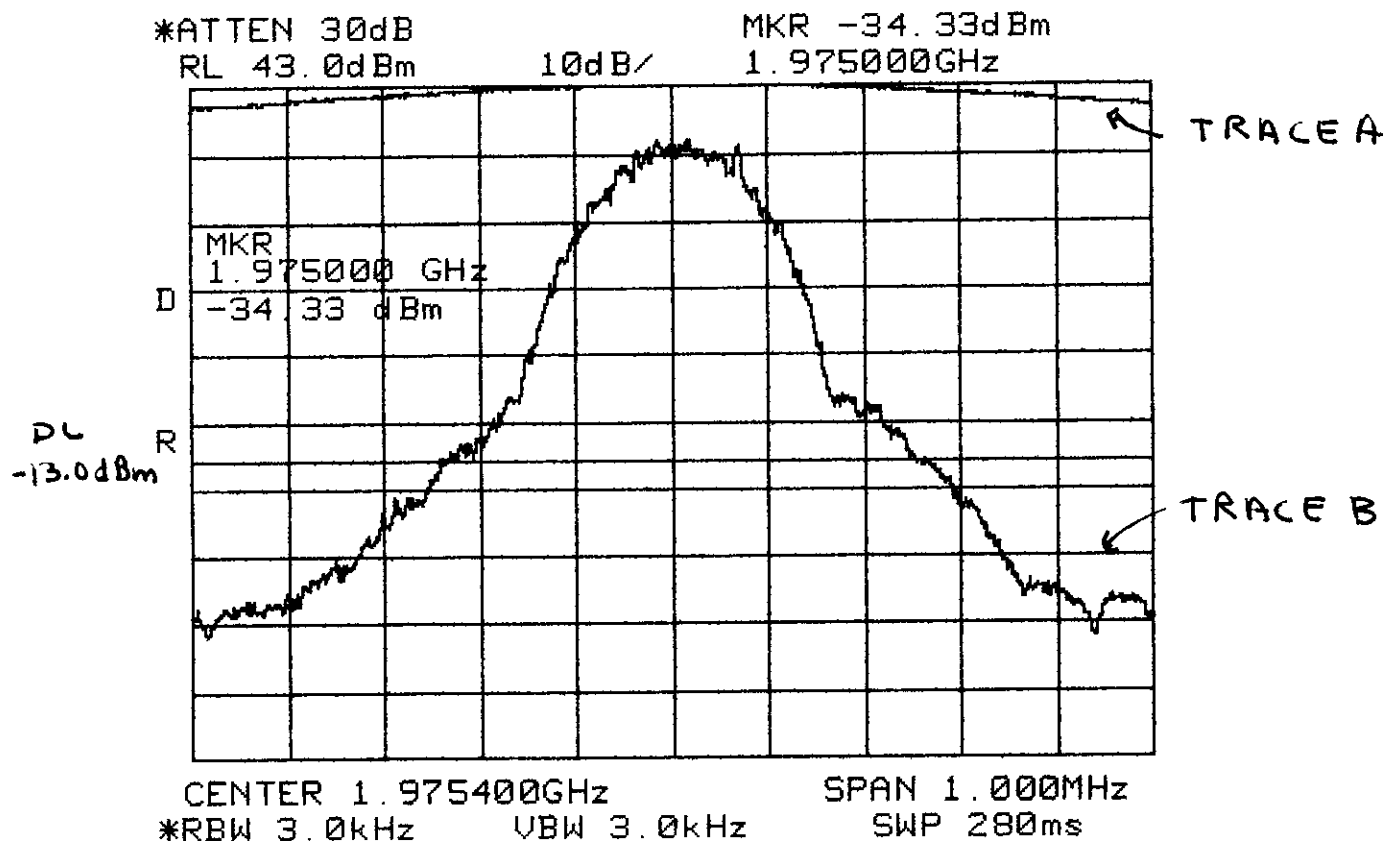
EXHIBIT 3 - TEST DATA

1. Emissions at edge of Frequency Block

As in the original MZKRE3000-1900 application the downlink path (AirSite to mobile phone) transmit path is qualified for a 20 Watt carrier at the antenna connection to the AirSite. Likewise, as in the original application, channels adjacent to a frequency block edge are prohibited from being used as an Airsite downlink carrier. Therefore the 1st usable channel is 400 kHz from any band edge. Figure 3.1 is submitted to show that requirements for spurious emissions at the band edge are still being met with the redesigned Plessey amplifier with a 20 Watt carrier at the downlink antenna terminal of the AirSite. (Reference Figure 9.3.1 of MZKRE3000-1900).

EXHIBIT 3 - TEST DATA

Figure 3.1: Band Edge Plot, Plessey 20 Watt Downlink



Trace A: RBW = 1MHz; VBW = 1MHz

Trace B: RBW = 3 kHz; VBW = 3 kHz

Display line at FCC limit of -13 dBm

Marker at band edge of 1975.0 MHz; 20 Watt Carrier at 1975.4 MHz

EXHIBIT 3 - TEST DATA

2. Antenna Conducted Spurious Emissions

The following data table shows the conducted spurious emissions for the 28W Plessey downlink amplifier tested in the AirSite Remote Radio. Data was taken at each antenna port connection: 1) Ground Transmit path (downlink); 2) Ground Receive Path (uplink); and 3) Backhaul transmit. A GMSK carrier of 20 Watts was brought up at 1975.4 MHz and is recorded as the fundamental at port 1.

All measurements were made with a resolution bandwidth of 1 MHz and a video bandwidth of 1 MHz. A 20 dB external attenuator was used on the high power downlink port to protect the front end of the spectrum analyzer. There was 10 dB of internal attenuation. The cables, connectors, and attenuator losses were calibrated out during the testing. No signals other than the fundamental were found - readings are noise floor measurements recorded at fundamental harmonic frequencies. The highest value measured amongst the 3 antenna ports is recorded in Table 3.1 below. Peak hold was used for all measurements. The spectrum analyzer used was a Advantest model R3271.

Table 3.1 Plessey 28 Watt downlink amplifier conducted spurious emissions

Frequency (MHz)	Net Power (dBm)	Limit (dBm)	Margin (dB)
1975.4	43	-	-
3950.8	-42	-13	29
5926.2	-46	-13	33
7901.6	-37	-13	24
9877.0	-38	-13	25
11852.4	-36	-13	23
13827.8	-39	-13	26
15803.2	-33	-13	20
17778.6	-32	-13	19
19754.0	-30	-13	17