

CONFIDENTIAL

1. Section 2.983 (d) (3):

Range of operating power levels and description of means
for variation of operating power

1-i. Range of operating power levels

The operating power level is divided into 14 steps in CDMA mode.

Level 0 24.7 dBm $\pm$ 0.3 dB

Level I 18.0 dBm + 0.3dB

Level 2 12.4 ~ $\pm$ 0.3 dB

Level 3 6.8 dBm $\pm$ 0.3 dB

Level4 1.2 dBm $\pm$ 0.3 dB

Level 5 -4.4 dBm $\pm$ 0.3 dB

Level 6 -10.0 dBm $\pm$ 0.3 dB

Level 7 -15.6 dBm $\pm$ 0.3 dB

Level 8 -21.2 dBm $\pm$ 0.3 dB

Level 9 -26.8 dBm $\pm$ 0.3 dB

Level 10 -32.4 dBm $\pm$ 0.3 dB

Level II -38.0 dBm $\pm$ 0.3 dB

Level 12 -43.6 dBm $\pm$ 0.3 dB

Level 13 under -50.0 dBm (open loop min power)

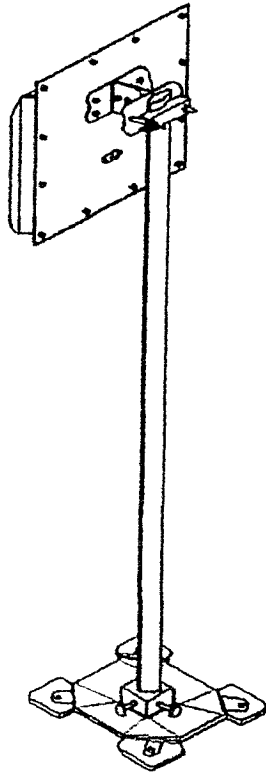
1-2. Means for variation of operating power

The RF interface of MSM communicates with the RF analog circuitry. This RF interface performs control of Power Amplifier (PA) and AGC (automatic gain controller) using digital control signals. The mid-range transmission frequency generated in IF [(Tx Baseband-IF converter) is designed to be gain-controlled for 84 dB dynamic range. The 84 dB dynamic range is 39 dB when the voltage 3.0V and -45dB in 0.1V. The 80dB dynamic range(0.1V - 3.0V) gain is used in this hand-held device. The software controlled power management in MSN controls, the Tx AGC adjust signal.

3. HWT-220 TECHNICAL SPECIFICATION

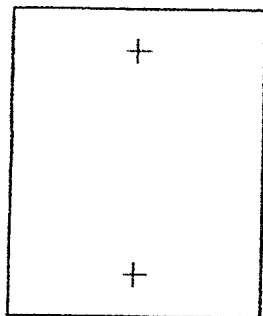
Air Interface	Common air interface standard → J-STD-008 FREQUENCY → TX: 1850-1910MHz RX: 1930-1990MHz TX Output Power → 319mW RX Sensitivity → -104dBm Vocoder → 8K/13K QCELP, 8K EVRC Channel Bandwidth → CDMA 1.25Mhz Spurious → TX : -61dBm below RX : -81dBm below MOD/DEMOD → O QPSK/QPSK Frequency Accuracy → $F_0 \pm 150\text{Hz}$
Battery Back-up	Type → Ni-Cd Capacity → 8.4V @ 1.7A Talk Time → 2 Hours Standby Time → 20Hours
Connectors for various Service support	RJ-11 → Standard wire-line telephone Analog G3 Fax (Optional) Serial port → Maintenance Purpose Data Service Purpose (Internet, PC Fax)
Physical	Dimension(D×W×H) → 266×166×65mm Weight (including Backup battery) → 1100g
Environmental	Operating temperature → -10 °C ~ +50 °C
Power Supply	Input Power → 110 ~ 240V(±20V), 50/60Hz Output Power → DC 12V @ 2A
Accessories	Internal Antenna → Di-Pole Antenna Power supply External Antenna (Optional) → 10dbi Gain Directional Panel Antenna

*** Optional Accessory**

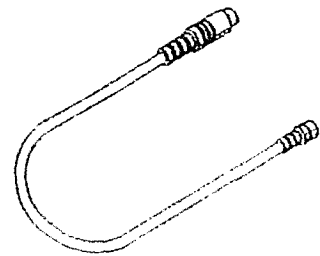


- External Antenna & Fastener -

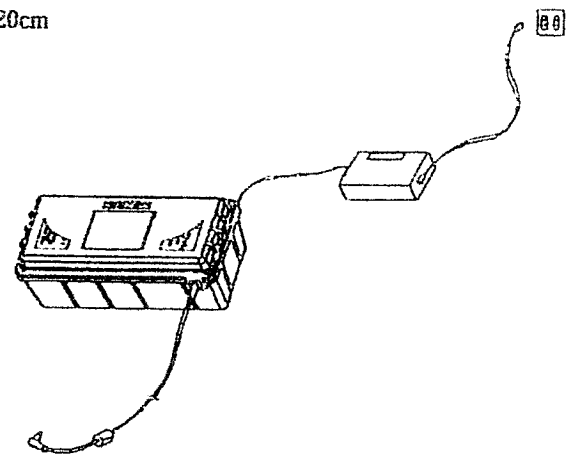
This system is designed to be operated as a fixed system device and must be located either on the roof top site, or up on or near the ceiling away from the user. It must be mounted in a manner to ensure that all user's and bystanders are kept a minimum of 20cm away from the antennas at all times.



- Installation Sheet -



- External Antenna Cable -



- External Battery -

FCC RF EXPOSURE INFORMATION

WARNING! *Read this information before using your phone*



In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this phone complies with the FCC guidelines and these international standards.



To comply with FCC RF exposure requirements, a minimum separation distance of 2.5cm (1inch) must be maintained between the user/bystander and the back of the unit, including the antenna.

When using the optional external antenna please note the following precautions:

This system is designed to be operated as a fixed system device and must be located either on the roof top site, or up on or near the ceiling away from the user. It must be mounted in a manner to ensure that all user's and bystanders are kept a minimum of 20cm away from the antennas at all times.

For more information about RF exposure, please visit the FCC website at www.fcc.gov