1. GENERAL INFORMATION

1.1 GENERAL

This equipment, ATT704 is called 2 way portable handheld radios.
The frequency range is 462.5625 467.7125MHz,UHF operating Channel
For international 2 way portable radios.

1.2 CHARACTERISTIC

a) All active device in this radio is composed of semiconductor and high density IC.
b) To design this radio in compact and weight approximately 140g including battery.
C) CPU of this equipment is UPD70F3017A from NEC.
d) It's power can operate by use of Alcaline 4 cell(1.5V AA) battery

1.3 COMPOSITION

This radio is composed of following.

a) Transmitter
b) Receiver(GMRS/FRS + GPS + NOAA)
c) Helical(GMRS/FRS/NOAA) & PATCH(GPS) Antenna
d) Belt clip

2. SPECIFICATION

2.1 GENERAL SPECIFICATIONS

a) Frequency Range : 462.5625 467.7125 MHz
b) Output Impedance : 50 Unbalanced
c) Modulation Type : 8K50F3E
d) Communication Mode : Simplex
e) Channel Capacity : 22 channel
f) Channel spacing : 12.5 KHz
g) Power : 6.0V(ALCA 1.5V X 4 AA)
h) Battery Life : ALCA. 2000mAh > about 18hour
NI-MH 600mAh > about 11hour
(Tx:800mA) 5% , (Rx:150mA) 5% , (Stand-by 10mA) 90%
GPS ON : ALCA 2000mAh > 9hours(Tx 5%, Rx 5%, Stand-by 90%)
GPS OFF : ALCA 2000mAh > 16hours(Tx 5%, Rx 5%, Stand-by 90%)
i) Operating Temperature : -30 +50
j) Dimension : 214(H) x 67(W) x 48.5(D)mm
k) Weight : 299g(with Battery)

2.2 ELECTRICAL SPECIFICATION

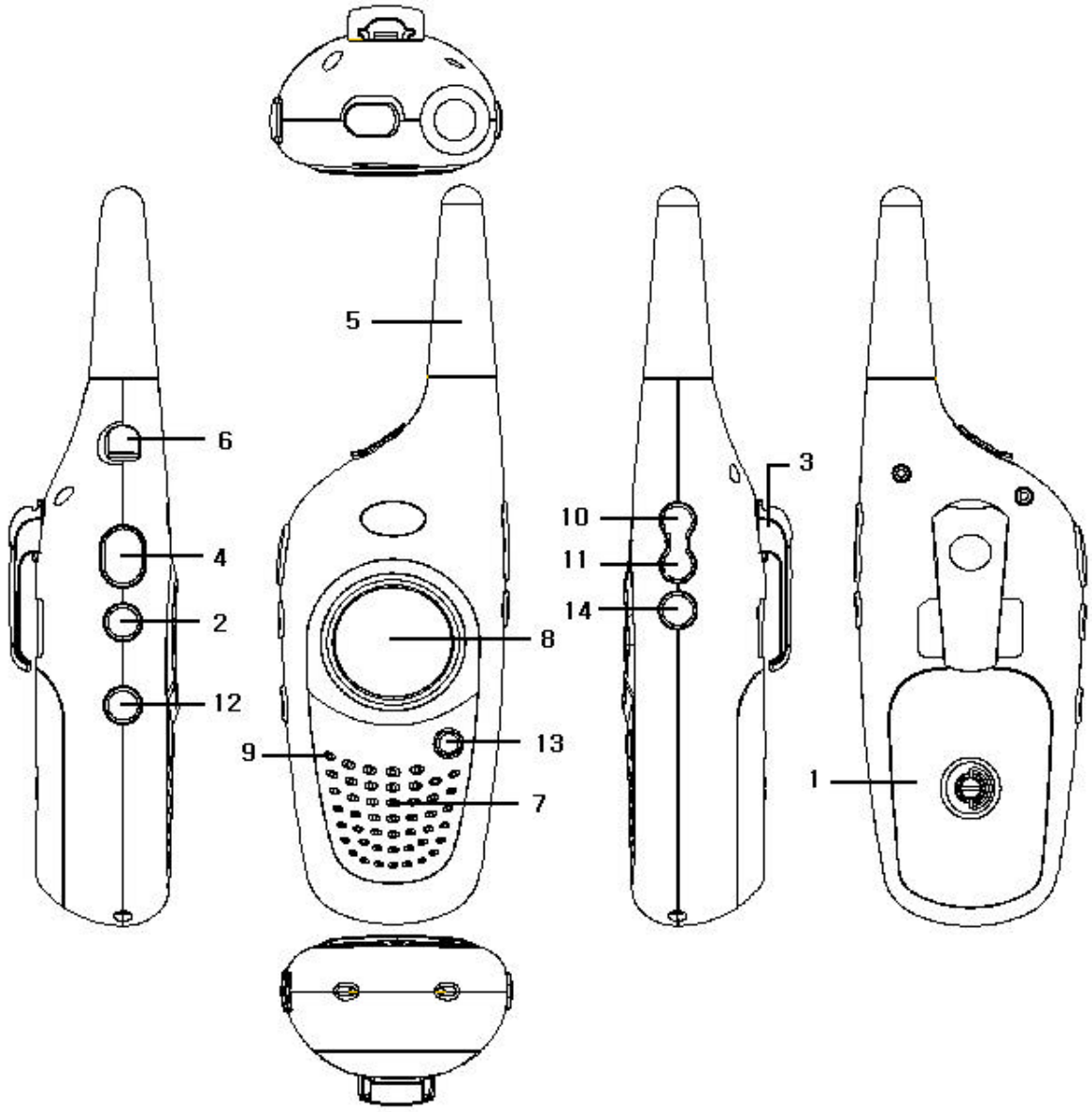
a) TRANSMITTER
1) Output power : Max. 2.0W(GMRS)/0.5W(FRS)
2) Frequency Stability : 5ppm(-30 -20)/ 2.5ppm (-20 +60)
3) Modulation Method : FM
4) Oscillation Method : PLL SYNTHESIZER
5) Max. Frequency Deviation : < 2.5KHz(with tone)
6) Cooling Method : air-cooling Method
7) Conducted Spurious Emission : < -13dBm
8) Radiation Spurious Emission(3m) : < -48dBm
9) FM Hum/Noise : > 40dB(1kHz 60% modulation)
10) Distortion : < 5% (1kHz 60% modulation)
11) Tx Audio Response : 6dB /OCT 3dB PRE-EMPHASIS(300Hz 2.5kHz)

b) RECEIVER
1) Receive Method : Double Super Heterodyne
2) Receive Sensitivity : less than -120dBm(12dB SINAD)
3) NOAA Sensitivity : less than –115dBm(12dB SINAD)
4) Squelch Sensitivity : -120dBm -130dBm(Audio On/Off Point)
5) Bandwidth : > 8kHz(6dB ATT Point)
6) Adjacent channel rejection : < -60dB(12.5kHz)
7) Local Frequency Stability : 5ppm(-20 +60)
8) Spurious Response : > 50dB
9) Audio output : 200mW(Internal 8 load THD 10%) EXt 100mW
10) Distortion : < 5% (1kHz 60% Modulation)
11) RX Audio Response : 6dB/OCT +1/-10dB DE-EMPHASIS(300Hz 2.5kHz)

12) S/N Ratio : < 40dB(1kHz 60% Modulation)
13) IF : 1'st IF = 21.7MHz
2'nd IF = 450kHz
14) Local Frequency : 1'st Local Frequency = fc - 21.7MHz
2'nd Local Frequency = 21.25MHz

3. INSTRUCTION MANUAL

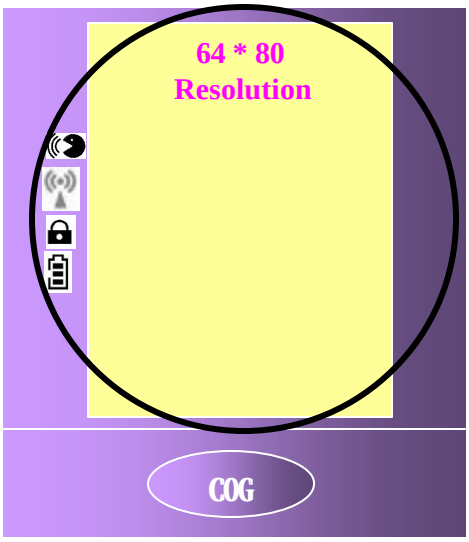
3.1 Key Name



FUNCTIONS AND CONTROLS

1) Battery Door
2) Monitor Button
3) Detachable Belt Clip
4) Push-To-Talk (PTT) Button
5) Antenna
6) External MIC/Speaker
7) Built-in Speaker
8) LCD Panel
9) Built-in Microphone
10) Up Button & Volume Control
11) Down Button & Volume Control
12) Page Button
13) Power On/Off & Mark Button
14) Enter & Function Button

3.2 ICONS on LCD



64 * 80 dots with ICONS

1) VOX Indicator

Blinks in VOX selection mode or appears when VOX is activated.

2) NOAA Indicator

This icon appears when the NOAA alert mode is selected.

3) Key Lock Indicator

Blinks in auto lock selection mode or when the key lock is activated.

4) Battery Level Indicator

Battery Level Meter indicates the remaining battery strength.

FCC WARNING

Replacement or substitution of transistors, diodes or other parts of a unique nature, with parts other than those recommended by the manufacturer, may cause a violation of the technical regulations of Part 15 of FCC Rules.

SAFETY INFORMATION

Your wireless hand-held portable transceiver contains a low power transmitter. When the PTT button is pushed it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50% using alkaline "AAA" size batteries to comply with Federal Communications Commissions (FCC) RF exposure guidelines with safety level guidelines for hand-held wireless devices.

Important: To maintain compliance with the FCC's RF exposure guidelines hold the transmitter at least 1 inch away (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away. If you wear the handset on your body while using the headset accessory, use only the AT&T supplied belt clip for this product and ensure that the antenna is at least 1 inch (2.5 centimeters) from your body when transmitting. Use only the supplied antenna. Unauthorized antennas, modifications, or attachments could damage the transmitter and may violate FCC regulations.

GMRS License: Use of GMRS radios within the United States requires a FCC GMRS licence. An individual 18 years of age or older who is not a representative of a foreign government is eligible to apply for a GMRS system license. You will need two forms from the FCC, FCC form 159 and form 605 Main Form and Schedule F. You can find the forms online at **http://www.fcc.gov/formpage.html or call 1-800-418-3676.**

The FCC requires that you be advised of certain requirements involving the use of this device. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment uses and can generate radio frequency energy, if not installed and used in accordance with the instruction, it may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception(which can be determined by turning the equipment off and on), the user is encouraged to correct the interference by one of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver
3. Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
4. Consult the manufacturer for technical assistance.