ENGINEERING STATEMENT

For Certification of

AIRTECH INFORMATION & COMMUNICATION CO., LTD.

Model No. ARH-465
FCC ID: ONKARH-465

I am an Electronics Engineer, a principal in the firm of Hyak Laboratories, Inc., Springfield, Virginia. My education and experience are a matter of record with the Federal Communications Commission.

Hyak Laboratories, Inc. has been authorized by Airtech Information & Communication Co., Ltd. to make certification measurements on the ARH-465 transceiver. These tests were made by me or under my supervision in our Springfield laboratory.

Test data and documentation required by the FCC for certification are included in this report. The data verifies that the above mentioned transceiver meets FCC requirements and certification is requested.

____
Rowland S. Johnson

Dated: September 21, 2000

A. INTRODUCTION

The following data are submitted in connection with this request for type acceptance of the ARH-465 transceiver in accordance with Part

2, Subpart J of the FCC Rules.

The ARH-465 is a hand-held, battery operated, UHF, frequency modulated, 2 W (conducted rating) transceiver intended for voice communications applications in the 462.5500 - 462.7250 MHz band under Part 95 in the GMRS service. (ERP (d) was 1.7 W.)

B. GENERAL INFORMATION REQUIRED FOR TYPE ACCEPTANCE (Paragraph 2.983 of the Rules)

1. Name of applicant: Airtech Information & Communication Co.

2. Identification of equipment: FCC ID: ONKARH-465

   a. The equipment identification label is submitted as a separate exhibit.
   b. Photographs of the equipment are submitted as separate exhibits.

3. Quantity production is planned.

4. Technical description:

   a. 16k0F3E emission
   b. Frequency range: 462.5500-462.7250 MHz.
   c. Operating power of transmitter is fixed at the factory at 2 watts (conducted).
   d. Maximum power permitted under FCC Part 95 (interstitial) is 5 watts ERP. The ARH-465 fully complied with that power limitation.
   d. The dc voltage and dc currents at final amplifier:

      Collector voltage: 6.9 Vdc
      Collector current: 0.61 A

   f. Function of each active semiconductor device: See Appendix 1.
   g. Complete circuit diagram is submitted as a separate exhibit.
   h. A draft instruction book is submitted as a separate exhibit.
   i. The transmitter tune-up procedure is submitted as a separate exhibit.

B. GENERAL INFORMATION (continuted)

   j. A description of circuits for stabilizing frequency is included in Appendix 2.
   k. A description of circuits and devices employed for suppression of spurious radiation and for limiting modulation is included in Appendix 2.
   l. Not applicable.

5. Data for 2.985 through 2.997 follow this section.

C. RF POWER OUTPUT (Paragraph 2.985(a) of the Rules)

RF power output was measured with a Bird 4421 RF power meter and a Narda 765-20 attenuator as a 50 ohm dummy load. Maximum power was 2.0 watts. (The transmitter was tuned by the factory.) For ERP (d) computation see Table 2.

D. MODULATION CHARACTERISTICS

1. A curve showing frequency response of the transmitter is shown in Figure 1. Reference level was audio signal output from a Boonton 8220 modulation meter with one kHz deviation. Audio output was measured with an Audio Precision System One TRMS voltmeter and tracking generator.

2. Modulation limiting curves are shown in Figure 2, using a Boonton 8220 modulation meter. Signal level was established with an Audio Precision System One. The curves show compliance with paragraphs 2.987(b) and 95.633(b).

3. Figure 3 is a graph of the post-limiter low pass filter which meets the requirements of paragraph 95.633(b) in providing a roll-off of 60Logf/3 dB where f is audio frequency in kHz. Measurements were made following EIA RS-152B with an Audio Precision System One on the Boonton 8220 modulation meter audio output.

4. Occupied Bandwidth (Paragraphs 2.989(c), 90.209(b)(4), and 95.629(a) of the Rules)

Figure 4 is a plot of the sideband envelope of the transmitter output taken with a Tektronix 494P spectrum analyzer. Modulation corresponded to conditions of 2.989(c)(1) and consisted of a 2500 Hz tone at an input level 16 dB greater than that necessary to produce 50% modulation at 2186 Hz, the frequency of maximum response. Measured modulation at 2186 was 5 kHz.

C. MODULATION CHARACTERISTICS (continued)

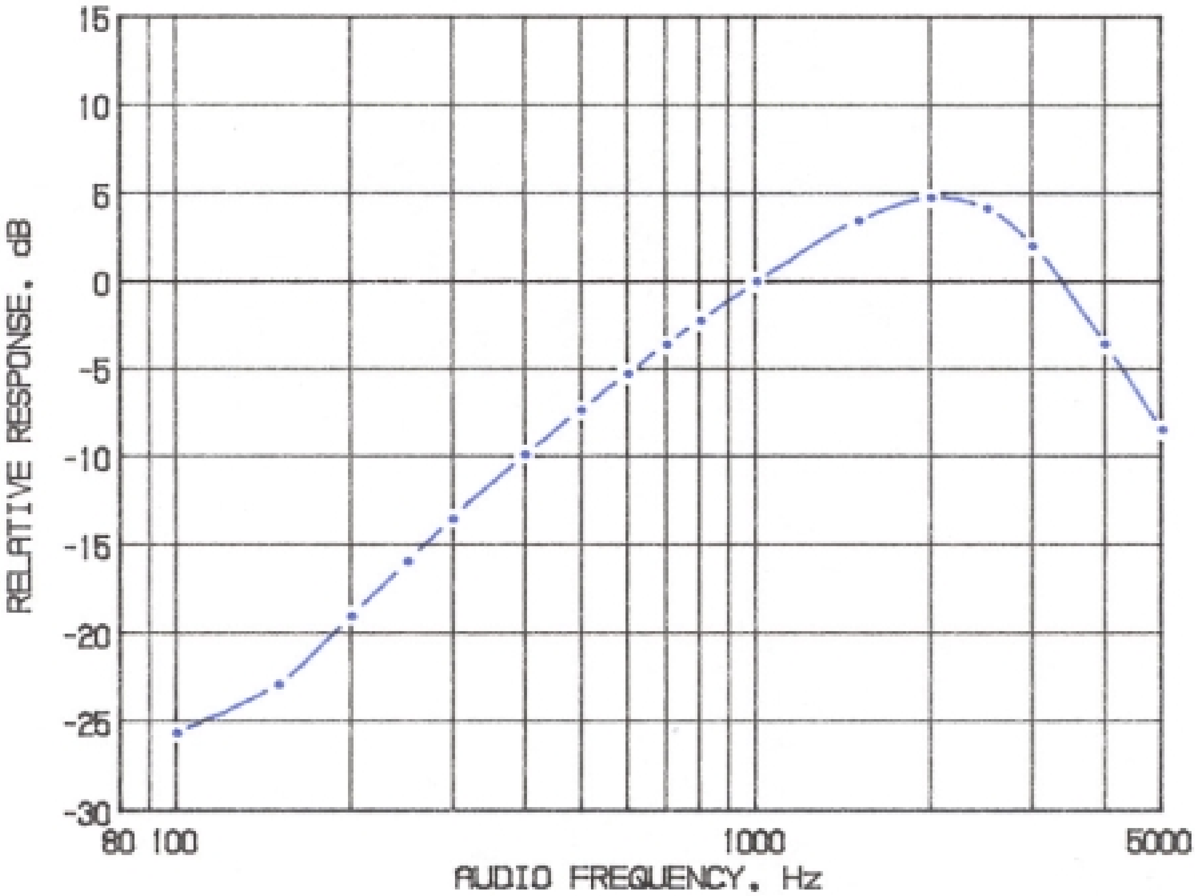
The plot is within the limits imposed by Paragraph 90.211(h) for frequency modulation. The horizontal scale (frequency) is 10 kHz per division and the vertical scale (amplitude) is a logarithmic presentation equal to 10 dB per division.

5. Emission Designator Calculation:

(2D + 2F) 2x5.0 + 2x3.0 = 16k0F3E

FIGURE 1

MODULATION FREQUENCY RESPONSE

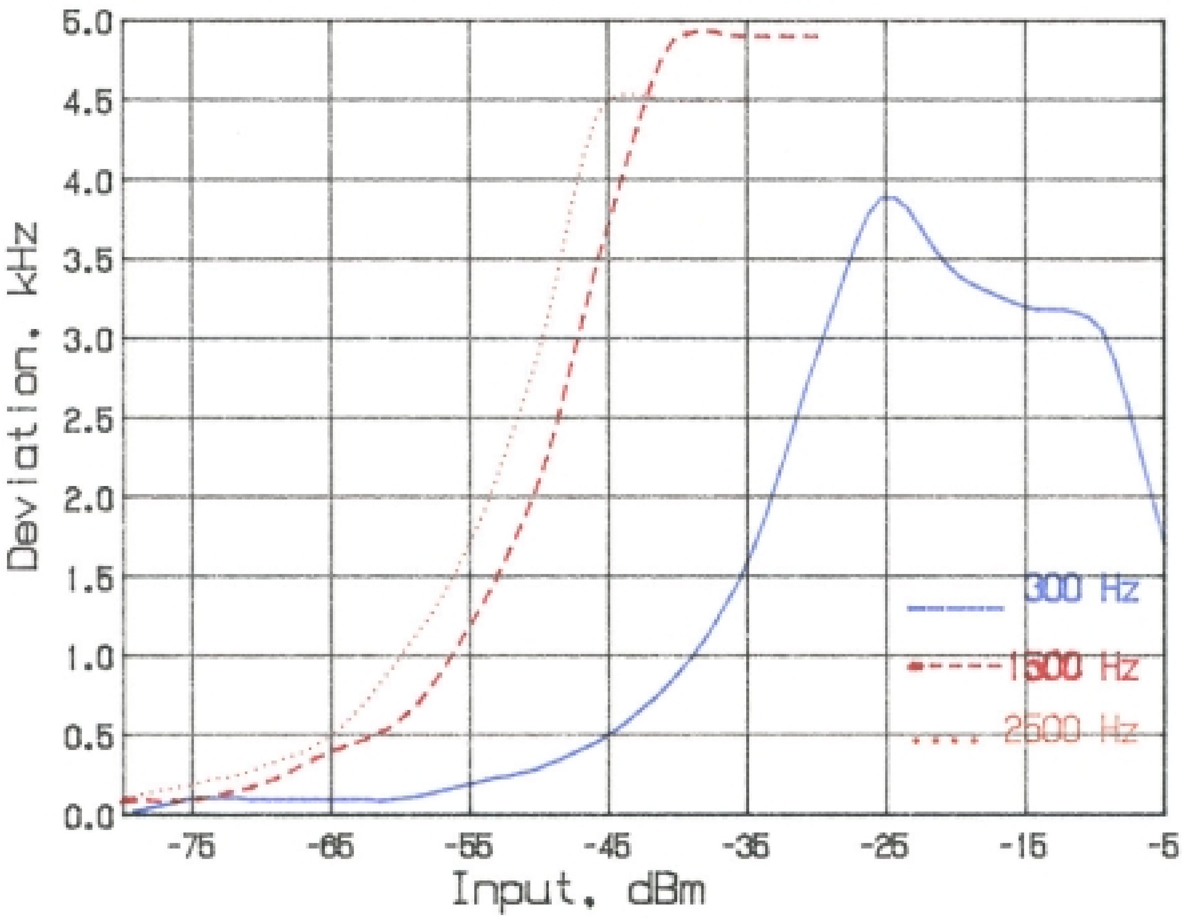


MODULATION FREQUENCY RESPONSE
FCC ID: ONKARH-465

FIGURE 1

FIGURE 2

AUDIO LIMITER CHARACTERISTICS

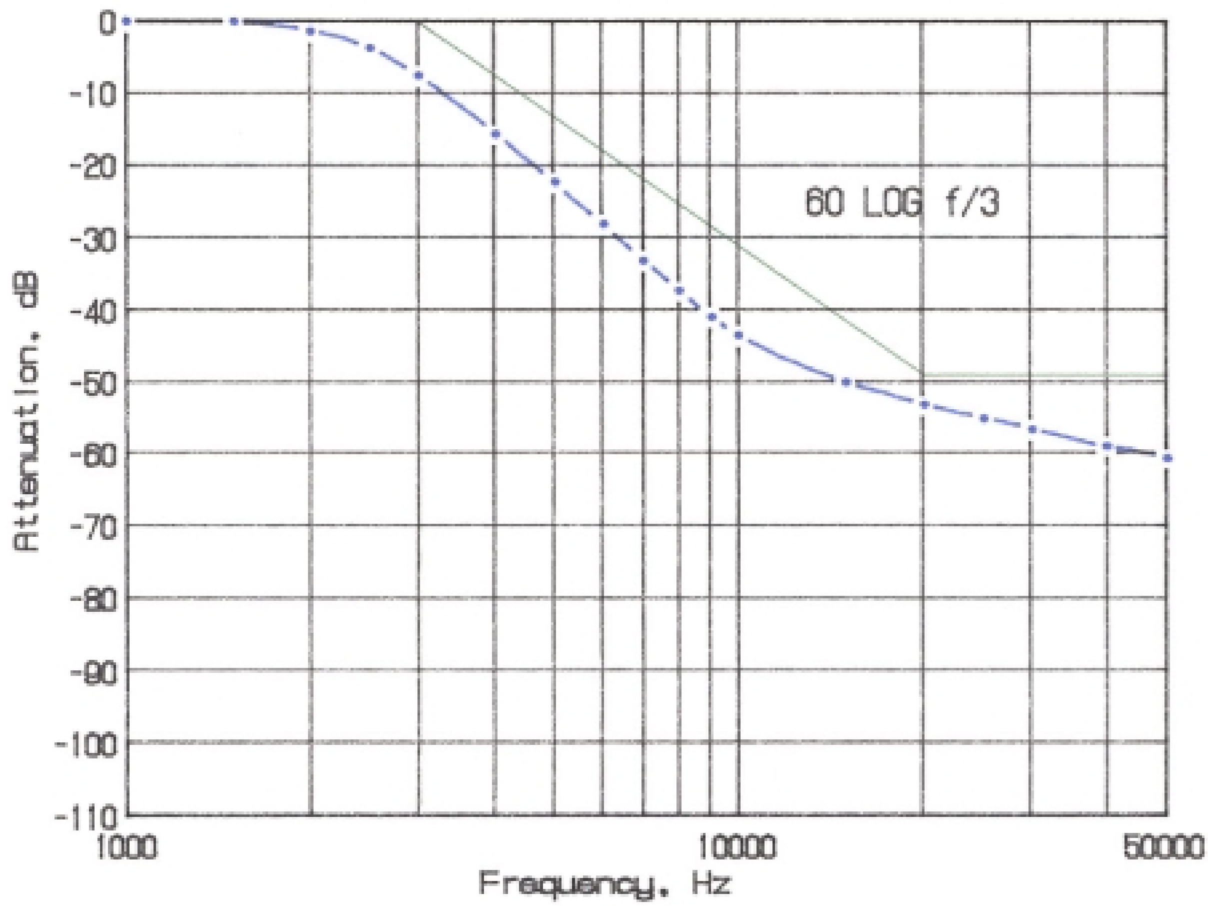


AUDIO LIMITER CHARACTERISTICS
FCC ID: ONKARH-465

FIGURE 2

FIGURE 3

AUDIO LOW PASS FILTER RESPONSE

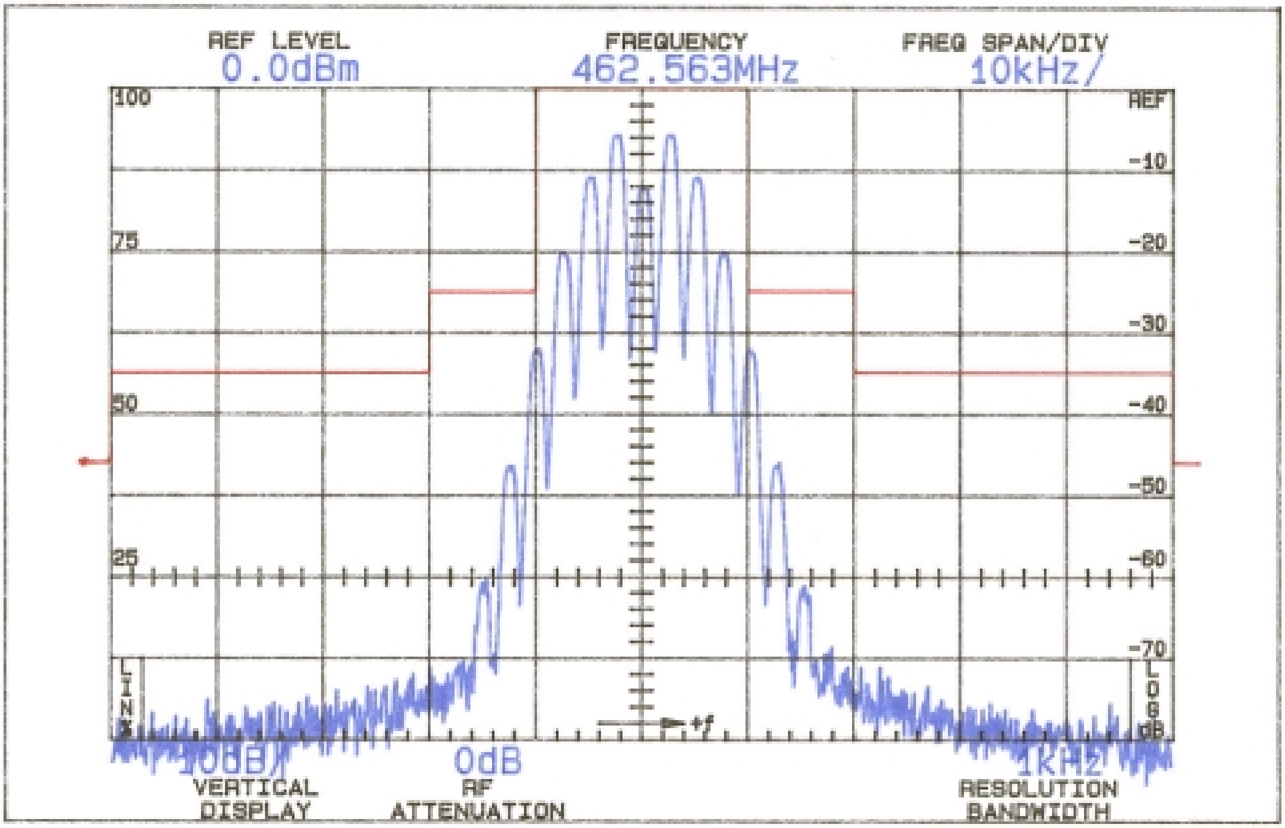


AUDIO LOW PASS FILTER RESPONSE
FCC ID: ONKARH-465

FIGURE 3

FIGURE 4

OCCUPIED BANDWIDTH



	ATTENUATION IN dB BELOW MEAN OUTPUT POWER Required
On any frequency more than 50% up to and including 100% of the authorized bandwidth, 20 kHz (10-20 kHz)	25
On any frequency more than 100%, up to and including 250% of the authorized bandwidth (20-50 kHz)	35
On any frequency removed from the assigned frequency by more than 250% of the authorized bandwidth (over 50 kHz)	43+10LogP = 46 (P = 2.0W)

OCCUPIED BANDWIDTH
FCC ID: ONKARH-465

FIGURE 4

E. SPURIOUS EMISSIONS AT THE ANTENNA TERMINALS
(Paragraph 2.991 of the Rules)

The ARH-465 transmitter was tested for spurious emissions at the antenna terminals while the equipment was modulated with a 2500 Hz signal, 16 dB above minimum input signal for 50% (2.5 kHz deviation) modulation at 2186 Hz, the frequency of highest sensitivity.

Measurements were made with Tektronix 494P spectrum analyzer coupled to the transmitter output terminal through Narda 765-20 microwave power attenuator.

During the tests, the transmitter was terminated in the 50 ohm attenuator. Power was monitored on a Bird 43 Thru-Line wattmeter; dc supply was 7.5 volts throughout the tests.

Spurious emissions were measured throughout the RF spectrum from 12.8 MHz (lowest frequency generated in the transmitter) to 4.7 GHz. Any emissions that were between the required attenuation and the noise floor of the spectrum analyzer were recorded. Data are shown in Table 1.

TABLE 1

TRANSMITTER CONDUCTED SPURIOUS
462.5625 MHz, 7.5 Vdc, 2.0 W

Spurious Frequency MHz	dB Below Carrier Reference
925.126	72
1387.689	92
1850.252	82
2312.815	94
2775.378	98
3237.941	>100
3700.504	>100
4163.067	92
4625.630	>100
Required: 43+10Log(P)	47

All other emissions from 12.8 MHz to 4.7 GHz were 20 dB or more below FCC limit.

F. DESCRIPTION OF MEASUREMENT FACILITIES

A description of the Hyak Laboratories' radiation test facility is a matter of record with the FCC. The facility was approved for radiation measurements from 25 to 1000 MHz on October 1, 1976 and is currently listed as an acceptable site.

G. FIELD STRENGTH MEASUREMENTS OF SPURIOUS RADIATION

Field intensity measurements of radiated spurious emissions from the ARH-465 were made with a Tektronix 494P spectrum analyzer using Singer DM-105A calibrated test antennae for the measurements to l GHz, and EMCO 3115 horn from 1 GHz to 5 GHz.

The transmitter with the normally supplied antenna was located in an open field 3 meters from the test antenna. Supply voltage was a power supply with a terminal voltage under load of 7.5 Vdc. Output power was 2.0 watts (conducted) at the 462.5625 MHz operating frequency. The transmitter and test antenna were arranged to maximize pickup. Both vertical and horizontal test antenna polarization were employed.

TABLE 2

TRANSMITTER CABINET RADIATED SPURIOUS
462.5625 MHz, 7.5 Vdc, 2.0 Watts

Frequency MHz	Field Intensity uV/m @ 3 M	dB Below Carrier Reference[1]
462.565	3046176	0
925.127	2504	62V
1387.690	246	82V
1850.258	72	93V
2312.823	80	92V

2775.387	80	92V
3237.952	108	89H
3700.516	89	91V
4163.081	128	88V
4625.645	66	93V

Required: 43+10Log(2.0) = 46

[1]Worst-case polarization, H-Horizontal, V-Vertical.

*Reference data only, more than 20 dB below FCC limit.

All other spurious from 12.8 MHz to 4.7 GHz were 20 dB or more below FCC limit.

E.R.P. (dipole):

$$P = (F.I.x3)^2/49.2$$
$$= (3.04x3)^2/49.2$$
$$= 1.7\ W$$

H. FREQUENCY STABILITY
(Paragraph 2.995(a)(2) and 95.621(b) of the Rules)

Measurement of frequency stability versus temperature was made at temperatures from -30°C to +50°C. At each temperature, the unit was exposed to test chamber ambient a minimum of 60 minutes after indicated chamber temperature ambient had stabilized to within ±2° of the desired test temperature. Following the 1 hour soak at each temperature, the unit was turned on, keyed and frequency measured within 2 minutes. Test temperature was sequenced in the order shown in Table 3, starting with -30°C.

A Thermotron S1.2 temperature chamber was used. Temperature was monitored with a Keithley 871 digital temperature probe. The transmitter output stage was terminated in a dummy load. Primary supply was 7.5 volts. Frequency was measured with a HP 5385A digital frequency counter connected to the transmitter through a power attenuator. Measurements were made at 462.5625 MHz. No transient keying effects were observed.

TABLE 3

462.5625 MHz, 7.5 V Nominal, 2.0 watts

Temperature, °C	Output_Frequency,_MHz	p.p.m.
-29.6	462.560269	-4.8
-19.7	462.561334	-2.5
-10.2	462.561838	-1.4
0.7	462.562738	0.5
10.5	462.563103	1.3
20.5	462.562870	0.8
30.6	462.562471	-0.1
40.4	462.562227	-0.6
50.4	462.562283	-0.5

Maximum frequency error: 462.560269
462.562500

- .002231 MHz

FCC Rule 95.621(b) specifies .0005% or a maximum of ± .002313 MHz, which corresponds to:

High Limit	462.564813 MHz
Low Limit	462.560187 MHz

I. FREQUENCY STABILITY AS A FUNCTION OF SUPPLY VOLTAGE
(Paragraph 2.995(d)(2) of the Rules)

Oscillator frequency as a function of power supply voltage was measured with a HP 5385A digital frequency counter as supply voltage provided by an HP 6264B variable dc power supply was varied from ±15% above the nominal 7.5 volt rating to below the battery end point. A Keithley 197 digital voltmeter was used to measure supply voltage at transmitter primary input terminals. Measurements were made at 20 o^{C} ambient.

TABLE 4

462.5625 MHz, 20°C, 7.5 V Nominal, 2.0 watts

%	Supply_Voltage	Output_Frequency,_MHz	p.p.m.
115	8.63	462.563093	1.3
110	8.25	462.563015	1.1
105	7.88	462.562939	0.9
100	7.50	462.562870	0.8
95	7.13	462.562809	0.7
90	6.75	462.562763	0.6
85	6.38	462.562730	0.5
*	6.00	no output	N/A

Maximum frequency error: 462.563093
462.562500

*Low Battery CPU shut-down + .000593 MHz

FCC Rule 95.621(b) specifies .0005% or a maximum of ±.002313 MHz, corresponding to:

High Limit 462.564813 MHz
Low Limit 462.560187 MHz

APPENDIX 1

FUNCTION OF DEVICES

No	Parts Name	Specifications	Maker	Q'ty	Descriptions
01	Cap.Tantal,SMD	25MCS105M	Marcon	7	EC5,8,9,14,16,19,24
02	Cap.Tantal,SMD	16MCM106M-	Marcon	13	EC2,3,4,6,7,10,11,13,17,20,21 23,25
03	Cap.Tantal,SMD	16MCM476M	Marcon	2	EC1,15
04	CAP-CER,1608	GRM39COG0R5C50	MURATA	2	C103,133
05	CAP-CER,1608	GRM39COG010C50	MURATA	2	C156,159
06	CAP-CER,1608	GRM39COG020C50	MURATA	5	C10,152,157,158,160
07	CAP-CER,1608	GRM39COG030C50	MURATA	6	C117,125,132,153,154,161
08	CAP-CER,1608	GRM39COG040C50	MURATA	3	C3,4,118
09	CAP-CER,1608	GRM39COG050C50	MURATA	2	C12,105
10	CAP-CER,1608	GRM39COG070D50	MURATA	2	C101,167
11	CAP-CER,1608	GRM39COG080D50	MURATA	3	C116,127,129
12	CAP-CER,1608	GRM39COG100D50	MURATA	5	C102,104,134,139,168
13	CAP-CER,1608	GRM39COG120J50	MURATA	1	C130

14	CAP-CER,1608	GRM39COG150J50	MURATA	6	C110,121,126,163,170,172
15	CAP-CER,1608	GRM39COG180J50	MURATA	1	C141
16	CAP-CER,1608	GRM39COG220J50	MURATA	1	C124
17	CAP-CER,1608	GRM39COG270J50	MURATA	4	C11,16,262,263
18	CAP-CER,1608	GRM39COG470J50	MURATA	2	C205,115
19	CAP-CER,1608	GRM39COG101J50	MURATA	5	C106,109,180,201,223
20	CAP-CER,1608	GRM39COG221J50	MURATA	4	C140,150,207,208
21	CAP-CER,1608	GRM39X7R102K50	MURATA	50	C6,7,8,9,14,108,111,113,119, 120,122,123,128,138,144,145, 146,148,155,162,169,171,173, 174,175,211,212,213,214,216, 226,229,231,237,240,246,249, 251,252,253,254,255,256,257, 258,259,260,264,561,562
22	CAP-CER,1608	GRM39X7R122K50	MURATA	2	C232,234
23	CAP-CER,1608	GRM39X7R332K50	MURATA	3	C228,238,241
24	CAP-CER,1608	GRM39X7R472K50	MURATA	3	C210,233,235,
25	CAP-CER,1608	GRM39X7R103K50	MURATA	3	C135,136,245
26	CAP-CER,1608	GRM39X7R473K50	MURATA	3	C236,239,242
27	CAP-CER,1608	GRM39Y5V104Z25	MURATA	14	C1,112,114,147,204,206,215, 224,225,247,248,250,261,506,
28	CAP-CER,1608	GRM39Y5V224Z25	MURATA	3	C15,137,230
29	CAP-CER,1608	GRM39Y5V474Z25	MURATA	6	C17,202,203,243,244,570
30	RES,CF,5%,SMD	CR1/16W000JV	HANRYUK	7	R24,46,116,138,141,608,615
31	RES,CF,5%,SMD	CR1/16W4R7JV	HANRYUK	2	R14,522
32	RES,CF,5%,SMD	CR1/16W220JV	HANRYUK	8	R4,10,33,35,63,87,109,117
33	RES,CF,5%,SMD	CR1/16W470JV	HANRYUK	4	R25,74,106,107
34	RES,CF,5%,SMD	CR1/16W101JV	HANRYUK	8	R37,61,75,77,101,104,108,613
35	RES,CF,5%,SMD	CR1/16W221JV	HANRYUK	4	R102,573,574,575
36	RES,CF,5%,SMD	CR1/16W331JV	HANRYUK	3	R23,45,94
37	RES,CF,5%,SMD	CR1/16W471JV	HANRYUK	5	R50,59,85,89,129
38	RES,CF,5%,SMD	CR1/16W681JV	HANRYUK	2	R78,137
39	RES,CF,5%,SMD	CR1/16W102JV	HANRYUK	5	R13,54,64,65,115
40	RES,CF,5%,SMD	CR1/16W182JV	HANRYUK	5	R27,31,69,70,119
41	RES,CF,5%,SMD	CR1/16W332JV	HANRYUK	6	R1,52,53,68,118,517
42	RES,CF,5%,SMD	CR1/16W472JV	HANRYUK	10	R7,42,51,67,91,95,100,121, 124,201
43	RES,CF,5%,SMD	CR1/16W682JV	HANRYUK	3	R44,113,128
44	RES,CF,5%,SMD	CR1/16W103JV	HANRYUK	14	R3,6,9,11,15,19,41,62,71,84, 92,93,99,135
45	RES,CF,5%,SMD	CR1/16W153JV	HANRYUK	5	R43,58,86,136,519
46	RES,CF,5%,SMD	CR1/16W223JV	HANRYUK	12	R18,55,56,72,73,90,97,122, 123,125,126,127
47	RES,CF,5%,SMD	CR1/16W303JV	HANRYUK	1	R36
48	RES,CF,5%,SMD	CR1/16W333JV	HANRYUK	5	R20,21,132,133,516
49	RES,CF,5%,SMD	CR1/16W473JV	HANRYUK	6	R2,38,57,82,103,120
50	RES,CF,5%,SMD	CR1/16W104JV	HANRYUK	11	R8,16,17,39,66,88,114,130, 139,142,143,518
51	RES,CF,5%,SMD	CR1/16W224JV	HANRYUK	4	R5,30,79,611
52	RES,CF,5%,SMD	CR1/16W474JV	HANRYUK	3	R12,28,80
53	RES,CF,5%,SMD	CR1/16W105JV	HANRYUK	1	R81
54	RES,CF,5%,SMD	CR1/16W155JV	HANRYUK	3	R131,134,568
55	RES,CF,1%,SMD	100KOHm, 1%	HANRYUK	2	R40,569
56	Chip Coil,J,0805	0805AS-8N2J-01	FASTRON	1	L11
57	Chip Coil,J,0805	0805AS-015J-01	FASTRON	4	L5,10,14,15
58	Chip Coil,J,0805	0805AS-022J-01	FASTRON	1	L12
59	Chip Coil,J,0805	0805AS-R33J-01	FASTRON	3	L1,7,17
60	Chip Coil,J,0805	FSLU2520-3R3	TOKO	2	L16,18
61	Chip Coil,J,1608	LL1608-FH27NJ	TOKO	3	L13,21,100
62	Coil,air,SMD,11n	0.5-1.4-3TL	STEWART	2	L8,19
63	Coil,air,SMD,23n	0.45-1.5-5TL	STEWART	3	L2,3,4

64	Coil,air,SMD,26n	0.45-1.4-6TL	STEWART	2	L6,9
65	DIODE,SW,SMD	KDS226	KEC	1	D10
66	DIODE,SW,SMD	KDS114	KEC	1	D8
67	DIODE,SW,SMD	KDS120	KEC	3	D2,104,106
68	DIODE,RE,SMD	SIG		2	D3,101
69	DIODE,PIN,SMD	MMBV3401L	MOT	2	D105,201
70	DIODE,VVC	KDV154	KEC	3	D102,103,120
71	DIODE,PIN,SMD	MA862	PANASON	1	D6
72	LED-LAMP,RED	SLSNNUR101TS	SS	1	LED3
73	LED-LAMP,GRN	SLSNNYG101TS	SS	1	LED2
74	LED-LCD,GRN	SLSNNYG401TM	SS	1	LED502
75	TR-SW,SMD	KRA302	KEC	10	Q1,3,4,9,13,15,17,35,36,602
76	TR-SW,SMD	KRC404	KEC	9	Q5,7,10,12,14,25,26,34,40
77	TR-SW,SMD	KTC4075	KEC	4	Q8,22,31,32
78	TR-SW,SMD	KTC4080	KEC	1	Q21
79	TR-SW,SMD	KRA225S	KEC	1	Q45
80	TR-SW,SMD	KTA2014	KEC	1	Q2
81	TR-SW,SMD	KTA1001	KEC	2	Q16,33
82	TR-RF,SMD	2SC4226R25	NEC	5	Q18,19,23,24,29
83	TR-RF,SMD	2SC3357	NEC	1	Q37
84	FET-RF,SMD	MRF9382TE	MOT	1	Q30
85	FET-RF,SMD	BF998RA(MOR)GS0812	TEMIC	1	Q20
86	IC,Ucom,OTP, 16K	HD4078812F	HITACHI	1	U2
87	IC,PLL,SMD	U2781B	TEMIC	1	U3
88	IC,SMD	S8110	SEICO	1	IC401
89	IC,IF-DET,SMD	TA31136FN	TOSHIBA	1	IC101
90	IC,AMP,SMD	NJM2073	JRC	1	U503
91	IC,Sub Audio,SMD	CMX808A	CML	1	U21
92	IC,REG,SMD	TK11250M	TOKO	2	REG1,REG2
93	IC,OP AMP,SMD	LM2902M	MOT/NS	1	U1
94	IC,EEPROM, SMD	AT24C02N-10SI-2.7	ATMEL	1	IC102
95	SAW FILTER	FO :447MHz	SS, DAEWOO	1	SAW1
96	OSC,XTAL,SMD	4.032M/16SX1 or 4.032M,HC-49S,SMD (32P,30ppm)	SUNNY CQ	1	X501
97	OSC,4ppm,SMD	12.8(-10~60/3ppm)	Nikko Den	1	X3
98	TACT-SW,SMD	EVQPJT05M	PANASON	1	SW502
99	SPEAKER	40 Pi, 16oHm,1W	GEUSAN	1	SP501
100	PCB	PMR446	Deamyung	1	
101	ANT	KEH-448S-AH3	GEUSAN	1	
102	ZEBRA,YI		POLY	1	
103	CERAMIC Filter	JTBM455C24	CQ	1	DISC2
104	OSC,XTAL	20.945M	SEIKO	1	X2
105	C-MIC,PCB	OB-27P44	Bosung	1	MIC501
106	Crystal Filter	21N08B5	Hz	1Pair	XCF1,XCF2
107	Ceramic Filter	LTM455HT	CQ	1	FL601
108	SP/MIC JACK	SHQ8405-010015	Hosiden	1	J501
109	LCD			1	LCD71

APPENDIX 2

CIRCUITS AND DEVICES TO STABILIZE FREQUENCY, SUPPRESS SPURIOUS EMISSIONS AND LIMIT MODULATION

One (1) PAGE THEORY OF OPERATION
FOLLOWS THIS SHEET

CIRCUITS AND DEVICES TO
STABILIZE FREQUENCY, etc.
FCC ID: ONKARH-465

APPENDIX 2

3. THERORY OF OPERATION

INTRODUCTION

ARH-465 is a micro size 15 channel portable FM transceiver constructed with a microprocessor controlled, temperature compensated Phase Locked Loop (PLL) frequency synthesizer. The radio features a double conversion receiver and a direct FM transmitter modulator. A special integrated circuit provides support to sub-audible signaling (CTCSS) and most of the receiving parts are switched off periodically in the power saver mode to reduce battery current drain during standby.

The Block Diagram RF and Control Circuit Diagrams for ARH-465 shall be used in associate with the following circuit description.

CIRCUIT DESCRIPTIONS

1) PHASE-LOCK LOOP (PLL) CIRCUIT

*** REFERENCE OSCILLATOR**

The reference oscillator consists of X3 in U3 with a frequency of 12.8MHz.
This comparison frequency is selected by decoding the first three bits of the data input from microcomputer.

*** PROGRAMMABLE DIVIDER**

The programmable divider in U3 consists of a prescaler with a 7 bit control register followed by a 11-bit internal programmable divider. The overall division ratio is selected by a single 19-bit world located on the serial data bus.

*** PHASE COMPARATOR**

A digital-type phase comparator in U3 with output and an open drain lock detect output compares divided VCO frequency with the comparison frequency. It generates a correction voltage that is applied to a low-pass filter consisting of R68, R69, R70 and C137, C136, C135, EC5 then sent to the VCO circuit.

*** VCO CIRCUIT**

The transmit/receive frequency is directly generated by the Colpitts oscillation circuit contains Q23. The oscillation frequency is variable by applying the VCO control voltage to variable to variable capacitors D103, D154. To switch between the transmit and receive frequencies, Q22 turn on oscillates when the T/R pin is low.

2) TRANSMITTER

*** MIC AMP CIRCUIT**

Voice signal from the microphone is applied to microphone amplifier U1. U1 contains a high-pass filter, low-pass filter that has a 6dB/oct response between 300Hz and 3 kHz,and eliminates hamonics above 3 kHz. The pre-emphasized audio signal is applied to Q10, 12, 14 to adjust maximum frequency deviation.

*** VCO AND AMPLIFIER**

The VCO signal output is fed through D6-½ to be amplified by Q18, Q37 and then fed to power amplifier Q30.

*** POWER AMPLIFIER CIRCUIT**

Q30 provides approximately 7.5V DC power source.
Q35 and Q36 adjust RF power output.
Signals from Q30 is supplied through antenna switch D201 to a low-pass filter made up of L2, L3, L4 and C1-C4, then applied to Antenna Jack.