REPORT ON
Radio testing of the STANDARD HORIZON GX1700
In accordance with ANSI/TIA/EIA-603-C, RSS-182

Report number YETA00332 December 2013

GENERAL INFORMATION

MODEL NAME:	GX1700	
FCC ID:	K6630483X3D	
IC:	511B-30483X3S	
MANUFACTURER:	YAESU MUSEN Co., Ltd.	
TRADE NAME:	STANDARD HORIZON	
EUT DESCRIPTION:	VHF FM Mobile Transceiver	
SERIAL NUMBER:	L63Q000001	
VOLTAGE RQUIREMENTS:	13.8 DC	[V]
NUMBER OF CHANNELS:	65	
SPECIFICATION ARE REFERENCED:	ANSI/TIA/EIA-603-C RSS-182	

TRANSMITTERS

TYPE OF EMISSION:	16K0G3E, 16K0G2B(for DSC)	
FREQUENCY RANGE:	156.05 to 157.43	[MHz]
POWER OUTPUT RATING:	1 to 25 x Switchable __ Variable __ N/A	[W]
MAXIMUM POWER RATING:	25	[W]
INPUT IMPEDANCE (MIC):	2000	[Ω]
OUTPUT IMPEDANCE (RF):	50	[Ω]
Collector Voltage:	13.8	[V]
Collector Current:	5	[A]

RECEIVERS

FREQUENCY RANGE:	156.050 to 163.475	[MHz]
INTERMEDIATE FREQUENCIES:	1st -21.7	[MHz]
	2nd -450	[kHz]
INPUT IMPEDANCE (RF):	50	[Ω]
OUTPUT IMPEDANCE (SP):	4	[Ω]
AUDIO OUTPUT POWER:	4.5	[W]

This report was prepared by YAESU MUSEN Co., Ltd.

Test performed by Takeshi Saito

Takeshi Saito

Engineering Division
YAESU MUSEN Co., Ltd.

Date: December 18, 2013

GX1700 Channel Settings

CH No.	Shown on LCD	Transmit Frequency [MHz]	Receive Frequency [MHz]	CH Spacing	Power	
					HI	LOW
1	CH16	156.800	156.800	25k	25W	1W
2	CH70	156.525	156.525	25k	25W	1W
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

NAME OF TEST: R.F. Power Output (Conducted)
SPECIFICATION: 47 CFR 2.1046 (a)
GUIDE: ANSI/TIA/EIA-603-C, Paragraph 2.2.1.2
TEST EQUIPMENT: As per attached page

MEASUREMENT PROCEDURE

1. The EUT was connected to a resistive coaxial attenuator of normal load impedance, and the modulated output powerwas measured by means of an R.F. power meter.

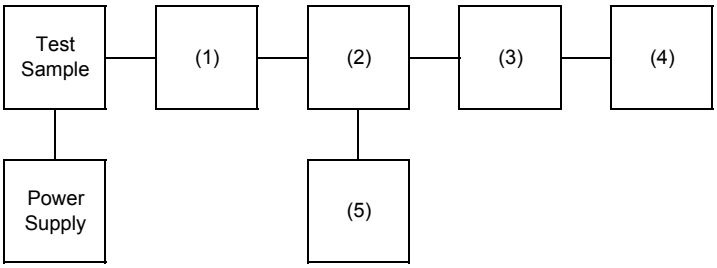
2. Measurement accuracy is ± 4%

MEASUREMENT RESULTS

NOMINAL, MHz	CHANNEL	R.F. POWER, WATTS	
		LOW	HIGH
156.800	16	0.9	24.7
156.525	70	0.9	24.5

TRANSMITTER POWER CONDUCTED MEASUREMENTS

TEST 1: R.F. POWER OUTPUT
TEST 2: FREQUENCY STABILITY



Instruments	Description
(1) COAXUAL ATTENUATOR	WEINSCHELL 49-10-43
(2) RF COUPLER	ADVANTEST TR4153
(3) POWER SENSOR	Agilent 8482B
(4) POWER METER	Agilent 8901B POWER MODE
(5) FREQUENCY COUNTER	Agilent 8901B FREQUENCY MODE

NAME OF TEST:	Unwanted Emissions (Conducted)
SPECIFICATION:	47 CFR 2.1051
GUIDE:	ANSI/TIA/EIA-603-C, Paragraph 2.2.13.2
TEST EQUIPMENT:	As per attached page

MEASUREMENT PROCEDURE

1. The emissions were measured for the worst case as follows:
   (a): within a band of frequencies defined by the carrier frequency plus and minus one channel.
   (b): from the lowest frequency generated in the EUT and to at least the 10th harmonic of the carrier frequency, or 40GHz, whichever is lower.

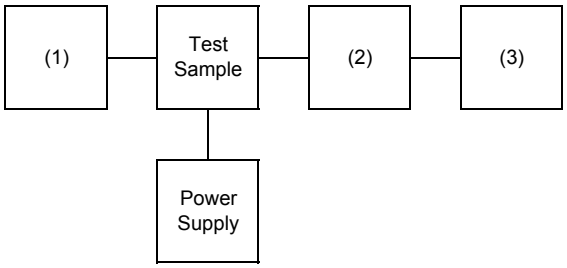
2. The magnitude of spurious emissions that are attenuated more than 20dB below the permissible value need not be specified.

3. MEASUREMENT RESULTS:

FREQUENCY OF CARRIER, MHz	=	156.8 , 156.525 , 0
SPECTRUM SEARCHED, GHz	=	0 to 10 x Fc
MAXIMUM RESPONSE, Hz	=	2900
ALL OTHER EMISSIONS	=	>= 20dB BELOW LIMIT

TRANSMITTER SPURIOUS EMISSION

TEST 1: OCCUPIED BANDWIDTH (IN-BAND SPURIOUS)
TEST 2: OUT-OF-BAND SPURIOUS



Instruments	Description
(1) AUDIO GENERATOR	Agilent 8903B
(2) COAXUAL ATTENUATOR	WEINSCHELL 49-10-43
(2) COAXUAL ATTENUATOR	Agilent 8498A
(3) SPECTRUM ANALYZER	ADVANTEST TR4173

NAME OF TEST: Unwanted Emissions (Conducted)

LIMIT'S), dBc: -(43+10xLOG(P)) = -57 (25 Watts)
-(43+10xLOG(P)) = -43 (1 Watts)

High Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB

measurements exceed the requirements by more than 20 dB

NAME OF TEST: Unwanted Emissions (Conducted)

LIMIT'S), dBc:	-(43+10xLOG(P))	=	-57	(25 Watts)
	-(43+10xLOG(P))	=	-43	(1 Watts)

Low Power

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, dBc	MARGIN, dB

measurements exceed the requirements by more than 20 dB

NAME OF TEST:	Field Strength of Spurious Radiation
SPECIFICATION:	47 CFR 2.1053 (a)
GUIDE:	ANSI/TIA/EIA-603-C, Paragraph 2.2.12.2

Please refer to the attachment measurement result and measurement methods about Field Strength of Spurious Radiation.

NAME OF TEST: Receiver Spurious Emissions (Conducted)
STATE: 0 : General
All other emissions in the required measurement range ware mora than 20dB below the required limits.

MEASUREMENT RESULTS

FREQUENCY TUNED, MHz	FREQUENCY EMISSION, MHz	LEVEL, dBm	LEVEL, nW
156.800	135.100	-68.2	0.1531

NAME OF TEST: Subpart T G3E Emissions
SPECIFICATION: 47 CFR 80.961 (a) & (b)

MEASUREMENT PROCEDURE

(a) The receiver is capable of reception of G3E Emissions on the required frequencires.

(b) The sensitivity of the receiver at 20dB SINAD is better than:

Sensitivity, dBm = -121.99
Sensitivity, uV = 0.178