

TIMCO ENGINEERING INC.  
849 STATE ROAD 45  
P.O. BOX 370  
NEWBERRY, FLORIDA 32669  
888-472 2424 OR 352 472 5500 FAX 352 472 2030  
e-mail: sharon@timcoengr.com

31 AUGUST 1999

TO: MR. JOE DICHOSO  
FCC

SUBJECT: FCCID: K66HX292UT

REFERENCE: EA94052

1. Attached you will find new schematics and block diagrams that have been enlarged to make them more readable.
2. Also I have enclosed new necessary bandwidth calculations based on the modulation plots for both the 25KHz channel spacing & the 12.5KHz channel spacing sent with the 22 July 1999 information.
3. The necessary bandwidth have been corrected so that the emission designator can be 16K0F3E & 11K0F3E accordingly.
4. Additionally I have been instructed to add FCC rules Parts 22,74,90, & 90.210 to the 731 form.
5. I have also enclosed a letter from the applicant that should cover the 90.203(g) requirements.

If you have any questions or require any further information, please advise.

Regards,

Sid Sanders

SAH/hs

F:\CUS\Y\YAE\YAE145\YAE145X9.RPT

TABLE OF CONTENTS LIST

APPLICANT: YAESU MUSEN CO., LTD.  
FCC ID: K66HX292UT

TEST REPORT:

PAGE 1.....COVER SHEET - GENERAL INFORMATION & TECHNICAL DESCR.  
PAGE 2.....TECHNICAL DESCRIPTION CONTINUED  
PAGE 3.....RF POWER OUTPUT  
PAGE 4.....MODULATION CHARACTERISTICS  
PAGE 5-6....OCCUPIED BANDWIDTH  
PAGE 7.....SPURIOUS EMISSIONS AT ANTENNA TERMINALS  
PAGE 8.....FIELD STRENGTH OF SPURIOUS EMISSIONS  
PAGE 9.....METHOD OF MEASURING RADIATED SPURIOUS EMISSIONS  
PAGE 10.....FREQUENCY STABILITY  
PAGE 11-12...TRANSIENT FREQUENCY STABILITY  
PAGE 13.....CERTIFICATION OF TECHNICAL DATA  
PAGE 14.....LIST OF TEST EQUIPMENT

EXHIBITS CONTAINING:

EXHIBIT 1.....POWER OF ATTORNEY LETTER  
EXHIBIT 2.....FCC ID LABEL SAMPLE  
EXHIBIT 3.....SKETCH OF FCC ID LABEL LOCATION  
EXHIBIT 4A-4B....EXTERNAL FRONT VIEW PHOTOGRAPHS  
EXHIBIT 4C-4D....EXTERNAL REAR VIEW PHOTOGRAPHS  
EXHIBIT 4E.....EXTERNAL TOP VIEW PHOTOGRAPH  
EXHIBIT 4F.....INTERNAL COMPONENT SIDE PHOTOGRAPH  
EXHIBIT 4G.....INTERNAL SOLDER SIDE PHOTOGRAPH  
EXHIBIT 5.....BLOCK DIAGRAM  
EXHIBIT 6.....PARTS LIST  
EXHIBIT 7.....SCHEMATICS  
EXHIBIT 8A-8D....USER'S MANUAL  
EXHIBIT 9A-9C....CIRCUIT DESCRIPTION  
EXHIBIT 10A-10C...TUNING PROCEDURE  
EXHIBIT 11.....AUDIO FREQUENCY RESPONSE GRAPH  
EXHIBIT 12A.....MODULATION LIMITING -25 kHz CH SPACING  
EXHIBIT 12B.....MODULATION LIMITING -12.5kHz CH SPACING  
EXHIBIT 13.....AUDIO LOW PASS FILTER GRAPH  
EXHIBIT 14.....OCCUPIED BANDWIDTH CW PLOT-25KHz CH  
EXHIBIT 15A.....OCCUPIED BANDWIDTH 2.5K TONE-25KHz PLOT  
EXHIBIT 15B.....OCCUPIED BANDWIDTH 2.5K+CTCSS TONE-25KHz PLOT  
EXHIBIT 16.....OCCUPIED BANDWIDTH CW PLOT-12.5KHz CH  
EXHIBIT 17A.....OCCUPIED BANDWIDTH 2.5K TONE-12.5KHz PLOT  
EXHIBIT 17B.....OCCUPIED BANDWIDTH 2.5K+CTCSS TONE-12.5KHz PLOT  
EXHIBIT 18A-18D...TRANSIENT FREQUENCY RESPONSE PLOTS

APPLICANT: YAESU MUSEN CO., LTD.  
FCC ID: K66HX292UT  
REPORT #: F:\CUS\Y\YAE\YAE145\YAE145X9.RPT  
PAGE: TABLE OF CONTENTS

GENERAL INFORMATION REQUIRED  
FOR TYPE ACCEPTANCE

2.983 (a,b,c) YAESU MUSEN CO., LTD. will sell the  
MODEL NO. K66HX292UT VHF transmitter in quantity,  
for use under FCC RULES PART 22 & 90.

2.983 (d) TECHNICAL DESCRIPTION

(1) Type of Emission: 16K0F3E For 25KHz  
11K0F3E For 12.5KHz

For 25KHz

$$B_n = 2M + 2DK$$

$$M = 3000$$

$$D = 4.8\text{KHz (Peak Deviation)}$$

$$K = 1$$

$$B_n = 2(3.0\text{K}) + 2(4.8\text{K})(1) = 6.0\text{K} + 9.6\text{K} = 15.6\text{K}$$

ALLOWED AUTHORIZED BANDWIDTH = 20.00KHz.

For 12.5KHz

$$B_n = 2M + 2DK$$

$$M = 3000$$

$$D = 1.8\text{KHz (Peak Deviation)}$$

$$K = 1$$

$$B_n = 2(3.0\text{K}) + 2(2.5\text{K})(1) = 6.0\text{K} + 5.0\text{K} = 11.0\text{K}$$

ALLOWED AUTHORIZED BANDWIDTH = 11.25KHz.

90.209(b)(5)

(2) Frequency Range: 148-174 MHz

(3) Power Range and Controls: There are NO user Power  
controls.

(4) Maximum Output Power Rating:  
5.0 & 1.0 Watts ,  
into a 50 ohm resistive load.

(5) DC Voltages and Current into Final Amplifier:

POWER INPUT

FINAL AMPLIFIER ONLY

$$V_{ce} = 7.2 \text{ Volts}$$

$$I_{ce} = 1.50\text{A.}$$

$$P_{in} = 10.8 \text{ Watts}$$

APPLICANT: YAESU MUSEN CO., LTD.

FCC ID: K66HX292UT

REPORT #: F:\CUS\Y\YAE\YAE145\YAE145X9.RPT

PAGE #: 1