FINAL TEST DATA

FOR

HARRIS FM TRANSMITTER

MODEL HT 30FM _____

MODEL HT 35FM ✓

Customer Name KRMP KVSP

OKLAHOMA CITY, OK

Customer Number 3706567

Impedances: RF 50 ohms; Audio 600/10K ohms

Frequency; 103.5 MHz

Power Out; 30,000 Watts

Line; 240 Volts 3 Phase 60 Hertz

Order # DG2-70 PRD0017462

Transmitter S/N PRD0035017000 1

DIGIT Exciter S/N PRD0037908 00017

Options: ANALOG I/O

RELEASED FOR SHIPMENT

Test Tech James A. Bailey Date 4-12-2004

Manufacturing Scott Wells Date 4/13/04

HT 30/35FM TEST DATA

I. INTERLOCKS :	CHECK
AIR	✓
FAULT	✓
MAIN CAB	✓
H.V. CAB	✓
EXT	✓
PHASE LOSS	✓

II. OVERLOADS :	CHECK
AFC	✓
IPA VSWR	✓
PA VSWR	✓
PA SCREEN	✓
PA PLT	✓
EXT	N/A
FILAMENT	✓

III. STATUS	CHECK
FAULT	✓
FAILSAFE	✓

IV. IPA OUTPUT POWER (BAR GRAPH DISPLAY)

FORWARD	550	WATTS
REFLECTED	0	WATTS

V. OUTPUT POWER (ANALOG METERS)

PLATE VOLTAGE	10.8	KV
PLATE CURRENT	3.40	Amperes
FORWARD	30,000	WATTS (100%)
VSWR	1.11:1	

VI. CONTROL SETTINGS

OUTPUT LOADING	0026.2	
PLATE TUNING	9	o'clock
GRID TUNING	0165.7	
INPUT MATCH	0011.7	

VII. MULTIMETER READINGS

BASIC READINGS

PLATE I	3.40	A
PLATE E	10.8	KVDC
SCREEN I	110	mA
SCREEN E	1042	VDC
FILAMENT	7.5	VAC
IPA FWD	550	W
IPA REF	0.0	W

VII. MULTIMETER READINGS (CONT.)

PA READINGS

PLATE E	10.8	KVDC
PLATE I	3.40	A
PLATE OVR	4.20	A
PA FWD	30.0	KW
APC PWR	30.0	KW
PA REF	.05	KW
PA OVR	1.20	KW
SCREEN E	1042	VDC
SCREEN I	110	mA
SCN OVLD	250	mA
GRID E	-478	VDC
GRID I	-144	mA
FILAMENT	7.6	VAC
INLET T	73	°F
STACK T	132	°F

IPA READINGS

IPA FWD	550	W
IPA REF	0.0	W
IPA OVR	65	W
IPA E	49.3	VDC
IPA I	16.7	A
IPA T	84	°F

VII. MULTIMETER READINGS (CONT.)

PREAMP READINGS

PREA PWR	23.0	W
PREAMP E	16.2	VDC
PREAMP I	2.2	A
PREA DRV	5.0	W

CONTROL STATUS

PHASE A	241	VAC
PHASE B	240	VAC
PHASE C	242	VAC
+5 SUPLY	5.0	VDC
+12	12.0	VDC
-12	-12.1	VDC
+10 REF	10.0	VDC
-10 REF	-10.0	VDC
TEMP	90	°F

IX. PA PLATE EFFICIENCY AT CUSTOMER OPERATING POWER

		Ip (A)	Ep (V)	Efficiency (%)
90%	27,000 W.	3.07	10,800	81.4
100%	30,000 W.	3.40	10,800	81.6
105%	31,500 W.	3.63	10,700	81.0

X. PA PLATE EFFICIENCY AT RATED POWER OUTPUT

POWER OUTPUT	IP	EP	EFF
30KW			
35KW ✓	3.42 A.	12,400 V.	82.5 %

XI. POWER INPUT

3 PHASE LINE VOLTAGE TO PA CABINET 241 / 241 / 241 VOLTS

3 PHASE LINE CURRENT TO PA CABINET 12.7 / 12.9 / 5.6 AMPS

3 PHASE VOLTAGE TO H.V. PWR. SUP. 241 / 241 / 241 VOLTS

3 PHASE LINE CURRENT TO H.V. PWR SUP 98 / 98 / 100 AMPS

AC SUPPLY LINE FREQUENCY 60 Hz.

XII. ADDITIONAL INFORMATION

Extended and Remote Controls Checked ✓.

700 WATT IPA S/N D8920

150 WATT PRE-AMP S/N 8767

PA TUBE S/N VCE103

CPU S/N S22682

SOFTWARE VERSION HT 1.0.2

XIII. TUBE SOCKET & CAVITY FD PARTS & DIMENSIONS

Pillars (4 used)

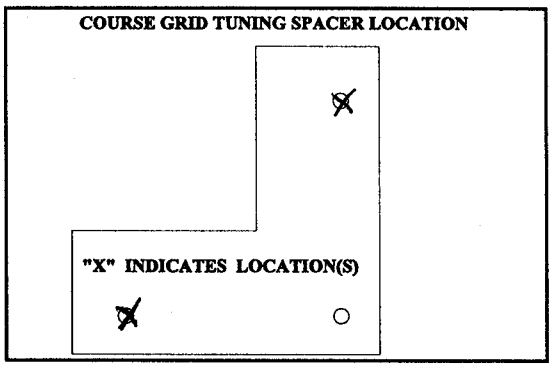
Location; Inner Circle 4 Outer Circle _____

Size .5 "dia.

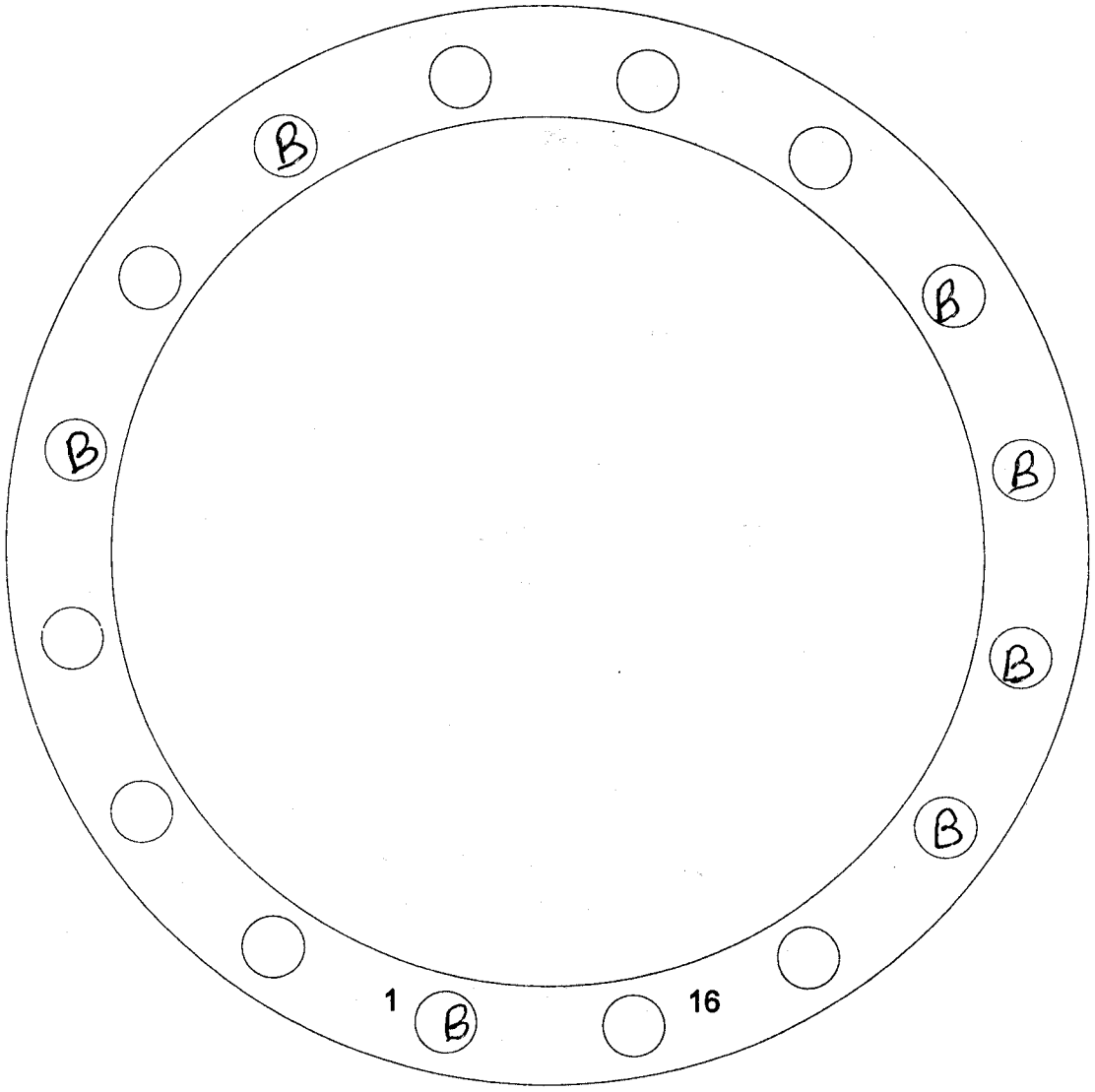
Spacers used (0 or 4) 0

Rings used (0 or 2 ea.) 0 each.

Cavity length set to 16 3/4 inches.



XI. SCREEN RING



REAR

A 1/2" Dia. Metal Spacer
B 1/4" Dia. Metal Spacer
C Non-Metallic Spacer with Nylon Screw
D Non-Metallic Spacer with Metal Screw
E Aluminum Block

HT 30/35FM-DIGIT WIDE BAND TEST DATA

SPECIFIED PERFORMANCE:	SPEC	MEASURED
1. CARRIER FREQUENCY	CUSTOMER ± 300 Hz	103,500,001Hz
2. EXCITER MULTIMETER		
FWD POWER (SET AT)	3W TO 55W	5.0 W
RFL POWER		0.1 W
PA AMPS		1.27 A
PA VOLTS		5.8 V
3. AUDIO INPUT LEVEL (± 75KHz DEV.)	3.5V PP	3.5V PP
4. WIDEBAND RESPONSE	≤ 0.2 dB	0.026 DB
@ 30Hz -0.003	@ 15KHz 0.0	
@ 1KHz 0.0 REF.	@ 53KHz -0.026	
5. F.M. NOISE	≤ -80dB	-88DB
6. A.M. NOISE		
ASYNCHRONOUS	≤ -55 dB	-61DB
SYNCHRONOUS	≤ -50 dB	-52 DB
7. I.M. DISTORTION (60/7000 Hz, 1:1, DE-EMP)	≤ 0.02%	.012%

HT 30/35FM/DIGIT MONAURAL TEST DATA

I. OPERATIONAL FUNCTIONS:

		CHECK
1. PRE-EMPHASIS (SET-AT)	FLAT	
	25US	
	50US	
	75US	✓

II. SPECIFIED PERFORMANCE:

1.	AUDIO LEVEL	+10 ± 1 dBm	+10 DBM
2.	AUDIO RESPONSE (SEE III.)	≤ 1.0 dB	0.084 DB
3.	AUDIO T.H.D. (MAX) (SEE III.)	≤ 0.15%	.14%
4.	I.M. DISTORTION	≤ 0.10%	.013%
5.	F.M. NOISE	≤ -80 dB	-88 DB

III. AUDIO RESPONSE AND T.H.D. DATA

FREQUENCY	RESPONSE	MONO THD	FREQUENCY	RESPONSE	MONO THD
30 Hz	-0.003	.011%	5,000 Hz	+0.078	.05%
100 Hz	-0.006	.011%	15,000 Hz	0.0	.14%
400 Hz	0.0 Ref	.012%			

HARRIS Communications
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INSTRUCTION BOOK ADDENDUM

Equipment: HT35CD **Serial No. PRD00350170001**
I.B. No. 988-2385-001

It has always been the policy of Harris Corporation, Broadcast Products Division, to give our customers the advantage of the latest product improvements. This addendum insures you that the latest improvements have been incorporated in your equipment. This way we can provide up to date information without a delay due to printing new instruction manuals.

Please make the necessary corrections as listed below. Please use ink for a permanent record.

This addendum may be removed after corrections have been made.
Thank you for your cooperation.

1. Filament voltage management.
    1. Transmitter operating at TPO.
    2. Power control in manual.
    3. Observe filament voltage via front panel multimeter..
       Filament voltage for first two hundred hours of operation on new tube should be maintained at 7.5 volts. After two hundred hours (note the power output) the filament voltage should be reduced gradually until power output begins to decrease. Increase voltage until previous TPO is reached (note filament voltage) and Increase voltage above this 0.1-0.2 volts. Do not decrease voltage to less than 6.5 volts. Disregard 5% below nominal recommendation as in bulletin AB-18.
2. Cable #271 (RG58) from 1J15 to 1J16 selected to 19.8125 inches.
3. Cable #233 (RG393) from 1A3J1 to 1A15J1 selected to 65.25 inches.
4. Six inches was added to P.N. 829-9135-442 between the Elbow and the RF Sample section of the RF Output Filter.