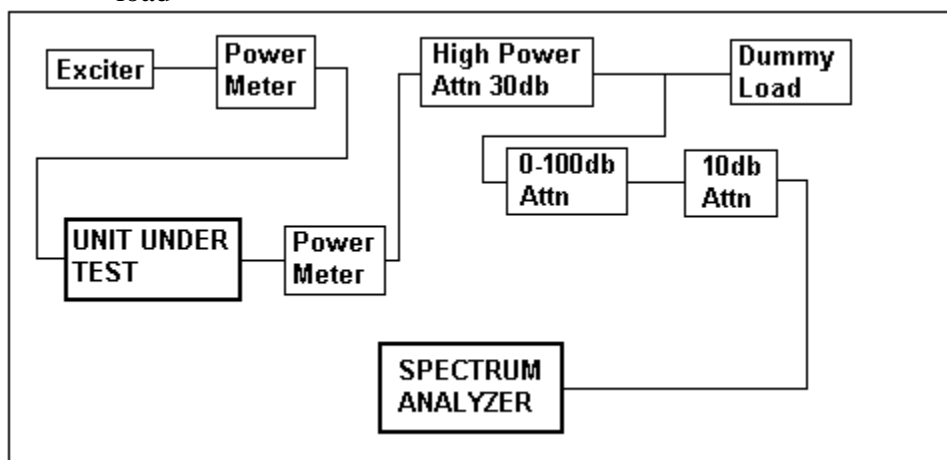


**TEST REPORT**  
**COMMAND TECHNOLOGIES Inc.**  
**HF-2500 MAGNUM Linear Power Amplifier**

**Equipment**

1. TenTec Paragon HF transceiver
2. Coaxial Dynamics Model 81000-A, S/N 1166 & 1167 wattmeter
3. Bird Tenuline Model 8329. S/N 695, 50 ohm power attenuator
4. Telonic Model TG950, S/N 2426A, step attenuator
5. Harris Model 992-4548-00, S/N 3473-11, fixed attenuator
6. Hewlett Packard Model 8591E, spectrum analyzer  
Calibration Date: 04-10-95
7. Bird Termaline Model 8251, S/N 695, 50 ohm "dummy load"



**Test Results**

Two prototype units were tested using the listed test equipment and configured according to the test equipment interconnection block diagram. Both units displayed nearly identical performance. Tests were performed on all amateur radio bands at 1500 watts output level. All spurious and harmonic radiation measured at least -60 db down from fundamental output. IMD products were at -35 db using a two-tone test. The frequency spectrum was investigated up to 1,000 MHz. No harmonic radiation exceeded the 50 milliwatt limitation. Spectrum analyzer plots have been furnished to verify this.

Tests were also performed from 24.00 MHz to 26.00 MHz and 28.00 MHz to 35.00 MHz. The output did not exceed the 6 db gain limitation. Also, tests were conducted from 26.00 MHz to 28.00 MHz. No amplification <0 db gain> was detected.

### 160 Meter Band

Frequency:	1.80 MHz	1.90 MHz	2.00 MHz
Input Power:	50 watts to 60 watts nominal		
Plate Voltage:	3,200 v	3,200 v	3,200 v
Plate Current:	750 mA	750 mA	750 mA
Grid Current:	40 mA	50 mA	35 mA
Grid Bias:	8.2 v	8.2 v	8.2 v
Power Output:	1,500 watts	1,500 watts	1,500 watts
2 <sup>nd</sup> Harmonic:	-45 db	-45 db	-45 db
3 <sup>rd</sup> thru 10 <sup>th</sup> Harmonic:	Greater than -60 db down		

### 80 Meter Band

Frequency:	3.60 MHz	3.80 MHz	4.00 MHz
Input Power:	50 watts to 60 watts nominal		
Plate Voltage:	3,200 v	3,200 v	3,200 v
Plate Current:	750 mA	750 mA	750 mA
Grid Current:	35 mA	35 mA	35 mA
Grid Bias:	8.2 v	8.2 v	8.2 v
Power Output:	1,500 watts	1,500 watts	1,500 watts
2 <sup>nd</sup> Harmonic:	-48 db	-48 db	-48 db
3 <sup>rd</sup> thru 10 <sup>th</sup> Harmonic:	Greater than -60 db down		

### 40 Meter Band

Frequency:	7.00 MHz	7.15 MHz	7.30 MHz
Input Power:	50 watts to 60 watts nominal		
Plate Voltage:	3,200 v	3,200 v	3,200 v
Plate Current:	750 mA	750 mA	750 mA
Grid Current:	40 mA	50 mA	35 mA
Grid Bias:	8.2 v	8.2 v	8.2 v
Power Output:	1,500 watts	1,500 watts	1,500 watts
2 <sup>nd</sup> Harmonic:	-50 db	-50 db	-50 db
3 <sup>rd</sup> thru 10 <sup>th</sup> Harmonic:	Greater than -60 db down		

### 20 Meter Band

Frequency:	14.00 MHz	14.20 MHz	14.35 MHz
Input Power:	50 watts to 60 watts nominal		
Plate Voltage:	3,200 v	3,200 v	3,200 v
Plate Current:	750 mA	750 mA	750 mA
Grid Current:	30 mA	30 mA	30 mA
Grid Bias:	8.2 v	8.2 v	8.2 v
Power Output:	1,500 watts	1,500 watts	1,500 watts
2 <sup>nd</sup> Harmonic:	-48 db	-48 db	-48 db
3 <sup>rd</sup> thru 10 <sup>th</sup> Harmonic:	Greater than -60 db down		

### 17 Meter Band

Frequency:	18.068 MHz	18.11 MHz	18.168 MHz
Input Power:	50 watts to 60 watts nominal		
Plate Voltage:	3,200 v	3,200 v	3,200 v
Plate Current:	750 mA	750 mA	750 mA
Grid Current:	30 mA	30 mA	30 mA
Grid Bias:	8.2 v	8.2 v	8.2 v
Power Output:	1,500 watts	1,500 watts	1,500 watts
2 <sup>nd</sup> Harmonic:	-56 db	-56 db	-56 db
3 <sup>rd</sup> thru 10 <sup>th</sup> Harmonic:	Greater than -60 db down		

### 15 Meter Band

Frequency:	21.00 MHz	21.20 MHz	21.45 MHz
Input Power:	50 watts to 60 watts nominal		
Plate Voltage:	3,200 v	3,200 v	3,200 v
Plate Current:	750 mA	750 mA	750 mA
Grid Current:	30 mA	30 mA	30 mA
Grid Bias:	8.2 v	8.2 v	8.2 v
Power Output:	1,500 watts	1,500 watts	1,500 watts
2 <sup>nd</sup> Harmonic:	-56 db	-56 db	-56 db
3 <sup>rd</sup> thru 10 <sup>th</sup> Harmonic:	Greater than -60 db down		

### 24.00 MHz to 26.00 MHz

Frequency:	24.00 MHz	25.20 MHz	26.00 MHz
Input Power:	110 watts	110 watts	110 watts
Power Output:	450 watts	150 watts	25 watts
db Gain:	6 db	< 1 db	< 1 db

### 26.00 MHz to 28.00 MHz

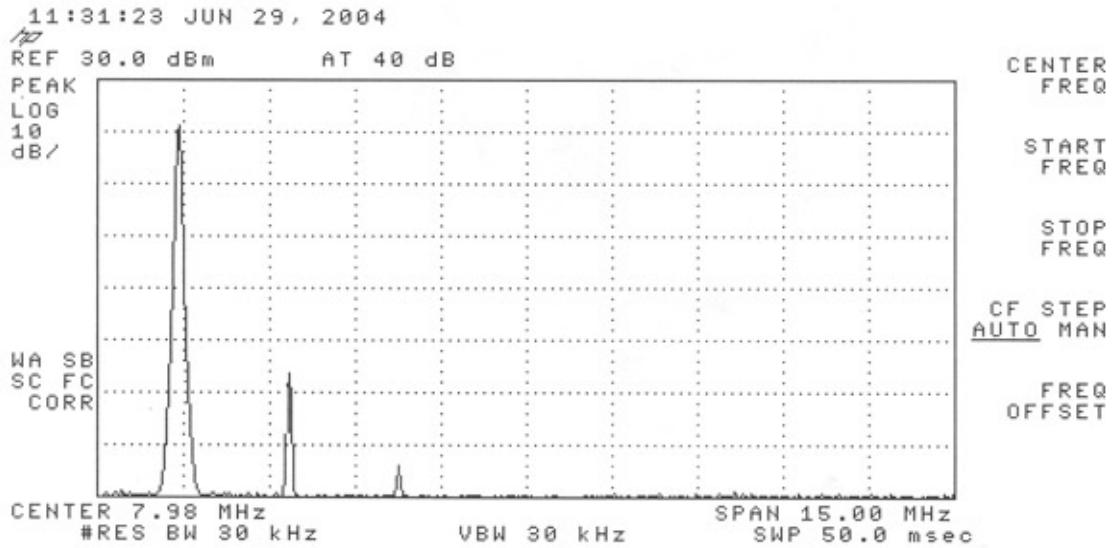
Frequency:	26.50 MHz	28.00 MHz
Input Power:	110 watts	110 watts
Power Output:	10 watts	5 watts
db Gain:	0 db	0 db

### 28.00 MHz to 35.00 MHz

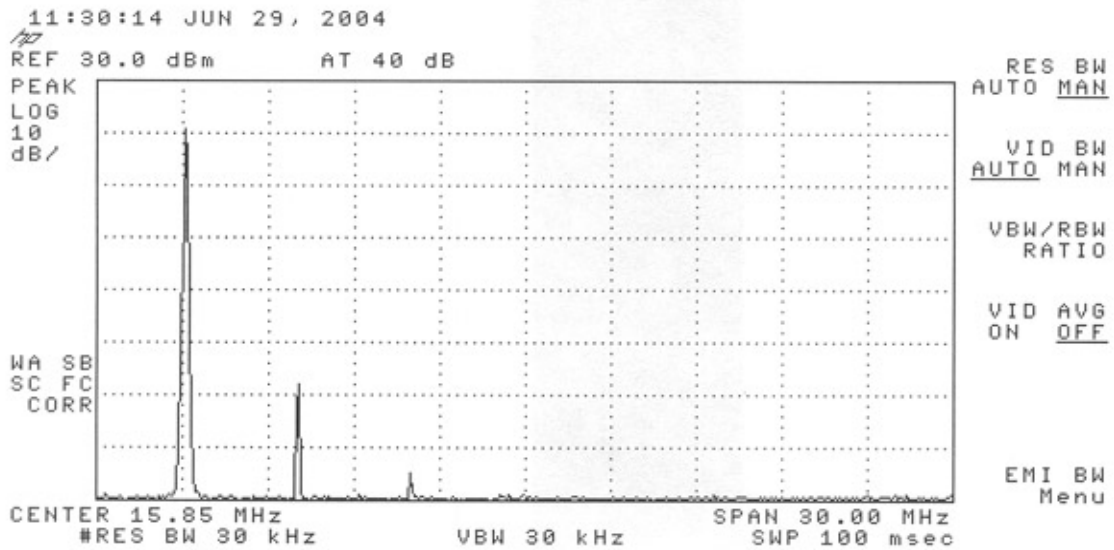
Frequency:	28.50 MHz	29.00 MHz
Input Power:	110 watts	110 watts
Power Output:	0 watts	0 watts
db Gain:	0 db	0 db

# Spectrum Analyzer

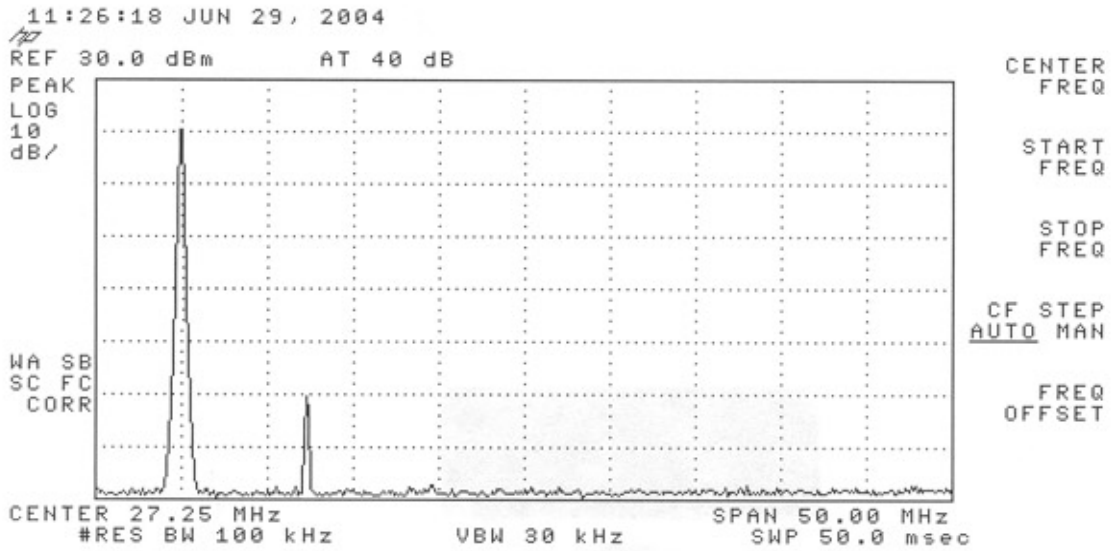
## 160 Meters



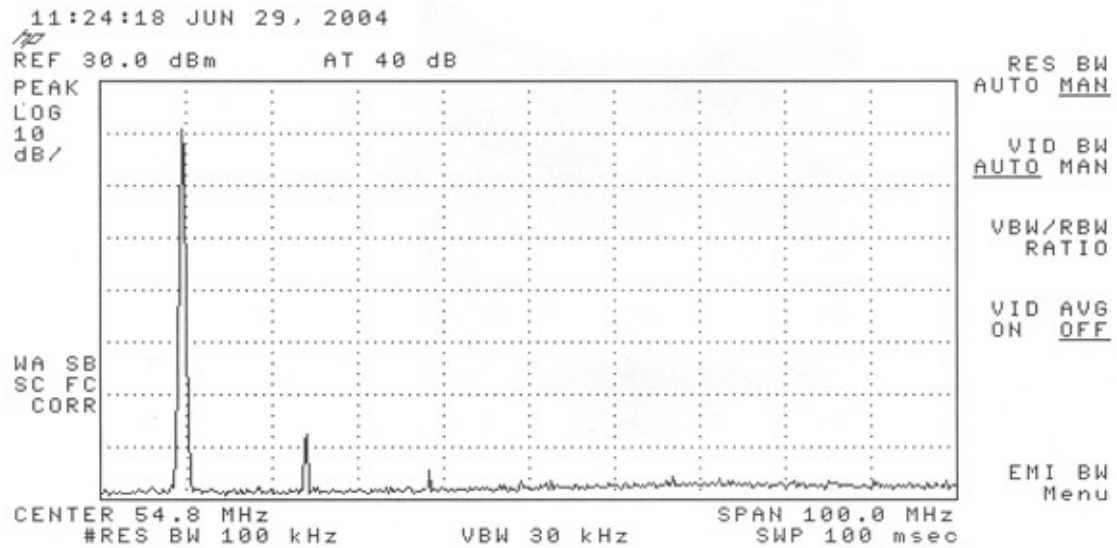
## 80 Meters



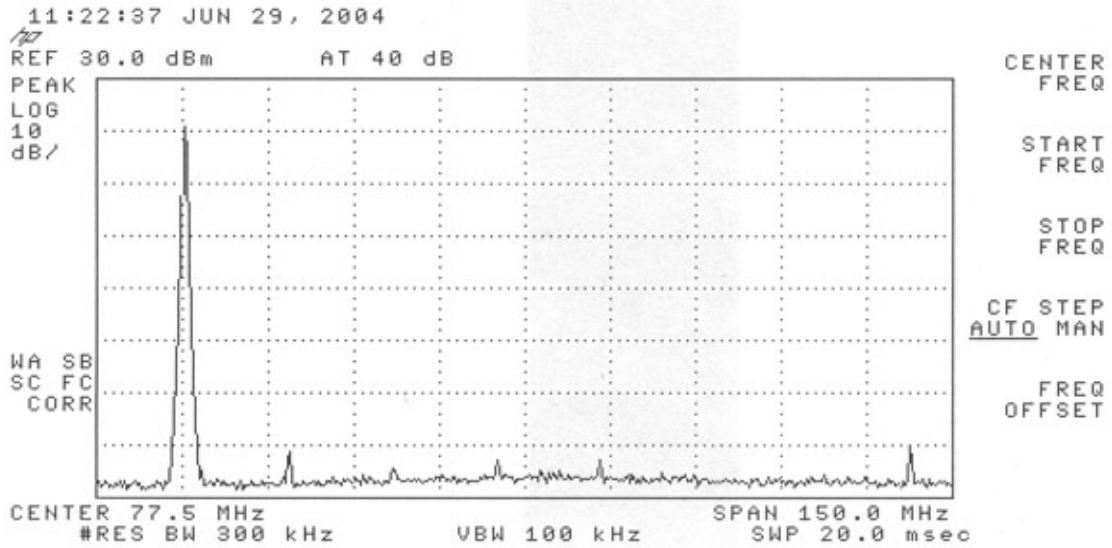
## 40 Meters



## 20 Meters



## 17 Meters



## 15 Meters

