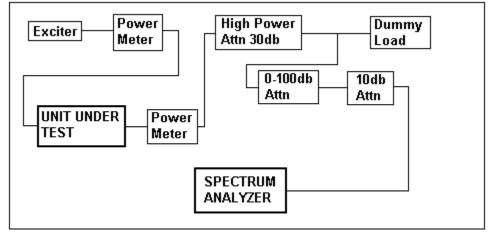
TEST REPORT COMMAND TECNOLOGIES Inc. HF-2500 MAGNUM Linear Power Amplifier

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.

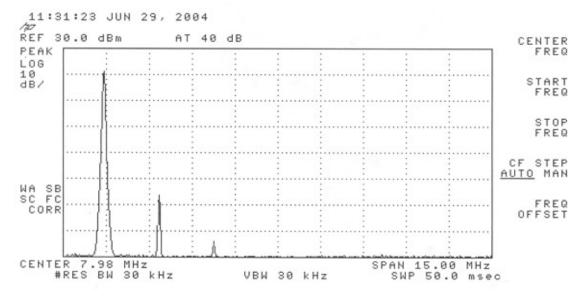
Tests were also performed from 24.00 MHz to 26.00 MHz and 28.00 MHz to 35.00 MHz. The output did not exceed the 6 db gain limitation. Also, tests were conducted from 26.00 MHz to 28.00 MHz. No amplification <0 db gain> was detected.

	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 nd Harmonic:	-45 db	-45 db	-45 db		
3 rd thru 10 th Harmonic:	Greater than -60 db down				
	80 Meter I	Rand			
Fraguency	3.60 MHz	3.80 MHz	4.00 MHz		
Frequency: Input Power:		s to 60 watts nominal	4.00 MINZ		
-	3,200 v	3,200 v	3,200 v		
Plate Voltage: Plate Current:	5,200 v 750 mA	5,200 V 750 mA	5,200 v 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^{nd} Harmonic:	-48 db	-48 db	-48 db		
3^{rd} thru 10^{th} Harmonic:		than -60 db down	-40 UU		
5 unu 10 marmonie.	Greater				
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 nd Harmonic:	1,500 watts -50 db	1,500 watts -50 db			
	1,500 watts -50 db	1,500 watts	1,500 watts		
2 nd Harmonic:	1,500 watts -50 db	1,500 watts -50 db than -60 db down	1,500 watts		
2 nd Harmonic:	1,500 watts -50 db Greater	1,500 watts -50 db than -60 db down	1,500 watts		
2 nd Harmonic: 3 rd thru 10 th Harmonic:	1,500 watts -50 db Greater 20 Meter I 14.00 MHz	1,500 watts -50 db • than -60 db down Band	1,500 watts -50 db		
2 nd Harmonic: 3 rd thru 10 th Harmonic: Frequency: Input Power: Plate Voltage:	1,500 watts -50 db Greater 20 Meter I 14.00 MHz	1,500 watts -50 db than -60 db down Band 14.20 MHz	1,500 watts -50 db		
2 nd Harmonic: 3 rd thru 10 th Harmonic: Frequency: Input Power:	1,500 watts -50 db Greater 20 Meter I 14.00 MHz 50 watts 3,200 v 750 mA	1,500 watts -50 db than -60 db down Band 14.20 MHz s to 60 watts nominal	1,500 watts -50 db 14.35 MHz		
2 nd Harmonic: 3 rd thru 10 th Harmonic: Frequency: Input Power: Plate Voltage: Plate Current: Grid Current:	1,500 watts -50 db Greater 20 Meter I 14.00 MHz 50 watts 3,200 v 750 mA 30 mA	1,500 watts -50 db than -60 db down Band 14.20 MHz s to 60 watts nominal 3,200 v 750 mA 30 mA	1,500 watts -50 db 14.35 MHz 3,200 v 750 mA 30 mA		
2 nd Harmonic: 3 rd thru 10 th Harmonic: Frequency: Input Power: Plate Voltage: Plate Current: Grid Current: Grid Bias:	1,500 watts -50 db Greater 20 Meter I 14.00 MHz 50 watts 3,200 v 750 mA	1,500 watts -50 db than -60 db down Band 14.20 MHz to 60 watts nominal 3,200 v 750 mA	1,500 watts -50 db 14.35 MHz 3,200 v 750 mA		
2 nd Harmonic: 3 rd thru 10 th Harmonic: Frequency: Input Power: Plate Voltage: Plate Current: Grid Current: Grid Bias: Power Output:	1,500 watts -50 db Greater 20 Meter I 14.00 MHz 50 watts 3,200 v 750 mA 30 mA 8.2 v 1,500 watts	1,500 watts -50 db t than -60 db down Band 14.20 MHz t to 60 watts nominal 3,200 v 750 mA 30 mA 8.2 v 1,500 watts	1,500 watts -50 db 14.35 MHz 3,200 v 750 mA 30 mA 8.2 v 1,500 watts		
2 nd Harmonic: 3 rd thru 10 th Harmonic: Frequency: Input Power: Plate Voltage: Plate Current: Grid Current: Grid Bias:	1,500 watts -50 db Greater 20 Meter I 14.00 MHz 50 watts 3,200 v 750 mA 30 mA 8.2 v 1,500 watts -48 db	1,500 watts -50 db t than -60 db down Band 14.20 MHz to 60 watts nominal 3,200 v 750 mA 30 mA 8.2 v	1,500 watts -50 db 14.35 MHz 3,200 v 750 mA 30 mA 8.2 v		

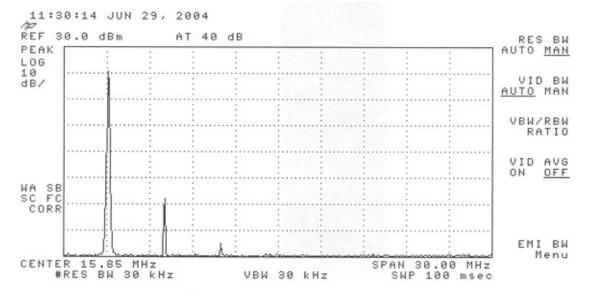
17 Meter Band				
Frequency:	18.068 MHz	18.11 MHz	18.168 MHz	
Input Power:	50 watts to 60 watts nominal			
Plate Voltage:	3,200 v	3,200 v	3,200 v	
Plate Current:	750 mA	750 mA	750 mA	
Grid Current:	30 mA	30 mA	30 mA	
Grid Bias:	8.2 v	8.2 v	8.2 v	
Power Output:	1,500 watts	1,500 watts	1,500 watts	
2 nd Harmonic:	-56 db	-56 db	-56 db	
3 rd thru 10 th 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 nd Harmonic:	-56 db	-56 db	-56 db	
3 rd thru 10 th Harmonic:	Greate	r 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

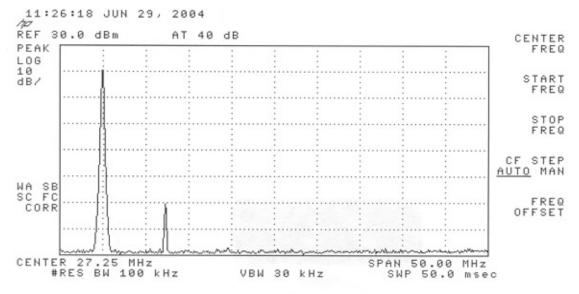
160 Meters



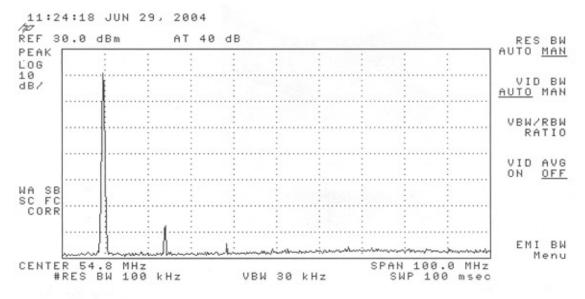
80 Meters



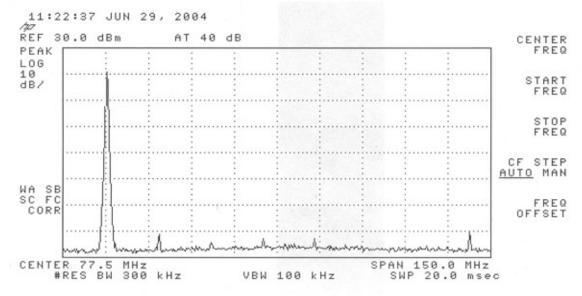




20 Meters



17 Meters



15 Meters

