

RF POWER AMPLIFIERS
SUPPLIED AROUND THE WORLD



TPL History

Since its founding over thirty five years ago, TPL Communications has lead the industry in developing and manufacturing RF Power Amplifiers that go beyond merely satisfying the requirements of its customers. This focus on providing the best solutions to any customer's application is embraced at all levels of the company. As a result, TPL has earned an excellent reputation as the premier manufacturer of RF Power Amplifiers.

In 2003, The Employees of TPL Communications purchased the company from its previous owners. As a result we have a personal commitment to expand the company's success and enhance our long tradition of excellence in products and service to our customers.

Located in Los Angeles, TPL can tailor any of its products to fit the customer's needs: from mass produced items to a single, specialized unit. This versatility ensures that every customer receives the exact type of equipment required to meet their specifications.

TPL's line contains a wide variety of products including:

Mobile Amplifiers
Base Station Amplifiers
Repeater Amplifiers
Cellular Amplifiers
Mobile Amplifier Chargers
Vehicular Battery Chargers

The demand for special types of amplifiers, including those needed for Homeland Security, continues to grow each year. To meet this demand, TPL employs experienced engineers and technical people to ensure delivery of the finest quality products.





TPL Communications has over 2,000 customers worldwide, and is proud to have several of the largest and most respected communications companies in the world as clients. These include:

*Motorola / Icom / Kenwood / BearCom /
Daniels Electronics / Relm / MIA-Com /
Harris / Boeing / Point Mugu /
E.F. Johnson / NASA*

Mission Statement

It is our mission to maintain an extremely efficient company, delivering high quality products, and generating growth and profitability, while providing impeccable service and best financial value to all customers.

In order to achieve this, we are as concerned with the welfare and satisfaction of our employees as with our customers.

The RXR Series amplifiers are our most popular cost effective, continuous duty power amplifiers. This package will accept any TPL amplifier from VHF Low Band through 960 MHz, with output levels up to 150 watts. The vertical fins provide excellent convection cooling, or if conditions warrant, a cooling fan will be installed. All configurations use 7" of vertical rack space and are designed with a flat front panel allowing for installation into a cabinet leaving sufficient room for airflow with the door closed. These amplifiers have a circuit breaker/on-off switch conveniently located on the front panel and can be supplied with or without a switching power supply. This series is the most versatile unit of its type on the market today.

SPECIFICATIONS

Power Input	Standard TPL amplifier input levels, optional 10mW or less.
Power Output	50 to 150 watts.
Frequencies	VHF Low Band, VHF High Band, 220 MHz, UHF, 700-960 MHz
Voltage	13.8 VDC, 120 or 240 VAC (24 VDC or 48 VDC available).
Current	5-24 Amps DC/1-4 Amps AC.
Harmonic Attenuation	Exceeds FCC specifications.
RF Connectors	Type N, 50 Ohms.
Operating Temperature	-30 to +50 degrees C.
Duty Cycle	Continuous (100%).
Weight	7 lbs., 14 lbs., w/power supply.
Dimensions	19" W x 7" H x 3" D (without fan), 19" W x 7" H x 5" D (with fan). 8" D w/power supply.

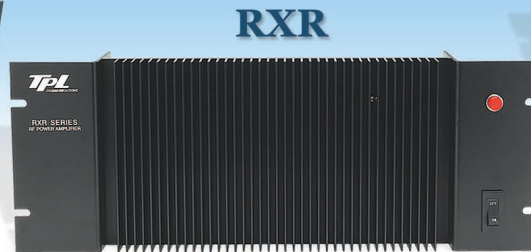
FEATURES

- Cooling fan provided for power levels exceeding 40 Watts for RS models, 75 Watts for RXR models.
- Accommodates all bands from 29.7 MHz to 960 MHz.
- Vertical fins for efficient convection cooling.
- 100% duty cycle operation.
- Repeater or base station operation (with bypass relay option).
- 19" rack mountable configuration.
- Available with or without self-contained switching power supply.
- Front panel circuit breaker/on-off switch.
- Flat front panel allows for cabinet door closure.
- Optional provision for battery backup.
- Cost effective design.

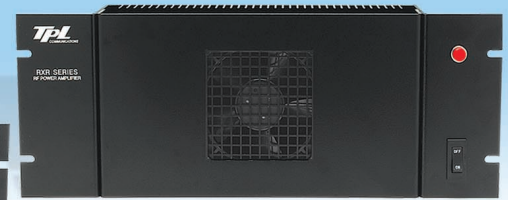
RF POWER AMPLIFIERS



RXRF-PS



RXR



RXRF

MODEL	POWER IN	POWER OUT	CURRENT DRAIN
VHF Low Band 29.7-50 MHz			
PA1-1AC-RS	1-4W	10-40W	8 Amps
PA1-1AC3-RS	2-8W	10-40W	8 Amps
PA1-1AE-RXRF	2-4W	60-100W	16 Amps
PA1-1BE-RXRF	4-8W	60-100W	16 Amps
PA1-1CE-RXRF	8-16W	60-100W	16 Amps
PA1-1DE-RXRF	20-40W	60-100W	16 Amps
PA1-1FE-RXRF	40-60W	60-100W	16 Amps
VHF Mid Band 66-88 MHz (For export only - Not FCC Certified)			
PA2-1AD-RXRF	1-4W	60-100W	14 Amps
PA2-1CD-RXRF	5-25W	40-100W	14 Amps
VHF High Band 136-174 MHz			
PA3-1AC-RSF	1-5W	10-45W	8 Amps
PA3-1AC3-RSF	2-8W	10-45W	8 Amps
PA3-1DC-RSF	8-15W	30-45W	6 Amps
*PA3-1EE-RXRF	50-250mW	90-150W	24 Amps
PA3-1AE-RXRF	1-2.5W	80-150W	20 Amps
PA3-1AE3-RXRF	2.5-5W	80-150W	20 Amps
PA3-1DE-RXRF	8-15W	80-150W	16 Amps
PA3-1FE-RXRF	15-25W	80-150W	14 Amps
PA3-1FE3-RXRF	25-50W	80-150W	14 Amps
PA3-2FF-RXHF3 (28 VDC)	8-15W	200-250W	18 Amps
PA3-2GF-RXHF3 (28 VDC)	20-70W	140-250W	18 Amps
UHF LOW Band 216-222 MHz			
PA4-1AE-RXRF	1-4W	70-100W	18 Amps
PA4-1BE-RXRF	8-15W	70-100W	14 Amps
UHF Band 400-512 MHz			
PA6-1AC-RSF	1-4W	10-50W	8 Amps
PA6-1AC3-RSF	2-8W	10-50W	8 Amps
PA6-1BC-RSF	8-15W	25-50W	7 Amps
*PA6-1EE-RXRF	50-250mW	75-100W	24 Amps
PA6-1AE-RXRF	1-3W	75-100W	20 Amps
PA6-1AE3-RXRF	3-6W	75-100W	20 Amps
PA6-1BE-RXRF	8-15W	75-100W	16 Amps
PA6-1FE-RXRF	15-30W	75-100W	15 Amps
UHF High Band 700-960 MHz			
PA7-2BE-RXRF (28 VDC)	8-15	70-100W	8 Amps
*PA8-1EB-RS	50-250mW	20-35W	8 Amps
PA8-1AA-RS	1-3W	10-20W	5 Amps
PA8-1AB-RS	1-5W	10-35W	7 Amps
*PA8-1ED-RXRF	50-250mW	50-80W	20 Amps
PA8-1AC-RXRF	1-5W	40-80W	16 Amps
PA8-1DD-RXRF	4-8W	40-80W	16 Amps
PA8-1FD-RXRF	15-30W	40-80W	12 Amps

*Input range must be specified at time of order.

The Smart SRXRF-PS amplifier contains all the features of our very popular RXR series of continuous duty power amplifiers. However, this new SMART unit has added features such as Controlled Output Level, Amplifier Protection, Local Failure Monitoring, and Outputs for Remote Monitoring. As with the RXR series, this amplifier will accept any TPL amplifier from VHF Low Band through 960 MHz, with output levels of up to 125 Watts. The unit uses 7" of vertical rack space and is designed for installation into a cabinet leaving sufficient room for airflow with the door closed. These amplifiers have a circuit breaker/on-off switch and five LED indicators, conveniently located on the front panel. Also, they are supplied with a self contained switching power supply. This is the most versatile unit of its type on the market today. Dimensions: 19" W x 7" H x 8" D. Wt. 15 lbs.

SPECIFICATIONS

Power Input	Standard TPL amplifier input levels, optional 10mW or less.
Power Output	75 to 125 watts.
Frequencies	VHF Low Band, VHF High Band, 220 MHz, UHF, 700-960 MHz
Voltage	120 or 240 VAC
Current	1-4 Amps AC.
Harmonic Attenuation	Exceeds FCC specifications.
RF Connectors	Type N, 50 Ohms.
Operating Temperature	-30 to +50 degrees C.
Duty Cycle	Continuous (100%).
Weight	15 lbs.
Dimensions	19" W x 7" H x 8" D

FEATURES

- Accommodates all bands from 29.7 MHz to 960 MHz
- Feedback Controlled Output Level.
- VSWR and Over Temperature Protection (Power Reduction)
- Local Failure Monitoring.
- LED indicators for:
 - DC ON
 - RF ON
 - VSWR
 - LOW POWER
 - OVER TEMPERATURE
- Forced air cooling
- 100% duty Cycle
- Repeater or Base Station operation (with bypass relay option).
- Front panel circuit breaker/on-off switch.
- Flat front panel allows for cabinet door closure.
- Cost effective design.

RF POWER AMPLIFIERS

SMART RXR



MODEL	POWER IN	NOMINAL POWER OUT
VHF LOW BAND 29.7-50 MHz		
PA1-1AE-SRXRF-PS	4-6W	100W
PA1-1BE-SRXRF-PS	6-10W	100W
PA1-1CE-SRXRF-PS	12-20W	100W
PA1-1DE-SRXRF-PS	25-40W	100W
PA1-1FE- SRXRF-PS	40-60W	100W
VHF MID BAND 66-88 MHz - (For export only - Not FCC Certified)		
PA2-1AD-SRXRF-PS	2-6W	100W
PA2-1CD-SRXRF-PS	20-30W	100W
VHF HIGH BAND 136-174 MHz		
PA3-1EE-SRXRF-PS	50-250mW	125W
PA3-1AE-SRXRF-PS	1-3W	125W
PA3-1AE3-SRXRF-PS	2-6W	125W
PA3-1DE-SRXRF-PS	8-15W	125W
PA3-1FE- SRXRF-PS	20-30W	125W
UHF LOW BAND 216-222 MHz		
PA4-1AE-SRXRF-PS	1-3W	100W
PA4-1AE3-SRXRF-PS	2-6W	100W
PA4-1BE-SRXRF-PS	5-10W	100W
PA4-1FE-SRXRF-PS	15-25W	100W
UHF 400-512 MHz		
PA6-1EE-SRXRF-PS	50-250mW	100W
PA6-1AE-SRXRF-PS	2-4W	100W
PA6-1AE3-SRXRF-PS	4-8W	100W
PA6-1BE-SRXRF-PS	8-15W	100W
PA6-1FE-SRXRF-PS	15-30W	100W
UHF HIGH BAND 700-960 MHz		
PA7-2BE-SRXRF-PS	10-15W	100W
PA8-1ED-SRXRF-PS	150-300mW	75W
PA8-1AC-SRXRF-PS	2-5W	80W
PA8-1DD-SRXRF-PS	8-15W	80W
PA8-1FD-SRXRF-PS	25-35W	80W

The MAS (Multiple Amplifier Series) of RF Power Amplifiers is designed for system integrators. It is designed to house up to five 100 Watts vertical slide-in amplifiers in a 19" horizontal rack, while using only 7" of vertical rack space. This packaging system accepts any TPL amplifier from VHF Low Band through 960 MHz with output levels up to 100 Watts. Each amplifier module has a circuit breaker/on-off switch located on the front panel, along with two LED indicators for DC and RF Power, and two cooling fans. The rear panel has discrete connectors for RF and DC. Blind-mate D-SUB connectors for all connections are also available upon request. As an accessory, a power supply unit with the ability to house up to five power supplies is available in a 5 1/4" high by 19" wide rack mount enclosure (MAS-PS), with an additional 5 Amps DC auxiliary terminal available per power supply to power an exciter, etc.

SPECIFICATIONS

Power Input	Standard TPL amplifier input levels, optional 10 mW or less.
Power Output	Up to 100 Watts.
Frequencies	VHF Low Band, VHF High Band, 220 MHz, UHF, 700-960 MHz.
Mode	FM/CW (Linear available in some models).
Voltage	13.8 VDC. 120 or 240 VAC with optional Power Supply.
Current, DC Operation	20 Amps DC per amplifier typical at 100 Watts.
Current w/Optional Power Supply	15 Amps AC typical w/5 amplifiers at 100 Watts each, at 120 VAC.
Harmonic & Spurious Attenuation	Exceeds FCC specifications.
RF Connectors	Type "N" or D-SUB Blind-mate (optional).
In/Out Impedance	50 Ohms.
Mismatch Capability	10:1 VSWR. Infinite on 800 MHz models if isolator option is selected.
Operating Temperature	-30 to +50 degrees C.
Duty Cycle	Continuous (100%).
Size, Amplifier Assembly	19" W x 7" H x 14" D (up to five modules).
Size, Power Supply Assembly	19" W x 5 1/4" H x 15" D (up to five modules).
Warranty	Two years parts and labor.

FEATURES

- Capable of housing five 100 Watt slide-in units in a 19" rack mount configuration.
- Accommodates all bands from 29.7 MHz to 960 MHz.
- Forced air cooling with two thermostatically controlled fans for each amplifier.
- 100% duty cycle operation.
- Trunking, Repeater or base station operation (with antenna switch relay option).
- Front panel circuit breaker/on-off switch.
- LED indicators for DC and RF Power.
- Power Supply modules have Power On and Fault LED indicators and 5 amp auxiliary terminals to power an exciter, etc.

RF POWER AMPLIFIERS

MAS

(MULTIPLE AMPLIFIER SERIES)



MODEL	POWER IN	NOMINAL POWER OUT
VHF LOW BAND 29.7-50 MHz		
PA1-1AE-MAS	2-4W	60-100W
PA1-1BE-MAS	4-8W	60-100W
PA1-1CE-MAS	8-16W	60-100W
PA1-1DE-MAS	20-40W	60-100W
PA1-1FE-MAS	40-60W	60-100W
VHF HIGH BAND 136-174 MHz		
* PA3-1EE-MAS	100-250mW	60-100W
PA3-1AE-MAS	1-2.5W	60-100W
PA3-1AE3-MAS	2.5-5W	60-100W
PA3-1DE-MAS	8-15W	60-100W
PA3-1FE-MAS	15-25W	60-100W
PA3-1FE3-MAS	25-50W	60-100W
UHF LOW BAND 216-266 MHz		
PA4-1AE-MAS	1-4W	70-100W
PA4-1BE-MAS	8-15W	70-100W
UHF BAND 400-512 MHz		
* PA6-1EE-MAS	50-250mW	75-100W
PA6-1AE-MAS	1-3W	75-100W
PA6-1AE3-MAS	2-6W	75-100W
PA6-1BE-MAS	8-15W	75-100W
PA6-1FE-MAS	15-30W	75-100W
UHF HIGH BAND 700-960 MHz		
* PA7-2BE-MAS (28 VDC)	8-15W	70-100W
PA8-1ED-MAS	50-250mW	40-80W
PA8-1DD-MAS	4-8W	40-80W
PA8-1FD-MAS	15-30W	40-80W

One rack frame required per five amplifiers.

*Input level must be specified at time of order.

The SMART MAS amplifier series contains all the features of our very popular MAS series of continuous duty power amplifiers. However, this new SMART unit has added features such as Controlled Output Level, Amplifier Protection, Local Failure Monitoring, and Outputs for Remote Monitoring. As with the MAS series, this unit will accept any TPL amplifier from VHF Low Band through 960 MHz. It is designed to house up to five 100 Watt vertical slide-in amplifiers in a 19" horizontal rack, while using only 7" of vertical rack space. Each amplifier has a circuit breaker/on-off switch and LED indicators, conveniently located on the front panel for DC On, RF On, as well as for VSWR, Low Power, and Over Temperature Alarms. The rear panel has discrete connectors for RF and DC. Blind-mate D-SUB connectors are also available upon request. As an accessory, a power supply unit with the ability to house up to five power supplies is available in a 5 1/4" high by 19" wide, rack mount enclosure (MAS-PS), with an additional 5 Amps DC auxiliary terminal available per power supply to power an exciter, etc.

SPECIFICATIONS

Power Input	Standard TPL amplifier input levels, optional 10 mW or less.
Power Output	Up to 100 Watts.
Frequencies	VHF Low Band, VHF High Band, 220 MHz, UHF, 700-960 MHz.
Mode	FM/CW (Linear available in some models).
Voltage	13.8 VDC. 120 or 240 VAC with optional Power Supply.
Current, DC Operation	20 Amps DC per amplifier typical at 100 Watts.
Current w/Optional Power Supply	15 Amps AC typical (w/5 amplifiers at 100 Watts each, at 120 VAC).
Harmonic & Spurious Attenuation	Exceeds FCC specifications.
RF Connectors	Type "N", or D-SUB Blind-mate (optional).
In/Out Impedance	50 Ohms.
Mismatch Capability	20:1 VSWR. Infinite on 800 MHz models if isolator option is selected.
Operating Temperature	-30 to +50 degrees C.
Overtemp/VSWR Protection	Proportional reduction of output power.
Duty Cycle	Continuous (100%).
Size, Amplifier Assembly	19" W x 7" H x 14" D (up to five modules).
Size, Power Supply Assembly	19" W x 5 1/4" H x 15" D (up to five power supply modules).
Warranty	Two years parts and labor.

FEATURES

- Capable of housing five 100 Watt slide-in units in a 19" rack mount configuration.
- Accommodates all bands from 29.7 MHz to 960 MHz.
- Feedback Controlled Output Level.
- VSWR and Over Temperature Protection (Power Reduction).
- Local Failure Monitoring.
- Outputs for Remote Monitoring.
- LED indicators for:
 - DC ON
 - RF ON
 - VSWR
 - LOW POWER
 - OVER TEMPERATURE.
- Forced air cooling with two thermostatically controlled fans for each amplifier.
- 100% duty cycle operation.
- Trunking, Repeater or Base Station operation (with antenna switch relay option).
- Front panel circuit breaker/on-off switch.
- Power Supply modules have Power on and Fault LED indicators and 5 Amp auxiliary terminals to power an exciter, etc.
- Cost effective design.

RF POWER AMPLIFIERS

SMART MAS



MODEL	POWER IN	NOMINAL POWER OUT
VHF LOW BAND 29.7-50 MHz		
PA1-1AE-SMAS	4-6W	100W
PA1-1BE-SMAS	6-10W	100W
PA1-1CE-SMAS	12-20W	100W
PA1-1DE-SMAS	25-40W	100W
PA1-1FE-SMAS	40-60W	100W
VHF HIGH BAND 136-174 MHz		
* PA3-1EE-SMAS	100-250mW	100W
PA3-1AE-SMAS	2-4W	100W
PA3-1AE3-SMAS	3-6W	100W
PA3-1DE-SMAS	10-20W	100W
PA3-1FE-SMAS	20-30W	100W
PA3-1FE3-SMAS	30-50W	100W
UHF LOW BAND 216-222 MHz		
PA4-1AE-SMAS	2-6W	100W
PA4-1BE-SMAS	10-20W	100W
UHF BAND 400-512 MHz		
* PA6-1EE-SMAS	50-250mW	100W
PA6-1AE-SMAS	2-4W	100W
PA6-1AE3-SMAS	4-8W	100W
PA6-1BE-SMAS	10-20W	100W
PA6-1FE-SMAS	20-40W	100W
UHF HIGH BAND 700-960 MHz		
PA7-2BE-SMAS (28 VDC)	10-15W	100W
* PA8-1ED-SMAS	50-250mW	80W
PA8-1DD-SMAS	8-15W	80W
PA8-1FD-SMAS	25-35W	80W

One rack frame required per five amplifiers.

*Input level must be specified at time of order.

The LMS Series of RF Power Amplifiers is designed to provide medium power output levels up to 150 watts in the 29.7 MHz to 960 MHz range. It is totally self-contained with a regulated switching power supply, front panel meter for amplifier monitoring, three cooling fans, and VSWR and temperature protection circuitry. It is designed for continuous duty operation in a 7" high rack-mount configuration.

SPECIFICATIONS

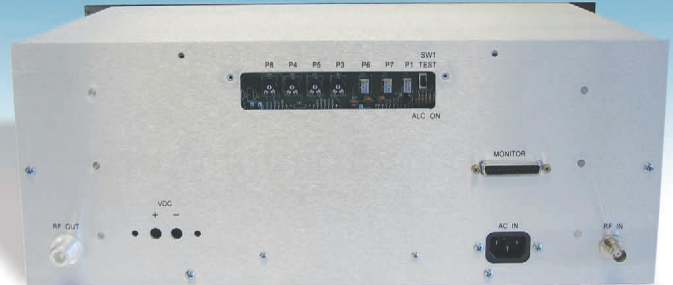
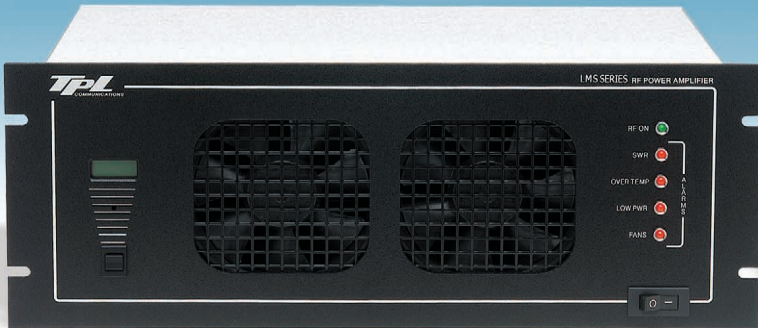
Power Input	All TPL standard amplifier input levels from 50 mW to 70 watts. Lower input levels are optional.
Power Output	Up to 150 watts, 29.7-960MHz.
Mode	FM/CW (Linear available in some models).
Voltage	120 or 240 VAC. (Please specify)
Current	1-4 Amps AC for various models.
Harmonic & Spurious Attenuation	Exceeds FCC requirements.
RF Connectors	BNC - Input, Type N - Output.
In/Out Impedance	50 Ohms.
Mismatch Capability	20:1 VSWR. Infinite on 800 MHz models if isolator option is selected.
Remote Monitoring	Overtemp, Low Power, Fan Failure, System Fault, Forward and Reflected Power, and other amplifier parameters.
Local Monitoring	Front panel digital display and LED indicators.
Overtemp/VSWR Protection	Proportional reduction of output power.
Operating Temperature	-30° to +50° C. Ambient
Duty Cycle	Continuous
Weight	18 pounds.
Dimensions	19" W x 7" H x 11" D.
Storage Temperature	-40° C to +85° C.
Storage Humidity	0% - 95% RH (Non-Condensing)
Operating Humidity	0% - 80% RH (Non-Condensing)
Warranty	2 years parts and labor

FEATURES

- Fully enclosed compact package with power supply.
- Double RF shielding for high RFI sites.
- Digital meter monitoring for system evaluation and maintenance, including forward and reflected power.
- High efficiency switching power supply.
- Adjustable output power, feedback controlled.
- Provision for remote monitoring.
- Adjustable alarm and protection thresholds.
- VSWR protection/power reduction.
- Over temperature protection/power reduction.
- Alarms for low power, over temperature, VSWR, and fan failure.
- Forced air cooling with three fans.
- Convenient access for amplifier adjustments.
- Excellent field serviceability.
- Repeater or Base Station operation (with antenna switch relay option).

RF POWER AMPLIFIERS

LMS SERIES



MODEL

VHF LOW BAND 29.7-50 MHz

MODEL	POWER IN	NOMINAL POWER OUT
PA1-1AE-LMS	2-4W	100W
PA1-1BE-LMS	4-8W	100W
PA1-1CE-LMS	8-16W	100W
PA1-1DE-LMS	20-40W	100W
PA1-1FE-LMS	40-60W	100W

VHF HIGH BAND 136-174 MHz

PA3-1EE-LMS	250-500mW	150W
PA3-1EE3-LMS	500mW-1W	150W
PA3-1AE-LMS	2.5-5W	150W
PA3-1AE3-LMS	5-10W	150W
PA3-1DE-LMS	10-20W	150W
PA3-1FE-LMS	25-50W	150W
PA3-1FE3-LMS	50-70W	150W

UHF BAND 400-512 MHz

PA6-2EE-LMS	250-500mW	125W
PA6-2AE-LMS	1-2W	125W
PA6-2AE3-LMS	2-4W	125W
PA6-2AE6-LMS	4-8W	125W
PA6-2BE-LMS	8-15W	125W
PA6-2DE-LMS	15-20W	125W
PA6-2FE-LMS	30-40W	125W

UHF HIGH BAND 700-960 MHz

PA7-2BE-LMS	10-15W	100W
PA8-1ED-LMS	150-300mW	80W
PA8-1AC-LMS	2-5W	80W
PA8-1DD-LMS	8-15W	80W
PA8-1FD-LMS	25-35W	80W
PA8-2EF-LMS	100mW	125W
PA8-2EF3-LMS	200mW	125W
PA8-2EF6-LMS	400mW	125W
PA8-2BF-LMS	3-6W	125W
PA8-2BF3-LMS	7-12W	125W
PA8-2BF6-LMS	13-24W	125W
PA8-2DF-LMS	35-50W	125W

The HMS series is designed to provide high power output from VHF Low Band through 960MHz. It is manufactured for rugged use while combining the latest technology into a space efficient package. These units are totally self-contained with a regulated switching power supply, using only 10 1/2" of vertical rack space and 15" of depth. Internal circuitry monitors several parameters of the amplifier, including forward and reflected power.

Input and output connectors are located on the rear of the unit, making it convenient to connect coaxial cables. TPL has made the unit easy to service if necessary. The amplifier RF deck has all wiring contained in one harness, which can be easily disconnected, allowing only the RF deck to be removed for servicing. A new RF deck could be installed in a matter of minutes.

SPECIFICATIONS

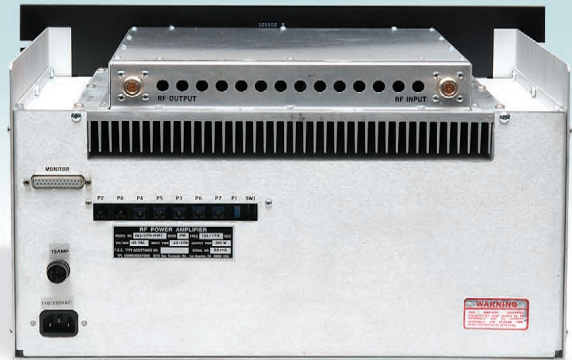
Power Input	75 mW to 70 Watts as specified.
Power Outputs	300 Watts VHF Low Band (29.7-50MHz), 250 or 500 Watts VHF High Band (136-174MHz), 300 Watts UHF (406-512MHz), 250 Watts (806-960MHz).
Mode	FM/CW (Linear in some models).
Voltage	120/240 VAC
Current	4 to 15 Amps AC, depending on model.
Harmonic & Spurious Attenuation	Exceeds FCC specifications.
RF Connectors	Type N
In/Out Impedance	50 Ohms
Mismatch Capability	20:1 VSWR. Infinite on 800 MHz models if isolator option is selected.
Remote Monitoring	Overtemp, Low Power, Fan Failure, System Fault, Forward and Reflected Power, and other amplifier parameters.
Local Monitoring	Front panel digital display and LED indicators.
Overtemp/SWR Protection	Proportional reduction of output power.
Operating Temperature	-30° to +50° degrees C. Ambient
Duty Cycle	Continuous
Weight	45 pounds.
Dimensions	19" W x 10 1/2" H x 15" D.
Storage Temperature	-40° C to + 85° C.
Storage Humidity	0% - 95% RH (Non-Condensing),
Operating Humidity	0% - 80% RH (Non-Condensing)
Warranty	2 years parts and labor

FEATURES

- Fully enclosed compact package with switching power supply.
- Digital meter monitoring for system evaluation and maintenance, including forward and reflected power.
- Adjustable output power, feedback controlled.
- Alarms for low power, over temperature, VSWR, and fan failure.
- VSWR protection/power reduction.
- Over temperature protection/power reduction.
- Adjustable alarm and protection thresholds.
- Provision for remote monitoring.
- Forced air cooling with three fans.
- Convenient access for amplifier adjustments.
- Excellent field serviceability.
- Repeater or base station operation (with coaxial antenna switch relay option).
- Other bands and modes available on special order.

RF POWER AMPLIFIERS

HMS SERIES



MODEL

VHF LOW BAND 35-50 MHz

MODEL	POWER IN	NOMINAL POWER OUT
PA1-3AF-HMS	2-4W	300W
PA1-3BF-HMS	4-8W	300W
PA1-3CF-HMS	8-15W	300W
PA1-3DF-HMS	15-25W	300W
PA1-3FF-HMS	25-35W	300W
PA1-3GF-HMS	35-70W	300W

VHF HIGH BAND 136-175 MHz

* PA3-2EF-HMS	500mW-1W	250W
PA3-2AF-HMS	1-2W	250W
PA3-2BF-HMS	2-4W	250W
PA3-2CF-HMS	4-6W	250W
PA3-2DF-HMS	8-12W	250W
PA3-2FF-HMS	15-25W	250W
PA3-2GF-HMS	30-50W	250W
* PA3-2EG-HMS	1-2W	500W
PA3-2AG-HMS	2-4W	500W
PA3-2BG-HMS	4-8W	500W
PA3-2CG-HMS	8-12W	500W
PA3-2DG-HMS	15-25W	500W
PA3-2FG-HMS	30-50W	500W
PA3-2GG-HMS	60-100W	500W

UHF BAND 400-512 MHz

* PA6-2EF-HMS	75-150mW	300W
PA6-2BF-HMS	5-12W	300W
PA6-2GF-HMS	20-45W	300W

UHF HIGH BAND 806-960 MHz

PA8-2EG-HMS	100mW	250W
PA8-2EG3-HMS	200mW	250W
PA8-2EG6-HMS	400mW	250W
PA8-2BG-HMS	3-6W	250W
PA8-2BG3-HMS	7-12W	250W
PA8-2BG6-HMS	13-24W	250W
PA8-2DG-HMS	35-50W	250W

*Input level must be specified at time of order.

TPL has been manufacturing mobile amplifiers since the company was founded in 1971. Over the years, this line has been greatly expanded and improved. TPL offers mobile amplifiers in the standard power outputs from as low as 10 Watts to as high as 140 Watts. Standard inputs range from as low as 1 Watt, to as high as 60 Watts. Special units can be ordered in practically any configuration.

PACKAGE A

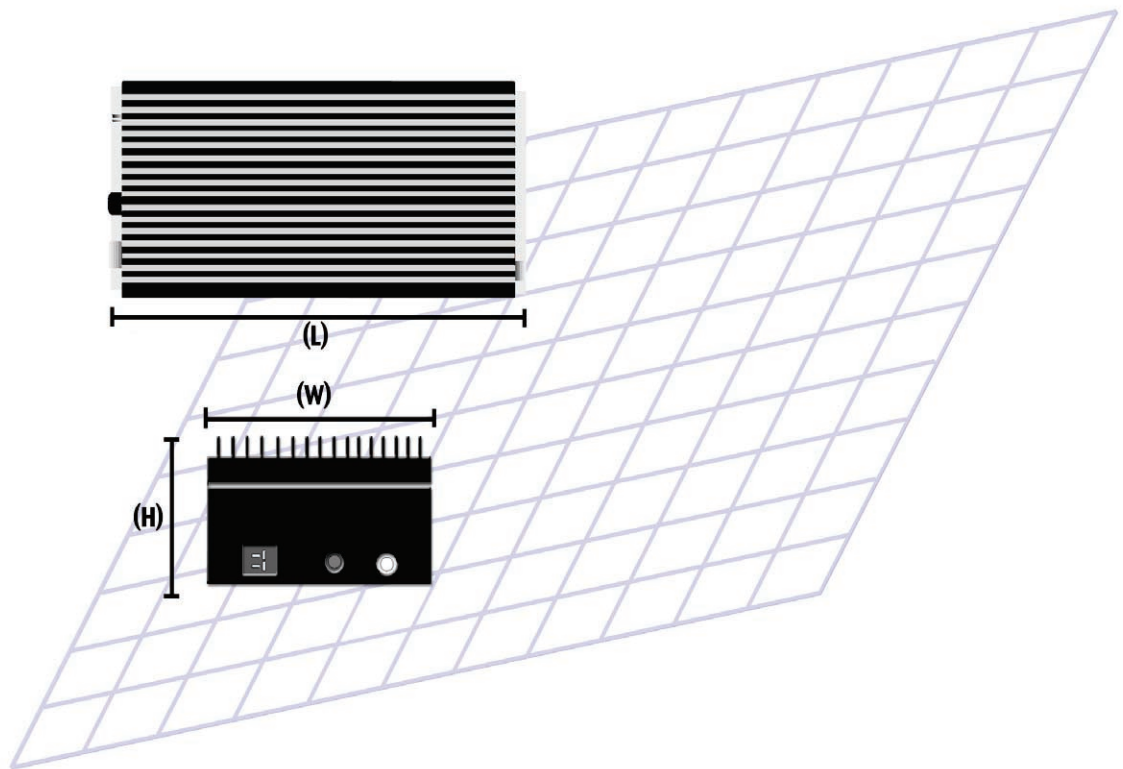
7.5" L x 2.2" H x 3.7" W

PACKAGE C

9.5" L x 3.0" H x 4.5" W

PACKAGE D

11.6" L x 3.0" H x 5.5" W

**FEATURES**

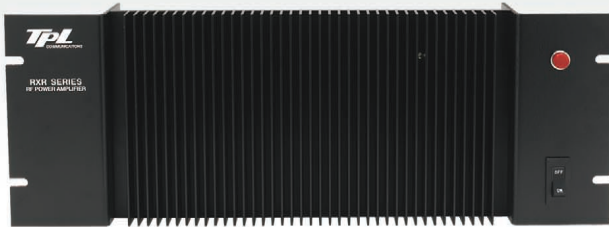
- Standard voltage is 13.8 VDC. 28 Volts is available for most models.
- Most mobile amplifiers may be tuned for broadband operation.
- All items shown are standard – Please inquire for information on special designs, e.g.; low input drive, higher output, other frequencies.
- UHF connectors are standard on all mobile amplifiers through 512 MHz. Type N connectors are standard on 806-960 MHz units. Other connectors are optional.
- Solid State Carrier Operated Relays are standard in all mobile amplifiers with the exception of VHF High Band models with outputs above 45 Watts; these models have mechanical relays. Solid State Relays for these models are optional.
- All power specifications are nominal.
- Specifications subject to change without notice.

MOBILE AMPLIFIER



MODEL	POWER IN	POWER OUT	PACKAGE SIZE	WEIGHT	
VHF LOW BAND 29.7-50 MHz					
All Low Band Units with the exception of the PA1-1AC and PA1-1AC3 are available in three different sub-bands (L = 29.7-36 MHz) (M = 36-42 MHz) (H = 42-50 MHz)					
PA1-1AC	1 - 4 W	10 - 40 W	± 1MHz	A	2 lbs.
PA1-1AC3	2 - 8 W	10 - 40 W	± 1MHz	A	2 lbs.
PA1-1AE	2 - 4 W	60 - 100 W		D	5 lbs.
PA1-1BE	4 - 8 W	60 - 100 W		D	5 lbs.
PA1-1CE	8 - 16 W	60 - 100 W		D	5 lbs.
PA1-1DE	20 - 40 W	60 - 100 W		D	5 lbs.
PA1-1FE	40 - 60 W	60 - 100 W		D	5 lbs.
VHF MID BAND 66-88 MHz					
±2 MHz Bandwidth (for export only - not FCC Certified)					
PA2-1AD	1 - 4 W	60 - 100 W		C	4 lbs.
PA2-1CD	5 - 25 W	40 - 100 W		C	4 lbs.
VHF HIGH BAND 136-174 MHz					
All VHF High Band Amplifiers have a minimum bandwidth of ±10 MHz. All units 45 Watts and below are broadband 136-174 MHz.					
PA3-1AC	1 - 5 W	10 - 45 W		C	4 lbs.
PA3-1AC3	2 - 8 W	10 - 45 W		C	4 lbs.
PA3-1DC	8 - 15 W	30 - 45 W		A	2 lbs.
PA3-1AE3	1 - 3 W	70 - 140 W		C	4 lbs.
PA3-1AE6	3 - 6 W	70 - 140 W		C	4 lbs.
PA3-1DE	8 - 15 W	70 - 140 W		C	4 lbs.
PA3-1FE	20 - 40 W	70 - 140 W		C	4 lbs.
UHF 400-515 MHz					
All UHF Amplifiers have a minimum bandwidth of ±10 MHz.					
PA6-1AC	1 - 4 W	10 - 50 W		C	4 lbs.
PA6-1AC3	2 - 8 W	10 - 50 W		C	4 lbs.
PA6-1BC	8 - 15 W	25 - 50 W		A	2 lbs.
PA6-1AE	1 - 3 W	75 - 100 W		D	5 lbs.
PA6-1AE3	3 - 6 W	75 - 100 W		D	5 lbs.
PA6-1BE	8 - 15 W	75 - 100 W		D	5 lbs.
PA6-1FE	15 - 30 W	75 - 100 W		D	5 lbs.
UHF HIGH BAND 806-960 MHz					
All of these mobile amplifiers have a minimum bandwidth of 15 MHz. Some units are available with 60 MHz bandwidth. Please inquire.					
PA8-1AA	1 - 3 W	10 - 20 W		A	2 lbs.
PA8-1AB	1 - 5 W	10 - 35 W		C	4 lbs.
PA8-1AC	1 - 5 W	40 - 80 W		D	5 lbs.
PA8-1DD	4 - 8 W	40 - 80 W		D	5 lbs.
PA8-1FD	15 - 30 W	40 - 80 W		D	5 lbs.

1. TPL Commercial Amplifiers are FCC Certified under Parts 22 and 90. In addition, some Amplifiers are also certified under Part 95 and Industry Canada.
2. Please include transmit frequency and input power to enable TPL to tune amplifier for optimum performance.

**RXRF-PS OPTION****RXRHF3 OPTION****RXR OPTION****RS OPTION**

- "RS" Option** 19" Extruded Rack Mountable Heat Sink for continuous duty up to 50 Watts.
19" W x 5 1/4" H x 3" D. Wt. 6 lbs.
- RSF Option** Same as "RS" option but with a thermostatically controlled DC cooling fan to provide extra cooling up to 50 Watts. 19"W x 5 1/4"H x 4 1/2" D. Wt. 8 lbs.
- "RXR" Option** Heavy Duty Heat Sink up to 80 watts. Includes front panel circuit breaker/on-off switch.
19" W x 7" H x 3 1/2" D. WT. 7 lbs.
- "RXRF" Option** Same as "RXR" Option but with a thermostatically controlled DC cooling fan to provide extra cooling for units up to 150 watts. 19" W x 7" H x 5" D. WT 9 lbs.
- "RXR-PS" Option** "RXR" Option with continuous duty switching power supply.
19" W x 7" H x 8" D. Wt. 11 lbs.
- "RXRF-PS" Option** "RXR" Option with continuous duty switching power supply and fan.
19" W x 7" H x 8" D. Wt. 13 lbs.
- "RXHF3" Option** This extra large rack mountable unit is designed for output application as follows:
VHF up to 500 Watts, UHF up to 300 Watts, and 806-960 MHz up to 250 Watts.
Thermostatically controlled cooling fans are standard. Optionally available with attached power supply. 19" W x 14" H x 7" D. Wt. 26 lbs.

TPL's Distributors

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www.syscom.com.mx

FABULOUS SYSTEMS

Selangor Darul Ehsan
Malaysia

BENTRONIX

Neve-Monosson
Israel

Warranty

TPL warrants that each product is free from defects in material and workmanship. If found to be defective within period specified below, the factory, at its discretion, will either repair or replace the unit at no cost, provided the unit is delivered by the owner to the factory intact, and if examination discloses, in the factory's judgement, that it is defective under warranty. Units repaired under warranty will be returned prepaid. **ALL MOBILE AMPLIFIERS CARRY A FIVE-YEAR WARRANTY. ALL HMS, LMS, MAS, & RXR SERIES AMPLIFIERS CARRY A TWO-YEAR WARRANTY.**

We reserve the right to alter specifications or design without notice. In Special critical application, please consult with the manufacturer.

This publication is used to provide an outline of specifications of the Products shown. It is not to form an order or contract or be regarded as a representation of the product unless agreed to in writing by the company.



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