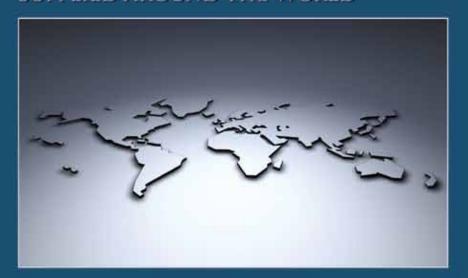


RF Power Amplifiers Supplied Around the World



MARCH 2016

TPL History

Since its founding over forty 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
Trunking 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 technicians 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 / Harris /
Boeing / Point Mugu /
E.F. Johnson / NASA /
Lockheed Martin

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.

RXR SERIES

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 125 watts. 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.

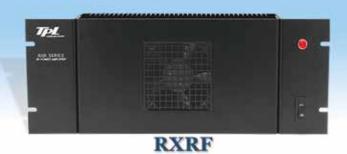
SPECIFICATIONS

Power Input	Standard TPL amplifier input levels, optional 10mW or less.
Power Output	50 to 125 watts.
Frequencies	VHF Low Band, VHF High Band, UHF, 806-960 MHz
Voltage	13.8 VDC, 120 or 240 VAC (24 VDC or 48 VDC available).
Current	Model dependent.
Harmonic Attenuation	Exceeds FCC and IC 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.

- Accommodates all bands from 29.7 MHz to 960 MHz.
- 100% duty cycle operation.
- Repeater or base station operation (with solid state 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.

RFPOWER AMPLIFIERS





MODEL	DOWED TN	DOWED OUT	CUDDENT DDATN

HODEL		. OWER IN	TOWER OUT	CORREIT DRA
VHF Low Band 29.7			exception of the PA1-1AC and PA1-1AC .7 - 36MHz) (M=36 -42MHz) (H=42-50I	
PA1-1AC-RSF	+/-1 MHz Bandwidth	1-4W	1-4W	8 Amps
PA1-1AC3-RSF	+/-1 MHz Bandwidth	2-8W	2-8W	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 66-8	8 MHz (For export only -	Not FCC or IC Certifi	ed)	
PA2-1AD-RXRF		1-4W	60-100W	14 Amps
PA2-1CD-RXRF		5-25W	40-100W	14 Amps
AERONAUTICAL BA	ND 118-137 MHz			
*PA3-2AB-AIR-RXRF		1-5W CW	25 W CW/100 W PEP	
*PA3-2AC-AIR-RXRF		1-5W CW	50 W CW/100 W PEP	
VHF High Band 136	5-174 MHz			
PA3-1AC-RSF		1-5W	15-60W	10 Amps
PA3-1BC-RSF		2-10W	15-60W	10 Amps
PA3-1AE-RXRF		1-5W	40-125W	18 Amps
PA3-1BE-RXRF		2-10W	40-125W	18 Amps
PA3-1DE-RXRF		5-25W	40-125W	18 Amps
PA3-1FE-RXRF		10-50W	40-125W	18 Amps
*PA3-2FF-RXHF3		8-15W	150-250W	18 Amps
*PA3-2GF-RXHF3		30-60W	150-250W	18 Amps
UHF Band 380-512	MHz All UHF u	inits are available in tw	o different sub-bands (M=400-470 MHz) (H=470-512 MHz)
PA6-1AC-RSF		1-5W	15-60W	10 Amps
PA6-1BC-RSF		2-10W	15-60W	10 Amps
PA6-1AE-RXRF		1-5W	40-110W	18 Amps
PA6-1BE-RXRF		2-10W	40-110W	18 Amps
PA6-1DE-RXRF		5-25W	40-110W	18 Amps
PA6-1FE-RXRF		10-50W	40-110W	18 Amps
UHF High Band 806	5-960 MHz			
PA8-1AA-RSF		1-3W	10-20W	5 Amps
PA8-1AB-RSF		1-3W	10-40W	10 Amps
* PA8-1ED-RXRF		50mW-1W	40-80W	20 Amps
PA8-1AD-RXRF		1-5W	40-80W	16 Amps
PA8-1BD-RXRF		2-10W	40-80W	16 Amps
PA8-1DD-RXRF		4-20W	40-80W	16 Amps
*PA8-2EF-RXRF		50mW-1W	60-125W	14 Amps
*PA8-2AF-RXRF		1-4W	60-125W	12 Amps
*PA8-2BF-RXRF		2-8W	60-125W	12 Amps
*PA8-2DF-RXRF		4-15W	60-125W	12 Amps
				·

^{*}Input level must be specified at time of order.

^{**}Operates off 28 VDC.

SMART RXR

6

The Smart SRXRF-PS amplifiers contain 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 100 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	Up to 100 Watts.
Frequencies	VHF Low Band, VHF High Band, UHF, 806-960 MHz
Voltage	120 or 240 VAC
Current	1-4 Amps AC @ 120 VAC
Harmonic Attenuation	Exceeds FCC and IC 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 solid state bypass relay option).
- Front panel circuit breaker/on-off switch.
- · Flat front panel allows for cabinet door closure.
- Cost effective design.

RFPOWER AMPLIFIERS SMART RXR





		NOMINAL
MODEL	POWER IN	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 HIGH BAND 136-174 MHz	z	
PA3-1AE-SRXRF-PS	2-5W	100W
PA3-1BE-SRXRF-PS	5-10W	100W
PA3-1DE-SRXRF-PS	10-20W	100W
PA3-1FE-SRXRF-PS	20-40W	100W
UHF 380-512 MHz	All UHF units are available in two different sub-bands (M=400-470) MHz) (H=470-512 MHz)
PA6-1AE-SRXRF-PS	4-8W	100W
PA6-1BE-SRXRF-PS	10-20W	100W
PA6-1DE-SRXRF-PS	20-40W	100W
UHF HIGH BAND 806-960 MHz	z	
* PA8-1ED-SRXRF-PS	50mW-1W	80W
PA8-1AD-SRXRF-PS	1-3W	80W
PA8-1BD-SRXRF-PS	3-6W	80W
PA8-1DD-SRXRF-PS	5-10W	80W
* PA8-2EF-SRXRF-PS	50mW-3W	125W
PA8-2AF-SRXRF-PS	3-6W	125W
PA8-2BF-SRXRF-PS	5-10W	125W
PA8-2DF-SRXRF-PS	10-20W	125W

^{*}Input level must be specified at time of order.

The MAS (Multiple Amplifier Series) of RF Power Amplifiers is designed for system integrators. It is designed to house up to five 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 125 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 125 Watts.
Frequencies	VHF Low Band, VHF High Band, UHF, 806-960 MHz.
Mode	FM/CW (Linear available in some models).
Voltage	13.8 VDC. 120 or 240 VAC with optional Power Supply.
Current, DC Operation	Model dependent.
Current w/Optional Power Supply	15 Amps AC typical w/5 amplifiers at 100 Watts each, at 120 VAC.
Harmonic & Spurious Attenuation	Exceeds FCC and IC specifications.
RF Connectors	Type "N" or D-SUB Blind-mate (optional).
In/Out Impedance	50 Ohms.
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	Three years parts and labor.

- Capable of housing five 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 module.
- 100% duty cycle operation.
- Trunking, Repeater, or base station operation (with solid state 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 Amps auxiliary terminals to power an exciter, etc.

RFPOWER AMPLIFIERS

MAS

(MULTIPLE AMPLIFIER SERIES)



VHF LOW BAND 29.7-50 MHz (L=29.7 - 36 MHz) (M=36-42 MHz) (H=42-50 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 PA3-1AE-MAS 1-5W 40-125W PA3-1BE-MAS 2-10W 40-125W PA3-1BE-MAS 5-25W 40-125W PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1BE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W VHF HIGH BAND 806-960 MHz 50mW-1W 40-80W PA8-1ED-MAS 50mW-1W 40-80W PA8-1FD-MAS 15-30W 40-80W	MODEL	POWER IN	NOMINAL POWEROUT
PA1-1BE-MAS	VHF LOW BAND 29.7-50 MHz (L=29.7 -	36 MHz) (M=36-42 MHz) (H=42-50 MHz)	
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 PA3-1AE-MAS 1-5W 40-125W PA3-1BE-MAS 2-10W 40-125W PA3-1DE-MAS 5-25W 40-125W PA3-1FE-MAS 10-50W 40-125W PA3-1FE-MAS 10-50W 40-125W PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W PA6-1FE-MAS 5-25W 40-110W PA8-1DD-MAS 4-8W 40-80W	PA1-1AE-MAS	2-4W	60-100W
PA1-1DE-MAS 20-40W 60-100W PA1-1FE-MAS 40-60W 60-100W VHF HIGH BAND 136-174 MHz PA3-1AE-MAS 1-5W 40-125W PA3-1BE-MAS 2-10W 40-125W PA3-1DE-MAS 5-25W 40-125W PA3-1FE-MAS 10-50W 40-125W PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 5-25W 40-110W	PA1-1BE-MAS	4-8W	60-100W
PA1-1FE-MAS 40-60W 60-100W VHF HIGH BAND 136-174 MHz PA3-1AE-MAS 1-5W 40-125W PA3-1BE-MAS 2-10W 40-125W PA3-1DE-MAS 5-25W 40-125W PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz 50mW-1W 40-80W PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA1-1CE-MAS	8-16W	60-100W
VHF HIGH BAND 136-174 MHz PA3-1AE-MAS 1-5W 40-125W PA3-1BE-MAS 2-10W 40-125W PA3-1DE-MAS 5-25W 40-125W PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA1-1DE-MAS	20-40W	60-100W
PA3-1AE-MAS PA3-1BE-MAS PA3-1BE-MAS PA3-1DE-MAS PA3-1DE-MAS PA3-1FE-MAS PA3-1FE-MAS PA3-1FE-MAS PA3-1FE-MAS PA3-1FE-MAS PA3-1FE-MAS PA3-1FE-MAS PA3-1FE-MAS PA3-1FE-MAS PA4-1AE-MAS PA6-1AE-MAS PA6-1BE-MAS PA6-1DE-MAS PA6-1DE-MAS PA6-1FE-MAS PA6-1FE-MAS PA6-1FE-MAS PA6-1FE-MAS PA8-1ED-MAS PA8-1DD-MAS	PA1-1FE-MAS	40-60W	60-100W
PA3-1BE-MAS 2-10W 40-125W PA3-1DE-MAS 5-25W 40-125W PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W CPA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	VHF HIGH BAND 136-174 MHz		
PA3-1DE-MAS 5-25W 40-125W PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W PA6-1FE-MAS 10-50W 40-110W PA6-1FE-MAS 10-50W 40-10W	PA3-1AE-MAS	1-5W	40-125W
PA3-1FE-MAS 10-50W 40-125W UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA3-1BE-MAS	2-10W	40-125W
UHF BAND 380-512 MHz (M=400-470 MHz) (H=470-512 MHz) PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA3-1DE-MAS	5-25W	40-125W
PA6-1AE-MAS 1-5W 40-110W PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA3-1FE-MAS	10-50W	40-125W
PA6-1BE-MAS 2-10W 40-110W PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	UHF BAND 380-512 MHz (M=400-470 I	MHz) (H=470-512 MHz)	
PA6-1DE-MAS 5-25W 40-110W PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA6-1AE-MAS	1-5W	40-110W
PA6-1FE-MAS 10-50W 40-110W UHF HIGH BAND 806-960 MHz PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA6-1BE-MAS	2-10W	40-110W
UHF HIGH BAND 806-960 MHz SPA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA6-1DE-MAS	5-25W	40-110W
PA8-1ED-MAS 50mW-1W 40-80W PA8-1DD-MAS 4-8W 40-80W	PA6-1FE-MAS	10-50W	40-110W
PA8-1DD-MAS 4-8W 40-80W	UHF HIGH BAND 806-960 MHz		
110 22 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	* PA8-1ED-MAS	50mW-1W	40-80W
PA8-1FD-MAS 15-30W 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.

10 SMART MAS

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, UHF, 806-960 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 and IC 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	Gradual 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).

Three 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:

Warranty

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 Amps auxiliary terminals to power an exciter, etc.
- Cost effective design.

RFPOWER AMPLIFIERS SIMART IMAS





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		
PA3-1AE-SMAS	2-5W	100W
PA3-1BE-SMAS	5-10W	100W
PA3-1DE-SMAS	10-20W	100W
PA3-1FE-SMAS	20-40W	100W
UHF BAND 380-512 MHz		
PA6-1AE-SMAS	4-8W	100W
PA6-1BE-SMAS	10-20W	100W
PA6-1DE-SMAS	20-40W	100W
UHF HIGH BAND 806-960 MHz		
*PA8-1ED-SMAS	50mW-3W	80W
PA8-1AD-SMAS	3-6W	80W
PA8-1BD-SMAS	5-10W	80W
PA8-1DD-SMAS	10-20W	80W

^{*}Input level must be specified at time of order.

LMS SERIES

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 40 watts.
	Lower input levels are optional.
Power Output	Up to 150 watts.
Frequencies	VHF Low Band, VHF High Band, UHF, 806-960 MHz
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	Gradual 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.
Warranty	3 years parts and labor.

- 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.
- 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).

REPOWER AMPLIFIERS LIMS SERVES





MODEL	POWER IN	NOMINAL POWEROUT
VHF LOW BAND 29.7-50 MHz		
PA1-1AE-LMS	2-4W	100W
PA1-1BE-LMS	4-8W	100W
PA1-1CE-LMS	8-16W	100W
PA1-1DE-LMS	20-40W	100W
VHF HIGH BAND 136-174 MHz		
*PA3-2EE-LMS	500mW-2W	150W
PA3-2AE-LMS	2-4W	150W
PA3-2BE-LMS	4-8W	150W
PA3-2DE-LMS	10-20W	150W
PA3-2FE-LMS	20-40W	150W
UHF BAND 380-512 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 806-960 MHz		
*PA8-2EF-LMS	50mW-3W	125W
PA8-2AF-LMS	2-4W	125W
PA8-2BF-LMS	5-10W	125W
PA8-2DF-LMS	10-20W	125W

^{*}Input level must be specified at time of order.

HMS SERIES

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

Dower Input	75 mW to 70 Watts as specified.
Power Input	·
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	Gradual 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.
Warranty	3 years parts and labor

- 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.
- 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.

RFPOWER AMPLIFIERS FILLS SERVES





		NOMINAL POWEROUT	
MODEL	POWER IN		
VHF LOW BAND 35-50 MHz			
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	10mW-1W	250W	
PA8-2BG-HMS	4-8mW	250W	
PA8-2CG-HMS	8-15mW	250W	
PA8-2DG-HMS	15-30W	250W	
PA8-2FG-HMS	30-60W	250W	

^{*}Input level must be specified at time of order.

MOBILE PACKAGE DIMENSIONS

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 125 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

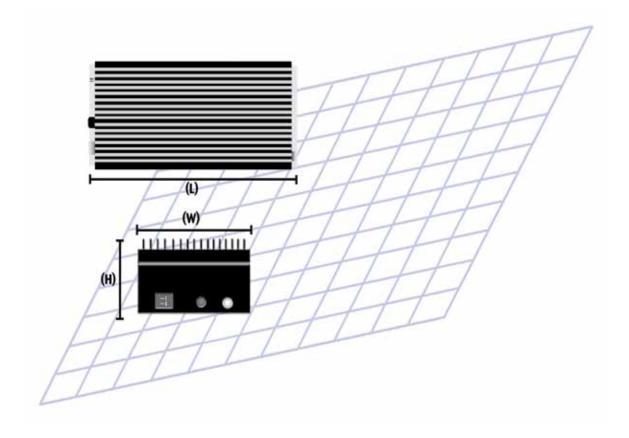
PACKAGE C

PACKAGE D

7.5" L x 2.2" H x 3.7" W

9.5" L x 3.0" H x 4.5" W

11.6" L x 3.0" H x 5.5" W



- 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.
- 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			he exception of the PA1-1AC a MHz) (M=36 -42 MHz) (H= 4		in three differ-
PA1-1AC	+/-1 MHz Bandwidth	1 - 4 W	10 - 40 W	Α	2 lbs.
PA1-1AC3	+/-1 MHz Bandwidth	2 - 8 W	10 - 40 W	Α	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 (For export	only - not FCC or I	C Certified)		
PA2-1AD		1 - 4 W	60 - 100 W	С	4 lbs.
PA2-1CD		5 - 25 W	40 - 100 W	С	4 lbs.
AERONAUTICAL B	AND 119-127 MH-				
**PA3-2AB-AIR	AND 110-137 MII2	1-5W CW	25W CW/100W PEP	С	4 lbs.
**PA3-2AC-AIR		1-5W CW	50W CW/200W PEP	C	4 lbs.
	36-174 MHz All VHF Hig		are broadband 136-174 MHz.		
PA3-1AC		1 - 5 W	15 - 60 W	С	4 lbs.
PA3-1BC		2 - 10 W	15 - 60 W	C	4 lbs.
PA3-1AE		1 - 5 W	40 - 125 W	D	5 lbs.
PA3-1BE		2 - 10 W	40 - 125 W	D	5 lbs.
PA3-1DE		5 - 25 W	40 - 125 W	D	5 lbs.
PA3-1FE		10 - 50 W	40 - 125 W	D	5 lbs.
UHF 380-512 MHz	All UHF un		wo different sub-bands. (M=4	, ,	•
PA6-1AC		1 - 5 W	15 - 60 W	С	4 lbs.
PA6-1BC		2 - 10 W	15 - 60 W	С	4 lbs.
PA6-1AE		1 - 5 W	40 - 110 W	D	5 lbs.
PA6-1BE		2 - 10 W	40 - 110 W	D	5 lbs.
PA6-1DE		5 - 25 W	40 - 110 W	D	5 lbs.
PA6-1FE		10 - 50 W	40 - 110 W	D	5 lbs.
UHF HIGH BAND 80	D6-960 MHz All of these 60 MHz ba	e mobile amplifiers h ndwidth. Please inq	nave a minimum bandwidth of uire.	15 MHz. Some units are a	vailable with
PA8-1AA		1 - 3 W	10 - 20 W	Α	2 lbs.
PA8-1AB		1 - 3 W	10 - 40 W	С	4 lbs.
		1 - 5 W	40 - 80 W	D	5 lbs.
PA8-1AD		1 3 11			
PA8-1AD PA8-1BD		2 - 10 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 Industry Canada certified under RSS-131. Please include transmit frequency and input power to enable TPL to tune amplifier for optimum performance.

^{**}Operates off 28 VDC.

BASE STATION/REPEATER OPTIONS





RXRHF3 OPTION



RXRF OPTION



RSF OPTION

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.

"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.

"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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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 judgment, that it is defective under warranty. Units repaired under warranty will be returned prepaid. ALL TPL AMPLIFIERS SOLD AFTER JANUARY 1, 2013 CARRY A THREE-YEAR WARRANTY.

We reserve the right to alter specifications or design without notice. In Special critical applications, 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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