

TUNABLE ANTENNAFIER™ 2400PT SERIES



Digitally Tunable
0.5 to 30 Watts

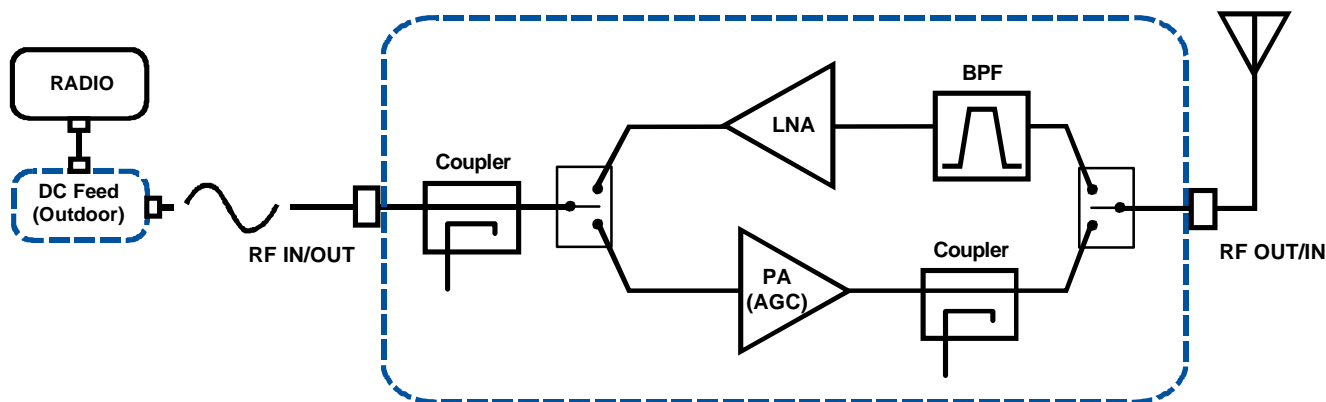
The 2400 PT is a High Power, Digitally Tunable Bi-Directional Amplifier for 802.11b/g WLAN. Fine Tune your system's RX Gain and TX Output Power via a USB link & our free software. These amplifiers have non-volatile memory and will recall their previous settings. Reprogramming is simple and can be easily accomplished in the field during a live-link.

Improve your link margin digitally with a spectrally clean TX Boost from 0.5W to 30W and highly selective RX gain from 5 to 20dB.

Featured Highlights:

- Fully Adjustable AGC TX Power: 0.5W to 30W
- Fully Adjustable RX Gain: 5 to 20dB
- USB controlled (both indoor and outdoor)
- Non-Volatile Memory (tune and remember)
- Built-in RF Input Power Meter
- Status Reporting
- High Q filtering in both RX & TX paths
- Low Receive Noise Figure
- Internal Lightning Protection
- RX/TX LED Indicator
- Automatically switches between RX/TX
- Rugged weatherproof housing

ANTENNAFIER™ 2400 PT SERIES BLOCK DIAGRAM



The marketing, sale, and use of power amplification devices are governed by and subject to Part 15 of the Rules and Regulations of the Federal Communications Commission. Such devices may only be sold to parties assembling certified RF transmission systems consisting of an intentional radiator, an external radio frequency power amplifier, and an antenna.

9017 Cincinnati Columbus Rd.
West Chester, Ohio 45069
PH: 513-777-2774

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Typical Performance Parameters

Frequency Coverage: 2.44 GHz +/- 50 MHz

Supply Voltage: +12 VDC

Positive Lock, MINI-CON-X

Receive:

Adjustable Gain: 5 to 20 dB (Pin < -12 dBm)
Noise Figure: 3.5 dB Typ.
Supply Current: < 500 mA
TX to RX Switching: < 500 nSec
IP₃ (Input): +18 dBm

Transmit:

Adjustable AGC Power : .5 W to 30 W (27 dBm to 44.8 dBm; 0.1 dB inc)
AGC range: Min Gain : 9 dB Max Gain: 40 dB
(For Pout = 27dBm ; Set Pin from 0 to 18 dBm)
(For Pout = 44.8dBm ; Set Pin from 5 to 23 dBm)



	Average RF Output Power	Typical Data Rate	Typical DC Current
802.11b	44.8 dBm (30 W)	11 Mbps	6.2 A
802.11g	44.8 dBm (30 W)	18 Mbps	6.2 A
	43.0 dBm (20W)	24 Mbps	4.9 A
	41.5 dBm (14W)	36 Mbps	4.1 A
	40 dBm (10W)	48 Mbps	3.6 A
	39 dBm (8 W)	54 Mbps	3.3 A

RF Input Pwr for Turn-On: >+2 dBm
Harmonic Rejection: > 63 dBc @ 39dBm Power Out
TX Supply Current: < 9 A
RX to TX Switching: < 500 nSec

Maximum Ratings:

Pin (Radio Port) +30 dBm
Pin (Antenna Port) +27 dBm

System Filtering:

RX chain: 3 poles of high Q coaxial band pass filtering
TX chain: Ceramic LPF to suppress harmonics

Size / RF Conn:

8.08" x 7.03"x 3.60" (Two RF Connectors—"N" Female)
Rugged aluminum die-cast chassis, with white power coat finish

Weight:

< 6.5 Lbs

Indicator LED:

Green LED -Receive Mode, Red LED-Transmit Mode

Lightning Suppression:

Antenna N-Connector, 1/4 wavelength DC short

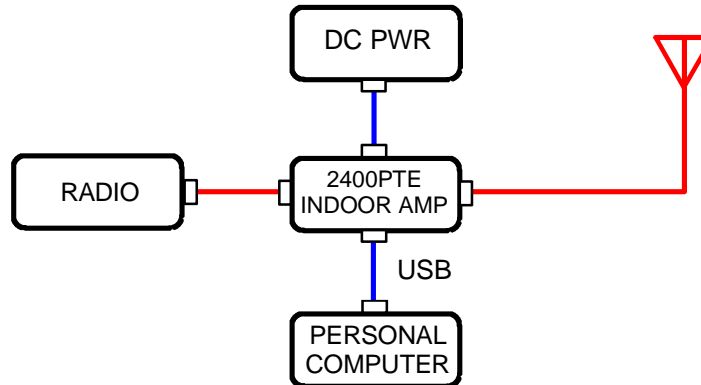
Temperature:

-40 to +70 Deg C

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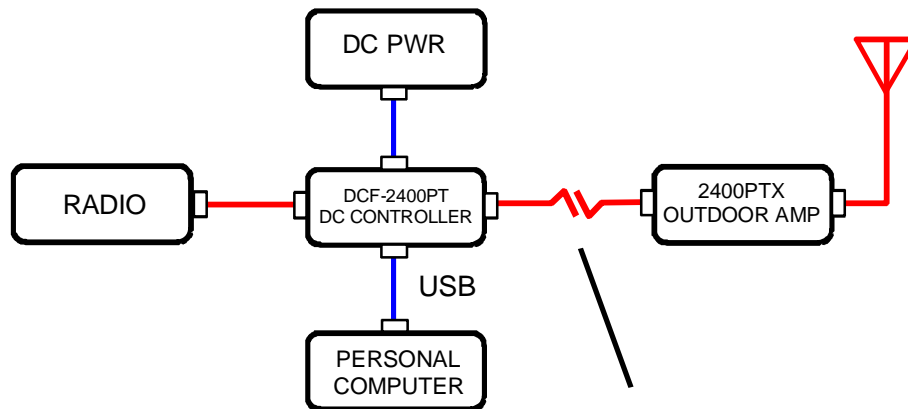
Deployment Diagram

Typical Indoor Application



PC for Tuning and Programming Only

Typical Outdoor Application



Caution Before Connecting DC Power:

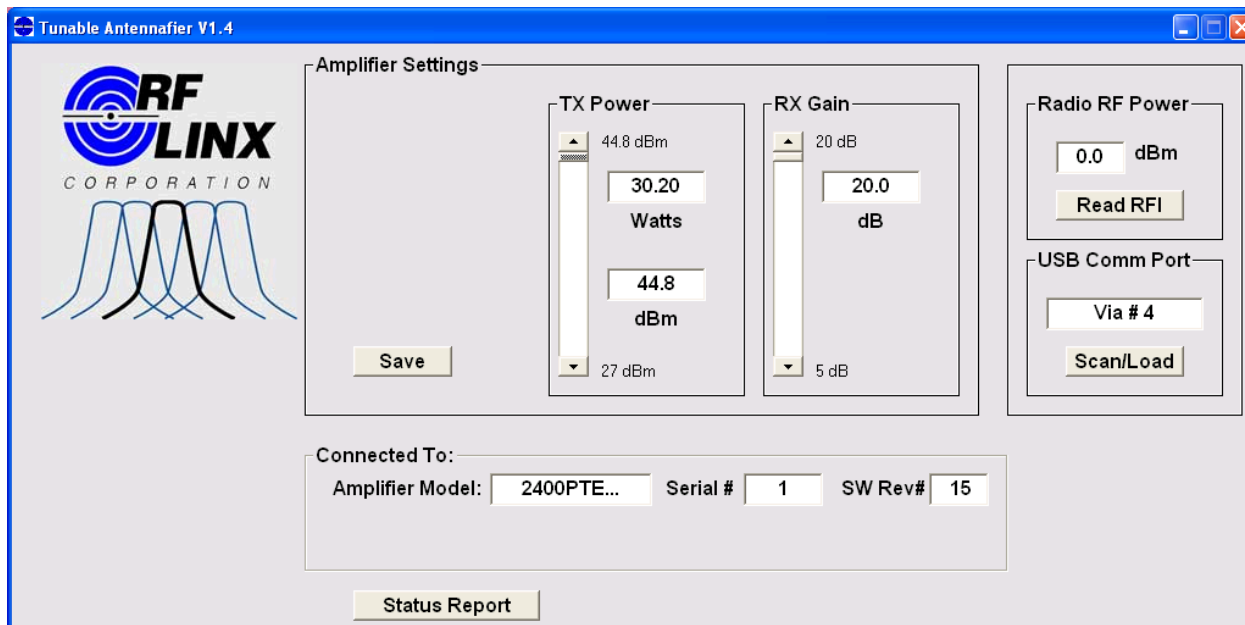
- When operating this amplifier always connect a 50 Ohm Load to Antenna Port.
- High RF Output Levels (30W), severe RF burns can result
- High DC Supply Currents, 12VDC @ 9A

Times Cable	Maximum Length
LMR-400	75 ft
LMR-600	130 ft
LMR-900	200 ft
LMR-1200	330 ft

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Programming Your Tunable Antennafier™

Programming is easily accomplished with a USB connection and our Tunable Software. The software operates on Windows (2000/XP/Vista) platforms. Below is a sample of the simple easy to use graphical interface.



Before applying DC power to amplifier connect radio and antenna as shown in Hook-Up Diagram on previous page. Ensure antenna load is 50 Ohms and connection is tight and secure. Damage to amplifier can occur if operating amplifier without proper loading. Apply DC power to amplifier then initiate the Tunable Software. The software auto finds a COM port and reads the attached amplifiers settings. Each Antennafier™ leaves the factory set at TX Pwr=+30dBm and RX Gain =+20dBm, and has a unique serial number. To change the TX Pwr and RX Gain settings, simply adjust the slide bar to the desired levels, the changes are almost instant. To permanently store these settings simply press the “Save” button, then disconnect the Tunable Controller. The Tunable Antennafier™ always remembers its stored information even when power is cycled.

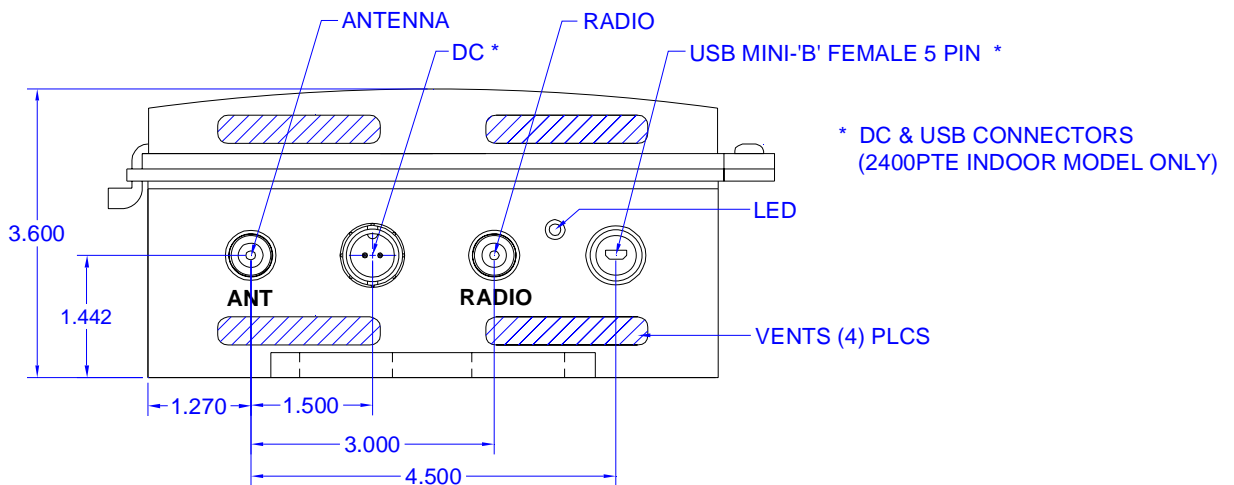
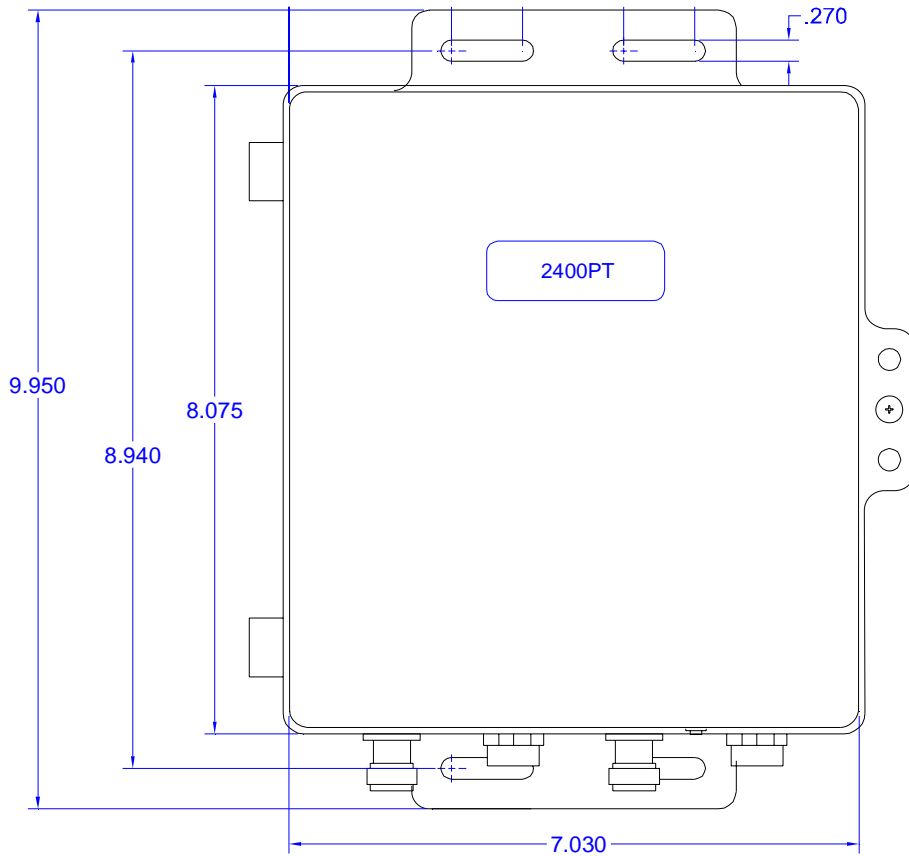
The digital tune information is carried through the 50 Ohm Coax between the controller and amplifier and does not interfere with radio traffic.

Radio Output Power to the amplifier can also be measured. Selecting “Read RFI”, will yield average RF energy during a TX cycle for either 802.11b/g modulations. This RF power measurement is useful and will aid in system diagnostics and assure proper RF Input Power is being applied to your amplifier.

A “Status Report” button is used to provide detailed diagnostic information.

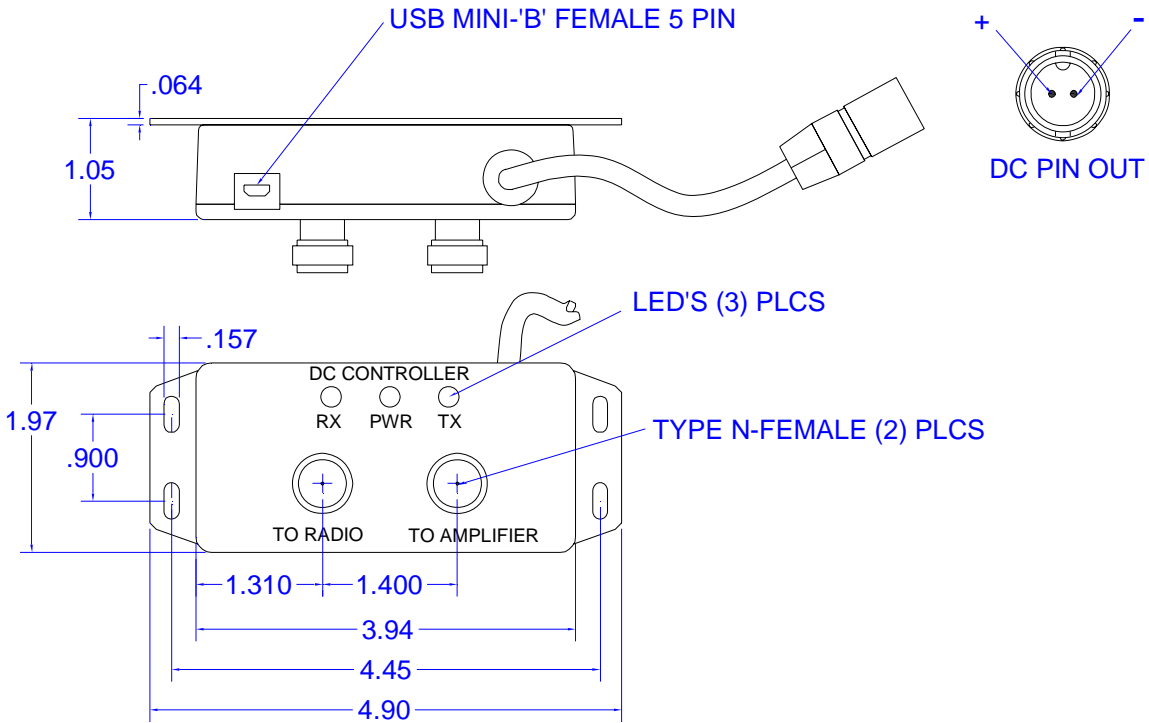
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Amplifier Mechanical Footprint (2400PTE/24000PTX):



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DC Controller for 2400PTX:



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ANTENNAFIER™ Ordering Guide

Part Number	Description
2400 PTE	30 Watt Indoor rated Amplifier, +12VDC Power Supply, USB Cable & Software
2400 PTX	30 Watt Outdoor rated Amplifier, DC Controller (indoor rated), +12VDC Power Supply, Mounting Brackets, USB Cable & Software



Outdoor Model Shown

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