

TUNABLE ANTENNAFIER™ 2400DT-SERIES



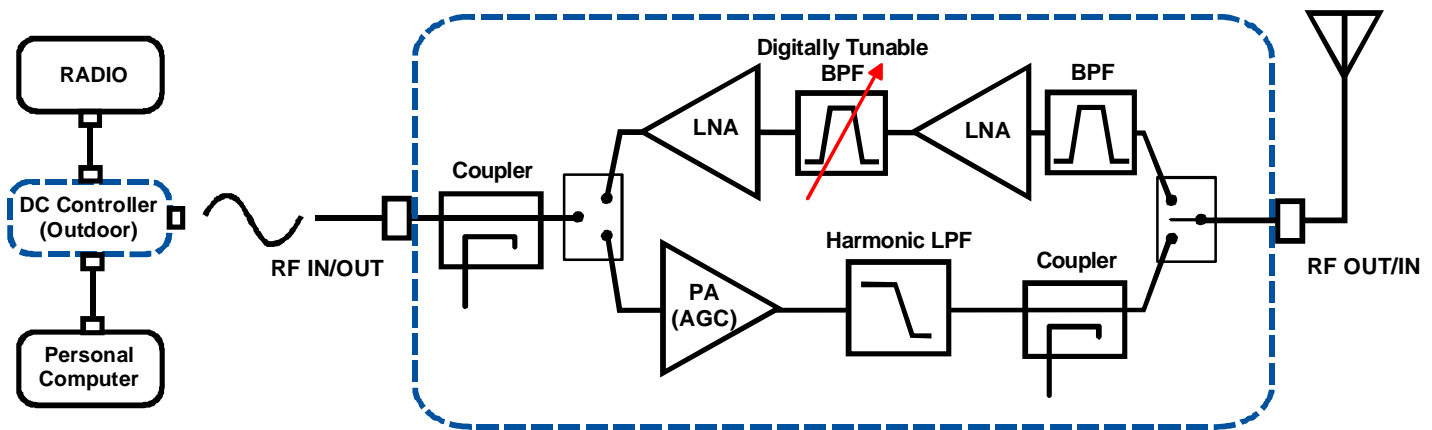
The 2400DT is a Digitally Tunable Bi-directional Amplifier with a Synthesized Ultra High Q Band Pass Filter, centered around your desired channel. Now you can fine tune your system's RF performance digitally via a USB connection & our free software. These amplifiers have non-volatile memory and will recall their previous settings. Reprogramming is simple and can be easily accomplished in the field.

Improve your link margin digitally with spectrally clean TX Output Boost from 0.5W to 4W and highly selective RX gain from 5 to 20dB.

Featured Highlights:

- Digitally Tunable Ultra High Q Filtering with Synthesized Center Frequency
- Fully Adjustable TX Power from 0.5W to 4W
- Fully Adjustable RX Gain: 5 to 20dB
- USB controlled (both indoor and outdoor)
- Non-Volatile Memory (tune and remember)
- Built in RF Power Meter
- Status Report
- Low Receive Noise Figure
- Internal Lightning Protection
- RX/TX LED Indicator
- Automatically switches between RX/TX
- Rugged weatherproof housing

ANTENNAFIER™ 2400 DT 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.

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Frequency Coverage: 2.40 GHz +/- 50MHz, Tunable over 14 Channels

Tunable Center Frequencies:

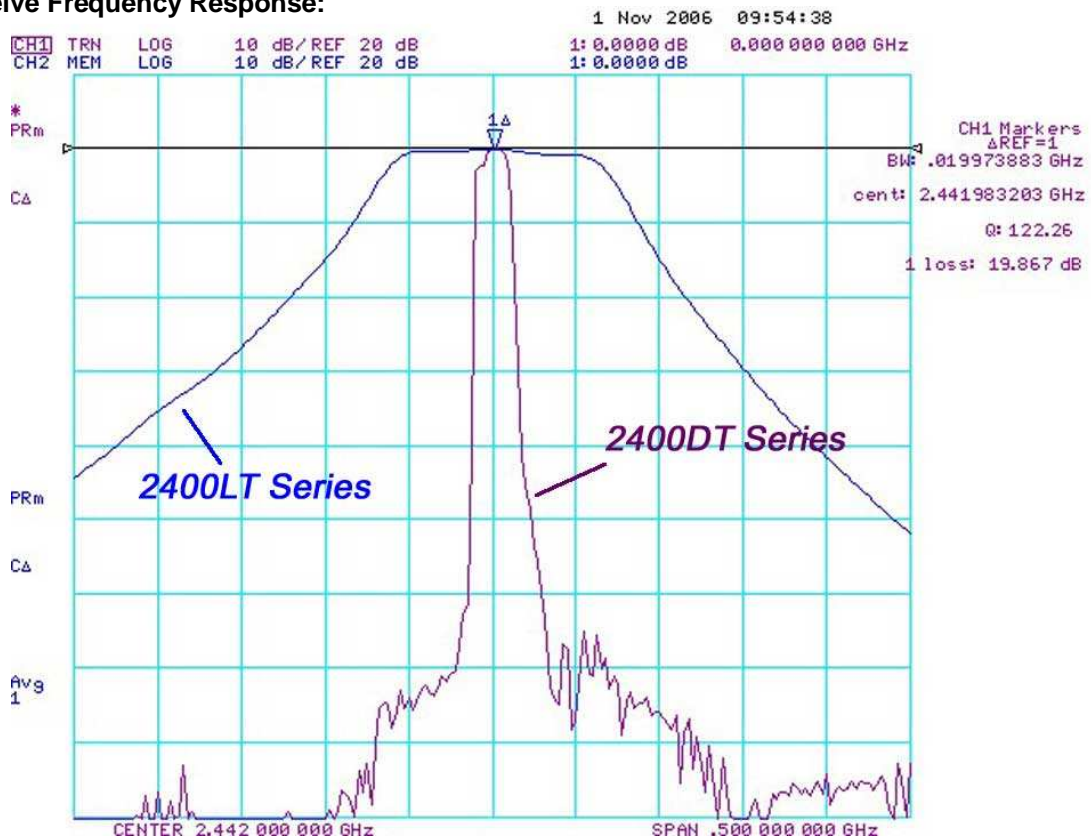
CHANNEL	Center Frequency
1	2412 MHz
2	2417 MHz
3	2422 MHz
4	2427 MHz
5	2432 MHz
6	2437 MHz
7	2442 MHz
8	2447 MHz
9	2452 MHz
10	2457 MHz
11	2462 MHz
12	2467 MHz
13	2472 MHz
14	2484 MHz

CH 1 thru 11 (U.S.)
CH 12 thru 14 (International)

Receive Filtering:

3 dB BW	20.0 MHz Typ.
30 dB BW	27.3 MHz Typ.
60 dB BW	55.0 MHz Typ.
Quality Factor	Q= 120 Typ.

Typical Receive Frequency Response:



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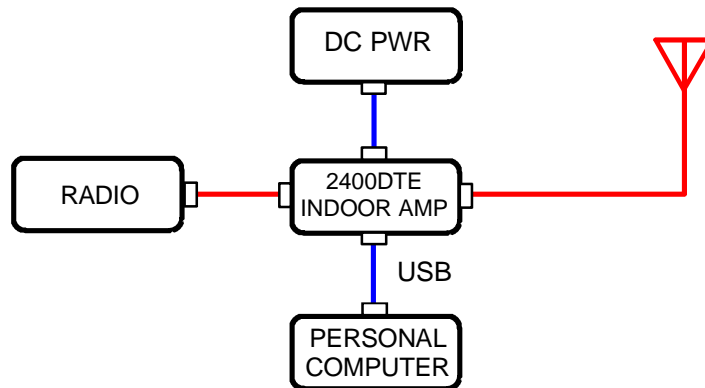
Typical Performance Parameters

Supply Voltage:	+12VDC	2.1mm I.D. (+), 5.5mm O.D. (-)
Receive:	Adjustable Gain:	5 to 20 dB (Pin < -12dBm)
	Noise Figure:	2.5 dB Typ.
	Supply Current:	< 500mA
	TX to RX Switching:	< 500nSec
	IP ₃ (Input):	+18dBm
Transmit:	Adjustable AGC Power :	0.5W to 4W (27dBm to 36dBm)
	AGC range:	Min Gain : 10dB Max Gain: 32dB
		(For Pout = 27dBm ; Set Pin from 0 to 17dBm)
		(For Pout = 36dBm ; Set Pin from 4 to 23dBm)
	'802.11g' Modulation Rates	4W typically yields 11 Mbs
		3W typically yields 24 to 36Mbs
		≤ 2W typically yields 36 to 48Mbs
	RF Input Pwr for Turn-On:	>+2dBm
	Harmonic Rejection:	> 65dBc @ 30dBm Power Out
	Supply Current:	< 2A , 1.7A nominal
	RX to TX Switching:	< 500nSec
Maximum Ratings:	Pin (Radio Port)	+30 dBm
	Pin (Antenna Port)	+27 dBm
Size / RF Conn:	2.53" x 5.90"x 1.45" ("N" type Female Connectors)	
Weight:	< 15 oz	
Chassis:	Diecast Aluminum with rugged black powder coat finish. To enhance reliability, indoor models are coated with conformal coating and outdoor models are encapsulated.	
Indicator LED:	Green LED -Receive Mode, Red LED-Transmit Mode	
Lightning Suppression:	1/4 wavelength short	
Temperature:	-40 to +70Deg C	

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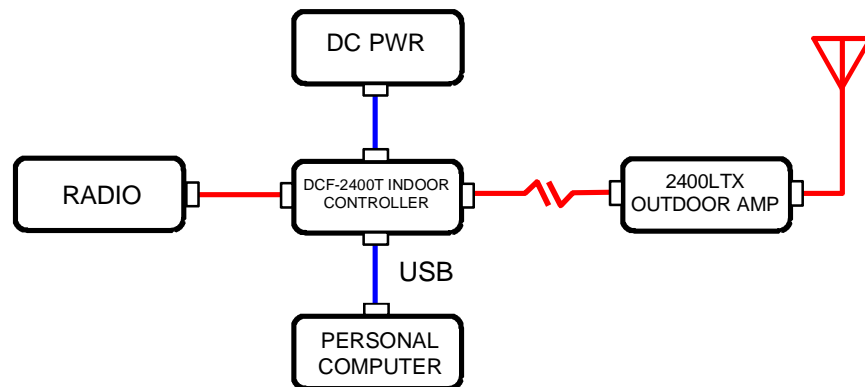
Hook-UP Diagram

Typical Indoor Application



PC for Tuning and Programming Only

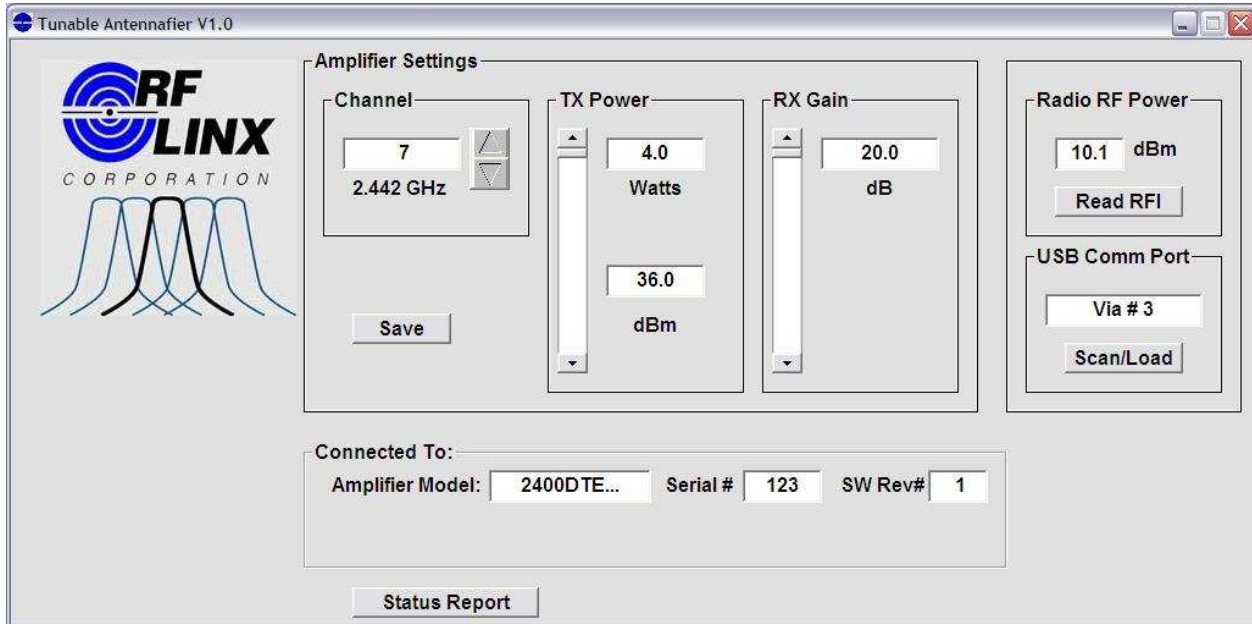
Typical Outdoor Application



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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 platforms. Below is a sample of the simple easy to use graphical interface.



After applying power, the software reads the amplifiers settings via a USB connection. Each Antennafier™ leaves the factory set at CH7, TX Pwr=+30dBm and RX Gain =+20dBm, and a unique serial number. To change the 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.

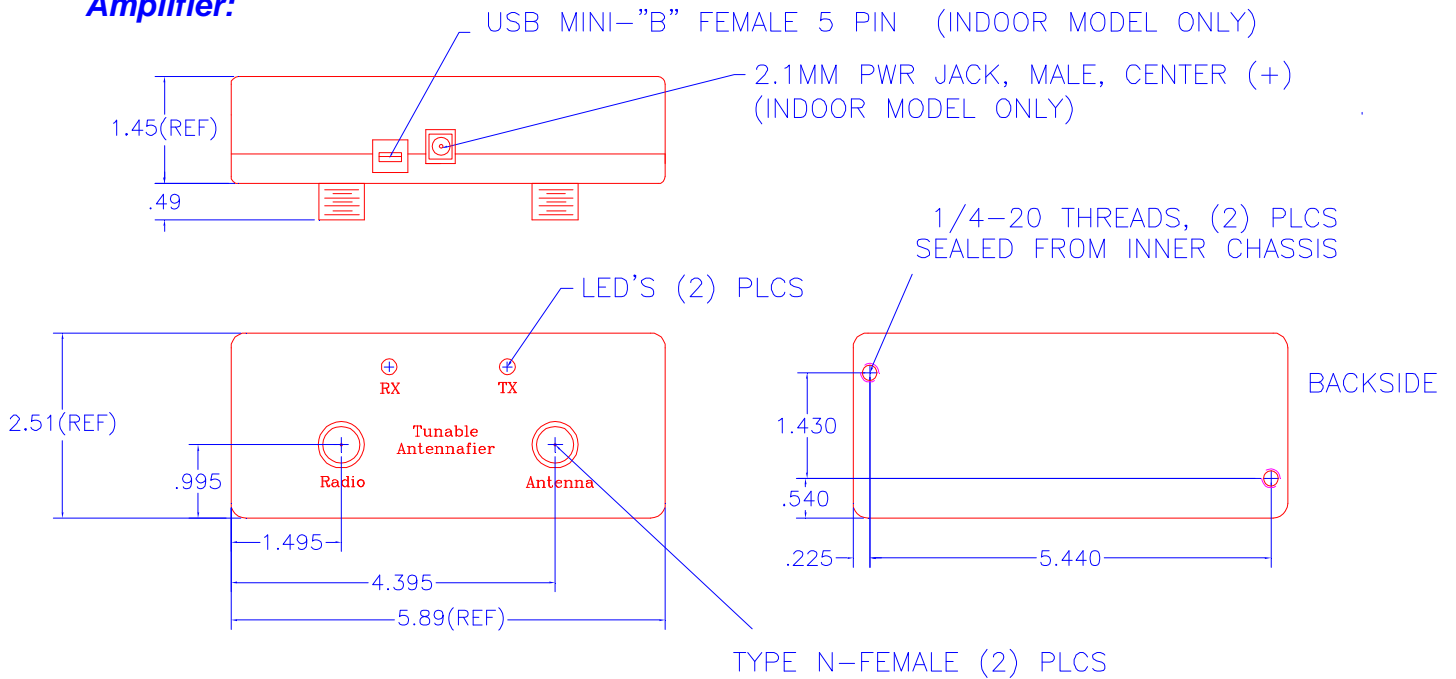
Radio Output Power to the amplifier can also be measured. Selecting “Read RFI”, will yield average RF energy during a TX cycle for either 802.11b/g modulations. This RF power measurement is useful and will aid in system diagnostics and assure proper RF Input Power is being applied to your amplifier.

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

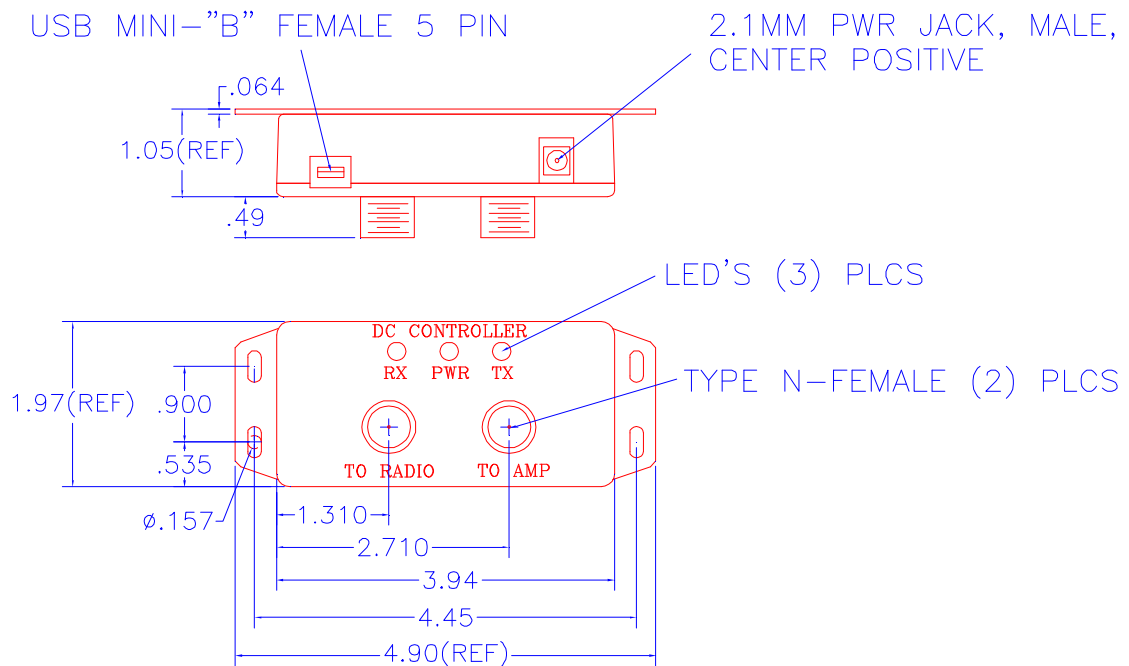
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Mechanical Footprint

Amplifier:



DC Controller:



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ANTENNAFIER™ Ordering Guide

Part Number	Description
2400 DTE	Includes: 4 Watt Indoor rated Amplifier, +12VDC Power Supply, Mounting Bracket USB Cable & Software
2400 DTX	Includes: 4 Watt Outdoor rated Amplifier, Indoor rated DC Controller, +12VDC Power Supply, Mounting Bracket USB Cable & Software



Outdoor Model Shown

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