

Amplifier Kit Contents:

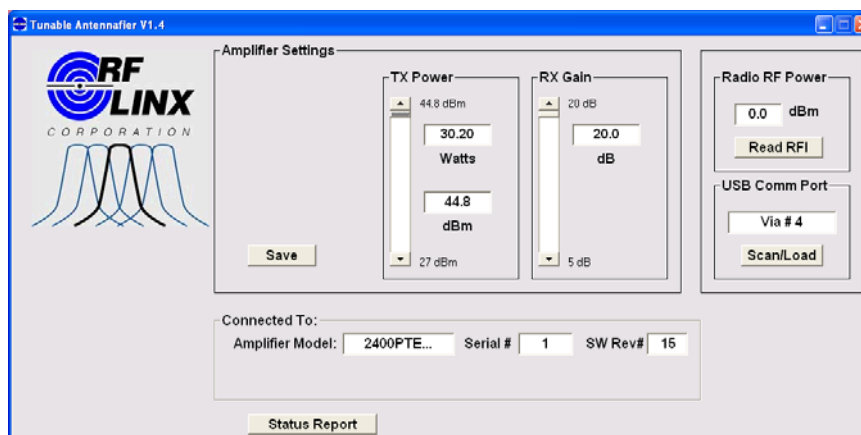
Qty	Description
1	Antennafier™ Amplifier with CD ROM & USB cable
1	12VDC Power Supply
1	DC Injector (PTX model)
1 kit	2.5" "U" Bolts & "V" Blocks, Kit with hardware & Coax Seal Tape

Software Installation:

The Tunable Antennafier Software can be installed on Windows 2000/XP/Vista platforms. Simply insert the disk and the self-install program will proceed installing the software, or use Start/Run/ then select "setup.exe".

Before applying DC power to amplifier connect radio and antenna as shown in Deployment Diagrams.

Next, connect the 12VDC power supply to the amplifier and connect the PC to amplifier via the supplied USB cable. Next, initiate the Tunable Antennafier software from the Windows desktop Icon. A screen similar to the window below will be displayed:



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.

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When connected to a 2400PTX outdoor amplifier, 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, simply selecting "Read RF1" , will yield average RF energy during a TX cycle for either 802.11b/g modulations. This RF power measurement tool is useful and will aid in system diagnostics and assure proper RF power from your radio is being applied to your amplifier.

Bi-Color LED Indicator:

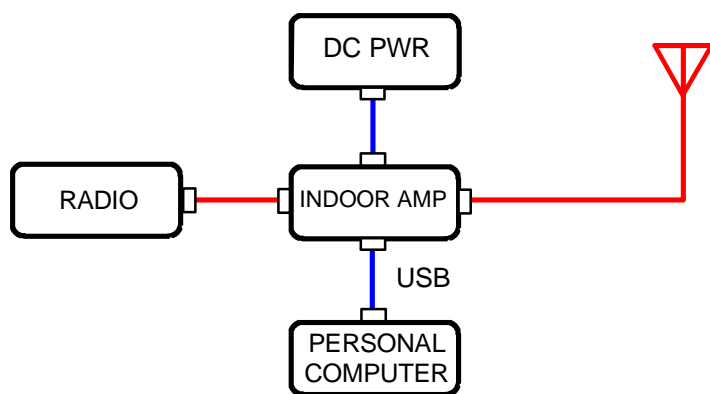
When DC power is applied and the Radio is connected to the amplifier a green color will be displayed on the LED indicator. A red indication will be displayed if the amplifier is in TX, an RF input level of greater than +2 dBm is needed to initiate TX. During normal RX/TX operation, one will see this LED turn Orange as it flickers back and forth between transmit and receive. If LED is not ON, check to ensure proper DC power is being applied.

Mode	TX	RX
Transmit	Red	-
Receive	-	Green
Operating	Orange	
Fault	-	-

Indoor Deployment Diagram:

Connect the 2400PTE with Type 'N' connectors to the appropriate RF ports as shown below.

Typical Indoor Application



PC for Tuning and Programming Only



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

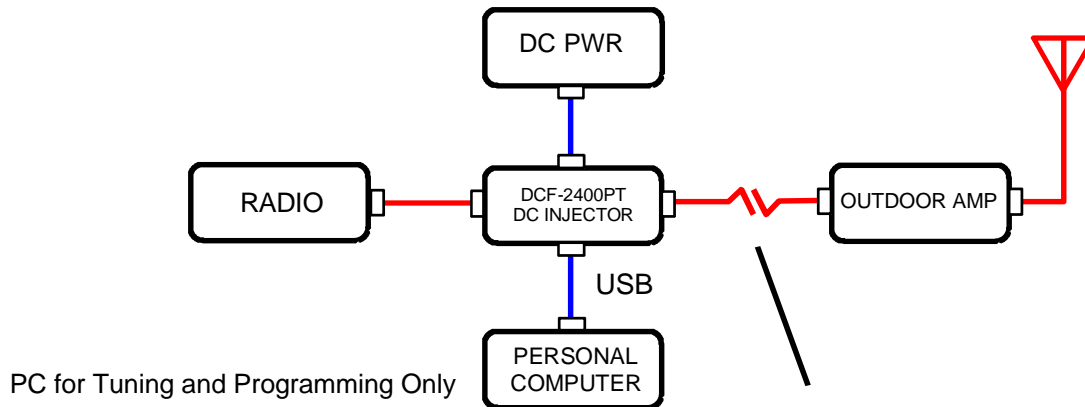
This high power amplifier has a long-life internal fan to circulate and cool the heat produce by this device. Intake & exhaust vents are located on connector side and must be kept unobstructed allowing the amp to breath.

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Outdoor Deployment Diagram:

Connect the DC Injector and 2400PTX with Type 'N' connectors to the appropriate RF Ports as shown below.

Typical Outdoor Application



Caution Before Connecting DC Power:	
•	<i>When operating this amplifier always connect a 50 Ohm Load to Antenna Port.</i>
•	<i>High RF Output Levels (30W), severe RF burns can result</i>
•	<i>High DC Supply Currents, 12VDC @ 9A</i>

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

Outdoor Mounting & Sealing RF Connections

Each amplifier is supplied with a mounting kit containing two 2.5" U-bolts w/brackets, hardware and coax seal. Attach the brackets to the amplifier and mount the amplifier to the tower with the RF connectors pointing downwards. This amplifier is designed to withstand extreme outdoor elements, yet mounting this amplifier connectors up cause rain to fill the cavity, thus voiding the warranty coverage.

Ensure all RF connections are tight then carefully seal all exposed RF connectors with the supplied coax seal and then two layers of PVC tape in an overlapping fashion. This high power amplifier has a long-life internal fan to circulate and cool the heat produce by this device. Intake & exhaust vents are located on connector side and must be kept unobstructed allowing the amp to breath.

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Optional Lightning Protection:

The Antennafier™ Amplifiers have integrated 1/4 wave surge protection built-in. However, for an added layer of protection, especially with tower-top applications, we suggest using an additional coaxial surge arrester between the amplifier output and antenna. Arrestors must be properly grounded with at least 12 AWG wire.

Remote Control Commands for your Antennafier™ via COM Port:

The Antennafier™ Amplifiers have the unique ability of being controlled via a COM Port with simple ASCII commands. Users can now write their own custom software applications that can link directly with an Antennafier™. A listing of these commands is tabulated on the next page.

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RFLINX---User Remote Control Commands REV A1 (09-15-2008)

Commands are not case sensitive. Spaces are optional, allowed anywhere, and ignored. A command is processed upon reception of carriage return (CR). All numeric digits (leading zeros) must be supplied. A decimal point is assumed in some commands. A backspace character will “erase” a received character. The baud rate is 9600, 8 bits, no parity (may be factory adjusted).

Command	Description
<i>Generic status commands:</i>	
LOGxxx	Conversion tool xx.xx Watts to xx.x dBm (i.e. 0523 W => 373 (37.2)dBm)
ECHOON	Turn loopback Echo ON
ECHOOFF	Turn loopback Echo OFF
RESTORE	Restore factory default user settings
AMPSER?	Returns amp serial number
AMPREV?	Returns amp firmware rev
AMPSTAT?	Return amp status (not available with DC Injector)
AMPID?	Return amp Identity String
SAVEALL	Store user settings
ERRNUM?	Return internal error code
TXAGC?	Return AGC mode (1 ON, 0 OFF)
AGCOK?	Returns if AGC is 'OK' or 'UNLOCKED'
<i>Receive commands:</i>	
RXGMIN?	Return minimum allowable RX dB Gain
RXGMAX?	Return maximum allowable RX dB Gain
RXGDB?	Return RCV gain setting, (xxx dB)
RXGxxxDB	Set user RX dB gain level (i.e. 15.1dB = 'RFG151DB')
RFIMEAS	Sets-up to measure average RFI during TX mode
TXRFI?	Return measured RFI (used after RFIMEAS to report RFI level dBm)
<i>Transmit commands:</i>	
TXMIN?	Return minimum allowable AGC dBm level
TXMAX?	Return maximum allowable AGC dBm level
TXDBM?	Return TX power setting (dBm)
TXWATTS?	Return TX power setting (Watts)
TXxxxWATTS	Set user TX level in Watts (i.e. 1W = 'TX0100WATTS')
TXxxxDBM	Set user TX level in dBm (i.e. 30.0dBm = 'TX300DBM')
<i>The following commands valid for 2400DT models only:</i>	
PLLOK?	Check PLL Lock (used on 2400DT only)
CHAN?	Reply with user channel (used on 2400DT only)
CHANxxx	Set user Channel nnn (00-014, used on)
<i>The following commands only valid for Fixed Gain Amps (AGC is OFF):</i>	
TXGMIN?	Return minimum allowable fixed gain level in dB (xx.x dB)
TXGMAX?	Return maximum allowable fixed gain level in dB (xx.x dB)
TXGxxxDB?	Set user TX gain in dB (i.e. 12.3dB = 'TXG123DB')

Note commands show current settings which may differ from the stored settings use SAVEALL to store user settings

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