

Amplifier Kit Contents:

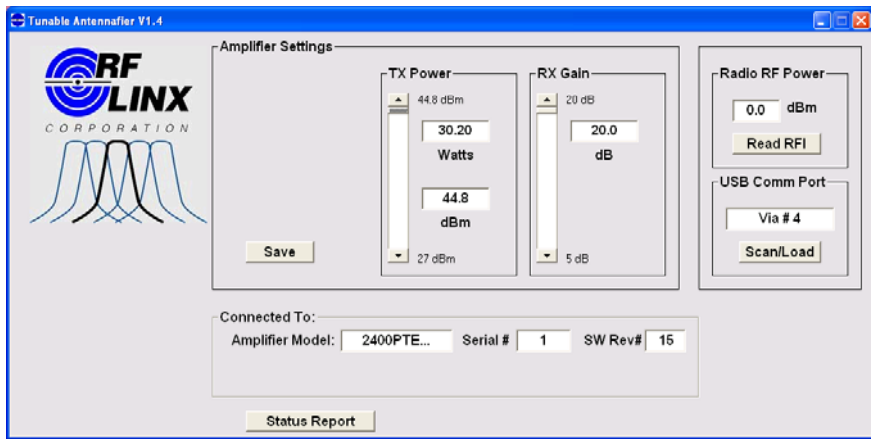
Qty	Description
1	Antennafier™ Amplifier with CD ROM & USB cable
1	Aluminum “L” Mounting bracket
1	12VDC Power Supply
2	1/4”x20 Stainless Steel Pan Head
1	DC Injector (LTX/DTX models)
2	Coax Seal Tape strips (LTX/DTX models)
1	2.5” “U” Bolt & “V” Block Kit with hardware (LTX/DTX models)

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 an 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.

Indicator LEDs:

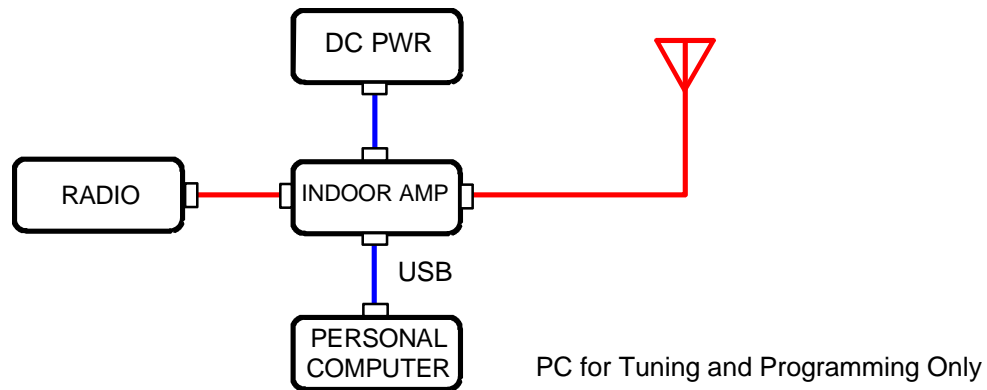
When DC power is applied and the Radio is connected to the amplifier the green RX LED should be lit. The red TX light will only turn on when the amplifier senses an RF level of greater than +2 dBm on it’s TX Input port. During normal RX/TX operation, one will see these two LEDs flicker back and forth between transmit and receive. If neither of these lights are operational, check to ensure proper DC power is being applied.

<i>Mode</i>	<i>TX</i>	<i>RX</i>
Transmit	Red	-
Receive	-	Green
Fault	-	-

Indoor Deployment Diagram:

Connect the 2400LTE or 2400DTE with Type ‘N’ connectors to the appropriate RF ports as shown below.

Typical Indoor Application



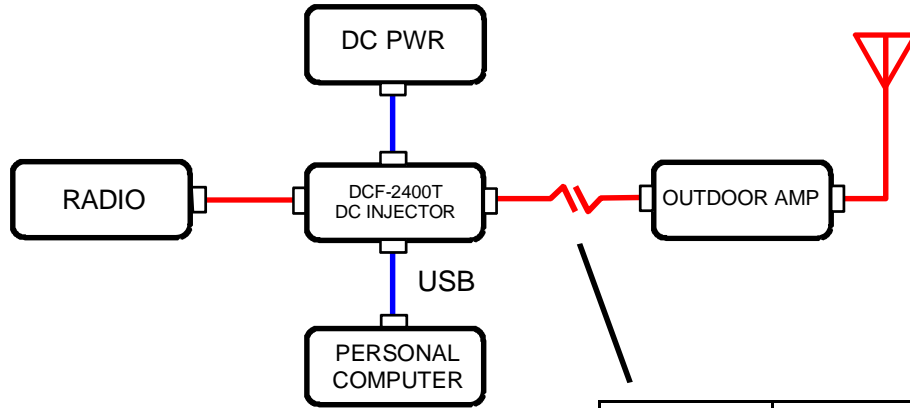
Each amp is supplied with an “L” shaped mounting bracket. This bracket attaches to the amp back via two 1/4” x 20 Pan Head Screws. Mount amp to either a wall or panel with the remaining holes located on the mounting bracket.

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Outdoor Deployment Diagram:

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

Typical Outdoor Application



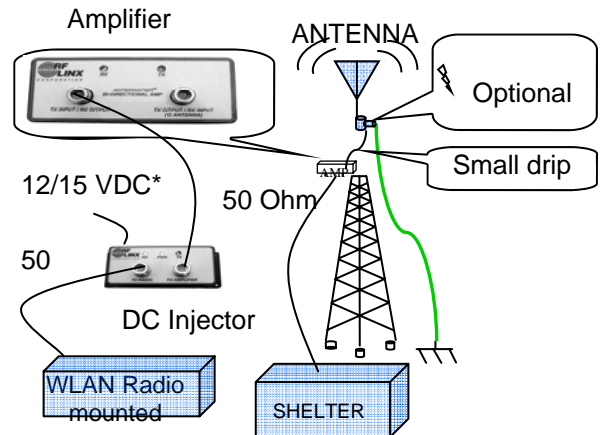
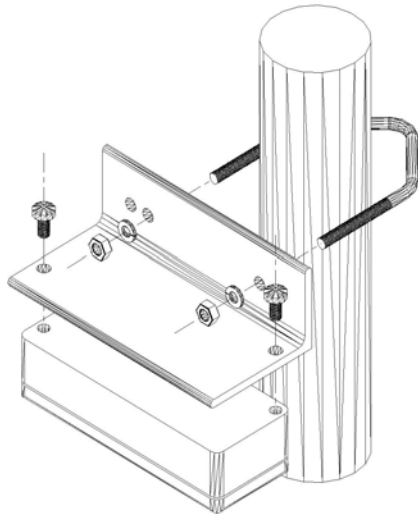
PC for Tuning and Programming Only

Times Cable	Maximum Length
LMR-400	200 ft
LMR-600	350 ft

Outdoor Unit Mounting & Sealing RF Connections

Each amplifier is supplied with an "L" shaped mounting bracket. Attach this bracket to the amplifier back via two 1/4" x 20 Pan Head Screws. The inner amplifier cavity is weather tight and sealed from the 1/4" x 20 screws, so no need to worry about sealing these screws. Next mount this assembly to a mast using the "U" bolt and supplied hardware (see diagram). Mount the amplifier with the RF connectors pointing downward for enhanced protection from the elements. Mounting amplifiers connectors up will void warranty coverage.

Carefully seal all exposed RF connectors with the supplied coax seal and then two layers of PVC tape in an overlapping fashion. The amp itself is weather tight, The RF connectors which tie into the amp must be properly sealed to maintain the integrity of the outdoor chassis.



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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). To use these commands requires amplifier with firmware 2400LT/DT REV 18 or 2400PT REV 15 or greater.

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')
TxxxDBM	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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