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Bi-Directional 900MHz 5 Watt Amplifier

Example setup to extend range of 900 MHz radio devices for Direct Sequence or Frequency Hopping Spread spectrum radio modems

(See www.rfwel.com/signal_improvement for booster solutions for other frequencies and/or signal levels)

NOTES:

General connection instructions:

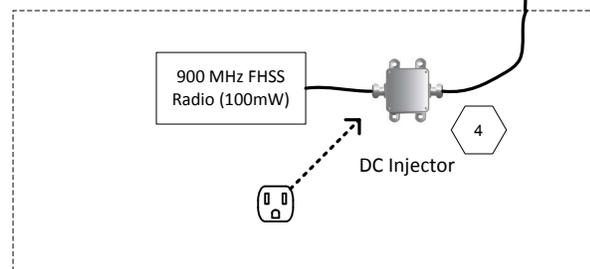
1. Connect the amplifier in the network as shown on the diagram
2. Connect DC injector to supplied 9V DC power supply
3. Connect DC injector end labeled "TO RADIO" to Radio using an N-Type coaxial cable
4. Connect DC injector end labeled "TO AMPLIFIER" to SmartAmp 900 MHz series amplifier using an N-Type coaxial cable.
5. Connect SmartAmp 900MHz series amplifier (labeled "TO ANTENNA") to input of antenna using an N-Type Coaxial cable

8-element Yagi Ant. Gain=11dBi @ 890-960 MHz, 6W

900MHz 5W bi-directional amplifier, TX Gain 26dB (max), RX Gain 14dB (typ), NF=3.5dB (typ)

LMR400-eq. low loss cable, N-Male, Attenuation 3.9dB/100ft @ 900MHz, 50Ω

Building or Enclosure



Bill of Materials (BOM)

ITEM	QTY.	PART NO.	DESCRIPTION
1	1	CTWL82-3155	890-960 MHz 8-Element 11dBi Yagi Antenna (w/ N-Fem)
2	1	TSWL466625	Bi-Directional 900MHz 5 Watt Amp, 100mW In, 3.5dB NF
3	3	952310	10' LMR-400 equivalent Low loss coax, N-male, Att<0.1dB
4	1	TSWL466625	DC injector, N-Female (included w/ item 2)



The use of all radio equipment is subject to radio regulations in each country. It is the responsibility of the purchaser/installer/operator to insure that only approved equipment/systems are deployed. For the ISM band (900MHz, 2.4GHz, 5.7GHz) equipment manufactured, sold/or used in the USA, FCC Title 47, Part 15 governs the sale, lease, use and manufacture of equipment (wireless LAN cards, wireless Access points, amplifiers, etc.) and prohibits the same unless such equipment is used in the FCC-certified system configuration with which such equipment is authorized.

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DRAWN BY: RT (Engr)
APPROVED BY:

FREQ(s): 900 MHz ISM

Generic 900MHz ISM Amplifier Setup -Teletronics SmartAmp (tm)

Outdoor bi-directional amplifier. Max input power 100mW, Max output power 5W. Rx gain~14dB, NoiseFigure ~3.5dB

SIZE

LIC NO

DWG NO

REV

AZ ROC# 253407

BW-00000000

1A

SCALE

NO SCALE

FRN: 0018086041

SHEET

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