



Part of your APCO 25 Solution!

# NTA01

## Your Motorola ASTRO Digital Spectra™ Installation Solution

- Utilize Existing Inventory of Motorola ASTRO Digital Spectra™ Radios
- Aircraft Grade Enclosure
- 28 - 13 Volt Power Supply
- Tac/Com II™ Compatible
- Aircraft Audio Interface
- Artificial Sidetone
- Easy Installation & Removal for Mission & Aircraft Flexibility
  - Lightweight, Compact
  - Tray Mount

The NTA01 Series Radio Conversion Kit provides a quick and easy solution for installing Motorola ASTRO Digital Spectra™ radios into an aircraft. The result is an aircraft quality assembly with all the necessary voltage and audio interface converters to meet both the physical and electrical interface requirements.

The Motorola ASTRO Digital Spectra™ series radio is one of the most popular versions used for public agency communications. It is available in conventional FM bands including VHF-LO, VHF-HI, and UHF bands, plus, Trunking configurations, and APCO 25 compliant networks. Until now, the car mobile version has been used to equip aircraft that must communicate with ground personnel. However, it required the use of multiple adapters plus modification of the mounting hardware.

The NTA01 kit provides all required interface functions along with tray mounting hardware. The voltage is converted from the standard aircraft 28 VDC to 13 VDC through a switching regulator with over voltage, over current and thermal protection. Speaker output and mic input levels and impedances are converted for connection to a standard aircraft audio system, and the kit produces artificial sidetone. The result is a radio that looks and operates just like a standard aircraft radio. Programming access to the radio is maintained with an external

15 pin connector for use with the Motorola RSS software (Motorola RIB or SRIB box required).

In completing the aircraft compatible system, the final step is to interface to the NAT Tac/Com II™ multi-radio control. This unit is capable of simultaneous operation of up to four separate FM transceivers, including the Motorola ASTRO Digital Spectra™ radio. Utilizing NAT's proprietary interface to the Motorola ASTRO Digital Spectra™, the Tac/Com II™ supports the Mode, Zone, and Scanning features of the radio.

The easy to install, mission flexible, NTA01 is your cost effective alternative solution for law enforcement, air ambulance or any special mission flight environment requiring a multi-band APCO 25 compliant network communication system.

**Note:** ASTRO™ radios come in a wide variety of versions, with varying transmit power levels and sizes. The NTA01 will support radios with a maximum length of 7" and a DC current draw of 4 amps at 14 VDC (20% duty cycle). The transmit power of the ASTRO™ radio must be set to 10 watts maximum prior to installation into the NTA01.

W7 or W9 versions of the ASTRO™ radio are recommended for operation with the NAT Tac/Com II™ control head. Not all features will be available if other radio versions are used.



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**Mechanical:**

Dimension 7.29"H x 14.83" D x 2.99" W  
(185.2mm x 376.7mm  
x 75.9mm)

Weight 4.5 lbs. (2.045 kg)

**Inputs:**

Power 27.5 VDC nominal

Operating Current 0.4 A (Standby)  
0.8 A (Receive)  
(Typical @ 10 Watts) 2.5 A (Transmit)

Mic  
(from audio panel) 250 mV rms into 150 ohms

Speaker  
(from ASTRO™) 5 watts into 8 ohms

Antenna 50 ohms

**Outputs:**

Mic (to ASTRO™) 150 mV rms into 150 ohms  
nominal (balanced)

Phones  
(to audio panel) 100 mW into 600 ohms

Frequency Response <3 dB, 350 Hz to 6000 Hz

Distortion <10%

Audio Noise Level >50 dB

Power 13 VDC nominal

**Environmental:**

Temperature  
(Operating) -30 C to +60 C  
(Survival) -40 C to +85 C

Vibration DO-160D Cat. (SM)(UF)

Shock DO-160D Cat. B

Humidity 95%

Altitude 15,000 ft

**Tac/Com II™ Control Head:**

**TH350**