

RF-300M-TV

FALCON III® TRIMLINE VEHICULAR AMPLIFIER

A space-saving vehicular amplifier adapter for use with the AN/PRC-152(C)

The Falcon III® RF-300M-TV Trimline Vehicular Amplifier (TVA) is a low-profile, single-channel power amplifier based on the advanced system architecture of the AN/VRC-110. Designed for use with the AN/PRC-152 multiband handheld radio, the TVA's space-saving silhouette is ideal for installation in vehicles with tight spaces, or where large amplifiers are currently installed and additional space is desired.

Providing increased communications reliability in long-range applications, the TVA supplies 50 watts from 30 to 90 MHz, 20 watts 90 to 512 MHz, and 50 watts for satellite communications. Separate VHF, UHF, and SATCOM ports with automatic port switching allow users to switch between ground, ground-to-air, or SATCOM communications by simply selecting the required net on the radio—no antenna change is needed.

Intended for use with the Falcon III Software Communications Architecture (SCA)-based AN/PRC-152(C) Multiband Handheld Radio, the TVA features an integrated Handheld Remote Charging Unit (HHRCU). The HHRCU permits simultaneous operation and charging of the handheld battery, plus remote control of the TVA from up to 15 feet (~4.6 meters) away. For dismount operations, the TVA's "jerk-and-run" capability allows removal of the handheld while remaining powered on.

With the AN/PRC-152(C), the TVA supports SINCGARS, JITC-certified DAMA, Havequick VII, VHF/UHF AM and FM, and MIL-STD-188-181B with Advanced Narrowband Digital Voice Terminal (ANDVT) voice with up to 56 kbps data. Ensuring support of future waveforms and encryption modes, the AN/PRC-152(C) protects transmissions with Harris' Sierra™ II software programmable encryption module.

Additional TVA features include VIC-1 and VIC-3 interface and stacking capability to create a dual-channel configuration. The TVA fits into the MT-6352 SINCGARS tray (no SINCGARS Interface Module (SIM) is needed), or it can be hard-mounted in a vehicle. The TVA is also compatible with the Harris RF-310M-HH Suite B multiband handheld radio.



Specifications for RF-300M-TV Falcon III® Trimline Vehicular Amplifier

Frequency Bands	
Frequency Range	30-512 MHz
Transmission Modes	FM, AM (90-512 MHz)
Presets	99 (standard); unlimited using multiple mission plan files
Power Input	20-32 VDC MIL-STD-1275 Protection
Tuning Resolution	10 Hz

Interfaces	
Data	RS-232
Remote Control	RS-232
VHF Antenna Port	50 Ohm BNC
UHF Antenna Port	50 Ohm BNC
SATCOM Port	50 Ohm BNC
Audio	VIC-1, VIC-3, LS-671 compatible

Transmitter	
Output Power	30-90 MHz: 5, 20, or 50 watts PEP 90-512 MHz: 20 watts SATCOM bands: 50 watts
Harmonic Suppression	Greater than 60 dBc (50 watts) Greater than 56 dBc (20 watts) Greater than 50 dBc (5 watts)
Spurious Suppression	VHF: Greater than 80 dBc typical UHF: 50 watts: Greater than 60 dBc 20 watts: Greater than 56 dBc 5 watts: Greater than 50 dBc

Radio Interoperability	
Crypto Fill Devices	AN/CYZ-10 DTD (supports DS-101, DS-102, and Mode 2/3), KYX-15, KYK-13, DTD-2000
Crypto Modes	KY-57/58, ANDVT/KYV-5, KG-84C, AES, FED-STD-1023, Fascinator
Radios	AN/PRC-117F(C), AN/PRC-117G, AN/PRC-113, AN/PRC-119A/B, AN/PRC-148 (JEM, MBITR), AN/PRC-77, PSC-5, AN/PRC-139, RF-310M-HH Suite B XTS-5000, ARC-164, ARC-210, ARC-231
GPS	PLGR, DAGR

Receiver	
Sensitivity	-113@12 dB SINAD (FM)
Image Rejection	Greater than 80 dB
IF Rejection	Greater than 70 dB

Physical Specifications	
Height	3.5 in.
Depth	10.5 in.
Width	15.2 in.
Power Amplifier Weight	22.5 lbs.
HHRCU Height	10.34 in.
HHRCU Width	5.75 in.
HHRCU Weight (with handheld)	7.5 lbs.

Environmental	
Temperature	-30° to +60°C
Shock/vibration	MIL-STD-810G
Sand/dust/salt fog	MIL-STD-810G

Key Radio Waveforms	
	SINCGARS
	HAVEQUICK III
	VHF/UHF AM/FM
	MIL-STD-188-181B
	HPW (Option)
	APCO P-25 (Option)
	MIL-STD-188-182A and MIL-STD-183A DAMA (Option)

Key Radio Features	
	SCA V2.2 compliant (no waivers)
	Sierra II™ based programmable type-1 crypto
	Built in speaker/microphone
	Full numeric keypad
	NVG compatible display
	Wireless cloning
	MELP



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