

COBHAM

The most important thing we build is trust



RT-7000 Panel Mount Radio Tactical Communications System

Civil Air Patrol 2017 National Conference



Cobham... *You may know us as...*

ACR (SA) (RSA)	ACR Electronics Inc (USA)	Aeroflex (USA)
Antenna & Sensors Lansdale (USA)	Argotek Inc	Atlantic Microwave Corp (USA)
AFI Flight Inspection (Germany)	Atlantic Positioning Systems (USA)	Aviation Defense Service) (FR)
Carleton Life Support Systems (USA)	Carleton Life Support Tech Ltd (USA)	Carleton Technologies Inc (USA)
Chelton Antennas SA (FR)	Chelton Inc (USA)	Chelton Limited (UK)
Chelton Telecom & Microwave (FR)	Cobham Advanced Composites (UK)	Cobham Advanced Tech (RSA)
Cobham Def Communications Ltd (UK)	Comant Industries (USA)	Conax (USA)
Continental Microwave (USA)	Credowan Limited (UK)	Culham Lightning (UK)
Domo Ltd (UK)	dB Systems (USA)	ERA Technology Ltd (UK)
European Antennas Limited (UK)	FBHeliservices Limited (UK)	Flight Precision Ltd (UK)
Flight Refuelling Limited (UK)	FR Aviation Limited (UK)	Global Microwave Systems (USA)
H Koch & Sons (USA)	Hyper Technologies (FR)	Kevlin Corporation (USA)
Label (FR)	M/A-COM (USA)	Mastsystem Intl (Finland)
Micromill Electronics Limited (UK)	Northern Airborne Tech Ltd (USA)	NAT Seattle Inc (USA)
National Air Support (AUS)	National Jet Systems (AUS)	Nauticast Navigationssysteme (Austria)
NEC AERO (FR)	Nurad Technologies Inc (USA)	Omnipless (RSA)
Orion (USA)	Patriot Antenna Systems (USA)	Racal Antennas Ltd (UK)
REMEC Defense & Space, Inc (USA)	Salies SA (FR)	Sargent Fletcher Inc (USA)
RVision Inc (USA)	Seimac Limited (USA)	Sivers Lab AB (Sweden)
SPARTA, Inc. (USA)	Spectronic (Denmark)	Surveillance Australia (AUS)
TEAM (FR)	TracStar (USA)	Trivec Avant (USA)
Thrane & Thrane (Denmark)	Vector Fields (UK)	Wulfsberg Electronics (USA)
Corp Ten International (USA)	MMI Research (UK)	Telerob (Germany)

List as of May 2014...

Cobham Aerospace Communications

COBHAM

Tactical Communications Customers Include...

- Customs and Border Protection – All fixed and rotorcraft assets
- US Air Force Executive Fleet – Air Force One
- US Coast Guard – All fixed and rotorcraft assets
- Federal Bureau of Investigation (FBI)
- US Army UH-72A Lakota
- Air National Guard C-26 Metroliner
- US State Department (DOS)
- Los Angeles Police Department (LAPD)
- Los Angeles Fire Department (LAFD)
- New York Police Department (NYPD)
- New York State Police (NYSP)
- Maryland State Police (MSP)
- New South Wales Police
- Queensland Police
- Colombian National Police
- Slovenian National Police
- Brazil Federal Police
- Sao Paulo Police
- Republic of Korea – Forest Service
- Italian Fire Brigade
- Qatar Police Force
- Singapore Air Force
- Royal Thai Air Force
- New Zealand Air Force



The Global Leader for Airborne Tactical Radio.



INTRODUCING THE RT-7000

RT-7000^{PMR}

COBHAM

Changing the way you communicate

- Software Defined Radio (SDR)
 - Display can be customized or altered
 - Future proofed architecture
- Color Screen
 - Alerts user to onscreen cues
 - NVIS complaint
- AM / FM / P25 in one radio



Tactile Control

COBHAM

Control the display the way you want

- Fully Redundant Button & Knob and Touch Screen Data Entry
- Resistive not capacitive touch screen works with flight gloves



Industry Leading Display & Man-machine Interface

RT-7000^{PMR}

The Value Proposition...

- MIL-STD-3009 NVIS Compliant
- 1000 nit (Cd/m²) Display
 - Direct Sunlight Readable
- 170° viewing angle
 - +85° to -85° from center both vertical and horizontal provides maximum placement flexibility



RT-7000^{PMR}

COBHAM

A Modern Radio for a Modern Cockpit

- Cockpit designed to be safer to operate and reduce resource load
- A radio designed to be safer to operate and reduce crew resource load while increasing capability



Multi-Configurable For Your Needs

COBHAM

AM, Marine, 800 MHz you choose

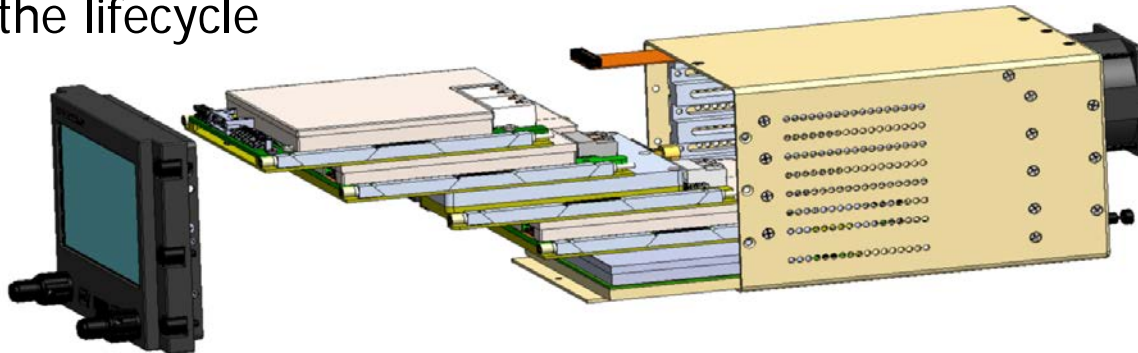
- Integrated Modular Architecture
 - 1 to 5 Transceiver
 - 3 Internal Modules
 - 2 Externally Attached
 - LMR
 - AN/PRC-117G
 - Cellular
 - Satellite
 - Repeater



Design Philosophy - Integrated Modular Architecture

- Designed to be more than a “point solution” airborne Land Mobile Radio (LMR)

Modular design allows for ease of configuration changes and upgrades through the lifecycle



- The only panel-mount radio that satisfies all public safety and para-public voice communication



RT-7000 Can Grow Easily as Your Missions Do!

- SDR Cobham Wideband Transceiver Module (WTM)
 - 29.7 MHz - 960MHz
 - FM / AM Across "The Wideband Spectrum"
 - Military FM – 50 MHz – 88 MHz
 - Military AM – 225 MHz – 400 MHz
 - Extended Range ATC, AM – 118 MHz – 156 MHz
 - 25 kHz & 8.33 kHz spacing
 - Land Mobile FM
 - 30 MHz – 50 MHz (VHF Low Band)
 - 136 MHz – 174 MHz (VHF High Band)
 - 380 MHz – 520 MHz (UHF)
 - 764 MHz – 870 MHz (700/800)
 - 896 MHz – 940 MHz (900 MHz)
 - P-25 Digital Common Air Interface (CAI)
 - Fips 140-2 AES and DES Encryption; P25 Over-The-Air-Rekey (OTAR)

Covers All Tactical Voice and ATC Needs

Transceiver Module #2

- Motorola APX-8000 based Module

- Every Module can cover:

- 136 - 174 MHz
 - 380 - 520 MHz
 - 764 - 870 MHz

- User Desired features

- P25 Phase II Trunking
 - P25 Phase I, SmartZone & SmartNet Trunking
 - ADP, AES, DES, DES-XL, DES-OFB, DVP-XL encryption
 - Over-the-the-air rekey (OTAR) and multikey encryption
 - VoteScan multi-cast voting scan
 - Other Motorola features as requested



Leverages the Latest Motorola User Experience

RT-7000^{PMR}

Highly Configurable for Mission Flexibility

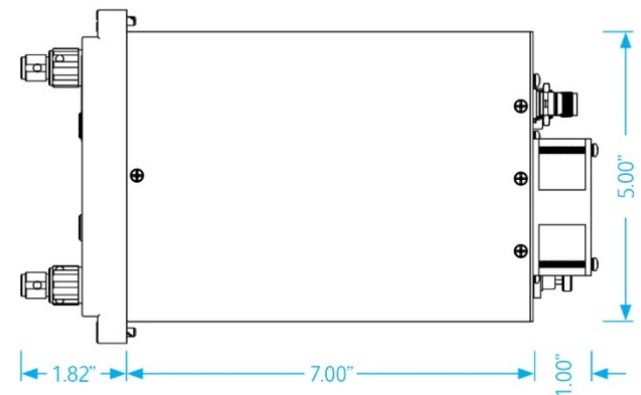
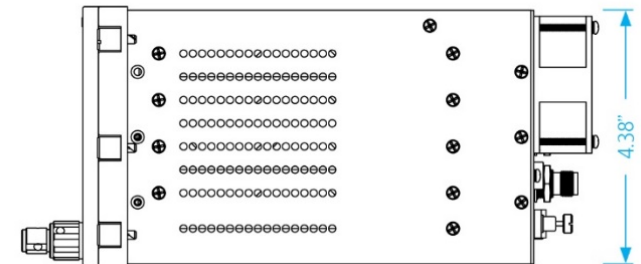
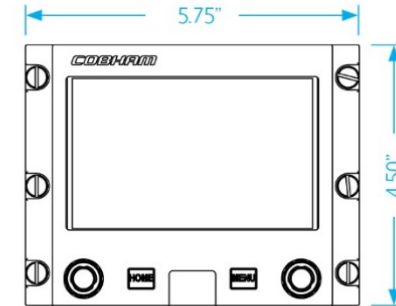
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Connect up to Two External Devices
Including: Relay, Simulcast, Relay / Simulcast

Environmental Characteristics

- The smallest form factor VHF/UHF, 700/800/900 MHz P25 airborne voice radio on the market
 - Allows the communication system to be mounted in a user defined location.
 - Built to fit standard aircraft pedestal
- Self cooling
 - Forced air cooling is not required
- Designed and tested to aircraft environmental standards, (DO-160, DC 178, DO-254, DO-186, TIA-603, FCC, ICC)



The Value Proposition...

- Manage 5 Radios
 - Relay in 2 steps via GUI
 - Simulcast in 2 steps via GUI
 - Relay/Simulcast Via GUI
 - No need for expensive external controls
- QMEM- Quick Memory like car stereo presets
- No Quick Reference booklet needed
- Front panel programmable
- Lowest cost of ownership through upgradable architecture

RT-7000^{PMR}

PDR-3500 Replacement

- Current PDR3500 is heavy, not supported anymore and single band
- RT7000 can create on board repeater
- Can be any band or cross band
- If antennas are spaced out, no need for duplexer
- Field configurable. No special programming or tuning needed
- Reduced cost of maintenance and operation
- Can be tied to cell phone, sat phone or HF
- Supports Analog FM, P25 and encrypted P25
- AM channel can be tied to FM channel for downed aircraft rescue operations

Support for External Devices

- Can support up to 2 external devices
- Can connect AN/PRC-117G for support of Solider Waveform
- Can support GlobalStar Sat phone with future dialing support
- Can connect cell phone
- Can connect external radio – EFJ, Motorola, Harris, etc
- External devices can be tied in with other radio channels to provide wide area tie back and communications.
 - Repeater tied to sat phone or cell phone
 - Channel connected to PRC-117G

Safer Operation

- Easy to see color screen
- Easy to use and simple controls
 - Touch screen
 - Button Knob
- Reduced crew resource load
 - Allows crew to fly plane and do job, and worry about radio less
- Easy of training and operation
- Can mimic current issued CAP handheld radio line up
- All interop and repeater channels can be preprogrammed
- 3000 channels allow nation wide codeplug
- Motorola Radio Management allows for central nation wide codeplug management and programming

Notes

- Optional Avionics Personality Module
 - Retains radio settings in aircraft
- AT-580 Antenna – Covers entire frequency range with a single antenna
- Easy configuration with Cobham Mission Configuration Tool (MCT Software) and Installation Configuration Tool (ICT Software)
- Frequencies can be programmed from the front of the display or using the programming cable that connects at the front of the display



Expanded Mission Capability

- Access to Low band
- Access to Military AM UHF
- Access to all National Interoperability Channels
 - Can be used as airborne VTAC, UTAC, 7TAC or 8TAC repeater
- Access to Motorola Smartnet Trunking
- Access to P25 Phase 1 and 2 Trunking
 - Local, State and Federal Trunk systems
 - Statewide systems can provide wide area coverage
- Repeater capability in all bands

Advantages

- Built in DES-OFB, AES-256 encryption and P25 OTAR
- Ability to create on board repeater with out need for PDR-3500
- Use case for no duplexer needed with correct antenna spacing
- Repeater can be any band
- Incorporate dialer for Globalstar Sat Phone- Future
- Ability to integrate with glass cockpit
- Future support path for FirstNET
- Support for Military UHF AM – Falcon Virgo and others
- Increased safety due to reduced crew resource load
- Access to State radio systems with P25 trunking
- Ability to create 7TACx repeater
- Reduce operating cost short and long term due to maintaining less equipment

RT-7000^{PMR}

Advantages

COBHAM

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RT-7000PMR from Cobham,
The Right Choice for any airborne mission!

"Semper Vigilans"

You are always Vigilant, you should have a radio that is also.