

AFRRCS Policies and Procedures

Section: Permitted Radio List

AFRRCS Policies and Procedures — Permitted Radio List

DOCUMENT REVISION HISTORY

Version	Date	Modified By	Section, Page (s), Text Revised
0.1	October 2, 2012	BS	Initial Draft
0.2	October 4, 2012	CB	Revision of Draft Document
0.3	February 14, 2013	BS	Add contacts & firmware version
0.4	October 4, 2013	BS	Add EF Johnson radios, update user
0.5	March 7, 2014	BS	Add RELM KNG-M800, P800 radios
0.6	April 7, 2014	BS	Add Harris XG25
0.7	October 14, 2014	BS	Add process for accessing Standing Offer
0.8	October 21, 2014	BS	Update EF Johnson contact
0.9	April 7, 2015	BS	Update Harris contacts
1.0	April 22, 2015	BS	Update EF Johnson model information
1.1	May 20, 2015	BS	Update EF Johnson contacts & products, TAIT
1.2	July 24, 2015	BS	Update Harris, Motorola contacts
1.3	October 1, 2015	BS	Add Motorola APX1500 Mobile, APX1000 portable, APX4500 mobile. APX3000 undercover, APX8000 portable tri-band
1.4	November 9, 2015	BS	Add Harris XG15P, update firmware version requirements
1.5	February 25, 2016	BS	Add Kenwood NX5200, 5400, 5700, Update 5900 series Update Kenwood contact information
2.0	March 31, 2016	KC	Added radio programing template requests to radio
3.0	May 19, 2016	BS	Add Harris XL-200, Aeronautical Category, TAIT 9400 Series
4.0	June 24, 2016	KC	Updated the standing offer radio pricing contact. Delete Kenwood TK series

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5.0	August 15, 2016	KC	Add RELM KNG2 models. Update Harris contacts
6.0	September 28, 2016	BS	Field test advisory for EFJ radios Updated standing offer contact
7.0	December 20, 2016	KC	Removed field advisory for the EFJ radios and updated the required firmware.
8.0	January 25, 2017	KC	Added permitted pager category.
9.0	March 21, 2017	KC	Updated the email address for Unication
10.0	September 20, 2017	AS	Added Motorola APX 8500 Added Motorola APX 2000 Added JVCKenwood radios Updated aeronautical permitted radio licensing requirement
11.0	October 2017	AS	Updated Harris and Tait contact info; Remoted Tait TP9100 and TM9100
12.0	January 2 2018	CB	Removed Appendix 6 upon expiry of GoA Standing Offer
13.0	June 2018	AS	Added ISED license number; Updated previous testing result format; Added 2018Testing section;

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1. Permitted Radio List Background

The Alberta First Responders Radio Communications System (AFRRCS) is a province wide two-way radio network for public safety first responder agencies, including police, fire and ambulance. AFRRCS provides these agencies with a common radio network to communicate with one another, and improve the interoperability between different agencies.

Harris Canada Systems Inc. (Harris) was selected to design and build the AFRRCS P25 infrastructure. A prime objective was to create a system that allows first responder agencies to use other manufacturer's P25 compliant devices on the network. AFRRCS performs user subscriber equipment testing to confirm these various equipment will operate seamlessly on the AFRRCS network while meeting the basic communication and safety requirements of first responders.

AFRRCS team developed a Subscriber Radio Test Procedure requirement document in 2012. The 2012 version of the testing document included assessment of basic P25 features. All radios tested and approved based on this version of testing requirements are included in Section 3.

The AFRRCS team developed a revised and more applicable version of Permitted Radio Testing Procedure document in 2018. In addition to basic P25 trunking features, almost all manufacturer-advertised radio features will be tested. AFRRCS will include testing results to provide detailed information on what features are available on the AFRRCS network. All radios tested in or after 2018 are listed in **Section 4**.

All end user radios included in Section 3 of the Permitted Radio list remain valid. Any new user devices tested will follow the new 'Permitted Radio Testing Procedure' document.

2. Testing Process

Testing radios must be pretested in one of the accredited P25 Compliance Assessment Program (P25 CAP) laboratories. Vendors will provide summary test reports from recognized laboratories along with a declaration of compliance. Radios must have an Innovation Science and Economic Development Canada (ISED) ID.

Manufacturers will be invited to test their products in the AFRRCS laboratory located at St. Albert, Alberta only after sending a testing request to AFRRCS. Testing will be conducted both in the AFRRCS laboratory and in the operational environment. Reprogramming is expected during testing. The successful manufacturers and their products are reflected in the Permitted Radio list in section 4 of this document.

All products on the Permitted List will be subject to additional testing as required to ensure ongoing functionality through version and system changes. Models on the Permitted Radio List will be tested as appropriate against the version or system changes to ensure the previously identified functionality and performance is consistent in the new environment. Any manufacturer whose model does not perform consistently through the changes will be requested to remedy the issue within the new environment. Any unit with specific isolated performance issues within the new environment will remain on the Permitted List but will be flagged with a notation that it did not operate reliably in the specified environment. New models will be accepted for testing on an ongoing basis.

The Permitted List will be a "living document" that reflects the addition of new equipment.

3. Permitted Radio List (Tested Before 2018)

Manufacturer	Contacts	Model	Firmware	ISED Certification Number
Harris & Tait	<p>1. Rick Wolochatiuk Regional Sales Manager, Harris Canada Systems, Inc. Tel: (716) 266-5611 wwolocha@harris.com</p> <p>2. Brian Phillips Account Manager, Harris Canada Systems, Inc. Tel: (403) 831-2434 bphil08@harris.com</p> <p>3. Huntley R. Quinn Sales Representative, Harris Canada Systems, Inc. Tel: (587) 216-8841 Huntley.quinn@harris.com</p> <p>4. Pierre Langevin Technical Contact, Harris Canada Systems, Inc. Tel: (418) 628-8543 plangevi@harris.com</p>	XG100,	R5C05 or later	122D-XG100P00
		XM100,	R5C05 or later	122D-XG100M00
		XG25,	R5C05 or later	3636B-0140
		XG75,	R5C05 or later	3636B-0074
		P7300 series,	R5C05 or later	3636B-0074
		M7300 series,	R5C05 or later	3636B-0132
		XG15P,	R5C05 or later	3636B-0134
		XL200,	R5C05 or later	3636B-0145
		Tait TP9400 Series	V9.27.0.2	737A-TPDK5A
		Tait TM9400 Series	V2.06	737A-TMBK5B
JVC-KENWOOD	<p>Greg Cust Regional Sales Phone: 780-818-8116</p>	* Viking VP900 700/800/VHF Multiband	8.16.13	933B 242570
		* Viking VP600 700/800 models	8.16.13	933B-2425770
		VM600 (700/800)	8.16.13	933B-2425M70

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	<p>Email: gcust@ca.jvckenwood.com</p> <p>Ron Rickward</p> <p>Mgr. Engineering Technical Services</p> <p>Phone: 905-908-0199</p> <p>Email: rrickward@ca.jvckenwood.com</p>	VP5230 (VHF)	8.16.13	282F-431400
		VP5430 (700/800)	8.8.21	282D-442000
		VM900 (700/800/VHF)	8.16.13	933B-2425M80
		VP6430(700/800)	8.18.21	282D-442000
		VM5930 (700/800)	8.18.21	282F-478500
		NX5200 portable,	firmware version	282F-431400
		NX5700 mobile,	1.65.00 checksum	282F-471100
		NX5400 portable,	D77D	282D-442000
		NX5900 mobile		282F-478500
Motorola	<p>Martyn Lutz</p> <p>Senior Account Manager</p> <p>(778) 878-5349</p> <p>martyn.lutz@motorolasolutions.co</p>	XTS Series	XTS/XTL: R17.01.02	
		XTL Series	XTS/XTL: R17.01.03	
		APX4000	APX: R14.00.04	109U-89FT3828
		APX6000	APX: R14.00.04	109U-89FT7086
		APX6500,	APX: R14.00.04	109U-92FT5858
		APX7000,	APX: R14.00.04	109U-89FT7036
		APX7500,	APX: R14.00.04	109U-92FT3824
		APX1500,	APX: R14.00.04	109U-92FT7055
		APX1000,	APX: R14.00.04	109U-89FT5861
		APX4500,	APX: R14.00.04	109U-92FT5865
		APX3000,	APX: R14.00.04	109U-89FT5860
		APX8000	APX: R14.00.04	109U-89FT7061

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		APX8500	APX: R14.00.04	109U-92FT7089
		APX2000	APX: R14.00.04	109U-89FT7050
RELM	Peter Rogell, Sales 321-953-7809 office 321-431-6208 cell proqell@relm.com	KNG P150,	release 1.4.5.0 (or higher)	K95KNGP150 / 2116A-KNG-P150
		KNG M150	release 2.4.5.0 (or higher)	K95KNGM150 / 2116A-KNGM150
		KNG P800	2.1.1 thru 4.2.6	K95KNGP800C / 2116A-KNGP800C
		KNG M800	2.1.1 thru 4.6	K95KNGM800C / 2116A-KNG-M800C
		KNG2-P150	5.5.4.0C	K95KNGP150 / 2116A-KNG-P150
		KNG2-P800	5.5.4.0C	K95KNGP800C / 2116A-KNGP800C

4. Permitted Radio List (Tested in 2018 and After)

Feature item number is cross referenced with the 'Permitted Radio Testing Document'

P25 TRUNKING (700MHz Band)																				
Manufacturer	Model	Date	Version	ISED ID	5.1 Radio Registration/ Group Affiliation / Out of Range/Site Trunking	5.2 Group/si mplex Call	5.3 Emergency Call	5.4 Individual Call	5.5 Status Message	5.6 Talk Group Scan	5.7 Priority SCAN	5.8 Enhanced Roaming	5.9 AES Encryption	5.10 Over-The-Air Re-Keying (OTAR)	5.11 Radio Authentication	5.12 Over-The-Air Programming (OTAP)	5.13 GPS	5.14 Bluetooth Speaker / Microphone	5.15 WiFi	5.16 Telephone Interconnect Call
Harris	XL-185	30-May-18	R06A23	3636B-0148	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Motorola	APX 900	06-June-18	R17.03.00	109U-89FT7096	pass	pass	pass	pass	pass	pass	pass	Pass	Not tested	Not Available	Not Tested	Not Tested	Display Pass, Reporting not Tested	Past test regular BT Mic. Not compatible with Motorola Public Safety BT Mic	Not Available	pass

P25 TRUNKING (VHF Band) and P25 Conventional (VHF Band on Mountain Top Repeater)																				
Manufacturer	Model	Date	Version	ISED ID	6.1 Radio Registration/ Group Affiliation / Out of Range/Site Trunking	6.2 Group Call	6.3 Emergency Call	6.4 Individual Call	6.5 Status Message	6.6 Enhanced Roaming (700MHz-VHF-700MHz)	6.7 AES Encryption	6.8 Over-The-Air Re-Keying (OTAR)	6.9 Radio Authentication	6.10 Over-The-Air Programming (OTAP)	6.11 GPS	6.12 Bluetooth Speaker / Microphone	6.13 WiFi	6.14 Telephone Interconnect Call	6.15 VHF Conventional Mountain Top Sites	

AFRRCS TRUNKING (Multi- Band)																					
Manufacturer	Model	Date	Version	ISED ID	5.1 Radio Registration/ Group Affiliation / Out of Range/Site Trunking	5.2 Group Call	5.3 Emergency Call	5.4 Individual Call	5.5 Status Message	5.6 Talk Group Scan	5.7 Priority SCAN	6.6 Enhanced Roaming (700MHz-VHF-700MHz)	5.9 AES Encryption	5.10 Over-The-Air Re-Keying (OTAR)	5.11 Radio Authentication	5.12 Over-The-Air Programming (OTAP)	5.13 GPS	5.14 Bluetooth Speaker / Microphone	5.15 WiFi	5.16 Telephone Interconnect Call	6.15 VHF Conventional Mountain Top Sites

- Testing Result: **Pass**
- Fail**
- Not Available on AFRRCS Network**
- Not Tested**

5. Permitted Pager list

Manufacturer	Contacts	Permitted Pager	Firmware (specified version or higher)
Unication Co Ltd.	Robert Marchetto, General Cdn. Operations rmarchetto@uniamericas.com, 604-205-7450, ext. 3301	Unication G4 P25 Pager Model number: 7/800 MHz G4 Pager	Firmware R11N2 or higher

6. Aeronautical Permitted Radio List

The following defines the requirements for airborne AFRRCS radios.

Note:

Agencies who utilize helicopters or airplanes require radios certified for airworthiness by Transport Canada. It is the Agencies' responsibility to obtain proper radios, licensed with Innovation, Science and Economic Development Canada (ISED) to operate in a helicopter or airplane below specific altitudes and transmit power levels. At this time, the 700MHz public safety band has not been approved for aeronautical use. ISED and FCC are currently reviewing aeronautical use in the 700MHz public safety band and until those reviews are completed, ISED cannot authorize any 700MHz frequencies for aeronautical use. Subsequently, AFRRCS has not been licensed for aeronautical channels from aeronautical band.

Aeronautical Radio Requirements

An aeronautical FM radio is defined as a radio that is designed to be installed and operated in an aircraft. Primary power is from a 28 volt (nominal) negative ground aircraft power source.

- Aeronautical FM radios must have their airworthiness approved by Transport Canada Civil Aviation (TCCA) or the FAA. A copy of the TCCA Authorized Release Certificate, Form One or equivalent, must be included with each radio submitted for Permitted Radio testing.

Manufacturer	Contacts	Permitted Radios	Firmware (specified version or higher)
Technisonic Industries	Robert Riel, Sales 905-890-2113 x210 rriel@til.ca	TDFM-9100	Firmware V1.0.8 or higher.