

	<p><b>MARCS IT Policy</b> Minimum Requirements for P25 Compliance on the MARCS Statewide Public Safety Communication System</p>	<b>No: MPP-31.0</b>
		<b>Effective: 11/19/13</b>
		<b>Revised: 07/27/2015</b>
		<b>Issued By:</b> MARCS Steering Committee
		<b>Published By:</b> OIT MARCS

**1.0 Purpose**

The purpose of this document is to define the rules and regulations concerning the eligibility, security, distribution and utilization of APCO P-25 compliant radio devices on the MARCS/IP Statewide Public Safety Communication Network.

**2.0 Scope**

This policy, and the rules and regulations set forth herein, apply universally for all radio devices sold/purchased for used on the MARCS/IP Statewide Public Safety Communication System.

**3.0 Background**

The MARCS/IP Statewide Public Safety Communication Network is a Motorola VoIP v. 7.13, Project 25 Phase 1 compliant public safety communication system. Project 25 (P25 or APCO-25) is a suite of standards for digital radio communications for use by federal, state/province and local public safety agencies in North America, enabling radio devices from various manufacturers to communicate with each, both for operability and interoperability. In order to remain P25 complaint, MARCS outlines herein minimum requirements for radio devices to be placed on the MARCS/IP Statewide Public Safety Communication Network.

**4.0 Minimum Requirements**

**All prospective voice and devices shall meet all of the below listed conditions:**

- a.) All voice radio devices (e.g. - portable, mobile, remote control station) shall operate on the MARCS/IP P-25 digital trunked 700/800 MHz system, including seamless inter-zone roaming. The roaming requirement includes affiliation into different zones upon activation of the radio from the "off" position.
- b.) All devices shall be P-25 compatible, capable and compliant.
- c.) All devices shall operate on the 700 MHz frequency range as well as 800 MHz.
- d.) The device provider/manufacture must guarantee, in writing, the device's successful performance on MARCS/IP, or provide a full refund to the purchaser.
- e.) The device provider/manufacture must provide a system security protocol (i.e. – system key) **allowing MARCS and MARCS only to activate the devices on the MARCSIP Public Safety Communication Network.**
- f.) All devices shall fully comply with State of Ohio procurement policies, and should be registered and accepted on the Ohio State Term Schedule.

- g.) Vendors must provide MARCS with operational radio units from production, and demonstrate the unit's capabilities as outlined above, prior to making the units available to MARCS/IP subscribers. This provisioning shall include all necessary hardware, software and cabling to allow MARCS to program radios on an ongoing basis.

## 5.0 Prohibitions

To facilitate point 4.0 g above, MARCS technical staff will assist prospective vendors and/or manufacturers in seeking compliance by programming the MARCS system into production version test devices. Consequently vendor representatives may have limited access to MARCS/IP security keys.

Any unauthorized sharing or copying of MARCS Public Safety Communication System data, including system key information, other security codes, hexadecimal identifiers and/or any related documentation; publicizing of the said data; or other unauthorized use of the MARCS/IP secure footprint is **expressly prohibited**.

## 6.0 Enforcement of Violations

Alleged violations of these rules shall result in thorough administrative and/or criminal investigation by agents of MARCS and/or authorized criminal justice representatives.

Proven violations of these rules shall result in MARCS administrative disciplinary actions, up to and including restriction or termination of MARCS participation, and/or prosecution pursuant to ORC 2913.04, or other appropriate charges found in the Ohio Revised Code.

## 7.0 Effective Date

This policy has been approved by the Ohio MARCS Steering Committee on Tuesday, November 19, 2013 and is effective until further notice.

## 8.0 Updates

The following updates to the original 11/19/13 policy have been made:

- 11/20/2013 – “Kenwood” letter – MPO.13.136 – dated November 8, 2013, added as attachment.
- 01/14/2014 – grammar change in 3.0, emphasis added to 4.0 “e”; detail added to 4.0 “g”.
- 01/15/2014 – “Motorola” letter – MPO.14.006 – dated January 14, 2014, added as attachment.
- 03/12/2014 – “Relm” letter – MPO 14.028 – dated March 12, 2014, added as attachment.
- 04/02/2014 – “EFJohnson” letter – MPO.14.044 – Dated April 2, 2014, added as attachment.
- 11/27/2014 – “Harris” letter – MPO.14.244 – Dated 11/26/2014, added as attachment.
- 12/03/2014 - “Motorola” letter # 2 – MPO.14.243 – dated 12/03/2014, added as attachment.
- 02/02/2015 - “Motorola” letter #3 – MPO.15.041 – dated 02/02/2015, added as attachment.
- 04/27/2015 – “Tait” letter – MPO.15.126 – dated 04/27/2015, added as attachment.
- 07/22/2015 – Motorola letter # 4 – MPO.15.125 –dated 07/22/2015, added as attachment

Ohio Department of Administrative Services  
Ohio Office of Information Technology  
John Kasich, *Governor*  
Robert Blair, *Director*  
Stu Davis, *State Chief Information Officer*

MARCS Program Office  
4200 Surface Road  
Columbus, Ohio 43228

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November 8, 2013  
MPO.13.136

Kenwood USA-Communications Sector  
Dave Brandkamp, Eastern Region Manager  
3970 Johns Creek Court  
Suwanee, GA 30024

RE : MARCS Approval for Kenwood P-25 radios

Mr. Brandkamp,

Thanks for your acknowledgement and request for Kenwood P-25 radio approval in your letter to MARCS dated November 5, 2013.

You have demonstrated to MARCS the Kenwood P25 model radios listed below perform as necessary to function on our Ohio MARCS/P System.

***Kenwood TK-5410K2 Portable***  
***Kenwood TK-5410K3 Portable***  
***Kenwood TK-5410-ISK3 Portable***  
***Kenwood TK-5410-ISK3 Portable***  
***Kenwood TK-5910BK Mobile***

Please ensure your continued compliance to our policy MPP-31, which is attached.

**DO NOT** attempt to market any other Kenwood radios for MARCS/P until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

A handwritten signature in black ink, appearing to read "Darryl Anderson". The signature is stylized and cursive.

Darryl L. Anderson, MARCS Program Director  
Darryl.Anderson@ohio.gov  
614.466.2257

Ohio Department of Administrative Services  
Ohio Office of Information Technology  
John Kasich, Governor  
Robert Blair, Director  
Stu Davis, State Chief Information Officer

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January 14, 2014  
MPO.14.006

Motorola Solutions-Communications Sector  
Robert Rummel, Area Sales Manager-Ohio  
350 Worthington Road, Ste. C  
Westerville, OH 43082

RE : MARCS Approval for Motorola P-25 radios

Mr. Rummel,

Thanks for your acknowledgement and request for Motorola P-25 radio approval in your letter to MARCS dated January 13, 2014.

You have demonstrated to MARCS the Motorola P25 model radios listed below perform as necessary to function on our Ohio MARCS/IP System.

***Motorola APX3000 Portable***  
***Motorola APX4000, 4000Li Portable***  
***Motorola APX6000, 6000XE, 6000Li Portable***  
***Motorola APX7000, 7000XE Portable***  
***Motorola XTS1500 Portable***  
***Motorola XTS2500 Portable***  
***Motorola XTS5000 Portable***  
***Motorola APX4500, 4500Li Mobile***  
***Motorola APX6500, 6500Li Mobile***  
***Motorola APX7500 Mobile***  
***Motorola XTL1500 Mobile***  
***Motorola XTL2500 Mobile***  
***Motorola XTL5000 Mobile***

Please ensure your continued compliance to our policy MPP-31, which is attached.

**DO NOT** attempt to market any other Motorola radios for MARCS/IP until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

A handwritten signature in black ink, appearing to read "Darryl L. Anderson". The signature is fluid and cursive.

Darryl L. Anderson, MARCS Program Director  
Darryl.Anderson@ohio.gov  
614.466.2257

Ohio Department of Administrative Services  
Ohio Office of Information Technology  
John Kasich, Governor  
Robert Blak, Director  
Paul Osler, State Chief Information Officer

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Ohio **DAS**

March 12, 2014  
MPO.14.028

**RELM WIRELESS**

Jim Holthaus, VP -- Project 25 Solutions  
7100 Technology Drive  
West Melbourne, FL 32904

RE: MARCS Approval for RELM P-25 radios

Mr. Holthaus,

Thanks for your acknowledgement and request for RELM WIRELESS P-25 radio approval letter to MARCS dated February 1, 2014.

You have demonstrated to MARCS that RELM P25 model radios listed below have met all requirements needed and thus are approved for use on Ohio MARCSIP System.

*KING-P800 Portable Radio*  
*KING-P800T2 Portable Radio*  
*KING-M800 Mobile Radio*  
*KING-8800 Control Station*  
*TMR-800 Transportable Radio*

Please ensure your continued compliance to our policy MPP-31, which is attached.  
**DO NOT** attempt to market any other RELM radios for MARCSIP until the same protocol is followed.

With the current RELM software system key for MARCSIP, all radios added to the system SHALL be programmed by the MARCS programming staff. Once MARCS has possession of hardware based permission capable Advanced System Keys, arrangements can be made with RELM service shops to supplement programming and/or cloning capabilities.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,



Darryl L. Anderson, MARCS Program Director  
[darrylanderson@das.ohio.gov](mailto:darrylanderson@das.ohio.gov)  
614.466.2257

Service. Support. Solutions for Ohio Government

March 31 2014

Mr. Darryl L. Anderson  
MARCS Program Director  
4200 Surface Road  
Suite 321  
Columbus Ohio 43228

RE: MARCS approval for EF Johnson Technologies P-25 radios

Mr. Anderson,

EF Johnson Technologies request approval to deploy our products on the MARCS statewide communications system. I acknowledge receipt of MARCS IT Policy MPP-31.0 dated March 12 2014. I have listed the EF Johnson Technology products below.

EF Johnson VP 600  
EF Johnson VP900  
EF Johnson S100  
EF Johnson S1ES  
EF Johnson S1SL  
EF Johnson S300  
EF Johnson X Platform

If you have any further questions, please feel free to call me at 312 720 2946.

Regards,



Paul Marshall  
Territory Sales Manager  
EF Johnson Technologies  
1440 Corporate Drive  
Irving TX 75038-2401

Ohio Department of Administrative Services  
Ohio Office of Information Technology  
John Kasich, Governor  
Robert Blak, Director  
Stu Davis, State Chief Information Officer

MARCS Program Office  
4200 Surface Road  
Columbus, Ohio 43223

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Ohio **DAS**

April 02, 2014  
MPO.14.044

E.F. Johnson Technologies  
Paul Marshall  
Territory Sales Manager  
1440 Corporate Drive  
Irving, Texas 75038-2401

RE : MARCS Approval for EFJohnson P-25 radios

Mr. Marshall :

Thanks for your acknowledgement and request for EFJohnson P-25 radio approval letter to MARCS dated March 31, 2014.

You have demonstrated to MARCS the EFJohnson P25 model radios listed below have met all requirements needed and thus are approved for use on Ohio MARCS/P System.

EFJohnson VP 600  
EFJohnson VP 900  
EFJohnson 5100  
EFJohnson 51ES  
EFJohnson 51SL  
EFJohnson 5300  
EFJohnson XPplatform

Please ensure your continued compliance to our policy MPP-31, which is attached.  
DO NOT attempt to market any other EFJohnson radios for MARCS/P until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,

  
Darryl L. Anderson, MARCS Program Director  
[darryl.anderson@das.ohio.gov](mailto:darryl.anderson@das.ohio.gov)  
614.466.2257

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Ohio Department of Administrative Services  
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Columbus, Ohio 43228

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Ohio **DAS**

November 26, 2014  
MPO.14.244

Harris Corporation RF Communications Division  
John Hawn, Area Sales Manager  
Columbus, Ohio

RE : MARCS approval for Harris P-25 radios

Mr. Hawn,

Thanks for your acknowledgement and request for Harris P-25 radio approval, via your letter to MARCS dated November 25, 2014.

You have demonstrated to MARCS the Harris P-25 model radios listed below have met all requirements needed, and thus are approved, for use on Ohio's MARCS/P 700/800 MHz System.

*Harris 7200M Mobile Radio*  
*Harris 7200P Portable Radio*  
*Harris 7300M Mobile Radio*  
*Harris 7300P Portable Radio*  
*Harris Unity XG-100 Mobile Radio*  
*Harris Unity XG-100 Portable Radio*  
*Harris XG-75 Mobile Radio*  
*Harris XG-75 Portable Radio*  
*Harris XG-25 Portable Radio*

Please ensure your continued compliance to our policy MPP-31, which is attached.  
DO NOT attempt to market any other Harris radios for MARCS/P until the same protocol is followed.

As you know, we now are in possession of a unique Harris Advanced System Key. In order for your radios to be added to our system, you will need to work with our staff to obtain unique system identification numbers and programming.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,



Darryl L. Anderson, MARCS Program Director  
[darryl.anderson@das.ohio.gov](mailto:darryl.anderson@das.ohio.gov)  
614.466.2257

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Ohio Department of Administrative Services  
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Columbus, Ohio 43228

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Ohio **DAS**

December 03, 2014  
MPO.14.243

Motorola Solutions  
Emily Allen, Area Sales Manager-Ohio  
350 Worthington Road, Suite C  
Westerville, OH 43082

RE : MARCS Approval for Motorola P-25 APX 1000 portable radio

Ms. Allen,

Thanks for your acknowledgement and request for Motorola P-25 radio approval, in your letter to MARCS dated November 16, 2014.

You have demonstrated to MARCS the Motorola P25 model radio listed below performs as necessary to function on our Ohio MARCSIP System, in addition to the radios you have previously been approved for.

**Motorola APX1000 Portable**

Please ensure your continued compliance to our policy MPP-31, which is attached.

**DO NOT** attempt to market any other Motorola radios for MARCSIP until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,



Darryl L. Anderson, MARCS Program Director  
Darryl.Anderson@ohio.gov  
614.466.2257



Motorola Solutions, Inc.  
350 Worthington Road, Suite C  
Westerville OH 43082

216-538-5218  
mike.borrelli@motorolasolutions.com

December 12, 2014

Ohio Department of Administrative Services  
Attn; Darryl Anderson, Director, Ohio MARCS  
4200 Surface Rd  
MARCS Suite 321  
Columbus, OH 43228

**Subject: Motorola APX4000 Two Knob for MARCS Certification**

Dear Mr. Anderson:

Motorola is pleased to release our newest P25 Portable Radio, the APX4000 Two Knob.

As such, Motorola is requesting certification and approval for operation of the APX4000 Two Knob on the Ohio MARCSIP System, and as such, allow Motorola to market and sell the APX4000 Two Knob to MARCSIP users.

Two APX4000 Two Knob Radios have been shipped to the MARCS office, to the attention of Sean Kelly for testing and certification purposes. They are scheduled to ship on December 18, 2014. A copy of the APX4000 Two Knob specification sheet is attached to this letter.

We look forward to continuing to provide P25 radio solutions to MARCS users, including the APX4000 Two Knob. If there are any questions during the certification process, please direct to your Account Manager, Mike Borrelli at 216-538-5218.

Respectfully,

MOTOROLA SOLUTIONS, INC.

A handwritten signature in blue ink, appearing to read 'E. Allen'.

Emily Allen  
Area Sales Manager  
North America Government Markets

February 2, 2015  
MPO.15.041

Motorola Solutions Emily Allen, Area Sales Manager-Ohio 350  
Worthington Road, Suite C  
Westerville, OH 43082

RE : MARCS Approval for Motorola P-25 APX 4000 two knob portable radio

Ms. Allen,

Thanks for your acknowledgement and request for Motorola P-25 radio approval, in your letter to MARCS dated November 16, 2014. Since then, you have demonstrated to MARCS the Motorola P25 model radio listed below performs as necessary to function on our Ohio MARCS/P System, in addition to the radios you have previously been approved for.

**Motorola APX4000 Two Knob Portable**

Please ensure your continued compliance to our policy MPP-31, which is attached.

DO NOT attempt to market any other Motorola radios for MARCS/P until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,



Darryl L. Anderson, MPA, PMP, *Program Director*  
Ohio MARCS/OHIO SWIC/SIEC Administrator  
[Darryl.Anderson@ohio.gov](mailto:Darryl.Anderson@ohio.gov)  
614.466.2257



April 23, 2015

Mr. Darryl Anderson  
MARCS Program Director  
4200 Surface Road  
Suite 321  
Columbus, Ohio 43228

Re: MARCS Approval for Tait Communications P-25 Radios

Dear Mr. Anderson:

Tait Communications requests approval to deploy our P25 trunking products on the MARCS state-wide communications system. I acknowledge the receipt of MARCS IT Policy MPP-31.0 revised February 3, 2015.

The Tait P-25 products submitted for approval are:  
TP9400 series portable  
TM9400 series mobile

If you have any further questions, please feel free to contact me at 832-557-7482.

A handwritten signature in black ink that reads "Michael Engelhaupt". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Engelhaupt  
Partner Development Consultant  
Tait Communications  
[Michael.engelhaupt@taitradio.com](mailto:Michael.engelhaupt@taitradio.com)

Tait Communications  
15342 Park Row Blvd  
Houston Texas 77084

Phone (281) 829-3300  
Fax (281) 829-3320  
[www.taitradio.com](http://www.taitradio.com)

April 27, 2015  
MPO.15.126

Michael Engelhaupt  
Partner Development Consultant  
Tait Communications  
15342 Park Row Blvd.  
Houston, Texas 77084

RE: MARCS Approval for Tait 9400 Series P-25 Public Safety Radios

Mr. Engelhaupt,

Thanks for your acknowledgement and request for Tait P-25 radio approval, in your letter to MARCS dated April 23, 2015. MARCS Staff and you have demonstrated to MARCS the Tait P25 model radios listed below perform as necessary to function on our Ohio MARCSIP System.

**Tait TP9400 Series Portable**

**Tait TM9400 Series Mobile**

Please ensure your continued compliance to our policy MPP-31, which is attached.

DO NOT attempt to market any other Tait radios for MARCSIP until the same MPP-31 protocol is followed.

With the current Tait system key solution available to MARCS, all Tait radios added to the system SHALL be programmed by MARCS programming staff. Also, please provide MARCS with a hardware-based Advanced System Key Solution as soon as practicable.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,



Darryl L. Anderson, MPA, PMP, *Program Director*  
Ohio MARCS/OHIO SWIC/SIEC Administrator

[Darryl.Anderson@ohio.gov](mailto:Darryl.Anderson@ohio.gov)

614.466.2257

Motorola Solutions, Inc.  
350 Worthington Road, Suite C  
Westerville, OH 43082

330-808-0347  
Emily.allen@motorolasolutions.com

July 21, 2015

Darryl Anderson  
Ohio Dept. of Administrative Services - MARCS  
4200 Surface Road  
Columbus, Ohio 43228

Subject: Request for Certification of Motorola APX8000 Portable and APX1500 Mobile

Dear Mr. Anderson:

In preparation of the upcoming shipping release of two new products, Motorola is respectfully requesting testing and certification of these units for approved operation on the Ohio MARCSIP System. The new radios are:

- APX8000 Portable Radio
- APX1500 Mobile Radio

Samples of each radio have been shipped to Sean Kelly in the Ohio MARCS Office for such purpose.

Thank you for the opportunity to certify and market these units upon successful testing.

Please do not hesitate to contact myself at 330-808-0347 with any questions.

Respectfully,

MOTOROLA SOLUTIONS, INC.



Emily Allen  
Area Sales Manager - Ohio  
North America Government Markets

July 22, 2015  
MPO.15.125

Motorola Solutions Emily Allen, Area Sales Manager-Ohio  
350 Worthington Road, Suite C  
Westerville, OH 43082

RE : MARCS Approval for Motorola P-25 APX 8000 and APX1500 portable radios

Ms. Allen,

Thanks for your acknowledgement and request for Motorola P-25 radio approval, in your letter to MARCS dated July 21, 2015. MARCS personnel have tested these two radios listed below and found they both perform as necessary to function on our Ohio MARCS/IP System, in addition to the radios you have previously been approved for.

**Motorola APX8000 Portable radio**

**Motorola APX1500 Portable radio**

Please ensure your continued compliance to our policy MPP-31, which is attached.

DO NOT attempt to market any other Motorola radios for MARCS/IP until the same protocol is followed.

If you have any further questions, please feel free to call me at the number provided below.

Best Regards,



Darryl L. Anderson, MPA, PMP, *Program Director*  
Ohio MARCS/OHIO SWIC/SIEC Administrator  
[Darryl.Anderson@ohio.gov](mailto:Darryl.Anderson@ohio.gov)  
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