

# 15.1 Viking Subscriber Software Release

Effective Release: 05/01/15

**FSN-0515-VIKING-01**

This Field Software Notice serves to announce EFJohnson’s Viking® radio software 15.1 general release. This software release supersedes previous radio software versions associated with 14.1. This is a major software release that adds new features, enhancements, and addresses issues in the 14.1 release.



*Note: Release 15.1 does not support Windows XP or Vista. Microsoft discontinued Windows XP in April of 2014 creating security concerns as Microsoft is no longer creating and applying security patches. For further information on the Windows XP end of support see <http://www.microsoft.com/en-us/windows/enterprise/end-of-support>.*

	Version	Part Number
<b>Viking Firmware Image</b>	8.12.13	023-5796-20010
<b>Armada Client</b>	1.12.15	023-0601-20013
<b>OTAP Server/Software</b>		Included with Armada Client install package
<b>Data Registration Server/Software</b>		Included with Armada Client install package
<b>Elite Battery Management Server/Software</b>		Included with Armada Client install package
<b>Viking Tune</b>	1.12.12	023-0603-205
<b>SMA (Key Loader)</b>	1.4.1	250-5000-0945

## Application Kits

Application Kits include software and cables (if applicable).

- Armada**

	Product Application	Part Number
<b>Armada Kit, Viking Portable Series</b>	Viking Portables	250-0600-70013
<b>Armada Kit, Viking Mobile Series</b>	Viking Mobiles	250-0600-78812
<b>Armada Kit, Viking Portable &amp; Mobile</b>	Viking Portables/Mobiles	250-0600-79912

- Viking Tune** *(only available to authorized service centers)*

	Product	Part Number
<b>Viking Tune, Radio Tune SW Kit</b>	Viking Portables	250-0600-75004
<b>Viking Tune, Mobile Kit</b>	Viking Mobiles	250-0600-60012
<b>Viking Tune, Portable &amp; Mobile Kit</b>	Viking Portables/Mobiles	250-0600-69912

## 15.1 General Release - New Products and Features

### Elite Battery Management

This feature will allow customers to manage and track battery maintenance and service life. The radio reads the battery information and reports the battery status. Battery status can be viewed:

1. On the radio display
2. Individually in Armada
3. Fleet view from the Elite Battery Server report

The following information will be retrieved from the currently attached radio battery:

- Current Capacity
- Health
- Full Charge Capacity
- Cycle Count

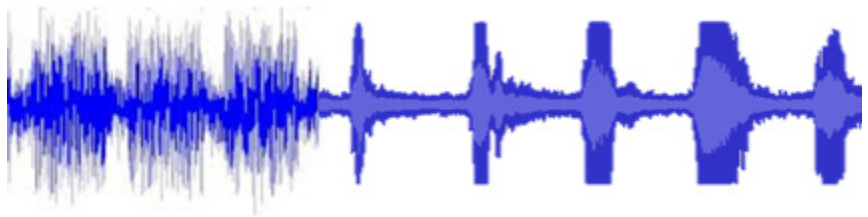
The information can be sent from the radio either over-the-air (requires P25 data channel) or via USB (Armada programming cable) connection.



### Analog Noise Cancellation

The powerful software based noise cancellation technology available exclusively on Viking digital channels is now available on Analog channels.

Unlike digital channels, the noise reduction on analog channels can be (via programming) toggled on/off by the end user.



### Two Tone Decode

Two tone decode allows the Viking radio speaker to remain muted unless a tone frequency, sequence, and duration are received by the radio that matches a pre-programmed two tone frequency, sequence and duration. Two tone decode allows the radio to act as a pager.

### Radio Unit Monitor

The Radio Unit Monitor (aka RUM) feature allows a dispatcher to remotely PTT the radio to monitor the users' audio environment. Typically, a dispatcher may elect to use RUM for hostage situations, stolen radio monitoring, or when the radio user is injured. Since Radio Unit Monitor is defined in the P25 TIA standards, it will work on any system that has RUM incorporated per the P25 TIA standard.

## 15.1 New Feature Options (requires feature option)

### OTIP

Over-the-Intranet-Programming (OTIP) allows remote programming of a mobile through a wireless 802.11 access point (or Ethernet interface.) Viking release 15.1 supports OTIP only on a mobile with an Ethernet connection or an attached Wi-Fi dongle.

OTIP is a featured option (not available by default). The ordering system will reflect the OTIP option for Viking Mobiles beginning the week of May 11.

### ARC4 Software Encryption

ARC4 encryption is a software based encryption that uses keys stored in the codeplug. It is compatible with Motorola ADP encryption.

ARC4 does not require a keyloader. Keys are manually entered into a key table in Armada (see picture to right).

ARC4 Software encryption is a featured option though it will have \$0 cost (option must be selected – it is not available by default.) ARC4 option for Viking radios is available in the ordering system.

PID	LID	Key	Alias
1	0000	*****	
2	0000	*****	
3	0000	*****	
4	0125	65365106b	
5	0000	*****	
6	0000	*****	
7	0000	*****	
8	0000	*****	
9	0000	*****	
10	0000	*****	
11	0000	*****	

### TBand Portable

Support added for a UHF portable radio that operates in 450 to 520 MHz frequency range.

## 15.1 General Release - Viking Radio Enhancements

### Allow Wideband Transmit in the Amateur Band

Armada will allow wideband channels in the amateur band 144.0 to 148.0 MHz to be downloaded to the radio. In addition the Wideband Blue Dot and Green Dot SMURS channels will be allowed. VHF narrowbanding range has been changed to only enforce in the range specified by the FCC 150-174 MHz.

### GPS Low Power Support

Internal GPS chip (Viking Portables) will be put into a low power cycle when it determines that signal conditions are not adequate to achieve location fix. This reduces the current consumption of the battery and extends the battery life for radios operating in non-open sky environments.

### FCC Narrowbanding Mandate UHF/VHF

Armada 1.12.15 enforces the FCC narrowbanding mandate in the UHF range 421-512 MHz. VHF narrowbanding range has been changed to only enforce in the range specified by the FCC 150-174 MHz. In addition the following narrowband exempt paging channels were added.

VHF wideband exempt channels paging channels:

- 152.007500
- 157.450000
- 152.480000
- 157.740000
- 158.460000

Puerto Rico and the U.S. Virgin Islands have five additional paging only frequencies in the Business Industrial Pool:

- 150.830000
- 150.920000
- 151.070000
- 151.190000
- 151.310000

UHF wideband exempt channels:

- 462.750000
- 462.775000
- 462.800000
- 462.825000
- 462.850000
- 462.875000
- 462.900000
- 462.925000
- 465.000000

## Armada Enhancements

### Custom Tag fields for Radios and Templates

'Radio Tag' and 'Profile Tag' fields have been added to the fleet window of Armada. These are custom text values entered by the radio programmer.

Radio Tag applies to radios only and is similar to the radio alias. It can be used as a custom identifier for the radio, such as an asset tag.

Profile Tag applies to both templates and radio codeplugs. It can be used to identify a specific version of an applied codeplug. This allows the radio technician to see if a radio's current codeplug is out of date.

Both values are viewable through the radio info menu on the radio, if assigned.

### Only Show Linkable Templates

When providing a list of templates with which to link a radio, Armada will now filter the list and only show templates that are eligible to be linked to. This enhancement will eliminate the "Unable to link, Band Mismatch" error message.

### Configurable Database Path – Network Access

The configurable database path feature allows users to share a single Armada database stored centrally on a network location, although only one copy of Armada can be open at any given time. Note that for simultaneous use, import/export of the database is still available.

### Other Enhancements:

- Event Logging: Enhancements have been made to the event logging and viewing.
- Properties Dialog: The Properties Dialog will display "last known" data when the dialog launches. If the radio is connected, the dialog will update when a "read information" action is completed. A progress bar is displayed until the information is received.
- Codeplug Touch History: Each radio codeplug will record the applications and version that was connected to the radio (e.g. Armada, Tune, etc).
- Goto Linked template: provides the ability to go directly to a linked template when working with specific radios/codeplugs.
- Control Channel capacity: now 1024 control channels, an increase from the previous maximum of 255
- DCS tones: The following DCS tones were added:  
36,53,122,145,212,225,246,252,255,266,274,325,332,356,446,452,454,455,462,523,525,526
- SN/SZ All Call Talkgroup/Announcement Group: In SN/SZ, allows a Talkgroup or Announcement Group of ID 4095.
- Separate Volume adjustments for Mobiles and Portables: Allows mobile and portable radios to have independent volume level adjustments in the same template.
- Show connected radios when filtered: When a radio connects it will now show up in an appropriate filtered codeplug view.

## Manuals

The following documents were revised or created in support of the 15.1 software release

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|------------------|--|
| • 004-0604-202   | OTAP Server Guide                            |
| • 004-0605-202   | Data Registration Installation Guide         |
| • 004-0606-200   | Elite Battery Management Server Guide        |
| • 002-0601-207   | Armada Programming Manual                    |
| • 002-0600-04505 | Viking VP600/VP900 Portable Operating Manual |
| • 002-0600-03502 | Viking VM600 Mobile Radio Operating Manual   |

For questions regarding this Field Software Notice, please contact EFJohnson at 1.800.328.3911, option 3