Operator Winlink Proficiency Goals Supporting American Red Cross

Introduction

Overview

During disasters, man-made or natural, the normal communications infrastructure can often be disrupted. Red Cross Radio Operators may be called upon to provide emergency communications support through the use of voice and/or digital radio communications.

As such we need to build skills and knowledge among our operators allowing for clear, effective communication.

This document identifies core skill goals for Winlink digital messaging in support of the American Red Cross, divided into **Basic**, **Independent** and **Advanced** levels.

Operator Skill Levels	
Basic	Communicator has the basic skills which meet the knowledge and performance skill goals.
Independent	Communicator has intermediate knowledge and skill and is capable of independent operation, without coaching or assistance, in the qualified skill goal area.
Advanced	Communicator has more advanced knowledge and skill and is considered a subject matter expert. May act as a communications lead and/or mentor. Capable of more difficult assignments, requiring more equipment and more complicated configurations, operations and troubleshooting. Is able to deploy and operate for an extended duration.

Abbreviations, Acronyms and Terms

General Abbreviations and Terms	
ARC	American Red Cross
ARDOP	Amateur Radio Digital Open Protocol
ARES	ARRL Amateur Radio Emergency Service
EMCOMM	Emergency Communication
FLMSG	Fast Light Message
NBEMS	Narrow Band Emergency Messaging Software
P2P	Peer-to-Peer
RMS	Winlink Radio Mail Server
SDA	San Diego ARES
WL2K BOK	Winlink Book of Knowledge
WL2K HELP	Winlink Express application's integrated Help documentation

Release Information

Change Control		
Revision	**Date**	**Comment**
1.0	9/24/20	Initial Release
1.1	9/25/20	VARA or PACTOR radio-only mode

Basic Operator Skills – Winlink

Overview

This is a basic skills / competency level for those new to Winlink and/or Technician license level operators. The Basic Operator is minimally expected to:

- Demonstrate ability to install, configure and operate Winlink using Telnet and packet session modes.
- Successfully create Personal Folders and organize (move) received messages into folders.
- Update the packet channel selection list.
- Create, receive and reply to Winlink ARC standard template-based messages (e.g., ARC ICS 213).
- Create an ARC template-based message, save message text and reload text for later reuse in a second message.
- Show competency in connecting to an RMS gateway both direct and via digipeaters.
- Send and receive a Winlink message using a packet peer-to-peer session.

Related Publications and Videos

A. SD ARES WL2K San Diego ARES Winlink YouTube Series
   https://www.youtube.com/playlist?list=PL-7mirT-kjfs84FQzLr-qv066Kl94rtYM
   (While dated process is relevant for todays' Winlink Express P2P operation)
B. Winlink BOK (Winlink *Book of Knowledge*)
   https://winlink.org/content/winlink_book_knowledge
C. Winlink Express Application integrated Help documentation
D. Winlink for EMCOMM - John Davis, WB4QDX
   https://www.youtube.com/watch?v=3gdwsV9_ca0&feature=youtu.b

Suggested Training

YouTube videos are available covering numerous aspects of Winlink usage. The below list is recommended for the Basic Operator. It is also advised that those new to Winlink seek an Elmer, a mentor, to provide local assistance.

The American Radio Safety Foundation's *Winlink Book of Knowledge* (BOK) is an excellent source of information on Winlink (winlink.org). Those new to Winlink Express are encouraged to tour through the BOK, in particular pay attention to the information topics in the "How-To Recipes" section. For example, if you are a Signalink user there is guidance on setting Signalink sound levels.

After installing the Winlink Express application you will find the built-in HELP documentation an excellent reference source.

Source	Video or Reference Material – Basic Operator
WB4QDX	Winlink for EMCOMM - an overview by John Davis - YouTube
SDA	0.0a How to download and install Winlink Express - YouTube
WL2K HELP	Basic Configuration topic - Winlink HELP
WL2K HELP	Composing a Message topic – Winlink Help
SDA	0.0b How to test your Winlink email account - YouTube
SDA	0.1 How to create a personal folder in Winlink Express - YouTube
WL2K HELP	Personal Message Folders topic - Winlink HELP
SDA	0.5 How to set always request a read receipt - YouTube
WL2K HELP	Message Acknowledgments topic - Winlink Help
SDA	0.7 How to update VHF and HF channel selection tables - YouTube
WL2K HELP	Updating Channel Data topic - Winlink HELP
SDA	0.8 How to create, save, and resume Form ICS-214A entries - YouTube
SDA	3. How to send an ICS Form 213 using Winlink Express software (Note process similar to using ARC ICS 213 template)
WL2K HELP	Making a Packet Connection to a Winlink RMS Packet Server topic – Winlink Help
SDA	11. How to send a Winlink Catalog Request to find your Winlink neighbors
SDA	15. How to generate an ICS Form 309 Comm Log automatically using Winlink Express software
WL2K HELP	ICS 309 Communications Log Generation topic - Winlink HELP

Independent (Intermediate) Operator Skills – Winlink

Overview

Building on Basic Operator skills and knowledge, the Independent Operator demonstrates enhanced capabilities to include HF-based Winlink operation and the ability to operate in a grid-down situation. The Independent Operator takes general direction and requires little to no direct supervision. A General class FCC or higher license is required for HF operation. Enhanced skills and knowledge include, but are not limited to:

- Demonstrate ability to configure and operate Winlink using HF with an ARDOP, VARA or PACTOR session.
- Update the channel / path quality list by both internet and radio modes.
- Create, forward, receive and reply to Winlink ARC template-based messages via an HF RMS gateway with either ARDOP, VARA or PACTOR.
- Is able to send and receive a Winlink message using an HF ARDOP or VARA peer-to-peer (P2P) session.
- Demonstrate ability to add or remove an attached document to/from a Winlink message.

Related Publications and Videos

    A. Reliable E-Mail Over HF With ARDOP Winlink Protocol – Rich Donahue
        https://www.youtube.com/watch?v=FEJRyNu26I8
    B. RMS Express Peer-to-Peer – Mark Esslinger, W5MAE; Craig Bean, AC5KW
        https://www.youtube.com/watch?v=6eeE4yU6NNc&list=PL2eb6VXheTW_WpmHl7oPmu_Ab1kJduXAw&index=11
        (While dated, process is relevant for today's Winlink Express P2P operation)
    C. SD ARES WL2K San Diego ARES Winlink YouTube Series
        https://www.youtube.com/playlist?list=PL-7mirT-kjfs84FQzLr-qv066Kl94rtYM
    D. Winlink BOK (*Winlink Book of Knowledge*)
        https://winlink.org/content/winlink_book_knowledge
    E. Winlink Express Application integrated Help documentation

Suggested Training

YouTube videos are available covering numerous intermediate and advanced topics of Winlink usage. The below list is recommended for the Independent Operator. As with the Basic level, an Elmer is recommended to provide local assistance.

Source	Video or Reference Material – Independent Operator
SDA	8. How to create and send a small text file using Winlink Express - YouTube
WL2K HELP	Adding Attachments to Messages – Winlink Help
WL2K HELP	Updating Channel Data – Winlink Help
K0PIR	Reliable E-Mail Over HF With ARDOP Winlink Protocol – Rich Donahue, K0PIR - YouTube
W5MAE	RMS Express Peer-to-Peer – Mark Esslinger, W5MAE; Craig Bean - YouTube
WL2K HELP	Making a Peer-to-Peer Connection – Winlink HELP

Advanced Operator Skills – Winlink

Overview

Continuing to build on the skills and knowledge of an Independent Operator, the Advanced Operator is capable of operation in the most demanding grid-down situations. This may require leveraging the Winlink Hybrid Network; operation in a wide-area event involving a number of distributed operators using tactical callsigns; and the ability to handle NBEMS FLMSG ARC forms as attachments to Winlink messages. The Advanced Operator is expected to act as an Elmer or subject matter expert.

- Demonstrate ability to configure and operate Winlink using HF with VARA or PACTOR radio-only (Hybrid Network) session.
- Demonstrate ability to configure and operate Winlink using tactical call signs.
- Proficiency in the use of NBEMS FLMSG application to view/edit ARC Custom FLMSG forms and add / remove such forms from a Winlink message.

Minimum NBEMS expectation is operator works with a pre-filled ARC NBEMS message provided from/to the ARC staff on a thumb drive which becomes a simple attachment to the Winlink message.   Preferably the operator is familiar with the FLMSG application in agency mode and is competent in message creation, editing and viewing ARC messages.

Related Publications and Videos

A. ARC NBEMS FLMSG Forms Usage with WinLink – Mark Bell, N7GRB
   http://gwinnettares.org/wp-content/uploads/2019/11/2019%20-%20ARC%20NBEMS%20Forms%20with%20WinLink.pdf
B. Introduction to Disaster Message Utility - Jim Piper, N6MED
   MP4 video on the ARC Disaster Message Utility Thumb Drive
   (other guides in pdf form on thumb drive)
   http://www.sacvalleyares.org/contents/news/ARC_Forms.asp
C. NBEMS FLMSG ARC forms and usage – David Freeze, W1HKJ
   a. FLMSG and American Red Cross Message Template Installation – Jim Piper
   b. Using the Red Cross Message Utility – Jim Piper, N6MED
   http://www.w1hkj.com/files/FLMSG/ARC_custom_forms/
D. SD ARES WL2K San Diego ARES Winlink YouTube Series
   https://www.youtube.com/playlist?list=PL-7mirT-kjfs84FQzLr-qv066Kl94rtYM
   (While dated process is relevant for todays' Winlink Express P2P operation)
E. Winlink BOK (Winlink Book of Knowledge)
   https://winlink.org/content/winlink_book_knowledge
F. Winlink Express Application integrated Help documentation

Suggested Training

Source	Video or Reference Material – Advanced Operator
SDA	0.3 How to create a tactical address in Winlink Express - YouTube
WL2K BOK	Tactical Addresses – How-to Recipes
SDA	0.4 How to select your default sending address - YouTube
SDA	7. How to resize an image to send using Winlink Express
WL2K HELP	Editing, Cropping and Resizing Images topic – Winlink Help
WL2K BOK	Overview of the Winlink Hybrid Network
WL2K HELP	Winlink Hybrid (Radio only) Network topic – Winlink Help
N6MEP	Introduction to Disaster Message Utility - ARC staff user view (Jim Piper's mp4 video on thumb drive image, see references for URL)
W1HKL	FLMSG ARC forms and training documents by Jim Pier (ref: Related Publications)
N7GRB	ARC NBEMS FLMSG Forms Usage with Winlink – pdf file (ref: Related Publications)