



# GEORGIA ARES WINLINK PROFICIENCY GOALS

## Abstract

This document identifies core skill goals for Winlink digital messaging in support of the agencies and community. This document identifies core skill goals for Winlink digital messaging in support of the agencies and community served by Georgia ARES.

Georgia ARES Training and Development

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## GEORGIA ARES WINLINK PROFICIENCY GOALS

### INTRODUCTION

#### OVERVIEW

During disasters, man-made or natural, the normal communications infrastructure can often be disrupted. Emergency communications operators may be called upon to provide 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 agencies and community served by Georgia ARES. The skill goals are to be considered the minimum requirements. Operators are highly encouraged to explore more of the Winlink Express technology beyond that outlined in this document.

Skill goals are divided into **Basic**, **Independent** and **Advanced** levels.

Operator Skill Levels	
<b>Basic</b>	Communicator has the basic skills which meet the knowledge and performance skill goals.
<b>Independent</b>	Communicator has intermediate knowledge and skill and is capable of independent operation, without coaching or assistance, in the qualified skill goal area.
<b>Advanced</b>	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. Communicator is able to deploy and operate for an extended duration.

For each of the listed goals training material in the form of online videos and printed documentation is identified for self-help. Winlink Express itself has a significant amount of documentation on various aspects of its use built into the integrated Help function.

## Emergency Radio Communications

## ABBREVIATIONS, ACRONYMS AND TERMS

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

## RELEASE INFORMATION

Change Control		
Revision	Date	Comment
<b>1.0</b>	4/26/2021	Initial release
<b>1.1</b>	5/2/2021	Added P2P video to Basic Level;

## BASIC OPERATOR SKILLS – WINLINK

### OVERVIEW

This is a basic skills / competency level for those new to Winlink and/or Technician license level operators operating primarily with VHF/UHF packet sessions. 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 standard template-based messages (e.g., ICS 213).
- Create and send Winlink Check In message to include GPS latitude and longitude.
- Create a template-based message, save message text and reload text for later reuse in a second message (e.g., ICS 213 save/load feature).
- 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-qv066KI94rtYM>
- B. Georgia ARES Training YouTube Channel  
<https://www.youtube.com/channel/UCyytlu3IEKyTcJeeGoFBE9A/videos>
- C. Winlink BOK (Winlink *Book of Knowledge*)  
[https://winlink.org/content/winlink\\_book\\_knowledge](https://winlink.org/content/winlink_book_knowledge)
- D. Winlink Express Application integrated Help documentation
- E. Winlink for EMCOMM - John Davis, WB4QDX  
[https://www.youtube.com/watch?v=3gdwsV9\\_ca0&feature=youtu.b](https://www.youtube.com/watch?v=3gdwsV9_ca0&feature=youtu.b)
- F. RMS Express Peer-to-Peer – Mark Esslinger, W5MAE; Craig Bean, AC5KW  
[https://www.youtube.com/watch?v=6eeE4yU6NNc&list=PL2eb6VXheTW\\_WpmHI7oPmu\\_Ab1kJduXAw&index=11](https://www.youtube.com/watch?v=6eeE4yU6NNc&list=PL2eb6VXheTW_WpmHI7oPmu_Ab1kJduXAw&index=11)

## Emergency Radio Communications

Georgia ARES wishes to express thanks to the various organizations for publicly sharing documentation and video material in support of Winlink proficiency training. In particular:

- Sand Diego ARES organization for their excellent YouTube Winlink training channel
- Santa Clara and Milpitas ARES / RACES for the resource typing model (Basic, Independent and Advanced)

## 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](http://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 as referenced earlier an excellent information 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 BOK	Packet Radio-Winlink with UZ7HO software using sound card interfaces (Signalink, DRA, built-in)
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

## Emergency Radio Communications

Source	Video or Reference Material – Basic Operator
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
GAT	Winlink check-in form - YouTube
SDA	3. How to send an ICS Form 213 using Winlink Express software
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 both ARDOP and VARA sessions and when available PACTOR.
- Update the channel / path quality list by both internet and radio modes.
- Create, forward, receive and reply to Winlink template-based messages via an HF RMS gateway with either ARDOP, VARA or PACTOR.
- Send and receive a Winlink messages using peer-to-peer (P2P) sessions demonstrating competence with both ARDOP and VARA HF P2P sessions.
- Demonstrate ability to add or remove an attached document to/from a Winlink message.
- Record activity with ICS-214A message template, save and reload form data.
- Demonstrate ability to work with and guide agencies in use of Winlink forms outside the context of Winlink Express.

### RELATED PUBLICATIONS AND VIDEOS

- G. Georgia ARES Training YouTube Channel  
<https://www.youtube.com/channel/UCyytlu3lEKyTcJeeGoFBE9A/videos>
- H. Reliable E-Mail Over HF With ARDOP Winlink Protocol – Rich Donahue  
<https://www.youtube.com/watch?v=FEJRyNu26l8>
- I. VARA HF, Email Over Ham Radio, Winlink Express Tutorial, Military Grade!! – Ham Radio Concepts  
<https://youtu.be/SegKxnJSmiM>
- J. RMS Express Peer-to-Peer – Mark Esslinger, W5MAE; Craig Bean, AC5KW  
[https://www.youtube.com/watch?v=6eeE4yU6NNc&list=PL2eb6VXheTW\\_WpmHI7oPmu\\_Ab1kJduXAw&index=11](https://www.youtube.com/watch?v=6eeE4yU6NNc&list=PL2eb6VXheTW_WpmHI7oPmu_Ab1kJduXAw&index=11)  
(While dated, process is relevant for today's Winlink Express P2P operation)
- K. SD ARES WL2K San Diego ARES Winlink YouTube Series  
<https://www.youtube.com/playlist?list=PL-7mirT-kjfs84FQzLr-qv066KI94rtYM>

## Emergency Radio Communications

- L. Winlink BOK (*Winlink Book of Knowledge*)  
[https://winlink.org/content/winlink\\_book\\_knowledge](https://winlink.org/content/winlink_book_knowledge)
- M. 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
KOPIR	Reliable E-Mail Over HF With ARDOP Winlink Protocol – Rich Donahue, KOPIR - YouTube
HRC	VARA HF, Email Over Ham Radio, Winlink Express Tutorial, Military Grade!! - YouTube
W5MAE	RMS Express Peer-to-Peer – Mark Esslinger, W5MAE; Craig Bean - YouTube
WL2K HELP	Making a Peer-to-Peer Connection – Winlink HELP
GAT	Non-Express use of ICS Forms – YouTube
WL2K BOK	Express forms use by a non-Express user – BOK How-To Recipe



## 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 and operation in a wide-area event involving a number of distributed operators using tactical callsigns. Operators are expected to work with agencies where the agency representative is providing digital messages to the operator. This includes the ability to handle NBEMS FLMSG ARC forms as attachments to Winlink messages and working with Winlink forms completed outside the context of Winlink Express. The Advanced Operator is expected to act as an Elmer and/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](http://www.sacvalleyares.org/contents/news/ARC_Forms.asp)
- C. NBEMS FLMSG ARC forms and usage – David Freeze, W1HKJ  
FLMSG and American Red Cross Message Template Installation – Jim Piper  
Using the Red Cross Message Utility – Jim Piper, N6MED  
[http://www.w1hkj.com/files/FLMSG/ARC\\_custom\\_forms/](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-qv066KI94rtYM>

## Emergency Radio Communications

(While dated process is relevant for today's Winlink Express P2P operation)

- E. Winlink BOK (Winlink Book of Knowledge)  
[https://winlink.org/content/winlink\\_book\\_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)