

REGION 1 DIGITAL PROFICIENCY

This document identifies the core skills required for radio operators to be proficient and valuable to Region 1 and its served agencies.

OPERATOR SKILL LEVELS

- ☐ BASIC – Operator has the basic knowledge and skills to support Region 1 VHF/UHF digital communications.
- ☐ INTERMEDIATE – Operator has knowledge and skills to support Region 1 VHF/UHF and HF digital communications, and is capable of independent operation, without coaching or assistance.
- ☐ ADVANCED – Operator is considered a subject matter expert. Operator may act as a communications lead, and is capable of more difficult assignments, using more equipment with more complicated configurations, and has the ability to troubleshoot and remedy digital traffic issues.



DEFINITIONS

- ☐ ARES – ARRL Amateur Radio Emergency Service
- ☐ EMCOMM – Emergency Communications
- ☐ WINLINK – A global system for sending digital messages (email) via radio. Winlink Express software used by most clients to send and receive messages.
- ☐ RMS – Radio mail server.

DOCUMENT CONTENTS

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BASIC OPERATOR SKILLS

The Basic Operator skill level is for those users/communicators new to Winlink and a Technician Level license to operate. A Basic Operator is able to:

1. Install, configure and operate Winlink using “Telnet” and “Packet” modes.
2. Create “Personal” folders and organize received messages into folders.
3. Create, receive and reply to Winlink messages using the standard template-based messages contained within Winlink.
4. Create a template-based message, save the message text, and reload the text for later use in a second message.
5. Update the packet channel selection list.
6. Connect to an RMS gateway both direct, and via digipeaters.

BASIC RESOURCES

Skagit County ARES/RACES Website: <https://sites.google.com/view/skagitares/home>

The ARES website has links to YouTube videos that provide an introduction to Winlink as well as other introductory training materials

Members of ARES and other local area radio club are available to mentor/Elmer you in your learning journey. Most of all, don't hesitate to dive in and try it. Doing is sometimes more valuable than reading.

Winlink.org Website: <https://winlink.org/>

The Winlink.org website is a vast knowledge base with instructional documents, videos and links to numerous other resources. If it has been done in Winlink, you will find it on their website or in their knowledgebase pages. It provides extensive information about Winlink Software and putting it all together.

YouTube Videos: WB4QDX, K4REF, and San Diego ARES (among many others) have published excellent “how to” videos on using Winlink for EMCOMM. The videos listed on the on Region 1 website have been identified as some of the best for learning Winlink, and will provide an excellent starting point. A search of YouTube will reveal numerous other videos as well.

Basic Skills Training. Region 1 recommend the following resources for Basic Skills Training.

How to install and configure Winlink Express How to Operate Winlink using Telnet	<u>Documents</u> Winlink Express Tutorial Winlink Training Course, pages 1-5 <u>Videos</u> San Diego ARES video #0.0a San Diego ARES video #0.0b METERSinc RMS Express Video series by Rick Frost <u>Winlink Express Help Topics:</u> Setup: Installation
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	Setup: Basic Configuration Setup: Telnet Setup Operation: Composing a Message Operation: Message Addressing Operation: Make a Telnet Connection to a CMS Server
How to Operate Winlink using Packet How to connect to an RMS gateway	<u>Documents</u> Winlink Training Course, pages 6-10 Winlink Operator's Guide, slides 7-16 <u>Winlink Express Help Topics:</u> Setup: Packet Setup Operation: Making a Packet Connection to a Winlink RMS Packet Server
How to use Personal Folders	<u>Videos</u> San Diego ARES video #0.1 <u>Winlink Express Help:</u> Operation: Personal and Global Message Folders Operation: Viewing and Managing Messages
How to create, receive and reply using standard templates (forms). How to create an ARES message using a template (form),	<u>Documents</u> Winlink Training Course, pages 25-27 <u>Videos</u> Winlink – How to Use Forms video San Diego ARES video #4 <i>Note: procedure is the same for all standard forms</i> <u>Winlink Express Help Topics:</u> Operation: Composing a Message Operation: Message Templates
How to update the channel selection list	<u>Documents</u> Winlink Training Course, pages 22-23 <i>Note: this explanation is written for HF, but the channel list update procedure is the same for Packet, except that there is no Path reliability or quality data.</i> <u>Videos</u> San Diego ARES video #0.7 <u>Winlink Express Help Topics:</u> Operation: Updating Channel Data
How to send/receive messages via a digipeater	<u>Documents</u> Winlink Training Course, pages 14-15 <u>Winlink Express Help Topics</u> Operation: Making a Packet Connection to a Winlink RMS Packet Server

INTERMEDIATE OPERATOR SKILLS

The intermediate operator demonstrates enhanced capabilities to include HF-based Winlink operation and the ability to operate in emergency situations. The intermediate operator takes general direction and requires little to no supervision. A General Class or higher license is required for HF operations.

In addition to Basic skills, the Intermediate operator is able to:

1. Configure and operate Winlink using HF with a VARA HF/ARDOP RMS session.
2. Create, forward, receive and reply to Winlink template-based messages via an HF RMS Gateway using ARDOP/VARA HF.
3. Update the channel/path quality list by both internet and radio modes
4. Add or remove an attached document to/from a Winlink message.
5. Send and receive messages via Packet Peer to Peer mode.

INTERMEDIATE RESOURCES

Skagit County ARES/RACES website (see link above in document). In addition, there are numerous YouTube videos that can assist with Winlink and HF usage.

The Winlink Book of Knowledge (https://winlink.org/content/winlink_book_knowledge) is highly recommended to the intermediate operator.

Intermediate Skills Training. Region 1 recommend the following resources for Intermediate Skills Training.

How to configure and operate Winlink using HF with a VARA HF.	<u>Documents</u> Beginners Guide to Winlink <i>Note: this is an HF oriented Winlink tutorial based on Winmore, but other than the Winmore setup, most of it also applies to VARA HF.</i> VARA HF 4.3 Quick Guide <u>Videos</u> Short Tutorial on Setting Up and Using VARA HF with Winlink:
How to create, forward, receive and reply to Winlink template-based messages via an HF RMS Gateway.	<u>Videos</u> VARA HF, Email over Ham Radio, Winlink Express Tutorial (video) Winlink on HF using IC-7200 and VARA HF (demo) <u>Winlink Express Help Topics:</u> Operation: Main Display (<i>note: see Messages tab to reply or forward a message</i>) Operation: Composing a Message Operation: Making a Connection to a Winlink RMS WINMOR Server. (<i>Note: the procedure is the same for all HF modes, including VARA HF</i>)
How to update the channel/path quality list by both internet and radio modes.	<u>Documents</u> Beginners Guide to Winlink, page 16 <u>Videos</u>

	HF Propagation Forecasts in Winlink Express - Video How-To: San Diego ARES video #0.7 <u>Winlink Express Help Topics:</u> Operation: Updating Channel Data
How to add or remove an attached document to/from a Winlink message.	<u>Videos</u> San Diego ARES video #8 <u>Winlink Express Help Topics:</u> Operation: Adding attachments to messages
How to send/receive messages using Peer to Peer modes	<u>Documents</u> Winlink Training Course , pages 11-13 <u>Videos</u> RMS Express Peer to Peer video <u>Winlink Express Help Topics:</u> Operation: Make a Peer to Peer connection

ADVANCED OPERATOR SKILLS

The Advanced Operator is capable of operation in the most demanding situations. The advanced operator is expected to act as a mentor and subject matter expert in Winlink messaging.

In addition to Basic and Intermediate skills, the Advanced operator is able to:

1. Configure and operate Winlink using tactical addresses.
2. Configure and operate Winlink Hybrid (radio only) HF modes.
3. Resize photographs, attach them to messages and send those messages, and receive and save messages with photographs.

ADVANCED RESOURCES

The Winlink Book of Knowledge (https://winlink.org/content/winlink_book_knowledge) is highly recommended to the advanced operator.

Advanced Skills Training. Region 1 recommend the following resources for Advanced Skills Training.

How to configure and operate Winlink using HF with VARA HF.	<u>Documents</u> VARA HF 4.3 Quick Guide <u>Videos</u> Short Tutorial on Setting Up and Using VARA HF with Winlink:
How to configure and operate Winlink using tactical addresses.	<u>Documents</u> Winlink.org article on Tactical Addresses: Winlink Express Comm Academy Session 3 presentation

	<u>Videos</u> San Diego ARES video #0.3 <u>Winlink Express Help Topics:</u> Operation: Message Addressing Operation: Composing a Message Operation: Call signs with Qualifiers Setup: Basic Configuration
How to resize/attach/receive messages with photographs.	<u>Documents</u> Winlink Express Comm Academy Session 3 presentation Slides 17-18 <u>Videos</u> Winlink Express: Picture Editor – Video How-To San Diego ARES video #7 Sending Images Over HF with VARA – demo video <u>Winlink Express Help Topics:</u> Operation: Adding attachments to messages Operation: Editing, Cropping and Resizing Images
How to send/receive messages using the Hybrid Network (Radio Only)	<u>Documents</u> Getting Started with Hybrid Network Presentation <u>Winlink Express Help Topics:</u> Operation: Winlink Hybrid (Radio Only) Network

REGION 1 DIGITAL

OPERATIONS (EXAMPLE ONLY)

WINLINK USAGE ON NETS. As an example, the Skagit County OPS 2 Net runs every Tuesday at 0930 hrs local time. Digital checkins are accepted via Winlink messages sent to KF7CFR (Skagit DEM) on Tuesday mornings, but it is not part of the current voice net procedures.

Eight of the 18 net roster member stations currently have digital capability. As additional member stations become digital capable, and station operators are trained for Winlink operation, net procedures will be updated to include calls for digital traffic during the voice net. The anticipated change to net procedures is as follows:

Net Control will continue to call stations for voice checkins in roster order. After a station acknowledges and states it has digital traffic, Net Control will advise them that they have clearance to send their digital traffic. They may send it to KF7CFR through the gateway of choice or availability.

Following completion of the roster, Net Control will run back through the roster of stations that have Winlink capability, and acknowledge receipt of message prior to QSY to the second repeater. If a message is not received, the station may at their convenience, send another message to try and make positive contact with KF7CFR.

The Region 1 OPS 1 net is similar in structure with 6 stations (EOC or ECC) participating.

The current Skagit County OPS 2 Net Roster is shown below. The highlighted stations have digital capability.

STATION	WINLINK CAPABLE
Anacortes EOC KI7CPD	YES
Anacortes Fire KI7CPA	NO
ARC Anacortes Mobile	NO
ARC Bellingham Mobile 1	NO
Bayridge Fire	NO
Chuckanut ACS KI7PRK	UNK
Concrete Fire	NO
Island Hospital KF7CFQ	YES
Naval Health Clinic, Oak Harbor	YES
Peace Health United Hospital KF7CFU	YES
Samish Fire	NO
Sedro Woolley EOC	NO
Skagit County ECC KF7CFR	YES
Skagit County MCP KF7CFT	YES
Skagit SAR Bldg KJ7KPX	NO
Skagit Valley Hospital KF7CFS	YES
Skagit County Public Health	NO
Swinomish EOC KI7ULA	YES