

National Traffic System and the Radiogram Format



ARRL

*North
Texas
Section*

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Presentation objectives

High-level overview of the National Traffic System

Skills gained by participating

The radiogram format and its components

Hands-on practice authoring radiograms and moving traffic



National Traffic System overview

National Traffic System (NTS) overview

Organized network of amateur radio operators who move traffic (messages)

Started in 1915 as the formal ARRL system to relay messages across the country

The **relay** in American Radio Relay League, as traffic is relayed from one location to another



Types of traffic

Emergency traffic

- Life-and-death matters
- Requests for supplies
- Requests for specific instructions

Priority traffic

- Where time is of the essence
- Notifications about injuries
- Other emergency-related traffic not of utmost urgency

Welfare traffic

- Inquiries about the health and welfare of an individual in an affected area
- Advisories/replies from an affected area indicating all is well

Routine messages

- General messages, such as well wishes
- This helps test the system and helps operators build traffic handling skills

NTS operations



Primarily set up to serve the United States and Canada

- NTS does support global traffic, dependent on amateur radio reciprocity agreements with other countries



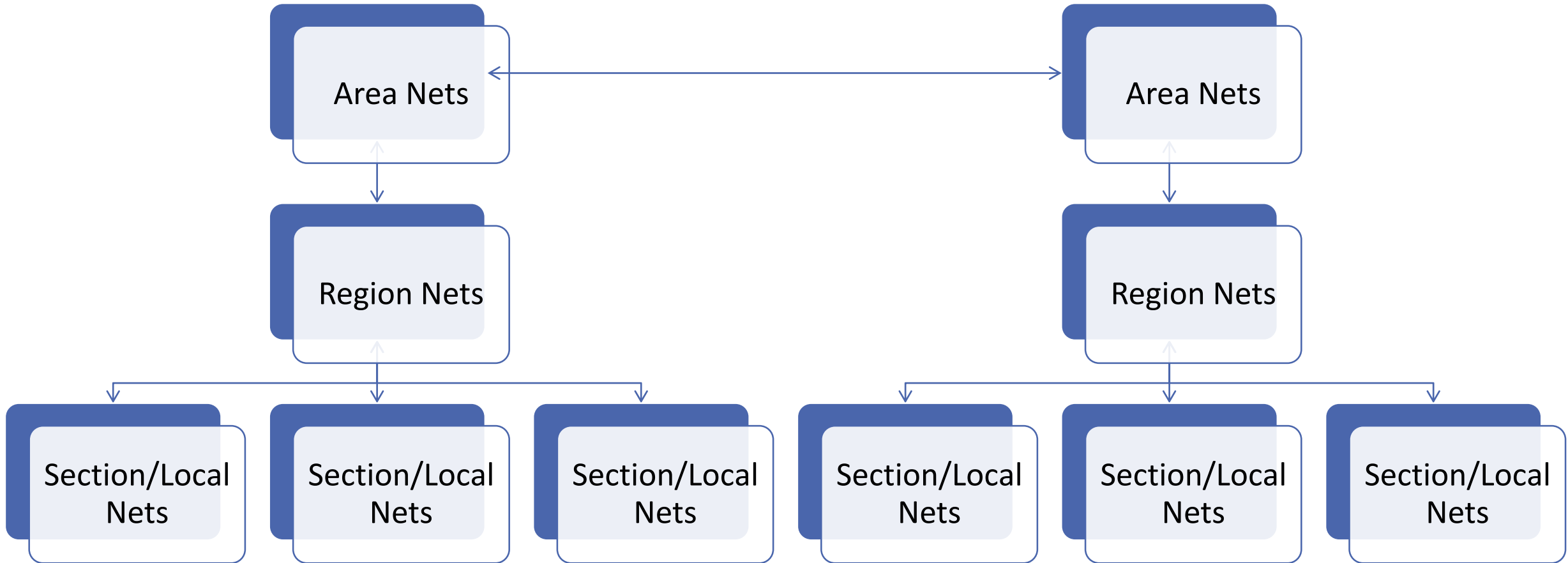
Transmit and receive modes

- Voice
- Morse code (CW)
- Digital Traffic Network (DTN)



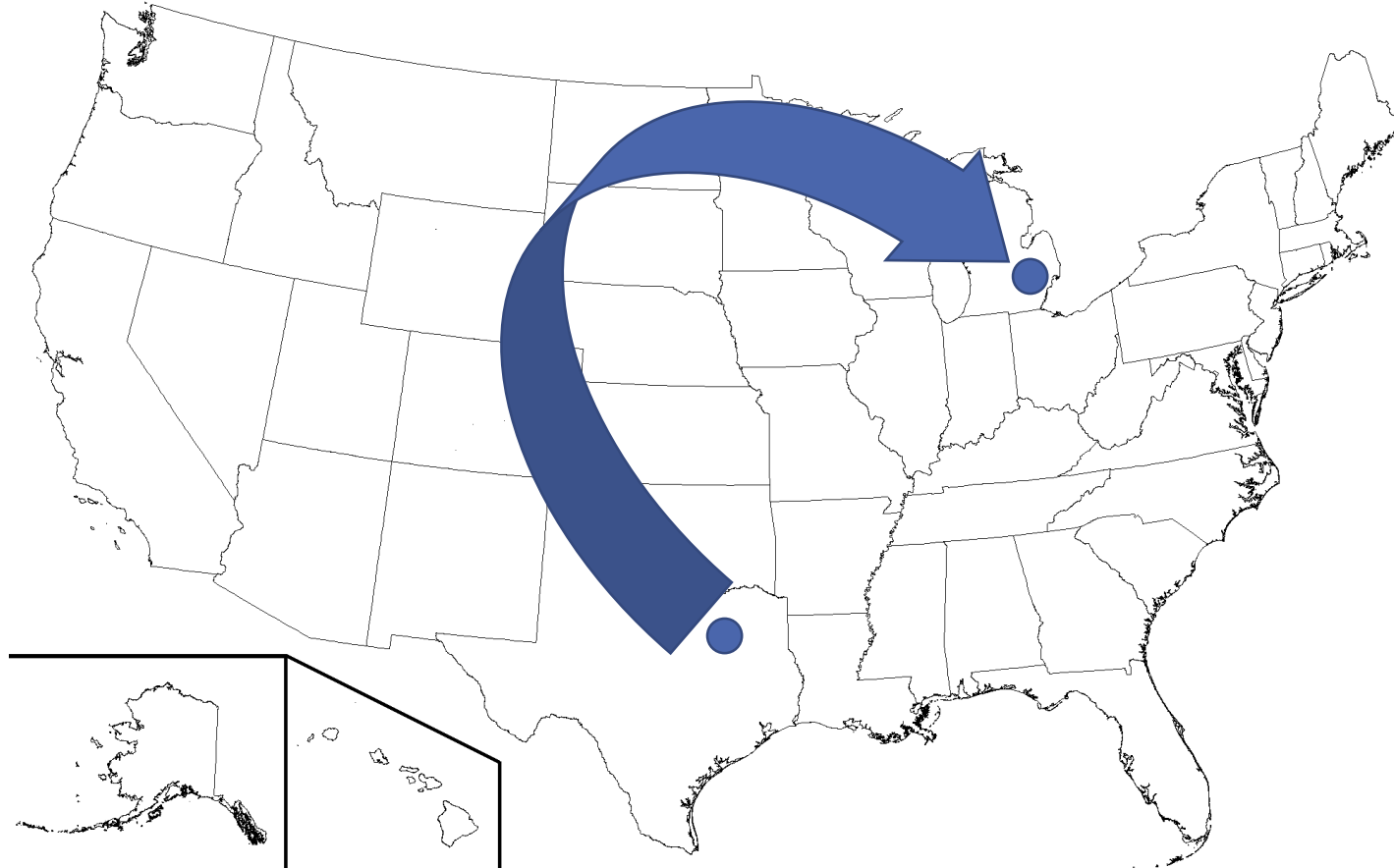
Example of how a message is relayed

NTS traffic flow



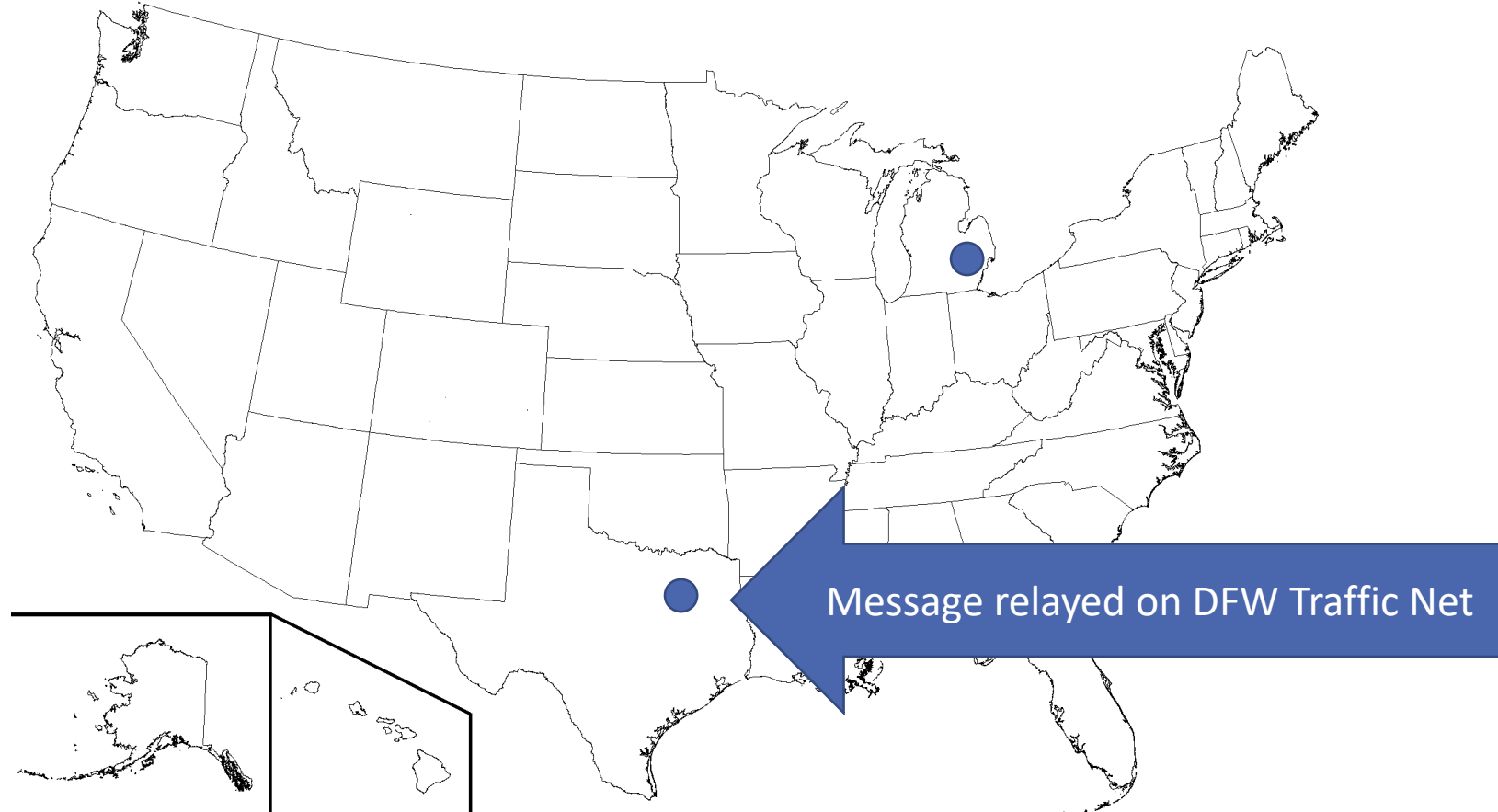
Example message movement

I want to send a message to a family member in Michigan



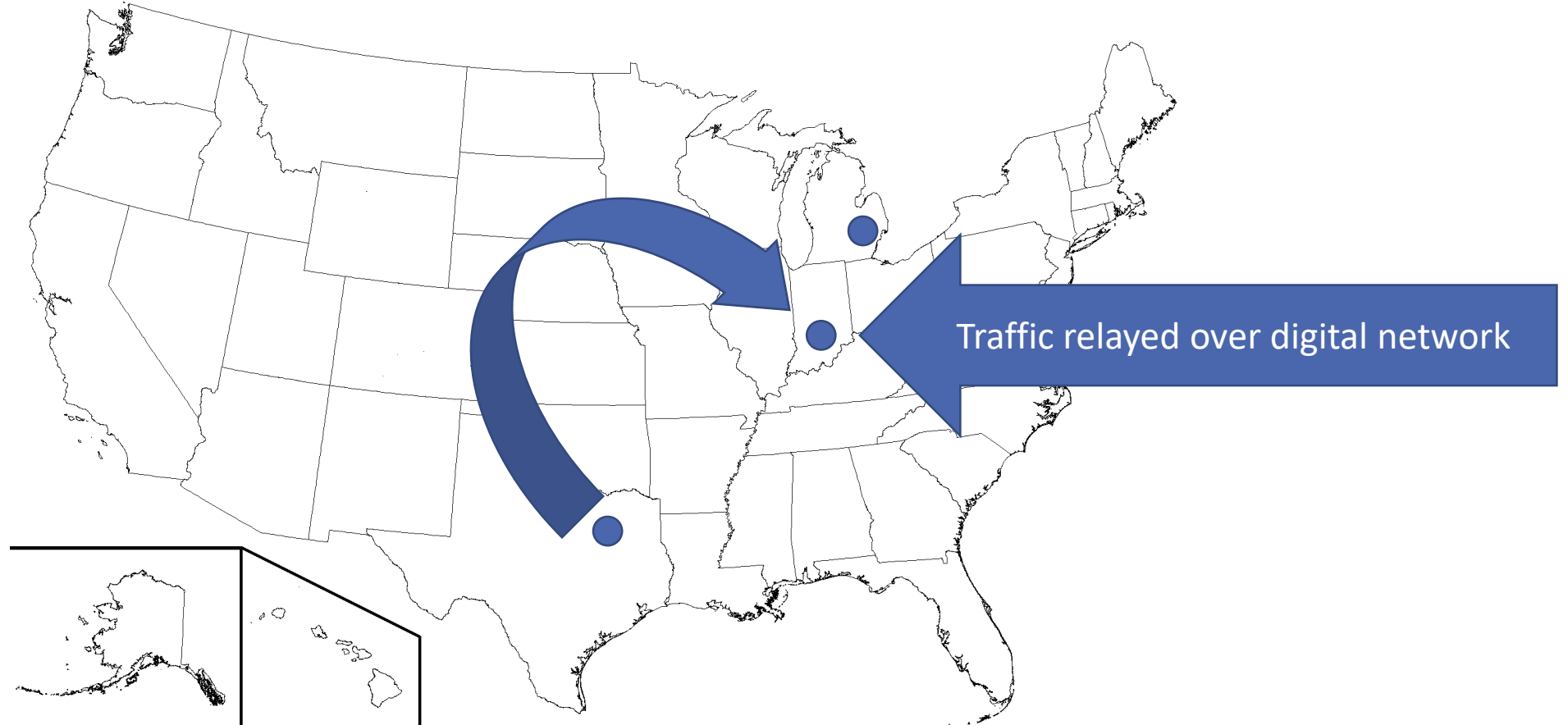
Example message movement

1. List the traffic and relay to station able to take the traffic



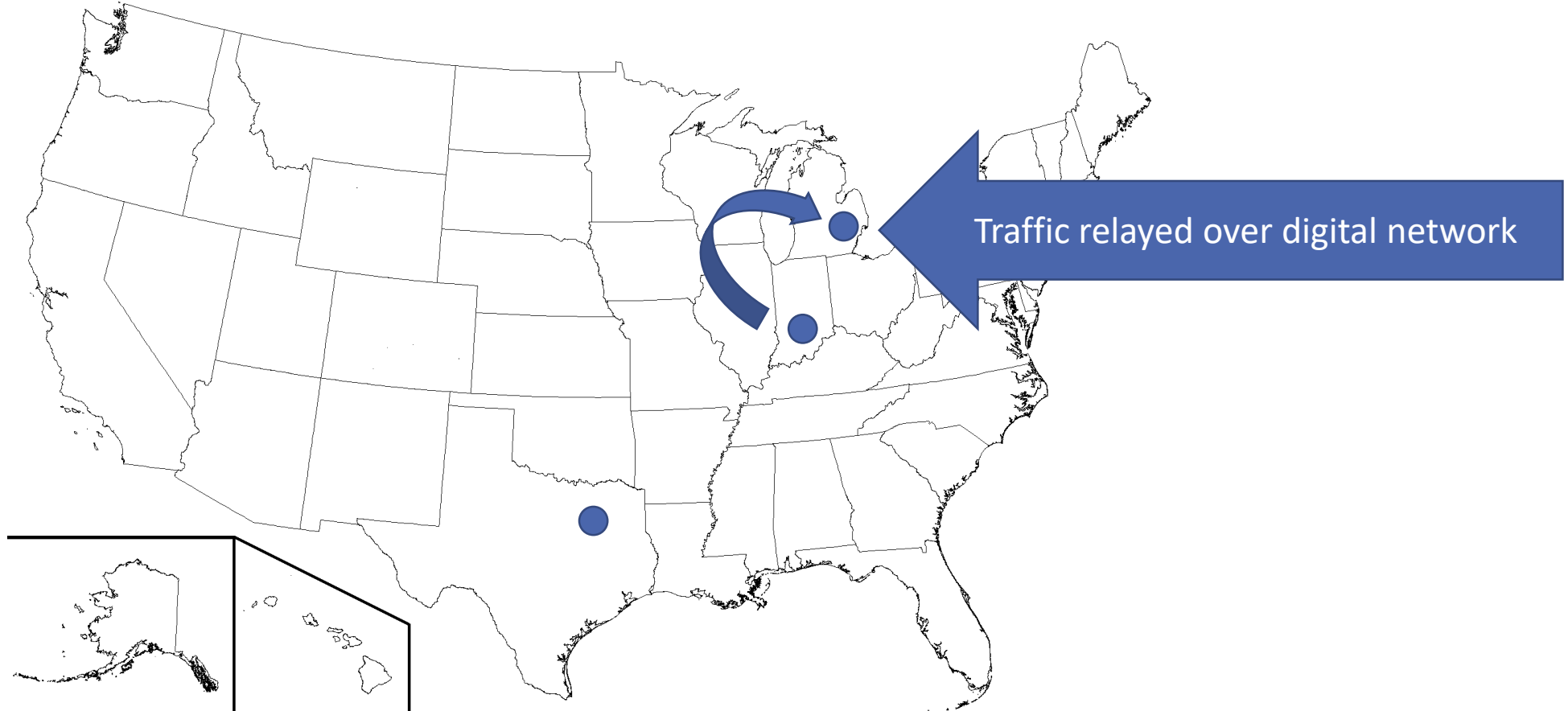
Example message movement

1. List the traffic and relay to station able to take the traffic
2. Relayed to IN



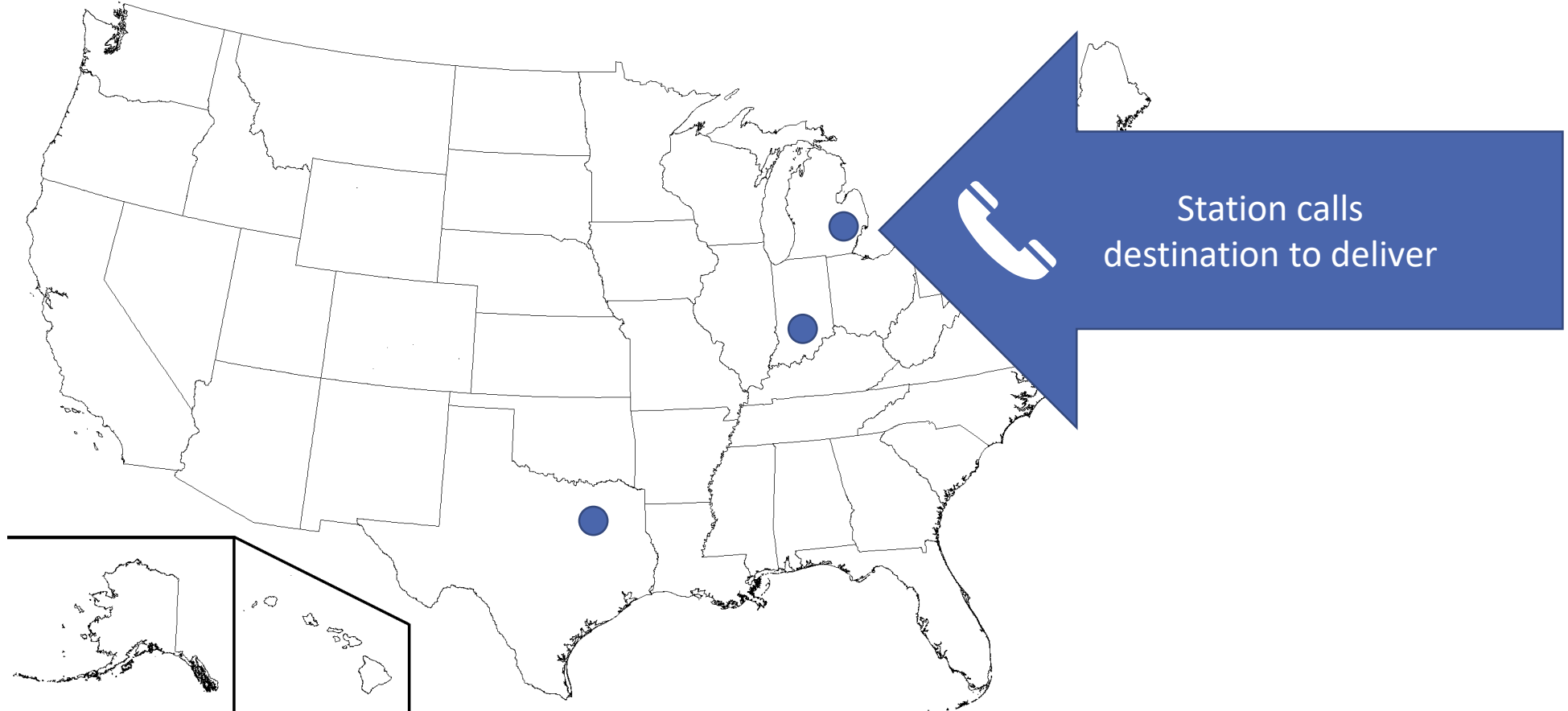
Example message movement

- 1. List the traffic and relay to station able to take the traffic**
- 2. Relayed to IN**
- 3. Relayed to MI**



Example message movement

1. List the traffic and relay to station able to take the traffic
2. Relayed to IN
3. Relayed to MI
4. Local delivery





The NTS helps build amateur radio skills

Teaches you how to speak on the air

When relaying a message, however slow you think slow is, speak **SLOWER**

- Repeating parts of the message takes longer than getting it all in one attempt
- “Slow is fast, fast is slow”

Speak clearly

- You may need to enunciate

You don't read a message, you **SEND** it

- After sending a message, the receiving station's copy needs to be identical to yours
- It needs to match word-for-word, letter-for-letter

On-air skills

Build familiarity with participating in formal nets

- Operating as a net control station builds even more skills

Become proficient with ITU phonetics

- Yes, they are the gold standard

Learn and use procedural signs (prosigns)

- Many of these same prosigns are used by public safety dispatchers
- We will go over some in a bit

Become concise by working with short, comprehensive messages

- You only have 25 words (groups) for your message

Emergency assistance skills

“When the disaster begins, the time to prepare ends.”

When assisting during an emergency...

Radiogram skills enable you to effectively relay information into and out of an affected area

NTS net participation skills transfer to communicating with dispatchers over public safety radios and moving ICS-213 forms

GENERAL MESSAGE (ICS 213)		
1. Incident Name (Optional):		
2. To (Name and Position):		
3. From (Name and Position):		
4. Subject:	5. Date:	6. Time
7. Message:		
8. Approved by: Name: _____ Signature: _____ Position/Title: _____		
9. Reply:		
10. Replied by: Name: _____ Position/Title: _____ Signature: _____		
ICS 213	Date/Time: _____	



It is OK to make a mistake

Smart mistakes are OK

If there is no current disaster incident, traffic nets are there to help you learn and build your skills

If there is a disaster and traffic nets are moving emergency or priority traffic, it is too late to learn and build your skills – wait until the disaster has ended

If you make a mistake, and you know, correct and keep going

If someone provides you some feedback, know it is to help you grow

Overcome your fear

What are you afraid of?

Looking ridiculous

Failure

We all started not knowing anything

The way we learn is by doing, and by making and learning from our mistakes along the way





AMERICAN RADIO RELAY LEAGUE

RADIOGRAM

CITY OF ORIGIN	STATION	NUMBER
----------------	---------	--------

TO:—

PHONE

TIME

DATE

ions of the

The ARRL radiogram format

Why radiograms

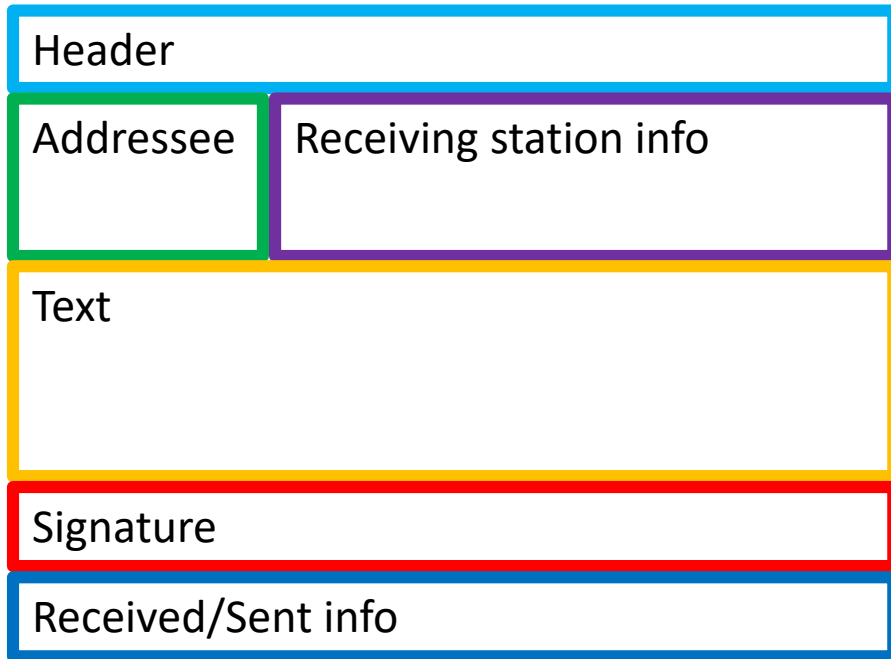
Standardized message format



- We all follow the same thing, even internationally
- Allows for faster relaying

Traceable

- We can follow the message's movements if we need to understand why it did not reach its destination
- Please keep a log of all messages you handle

ARRL radiogram components



 **ARRL** — the national association for Amateur Radio™ 

RADIOGRAM

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO			THIS RADIO MESSAGE WAS RECEIVED AT				
PHONE NUMBER			AMATEUR STATION _____ PHONE _____				
E-MAIL			NAME _____ E-MAIL _____				
			STREET _____				
			CITY, STATE, ZIP _____				
<div style="border: 1px solid black; padding: 5px;"> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div>							
FROM _____ DATE _____ TIME _____				TO _____ DATE _____ TIME _____			
REC'D				SENT			

whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.

magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.

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Radiogram header: Number

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO					THIS RADIO MESSAGE WAS RECEIVED AT		

This number is assigned by the originator and is for tracking purposes

No standard way of numbering these, but you have a few options

Consecutive (1, 2, 3...) starting over each new month or year

Formatted by month and number

For example, starting March 1st, your first message is 301, your second 302, your 112th as 3112...

Radiogram header: Precedence

NUMBER	PRECEDENCE	FX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO					THIS RADIO MESSAGE WAS RECEIVED AT		

The precedence, always said in full, depicts what type of traffic this is

Precedence	Abbreviation	Meaning
Emergency	None: Always spell this out	Life/death urgency in a declared emergency
Priority	P	Traffic during declared emergencies where time is of the essence
Welfare	W	Health and welfare information during declared emergencies
Routine	R	Everything else, and the most frequently used precedence

Radiogram header: Handling Instruction (HX)

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO					THIS RADIO MESSAGE WAS RECEIVED AT		

Handling instructions (optional) provide guidance on

How to handle the traffic as it moves through the traffic system

How to deliver the message

Handling instructions

HX	Meaning
A##	Collect landline delivery authorized by addressee within X miles. (If no number, authorization is unlimited)
B##	Cancel the message if it's not delivered within X hours of the filing time. <ul style="list-style-type: none">Used in cases where the message becomes pointless after a certain amount of time. These types of messages should be sent at least as a Priority message.
C	Report the date and time of delivery back to the originating station.
D	Report to the originating station the identity of the station you received the message from, as well as the date and time you received it. Also, report the identity of the station to which you relayed the message along with the date and time, or if you delivered it to its destination, report the date, time, and method of delivery.
E	The delivering station should ask for a reply from the addressee, and then originate a message back with the reply.
F##	Hold delivery until (specific date).
G	Delivery by mail or landline toll call not required. If toll or other expense involved, cancel message and service originating station.

Radiogram header: Station of Origin

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO					THIS RADIO MESSAGE WAS RECEIVED AT		

This is the amateur radio operator (station) that originated the message

A.K.A. who filled out the radiogram

While the message can be from anyone, including non-amateur radio operators, it is possible for one amateur radio operator to originate a message on behalf of another operator

Radiogram header: Check count

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO					THIS RADIO MESSAGE WAS RECEIVED AT		

Count of the number of words present **ONLY** in the text section

If using ARL shorthand (we will cover this later) you need to place ARL in front of the check

ARL shorthands allow us to quickly reference common messages

Radiogram header: Place of Origin

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO							
					THIS RADIO MESSAGE WAS RECEIVED AT		

Location of the person who authored the message (CITY ST such as DALLAS TX)

If this is you, then your city and state

If you took the message for someone else, this is their city and state

Radiogram header: Time filed

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO				THIS RADIO MESSAGE WAS RECEIVED AT			

Optional, but should be used...

For emergency, priority, or welfare traffic

When there is an HXB handling instruction

Remember, HXB says to cancel the message if it's not delivered within so many hours

Use the 24-hour time format, ideally UTC

If not UTC, then indicate the time zone, such as 21:00 CST

Radiogram header: Date

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO				THIS RADIO MESSAGE WAS RECEIVED AT			

Simply write the first 3 letters of the month followed by the date

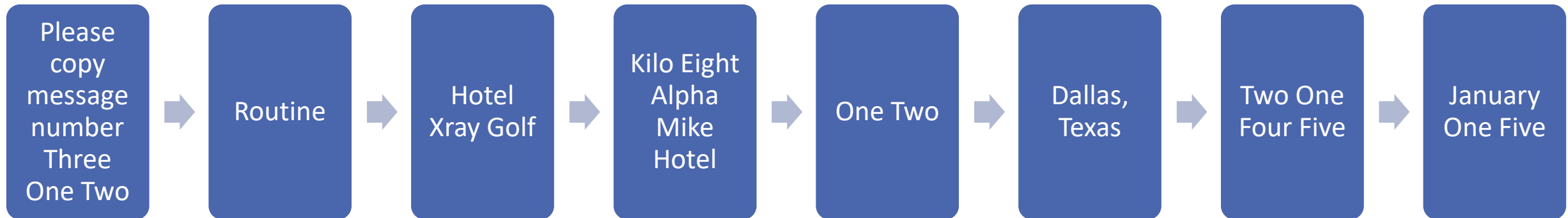
For example, JAN 15 or MAR 3 or JUL 22

The year is never included

Again, UTC is preferred

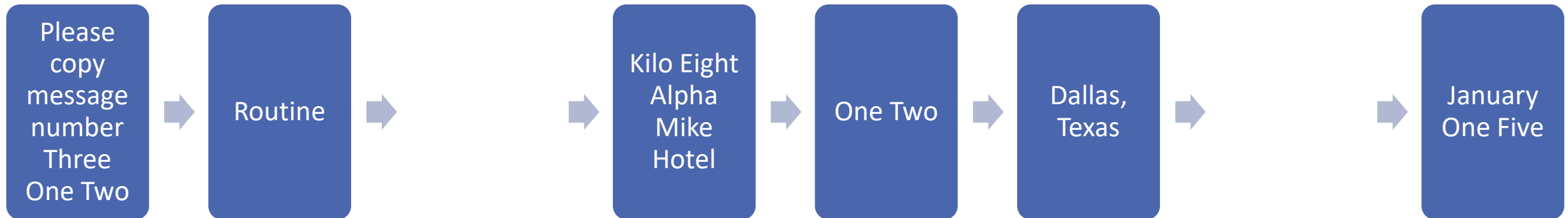
How to say header information on the air

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
312	R	G	K8AMH	12	DALLAS TX	21:45	JAN 15
TO				THIS RADIO MESSAGE WAS RECEIVED AT			

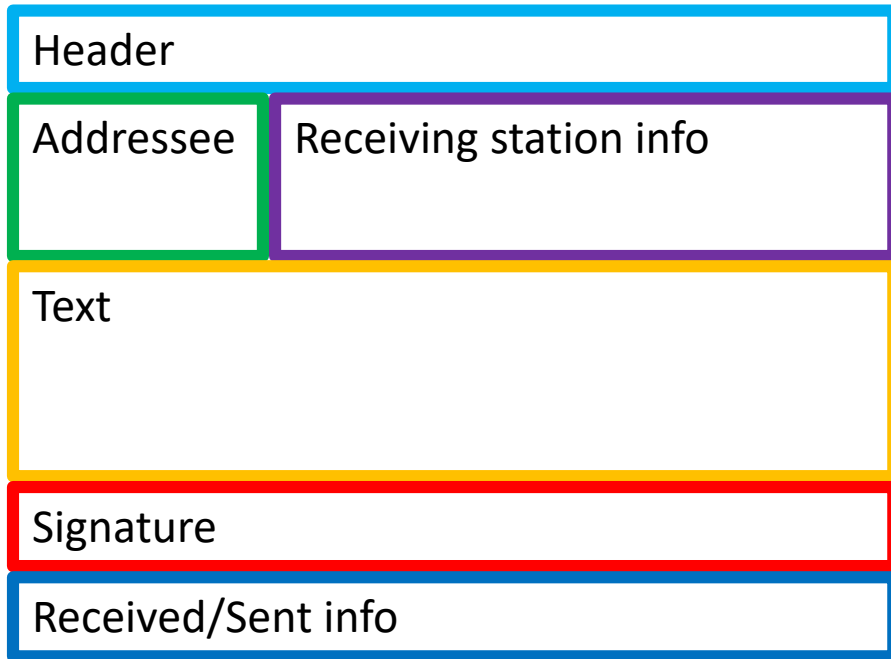


How to say header information on the air

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
312	R		K8AMH	12	DALLAS TX		JAN 15
TO				THIS RADIO MESSAGE WAS RECEIVED AT			



ARRL radiogram components



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RADIOGRAM

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO			THIS RADIO MESSAGE WAS RECEIVED AT				
PHONE NUMBER			AMATEUR STATION _____		PHONE _____		
E-MAIL			NAME _____		E-MAIL _____		
			STREET _____				
			CITY, STATE, ZIP _____				
<div style="border: 1px solid black; padding: 5px;"> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div>							
FROM _____				DATE _____		TIME _____	
TO _____				DATE _____		TIME _____	
REC'D				SENT			

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Radiogram addressee

The basic format is

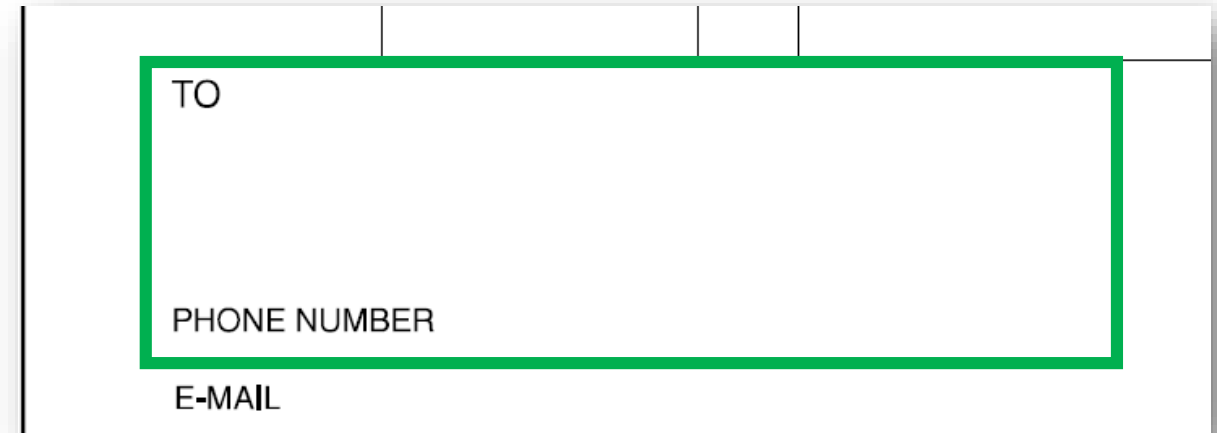
FIRST LAST CALLSIGN

ADDRESS

CITY STATE ZIP

PHONE NUMBER ### ### #####

Addressee does not need to have a
callsign



The diagram shows a rectangular box representing a radiogram address. The box is divided into four columns by vertical lines. A green border highlights the first three columns. Inside the green border, the text 'TO' is at the top left, 'PHONE NUMBER' is at the bottom left, and 'E-MAIL' is at the bottom right. The fourth column is empty.

Radiogram addressee

If you do include an email, you need to write it out

JANE DOT DOE ATSIGN EXAMPLE DOT COM

TO			
PHONE NUMBER			
E-MAIL			

Radiogram addressee

TO

JANE DOE AR1T

123 85TH ST SE

SOMETOWN WI 00121

PHONE NUMBER 330 555 4424

TO			
PHONE NUMBER			
E-MAIL			

How to say addressee information on the air

Going to

Jane... Doe **I SPELL** Delta Oscar Echo...
AMATEUR CALL Alpha Romeo One Tango

ADDRESS FIGURES One Two Three... **MIXED**
GROUP Eight Five Tango Hotel... Street...
DIRECTION Southeast

Sometown... Wisconsin

ZIP FIGURES Zero Zero One Two One

PHONE FIGURES Three Three Zero... Five
Five Five... Four Four Two Four

BREAK

TO	JANE DOE AR1T 123 85TH ST SE SOMETOWN WI 00121
PHONE NUMBER	330 555 4424
E-MAIL	

Prosigns used when giving addressee information

Going to

Jane... Doe **I SPELL** Delta Oscar Echo...
AMATEUR CALL Alpha Romeo One Tango

ADDRESS FIGURES One Two Three... **MIXED GROUP** Eight Five Tango Hotel... Street...
DIRECTION Southeast

Sometown... Wisconsin

ZIP FIGURES Zero Zero One Two One

PHONE FIGURES Three Three Zero... Five Five Five... Four Four Two Four

BREAK

Prosigns	Meaning
I spell	Indicates you are about to spell the word you just said – if you pause too long, the receiving station may start trying to spell it on their own. It is good practice to spell last names.
Amateur call	Indicates you are about to give a callsign
Figures	Used to indicate you are about to give a series of numbers
Mixed group	You are about to provide a mix of letters and numbers
Direction	Cardinal direction in an address
Break	Used twice while moving traffic – the first use indicates the end of the header. Other station will say GO , or ask for corrections/fills.

Address OP NOTE

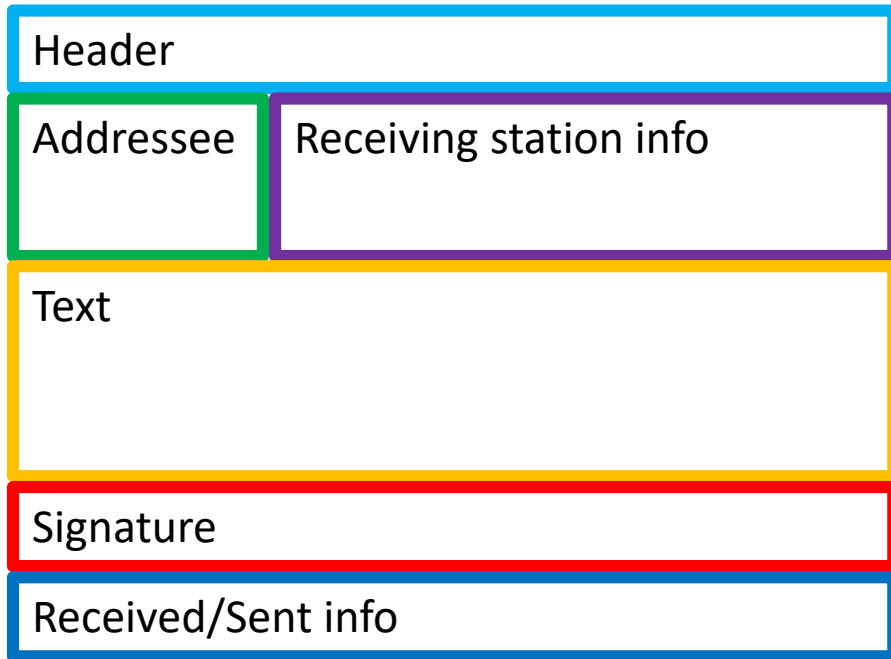
There's an option to include an operator note (OP NOTE) after the addressee information



This relates to handling and/or delivery

In this example, "Workday only" means only attempt calling during workdays

TO	JANE DOE AR1T 123 AMATEUR WAY SE SOMETOWN WI 00121
PHONE NUMBER	330 555 4424
E-MAIL	OP NOTE WORKDAY ONLY

ARRL radiogram components



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RADIOGRAM

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TO			THIS RADIO MESSAGE WAS RECEIVED AT				
PHONE NUMBER			AMATEUR STATION _____ PHONE _____				
E-MAIL			NAME _____ E-MAIL _____				
			STREET _____				
			CITY, STATE, ZIP _____				
<div style="border: 1px solid black; padding: 5px;"> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div>							
FROM _____ DATE _____ TIME _____				TO _____ DATE _____ TIME _____			
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Radiogram receiving station info

This would be your information

I generally only fill this is when I am mailing a copy of the radiogram to the addressee

THIS RADIO MESSAGE WAS RECEIVED AT	
AMATEUR STATION _____	PHONE _____
NAME _____	E-MAIL _____
STREET _____	
CITY, STATE, ZIP _____	

Radiogram text



Limited to 25 groups (words)

Hence there are 25 spaces

Think of it as \$5.00 per word

Radiogram text

Let's use this example as a message we want to send

Great seeing you yesterday. Hope to get together again soon. 73

Radiogram text

Let's use this example as a message we want to send

Great seeing you yesterday. Hope to get together again soon. 73

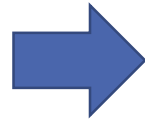
In a radiogram, periods are written as either the letter X (“initial x-ray”) or the word XRAY

Similarly, if your message was, “How are you?” the question mark would be written as QUERY to indicate a question. Exclamation points are EXCLAMATION.

Radiogram text

Let's use this example as a message we want to send

Great seeing you yesterday. Hope to get together again soon. 73



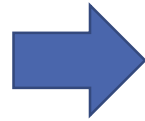
GREAT SEEING YOU YESTERDAY X
HOPE TO GET TOGETHER AGAIN
SOON 73

Notice how we did not place X between SOON and 73? When wishing someone 73 at the end of a message, we generally do not include an X as it's automatically implied. Remember, \$5.00 per word (group).

Radiogram text

Let's use this example as a message we want to send

Great seeing you yesterday. Hope to get together again soon. 73



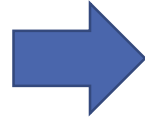
GREAT SEEING YOU YESTERDAY X
HOPE TO GET TOGETHER AGAIN
SOON 73

The only exception would be to include it for clarity. For example, if the end of your message was "ON AUGUST 10 73" it could be confusing this way, so we would instead say "ON AUGUST 10 X 73" to help better separate the date from wishing someone 73.

Radiogram text

Let's use this example as a message we want to send

Great seeing you yesterday. Hope to get together again soon. 73



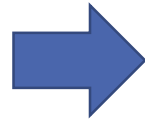
GREAT SEEING YOU YESTERDAY X
HOPE TO GET TOGETHER AGAIN
SOON 73

Items like X and QUERY count as a word when filling in the check, so counting what we have above, there are 12 words, and we would write 12 in the check.

How to say this text on the air

Let's use this example as a message we want to send

Great seeing you yesterday. Hope to get together again soon. 73



GREAT SEEING YOU YESTERDAY X
HOPE TO GET TOGETHER AGAIN
SOON 73

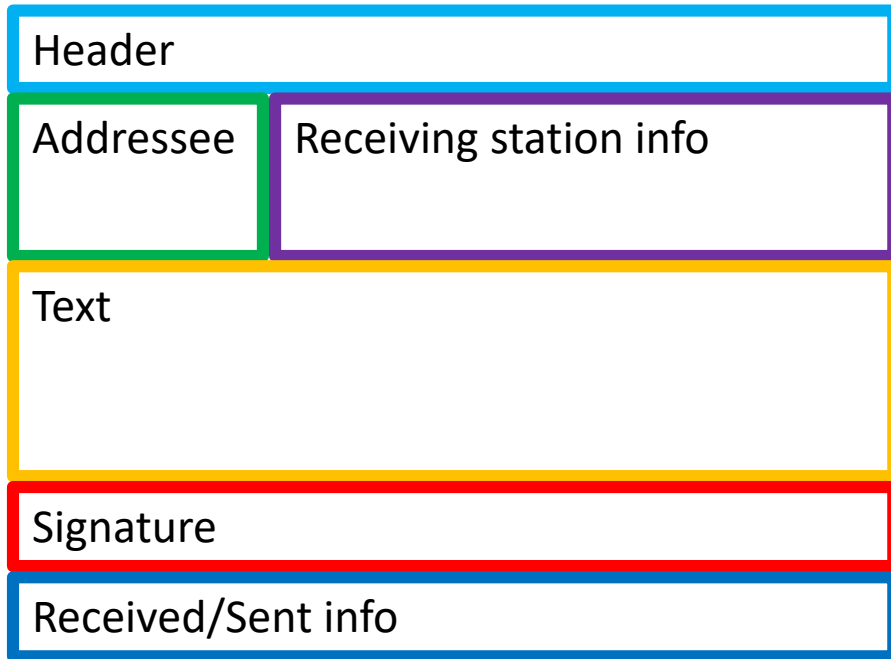
Great... seeing... you... yesterday... **INITIAL** x-ray... hope... to... get... together... again... soon... **FIGURES** seven three. **BREAK**

Some more prosigns

Prosigns	Meaning
Initial(s) or Letter Group	Indicates you are about to give initials
Break	Used twice while moving traffic – the second use indicates the end of the text
Other prosigns you may hear...	
Say Again	If a receiving station missed something, they will ask you to repeat that information.
Word before/after	“Please say again word before yesterday” / “Please say again word after again”
All before/after/between	“Please say again all before yesterday” / “Please say again all after again”
Affirmative/Negative	Yes/No
Correction	Corrects an error you just said: “East... CORRECTION... Southeast”

Great... seeing... you... yesterday... **INITIAL** x-ray... hope... to... get... together...
again... soon... **FIGURES** seven three. **BREAK**

ARRL radiogram components



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RADIOGRAM

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE
TO			THIS RADIO MESSAGE WAS RECEIVED AT				
PHONE NUMBER			AMATEUR STATION _____ PHONE _____				
E-MAIL			NAME _____ E-MAIL _____				
			STREET _____				
			CITY, STATE, ZIP _____				
<div style="border: 2px solid yellow; padding: 5px;"> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div>							
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Radiogram signature

FROM	DATE	TIME	TO	DATE	TIME
------	------	------	----	------	------

Directly below the text section, and above the received/sent info

Yes, it is not labeled

Generally a first name and callsign

AARON K8AMH

How to say the signature on the air

AARON K8AMH

SIGNED AARON AMATEUR CALL KILO EIGHT ALPHA MIKE HOTEL

END NUMBER 312, **NO MORE**, HOW COPY

More prosigns

AARON K8AMH

SIGNED AARON AMATEUR CALL KILO EIGHT ALPHA MIKE HOTEL

END NUMBER 312, **NO MORE**, HOW COPY

Prosign	Meaning
End / End Book	This is the end of the traffic/book
No more/One more/Two more...	You may move more than one piece of traffic to someone. If you have more to move, this tells them how many you have left.
How copy?	Did you copy it successfully?
Roger	You copied everything successfully: "I roger your number 312, thanks for the traffic!"

Signature OP NOTE

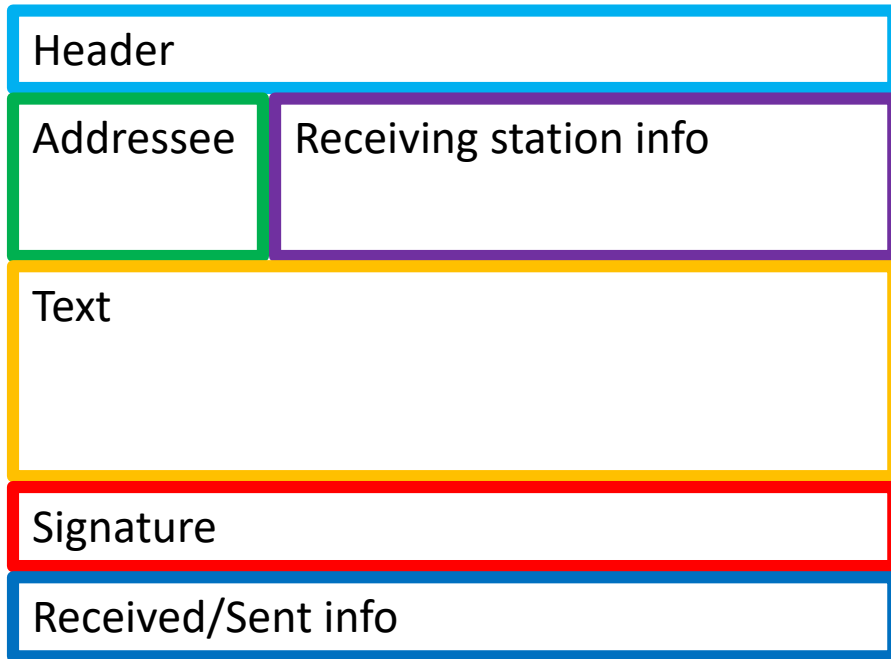




There's an option to include an operator note (OP NOTE) after the signature information

This relates to replies and/or servicing matters

For example, "AARON K8AMH OP NOTE REPLY OR SERVICE TO KE5YTA"

ARRL radiogram components




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			CITY, STATE, ZIP _____				
<div style="border: 1px solid black; padding: 5px;"> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> </div>							
FROM _____ DATE _____ TIME _____				TO _____ DATE _____ TIME _____			
REC'D				SENT			

whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio may be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.

magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.

1320 2/11

Radiogram received/sent info

FROM	DATE	TIME	TO	DATE	TIME
REC'D			SENT KE5YTA DFW LATE	JAN16	04:40

Indicates when and from whom you received traffic from or sent it to

Use the 24-hour time format, ideally UTC

If not UTC, then indicate the time zone, such as 21:00 CST

Let's say I sent it to KE5YTA for relaying, on January 16 04:40 UTC

I personally like to track what net I was on, but there is no hard requirement

Here is how our completed radiogram looks

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED
312	R		K8AMH	12	DALLAS TX		JAN 15
TO JANE DOE AR1T 123 85TH ST SE SOMETOWN WI 00121 PHONE NUMBER 330 555 4424 EMAIL				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION _____ PHONE _____ NAME _____ EMAIL _____ STREET _____ CITY, STATE, ZIP _____			
GREAT	SEEING	YOU	YESTERDAY	X			
HOPE	TO	GET	TOGETHER	AGAIN			
SOON	73						
AARON K8AMH							
FROM	NET	DATE	TIME	TO	NET	DATE	TIME
REC'D				SENT	KE5YTA	DFW LATE	JAN16 04:40
This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org .				The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.			

What if we have the same message to several people?

This is called **book traffic**

Only the message number and the addressee info change

Your sent/receive times will change, but this is for your records

All other information is the same

ARRL — the national association for Amateur Radio™									
ARRL				ARRL					
RADIOGRAM									
NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED		
312	R		K8AMH	12	DALLAS TX		JAN 15		
TO JANE DOE AR1T 123 85TH ST SE SOMETOWN WI 00121 PHONE NUMBER 330 555 4424				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION _____ PHONE _____ NAME _____ EMAIL _____ STREET _____ CITY, STATE, ZIP _____					
EMAIL									
GREAT		SEEING		YOU		YESTERDAY		X	
HOPE		TO		GET		TOGETHER		AGAIN	
SOON		73							
AARON K8AMH									
FROM	NET	DATE	TIME	TO	NET	DATE	TIME		
REC'D				SENT	KE5YTA	DFW LATE JAN16	04:40		
<small>This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.</small>				<small>The ARRL is the national association for Amateur Radio and the publisher of QST magazine. The ARRL has organized the National Traffic System for daily nationwide message handling.</small>					



ARL numbered radiograms

Example radiogram

ARRL — the national association for Amateur Radio™							
RADIOGRAM							
NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED
287	R	E	N1IQI	ARL 23	PEMBROKE MA		FEB 21
TO <div style="margin-left: 20px;">Name</div> PHONE NUMBER EMAIL Phone				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION <u>K8AMH</u> PHONE <u>469 630 2528</u> NAME <u>AARON HULETT</u> EMAIL <u>K8AMH@ARRL.NET</u> STREET <u>PO BOX 1864</u> CITY, STATE, ZIP <u>COPPELL TX 75019</u>			
<u>ARL</u>	<u>FIFTY</u>	<u>SIX</u>	<u>NEW</u>	<u>AMATEUR</u>			
<u>RADIO</u>	<u>LICENSE</u>	<u>X</u>	<u>WELCOME</u>	<u>TO</u>			
<u>THE</u>	<u>HOBBY</u>	<u>X</u>	<u>ENJOY</u>	<u>THE</u>			
<u>FUN</u>	<u>AND</u>	<u>FRIENDSHIPS</u>	<u>YOU</u>	<u>WILL</u>			
<u>MAKE</u>	<u>X</u>	<u>73</u>					
LOREN N1IQI							
FROM	NET	DATE	TIME	TO	NET	DATE	TIME
REC'D <u>KF5IOU</u>	<u>DFW EARLY</u>	<u>MAR 01</u>	<u>0047</u>	SENT			
This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org .				The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.			

ARL shorthands

Provide a way to send common messages quickly

When delivering a message using an ARL shorthand, we read the full text rather than the ARL number

In the check, we indicate the use of one or more ARL shorthands in the check

Check 12 becomes ARL 12

Common ARL shorthands

ARL	Meaning
FORTY SEVEN	Reference your message number _____ to _____ delivered on _____ at _____ UTC.
FIFTY	Greetings by Amateur Radio.
FIFTY SIX	Congratulations on your _____, a most worthy and deserved achievement.
SIXTY ONE	Wishing you a very Merry Christmas and a Happy New Year.
SIXTY SEVEN	Your message number _____ undeliverable because of _____. Please advise.

Converting ARL shorthand to full text

Congratulations on your NEW AMATEUR RADIO LICENSE, a most worthy and deserved achievement.

PHONE NUMBER	NAME <u>LOREN N1IQI</u> EMAIL <u>LOREN@ARRL.NET</u>			
EMAIL	STREET <u>PO BOX 1664</u>			
	CITY, STATE, ZIP <u>COPPELL TX 75019</u>			
<u>ARL</u>	<u>FIFTY</u>	<u>SIX</u>	<u>NEW</u>	<u>AMATEUR</u>
<u>RADIO</u>	<u>LICENSE</u>	<u>X</u>	<u>WELCOME</u>	<u>TO</u>
<u>THE</u>	<u>HOBBY</u>	<u>X</u>	<u>ENJOY</u>	<u>THE</u>
<u>FUN</u>	<u>AND</u>	<u>FRIENDSHIPS</u>	<u>YOU</u>	<u>WILL</u>
<u>MAKE</u>	<u>X</u>	<u>73</u>		
LOREN N1IQI				
FROM	NET	DATE	TIME	TO
REC'D <u>KF5IOU</u>	<u>DFW EARLY</u>	<u>MAR 01</u>	<u>0047</u>	SENT
<small>This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.</small>			<small>The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.</small>	

Reading ARL shorthand on the air

Spell out the ARL numbers

They are written out, rather than using digits

INITIALS ALPHA ROMEO LIMA... FIFTY I SPELL FOXTROT INDIA FOXTROT TANGO YANKEE...

PHONE NUMBER		NAME <u>LOREN N1IQI</u>		EMAIL <u>LOREN@ARRL.NET</u>			
EMAIL		STREET <u>PO BOX 1864</u>		CITY, STATE, ZIP <u>COPPELL TX 75019</u>			
Phone							
<u>ARL</u>	<u>FIFTY</u>	<u>SIX</u>	<u>NEW</u>	<u>AMATEUR</u>			
<u>RADIO</u>	<u>LICENSE</u>	<u>X</u>	<u>WELCOME</u>	<u>TO</u>			
<u>THE</u>	<u>HOBBY</u>	<u>X</u>	<u>ENJOY</u>	<u>THE</u>			
<u>FUN</u>	<u>AND</u>	<u>FRIENDSHIPS</u>	<u>YOU</u>	<u>WILL</u>			
<u>MAKE</u>	<u>X</u>	<u>73</u>					
LOREN N1IQI							
FROM	NET	DATE	TIME	TO	NET	DATE	TIME
REC'D	KF5IOU	DFW EARLY	MAR 01	0047	SENT		
<small>This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.</small>				<small>The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.</small>			

Original

NAVAL COMMUNICATIONS

Heading NPC NR 63 F L Z F5L 071830 C8Q TART 0 BT

From: CINC PAC

Date 7 DEC 41

To: ALL SHIPS PRESENT AT HAWAII AREA.

Info: - U R G E N T -

DEFERRED unless otherwise checked

ROUTINE

PRIORITY

AIRMAIL



MAILGRAM

AIRRAID ON REARLHARBOR X THIS IS NO DRILL



Additional radiogram examples

07014

Radiogram example

 ARRL — the national association for Amateur Radio™ 									
RADIOGRAM									
NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED		
209	R		DL4FN	ARL 21	ERBACH DEU		FEB 2		
TO Name _____ PHONE NUMBER _____ Phone _____ EMAIL _____				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION <u>K8AMH</u> PHONE <u>469 630 2528</u> NAME <u>AARON HULETT</u> EMAIL <u>K8AMH@ARRL.NET</u> STREET <u>PO BOX 1664</u> CITY, STATE, ZIP <u>COPPELL TX 75019</u>					
<u>ARL</u>		<u>FIFTY</u>		<u>JOHN</u>		<u>AND</u>		<u>CONGRATS</u>	
<u>ON</u>		<u>NEW</u>		<u>AMATEUR</u>		<u>RADIO</u>		<u>LICENSE</u>	
<u>XRAY</u>		<u>ENJOY</u>		<u>ALL</u>		<u>THAT</u>		<u>THE</u>	
<u>RADIO</u>		<u>COMMUNITY</u>		<u>OFFERS</u>		<u>XRAY</u>		<u>BEST</u>	
<u>REGARDS</u>									
<u>PETER DL4FN OPNOTE REPLY OR SERVICE MESSAGE TO DL4FN VIA KE5YTA RICHARDSON TX 75080</u>									
FROM	NET	DATE	TIME	TO	NET	DATE	TIME		
REC'D KE5YTA	DFW EARLY	FEB 04	0045 UTC	SENT					
<small>This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.</small>					<small>The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.</small>				

Radiogram example

 ARRL — the national association for Amateur Radio™ 									
RADIOGRAM									
NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED		
748	R		DL4FN	23	ERBACH DEU		MAR 2		
TO Name _____ PHONE NUMBER Phone _____ EMAIL _____				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION <u>K8AMH</u> PHONE <u>469 630 2528</u> NAME <u>AARON HULETT</u> EMAIL <u>K8AMH@ARRL.NET</u> STREET <u>PO BOX 1664</u> CITY, STATE, ZIP <u>COPPELL TX 75019</u>					
HELLO		GARY		X		CONGRATS		ON	
YOUR		NEW		AMATEUR		RADIO		LICENSE	
X		ASK		DELIVERING		HAM		FOR	
MORE		INFO		ABOUT		THIS		MESSAGE	
X		BEST		WISHES					
PETER DL4FN OP NOTE REPLY OR SERVICE MESSAGE TO DL4FN VIA KE5YTA									
FROM	NET	DATE	TIME	TO	NET	DATE	TIME		
REC'D	KF5IOU	DFW EARLY	MAR13	2353	SENT				
<small>This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org.</small>					<small>The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.</small>				



Hands-on practice: fill out some radiograms

Radiogram hands-on

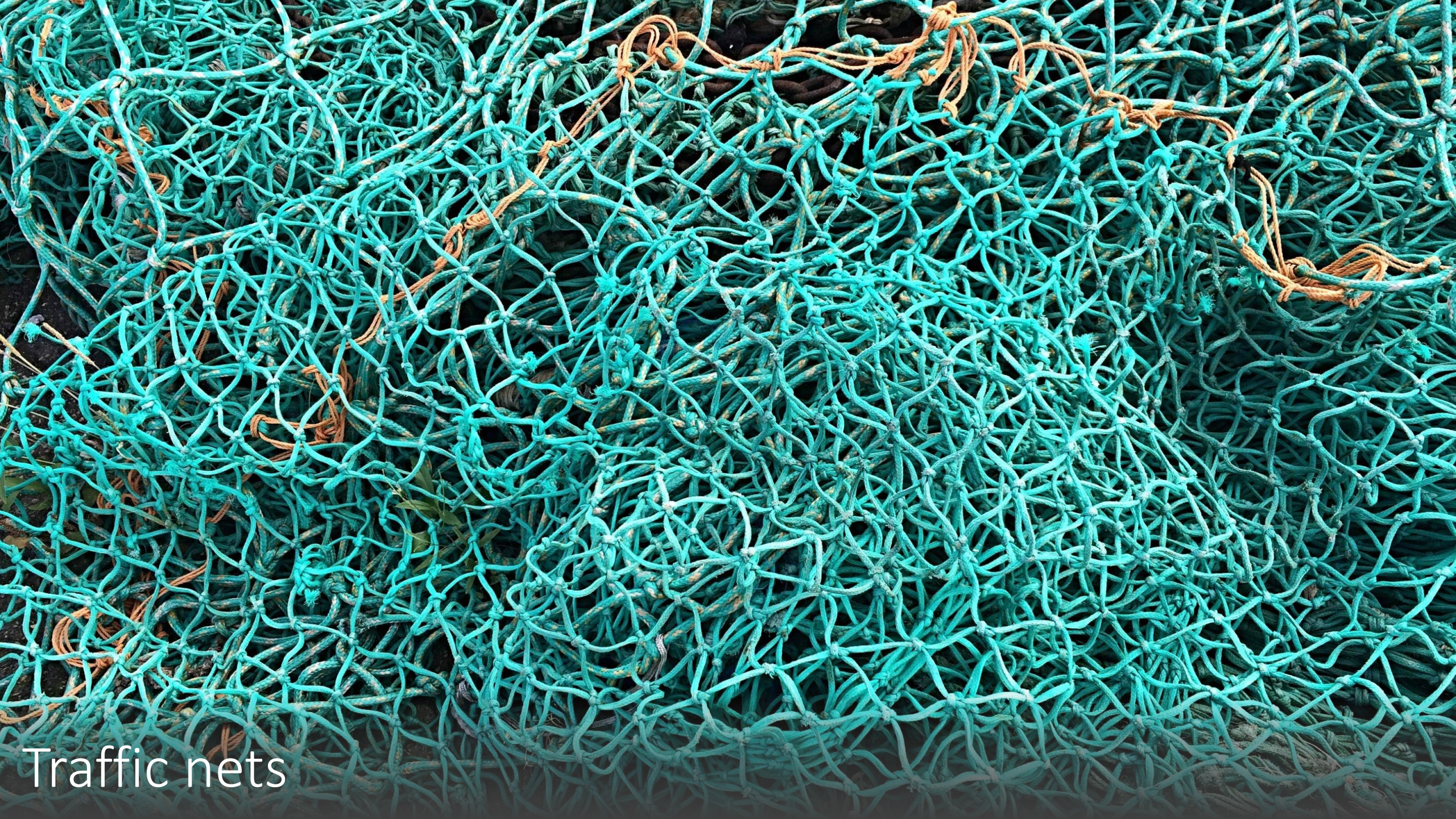
Let's all try one together

Send a message from you to me (Aaron Hulett K8AMH, PO Box 479, Little Elm TX 75068, 469-630-2528) saying:

Hope to hear you on the bands soon 73

Radiogram hands-on

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN (YOURCALLSIGN)	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED (TODAY)
1	R			9			
TO AARON HULETT K8AMH PO BOX 479 LITTLE ELM TX 75068 PHONE NUMBER 469 630 2528 EMAIL				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION _____ PHONE _____ NAME _____ EMAIL _____ STREET _____ CITY, STATE, ZIP _____			
HOPE	TO	HEAR	YOU	ON			
THE	BANDS	SOON	73				
(YOURNAME) (YOURCALLSIGN)							
FROM	NET	DATE	TIME	TO	NET	DATE	TIME
REC'D				SENT			
This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org .				The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.			



Traffic nets

Net format

Preamble

- Welcome to the net
- How it's going to run

Check-ins

- With traffic
- Without traffic

Relaying

- Two stations will work together to relay the radiogram towards its destination

Net control is the traffic director

Callsign	Name	Location	Liaison	Traffic
K8AMH	Aaron Hulett	Dallas	Denton ARES	No traffic
W7KYG	Calvin Luck	Fort Worth		Bowie TX
W9VE	Don Murray	Dallas	TEX	No traffic
KE5YTA	Roger Elkinton	Richardson	DIGITAL	Book of 5: 2 to Dallas, Plano, Prosper, Melissa
KF5IOU	John Hazelton	Dallas	DIGITAL	Book of 3: North Richland Hills, Krum, Corinth; 1 to Burleson
KG5NNA	Korky Kathman	Coppell		Net report

The net control station will route traffic based on who checks in

Their locations

What other traffic nets they work

Moving traffic

Net control: Station 1, please call Station 2 and pick up one message to somewhere

Station 1: Station 2, this is Station 1, ready to copy

Station 2: Station 1, this is Station 2, thank you and please copy number...

(After finishing the header) BREAK

Station 1: (Please say again / Please spell / ...) GO

Moving traffic

Station 2: *Reads the text section...* BREAK

Station 1: (Please say again / Please spell / ...) GO

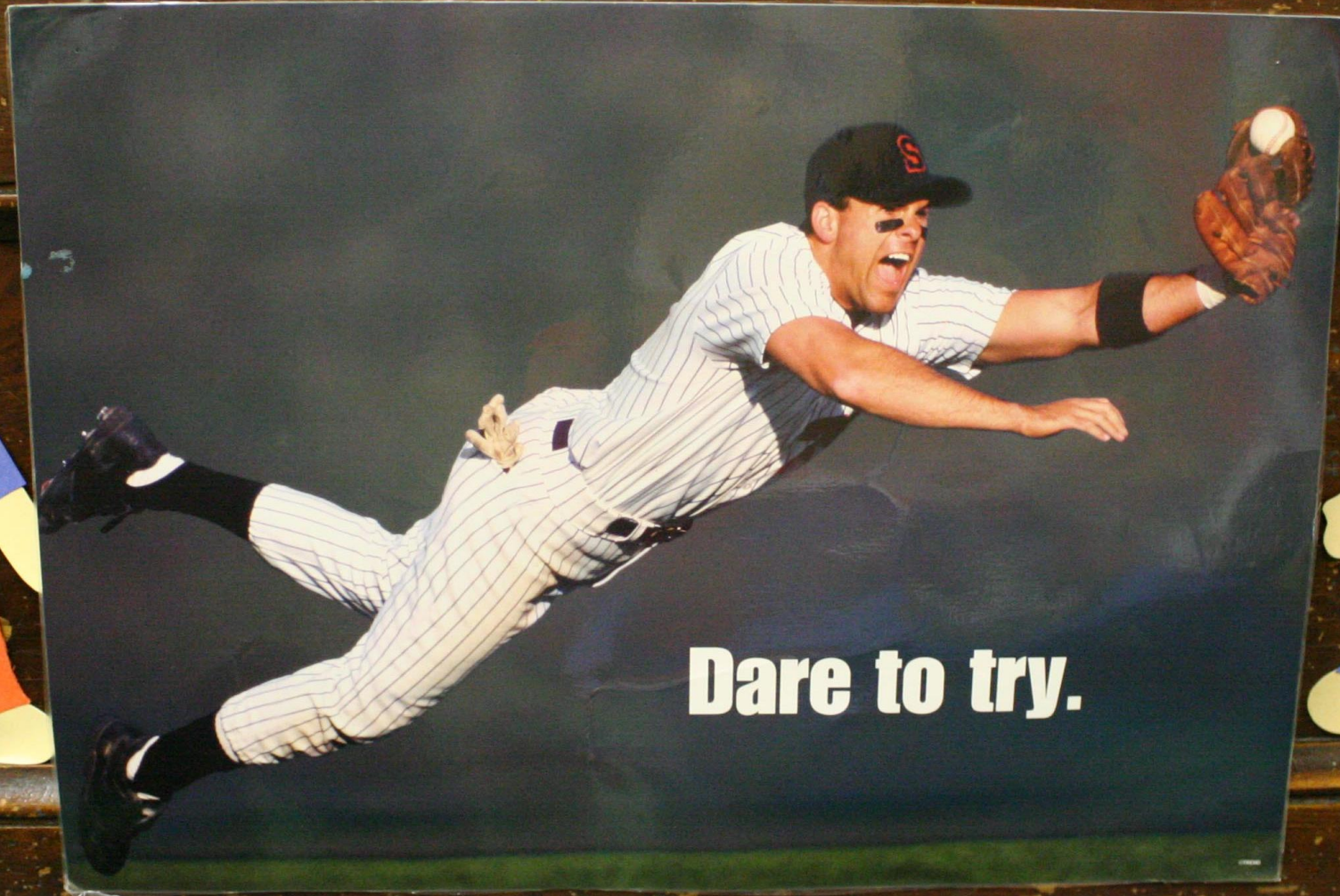
Station 2: Signed ... END number ###, no more, how copy?

Station 1: I roger your number ###, thanks for the traffic, <callsign>

Station 2: Thank you for taking it. <callsign> back to net

Moving our completed radiogram from earlier

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED
312	R		K8AMH	12	DALLAS TX		JAN 15
TO JANE DOE AR1T 123 85TH ST SE SOMETOWN WI 00121 PHONE NUMBER 330 555 4424 EMAIL				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION _____ PHONE _____ NAME _____ EMAIL _____ STREET _____ CITY, STATE, ZIP _____			
GREAT	SEEING	YOU	YESTERDAY	X			
HOPE	TO	GET	TOGETHER	AGAIN			
SOON	73						
AARON K8AMH							
FROM	NET	DATE	TIME	TO	NET	DATE	TIME
REC'D				SENT	KE5YTA	DFW LATE	JAN16 04:40
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Hands-on practice: moving traffic

Moving traffic hands-on

Everyone prepare to copy a message

I need one volunteer to act as my receiving station

Moving traffic hands-on

NUMBER	PRECEDENCE	HX	STATION OF ORIGIN	CHECK	PLACE OF ORIGIN	TIME FILED	DATE FILED
404	R		K8AMH	16	DALLAS TX		JAN 29
TO SESSION ATTENDEES PHONE NUMBER EMAIL				THIS RADIO MESSAGE WAS RECEIVED AT AMATEUR STATION _____ PHONE _____ NAME _____ EMAIL _____ STREET _____ CITY, STATE, ZIP _____			
THANK	YOU	FOR	ATTENDING	THIS			
TALK	TODAY	X	HOPE	TO			
RECEIVE	TRAFFIC	FROM	YOU	SOON			
73							
AARON K8AMH							
FROM	NET	DATE	TIME	TO	NET	DATE	TIME
REC'D				SENT			
This message was handled at no charge by a licensed Amateur Radio operator, whose address is shown in the box at right above. No compensation can be accepted by a "ham" operator. A return message may be filed with the "ham" delivering this message to you. Further information on Amateur Radio can be obtained from ARRL Headquarters, 225 Main Street, Newington, CT 06111 or www.arrl.org .				The ARRL is the national association for Amateur Radio and the publisher of QST magazine. One of its functions is promotion of public service communication among Amateur Radio operators. To that end, the ARRL has organized the National Traffic System for daily nationwide message handling.			

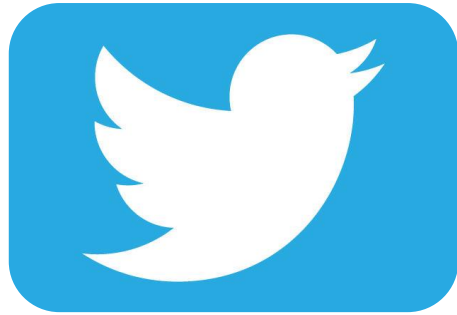


Questions

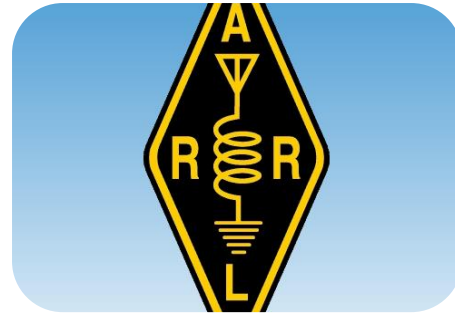
For more information



[/groups/ARRLNTX](#)



[@arrlntx](#)



[arrlntx.org](#)



[k8amh.com](#)



[k8amh@arrl.org](#)