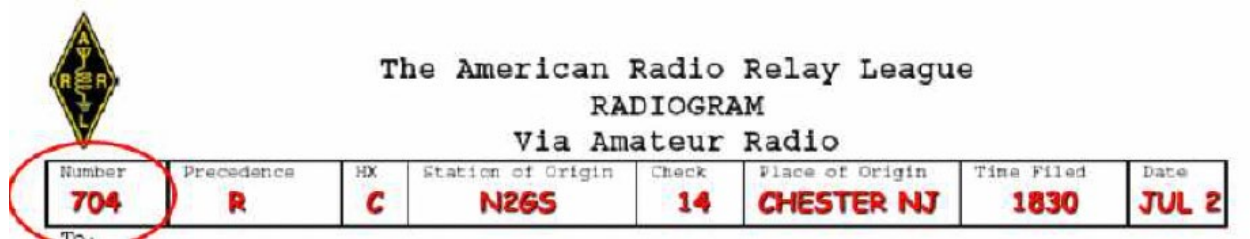# Radiogram Tutorial

This tutorial was developed by Dave Sheppard – W2PAX. It provides an overview and instructions on the various parts of the radiogram format, section by section.

Radiograms have four sections: the preamble, the addressee, the text, and the signature.

(NOTE: The "Received", "Sent", and "Received At" sections of the radiogram form are not addressed in this tutorial. These sections are for individual tracking and delivery purposes.)

The Preamble – Sometimes this section is referred to as the "header"; this snapshot of a radiogram preamble will help you follow along.

The Preamble always starts with the **Message Number**. Every radiogram must have a number as a way to track it. Message numbers can be anything you want them to be, except that you may <u>not</u> use leading zeroes or letters. The number should be something that makes sense to you so you can easily keep records of what you do. Message numbers should always be transmitted by digit (e.g., Seven Zero Four) and a zero should always be transmitted as "zero", not as "oh".

The next item is the **Precedence**. There are four radiogram precedence levels: Emergency, Priority, Welfare, and Routine. The latter three are written in the radiogram with their respective letter (e.g., "R" for Routine). "Emergency" precedence is always written out. Regardless of the type, when transmitting on the air, the precedence word is always spoken. In other words, "R" is written, but "Routine" should be said. Emergency and Priority traffic is rarely handled in the modern traffic system, as more efficient modes have taken hold. Routine and Welfare traffic are most common. Remember that Welfare traffic should only be handled into and out of declared disaster areas, and Routine traffic to active disaster areas should be avoided while short term recovery occurs.

Next is the **Handling Instructions**, or "HX" in the preamble. This is the only section where the section title is spoken during transmission. In the example above, it would be transmitted correctly as "Hotel Xray Charlie". There are ten handling instruction options for the radiogram, although only five are commonly used in the modern traffic system. Charlie (C) tells the delivering station that you want a "delivery receipt" radiogram sent back to you. Delta (D) tells each station that handles your radiogram along its journey to report back to you the time and date they handled your radiogram. Echo (E) tells the delivering station to get a reply from the addressee, and send that reply back to you. Foxtrot (F) requires a number after it (e.g., F14, or "Foxtrot One Four") – it tells the delivering station to not deliver the message before that date (this is a great HX for birthday radiograms). Golf (G) tells the delivering station that if there is any cost involved to deliver your message (e.g., postage, long distance charge, etc.) to cancel the message, and send you back a service message letting you know that occurred.
The complete list of handling instructions can be found at the end of this document.

The **Station of Origin** is simple: it is the callsign of whomever puts the message into the traffic system.

The **Check** is also simple: it is the word count in the text of the message. The check is used just for that reason: to "check" against the text you received to make sure your word count matches. Remember, accuracy is a cornerstone of the radiogram. Note that radiogram forms have five words per line, so it is easy to count them during transmission.

The **Place of Origin** is where the radiogram was written (city and state). If you are creating the radiogram, then it would be where you are. However, if your non-amateur sister in Fort Myers calls you on the phone in Naples and gives you a message to send by radiogram, then the place of origin would be...Naples or Fort Myers? Answer: Fort Myers FL. Why? Because the message was from your sister and she is in Fort Myers. During transmission, say "Fort Myers Florida."

In the graphic example above, it is written correctly, but the proper voicing would be "Chester New Jersey."

Time Filed should only be used for messages that are truly time sensitive. This is rarely used. As an aside, the radiogram format always assumes that time and date are UTC (a/k/a Zulu). Anything else should be qualified, such as L for local (e.g., "1830L", or One Eight Three Zero Lima).

Date should be written using the accepted three-letter month abbreviation and the numerical day. Year is never used! The date should always be transmitted saying the month and digits (September One Two).

So how do you put all this together? Using the example above, the properly transmitted preamble would be:
"Please copy message number Seven Zero Four, Routine, Hotel Xray Charlie, November Two Golf Sierra, One Four, Chester, New Jersey, One Eight Three Zero, July Two."

One final reminder: how long did it take you to write all that? That's the speed you need to say it when you transmit it. Remember, the person on the other end is writing it as you are saying it.

The Address (To) Field – While this may seem very simple, it is an area where many procedural words ("Pro-words") come into play. We will address several of the most common scenarios. Most importantly, a radiogram must have a name, city, state, and zip code to be accepted into the system at all. Without this bare minimum of information, there simply isn't enough to get the message started moving. Names should generally be given however they are most likely to be found in a phone look-up.

Obviously, the more information you can provide, the more likely the message is to make it to its destination. If a recipient has an amateur callsign, that should always be provided, and is transmitted after the person's name. Other components such as street address, phone number, and an email address should also be provided whenever possible.

The example below is a correctly formatted radiogram addressee:

DAVE SHEPPARD W2PAX
591 18TH STREET NORTHEAST
NAPLES FL 34120
239 250 0282
W2PAX ATSIGN ARRL DOT NET
OP NOTE DELIVER VIA SWFTN

Let's talk about some specifics above. While the postal service would abbreviate "NORTHEAST" to "NE", the radiogram format should spell out directions. The letters are not used. (Note: there are instances where the rules allow for direction initials, but not for the purposes of this article.) Streets, lanes, avenues, etc., can be abbreviated using the standard postal abbreviation or spelled out, but they need to be transmitted as "street" "lane" "boulevard", no matter how they are written. I do not encourage sending "Sierra Tango" as a "street" abbreviation.

States should be written using the standard two letter postal code, but said in their entirety when transmitted.

Email addresses become interesting as any punctuation contained in them needs to be spelled out (see example above). Why? Punctuation is not permitted in the radiogram format.

Finally, an operator's note ("op note") regarding delivery instructions can be included here. Op notes are sometimes thought to only be placed after the signature, but this is not the case. Op notes regarding delivery instructions should be given at the end of the addressee before the break for text. Op notes regarding reply instructions should be given after the signature.

Once again, let's pull all this together, and properly send the example above. Pro-words are shown in italics. The commas are typed to indicate a logical pause in speech – they are not actually transmitted.

"Going to Dave Sheppard, *amateur call* whiskey-two-papa-alpha-xray
***Figures* five-niner-one, *mixed group* one-eight-tango-hotel street, *direction* northeast, Naples Florida, *figures* three-four-one-two-zero**
***Phone figures* two-three-niner, two-five-zero, zero-two-eight-two**
Email *amateur call* whiskey-two-papa-alpha-xray at sign arrl dot net
Op note deliver via *initials* sierra-whiskey-foxtrot-tango-november."

"Break for Text"

Please take note of the use of multiple pro-words: "amateur call", "figures", "mixed group", "direction", and "initials". These are all used to give the receiving station a "hint" of what they are about to receive. The break at the end of the Address Field allows the message handler to "Roger" the information sent so far, or to ask you to fill in anything missed, before proceeding to the text.

Text Field – Now for the text of the message. In theory, a station should be able to convey in a Radiogram (hereafter we will use RG for short) almost any information one could imagine. In practice, several guidelines need consideration to fit the content into the proper format.

For this exercise, let's consider two examples, one as an ARL numbered radiogram and one as an ordinary RG, which we will address first.

When composing text for RGs, never use contractions, such as "isn't" or "could've." There is no authorized punctuation in the NTS (National Traffic System) for the apostrophe, so you would have to say, "it is," or "could have." Other contractions such as possessives would need their own necessary rewording.

Radiogram Tutorial

Another point is to avoid overly complex words or phrases. Rather than to say a reference was "incomprehensible," it is better to say it was "unclear." Remember, a receiving station must write incoming messages quickly, and not always under ideal conditions, so brevity and clarity are key when composing messages.

Still another point to remember is the proper use of the <u>Xray</u> character in your text. Xray is NOT a period! It is used to separate complete thoughts from each other. It is standard and expected NTS practice that RGs are not ended with an Xray, because your final thought needs no separation from the "BREAK for signature."

Now let's try an exercise. Suppose you would like to develop an ordinary RG with the following thoughts, "Can't wait 'til you're here in MO. Please rendezvous with us at the deli at 6pm our time on the 27th. Best Wishes".   Using the guidelines above, your RG text may look like this:

**I CAN NOT WAIT UNTIL
YOU ARE HERE IN MISSOURI
X PLEASE MEET WITH US
AT THE DELI AT 1800L
ON NOVEMBER 27 X 73**

This RG with a Check figure of 25 would be read as follows, (with pro-words in italics):
"I can not wait until you are here in Missouri *initial* Xray please meet with us at the deli at *mixed group* one eight zero zero Lima on November *figures* two seven *initial* Xray *figures* seven three." At this point you would "BREAK for signature", give the signature name and callsign (if available,) and any Op Notes as needed. The content of your RG is now complete.

Now let's look at an ARL numbered RG, specifically my favorite, ARL Forty Six, the Birthday RG.

Suppose a station wants to send a birthday greeting to another station. The Birthday RG template on our FMARC.NET/SWFTN website can be used. The entire text of this RG template is:

ARL FORTY SIX X 73

This would be read as follows: **"*Letter group* Alpha Romeo Lima FORTY, I spell foxtrot-oscar-romeo-tango-yankee, SIX, I spell sierra-india-xray, *Initial* Xray, *Figures* seven three"**

Let's break this down. *"Letter group* Alpha Romeo Lima". *Letter group* is the pro-word phrase indicating the next field will contain letters, in this case ARL.

*"*FORTY, I spell foxtrot-oscar-romeo-tango-yankee". We always spell out the numeric portion of an ARL numbered RG phonetically. This is in keeping with established NTS guidelines.

"Initial Xray *Figures* seven three" (<u>not</u> *Figures* Seventy Three). *Initial* is the pro-word indicating the next field is a single letter, in this case an X, which designates the end of a thought. *Figures* is the pro-word indicating the next field contains numbers.

The last consideration for ARL numbered RGs is that the "Check" field in the preamble is prefaced with ARL to indicate the RG contains an ARL designated code. In our example, the check would be "ARL 5".

The complete list of ARL numbered radiogram texts can be found at <u>Numbered Texts – NTS 2.0</u>.

Radiogram Tutorial

We have talked about the preamble, the addressee, and the text. The final part is the signature and any operator notes ("op note") with regard to replying to the message.

Signature – You have come to the end of sending the text of your message. The next step is to say "break for signature". Unlike the break that precedes the text, you do not stop or unkey at the "break for signature". Simply saying it lets the receiving station know that the text has ended and they can expect the signature next.

Give the signature. Typically if the originating station is signing the radiogram, they would use their first name and callsign. Remember that callsigns should be given phonetically and prefaced with the pro-word "amateur call". If you are originating a message for a civilian, then the signature should be <u>their</u> name, and should be first and last name for clarity.

Any information about an individual can be part of a radiogram signature: name, callsign, address, email address, title, served agency name, etc. Closing salutations such as "regards" or "love" should not be part of the signature – they should be in the text. Remember to be mindful that the more information you attempt to include, the longer it will take to transmit and the more chance there is for error. Radiograms should always be as clear and concise as possible.

Op notes following the signature should be information about how to reply to the message. Examples would be an address, phone number, email address, or traffic net through which the originator can be reached.

An example of signature procedure would be as follows: *"Break for signature, Dave, amateur call Whiskey Two Papa Alpha Xray, with an op note, reply via Southwest Florida Traffic Net."*
As always, remember to say everything at <u>writing</u> speed – the receiving station is writing this down as you are saying it.

Once you have reached the end of your signature (and op note if applicable), you have reached the end of your radiogram, and you need to indicate this to the receiving station. You do this by saying, *"end of message, no more."* If you have additional traffic (messages) to pass, you would replace "no" with the quantity of remaining messages. ("End of message" may be shortened to just "end" – this is acceptable within the NTS voicing procedures.)

We hope this tutorial will help your skills, and encourage you to bring traffic to our net.

73
Dave Sheppard W2PAX SWFTN Manager
Rich Schnieders SWFTN Asst. Manager

Additional Sources:
The ARRL Message Format https://www.arrl.org/files/file/Public%20Service/MPG104A.pdf
ARL Numbered Radiograms https://nts2.arrl.org/numbered-texts/
ARRL Handling Instructions https://nts2.arrl.org/hx-handling-instructions/
ARRL Precedence https://www.arrl.org/chapter-six-arrl-precedences-and-handling-instructions

Please feel free to contact swftn@fmarc.net for help with the Radiogram format.