



## What is the National Traffic System (NTS)?

The NTS is a field organization of the American Radio Relay League (ARRL®), the National Association for Amateur Radio™. ARRL was formed in 1914 to pass written personal messages around the United States, although its mission has expanded greatly over the years.

Messages are sent in the standard ARRL Radiogram format, and relayed from Amateur Radio operator to another through a series of formal networks. The message is ultimately delivered to the addressee in about 24 to 36 hours by an NTS operator who lives fairly close to the recipient, either by telephone, mail, or hand delivery (uncommon).

The NTS operates every day and is used by thousands of people to send and receive short messages of a personal, non-commercial nature, such as birthday greetings, congratulations on a special event, or wishes for a speedy recovery. It's also used by the ARRL Field Organization to send reports and operational messages. Subject to international treaties governing "third party" messages, many foreign countries also allow their hams to exchange radiograms with US hams.

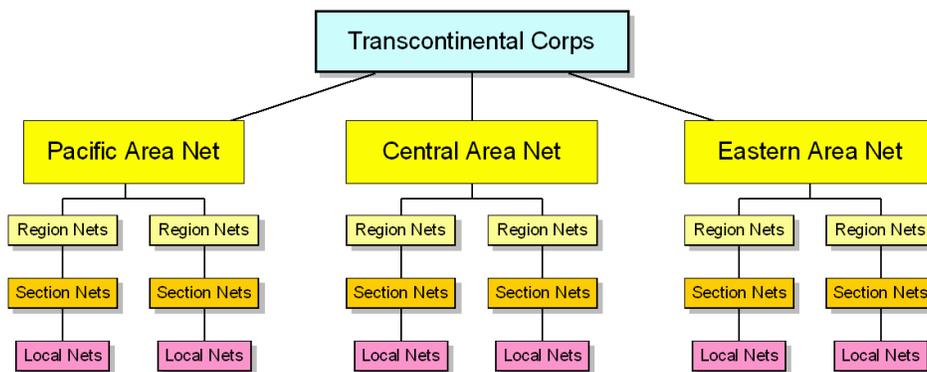
Messages can originate with either hams or non-hams. Non-hams who would like to send a radiogram should contact a ham friend or neighbor. There is no charge for a Radiogram. Radiograms are one way hams serve the public, and are welcomed as a way to train new traffic handlers and keep the experienced handlers in practice. Additional information on NTS <http://www.arrl.org/nts>

During disasters or other emergencies, radiograms are used to send critical life safety and agency messages, and "health and welfare" information from disaster victims to friends and family. During these times, the NTS works in concert with the ARRL's [Amateur Radio Emergency Service \(ARES®\)](#) and other emergency and disaster relief organizations, such as the American Red Cross and The Salvation Army. Networks are often accelerated and expanded to accommodate the needs.

## How are NTS Messages Handled?

Messages are usually relayed using a system of manual "nets," (short for "networks.") NTS nets are on-the-air meetings of message handlers at an appointed time and a designated frequency. There are four levels of nets, each covering broader territory -- local, section, regional, and area. Local nets are usually on VHF, all others are on HF frequencies. Local nets relay messages to and from the Section nets; Section nets to the Region nets; Region nets to the Area nets. These nets are held throughout the day in order to move messages around the country. (Only designated operators participate in the Region and Area nets. These nets are not open for general participation.) Manual NTS nets operate in a variety of modes such as CW, voice and teletype.

### ARRL National Traffic System (Manual Nets)



While there are only three Area Nets, there are many more Region, Section and Local nets than we could show here due to space limitations.

## NTSD (Digital)

In addition to the traditional manual modes listed above, NTS operates a parallel high speed digital HF Pactor network. NTSD operators use 80, 40, 30, and 20 meter HF frequencies. Designated NTSD operators in each Region and Areas relay messages, either between Regions or to and from the Area stations. Designated Digital Relay Stations can also link NTSD directly to Section nets for speedy message transfer.

At the local level, packet networks may be used for collection and distribution, otherwise, traditional manual modes are used. NTS packet messages can be initiated and sent by any packet-capable operator. Messages for delivery are posted on an NTS Packet Bulletin Board System (PBBS). Messages come into the BBS from the NTSD HF network or from local packet networks in nearby sections or regions. In addition, any voice NTS messages that might not have been picked up on a voice net (see above) can be converted to digital and posted to an NTS PBBS. One of the big advantages of a PBBS is that it will hold messages for later pickup, perhaps by an NTS operator who wasn't able to join the regularly scheduled voice or CW net.

You can find more information about NTS Digital here: <http://nts-digital.net>

## How to get started as an NTS Message Handler

Any Amateur Radio licensee can become an NTS operator, although Technician Class licensees will likely be limited to local VHF nets. As a first step, read about general NTS system operations, standard net procedures, and the ARRL Radiogram message form (shown below).

Here are direct links to just some of the information at [www.arrl.org/public-service](http://www.arrl.org/public-service):

- ◆ [Chapter 1: National Traffic System \(NTS\)](#) from the [ARRL Public Service Communication Manual Sect. 2](#)
- ◆ [FSD-218 How to fill out a Radiogram, message precedences, CW Q-signals, more](#)
- ◆ [FSD-220 Operating Aid – Prosigns and prowords, phonetic alphabet, more](#)

Tune in to a local or Section level NTS net (check the [ARRL net directory](#)) and listen at least once to the entire net. This will give you a sense of how the NTS nets are conducted. A next step might be to practice copying the messages you hear being relayed onto blank Radiogram forms. (You would do this without checking in to the net.) The copying process will help you become familiar with the Radiogram form.

When you're ready, simply check in to any local net when the net control asks for check-ins. Be sure to mention that this is your first check-in to an NTS Net. You'll generally find other operators eager to help and very patient. Remember, your participation is always voluntary. Even if you check in, you don't need to handle any traffic if you don't feel ready.

NTS message handling skills are valuable in other Amateur Radio volunteer services, such as ARES and the Radio Amateur Civil Emergency Service (RACES), where messages are often originated and received.

The American Radio Relay League RADIOGRAM Via Amateur Radio							
Number	Precedence	HX	Station of Origin	Check	Place of Origin	Time Filed	Date
207	P	E	W1FN	10	LEBANON, NH	1200EST	JAN 4
To: MARK DOE RED CROSS DISASTER OFFICE 123 MAIN ST RUTLAND, VT 05701 Telephone Number: 802-555-1212				This Radio Message was received at: Amateur Station _____ Date _____ Name _____ Street Address _____ City, State, Zip _____			
NEED MORE COTS AND SANITATION KITS AT ALL FIVE SHELTERS				JOAN SMITH SHELTER MANAGER			
REC'D	From	Date	Time	SENT	To	Date	Time
A licensed Amateur Radio Operator, whose address is shown above, handled this message free of charge. As such messages are handled solely for the pleasure of operating, a "Ham" operator can accept no compensation. 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.				The American Radio Relay League, Inc. is the National Membership Society of licensed radio amateurs and the publisher of QST Magazine. One of its functions is promotion of public service communication among Amateur Operators. To that end, The League has organized the National Traffic System for daily nationwide message handling.			