

Washington County ARES/RACES

NTS Message Information

National Traffic System Methods and Practices Guidelines	Packet Traffic	Voice Traffic
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National Traffic System Methods and Practices Guidelines The Entire NTS-MPG manual in PDF

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INTRODUCTION

This document, *NTS Methods and Practices Guidelines (NTS MPG)*, is attached to the ARRL *Public Manual (PSCM)* as *Appendix B*, and is the working reference manual on Traffic Net and Message Handling for the NTS. It shall be the uniform reference standard for STMs, Section/Local NMs and Area Staff members.

The *NTS MPG* document is maintained by the Standing Committee of the three NTS Area Chairs, and other persons, under the *General Procedures* sections of the *NTS Terms of Reference (NTS TOR)*, attached as *Appendix A*.

This manual will be a working reference document---subject to change as Amateur Radio continuously improves how the tasks as presented are a reasonably accurate snapshot of current practices. They are indeed practices, and not strict rules, but the beginner and TCC net operators and management alike will find it beneficial to have a uniform protocol reference to be used by operators.

It is further hoped that the wisdom of the founders of the ARRL and its NTS with respect to fundamental operating practices, along with those preserved in tact in one collection of documentation as the NTS goes forward. Other essential references such as message Precise Handling Instructions, ARRL Numbered Radiograms, etc., are reproduced in this manual although available from ARRL in Newington, NH on the internet. You will need to update these from the ARRL primary source from time to time.

The ARRL NTS system operation is in accordance with the *PSCM* and *NTS TOR*. Such matters are left to those separate documents.

This manual deals with station and net operating practices and not with matters of net format or system management. Those issues are left to Section Managers, Section Traffic Managers, and Area Staffs, etc., as appropriate. This manual is not intended to infringe on their discretion with "job descriptions" imposed at any level.

Instructors may extract the information in the manual for use in their own training lesson plans provided full credit is given to the source. Simplified overview tutorial documents may be made available through ARRL Field and Educational Services from time to time, providing a proper introduction of the NTS to newcomers to Amateur Radio.

Requests for further information, explanations, or suggested additions should be submitted to your Net Manager for consideration may be forwarded via either STM's or Area/TCC staff to the appropriate Area Chair for periodic consideration by the NTS standing and practices.

FOREWORD

Handling communications for a third party has always been a technology and art form capturing the imagination of people through civilization. Such communications have played an important role in the development of the world as we know it. It is no surprise that it and flourished with the introduction of the telegraph and radio.

From smoke signals to semaphore, telegraph to email, the art form has adapted to the prevailing technology of the time. Over the getting the information from point A to point B may have changed, but the basic steps of creating the transmission-ready form for handling of it through the system, and the reception and delivery have remained essentially the same.

In Amateur Radio today we find many adaptations to the technology of the time and, in fact, are involved in developing new techniques. The basic underlying purpose and act of communicating for a third party, or for ourselves, is still fascinating and useful regardless of Voice, RTTY, PSK-31, packet, or WinLink gateways. The use of today's modes has expanded our abilities far beyond the time when a man would send his message on CW to order a new tube and seized upon the idea of having a system of scheduled and reliable nets to handle the traffic.

We began this Amateur Radio journey in an organized way in 1914 when the American Radio Relay League was founded, and it has developed and adapted over the years. Today the ARRL manages and operates the National Traffic System (NTS/NTSD) to assist in the structure to handle formal message traffic in the US. Many other countries participate in the system as permitted by treaty or convention. A variety of digital modes and structures are operating to assure the use of all Amateur Radio resources in the public service effort.

There is a large body of experience and literature available to guide amateur operators in using radio to establish contact. This experience is unique to Amateur Radio due to its flexibility and resourcefulness driven by personal interest and motivation. This manual will not cover where the specifics of radio operation are conducive to effective message transmission and reception.

The public and our served agencies appreciate our ability to send formal written message traffic efficiently and accurately. When handling, radio and net operating skills to provide professional service we earn their trust.

The process is simple, yet there are details to learn about how to make it all happen efficiently and with precision. We must interact, gather the information required to prepare the message in the proper format. We must be skilled at exchanging the message with others along, and be able to participate in and run organized nets to efficiently handle large amounts of message traffic. We must know how to address the addressee, and create a reply or a service message back to the originator when required.

The manual, therefore, will deal with the methods used by effective communicators in transmitting and copying message traffic with perception, format and protocols, net operating and net control, and managing the completion of the task through to delivery and Soliciting messages from the public and brief discussions of public service and disaster operations are also presented.

OBJECTIVES:

The primary objective of these methods and protocols is to facilitate transmission of a properly formatted written formal message that it arrives exactly as written on the original copy, group for group, character for character, space for space.

Messages filed in the NTS must be capable of being transmitted by any mode without message alteration being required.

Voice and CW nets must be run with methods and protocols to operate effectively and uniformly so that message traffic may be exchanged.

Stations operating in the NTS have the responsibility to promptly relay messages along, deliver messages in a timely fashion, or return messages back to the originator. Stations must honor this responsibility.

Stations operating in the NTS interface directly with the public and served agencies representing all of Amateur Radio. Stations not operating in the NTS interface with the public and served agencies through the NTS.

The methods and protocols of the NTS MPG are intended to facilitate achieving these objectives.

CHAPTER 1, FORMAT: Chapter 1 presents the standard ARRL formal radiogram format used throughout Amateur Radio today. This format is the expected form of written messages, and is used everywhere except in a few specialized served agency applications. Incident reports or customized RACES forms may be used. Other techniques used in some disaster efforts, such as taking lists of inquiries, and other similar informal traffic handling methods, are beyond the scope of this manual.

CHAPTER 2, VOICE: Transmission of formal written traffic by voice confronts the amateur with the difficulties of voice perception and content with precision. The path of the manual temporarily splits accordingly, presenting voice message exchanging procedures separate from the CW protocols. The two station voice exchange is presented in this chapter.

CHAPTER 3, CW: Transmission of formal written traffic by CW is presented in Chapter 3. The technique is notably different than CW exchange is presented in this chapter.

CHAPTER 4, NETS: Managing the voice and CW transmission of messages beyond the two station exchange is handled on nets. This chapter converges, presenting both CW and voice traffic net operating guidelines, for both the participating station and the net control, in Chapter 4.

CHAPTER 5, NCS: Additional topics unique to net control are expanded upon in Chapter 5.

CHAPTER 6, NTSD: Messages transmitted with the digital modes use the standard ARRL format for the entire message entered enabling a message to move from one mode to another without modification. Chapter 6 presents the NTS Digital (NTSD) method message including the routing information in the "To" and "Subject" blocks. The NTS Digital Guidelines for the system are included.

CHAPTER 7, SAR/PSHR: Chapter 7 presents the methods used by stations participating in the National Traffic System for reporting the SAR and PSHR reports.

CHAPTER 8, PUBLIC INTERFACE: Chapter 8 presents guidelines for delivering messages to the addressees, sending service reports of origin to report on progress or problems, notes on originating messages from the public and mass mailings.

CHAPTER 9, PUBLIC SERVICE: Chapter 9 ends the manual with a discussion and examples of some tactical public service type operations. Emergency Coordinators and local EC's generally stipulate the methods used in this type operation, hence the examples given show how the traffic net procedures can be useful in such nets.

GENERAL: Throughout this manual there are tasks presented which are, or may be, handled using various techniques. Different methods for the same task are either presented as alternate choices explained in full as separate cases, or included in notes within the chapters. The preference is based upon the current "best Amateur Radio practice".

In some cases there are matters for which there is no customary method yet devised or widely used. A few suggestions are made and always a default tool for accomplishing the tasks or issuing the commands in these cases.

Some new ground is broken in a few protocols presented in the manual. For example, the continuing problem of how best to handle various groups encountered in messages when on the phone nets has been consolidated into one set of guidelines. Although these methods vary throughout the system, the presented form will be of assistance in bringing some uniformity. To do otherwise would leave "rules" to use which can be confusing to the newcomer. A variety of rules can lead to misunderstandings and surprises when they occur even among experienced operators. The voicing protocols presented here are designed to be mutually exclusive, assuring that the syntax or encountered group will have a unique method applied. The experienced operator may then come to expect a unique method for each situation.

Such license is taken only when the presented protocols have been subjected to extensive testing in typical amateur traffic handling situations. Where choices were available, those presented first in order were chosen to attempt to optimize message transmission and reception accuracy.

In addition to the chapter texts, some additional attachments are included in both textual and graphics form to aid in the fundamental operations, i.e., to provide a document for those wishing to have a ready reference for the current "best Amateur Radio traffic handling practices".

The overall NTS MPG table of contents is presented up front for printed version reference purposes. Each chapter has its own table of contents.

The future of the NTS is in the hands of those who understand the value of formal third party communication and the technology in today's environment. To assure opportunities for all amateurs to enjoy the rewards of public service traffic handling it is essential to preserve the knowledge developed over the years, and to introduce newcomers to this particular subset of Amateur Radio activity. Everyone c

Formal traffic handling is an essential part of Amateur Radio emergency communications public service as well. Effective ARES/ARES/RACES will produce benefits for the overall effort. The distinction between the groups with respect to traffic handling can be blurred and RACES operators can become NTS operators within their domain.

It is worthwhile to reduce the number of amateurs encountered at hamfests who have been in the service for ten or twenty years and have never heard of the NTS! It is perhaps more important to be certain that newcomers, from the first day they enter the service, are aware of the NTS and the skill levels used in serving the public.

Pass the torch!

ACKNOWLEDGMENTS

Many outstanding Amateur Radio operators have contributed to this manual---some without even being aware of it at all. We are the devoted NTS operators, net controls and managers encountered since way back in the United Trunk Line days. Those individuals all of use coming up through the ranks of the traffic handling community. They are the ones who pioneered the practices we use every one of them we owe our thanks for their devotion to the effectiveness of our traffic handling systems. Remember that H. P. one time... with the same intent as those of us who pound brass, voice messages, or type on keyboards today.

Particular thanks must be given to Bill Thompson, W2MTA, most recent past Eastern Area Chair, who shared a keen interest in it and encouraged its progress, and made it possible to bring it to this level. It is hoped that the manual will satisfactorily justify his trust.

Thanks to Marcia, KW1U, current Eastern Area Chair, who helped carry the work forward, and to Jim, KB5W, Central Area Chair Area Chair, for their assistance, guidance and suggestions in bringing this work of the Standing Committee to final form and substance.

Thanks also must be extended to Gary Ferdinand, W2CS, who likewise shared a keen interest in this effort. His considerable time and detailed review and criticism of the articulation of techniques helped capture in the written word efficient methods and syntax at a level. To a large extent the capturing of best current practice in this manual is due to his sharp eye and experience.

Thanks to Nick, N4SS, Eastern Area NTSD, and Cal, N3QA, former 3DC, who both made extensive contributions to Chapter 6 on

Appreciation must also be extended to all the currently active net controls and operators who answered questions or set the example was always done with the friendly spirit of cooperation in Amateur Radio that makes our service unique.

And thanks, too, to all the NTS operators in the MDC Section who put up with the constant experimentation with traffic handling concepts and exercises, SET workloads, and constant preaching. The MDC SEC, WA1QAA, was first in line insisting on having this kind of untold hours helping to review content. Thanks also to John, KO4A, who invested his time and effort in early formatting of material project forward.

All of those operators, Section and national, contributed a great deal to this manual by proving what works, and reminding us all of

73, AI, W3YVQ, EAS Associate Member, ORS, OES,
MDC ASM RACES-ARES/NTS Coordinator.

Packet Traffic

National Traffic System Methods and Practices Guidelines

INTRODUCTION TO PACKET RADIO - PART 12 - by Larry Kenney, WB9LOZ

The National Traffic System, known as NTS, is the ARRL sponsored Amateur Radio message handling network. Packet radio is now playing a very important role. This series will take a look at the system and give you some tips on handling NTS traffic by packet.

Handling third party traffic is the oldest tradition in amateur radio. Nationwide, the National Traffic System has hundreds of local and section nets meeting to handle the delivery and origination of such messages. More and more of this traffic is being originated, relayed, and delivered on packet. If you enjoy traffic handling, this series will show you how to handle NTS via packet. If you're on packet but know nothing about NTS, this part of the series will get you off to a good start. At the end you'll also find some references to other NTS.

Local packet BBSs have to be checked daily for traffic that needs to be delivered or relayed. When you check into your local BBS, enter the LT command, and the BBS will display a list of all NTS traffic awaiting delivery. It'll look similar to this example:

```
MSG# STAT SIZE TO FROM @BBS DATE/TIME SUBJECT
37893 TN 486 60625 KB6ZY NTSIL 1227/0712 CHICAGO, IL 312-267
37802 TF 320 06234 WB6DOB NTSCT 1227/0655 NEW HAVEN, CT
37854 TF 588 93432 KA4YEA 1227/0625 CRESTON, CA 93432
37839 TN 412 94114 KA8UHL 1227/0311 SAN FRANCISCO 415-821
37781 TF 298 94015 W1KPL 1226/2356 DALY CITY, CA 415-992
```

You might see traffic that is being relayed by your local BBS to some other part of the country as well as traffic for your local area. The "Subject" or "Title" field indicates the destination of the traffic. If you see a message that is within your local area, help out and deliver it.

RECEIVING A MESSAGE: To take a message off of the Bulletin Board for telephone delivery, or for relay to a local NTS net, enter R followed by the message number, as above, R 37839 would send you the message from KA8UHL for San Francisco. You'll find the message in a special NTS RADIOGRAM format, with a pre-number, text and signature, ready for delivery. After the message has been saved to your printer or disk, the message should be erased from the BBS. Use the U command to kill your own messages. To kill message 37839, for example, you'd enter: K 37839. This prevents the message from being delivered again by someone else.

DELIVERING OR RELAYING A MESSAGE: Once you have received the NTS Radiogram, it should, of course, be handled expeditiously. If it's for your immediate use, deliver the message by telephone. If you took the message for delivery to the local traffic net, you should make an effort to see that it gets relayed as quickly as possible. If you're unable to deliver the message, due to a busy channel, no answer after several tries, or some other problem, send a return message to the originator advising him of the non-delivery, and why.

SENDING MESSAGES: Any amateur can originate a message on behalf of another individual, whether the person is a licensed amateur or not. It is the responsibility of the amateur, however, to see that the message is in proper form before it's transmitted. A special format is used for NTS traffic so that the messages are compatible with the NTS system.

Each message should contain the following components in the order given: message number, precedence, handling instructions (optional), the station of origin, check, place of origin, time filed, date, address, telephone number, text and signature.

The destination of all NTS traffic must be to a point in the US, its possessions, or Canada.

When the message is ready to be entered into your local BBS, you must use the ST command, which means "Send Traffic", followed by the zip code of the followed by the two letter state abbreviation. The form used is ST ZIPCODE @ NTSxx. A message being sent to Boston, MA 02109 would be entered as and a message for Iowa City, IA 52245 would be entered as ST 52245 @ NTSIA. The message SUBJECT or TITLE should contain the destination city an code and exchange, if available. See the examples in the listing above. Only one NTS message should be included in each packet message (no "book" messages). The actual radiogram should be included entire message, including all of the components listed above. End the message with the usual Control-Z or /ex.

IN TIME OF EMERGENCY: The National Traffic System functions on a daily basis as a public service for both your fellow hams and the general public. It The NTS provides a well oiled and trained national system of experienced traffic handlers able to handle large volumes of third party traffic accurately and disasters. Your participation now will help prepare you for that time of emergency. Following the Loma Prieta Earthquake in October of 1989, over 7000 N packet BBSs in the San Francisco Bay Area. We needed and used all of the help we could get.

REFERENCE MATERIAL: The ARRL booklet "An Introduction to Operating an Amateur Radio Station" offers detailed information on handling and prepari also many files with detailed information on NTS available for downloading from your local BBS. They give a complete rundown on how to prepare and se how to deliver NTS messages, etc. Check your local BBS files section for them if you want to get involved. Your help will certainly be welcome!

Voice Traffic

[NTS "Cheat Sheet"](#) 

[National Traffic System Methods and Practices Guidelines](#)

Outgoing NTS Traffic Routes

Formal traffic is handled on most all nets. The timing and handling method for entering traffic into the NTS depends on the time of day. Outgoing traffic in V most conveniently on the following nets and times:

- NTTN (Northwest Traffic and Training Net) (also called the 605 net) at **6:05 pm on the linked repeaters of the Western Oregon Radio Club inclu 146.80, and 443.150 MHz repeaters, all having a pl tone of 107.2** which is timed to pass to OSN (Oregon State Net).
- ARES D1 (Amateur Radio Emergency Service District 1) net at **7:30 pm on the 147.320 MHz** repeater. Traffic passed on this net usually will be ser (Daytime Regional Net 7) or the Noon time net.

Outgoing messages should be passed before 6:30 pm to a CW operator who is going to OSN1 if it is to go out that day. If the message may wait it can go DRN7 or the Noon time net the following day.

- The OSN1 is at **6:30 pm (CW on 3587 kHz)**.
- The DRN7 is at **9:45 am (SSB on or about 7236 kHz)**.
- The Noon time net is between **10 am and 1 pm (SSB on 7268.5 kHz)**.

Outgoing traffic can also be handled on the afternoon DRN7 at **3:15 pm (SSB on or about 7236 kHz)** although this net is usually for incoming traffic. The people who go to DRN7 regularly are:

- K7PMB Ralph
- N7DRP Betty
- And sometimes N7CM Claire

KC7ZZB Hal frequently goes to the Noon time net. And traffic handlers to OSN1 often are:

- N7YSS Dave
- N7CM Claire
- KK1A Karl
- WS7L Carl

Outgoing traffic from the NTTN, ARES traffic net **5:30 pm (SSB on 3993.5)** or **BSN (Beaver State Net) 5:45 pm (SSB on 3920)** can go out at **6:30 pm** if operators soon enough. Otherwise it goes out on DRN7 or the Noon time net the next day.

Traffic can be handled by any HF operator; the people listed are those that are usually willing and often available to handle it. You are also encouraged to use your capability and operating privileges to enter NTS traffic into the system and take messages for delivery.