

CHAPTER 4 - NET OPERATIONS

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CHAPTER 4 - NET OPERATIONS

4.0 NET OPERATIONS, NET CONTROLS AND STATIONS

Earlier chapters dealt with the skills required to format and to pass traffic from one station to another. In order to provide a discipline to facilitate passing traffic among larger numbers of stations an additional layer of skills and organization is required. This additional layer is the referred to as the network, or “net” for short.

Chapter 4 on NET OPERATIONS is the reference for both the net control stations (NCS) and participating stations, and presents background information on nets and the methods and language used in operating them. The syntax used in net operations is shown in sequence so that commands and responses may be reviewed together. Additional net control topics are presented in chapter 5.

This chapter will present information on calling the net, preparing the traffic list, checking into nets, listing traffic, assigning and dispatching traffic on and off net frequency, the disciplines of the directed net, excusing stations, and closing the net.

It is assumed that the reader is familiar with message formatting (Chapter 1) and the skills required for exchanging individual and book messages on voice (Chapter 2) and CW (Chapter 3).

Voice and CW methods and syntax will be presented in each section so that they may be easily compared. The functions by topic are essentially the same on both modes.

Notes in the syntax sections will point out variations and differences between NTS Area, Region, Section, and Local nets. Options will also be included where several methods are in use, the best current practice being shown as primary.

This is a complex chapter. The newer student should concentrate on understanding the basics of checking into the net and listing traffic, basic assigning, dispatching and excusing, and then flesh out his understanding of the more difficult topics and techniques in combination with experience on the air in the nets. The experienced operators will be glad to help you along, and they will notice and appreciate your progress.

Station call signs used in examples are intended to be generic and in no way are intended to relate to the holders of those call signs in any way.

4.1 TYPES OF NETS

4.1.1 NTS, DAILY TRAFFIC NETS

The ARRL National Traffic System is composed of nets operating at different levels as a function of area covered. They are linked for traffic flowing in both directions by assigned liaison stations, and scheduled to operate sequentially to permit traffic to flow throughout the country.

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A complete “cycle” of NTS nets consists of the sequence of Local/Section nets, Region nets, Area net, Region nets, and Section/Local nets. Notice that the Local/Section nets and Region nets meet twice during the cycle, the early sessions for outbound traffic, the later for inbound traffic.

This sequence begins with the Eastern Area, then one hour later each for the Central and Pacific Areas. Currently there are several partial or full cycles of this sequence in regular operation, an afternoon Cycle 2, early evening Cycle 3, and the evening Cycle 4, although the structure provides for up to 4 cycles each 24 hours, or, in emergencies, continuous operation. Part of the morning Cycle 1 operates in the Pacific Area.

Traffic is carried between Area Nets by the stations of the Transcontinental Corps, or TCC.

AREA NETS: Eastern (EAN), Central (CAN), Pacific (PAN); each have a “transmit” and “receive” liaison from each Region Net in the Area, plus TCC liaisons to the other Area Nets, and liaisons to and from special nets such as international connections and the Atlantic Region Net (ARN).

EAN: Regions 1, 2, 3, 4, 8, 11, ARN

CAN: Regions 5, 9, 10

PAN: Regions 6, 7, 12

REGION NETS: 12 Regions; each provide the TX and RX reps for the Area Nets mentioned above, and have liaisons from each Section Net within their region.

SECTION NETS: Each NTS affiliated Section net, or combined Section’s net, provides liaisons to the early and late sessions of their respective Region Net.

LOCAL NETS: Within Sections; sometimes meeting only once daily, generally have liaisons from and to their respective Section Nets. Such nets generally cover smaller areas such as those covered by local VHF/UHF repeaters.

The above nets operate on a variety of bands and modes although most HF operation is on 80 or 40 meters. The NTSD, the digital branch of the NTS, operates in parallel with the voice and CW nets providing manned and monitored digital message forwarding between Regions and/or Areas using HF Amtor/Pactor or other modes.

NET DIRECTORY: US and Canada boundaries for each Area and Region are shown in the ARRL Net Directory along with traffic routing lists, state abbreviations, Third Party Traffic Country Lists, as well as lists of the NTS nets and schedules, emergency nets, and other independent nets registered with the ARRL.

PSCM: For more information on the NTS system consult the ARRL Public Service Communications Manual (PSCM) or your local Section Traffic Manager (STM).

4.1.2 WELFARE, INCOMING/OUTGOING PUBLIC TRAFFIC

During disasters special public welfare nets may be set up to facilitate the movement or archiving of large amounts of public traffic related to the emergency. These nets work closely with the regular NTS nets (and may be one and the same), and operate using the protocols presented in this manual. Traffic is usually, but not always, in formal ARRL format.

4.1.3 EMERGENCY NETS, ARES/RACES

During disasters local ARES/RACES groups will run nets to facilitate the movement of traffic for served agencies and for handling public welfare traffic. These nets are managed by Section and Local ARES/RACES officials and operate using the protocols presented in this manual. They may use special message forms and numerous ad hoc structures to meet the local needs. Public welfare traffic is handled in formal ARRL format. The regular NTS activates special support for such nets as required. Traffic may be written formal traffic or tactical communications as required by the situation and served agency needs.

4.1.4 SPECIAL NETS

* **DISASTER, SPECIFIC SERVED AGENCIES:** ARES/RACES may, from time to time, set up nets devoted to serving one or a small number of specific served agencies in order to accommodate the needs of those agencies. Liaison with other ARES/RACES or NTS nets is arranged by the local ARES Emergency Coordinators or RACES Officers. These nets also use these net protocols.

In addition, local ARES/RACES or other amateur groups may evoke special nets for other special purposes such as those listed below. Generally they all use the standard net protocols, making only minor changes to suit the special purposes. These may use formal written traffic as well as tactical traffic as needed.

* **ADMINISTRATIVE, EMERGENCY COORDINATION** Nets;

* **VOLUNTEER COORDINATION, MANPOWER, MAINTENANCE** Nets;

* **SKYWARN** Nets in support of NOAA/NWS;

* **SOCIAL AND SPECIAL PURPOSE NETS**, such as swap nets, special interest groups, technical discussion nets, etc.;

* **PUBLIC SERVICE EVENT NETS**, special nets, usually local in scope, to facilitate the safe operation of events such as parades, walkathons, bike rides, etc. These nets may use mostly tactical traffic, but in certain emergency situations generate formal written traffic to preserve a record of unusual events and better serve the organizing officials.

4.2 TRAFFIC NETS

This section presents the concept of the traffic net, its purpose and jobs, and skills required of its participants. Subsequent sections deal with the NCS and individual station skills required to conduct and participate in nets.

4.2.1 PURPOSE OF A NET

The purpose of a traffic net is to provide a controlled meeting of stations having business to conduct. The net is directed by a net control station which controls everything that goes on during the net meeting.

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A net format, or schedule of operation, is established for the net to insure the orderly flow of intended business, and to help stations participating on a regular basis to know the order of business to be expected. The net format is established by the net manager and sets the business sequence. The net protocols presented in this chapter provide the syntax and procedures for operating in the net and managing the net operation, but do not establish or affect the net format or the discretion of the net manager to set the net format.

If the net control does his or her job properly, all stations having traffic to pass will get their chance in an orderly fashion.

By setting and keeping regular meeting times, the net becomes a known quantity. Stations with traffic can count on there being a regular means at a regular time for passing their traffic. The net's connections with other nets are established and maintained so that stations will know that traffic can be relayed to its destination. The ARRL National Traffic System (NTS) is so organized and operates daily to maintain scheduled traffic pathways nation-wide.

The key to successful net operation is order and discipline. The net control bears a large responsibility in this regard, but the individual station checking into the net must know the correct operating methods in order for the net control to maintain smooth operation. An operator not familiar with normal net operation methods can disrupt the flow. The role of the net control station is obviously very important, but, as in the case of the orchestra leader and players, the individual operator is just as much a part of the team.

Participating in a well run traffic net and having all your business handled efficiently is a rewarding experience, and a lot of fun. When the NCS and participating stations know the words used, and how to respond, the net goes smoothly.

The protocols in this manual hopefully reflect the best current practices used in efficient net operations throughout the ARRL National Traffic System.

4.2.2 NET MANAGER (ARRL Appointment)

Net Managers are appointed in the NTS for Local and Section Nets, reporting to the Section Traffic Manager; and for Region and Area Nets, reporting to the Area staffs.

The Net Manager (NM) designs the format for the net, establishes the schedule of operations, days and times, makes sure the format is consistent with the NTS structure and guidelines; maintains manning assignments, establishes liaison assignments and agreements, and supports day to day operations. The NM assures that the net meets standards set by the NTS and its Terms Of Reference, particularly with respect to schedules and liaison assignments with other NTS nets for which the net is responsible, as well as standard operating practices operators expect to find.

The NM is responsible for training net members in traffic handling, net operations, and liaison duties based on the best amateur practice of the day as stipulated in the TOR and this Appendix. Operating and traffic handling protocols should be as uniform as possible throughout the NTS according to those standards.

The NM is responsible for maintaining an operational plan for regular operations and for emergency operations. The NM cooperates with the Section Traffic Manager, for Local and

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Section Nets, in establishing emergency plans with the Section Emergency Coordinator for the Amateur Radio Emergency Service (ARES), and for RACES cooperation.

The NM is responsible for collecting the daily net operation statistics and reporting summary data monthly to the STM for Local and Section Nets (for the SM's column in QST and NTS), for providing the net members with certificates of participation (with endorsements for NCS and liaison duty), and for assisting operators in applying for the ORS appointment and moving up in the system. Region and Area operators are sought and promoted from these ranks.

The NM of Region and Area Nets is responsible for net operations, reporting the net operation statistics monthly to the appropriate Area staff, and for seeking, training, and promoting operators for higher level nets and/or the TCC , per the requirements of the Area staff.

NM's should maintain a newsletter/roster to share information with all NCS stations.

4.2.3 NET CONTROL STATION (NCS)

The net control station calls the net at the scheduled time and frequency, checks in all stations, lists all traffic and other business for the net, assigns stations to receive traffic, instructs stations when and where to pass traffic, controls all transmissions on net frequency, maintains a list of all participating stations and their whereabouts, and checks stations out of the net. The net control will arbitrate the net's adaptation to unusual circumstances which might arise due to missing personnel or outlets, liaison needs, and emergencies of any sort.

Responsibilities of the NCS include knowing the proper routing for traffic, the areas served by the net, required and possible alternative liaisons, emergency plans for the net, directing how to make best use of station capabilities, frequencies and modes, asking questions of net stations when information is needed, and the ability to anticipate the needs and frustrations of stations waiting to check into the net or conduct business.

The net control station reports on each net session to the Net Manager including information on which stations were present, liaison stations, traffic handled, session time, newcomers, and other information required by the Net Manager. Net reports are filed within a few days in order to keep current the information on net operations.

It is crucial that the NCS keep a record of all listed business and stations in the net, and be able to update the record as traffic is dispatched, stations leave and return to the net, and business is cleared and stations are excused. Notes should also be made regarding which stations can hear each other when propagation is poor. Prudent use of relays by the NCS can expedite what otherwise might be ineffectiveness.

This can be a daunting task on large traffic nets. Much has been written on the subject. See the chapter on Net Control for more information beyond the basic mechanics in this chapter.

Unscheduled liaisons from higher nets or the TCC should be handled by the NCS with priority. Traffic from these stations should be dispatched promptly for delivery or holding for later outlets.

NCS TASKS are summarized in a later section as an introduction to net operations.

4.2.4 ALTERNATE NET CONTROL STATION (ANC)

The Alternate Net Control backs up the NCS in case the NCS is not able to make the session, or leaves the net for any reason.

The Alternate Net Control function is optional, is used primarily on large Local or Section Nets, and is called for each session at the discretion of the NM. This station should monitor the net operation, record all the same information that the net control does, and be prepared to step in immediately and assume the net control duties should it become necessary for any reason. Net Managers have been known to ask NCS stations to pretend to have a transmitter failure during a net to check the ability of the ANC or other stations to pick up the NCS duties.

If the net format does not call for an ANC, any station on the net should be ready to step in and perform the duties of NCS if that station leaves the air or fails to show up.

The ANC should be called upon for relay help under difficult radio conditions. The NCS may ask additional stations to be assistant net controls for such purposes.

4.2.5 LIAISON STATIONS, DUTIES

Liaison stations are assigned to carry messages between nets. In the NTS, each Region and lower net Net Manager is responsible for assigning liaison stations going to and from higher level nets, and for stations going to and from other NTS cycles of operation at Section level. Liaison stations always check into nets giving their liaison assignment so that the net control will know that all representation is present and accounted for.

The NM may also require liaisons be assigned to other affiliated nets or the NTSD, the digital system.

The NCS should always assure that all liaison assignments are filled, even if volunteers must be solicited, or the NCS performs the task(s). An NTS net frequently feeds another net or function. Even if all traffic to that destination has not been cleared, the rep needs to be excused on time. Additional stations can be sent, of course, or traffic can be held until the next cycle.

Auxiliary (AUX) liaisons (extra help) may be assigned by the NCS to help carry large amounts of traffic to the assigned nets.

Liaison stations must check in promptly to their assigned nets. This permits efficient net operation and assures the continuity of the entire system.

Liaisons must know how to group their traffic for delivery on their respective target destination nets, and how to re-book or un-book traffic accordingly. The outlets are different at Local, Section, Region, and Area nets. See also the section on THE TRAFFIC LIST.

4.2.6 LEARNING THE OTHER JOBS ON THE NET

Stations do not have to wait for the Net Manager to solicit them to perform the various jobs on the net.

When a station has learned the basic traffic handling and net skills, and becomes familiar with the specific assignments, it may express the interest in accepting a job, or volunteer to fill a

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vacancy, temporary or permanent, as the situations present themselves. Many amateurs have been baptized by fire by volunteering for liaison or NCS duties when a station was not present on the net, and afterwards have become regulars at the task. Other experienced stations on the net are always willing to answer questions or train newcomers in the various jobs.

All stations are welcome and encouraged to learn and move up in the system.

4.2.7 NET FORMAT

The format of the net, that is, the opening and closing statements, liaison list, sequence of calling liaisons, etc., is a matter determined by the Net Manager and documented for the NCS stations. This subject, being the responsibility of the NM's and subject to considerable variation based on the level of the net and other local considerations, is NOT specified or stipulated in this manual.

Consult with the NM regarding the net format. You should also find that the format is followed closely day to day and the basics can readily be learned by listening to the net.

Net operation protocols in this manual deal with the NCS and participating station syntax and procedures. These are the instruments of net operating. The format is the event program.

Although formats vary across the country and with the level of the nets, the basic syntax for commands and requests is uniform throughout the system. This manual deals with those matters that are uniform so that operators may understand instructions and know how to respond anywhere in the NTS.

Generally, liaisons are called after the net preamble, traffic dispatching is begun, and other stations, with or without traffic, are then checked in. Stations are often excused as soon as there is no more business for them, except for liaisons on lower nets which may be held to accommodate late checking stations, but only until it is time for them to leave for their assigned destination nets.

4.2.8 TRAFFIC HANDLERS

The backbone of Section and Local traffic nets is made up of the regular stations checking in to bring traffic to the net, or to receive traffic for delivery in the local area.

On Area and Region Nets the assigned liaisons are the conduits for the traffic. Once accounted for, all the net business can be conducted.

On the other hand, on Local and Section nets, traffic is received for delivery throughout the net coverage area. It is essential that there be stations present capable of delivering all such traffic for the system to work. This means stations throughout the coverage area should check into these nets even if they have no traffic of their own. Having outlets is the key to success.

Traffic for the public or served agencies is inserted into the system by stations checking into Local and Section level nets with originated traffic.

Daily NTS traffic can not be delivered unless stations check into their Local or Section level nets at the other end of the cycle to receive and deliver it, or pass it to other Local nets.

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Participate by checking into your Local or Section NTS nets often---daily if possible. Learn the other net jobs as you participate.

Automated digital traffic handling systems rely on traffic handling stations to originate and deliver traffic. (In this case we are speaking of formal ARRL radiograms as opposed to packet mail and other types of messages.) Manual operator nets assign liaisons to the NTS digital system to assure the cross-feed. If your station is digitally equipped you can be of help here.

New amateurs will find it quite amazing that they can check into your local net, pass a radiogram to a local station, and find out that the message may be delivered anywhere in the country that night or the next day by this magical system of liaisons and nets.

If you have never delivered a radiogram to someone, and hear one listed on a net that you might be able to handle, ask an experienced operator to walk you through the process after the net. Delivering radiograms to the public is a richly rewarding experience... it's easy and fun; a great chance to have a conversation about Amateur Radio, offer to originate a reply message, and perhaps encourage someone to get into the service.

4.3 NET CONTROL STATION TASKS

The practice of having a radio net control has been used throughout the years by many services. The job is more than just being a police traffic officer on the net frequency. A good net control can efficiently take care of business while making the activity fun for the participants.

The NCS should call the net no later than 1 minute after the scheduled start time. If the assigned NCS is not present, the ANC (if any) or any other station on the net should assume net control and begin. The NTS system relies upon scheduled nets and reliable liaison between nets.

The station controlling a net (NCS) has the following general tasks which are applicable to voice and CW nets alike. Some tasks are not performed on Area or Region Nets.

*** NCS TASKS:**

- 1) Opening (calling) the net on time
- 2) Transmitting the net preamble (*)
- 3) Checking in anc, or any other format required specific stations (*)
- 4) Checking in single liaison stations from a net
- 5) Checking in multiple liaison stations from a net (*)
- 6) Checking in stations, open and specific net calls
- 7) Listing traffic and business on the net control sheet (**)
- 8) Assigning traffic
- 9) Dispatching formal traffic and other business
- 10) Re-checking stations and asking for check-ins often
- 11) Handling additional business
- 12) Maintaining order and directing business
- 13) Adjusting the net to prevailing conditions
- 14) Excusing net liaisons in time to meet assigned nets
- 15) Excusing net stations
- 16) Closing the net on time
- 17) Filing net reports with the net manager (**)

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(*) Usually on Section/Local nets only, or as required by the net format.

(**) These strategies for managing operations will be discussed in the chapter on Net Control.

* MANUAL TOPICS:

The subsequent sections of this chapter will deal with the NCS syntax to accomplish these tasks and the syntax used by stations when responding to NCS commands and requests, listing their traffic, and performing other duties.

Presentation of written descriptions of voiced and transmitted syntax requires certain symbology and abbreviation, thus a key for the written chapter appears first in the following section. The key is followed by notes regarding certain syntax conventions used throughout the manual, Q signal use, and station ID requirements on directed nets.

The operating protocols are then presented generally in the order of the task list above, except that the methods used by stations to check in and list traffic are discussed first. These techniques are used at various times during the net, thus are presented before beginning discussion of the “flow” of the net.

4.4 KEY TO THE MANUAL SYNTAX

Sections are divided into parts for VOICE, with examples as needed; and CW, with examples as needed; and further divided showing variations for Voice or CW where different methods are used in different situations or net types. Alternative choices are usually in brackets. Differing methods or situations are often shown as numbered cases.

* **LINES TRANSMITTED** in each part are shown by sender, introduced with:

NCS	- for the net control station;
ANC	- alternate net control station;
STN	- for any other station; (may be suffix);
XA, XB, etc.	- for particular additional net stations; (may be suffix);
TX	- for a station holding traffic to be transmitted; (may be suffix);
RX	- for a station assigned to receive specified traffic; (may be suffix);
RLY	- for a station assigned to relay between stations. (may be suffix);

* **SYMBOLIC STATEMENTS WITHIN THE LINE SYNTAX:**

(____)	Items in parentheses filled in by user;
[____]	Items in brackets are optional items;
(call sign)	Full call sign of station addressed;
(suffix)	Suffix of call sign, number and letter if 2x1;
(1 letter)	Arbitrary letter used on CW for recognition;
W3RX	Receiving station full call sign**;
W3TX	Transmitting station full call sign**;
W3RLY	Relaying station full call sign**;
W3STN	Any other station**;
W3XA, W3XB, etc.	One of several RX or TX stations**;

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(net name)	Name of net, full words or abbreviation on voice, figures/letters on CW. Where assignments are compound, as in “EAN TX”, stations include the modifier when referring to jobs by net name;
(job)	Station net job, such as NCS or ANC;
(assignments)	Station’s assigned jobs/liaisons, by net name compound as above when required. “From” listings before “To” listings;
(dest)	Message destination, may be multiple;
(qty)	Message quantity, may be multiple;
[prec]	Precedence appended to qty. Omitted in manual;
(dest [qty])	Destination, and optional quantity (NCS discretion) for messages;
(req)	Informal requests added to station transmissions;
<AS>, <AR>, etc.	CW prosign concatenated letters.
(See also the Prosign and Proword List at the end of Chap. 3.)	

**** CALL SIGNS USED IN THIS MANUAL: All call signs used in this manual are intended to be generic for example purposes and are in no way related to the holders of those call signs.**

(Suffixes of the above calls are often used in syntax to relate to the full call sign.)

* **(data):** Information to be filled in by the station transmitting in shown in parentheses.

* **[OPTIONS]:** Options are shown within brackets, [], within the flow of the syntax as needed, and around additional choices for syntax. Other options are shown at the end of the section or part. Generally options are shown in their order of preference unless otherwise noted.

* **SYNTAX, WRITTEN:** Groups transmitted in a line are shown in CAPS. Components in parentheses to be filled in are shown in lower case as shown above.

* **NOTES:** Explanations, tips, caveats, etc., are included at the end of the section as needed.

* **GREETINGS, THANKS, FAREWELLS, etc.** are omitted from the formal protocols for clarity. Traffic handling and net operating are enjoyable activities and the niceties are frequently used to sustain a pleasant atmosphere. Examples are given where they are often used, or as “[option words]” in brackets. They are often inserted before the key words of the NCS or Station syntax to avoid interfering with the self completing nature of commands and replies; as in: W3XYZ 73 GL QNX, as opposed to W3XYZ QNX 73 GL [K], where “K” would mark the end of the uncertain length farewell. This is a minor point however, and a 73 or GE will frequently be heard after the command or reply. Names (abbreviated on CW) are frequently used to maintain the friendly atmosphere.

4.5 NOTES AND DEFINITIONS, SYNTAX AND CONVENTIONS

The NCS makes its net CALLS, ASSIGNS and DISPATCHES traffic, and EXCUSES stations according to protocols developed over years of organized net operating. There are a number of conventions regarding the conduct of business which aid in the running of efficient nets. These conventions apply to the NCS and also affect how individual stations respond to the flow of

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business. These conventions are discussed below for use in the subsequent Net Call protocols, but most also apply to net operations throughout the assigning, dispatching, and excusing functions as the net progresses.

4.5.1 FLOW

AREA: On Area Nets the stations checking in are primarily liaisons from or to other nets. The NCS knows which stations should be present and can manage the checking in of stations and the flow of the net to expedite the movement of traffic. Some net formats or NCS preferences direct this process using the OPEN net call, taking stations at random as they check in, while others may make SPECIFIC calls for liaisons in preferred order.

In either case, the NCS may list a station's traffic then either dispatch the traffic with outlets already in the net, or call for outlets needed which have not yet checked in and then dispatch the traffic. Traffic is automatically assigned to the RX liaisons by default. On these nets traffic is normally dispatched off net frequency to permit ongoing net business. The NCS continues checking in new stations until all the expected liaisons are accounted for, then continues the net until all listed business is cleared.

The Area nets have both a receive rep and a transmit rep from each Region level which permits parallel movement of both incoming and outgoing traffic between the Region TX and RX liaisons. The TCC stations handle traffic to and from other Areas. The NCS, therefore, is in charge of configuring the flow of traffic between these Region reps and TCC stations to optimize the amount of traffic flowing per unit of time, clearing all stations within the allotted time, and excusing liaisons in time to return to their Regions. Region reps to Area Nets check in as RX or TX, or BOTH if one station is assigned both functions.

REGION: Region nets have liaisons from the Sections below, and liaisons to the Area net in early sessions, and from the Area net in late sessions. The NCS functions at this level are essentially the same, except that there is only one liaison per Section net and one for the Area net. The NCS must adjust the sequence of dispatching to accommodate the loading for particular liaisons that develops each session. These nets may also use OPEN or SPECIFIC calls to check in all liaisons.

SECTION: Section nets usually check in liaisons at the beginning of the net with SPECIFIC calls, list the traffic, and then make SPECIFIC calls for outlets for delivery of incoming traffic while routing the outbound traffic on early sessions to the appropriate liaison. On late sessions the source net liaison often brings the greatest load of traffic for local delivery. The OPEN net calls are used to check in outlets from the Section's local delivery areas. The NCS may be faced with a wide variety of problems finding outlets for incoming traffic. There are numerous tools at its disposal which are presented in this section. It may make SPECIFIC calls for outlets for unassigned traffic to be delivered, use its knowledge of which stations can handle certain areas, or move traffic toward other local nets or assign stations to store traffic for later forwarding or nets.

4.5.2 AUXILIARY STATIONS

Auxiliary (AUX) liaisons may be assigned at any level to help the primary liaisons with heavy traffic loads. These stations check into destination nets indicating such status.

4.5.3 MISSING LIAISONS

If liaison stations are absent, the NCS should find other stations to perform those assignments by using the CALL for VOLUNTEERS for MISSING LIAISONS. If no station volunteers for an unfilled liaison job, the NCS should take the job, if at all possible, or make an attempt to pass the word to the target net affected.

On any net, missing or late liaisons can cause the postponement of traffic handling and delivery, and delay the net finishing its business while waiting or asking for volunteers. Liaison stations from other nets know not to be late.

4.5.4 SERVICING VISITORS

Unscheduled liaisons from higher nets or the TCC should be handled by the NCS with priority. Those liaisons may be on a tight schedule needing to check numerous nets. Other stations visiting the net should be helped to the greatest extent possible and not turned away holding traffic for the net's area. Net stations should be promptly asked to accept traffic from each of these stations for delivery or holding.

4.5.5 TRANSACTIONS

A transaction on the net consists of an NCS request or command and the response(s) from the stations specifically addressed, a station call and the NCS response or processing, words for the net, etc.; and also consists of an exchange on or off net of traffic between stations. A dispatch and the full traffic exchange on net frequency is one transaction, for example.

Stations checking into the net, already checked in, or returning stations should not seek the attention of the NCS in the middle of such transactions except for urgent business or emergencies. This is an interruption considered poor practice, with few exceptions. This also applies to a QNA liaison calling sequence per the net format. Other stations should wait for later calls.

On some nets returning stations may be permitted to check back into the net in batches, each sending their suffix ("suffix BACK" on voice) in a series. The NCS will acknowledge their return likewise (en-mass) at its discretion. If the NCS immediately acknowledges the first returning station, take that as a signal that a series of calls is not desired. The NCS may stop the process at any time and deal with a problem or make a dispatch or call when required.

Interruptions are sometimes made to catch an excused station for words or traffic, to inform the net or stations of traffic routing changes, or suggestions on or off the net prior to exchanges, or when other matters need to be brought to the attention of the NCS affecting commands and actions. Such interruptions should be made with care, sparingly, and only when essential for problem solving or enhancing net efficiency. They are discussed in subsequent sections.

Opinions regarding better ways for the net to conduct business or route traffic may not be based on the knowledge and information available to the NCS, or in agreement with the NCS discretion in directing the net. It is often wise to be tactful and request to be recognized at a time convenient to the net and make a request or suggestion regarding changes, thus permitting the NCS to act on the information at the net's convenience. To do otherwise often creates the opportunity for a station to open its mouth and insert foot.

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Interrupting during transactions can be disruptive, irritating to both NCS and net stations, and counterproductive. It is controversial to even suggest the practice, but occasionally it can be helpful, and will be appreciated in such cases. A wise NCS will be willing to change decisions based on better information. Patience, common sense, judgment, and courtesy, however, must always apply.

4.5.6 TAIL ENDING

Generally stations wait for an OPEN or SPECIFIC net call in which they are eligible to call, but, if carefully done, can make their call at the end of a transaction following the last participating station's transmission, and/or before the NCS resumes the net. The NCS will often make an OPEN call following such transactions, but stations generally need not wait. If there are no transactions in progress, tail ending can expedite net business flow.

Caution is in order. Tail ending for general purposes is not considered good practice during a sequence of liaison or other specific net calls, as in the QNA type series at the beginning of many Section/Local Nets. Calling out of order in such cases is disruptive. The NCS may ignore such interruptions.

4.5.7 PAUSE TAIL ENDING

Some nets or NCS stations will accept stations in other categories, or returning stations, to check in even if not in the category called, but expect the station to pause to allow the NCS request to be responded to first by any eligible stations. This is a form of "pause tail-ending". Such a respectful pause is a courtesy to the NCS and the called station(s).

4.5.8 SPECIFIC SINGLE RESPONDER CALLS

The NCS may call for single responders for net jobs, expected liaisons by net name, or specific stations by call sign. The method gives the NCS the ability to control the check in sequence and/or fill a specific need immediately.

Other stations should not call except using pause tail ending.

4.5.9 OPEN AND SPECIFIC CALLS, MULTIPLE RESPONDERS EXPECTED

The NCS may call for multiple liaisons from a single net, specific categories of stations, or other specific requests where more than one station is likely to reply.

The general approach for dealing with this situation on voice involves having the responding stations make limited calls and wait to be acknowledged by the NCS before proceeding. On CW the single letter approach is customary. (See OPEN net calls, CW.)

Stations not in the category called should not call except using pause tail ending.

4.5.10 STATIONS REPLY ONLY IN THE CATEGORY CALLED

Other stations not in the category called should wait for the NCS to complete the sequence and then respond in an appropriate category or wait for an OPEN call.

In the SPECIFIC CALL sections following, for single or multiple responders, it is assumed that the call is "closed to others" unless otherwise indicated. The customary practice of the net may dictate otherwise. Stations should listen to an unfamiliar net to determine the practice in use.

An immediate call by a station not in the category called prevents any appropriate stations from responding to the NCS call. This forces the NCS to repeat the call, thus delaying the net for all. In such net calls, at least pause tail ending is mandatory. Better to wait for an appropriate net call except perhaps for stations returning to the net from off frequency. The NCS may ignore stations calling which are not in the requested category.

4.5.11 RETURNING STATIONS

Stations returning from off the net may have need to report failed contact, and certainly need to check back into the net in a timely fashion. There also may be other business pending for their stations, previously listed, or listed while they were off net. The NCS may call specifically for returning stations often to avoid the pressure to check in during other calls. OPEN or RETURNING calls should be made frequently during the net, or the NCS should leave pauses following transactions to permit tail ending, or should permit pause tail ending.

4.5.12 QNU, NET HAS TRAFFIC FOR YOU, STAND BY

The NCS may advise stations checking in that the net has traffic for them, but this is not often done. Listen to the NCS and the net stations carefully. Make note of traffic listed for your station and be prepared for the dispatch. QNU, or the voice equivalent, may optionally be used to inform a station why it is being asked to wait after listing no traffic, for example.

4.5.13 CHECKING IN STATIONS

Some techniques or net formats require different replies from stations checking into the net. The NCS may ask a station to “list” its traffic in the voice two step method. The NCS will use the single letter method of checking in new stations in multiple responder calls on CW.

The NCS will assign traffic by default to liaisons, or to stations by knowing what traffic they can handle, by asking specific stations if they will accept it, or by calling for volunteers to take the traffic.

The NCS may acknowledge a station checking in and ask it to stand by. The NCS may acknowledge the station and then dispatch it for traffic handling. The NCS may skip acknowledgment, call for an outlet if needed, and immediately dispatch the station for traffic, or use a shortcut split dispatch. The various techniques are presented in the Net Call and Dispatch sections.

4.5.14 OPERATIONAL WORDS, “Q” SIGNAL USE, ETC.

It is important to note that the NCS transmits key words or symbols which constitute commands or requests. Such commands are usually self completing, that is, are sufficiently clear to stand both for a command or request, and an end of transmission marker. Likewise, certain station acknowledgments, replies, or other transmissions are self completing as well.

The regular “Q” signals used on CW can be sent with a query (?) or without to make the NCS intention clear. The net “QN” signals are not used with queries (?).

“Q” signals are NOT used operationally on voice nets. Use the voice syntax words.

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The use of words like GO AHEAD or OVER, <AR> or <K> on CW, are not shown or needed in self completing commands. It is therefore efficient to omit these words or symbols at the end of most NCS transmissions. They persist at the end of some NCS transmissions, and in certain of those from stations, in order to clearly mark the end of transmissions of uncertain length or where required. Although it is sometimes argued that silence is just as effective, on lower nets, and when long traffic lists or other long transmissions are sent, the use of OVER or <K> can help prevent “doubling” by two stations by clearly marking the end of transmissions.

OVER is useful on some two meter repeater nets where audio delay systems remove squelch tails and obscure releases of the PTT switch. Voice operators using fast VOX, and CW stations using QSK are not so concerned about “doubling”. The CW prosigns “K”, <AR>, etc., and OVER on voice are very clear in their meaning and are effective in marking the end of transmissions. The point is to use them only when necessary.

Users of VHF/UHF repeaters should be cautious to allow system components to fully “key up” before speaking, and transmission timers should be carefully reset to prevent shutdown.

“Every single word not absolutely needed may be dispensed with profitably.” (Operating an Amateur Radio Station, p. 17, CD4/1-83, ARRL, Newington, CT.)

All communications on a directed net are under the direction of the net control. Stations must seek recognition from the NCS prior to making comments or other interruptions. The urge to insert a comment or offer to help should be resisted in favor of first getting the attention of the NCS. Critiques of the NCS job or station activities should be reserved for off net, or preferably off the air.

4.5.15 STATION IDENTIFICATION ON DIRECTED NETS

The NCS must ID at the start of the net and every ten minutes. Using the net name or abbreviation during OPEN net calls is customary, adding the NCS call sign at the appropriate time intervals. The NCS must ID with full call sign when closing the net.

Liaisons and other stations checking into the net will give their full call sign at their initial check in time. When they are dispatched off frequency they may acknowledge with their suffix letters (voice, number and letter for 2x1 calls, etc.; “T” or “G” on CW), and use suffixes when returning to the net with their job completed. They do not need to ID every ten minutes on the net during the net. Stations already checked in and seeking to be acknowledged by the NCS on the net may use their suffix for that purpose.

It is, however, customary for stations to sign with full call sign after an exchange of words with another station on the net, an announcement, etc., and after exchanging traffic on the net frequency as shown in chapters 2 and 3. Sending the full call sign clearly identifies the source of the transmissions in this case, and also alerts the NCS to the conclusion of the exchange.

Stations must also use their full call signs every ten minutes and when concluding exchanges off the net frequency.

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When individually excused from the net, stations acknowledge with their full call signs at departure. If stations are excused by the act of the NCS closing the net, or excusing a list of stations, no individual station ID's are required in response.

4.6 LISTING TRAFFIC, STATIONS CHECKING INTO NET

Before going on to net operations stations will need to know how to prepare and transmit the TRAFFIC LIST, and the basic check-in sequence used in various situations.

1) THE TRAFFIC LISTING SEQUENCE:

ID		TFC STATUS	--- TRAFFIC LISTING ---				REQ	END MARK
	1	2	3	4	5	6	7	
CALL	JOBS	TRAFFIC QTC	FORMAL TFC	QNC'S	WDS NET	WDS STN		OVER, <AR>
CALL	JOBS	TRAFFIC QTC	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>
CALL	JOBS	WITH TRAFFIC (VOICE ONLY, TWO STEP CHECK-IN)						
CALL	JOBS	WITH TRAFFIC (VOICE ONLY, TWO STEP CHECK-IN)					[REQ]	OVER, <AR>
CALL	JOBS	NO TRAFFIC, QRU						
CALL	JOBS	NO TRAFFIC, QRU					[REQ]	OVER, <AR>

The full traffic listing sequence may include some or all of the following items in order:

--- **FULL CALL SIGN:** (Always sent first.)

1) **JOBS, ASSIGNMENTS:** (assignments), jobs, liaison net names, if any.

2) **TRAFFIC STATUS:** NO TRAFFIC, WITH TRAFFIC, TRAFFIC.

3) **FORMAL TRAFFIC:** (destination) (quantity) [precedence] [information]

4) **MESSAGES FOR ALL STATIONS, (QNC):** formal radiogram traffic, (not informal words).

5) **WORDS FOR THE NET:** informal words, all net stations, announcements

6) **WORDS FOR STATIONS:** informal words for listed station(s)

7) **ADDED REQUESTS or STATEMENTS [optional]:** Not considered traffic. Requests, statements, offers to take traffic, etc., primarily for benefit of the NCS.

--- **“OVER”, or “<AR>“ (CW)**] (as required)

Each of the 7 categories are discussed in the following sections of the same number.

* **OVER, <AR>:** The full traffic list of uncertain length is always ended with “OVER” (<AR> on CW). In the “No Traffic” (QRU) and Voice “With Traffic” cases, if any “added requests” are included, the “OVER” (<AR> on CW) is also used to terminate the sequence. The “No Traffic” (QRU) and Voice “With Traffic” cases without “added requests” are self completing and require NO “OVER” or <AR>.

* **ALL BUSINESS AT FIRST OPPORTUNITY:** In any case, when called upon to check in to list traffic, a station lists all its business at the first check-in opportunity. A station with multiple liaison jobs, for example, does not have to wait for each NCS liaison call and check in multiple times. It should reply at the first chance with all its assignments and all business. The NCS will note its assignments.

* **PREPARING FOR THE NEXT NET:** Stations usually keep some form of list of traffic received on a net when they are liaisons. Knowing the outlets on the next net permits the station to make a list presorted accordingly. This enables the station to be well prepared with its traffic list when checking into the next net.

* **NCS FILLS:** The NCS may ask for repeats of the traffic list, or requests as needed, as in “HOW MANY FOURTH REGION?”, or on CW “QTC 4RN?” or “UR L QTC?” (your last QTC?), etc.

2) THE CHECK-IN SEQUENCE: The method used by a station checking into a net varies with the type of net call, the mode, the number of expected responders, and the net format itself.

*** SINGLE STEP METHOD:** When the NCS calls for a specific station, or a specific single liaison from another net, the appropriate responding station checks in and completes its entire check-in sequence; call sign, listing all its assignments, traffic status, and if holding traffic, its entire traffic list. When the NCS makes a general call for check-ins, and a particular single station is recognized to check in, this single step method is also used for the station response.

In other words, when it is clear that only one station is to respond to the NCS and check in, this full sequence is used on the respective modes:

NCS recognizes or expects one station, and the STN replies:

VOICE:

(call sign) (assignments) NO TRAFFIC; or

(call sign) (assignments) NO TRAFFIC [(requests)] OVER; or

(call sign) (assignments) TRAFFIC (traffic list) [(requests)].. OVER.

CW:

(call sign) (assignments) QRU; or

(call sign) (assignments) QRU [(requests)] <AR>; or

(call sign) (assignments) QTC (traffic list) [(requests)] <AR>.

The optional requests may also be brief statements or offers to relay or take listed traffic. “No Traffic” or QRU, without requests, does not require an ending “OVER” or <AR>.

*** VOICE, TWO STEP METHOD:** When the NCS calls for a category in which there may be multiple responders, the stations attempting to check in transmit their call signs, assignments, and state only their traffic status, i.e., say that they either have “No Traffic”, or are “With Traffic”.

This technique is used mostly on Section or Local nets to help sort out multiple responders to OPEN or SPECIFIC category net calls.

The NCS will respond to those having “No Traffic” by acknowledging them or dispatching them. The NCS will ask those stations “With Traffic”, one at a time, to “List” their traffic. At that point the station will complete its entire check-in sequence, call sign, listing all its assignments and its full “Traffic List”.

NCS makes a net call expecting multiple responders. Stations reply:

VOICE:

(call sign) (assignments) NO TRAFFIC; or

(call sign) (assignments) NO TRAFFIC [(requests)] OVER; or

(call sign) (assignments) WITH TRAFFIC; or

(call sign) (assignments) WITH TRAFFIC [(requests)] OVER.

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Stations with no traffic are acknowledged by full call sign and asked to wait. Stations with traffic wait for NCS to ask “(call sign) **PLEASE LIST**”, then the method becomes the same as for a single responder (see 4.8.2, OPEN NET CALLS for more information):

(call sign) (assignments) TRAFFIC (traffic list) [(requests)] OVER

Note that “requests” are permitted in both the “No Traffic” and “With Traffic” two step check in sequences. Such “requests” are not considered “traffic” for the status reported. See the explanation in the section on Adding Requests below.

*** CW, TWO STEP METHOD:** On CW nets the multiple responder issue is resolved by each station sending a single letter, waiting to be recognized by the NCS (who will repeat the single letter as a signal to proceed), then the station checks in with its entire sequence, listing all its assignments, status, and traffic list if holding traffic. Once recognized, the station therefor replies as a single responder.

CW:

STN: (1 letter)

NCS: (repeats 1 letter)

STN: (call sign) (assignments) QRU; or

STN: (call sign) (assignments) QRU [(requests)] <AR>;

STN: (call sign) (assignments) QTC (traffic list) [(requests)] <AR>.

Note that “requests” are permitted in both the “QRU” and “QTC” listing sequences. Such “requests” are not considered “traffic” for the status reported. See the explanation in the section on Adding Requests below.

4.6.1 ASSIGNMENTS

*** JOBS/ASSIGNMENTS:** If a station has any specific net job, or liaison assignments from or to other nets, these are listed as the assignments immediately following the call sign: (call sign) (assignments).

	1	2	3	4	5	6	7	
CALL	JOBS	STATUS	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>

*** JOBS**, such as Alternate Net Control (ANC), are said in plain words on voice, and given as the letter abbreviations on CW. They are given before other liaison assignments.

*** LIAISON ASSIGNMENTS;** are specifically assigned to stations by the NCS stations on nets, or assigned in advance by the Net Manager (and may be listed on a net roster). They are NOT used simply to indicate a net visited by a station prior to checking in, but to indicate that their station has been designated as an official representative from or to a net.

Liaison assignments are given on voice as the full name of the net in words, or the abbreviation without introduction or phonetics, and on CW as the abbreviation.

When a station represents more than one net, the names of the nets from which it is coming are listed before those to which it is going.

Typical liaisons:

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* AREA NETS REGION LISTING:

EAN: Regions 1RN, 2RN, 3RN, 4RN, 8RN, ECN (11), ARN, CAN, PAN, TCC

CAN: Regions RN5 (5), 9RN, TEN (10), EAN, PAN, TCC

PAN: Regions 6RN, 7RN, TWN (12), CAN, TCC

Each Region has a TX rep, voiced as in “FIRST REGION TRANSMIT”, or “ONE R N TRANSMIT”, on voice; 1RN TX on CW; and an RX rep voiced in similar fashion. ECN is the Eastern Canada Net, ARN is the Atlantic Region Net. EAN, CAN, and PAN are the Eastern, Central and Pacific Area Nets; TCC the Trans-continental Corps. Certain TCC liaisons may be identified by their TCC schedule letters, as in “ROMEO”, or “VICTOR”.

* REGION NETS, 12 Regions, listed above: Each provide the TX and RX reps for the Area Nets mentioned above, and have single liaisons on both sessions representing each of the Section Nets within their Region. Region nets meet twice in any given full cycle.

* SECTION NETS: ARRL Sections, or combined Sections, each provide liaisons to the early and late sessions of their respective Region Nets, earlier or later NTS cycle nets, and receive liaisons from and to Local Nets in the Section. Section nets meet twice in any given full cycle. Section Net names vary throughout the US. Consult with the NM or operators for the abbreviation used.

* LOCAL NETS: NTS affiliated local nets (usually covering limited areas or parts of a Section, and often on 2 meters or UHF) generally have liaisons to/from the Section Nets. Consult with the NM or operators for the abbreviation used.

* **AUXILIARY LIAISONS:** Additional stations over and above the normal liaisons sent between nets are called auxiliary liaisons and check into nets indicating AUXILIARY on voice, AUX on CW. They may be used at all levels. “W3XX 3 R N TRANSMIT AUXILIARY”, or “W3XX THIRD REGION TRANSMIT AUXILIARY”; or W3XX 3RN TX AUX on CW.

* **BOTH:** On Area Nets where a station is performing both the TX and RX functions from/to Region it checks in as “BOTH”, as in: W3RX 3RN BOTH.

* **FROM, TO:** In those rare cases where the direction of a liaison (bringing incoming or taking outgoing traffic is not clear), the word FROM or TO (or both) may be used ahead of the respective net name(s); as in W3XX FROM MEPN TO MDD, or W3XX FROM AND TO MDD for a roving liaison, or W3XX FROM 3RN TO BTN AND MDD..

* The NTS nets are listed in the ARRL NET DIRECTORY.

Examples of assignments, CW only. They are given on voice in similar fashion with TX voiced as “transmit”, RX as “receive”, AUX as “auxiliary”, net names as either the abbreviation or full words.

* ON EASTERN AREA NET:

W2XX CAN; station on EAN going to CAN (TCC schedule ALPHA).

W3TX 3RN TX; TX station from 3RN, to the EAN.

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W3XX 3RN AUX TX; TX station helping bring extra 3RN traffic to EAN.

W3RX 3RN RX; RX station to 3RN, checking into EAN.

W3RX 3RN BOTH; station performing both TX and RX 3RN duties on EAN.

* ON THIRD REGION NET (3RN) EARLY:

W3TX EAN TX; station to EAN, TX.

W3XX EAN BOTH, going to EAN as TX and RX.

* ON 3RN LATE:

W3RX EAN; station from EAN, RX bringing down EAN traffic.

* ON SECTION NET:

W3XX 3RN; station on MDD Section net, to early 3RN or from late 3RN.

W3XX ANC 3RN MDD; ANC, from 3RN and to MDD. FROM and/or TO may be used.

4.6.2 TRAFFIC STATUS

The traffic status follows the assignments. (call sign) (assignments) (status):

	1	2	3	4	5	6	7	
CALL	JOBS	STATUS	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>

STATUS

VOICE:

... NO TRAFFIC, or NO TRAFFIC [(requests) OVER];

... WITH TRAFFIC, or WITH TRAFFIC [(requests) OVER]; (two step),

... TRAFFIC (traffic list) [(requests)] OVER; (when listing).

CW:

... QRU, or QRU [(requests) <AR>];

... QTC (traffic list) [(requests) <AR>].

* TRAFFIC:, QTC: is used to introduce the traffic list even when the only traffic listed is informal words for the net or a station. It is not required when listing only requests/statements.

All stations checking into traffic nets should give a traffic status, whether checking in on voice with a two step process or not. Failure to give traffic status leaves the question unanswered which forces the NCS to ask. This wastes valuable net time.

* NO TRAFFIC, QRU case: "OVER" or <AR> is NOT required unless a request/statement is included.

4.6.3 LISTING FORMAL RADIOGRAMS

	1	2	3	4	5	6	7	
CALL	JOBS	STATUS	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>

FORMAL TFC: (dest) (qty [prec]) [(information)] ... (dest) (qty [prec]) [(information)]...

Following (call sign) (assignments) (traffic), the general format for listing formal radiograms (the first of a series of types of traffic constituting the "traffic list") follows. Note that the optional precedence ([prec]) is omitted for Routine traffic:

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* **BOOK OF (qty):** May be used ahead of group of messages to alert the NCS so dispatching of all recipients may be made together. (qty) is the total number of messages in the book. See BOOK OF (qty) below.

* **<AA>**: The <AA> separator may be inserted between items on CW for clarity if necessary.
W3XX QTC LAUREL 1 TEL 301 555 <AA> 3RN 2 <AR>

The use of <AA> has diminished in recent years and is more often omitted in favor of appropriate pauses. On Area/Region Nets where the list is very succinct the <AA> between items is omitted, and items are listed in specific order.

* **(dest) (qty [prec])**

(dest. = destination, qty. = quantity, prec. = precedence above R. Items in brackets are optional.):
... (dest) (qty [prec]), for each message listed; or

* **(dest) (qty [prec]) (information)**

To help determine outlets in the local area:

... (dest) (qty [prec]) [(Tel. area + prefix)] [zip code];

For a station on the net:

... (station call sign) (qty [prec])

For a station not on the net, to help determine an outlet:

... (dest) (qty [prec]) [FOR (station call sign)]

Notes:

* **(dest)**, DESTINATION: net name, "through", city, or call sign.

The DESTINATION, (dest), is stated in different ways depending on the net and its outlets. The destination could be a station on the net, a city in the local net area, a net name, or the next higher or lower net in the NTS system for traffic going out of the local area or net jurisdiction.

NET STATIONS: Traffic for net stations is listed as: (call sign) (qty [prec]). Traffic for an amateur in a given city/town may be listed as (dest) (qty [prec]) FOR (call sign). This can help with finding outlets.

GROUP OF NET STATIONS: Traffic for a group of net stations, such as served agency liaisons in various jurisdictions, types of liaisons, etc., may be listed as (station type) (qty [prec]), etc.
Example: TRAFFIC ALL EOCS TWO; QTC ALL EOCS 2.

On Section and Local Nets the destination may be listed for outlet locations in the Section or Local Net covered area, stations on the net, other Nets, or Through (see below). Stations checking into Section or Local nets should prepare and keep handy a list of toll free telephone exchanges that can be called, a zip code directory, and maps of the area. Club directories are useful. Access to an internet data base for verifying names, addresses, zips and phone numbers for message addressees, and city/town/zip map data bases, can be useful, particularly if searches by category can be made. Thus a station can volunteer to take listed traffic with confidence.

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The out-of-jurisdiction traffic destination is listed as the name of the net represented by a liaison station for outbound traffic. This is usually a Region net or Local Net when you are in a Section net; an Area Net or Section Net when in a Region net; a Region or other Area Net when on an Area Net; or the name of a special liaison net connection or digital system target. Consult with the NCS regarding the proper target destination if you are not familiar with the net's liaison arrangements or routing.

“THROUGH”, or “THRU” on CW, may be used to refer to the name of the next higher net on Local, Section, or Region Nets, particularly if you do not know that net name.. “TRAFFIC THROUGH TWO”, or QTC THRU 2, would be routed to the liaison to the next higher net.

Traffic on Area and Region Nets is mostly listed for the liaisons carrying traffic to other nets. The (dest) is therefor the target net (net name). These net/liaison names are usually letter groups, or mixed number/letter groups, as in “2RN”, “EPA”, “EAN”, CAN, ARN, etc.

On Area nets the sequence of liaison destination listing is specified in the net format; as in (for Eastern Area Net): 1RN, 2RN, 3RN, 4RN, 8RN, ECN, ARN, CAN, PAN, (other); and traffic would be listed: 1RN 3.. 2RN 6.. CAN 5... , etc., omitting those for which no traffic is held. Similar orders are used on CAN and PAN. On VOICE these Regions may be voiced as “FIRST REGION”, “SECOND REGION”, and so forth. Some operators may choose to say “ONE R N”, “TWO R N”, etc. Introducers and phonetics are seldom used.

NOTE TO LIAISONS: When carrying traffic to Region Nets where message addresses are for parts of states in which there is more than one Section, it may be difficult to know which Section liaison should receive it. Often such Sections will have a list of zip codes available for their parts of the state. Obtaining that information is very useful to enable listing traffic for the correct Section rep without having to ask for routing during the net.

* (qty [prec]), QUANTITY The number of messages for the destination of a given precedence. Books are counted 1 for each separate message contained therein.

* [prec], PRECEDENCE for the given quantity (not given for Routine traffic). Messages of different precedence are listed separately, as in: PODUNK 2 PRIORITY.. PODUNK 3 WELFARE.. PODUNK 4, the last 4 being Routine. On CW: PODUNK 2 P.. PODUNK 3 W.. PODUNK 4. A book with different precedences on the various messages may still be listed accordingly in the BOOK list --- (dest) (qty [prec]) for each.

Note that the [prec] syntax is omitted throughout this manual. The precedence should be appended to the (qty) with a space where necessary. Remember to append the precedence after the (qty) if the traffic is not Routine, and special handling is practical or required. Priority (P) and Welfare (W) messages for each destination are listed separately when required so that the NCS may note and handle them accordingly.

Priority or Welfare traffic is seldom listed separately on Area/Region Nets unless the holding station sees some compelling time dependence requiring special handling. The liaisons normally can not move the traffic until the next scheduled Region or Section net. In those cases where a time urgency is noted, special handling should be arranged by the NCS and stations involved.

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* EMERGENCIES should be declared to the net rather than listed as traffic to be processed. The net operations should immediately be devoted to handling the Emergency traffic by any means available.

* **(information):** TEL., ZIP, COUNTY, FOR (call sign), etc.: These optional information notations following (qty [prec]) are often used on Section or Local nets to help indicate to possible outlets if the addressee is within their range. This helps the NCS and listening stations. On Area/Region Nets such information is not required. All traffic on those nets is directed to liaisons.

* **BOOK OF (qty):** Books are listed as the destination/quantity of individual messages contained therein. For a book that can be handled by ONE STATION there is no need to advise the NCS that the messages are booked. Simply list the individual messages and quantities by precedence.

List books **last** in the formal traffic list to prevent ambiguity in the list, otherwise a separator must be added to continue after the BOOK list with any additional single destination listings.

A book with different precedences on the various messages may still be listed accordingly in the BOOK list --- (dest) (qty [prec]) for each.

On AREA and REGION NETS all book traffic must be re-booked by the sender for each liaison outlet available on the net. In other words, a book of 7, 3 for 2RN and 4 for 3RN, must be listed as "2RN 3.. 3RN 4" for the normal separate dispatching. Books are seldom sent to multiple stations simultaneously on these nets, and are not usually listed as such. It is permitted, however, and may be listed as in "BOOK OF TEN 2RN 6.. 3RN 4" on EAN, or "BOOK OF 12 EPA 8.. WPA 4" on 3RN. The NCS may elect to dispatch multiple liaisons, as also done below.

On Local/Section Nets if the booked messages can be received by MULTIPLE SEPARATE STATIONS, it is helpful to advise the NCS of this so that all the receiving stations may be dispatched together. This can be an economy for these nets. In all cases the individual destinations and quantities are separately listed. Those to be received by separate stations may be grouped together and introduced as a book to help the NCS; as in "BOOK OF 5 DC 1.. LAUREL 2.. BOWIE 2". The fixed parts of the book will be sent once to all stations thus saving valuable time (if the NCS can schedule dispatching the receiving stations together without incurring other more serious delays).

* LISTING EXAMPLES

VOICE:

W3XX TRAFFIC WPA TWO.. EAN FIFE.. OVER; or
[W3XX TRAFFIC WESTERN PENNSYLVANIA TWO.. EASTERN AREA FIFE OVER]
W3XX TRAFFIC LAUREL ONE PHONE 301 555 OVER;
W3XX TRAFFIC LAUREL ONE.. WHISKEY THREE ROMEO X-RAY ONE OVER;
W3XX TRAFFIC LAUREL ONE FOR WHISKEY THREE X-RAY ALPHA OVER;
W3XX TRAFFIC LAUREL ONE PRIORITY.. LAUREL TWO OVER.
W3XX TRAFFIC BOOK OF 5 LAUREL TWO.. PODUNK TWO.. W3RX ONE OVER.

CW:

W3XX QTC WPA 2 EAN 5 <AR>;

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W3XX QTC LAUREL 1 TEL 301 555 <AR>;
W3XX QTC LAUREL 1.. W3RX 1 <AR>;
W3XX QTC LAUREL 1 FOR W3XA <AR>.
W3XX QTC LAUREL 1 P.. LAUREL TWO <AR>
W3XX QTC BOOK OF 5 LAUREL 2.. PODUNK 2.. W3RX 1 <AR>.

4.6.4 LISTING FORMAL MESSAGES FOR ALL STATIONS (QNC)

	1	2	3	4	5	6	7	
CALL	JOBS	STATUS	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>

Such traffic is not usually handled on Area or Region nets. This is a formal radiogram to be sent, not informal words. List in the traffic list after other formal traffic as:

VOICE:

... MESSAGE FOR ALL STATIONS (qty [prec]). (“Q” signals are not used operationally on voice, and, although QNC might be used in that fashion here, saying it with words is consistent.)

CW:

... QNC (qty [prec])

4.6.5 LISTING INFORMAL WORDS FOR THE NET (ANNOUNCEMENTS)

	1	2	3	4	5	6	7	
CALL	JOBS	STATUS	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>

Such traffic is not usually handled on Area or Region nets. This is distinct from and NOT formal traffic for the net stations. List informal words and announcements after formal traffic as:

VOICE:

... WORDS FOR THE NET; or [ANNOUNCEMENT FOR THE NET]

CW:

... WDS FOR NET; (This is sometimes listed as a QNC in error, forcing the NCS to make note of the informality when sent and not count the words as formal traffic passed.)

4.6.6 LISTING WORDS WITH STATIONS

	1	2	3	4	5	6	7	
CALL	JOBS	STATUS	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>

Such traffic may be listed on nets at any level.

* Words are listed last in the traffic list to avoid conflict with any subsequent formal message for a call sign and the resultant need for a separator.

Words may be requested with a station or stations on the net listed by call sign, liaison name, or title. The group [WITH] is sometimes used following “WORDS”, but is not required. Listing a request to have informal words:

VOICE:

... WORDS (call sign); or

... WORDS (call sign) WORDS [WITH] (call sign)... ;

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... WORDS (call sign) (call sign)... , etc., for multiple listings;
... WORDS (title, NCS, liaison, name, etc.); or even
... [WORDS YOU] for the NCS, in the ultimate shorthand.

CW:

... WDS (call sign); or WDS (call sign) WDS (call sign)...; or
... WDS (call sign) (call sign)...], for multiple listings;
... WDS (NCS); or even [WDS U] for the NCS in shorthand.

NOTE: The use of WORDS (call sign), or WDS (call sign), may be repeated for each individual station desired, but may also be listed as shown for multiple listings.

* TOGETHER: Multiple call signs following a single “WORDS” request may or may not be interpreted as a request to talk with all of the stations together at the same time. Although not widely used, it is suggested that a desire to talk to a number of stations together on or off net be listed as:

VOICE: ... WORDS (call sign) (call sign).. TOGETHER;
CW: ... WDS (call sign) (call sign).. TOGETHER;

Otherwise a sharp NCS will have to ask. Without the “TOGETHER” the default assumption for multiple listings is the request to talk to each separately.

4.6.7 ADDING REQUESTS, COMMENTS

	1	2	3	4	5	6	7	
CALL	JOBS	STATUS	FORMAL TFC	QNC'S	WDS NET	WDS STN	[REQ]	OVER, <AR>

[(requests)] are optional additional requests or information to be passed to the NCS and may be included after either “No Traffic” (QRU) , “With Traffic” (two step voice), or the full traffic list. Added requests are therefor not considered or treated as “traffic”.

When present, requests/statements are followed by “OVER” or <AR> since they are of uncertain length.

Although added requests in the two step “With Traffic” case can be withheld for the full listing check in sequence, the added request option is shown in this case for those stations checking in “With Traffic” and wishing to volunteer for an assignment, to take traffic, or simply indicate that they have a “REQUEST” or “COMMENT”, etc. When recognized to check in, such stations may present their full list of business, including a fully expanded list of requests or statements.

Requests/statements may be listed on nets at any level. They are not listed as “traffic”. If the NCS is calling for stations with additional business for the net, a station with only requests or statements may ask to be recognized and then list them informally without giving a “status”.

In either case the NCS often has to record such requests or comments to service them. Remember to transmit them at copy speed unless they are of an immediate operational nature, such as volunteering to take specific traffic or take a specific job.

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*** REQUESTS, QUERY, INFO BY STATIONS WITH NO TRAFFIC, ETC.**

Such additional comments may be included even if you check in with NO TRAFFIC. In this case, limit the size of requests so as not to slow down the check in process for several stations attempting at the same time. For long requests it is better to indicate that you have a “REQUEST” and let the NCS ask you to make it, as in:

... W3XYZ NO TRAFFIC [REQUEST] OVER; or [QUERY]; or [INFO], etc.

The NCS will ask you to make your request, query, or statement, etc..

*** REQUESTS, QUERY, INFO FOLLOWING THE TRAFFIC LIST:**

Following the traffic list, words may be added to make a specific request of the NCS regarding a station’s net business. Such items may include brief requests for being excused from the net promptly, explaining that you are substituting for another station, or volunteering to accept traffic previously listed on the net, other requests, queries, comments, etc. Keep them brief.

Avoid adding comments to the traffic list unless they are essential to your business. Requesting expeditious release from the net, offering to accept specific traffic , etc., are certainly acceptable additions at the end of the list. Comments of a more social nature or not related to net business at hand should be avoided or listed as a request to have words with the NCS or net.

If the request or info is essential to the operation of the net, so list.

4.6.8 EXAMPLES OF TRAFFIC LISTS AND REQUESTS

ID		TFC STATUS	--- TRAFFIC LISTING ---				REQ	END MARK	
	1	2	3	4	5	6	7		
CALL	JOBS	TRAFFIC, QTC	FORMAL TFC	QNC’S	WDS NET	WDS STN		OVER, <AR>	
CALL	JOBS	TRAFFIC, QTC	FORMAL TFC	QNC’S	WDS NET	WDS STN	[REQ]	OVER, <AR>	
CALL	JOBS	WITH TRAFFIC (VOICE ONLY, TWO STEP CHECK-IN)							
CALL	JOBS	WITH TRAFFIC (VOICE ONLY, TWO STEP CHECK-IN)						[REQ]	OVER, <AR>
CALL	JOBS	NO TRAFFIC, QRU							
CALL	JOBS	NO TRAFFIC, QRU						[REQ]	OVER, <AR>

There are many permutations. The no-traffic cases are shown here to demonstrate the requests addition when used. A few examples follow:

VOICE (use proper voicing rules where needed)

- 1) W3XYZ NO TRAFFIC (“over” not required)
- 2) W3XYZ NO TRAFFIC REQUEST TO BE EXCUSED OVER
- 3) W3XYZ NO TRAFFIC REQUEST, or ... QUERY, or ... INFO, OVER
- 4) W3XYZ NO TRAFFIC CAN TAKE LAUREL OVER
- 5) W3XYZ TRAFFIC PODUNK 1 PRIORITY.. 3RN 3.. WORDS WITH W3ABC OVER
- 6) W3XYZ TRAFFIC 3RN 3.. BOOK OF 5 PODUNK 2.. LAUREL 2.. BTN 1 OVER
- 7) W3XYZ TRAFFIC PODUNK 2 PHONE 410 555.. WJ3K 1.. 3RN 3.. ALL STATIONS 1.. WORDS FOR THE NET.. WORDS W3ABC.. CAN TAKE LAUREL.. NEED TO BE OUT BY SEVEN THIRTY PLEASE OVER
- 8) W3XYZ **THIRD REGION TRANSMIT.. TRAFFIC FIRST REGION 2.. SECOND REGION 4.. EIGHTH REGION 3.. W2FR 1 OVER**

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(Introducers and phonetics for net names are usually omitted. Spelling town names is useful, as are phonetics for call signs unfamiliar to the net.)

CW:

- 1) W3XYZ QRU (no <AR> or K required)
- 2) W3XYZ QRU QNX PSE <AR>
- 3) W3XYZ QRU REQUEST, or QRU QUERY, or QRU INFO <AR>, etc.
- 4) W3XYZ QRU QSP LAUREL <AR>
- 5) W3XYZ QTC PODUNK 1 P.. 3RN 3.. WDS W3ABC <AR>
- 6) W3XYZ QTC 3RN 3.. BOOK OF 5 PODUNK 2.. LAUREL 2.. BTN 1 <AR>
- 7) W3XYZ QTC PODUNK 2 TEL 410 555.. WJ3K 1.. 3RN 3.. QNC 1.. WDS W3ABC.. QSP LAUREL.. QNX BY 730 PSE <AR>
- 8) W3XYZ **3RN TX**.. QTC 1RN 2.. 2RN 4.. 8RN 3.. W2FR 1 <AR>

NOTES:

The prosign <AA> may optionally be used to separate items for clarity on CW if necessary (as in 6), but is seldom used when listing liaison traffic on the higher nets.

Pausing between items aids in clarity when transmitting the list. Send at copy speed.

Listing BOOKS (6) is usually only done at Local/Section level and is shown above (BOOK OF 5) to aid the NCS in choosing to dispatch the PODUNK, LAUREL, and BTN together.

Note the use of the call sign, assignments, and the word “TRAFFIC” on voice (QTC on CW) to begin the traffic list. It is used even if the list contains only informal business such as “WORDS”. This is the formal way to introduce the traffic list. “TRAFFIC” or QTC is not used to introduce requests/statements alone.

Note in example 5 the PODUNK 1 P priority message.

Note in example 8 “3RN TX” is the station’s “assignment”, the only example with same.

4.7 OPENING THE NET, NET PREAMBLE

The NCS calls the net promptly at the scheduled time. If the assigned station is not present by one minute after the scheduled time, the alternate net control (if called for in the format) or any other qualified net station should begin the net. If the assigned station shows up thereafter it is the option of the operating NCS to relinquish net control. This rapidly becomes impractical once stations are checked in and business listed, etc.

A “directed” net is one in which all communications are directed by a net control.

Net formats vary widely. Consult the Net Manager or other net control stations for your traffic net. Typically:

VOICE:

NCS: CALLING THE (net name) NET.. THIS IS (call sign) NET CONTROL [NCS may insert name and location.] THIS IS A DIRECTED NET

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[NCS transmits the NET PREAMBLE, if specified in the net format].. [STATIONS WITH EMERGENCY TRAFFIC PLEASE?, if specified in the net format. If no response continue, else handle immediately.]

NCS: THIS IS (call sign) (net name) [ALTERNATE NET CONTROL PLEASE?, if in format] (ANC checks in with full call and traffic list.)

The NCS will then proceed with calling LIAISONS depending upon the net format or style, or may begin with an OPEN call by asking for STATIONS WITH OR WITHOUT TRAFFIC.

CW:

(The CQ is used and the net name is often repeated 3 times on the first opening net call):

NCS: CQ (net name) (net name) (net name) DE (call sign) QND [PSE] QNZ (net name)...

The NCS will then proceed with calling liaisons depending upon the net format or style. This is often begun with QNA followed by a series of calls and check-ins for net liaisons, else the OPEN call (net name) QNI [or (net name) K] is made. The CQ is usually dropped on subsequent open net calls.

* NOTES:

Area and Region Nets may call specific liaisons immediately, or may make an OPEN net call. Area and Region Nets expect mostly liaison stations to check in. The TX liaisons on Area Nets are usually expected to check in first to get the traffic listed, and the RX reps are often called by the NCS as soon as they are needed.

Section nets will usually call specific liaisons before going to OPEN calls. Some Local/Section nets have numerous SPECIFIC net calls to help sort out check-in categories, and the net may call for stations wishing to leave early, and calls for comments from remaining stations during the course of the net. The NCS interweaves the dispatching of traffic with the more social activities. CW nets and Area/Region Nets seldom have alternate net controls (ANC). Any capable station may assume net control if there is a problem. These nets seldom have social commentary, using instead the listing of “words” between stations as needed.

All communications are at the direction of the NCS.

See also OPEN NET CALLS in a later section.

4.8 NET CALLS, CHECKING STATIONS INTO THE NET

Net CALLS are used to control the process of checking in stations in the opening phase of the net operation and throughout the net as needs arise. The NCS checks liaison and other stations into the net as a result of OPEN calls for any station, or SPECIFIC calls for liaisons, specific stations, categories, relay stations, or to solicit information or volunteers.

OPEN CALLS anticipate multiple responders. SPECIFIC CALLS for a specific station or single liaison anticipate a single responder. Other SPECIFIC CALLS anticipate any responder in the

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category called. Separate sections deal with single and multiple responder cases since the NCS strategy for handling these situations and the station responses vary accordingly.

In the following sections the call types are separated into SPECIFIC CALLS (single responder), OPEN CALLS (any station), and SPECIFIC CALLS (limited categories), to show the different methods.

4.8.1 SPECIFIC CALLS, JOB, LIAISON, CALL SIGN, 1 RESPONDER

This is the workhorse SINGLE RESPONDER net call for a specific station or liaison.

Other returning stations or stations already checked into the net usually do not respond after such calls since the calls are considered “closed to others”. This is particularly so during a net opening sequence of liaison calls (QNA series). Returning or net stations may use tail ending after a pause at the discretion of the NCS.

If a station assigned a specific job is not present the NCS should solicit a volunteer to perform the job. This is often done right after finding no response to a call for an assigned station, but may be delayed for a reasonable grace period. See CALL VOLUNTEERS FOR MISSING LIAISONS.

If the single station called is a traffic addressee or an anticipated outlet for traffic, and does not check in, the NCS should repeat the call during the net, or ask for an alternate relay to move the traffic at some point. See the section ASSIGN, CALL NET UNASSIGNED TRAFFIC LIST.

Commands shown here are for checking in stations for specific jobs, specific liaisons, specific outlets, or specific returning stations. The syntax for questions or commands to specific stations in other transactions is shown elsewhere, as in calls for relays, holding traffic, dispatching, excusing, etc.

Stations check in with NO TRAFFIC or with their full TRAFFIC LIST, listing all business at this opportunity if checking in for the first time. This is the SINGLE RESPONDER case.

* The SPECIFIC JOB, LIAISON, STATION, SINGLE RESPONDER CALL:

VOICE:

* At ID time: The NCS begins the call:

... [THIS IS] (call sign) (net name)...; or

... (net name) [THIS IS] (call sign)...; etc.

NCS: (specific net job) [PLEASE]?; for a job, as in ANC, or

NCS: (net name) [REP PLEASE]?; for a liaison, or

NCS: (call sign) [PLEASE]?; for a specific station.

* **RESPONSE:** Specific station.

STN: (call sign) (assignments) NO TRAFFIC [(req) OVER]; or

... (call sign) (assignments) TRAFFIC (traffic list) [(req)] OVER

Acknowledgment by NCS:

NCS: (call sign) STAND BY; or [(call sign) WAIT]; or

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... [(call sign) THANK YOU PLEASE STAND BY], etc.,
or the NCS may call an outlet and/or dispatch the station for traffic.

* CALLING A SPECIFIC RETURNING STATION:

NCS: (call sign)?; or [(suffix)?]; query makes call clear;

STN: (suffix) BACK; or reports no joy if applicable.

NCS: repeats the (suffix) to acknowledge, or dispatches station.

VOICE Examples:

(Mixed group abbreviations for net names are shown for simplicity. Saying the net name in words, as in "First region transmit" is consistent with voicing rules. Saying the mixed group without introduction and phonetics is also a customary shortcut used.)

NCS: 1RN TRANSMIT?, or [FIRST REGION TRANSMIT?]

STN: W1TX 1RN TRANSMIT.. NO TRAFFIC

NCS: W1TX STAND BY.. 2RN TRANSMIT?

STN: W2TX 2RN TRANSMIT.. TRAFFIC 3RN 3.. W2FR 1 OVER

To acknowledge and go on with the series:

NCS: W2TX STAND BY...;

Or to acknowledge by implication, calling an outlet and dispatching using the Immediate Dispatch or Split Dispatch (These techniques will be presented again in the Dispatch sections.)

VOICE:

* CALL LIAISON, IMMEDIATE DISPATCH:	* SPLIT DISPATCH:
NCS: 3RN RECEIVE? STN: W3RX 3RN RECEIVE NO TRAFFIC NCS: W3RX W2TX UP 5 3RN (BOTH STATIONS ARE ACKNOWLEDGED BY IMPLICATION.)	NCS: W3RX... STN: HERE (implied RX QRU) NCS: ... W2TX UP 5 3RN (COMPLETING THE SPLIT DISPATCH. IF W3RX CHECKS IN WITH TRAFFIC, THE TWO STATION DISPATCH IS USED.)

(If NCS knows the RX rep is present, but not yet checked in, the dispatch may be immediate.)

STN: W2TX 2RN TRANSMIT TRAFFIC 3RN 3 W2FR 1 OVER (as above, repeated);

NCS: W3RX W2TX UP 5 3RN (knowing that W3RX was present)

Stations acknowledge and depart:

W3RX: RX GOING;

W2TX: TX GOING; both stations depart for stack frequency.

NCS: W2FR?; calls next outlet;

W2FR: W2FR NO TRAFFIC

NCS: W2FR UP 5 W2TX AFTER W3RX FR; (Immediate dispatch.)

W2FR: FR GOING

Calling a returning station:

NCS: W3XX?; or XX?

STN: XX BACK; (returning station, job completed);

NCS: XX; or immediately dispatches W3XX for another job.

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* **THE SPECIFIC JOB, LIAISON, STATION, SINGLE RESPONDER CALL:**

CW:

* At ID time: The NCS begins the call:

... [DE] (call sign) (net name)...; or

... (net name) [DE] (call sign)...

QNA (“Answer in prearranged order.”) is optional. When used it is customary to use QNA once to call a series of specific liaisons or stations by call sign at the opening of the net. If these calls are made singly at another time, use the QNA for each one, or add a query to the end of the call sign for each call. The query is optional for a (net name) liaison, but recommended for a (job) or (call sign) call to avoid ambiguity with other syntax.

1) IN A QNA SEQUENCE, checking in the station after each specific call, then continuing the series:

NCS: QNA ANC; for a job; (check in station with job); or

... (net name); for a liaison; (check in liaison); or

... (call sign); for specific station; (check in station).

“K” is not needed since each call is part of the QNA series.

2) Or, as INDIVIDUAL CALLS at any other time not in QNA series:

NCS: ANC?; or [QNA ANC];

... (net name); or [(net name)?]; or [QNA (net name)]

... (call sign)?; or [QNA (call sign)]

The query is not required in the QNA case. “K” is not needed.

* **RESPONSE, CW, Specific station:**

STN: (call sign) (assignments) QRU [(req) <AR>]; or

... (call sign) (assignments) QTC (traffic list) [(req)] <AR>.

Acknowledgment by NCS:

NCS: (call sign) <AS>; or [(call sign) GE TU PSE <AS>];

... or NCS may call an outlet and/or dispatch the station for traffic.

* **CALL FOR RETURNING STATIONS, CW**

NCS: (call sign)?; or [(suffix)?] ; query makes the call clear;

STN: (suffix); or reports no joy if applicable.

NCS: repeats (suffix) to acknowledge, or dispatches station.

CW Examples:

NCS: QNA 1RN TX;

STN: W1TX 1RN TX QRU

NCS: W1TX <AS> 2RN TX; (<AS> ends W1TX QNI, 2RN TX is the next call.)

STN: W2TX 2RN TX QTC 3RN 3 FR 1 <AR>

NCS: W2TX <AS>; to acknowledge and go on with QNA series, or

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To acknowledge by implication by calling outlet and dispatching immediately.

CW:

* CALL LIAISON, IMMEDIATE DISPATCH:	* SPLIT DISPATCH:
NCS: 3RN RX STN: W3RX 3RN RX QRU NCS: W3RX W2TX UP 5 3RN (BOTH STATIONS ARE ACKNOWLEDGED BY IMPLICATION.)	NCS: W3RX... STN: T (implied RX QRU) NCS: ... W2TX UP 5 3RN (COMPLETING THE SPLIT DISPATCH. IF W3RX CHECKS IN WITH TRAFFIC, THE TWO STATION DISPATCH IS USED.)

(If NCS knows the RX rep is present, the dispatch may be immediate.)

STN: W2TX 2RN TX QTC 3RN 3 FR 1 <AR>, (QNI as above, repeated);

NCS: W3RX W2TX UP 5 3RN (knowing that W3RX was present)

Stations acknowledge and depart:

W3RX: T;

W2TX: T; both stations depart for the stack frequency.

NCS: W2FR; (no “?” since in QNA series, otherwise W2FR?)

W2FR: W2FR QRU

NCS: W2FR QNQ UP 5 W2TX FR; or [W2FR QNQ UP 5 W2TX U 1]

W2FR: T; immediately dispatched up 5.

And a call later, not in a QNA sequence, “?” added:

NCS: PAN?, or [QNA PAN]; for the PAN rep

NCS: W2MTA?, or [QNA W2MTA]; for W2MTA.

NOTES: The NO TRAFFIC, or QRU, statement is self completing unless a request is placed thereafter.

On CW the query (?) is recommended following a specific call sign request in order to avoid conflict with the syntax of a normal dispatch sequence. It is sometimes omitted, but this practice can encourage stations to respond during a dispatch which is considered poor practice.

Responding with a “dit” during a dispatch sequence (the “are you awake” response on slow training nets.) is considered an interruption by the NCS station and should be dispensed with.

The split dispatch is the exception used by experienced NCS stations and participants.

The NCS acknowledges a new station by call sign, or may optionally dispatch it to receive or send traffic. The STAND BY, or <AS> concludes the acknowledgment transaction, and is self completing. The acknowledgment by the dispatched stations ends that type transaction.

Returning stations, called specifically to expedite net business, are acknowledged by suffix, or immediately dispatched. In both cases the syntax is self completing.

See DISPATCHING, 2 STNS TO STACK, FULL, IMMEDIATE, SPLIT, for more information on the IMMEDIATE and SPLIT methods and alternatives.

On Area/Region Nets is it not uncommon for the NCS to apparently ignore the station’s transmission altogether, call for a rep for the listed traffic if not already checked in, and/or immediately dispatch the two stations off frequency to begin handling traffic. This dispenses with

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the need to acknowledge the station which understands from the dispatch that it is checked in with traffic listed. This is a subtle, rapid, efficient way of doing business often used on such nets.

The NCS may use these SPECIFIC calls throughout the net, to check in a specific station by call sign for whom traffic is listed, or, after having traffic listed for a particular net, to check in the specific liaison immediately for a dispatch.

Calling a net station with (call sign)? or (suffix)? to ask a question, expecting the station to first acknowledge, is of the same form.

NCS notifies the station NET HAS TRAFFIC FOR YOU, or QNU, only if there is a need to notify the station of pending business or to explain why the station is asked to wait.

Auxiliary liaisons from the called net will check in during OPEN calls, or a tail end opportunity, since the "(net name) call" (for a single liaison net) is for one expected assigned primary responder.

NCS may hold a TX rep who is QRU until the RX rep shows up in case help is needed to that Region Net. Section/Local Nets may also hold their outbound liaisons for late listed traffic.

On Area Nets the RX and TX stations check in accordingly. A station performing both tasks should check in indicating "BOTH" in the assignments block, and reply whichever assignment is called first.

Stations should not interrupt transactions.

* **GREETINGS:** The NCS and stations usually utter greetings, etc., before the command syntax so that commands remain self completing, as in:

VOICE:

NCS: W1TX GOOD EVENING BILL.. STAND BY;

(STAND BY is a line terminating command ending the transaction, no reply expected.)

CW:

NCS: W1TX GE BL <AS>

NCS: 3RN RX?

STN: GE JIM W3RX 3RN RX QRU (QRU is the line ender.)

NCS: TU GE W3RX W2TX UP 5 3RN; immediate dispatching.

4.8.2 OPEN NET CALLS, QNI (ANY STATION)

The OPEN CALL is made anticipating multiple responders in any category. New stations, returning stations, or stations already in the net may gain the attention of the NCS to be heard.

The NCS makes, and periodically repeats, calls for additional stations to check in (the OPEN call), or calls for SPECIFIC types of stations to check in. These calls are repeated during the net "idle" time while other stations are busy handling traffic or other business. Such calls should be made frequently so as to avoid making stations wait for long periods to check into or return to the net. Having to wait a long time to check in is a frustrating experience.

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Many net controls will wisely make OPEN calls, or calls for returning stations, between dispatches, or leave obvious pauses for tail ending. If the NCS fails to make frequent OPEN calls, stations are forced to tail end to be recognized, but only following completed net transactions.

The NCS may use a pause between transactions as a subtle way to leave the door open for a tail end call from a returning station or net station.

Dealing with multiple stations checking in following an OPEN net call may be avoided on Area/Region Nets. Stations are almost always assigned liaisons known to the NCS prior to calls. Those liaisons may be called in SPECIFIC calls. On the other hand, the NCS always has the option of taking new stations one at a time in the OPEN call, dealing with returning stations and net stations with additional business in the mix by immediately recognizing those.

The returning station transmission and its acknowledgment are usually very short if there are no problems to be reported. The NCS may handle a series of such returns, each returning station transmitting as soon as the previous one is acknowledged (tail ending the previous transaction in other words.).

If specific liaisons or stations not yet checked in are needed for a dispatch, the NCS uses the SPECIFIC CALL for SINGLE RESPONDERS to limit the call. Likewise with needed returning stations (using the query).

On Area Nets RX and TX stations check in accordingly. When a station is performing both functions, it checks in with "BOTH" in the assignments block. Using the net name alone, implying both, can be ambiguous thus forcing the NCS to check.

Strategies to deal with multiple responders are shown in the following parts. Stations on Section/Local voice nets generally make a limited content call to gain the acknowledgment of the NCS before transmitting full traffic lists or long requests. This two step process is not required for the single responder net calls, and is therefore seldom heard on Area/Region Nets.

One of the alternative methods presented is often selected based upon the net format or customs of a particular net or NCS. A few moments of listening to OPEN calls on an unfamiliar net will reveal the method of choice for responders.

* **TIP:** On some Local/Section VOICE nets, and particularly on VHF/UHF repeaters, "doubling" during replies to OPEN calls leads to numerous repeats by stations. An optional reply method, introduced into a Section net by W3BOB, paralleling a technique used in other services, can be helpful. Stations begin their transmission by saying first "THIS IS", then release the PTT switch briefly to see if another station is transmitting, then continue if clear. It is not customary (yet) in the amateur service, but it does work (based on year's of testing). The "THIS IS" introduction to the call also allows time for repeater multiple receive site systems to become keyed up and voted, thus preventing the truncation of the beginning or call sign prefix.

* OPEN NET CALL CASES:

Several options are used to respond to the OPEN NET CALL on Voice:

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Case 1) Full call sign and assignments followed by NO TRAFFIC, or WITH TRAFFIC; numerous stations responding in a series of spaced calls, with NCS taking a list and working it when the pile-up subsides, or the NCS interrupts to acknowledge;

Case 2) Full call sign and assignments followed by NO TRAFFIC, or WITH TRAFFIC, single calls by all stations in one time window, with NCS taking one at a time;

Case 3) Single letter (phonetically) by all stations in one time window, with NCS taking one at a time; a rare innovation on voice, but customary on CW.

On CW a single letter sent, and acknowledged by the NCS before checking in, is the customary practice. This resolves the CW responder choices to one case only. SEE CASE 3 for the CW OPEN CALL.

Note that a method using station suffixes is not included on VOICE since the sending of suffixes by new stations would be a conflict with the syntax used by returning and net stations wishing to be recognized, thus forcing the NCS to check the net station list.

On both modes the NCS may stop the process and assign, dispatch, excuse, or make SPECIFIC calls at any time. For new or returning stations the NCS may call for an outlet and/or dispatch stations using the full dispatch, immediate dispatch, or a split dispatch as shown in the SPECIFIC CALL and DISPATCH 2 STNS TO A STACK sections.

Stations should not interrupt transactions.

The (net name) used here is this example net's name, of course.

* **THE OPEN NET CALL**, an open call for returning, new, or net stations.

VOICE:

At ID time the NCS begins the call:

... (net name) [THIS IS] (call sign)... , or
... [THIS IS] (call sign) (net name)... , etc.

At other times the NCS omits the ID and makes the call:

NCS: (net name); or

... [(net name) STATIONS WITH OR WITHOUT TRAFFIC?]; or
... [(net name) ADDITIONAL STATIONS WITH OR WITHOUT TRAFFIC?];

The call is sometimes ended with PLEASE, or OVER, but these words are not required.

1) CASE 1 RESPONSES, No Traffic or With Traffic, series of calls (TWO STEP):

* **NEW STATIONS NOT ALREADY CHECKED IN**

STNS: (call sign) (assignments) NO TRAFFIC [(req) OVER]

STNS: (call sign) (assignments) WITH TRAFFIC [(req) OVER]

The NCS takes the list, stops the series, checks in stations.

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Acknowledging stations with NO TRAFFIC:

NCS: (call sign) STAND BY; or

... [(call sign) PLEASE STAND BY]; or

... [(call sign) (call sign) (call sign)... STAND BY];

or dispatches station(s) for traffic, each in turn.

Acknowledging stations WITH TRAFFIC, each in turn:

NCS: (call sign) LIST; or [(call sign) PLEASE LIST]

STN: (call sign) (assignments) TRAFFIC (traffic list)[(req)] OVER

NCS: (call sign) STAND BY; or dispatches station for traffic.

* RETURNING STATIONS

STN: (suffix) BACK; or [(call sign) NO JOY], etc., per the section on Returning Stations

NCS: (suffix); or [(suffix) ROGER STAND BY] if problem; or the NCS may dispatch the station for traffic, or call for its contact, relay, or an outlet and dispatch both stations.

* NET STATIONS (on the net) with ADDITIONAL BUSINESS

STN: (suffix); to be recognized by the NCS

NCS: (suffix); to recognize the station

STN: makes its request or statement; per the section on ADDITIONAL BUSINESS,

NCS acknowledges, or the NCS may dispatch the station for traffic.

* MORE?

The NCS may then continue the OPEN call adding:

NCS: ADDITIONAL STATIONS?; or [NEXT?]; or [OTHERS?]; or simply repeats the OPEN call.

At the end of a dispatch (after the station(s) reply), or after STAND BY as an end marker, additional stations may try to check in (tail ending). It is not necessary for stations to wait for a repeat of the OPEN call, but they should not interrupt transactions:

NOTES:

The NCS may ask for a station to repeat its attempt by repeating the call, suffix, or single letter heard, or asking for a relay. The station repeats the original call, sending its full traffic list only after being asked by the NCS or a relay station for the NCS.

The NCS notes if multiple stations are heard and calls for a specific station heard, additional stations, or repeats the OPEN call until all stations are handled. The pond is fished until empty to avoid making stations wait, even if some business is handled along the way.

VOICE Examples, series of calls made:

NCS: MEPN STATIONS WITH OR WITHOUT TRAFFIC?

... (or THIS IS W4TX MEPN.. STATIONS WITH OR WITHOUT TRAFFIC?)

STNS: W1RX NO TRAFFIC.. W2RX NO TRAFFIC W2TX WITH TRAFFIC, etc.

NCS: W1RX W2RX STAND BY.. W2TX PLEASE LIST

TX: W2TX TRAFFIC PODUNK 2.. 3RN 1 OVER

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NCS: W2TX STAND BY; or may call outlet and/or dispatch W2TX
NCS: ADDITIONAL STATIONS?

Or, in the same series of attempts or at a later time:
STN: STN BACK; returning station, SUFFIX only, job completed.
NCS: STN; acknowledged... the NCS knows STN was off frequency

and a net station with additional business:
STN: XX; station already checked in and standing by;
NCS: XX
STN: W3XX PLEASE ADD TRAFFIC 3RN 1 OVER
NCS: ROGER STAND BY; or dispatches the station for traffic.

2) CASE 2: RESPONSES, No Traffic or With Traffic, one station taken, (TWO STEP, 1):
STNS: (call sign) (assignments) NO TRAFFIC [(req) OVER], or
STNS: (call sign) (assignments) WITH TRAFFIC [(req) OVER]

All stations make one transmission immediately following the NCS OPEN call shown above for case 1, then all stand by.

The NCS acknowledges a station heard, asking for the traffic list if required, asks the station to stand by or dispatches the station for traffic as above.

The primary difference in taking one at a time is preventing ongoing interference or duplications, and dealing with problems and listing one at a time. The technique choice is made by the NCS or stipulated in the net format.

RETURNING STATIONS and net stations with ADDITIONAL BUSINESS are accepted as in case 1 and in the respective sections. These stations usually pause a few seconds to permit new stations a chance to be heard.

The NCS notes if multiple stations are heard and calls for a specific station heard, additional stations, or repeats the OPEN call until all stations are handled. Stations may tail end, but not interrupt, transactions.

Examples are as shown for case 1, except calls taken 1 at a time.

3) CASE 3: RESPONSES, single letter only, one station taken. (Similar to CW method.):
VOICE:
STNS: (1 letter); phonetically of course
NCS: (1 letter)
STN: (call sign) NO TRAFFIC [(req) OVER]; or
... (call sign)(assignments) TRAFFIC (traffic list)[(req)] OVER
NCS: (call sign) STAND BY; or dispatches station for traffic.

All stations make one transmission immediately following the NCS OPEN call, then stand by. The primary difference in the method is saved time in the station transmission. This technique parallels the CW method.

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RETURNING STATIONS and net stations with ADDITIONAL BUSINESS are accepted as above and in the respective sections, the stations using the regular suffix or full call methods.

The NCS notes if multiple stations are heard and calls for an additional letter heard, or repeats the OPEN call until all stations are handled. Stations may tail end, but not interrupt, transactions.

VOICE Examples:

NCS: MEPN STATIONS WITH OR WITHOUT TRAFFIC?

STNS: YANKEE X-RAY BRAVO; all in one time window, NCS picks one;

NCS: X-RAY

STN: W3XX PACKET TRAFFIC 3RN 1 OVER

NCS: W3XX STAND BY; or calls 3RN rep and/or dispatches station.

NCS: BRAVO (goes on to next station heard on the first attempt)

CW: (CASE 3 only.)

* CW OPEN NET CALL, an open call for returning, new, or net stations.

At ID time the NCS makes the call:

NCS: [CQ] (net name) [DE] (call sign) [QNI or K]; or

... [DE] (call sign) (net name) [QNI, K, or nothing];

At other times NCS omits the ID and makes the call:

NCS: (net name) [K]; or (net name) QNI;

“K” is not required in the QNI case (it is sufficiently self completing). “K” is optional for the call “(net name) [K]”. Listen to the NCS to determine the style in use.

RESPONSES, CW

* NEW STATIONS not already checked in:

STN: (1 letter)

NCS: repeats (1 letter)

STN: (call sign) (assignments) QRU [(req) <AR>]; or

... (call sign) (assignments) QTC (traffic list) [(req)] <AR>.

* RETURNING STATIONS, per the section on RETURNING STATIONS;

STN: (suffix); **job completed**

NCS: (suffix); or

STN: [(call sign) NO JOY], etc., **if problem**;

NCS: [(suffix) R <AS>],

The NCS may dispatch the station for traffic, or call for its contact, a relay, or an outlet and dispatch both stations.

* NET STATIONS, per the section on ADDITIONAL BUSINESS.

STN: (suffix); to be recognized by the NCS

NCS: (suffix); to recognize the station

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STN: makes its request or statement.

NCS: [R] <AS>; or the NCS may dispatch the station for traffic.

* MORE?

The NCS notes if multiple stations are heard and calls for a specific letter heard, or repeats the OPEN call until all stations are handled. Tail ending without the OPEN call is customary.

At the end of a dispatch (after the station(s) reply), or after checking in a station and <AS> is sent as an end marker, additional stations may try their single letters (tail ending). It is not necessary for stations to wait for a repeat of the (net name) OPEN call, but they should not interrupt transactions.

The NCS may stop the process at any time to dispatch, call for liaisons, etc., as needed.

* CW Examples (MDD is net name):

NCS: MDD [K], (or [MDD QNI])

STNS: X.. E.. R.. ; single letters by three separate stations

NCS: R

STN: GE W3RX MSN QTC PODUNK 2.. 3RN 1.. W3XX 1 <AR>

NCS: W3RX [GE] <AS>.. X; having heard the X in the first round

STN: W3XX QRU

To acknowledge only:

NCS: W3XX [optional greetings] <AS>

Or NCS may call outlet and/or dispatch W3XX as in:

NCS: W3XX W3RX UP 5 XX; or [W3XX W3RX UP 5 U 1]

W3XX: T;

W3RX: T; stations leave, ending the dispatch transaction;

The NCS might continue with another letter heard, or if the NCS is quiet:

STNS: X.. E.. L.. ; three stations tail end the end of the dispatch or the pause;

NCS: X; and the X station checks in, etc.

Or, in the same series of attempts or at a later time:

STN: RLY; returning station, suffix only, job completed;

NCS: RLY; acknowledged... the NCS knows RLY was off frequency;

STN: TX; station already checked in and standing by;

NCS: TX; the NCS knows this is not a returning station;

STN: W3TX PSE ADD QTC 3RN 1 <AR>

NCS: W3TX <AS>, or [R <AS>]; or may dispatch W3TX immediately;

NCS: MDD [K]; to repeat the OPEN call,

or stations may send a single letter tail ending the <AS>.

NOTES:

The NO TRAFFIC, or QRU, statements are self completing unless a request is added at the end.

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See the section on DISPATCH, 2 STNS TO STACK, FULL, IMMEDIATE, SPLIT, for additional examples of calling for outlets and immediate dispatching.

Stations should not interrupt transactions.

4.8.3 SPECIFIC NET CALL, LIMITED CATEGORIES BY TYPE

This is a SPECIFIC CALL with multiple responders possible. The NCS might wish to limit an otherwise OPEN call. Stations in the category check in to this call as in OPEN net calls above.

Other stations not in the category should wait for the NCS to complete this sequence and then respond in their category or wait for an OPEN call.

Some nets accept returning stations after a pause, considering the returning station's tail ending call an acceptable interruption to the specific category call.

These limited category calls are sometimes used on Local and Section nets to sort the listing of various types of business. They are seldom used on Area/Region Nets except for calling RETURNING STATIONS to the exclusion of others.

*** CALL SPECIFIC CATEGORIES.**

At ID time NCS begins the call: (net name) (call sign)...

VOICE:

NCS: STATIONS WITH EMERGENCY OR PRIORITY TRAFFIC?;

NCS: STATIONS WITH [FORMAL TRAFFIC?], [INFORMAL TRAFFIC?], [ANNOUNCEMENTS?], etc.; or

NCS: STATIONS [(in other specific categories)?];

In very large nets, for example, the NCS may wish to take calls by groups of suffix letters, or by counties, etc., as in:

NCS: STATIONS [...SUFFIXES ALPHA THROUGH MIKE PLEASE?], etc.

RESPONSES:

* NEW STATIONS, in the category called only, check in as above in the OPEN call case.

* OTHER STATIONS waiting to check in, including net stations, should wait for the NCS to make an open call or call in their category, or use pause tail ending.

* RETURNING STATIONS pause to permit the called category stations to reply, tail ending as permitted..

*** SPECIFIC CALL, RETURNING STATIONS**

NCS: RETURNING STATIONS?; or

... [(net name) THIS IS (call sign) RETURNING STATIONS?]

STN: (suffix) BACK; job completed, or [(call sign) NO JOY], etc.

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This call is often made frequently during the net to expedite returning stations back into the net for additional business. (A specific single returning station may also be selectively called. See the later sections on calling liaisons, etc.)

CW:

Specific category net calls on CW are seldom required and virtually never heard on Area/Region Nets.

NCS: [(specific categories)?]; or [(specific categories) QNI]

In very large nets, for example, the NCS may wish to take OPEN calls by groups of alphabetic suffix letters, counties, etc., as in:

NCS: [...SUFFIXES A THRU M QNI], [PODUNK COUNTY?]. etc.

* SPECIAL OPTION: Stations with formal traffic only:

NCS: [(net name) QTC QNI]; or [(net name) STNS W TFC QNI], has been suggested by WJ3K, MDC Section MDD NM, to call for stations with formal traffic when needed. Such calls are seldom used on CW nets, but could save some time on large nets getting to the listing of traffic ahead of a long series of QRU outlet stations. This is useful in large disaster related nets to expedite traffic, particularly when Section/Local NTS Nets are an integral part of the Section's emergency response plans and communications structure.

RESPONSES

* NEW STATIONS, in the category called only, check in as above in the OPEN call case, single letter method.

* OTHER STATIONS waiting to check in, including net stations, should wait for the NCS to make an open call or call in their category, or use pause tail ending as permitted.

* RETURNING STATIONS pause to permit the called category stations to reply, then check in, tail ending as permitted.

STN: (suffix); job completed, or [(call sign) NO JOY], etc., if problem;

NCS: (suffix); or (suffix) R <AS>. NCS may dispatch the station for other business.

* SPECIFIC CALL, RETURNING STATIONS

No CW SPECIFIC CALL for returning stations is made. The OPEN net call is used, or a specific station is called for. Returning stations customarily check back by tail ending at the end of transactions. Net calls or pauses are made frequently so as not to keep stations waiting..

NOTES:

Stations should not interrupt transactions.

During the handling of new checking stations the NCS may hear a returning station, acknowledge it, and then dispatch that station or other business, then resume the SPECIFIC CALL.

4.8.4 CALL VOLUNTEERS FOR JOBS, LIAISONS, OR AUXILIARY HELP

This is a SPECIFIC CALL with multiple responders possible.

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The NCS may call for a liaison replacement volunteer, or for an Auxiliary liaison station to help carry extra traffic, or for a station to perform a net job called for in the format.

A late arriving liaison may or may not hear this call, and may check in following an OPEN net call. The NCS should make that station aware of a change or arrange for a job swap.

This is a call open to any volunteer station; returning, new, or already checked in. Responders to this call are assumed to be volunteering.

* SPECIFIC CALL, VOLUNTEERS:

At ID time NCS begins call "(call sign) (net name)..."

VOICE:

NCS: VOLUNTEER FOR (net name)?; or [NEED (net name)]; liaison;

NCS: [HELP (net name)?]; or [HELP WITH (net name)?]; Auxiliary

NCS: VOLUNTEER FOR (job)?; or [NEED (job)]; as in ANC job.

* NEW STATION RESPONSE, a station not previously checked into the net, two step:

STN: (call sign)(assignments) NO TRAFFIC [(req) OVER]; or

... (call sign)(assignments) WITH TRAFFIC [(req) OVER]

The NCS picks a responder, confirms the assignment, then lists traffic, if any.

NCS: (call sign) [THANKS FOR] (net name)... ;

... (call sign) [THANKS FOR] (net name) AUXILIARY... ;

... (call sign) [THANKS FOR] (job)... ;

For station with no traffic, NCS adds:

NCS: ... STAND BY; or dispatches station for traffic.

For a station with traffic, NCS adds:

NCS: ... PLEASE LIST

STN: (call sign)(assignments) TRAFFIC (traffic list)[(req)] OVER

NCS: (call sign) STAND BY; or dispatches station for traffic.

The station may indicate in its (assignments) the net name for which it is volunteering, or for which it was assigned and is arriving late.

New stations on Area/Region Nets will sometimes dispense with the two step method and check in with full traffic list when volunteering.

The NCS may also check in and thank the other volunteers not accepted for the task.

* NET STATION RESPONSE: A volunteering net station or returning station (2nd syntax) will be recognized and the NCS will confirm it is assigned the job:

STN: (suffix); or [(suffix) WILL DO [(net name)] or [job]

NCS: (call sign) [THANKS FOR] (net name)...

... (call sign) [THANKS FOR] (net name) AUXILIARY...

... (call sign) [THANKS FOR] (job)...

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The NCS may add:

NCS: ... STAND BY; or dispatch the station for traffic.

The NCS may shorten the acknowledgment of task to simply a “(call sign) THANK YOU”, or may simply assign the task to the station on the net records, acknowledge with an optional “ROGER”, and immediately dispatch the station for traffic, the assignment of task being implied. The NCS may also thank the other volunteers not accepted for the task.

CW:

* SPECIFIC CALL, VOLUNTEERS

NCS: QNC NEED (net name); or [QNC VOL (net name)?]; for liaison sub;

NCS: QNC HELP (net name)?; for Auxiliary liaison;

NCS: QNC VOL (job)?; or [QNC NEED VOL (job)]; as in ANC job.

The QNC attention getter is optionally omitted.

* NEW STATION RESPONSE, a station not previously checked into the net:

STN: (1 letter)

NCS: repeats (1 letter)

STN: (call sign) (assignments)...; or

... (call sign) (assignments) WL DO [(net name)] or [(job)]...

... adding either: ... QRU; or ... QTC (traffic list)[(req)] <AR>

The station may indicate in its (assignments) the net name for which it is volunteering, or for which it was assigned and is arriving late, thus dispensing with the “WL DO”.

The volunteer statement may also be appended after the traffic status or list, followed by <AR>.

The NCS confirms assignment of task:

NCS: (call sign) [TU] (net name) <AS>;

... (call sign) [TU] (net name) AUX <AS>;

... (call sign) [TU] (job) <AS>;

or dispatches station for traffic.

The NCS may also check in and thank the other volunteers not accepted for the task as in the OPEN call.

* NET STATION RESPONSE, a volunteering net station:

STN: (suffix); or [(suffix) WL DO [(net name)] or [(job)]

* RETURNING STATION:

STN: [(suffix) WL DO [(net name)] or [(job)]

The NCS confirms assignment of task:

NCS: (call sign) [TU] (net name) <AS>;

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... (call sign) [TU] (net name) AUX <AS>;
... (call sign) [TU] (job) <AS>;

Or NCS dispatches station for traffic.

The NCS may shorten the acknowledgment of task to simply a “(call sign) TU <AS>”, or may simply assign the task to the station on the net records, acknowledge with an optional “R”, and immediately dispatch the station for traffic, the assignment of task being implied.

The NCS may also thank the other volunteers not accepted for the task.

NOTES:

The NO TRAFFIC, or QRU, statement is self completing unless a request is added. Since stations responding to this type call are assumed to be volunteering, and may omit their volunteer statement, other stations should consider this call NOT open to others.

Stations should not interrupt transactions.

4.8.5 CALL LIAISONS, ONE NET, MULTIPLE STATIONS EXPECTED

This is a SPECIFIC CALL with multiple responders possible. This case may be encountered on Section or Local nets when asking for multiple packet/NTSD reps for example.

Participating liaisons should know the category has multiple reps so they do not check in with full traffic lists resulting in wasted net time asking for repeats.

Area Nets have TX and RX liaisons, Region Nets only single liaisons, therefore those nets rarely need to deal with this situation.

Auxiliary reps, if any, from the called net may check in during this call (in addition to assigned liaisons) on the assumption and understanding that multiple responders are possible.

Other stations not in the category should wait for the NCS to complete this sequence and then respond in their category or wait for an OPEN call. Returning stations may pause tail end.

Responders to this call are assumed to be multiple liaisons from the called net name (which could be a linked net, packet, NTSD, etc.). The NM establishes the multiple rep policy.

* CALL MULTIPLE LIAISONS FROM ONE NET, VOICE:

At ID time, NCS begins call (net name) (call sign)...

VOICE:

NCS: (net name)?; or [(net name) REPS PLEASE?]

(as in “MEPN.. PACKET REPS PLEASE” where multiple reps are expected, etc.)

* NEW STATION RESPONSE, multiple reps know to use the TWO STEP method:

STNS: (call sign) (assignments) NO TRAFFIC [(req) OVER]; or

... (call sign) (assignments) WITH TRAFFIC [(req) OVER]

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The NCS notes all stations heard, then replies to stations with NO TRAFFIC:
NCS: (call sign) STAND BY; or [(call sign) THANK YOU STAND BY]

Several stations may be done at once, as in [W3XB W3XA W3XD... STAND BY];

And to stations WITH TRAFFIC, each in turn:

NCS: (call sign) LIST; or [(call sign) PLEASE LIST]

STN: (call sign)(assignments) TRAFFIC (traffic list) [(req)] OVER

NCS: (call sign) STAND BY; or station dispatched for traffic.

When all stations heard are processed, then:

NCS: ADDITIONAL (net name)?; continuing until no more.

The NCS may elect to respond to callers one at a time as in the OPEN call (cases 2 or 3) in order to better control the flow. Additional stations may tail end after each transaction.

The NCS may stop the process at any time, assign, dispatch, excuse, or make SPECIFIC calls as needed.

CW:

The expected multiple reps should know from the regular net format that they should use the single letter technique for getting the NCS acknowledgment. The single letter method is the default on CW nets. Here the one letter method deals with multiples well, and is also widely used for OPEN nets calls.

Note QNA may not be repeated at this calling point. It is customary to use QNA once at the beginning of a series of liaison calls. "QNA (net name)" or "(net name)?" may be used for later calls for this multiple liaison case.

* CALL FOR MULTIPLE LIAISONS FROM ONE NET, CW:

After a QNA:

NCS: (net name); (NCS and reps know this net liaison may have multiple responders),

Or as individual calls later:

NCS: (net name)?; or [QNA (net name)];

* NEW STATION RESPONSES: Single letter method:

STN: (1 letter)

NCS: repeats (1 letter)

STN: (call sign) (assignments) QRU [(req) <AR>]; or

... (call sign) (assignments) QTC (traffic list) [(req)] <AR>

NCS: (call sign) <AS>; or dispatches station for traffic.

The NCS repeats the call until there are no more replies, then goes on to the next net liaison, or to OPEN calls.

NOTES:

The NO TRAFFIC, or QRU, statement is self completing unless a request is added.

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The NCS usually acknowledges the station by call sign and may then optionally dispatch it to receive or send traffic, but it may skip the call sign and immediately dispatch the station to exchange traffic, implying the acknowledgment, or call for a receiving station for the listed traffic and immediately dispatch the stations together. See DISPATCH, 2 STNS TO STACK, FULL, IMMEDIATE, SPLIT, for details and examples.

Stations should not interrupt transactions.

4.8.6 CALL FOR SPECIFIC INFORMATION OR ASSISTANCE

This is a SPECIFIC CALL with multiple responders possible. The call is typically used when the NCS needs information to expedite the net.

Any station, returning, new, or already checked into the net may answer the request. Responders are assumed to be offering a reply to the request.

At ID time NCS begins call (net name) (call sign)...

VOICE:

NCS: (request)?; [OVER] may be used if an end marker is needed.

* NEW STATIONS checking in for the first time respond as in the OPEN net call above, adding the answer in the request (req) block.

* NET STATIONS already checked into the net:

STN: (suffix)

NCS: repeats (suffix)

STN: responds with answer.

* RETURNING STATIONS:

STN: Checks back as in the RETURNING STATIONS section, then adds the answer.

NCS: Acknowledges return or dispatches the returning station.

CW:

NCS: QNC (request)?; K may be used if an end marker is needed (if the remark is a statement of need, etc.). The query (?) is a sufficient end marker for a question.

* NEW STATIONS CHECKING IN FOR THE FIRST TIME

Adding the answer in the (req) block.

STN: (1 letter)

NCS: repeats (1 letter)

STN: (call sign) (assignments) QRU [(req) <AR>]; or

... (call sign) (assignments) QTC (traffic list) [(req)] <AR>

* RESPONSE: STATIONS ALREADY CHECKED INTO THE NET

STN: (suffix)

NCS: repeats (suffix)

STN: responds with answer.

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* RESPONSE: RETURNING STATIONS

STN: Checks back as in the RETURNING STATIONS section, adding the answer at the end.

NCS: Acknowledges return or dispatches the returning station.

NOTES:

Stations wishing to make spontaneous suggestions, comments, or queries do so as in the section on ADDITIONAL BUSINESS, always recognized by the NCS before commenting.

Stations should not interrupt transactions, except in the rare case where its reply would alter the NCS choice of action based on the previous answer. In this case the station would still obtain NCS recognition before commenting.

4.8.7 CALL TO VERIFY COPY

This is a call to specific station(s) to determine if stations can copy each other or the NCS. The NCS asks a station if it can copy another, or instructs it to call the station and verify copy.

The NCS may also use the Establish Contact dispatch command, with no further instructions appended, to ask a station to make contact with another station. See also the section on DISPATCH, 2 STATIONS, ESTABLISH CONTACT..., QNV.

The NCS also makes note of stations that are weak or need relay when checking into the net. Verifying copy and asking for relay volunteers is part of a strategy used by the NCS to plan for later dispatching of traffic.

VOICE:

NCS: W3XB HOW COPY W3XA?

XB: I COPY; or NO COPY; or

NCS: W3XB ESTABLISH CONTACT WITH W3XA;

XB: calls W3XA, verifies copy, then reports.

CW:

NCS: W3XB QNJ W3XA?; or W3XB COPY W3XA?

XB: QNJ; or QNP; or C or N; or

NCS: W3XB QNV W3XA

XB: calls XA, verifies copy, then reports.

Note the implied "YOU" usage of QNJ and QNP when no [call] is appended. See the "Q" signal list.

4.8.8 CALL FOR RELAYS

This is a SPECIFIC CALL, possibly with multiple responders.

In difficult conditions, or for aiding weak calling stations, the NCS should use stations on the net for relays or for making calls for the net to check in stations having difficulty copying the NCS (or vice versa).

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The NCS calls for any volunteer to relay a calling station or relay NCS commands. Any station may volunteer.

The NCS may use this call in combination with the verify copy methods to select a station capable of acting as a relay for a traffic exchange dispatch as shown in the dispatch sections.

Only the response of a station already in the net is shown below. Others may respond.

A station makes a transmission which the NCS can not copy. The NCS then asks:

VOICE:

NCS: RELAY?; or [STATION WHO CAN RELAY THE CALLING STATION?]

STN: (suffix)

NCS: (suffix) RELAY THE STATION, or (suffix) RELAY PLEASE;

STN: Station relays the transmission; or contacts the caller, secures its call sign and traffic status or list, or request, reports the call sign and information to the NCS, then signs its own full call sign.

CW:

NCS: QNC QNB?; or [QNB?] by some operators.

STN: (suffix)

NCS: (suffix) QNB

STN: Station relays the transmission; or contacts the caller, secures its call sign and traffic status or list, or request, reports the call sign and information to the NCS, then signs its own full call sign.

NOTES:

On both modes a new station checking in for the first time would respond as in the open call adding "RELAY" or "QNB" in the (req) block. Returning stations check back as usual adding the "RELAY" or "QNB" if they can relay.

Stations wishing to spontaneously relay a station not heard by the NCS should transmit their (suffix), wait to be recognized, then inform the NCS of the relay as in the section on ADDITIONAL BUSINESS, always recognized first by the NCS. A series of "helpful" relay transmissions without NCS permission can lead quickly to net disorder.

Returning stations offering to relay should first check back as in the RETURNING STATIONS section, then add the offer the relay help. The NCS should acknowledge the station's return then ask it to perform the relay.

Stations should not interrupt transactions.

4.8.9 CALL TO RELAY NET CALLS, SPECIFIC STATION

A station is addressed to make a net call for the NCS for any number of reasons.

VOICE:

NCS: (call sign) CALL THE NET; or

... [(call sign) MAKE A NET CALL PLEASE]; or

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... [(call sign) MAKE (SPECIFIC TYPE) NET CALL PLEASE], limited;
STN: (call sign) FOR NET CONTROL (net name); or
... (call sign) FOR (NCS call sign) (net name); or
... (call sign) FOR NET CONTROL (net name) (SPECIFIC TYPE);

The station may add “STATIONS WITH OR WITHOUT TRAFFIC”, etc.

CW:

NCS: (call sign) NET CALL PSE; or [(call sign) CALL NET]; or
... [(call sign) MAKE (SPECIFIC TYPE) NET CALL PSE], limited
STN: (call sign) FOR (net name) [QNI] [K]; or
... [DE] (call sign) FOR (NCS call sign) (net name) [QNI];

Station makes the net call using its own call sign, records stations checking in, reports the information to the NCS, then signs its full call sign returning control to the NCS.

The NCS may use relays to call for liaisons, volunteers, other relays, etc., using the same techniques above, addressing the net station by call sign and passing the call request in the (SPECIFIC TYPE) syntax.

* EXCUSING OR REQUESTING INFORMATION BY RELAY:

The same technique may be used through a relay station to request information or to excuse stations not copying the NCS (using RELAY TO.... or QNB..., (call sign), (command), etc.).

VOICE:

NCS: W3XB RELAY TO W3XA 73 EXCUSED
... W3XB SEND W3RX W3TX UP 5 PODUNK 2; (See dispatching sections.)

CW:

NCS: W3XB QNB W3XA 73 QNX
... W3XB CALL FOR QSP LAUREL; etc., etc.

Since there is not customary syntax for many such relayed commands, plain English is often used to obtain the result.

4.8.10 CHECK IN LATE ARRIVALS, LIAISONS OR STATIONS

A station arriving late should check in as other stations do in response to an OPEN or SPECIFIC net call, getting NCS attention first, using the check in method appropriate for the mode and type of net call.

Excuses for being late are not required or expected, but as friendly amateurs the expression “sorry late” is often used.

Late liaisons should be informed if volunteers have taken their assignment or if they will still have the job. A swap or auxiliary assignment may be made.

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The NCS should determine if the new station can handle any of the pending business. This may be done through specific requests to the station, or by calling the net's UNASSIGNED TRAFFIC LIST to inform all newcomers of pending business.

See ASSIGN.

4.8.11 CALL NET UNASSIGNED TRAFFIC LIST

See the section below on ASSIGN, CALL NET UNASSIGNED TRAFFIC LIST for making net calls for outlets. This is a technique used mostly on Section/Local Nets. Area/Region Nets have specific assigned liaisons which may be called, or volunteers for missing liaisons may be solicited.

4.9 ASSIGNING TRAFFIC

The NCS assigns which stations are to take listed traffic. This is a step separate from both checking in stations and dispatching traffic. The NCS makes note on the net record of which stations will accept traffic. This does not mean that the NCS can force a station to take traffic, but that the NCS solicits the receiver, then assigns that station the job. Accepting traffic is voluntary for non-liaison stations. Liaisons accept traffic for their target net by default.

Dispatching involves making decisions about the sequence of exchanges to minimize net time and optimize net efficiency, and is more easily done once assignment has been made. Stations are then dispatched to handle the traffic.

On Local/Section Nets the NCS should be familiar with which stations can handle traffic for certain areas. The NCS may ask such stations if they will accept the traffic in case they may have some reason to refuse on that particular net session. Alternatively the NCS may make a net call asking which station can take listed traffic.

The NCS generally should assign traffic promptly on nets where that involves asking for recipients in order to be able to dispatch efficiently. The sooner dispatching begins the sooner all traffic is handled.

The NCS on some Section/Local nets may prefer to check in all liaisons and target stations before assigning in order to assess the traffic load and distribution before planning the dispatching. Picking the best path for delivery, or balancing loading, can be done once the total list is made, but usually at the expense of total net time. This is almost never done on Area/Region Nets.

4.9.1 ASSIGN, DEFAULT TO LIAISONS

On all NTS traffic nets the liaisons automatically accept traffic for their destination nets. Assignment is by default. Dispatching traffic to liaisons may begin immediately. When there is a missing liaison the NCS may take remedial actions as outlined in previous sections.

4.9.2 ASSIGN, CALL NET UNASSIGNED TRAFFIC LIST

On Area and Region Nets asking for outlets for unassigned traffic is done by asking for the liaison for which the traffic is listed. Volunteers for missing liaisons or alternate paths may be

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solicited. On Area Nets a Region transmit rep may be asked to assume the duties of a missing receive rep.

On Local/Section Nets there may be unassigned traffic on the net record. In order to make stations aware of the business on the net frequency, and for others who may not yet have checked in, the NCS may elect to transmit a list of pending traffic to solicit volunteers to accept it.

Alternatively, the NCS may ask specific stations if they can take listed traffic as shown in the next section, or may simply assign and dispatch knowing a station's outlet range.

The NCS should know which stations on the net can handle such traffic, but that may not always be possible, particularly for unusual destinations. NCS may also ask net stations where the destination is located, or ask for suggestions for alternate paths.

Additional information, either listed at the holder's check in time, or asked for at this point, such as telephone area and prefix, zip, or county, can often facilitate finding an outlet or path. The NCS should aggressively pursue vague addresses, etc., by asking for help from net stations to use directories, club rosters, zip code checks, etc. to find paths for delivery.

Finding ways to deliver traffic on Local and Section Nets is determined by NCS leadership in many cases.

Calls are usually made for one destination at a time to minimize sorting out responders, but entire lists may be presented to the net, particularly if no outlets are snared in first tries.

Where applicable, the NCS may add quantity, (qty), and/or telephone area codes and prefixes to the destination (dest) to aid stations in deciding if they can handle the traffic.

Stations should have their toll free telephone list, zip code directory, and maps handy.

Responders are assumed to be volunteering to take traffic.

VOICE:

NCS: NET HAS TRAFFIC FOR (dest) [(dest)...] RELAY?; or
... [STATION TO TAKE (dest) [(dest)...] OVER]

* NET STATIONS

STN: (suffix); multiple responders possible

NCS: repeats (suffix)

STN: (call sign) CAN TAKE (dest) [(dest)...]; etc. The (call sign) is often omitted since the station is already recognized.

NCS: will assign traffic to that station, or dispatch it;

* NEW STATIONS CHECKING IN

STN: replies with full call sign, NO TRAFFIC or WITH TRAFFIC, and adds

... CAN TAKE (dest) [(dest)...] OVER; adding the offer in the (req) block.

NCS: Will acknowledge, assign traffic to that station, (call sign) ROGER.. STAND BY; or ask a

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station with traffic to LIST their traffic to complete checking into the net, (call sign) ROGER..
PLEASE LIST.

* EXAMPLES, VOICE

1) A new station checking in:

NCS: NET HAS TRAFFIC FOR PODUNK AND HOMETOWN.. RELAY?

STN: W3XX WITH TRAFFIC CAN RELAY PODUNK OVER (new station)

NCS: W3XX ROGER.. PLEASE LIST

STN: W3XX TRAFFIC 3RN 2 OVER

NCS: W3XX ROGER STAND BY; or W3XX W3TX UP 5 PODUNK

2) A net station, recognized before offering:

NCS: NET HAS TRAFFIC FOR PODUNK AND HOMETOWN RELAY?

RX: RX (net station)

NCS: RX

RX: W3RX CAN TAKE PODUNK; or WILL TAKE PODUNK

NCS: ROGER STAND BY; or W3RX W3TX UP 5 PODUNK; etc.; or

3) A returning station per the RETURNING STATIONS section:

NCS: NET HAS TRAFFIC FOR PODUNK AND HOMETOWN RELAY?

STN: XA BACK.. CAN TAKE PODUNK (returning station)

NCS: XA ROGER STAND BY; or W3XA W3TX UP 5 PODUNK

(Returning with a problem, use full call sign with NO JOY, etc., then comment.)

CW:

* CW NET UNASSIGNED TRAFFIC LIST CALL

NCS: QNC QSP (dest) [(dest)...]?: or

... [QNC QTC (dest) [(dest)...] QSP?]

* NET STATIONS

STN: (suffix); (net station) multiple responders possible;

NCS: repeats (suffix)

STN: (call sign) QSP (dest) [(dest)...] <AR>. The (call sign) is often omitted since the station is already recognized.

NCS: Will assign traffic to that station, or dispatch it.

* NEW STATIONS, CW

STN: New stations may reply with single letter, be recognized by the NCS, then check in as in the OPEN call, adding: QSP (dest) [(dest)...] in the (req) block.

NCS: Will assign traffic, then acknowledge or dispatch the station.

* CW EXAMPLES

1) A new station:

NCS: QNC QSP PODUNK?

STN: X (new station checking in for the first time)

NCS: X

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STN: W3XYZ QTC 3RN 2.. QSP PODUNK <AR>
NCS: W3XYZ <AS>; or W3XYZ W3TX UP 5 PODUNK; or

2) A net station on frequency, recognized before offering:
NCS: QNC QSP PODUNK?, or [QNC QTC PODUNK QSP?], (held by TX)
RX: RX (station already checked into the net)
NCS: RX
RX: W3RX QSP PODUNK, or simply QSP PODUNK;
NCS: R <AS>; or W3RX W3TX UP 5 PODUNK; etc.; or

3) A returning station per the RETURNING STATIONS section:
STN: XA.. QSP PODUNK, (returning station, job complete, adding the offer to QSP)
NCS: XA R <AS>; or W3XA W3TX UP 5 PODUNK, (Immediate dispatch.)

(Returning with a problem, use full call sign with NO JOY, etc., then comment.)

NOTES:

In case 2, the net station is shown being recognized by the NCS to transmit before it offers to take the traffic (list). This is consistent with the normal directed net procedure with possible multiple responders. In the STN reply the station's (call sign) is often omitted since the station is already recognized. The full call sign is the formal treatment and always avoids possible suffix conflicts.

Use of the suffix alone (not shown) for a net station, implying it will take the traffic, is in conflict with the syntax for additional business and returning stations. (The suffix-alone method may be heard on some nets, however, where the NCS will pick a station heard and assign the traffic. Confusion may sometimes be a result.)

A net station may choose to respond without recognition (not shown) and add the QSP (list) statement on its first transmission, thus negating the need for the NCS to first acknowledge it. This method is avoided, although heard on some nets, since it is outside the normal directed net procedures. There is potential for doubling on voice or non-QSK CW.

Destinations on Area and Region Nets are usually net names or call signs.

4.9.3 ASSIGN, UNASSIGNED TRAFFIC, SPECIFIC STATION REQUEST

The NCS may ask a specific station on the net if it can take listed traffic. The asked station may answer in the affirmative or negative without explanation, or may make suggestions to the NCS about possible routing or alternatives.

VOICE:

NCS: (call sign) RELAY (dest)?, or (suffix) RELAY (dest)?;
STN: AFFIRMATIVE; or NEGATIVE; or (suggestion); etc.
NCS: may assign the traffic, dispatch the station, or ROGER the suggestion.

CW: (Unassigned traffic solicitation.)
NCS: (call sign) QSP (dest)?, or (suffix) QSP (dest)?;

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STN: C; or N; or (suggestion); etc.

NCS: may assign the traffic, dispatch the station, or R the suggestion.

NOTES:

These calls are questions, followed by the appropriate inflection or “?” on CW.

On Area and Region Nets destinations are usually net names, and stations may be asked if they can take traffic for a Region or Section Net not their own in some circumstances, as in:

NCS: W3TX QSP 4RN?; asking the 3RN TX rep to help with 4RN RX.

The station accepting the traffic may be immediately dispatched as shown in DISPATCH, 2 STNS TO STACK.

4.9.4 ASSIGN, SPECIAL OUTLETS

Traffic routing in the NTS from Section to Region to Area and back down to Region and Section is established to move traffic efficiently throughout the system. Nothing here is meant to suggest bypassing normal daily routing of traffic within that system. It is important to maintain the integrity of the system by the use of proper routing.

There are situations at Section and Local level addressed here. Finding outlets for traffic delivery is the primary issue.

The NCS may solicit volunteers to take traffic to other nets with which the current net has no normal connection, or make other similar arrangements using the net station's versatility. Many independent nets are potential outlets even if they are not normally traffic nets. Club and ARES nets are fine examples of potential outlets.

Stations may be asked to take traffic for amateurs for hand delivery at club meetings, or at special events, for example.

Stations may be asked to take traffic which they can pass by toll free calls to stations who can make the delivery.

Stations may be asked to contact MARS stations who might be able to handle the traffic by making personal schedules to meet on the air, or through their service when permissible.

Stations should be familiar with the various strategies discussed in the chapter on Delivering Messages.

The NCS should be aware of the potential use of the NTSD (NTS digital) as a parallel path for liaison to Region or Area connections.

4.9.5 ASSIGN, STORE AND FORWARD

A station may be asked, or a volunteer solicited, to store and forward the traffic to a Local, ARES/RACES net, or other net in the destination area meeting at another time.

Stations checking in from outside the net's normal coverage area are usually afforded the courtesy of having a net station store and forward their traffic if necessary. TCC stations or

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unscheduled liaisons from higher or other nets should be afforded the same courtesy. TCC operators often rely on such service to clear eastbound traffic in the US system.

A station may store and forward any such traffic for handling on a another session of the current net, or even for later insertion into another NTS path suitable for delivery, including the NTSD (digital) system. Having stations prepared to store traffic for subsequent forwarding can be of great value when handling large amounts of welfare traffic during disasters.

Use this alternative to avoid having to send a station away claiming no outlet for its traffic, unless the station itself is capable of holding the traffic without undue delay or inconvenience.

The NCS may direct a net station to take the traffic to hold for later delivery, or request a volunteer. The typical requests to a net station are:

VOICE;

NCS: (call sign) RELAY (dest) FOR (____)?; or
... (call sign) TAKE AND HOLD (dest)?; etc.

CW:

NCS: (call sign) QSP (dest) FOR (____)?;
... (call sign) QSP (dest)?; etc.

The blank may be another net or a later net or session, the next NTS cycle, another mode, the next day, a station call sign, etc. If the station accepts, the traffic is assigned or immediately dispatched.

The NCS may simply dispatch a station to take and hold the traffic.

4.9.6 ASSIGN, BOOKS

Book traffic sent to Region or Area nets must be re-booked for the liaisons found on those nets respectively. Books are not usually listed as such on those nets. The total quantity of messages for each liaison outlet is listed instead.

On Local/Section Nets if a book is listed requiring several receiving stations the NCS will typically ask for stations to accept each single book part until all possible are assigned. The book holder should make note of the assigned stations. The NCS may then decide if it is in the interest of the net efficiency to dispatch the book to all the assigned stations simultaneously on the net, off net frequency, or to break up the book transmission to individual or sub-group exchanges.

Local/Section Nets, particularly when serving in support of ARES/RACES served agencies, will encounter books destined to all offices of an agency, all emergency operation centers, to all Skywarn operators, etc., which are often best transmitted simultaneously to all recipient stations. With a large number of recipients the economy is obvious. It is the essence of booking. It is easily done on or off the net.

See the section on Dispatching Books for more information about how this is managed.

4.10 DISPATCHING TRAFFIC, OVERVIEW

This is where the work on the net begins. Net calls and assigning are intended to bring the NCS and stations to the point of dispatching, which directs the exchange of traffic.

The NCS dispatches assigned traffic with syntax shown in the following dispatch sections, divided into commands for exchanges on the net and those for stations sent off the net frequency.

Once the affected stations acknowledge the command they proceed to exchange traffic per the guidelines discussed Chapter 2 for VOICE and Chapter 3 for CW, Station Operations, for passing the message(s) on net or going off frequency. This is briefly reviewed in the Exchange sections of this chapter later.

The NCS keeps track of all business listed, assigned, and dispatched; and determines the order of dispatching to optimize net efficiency.

4.10.1 FULL CALL SIGNS

Full call signs are used in the dispatch commands to address the station(s).

4.10.2 SUFFIXES, CONFLICTS

Where call sign suffixes are called for in station responses, the holders of 2 by 1 calls use their number and suffix letter.

The NCS may also use a unique acknowledgment for stations with identical suffixes, and the stations may thereafter use the unique sequence when returning. For example, W1XYZ and W2XYZ are both on net. W1XYZ sends suffix XYZ returning, the NCS repeats XYZ. W2XYZ returns and sends XYZ, the NCS repeats YZ, and W2XYZ uses YZ thereafter. Of course the NCS could use 1XYZ, 2XYZ. Using single letters on CW is not done since that conflicts with the syntax used by new stations checking in.

4.10.3 SYNTAX: ORDER, ALTERNATIVES, APPENDING

* **GENERAL:** The sequence of call signs, prosigns on CW, frequency, and traffic destination-quantity are specific for each type of dispatch. The order is significant and important.

* **DESTINATION-QUANTITY LAST:** Putting the (dest [qty]) always last in dispatches (with no excusing statements) appears to be a preference of many net controls to be consistent in form (2 station, QNQ, QNV). There are several methods in use in this regard for dispatching single stations to a stack (off net frequency). See the QNQ off net dispatch. The old published QNK signal places the (dest [qty]) next to last, hence that form is shown for reference only (The QNK form of dispatch is seldom used today.). The form closest to the published definition is shown as the “literal usage”.

The VOICE dispatching syntax equivalent to these “QN” signals is frequently shown here with reduced wording reflecting best current practice.

* **EXCUSING IN ADVANCE:** Syntax for excusing in advance is appended at the end of the dispatch line. NCS may excuse, in advance, one or both of the stations dispatched off frequency. These stations do not return to net, and check out as part of their acknowledgment. The NCS still

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needs to know or have reasonable confidence that the assignment is or will be completed. This may be done by monitoring the stack frequencies even if the net is closed.

4.10.4 OVER, K

Many dispatch commands are self completing, not requiring OVER or “K” as a signal to reply. Those “go ahead” signals are omitted in the syntax shown except where they are suggested to mark the end of transmissions of uncertain length.

4.10.5 PRECEDENCES

Traffic is handled in order of precedences as much as possible with the means at hand to do so. Emergency traffic is handled immediately, and it is important to use any means available to get Emergency traffic delivered promptly, including telephone, public safety services, etc. Death and serious injury or illness messages are often best delivered by public safety or private relief agencies such as the American Red Cross.

It is a myth, however, that all Priority traffic must be handled before any Welfare or Routine traffic. The P, W and R traffic is handled in order, but it is often misunderstood that it is the option of the NCS to dispatch lower level traffic while there is higher precedence traffic pending. The NCS may need to wait for an available outlet to be free.

It is equally important for the NCS to consider the overall net workload, time available, and situation. Nets operating during disasters may dispense with handling Routine traffic, and perhaps even Welfare traffic, for extended periods until the higher priority traffic is cleared. Multiple nets may be needed.

4.10.6 FLOW

Some NCS stations on Local/Section Nets prefer to check in all liaisons before dispatching in order to assess the traffic load and distribution. On other nets the NCS may call specific liaisons bringing traffic, then call for outlets and dispatch immediately. Some call the net only with OPEN calls, taking stations as they come, then dispatching, or calling outlets and dispatching, as needed. In general, the sooner the traffic is dispatched, the sooner the net finishes its business.

4.10.7 QUANTITIES

There is some economy, or less inconvenience for waiting stations, to handle stations with smaller quantities of traffic before those with larger ones in many cases. There are exceptions. The primary object of managing the net’s traffic flow is to get all the traffic moved in the allotted time while optimizing net efficiency by moving the maximum amount of traffic per unit of time. More on quantity and sequencing permutations in the chapter on Net Control.

4.10.8 NET OR STACKS

The NCS may dispatch traffic on the net frequency or “stack” several stations on a number of frequencies off the net. Exchanging traffic on the net frequency interrupts other net business which is an important factor considered by the NCS. Dispatching sections below are divided accordingly.

4.10.9 DISPATCHED TRAFFIC ONLY

Stations exchange only traffic dispatched by the NCS. If a change is desired the station(s) should return to the net and arrange the change with the NCS. Minor changes in the quantity in the block

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dispatched may be handled, and the corrected count reported upon return, or, if the stations are excused, they should return and notify the NCS of the change (or notify by other means).

4.10.10 BOOKS

The NCS may dispatch a number of stations in one dispatch command to receive parts of a book. The book may be sent on net or off frequency. The book sender will call all the recipients to control the sending process.

Dispatching books to multiple stations simultaneously is a decision that must be made by the NCS based upon conditions, the economies for the net, and the capabilities of the stations involved. It is of course optional.

This is seldom, if ever, done on Area/Region Nets where books for multiple stations are not listed. All traffic is sent to one liaison at a time. Traffic to that liaison may be in book form of course. It is possible to dispatch a book to multiple liaisons on these nets, however.

4.10.11 FORMAL AND INFORMAL TRAFFIC, ALL STATIONS

On Local/Section Nets informal announcements and formal traffic to all stations is sometimes listed. This will require that the NCS have all net stations on the net frequency for such traffic to be passed. This traffic could be system bulletins, or simply a request for a substitute for a later assignment, etc. This kind of traffic is seldom handled on Area or Region Nets. Net newsletters, emails, BBS bulletins, distribution via lower nets, etc., are often substituted. A request for a substitute for a net assignment is often passed to the NCS or NM who may then make net requests. QNC messages may be given to single stations or groups of stations piecemeal if required.

4.10.12 WORDS

Listed informal words between stations are often dispatched after formal traffic, or whenever the respective stations are free. Be patient. If words are more urgent, related to net business for example, so list. Words are often held for the last assigned traffic then dispatched to the stations who are excused in advance from their off net stack.

4.10.13 VERIFY COPY CHECKS, PRIOR TO DISPATCHING

The NCS may check stations to confirm mutual copy directly, by asking them to make contact with others, or do so via relays, all prior to dispatching traffic. The QNV dispatch, used without a frequency and destination included, is sometimes used to direct a station to check copy with another station. See Net Calls, Verify Copy, and the QNV and QNQ type dispatches.

The NCS should know when stations have returned to net from off frequency, or may call them specifically as outlined in SPECIFIC calls. If copy is in doubt the QNV, directed to the station the NCS knows can copy, or QNB dispatches may be used.

The NCS should make note of which stations need relay upon checking into the net, and which stations may need relay to exchange traffic. The appropriate dispatch method may then be chosen and executed. This can often be the most difficult part of managing traffic nets.

4.10.14 IMMEDIATE DISPATCH, ALTERNATIVE TO ACKNOWLEDGMENT

Immediate dispatches may be used for on net or off net dispatching. This is simply a shortcut skipping a station acknowledgment and going directly to a dispatch command.

See DISPATCH, 2 STNS TO STACK for examples.

* **OUTLET NEEDED:** The NCS will copy a new station checking in with traffic after any type net call, and then will immediately call for an outlet by either call sign or liaison name using the SPECIFIC CALL. The outlet may check in with call sign and either no traffic or with a traffic list. The NCS will then execute a full dispatch of the new station and the responding outlet. This method acknowledges both the new station and the outlet by implication. (See also the SPLIT DISPATCH.)

* **OUTLET ALREADY IN THE NET:** The NCS will copy a new station checking in with traffic after any type net call, and then will immediately execute a full dispatch of the new station and the outlet listening on the net. This method acknowledges the new station by implication.

* **ACKNOWLEDGING:** If the outlet is not available the NCS in both cases will acknowledge the new station and ask it to wait, or dispatch its other traffic if possible.

4.10.15 AWAKE?

It is considered poor practice to interrupt the NCS during dispatches with acknowledgment after the call sign (a dot or dash on CW). This practice is used on some Slow Nets or training nets as an “are you listening” confirmation where it is effective due to the slow speeds and long time between calls. It is dispensed with when moving up to Section and higher nets. Stations should listen to the NCS carefully at all times and be prepared to respond to the NCS commands, replying only with the customary acknowledgment after the command is completed.

An exception to this guideline occurs when SPLIT DISPATCHES are used in IMMEDIATE DISPATCHING or to check for a returned station. New stations and returning stations not yet checked into the net, upon hearing their call signs followed by a pause, should recognize the NCS is asking for an acknowledgment. Note the unique circumstances here.

Stations listening on the net should know not to respond to their call sign during a dispatch, but listen for their call sign or suffix at other times followed by a pause suggesting that the NCS is asking for an acknowledgment. It is suggested that using the query (?) after the call on CW, or the equivalent voice inflection, makes the call clear when the NCS wishes to check the presence of a station or pose a question. The query resolves the syntax conflict.

4.10.16 THE SPLIT DISPATCH

This is a subtle technique used by experienced NCS and net stations and should be used with care. The NCS may always determine the presence of all involved stations prior to the dispatch, and then execute the full command sequence--the more formal and complete method.

Splits may be used for on-net or off-net dispatches.

See DISPATCH, 2 STNS TO STACK for examples.

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*** SPLIT, CHECK FOR STATION PRESENT OR ABLE TO COPY NCS:**

Some NCS stations pause in the dispatch to check that a station is present (returned) or able to copy the NCS, then continue the dispatch syntax to complete the command. The technique is often done without a query on CW. The NCS will pause after a call sign as a signal for the addressed station to reply with a “HERE” on voice, or “T” or “HR” on CW, then complete the rest of the SPLIT dispatch command.

Although the method conflicts with the “AWAKE?” comments, it is sometimes used to expedite business on Area/Region level nets primarily to verify a station is present, returned but not yet checked back in, or copying the NCS. It is not used just to verify that a net station is listening.

Although this seems like a fine point, experienced operators understand when they are being engaged by the NCS and assist in expediting the dispatch. The pause after the call sign is the key signal (taking on the role of a proword or prosign). The query (?) or inflection helps, but is suggestive of a separate transaction, followed by a full or immediate dispatch.

*** SPLIT, EXPEDITING CHECKING IN THE OUTLET:**

The NCS will copy a new station checking in with traffic after any type net call, and then will call for the expected outlet by call sign (W3RX...), in actuality beginning a dispatch sequence.

If the outlet station has no traffic it may simply reply with “HERE”, or “T” or “HR” on CW, and the NCS will immediately continue by adding “...W3TX (freq) (dest [qty])” to finish the SPLIT DISPATCH of both stations off the net to the stack frequency. If, instead of the implied no-traffic check in, the outlet station checks in with a traffic list, the NCS will default to the full dispatch command for both new stations, acknowledging them by implication with the immediate dispatch.

If there is no response from the outlet in response to its call sign, the NCS will call for the outlet by (net name), the SPECIFIC CALL for the liaison. If the outlet is present it will check in with no traffic or with a traffic list. The NCS will then execute a full dispatch as in the IMMEDIATE DISPATCH. This accommodates unscheduled or substitute liaisons.

If there is no response for the requested outlet after both types of call, the NCS will either dispatch the new station with another outlet or simply acknowledge it and ask it to wait.

In some cases, if the NCS knows who the RX rep is, and expects the station is on frequency (not yet checked in), the NCS may simply immediately dispatch both to the stack without even checking in the outlet (RX) station. This acknowledges both stations by implication, and also implies and acknowledges that the outlet has no traffic. The outlet station, of course, could add a traffic list, etc., after the dispatch before going to the stack.

4.10.17 RELAYS

As in other NCS operations, relays may be utilized to facilitate contact and/or dispatching of stations not hearing the NCS or each other. Relays may be assigned to assist in the traffic exchange or simply to relay the dispatch. As discussed in NET CALLS, RELAYS, the NCS may initiate the request for a relay, instruct a relay, or a net station may volunteer to assist by first sending its suffix to gain NCS permission to transmit. See the QNB dispatch section.

4.10.18 SWAPPING TRAFFIC

On occasion two stations, or additional stations sent to a stack, may have traffic for each other. The NCS may dispatch such traffic by simply listing the (dest [qty]) for each. Some NCS stations simply will add “SWAP” ahead of the destinations, or in some cases simply say “SWAP”.

4.10.19 MULTIPLE DESTINATIONS

The NCS may dispatch multiple messages to different destinations by simply sending all the destinations in the dispatch sequence. The receiving station will take them all.

4.10.20 MISSED DISPATCH COMPONENTS

A station missing part of the dispatch may ask for repeats with simple requests such as: WHERE? WHO? AFTER? TRAFFIC? AGAIN? (WHERE?, WHO?, AFTR?, QTC?, AGN?, or ? on CW). The station may send (suffix) followed by the question for missed parts of a 2 or 3 station dispatch. The NCS may answer the question or repeat the dispatch if needed.

4.10.21 RETURNING STATIONS

Returning stations from off frequency check back in as described in the section Returning to Net. Stations signify the job complete, or report problems, by choice of syntax. Stations should return promptly after a brief pause to check for other calling stations. Other business may be pending. The “(suffix) back” on voice, or “(suffix)” on CW, when successful, or “(full call) no joy” when not, are distinct and functional since the NCS knows which stations are dispatched.

4.10.22 NET TRAFFIC COUNT

The net counts and reports the total number of messages transmitted from a holding station to a receiving station at the direction of the NCS during the directed net. Best current practice finds most Area and Region nets excusing stations in advance sent to stacks to handle their last listed traffic, closing the net, and then monitoring to ascertain that assigned traffic was passed. This last step is key to ethically assuring the accuracy of the net traffic count. The NCS may monitor the net frequency after the net is closed in case stations have difficulty and return to report.

4.10.23 STATIONS LISTEN CLOSELY

Listen to the net control carefully throughout the net. All stations checked into the net should pay close attention since dispatch commands or questions may be directed to their station at any time. An experienced NCS has a plan for moving the listed business which often relies on a tight sequence of events. A missed and repeated dispatch wastes valuable net time for all. A postponed dispatch upsets the entire plan. Help the NCS execute an efficient and smooth running net.

4.10.24 NCS IN CONTROL

Give clear and concise instructions in the expected manner. The NCS gives commands and maintains control at all times. This is done even if the operator may be struggling with complex routing or dispatch sequence questions between transmissions, or is in a state of panic. The seasoned NCS will take a deep breath, plan the next best move, and issue the command in a calm manner, which convinces all other stations that things are running smoothly.

When choices must be made, ask questions if needed, but make the choices.

Maintain control. If some degree of disorder or confusion on the net develops, stop the action and ask questions, direct particular stations to transmit, restate questions, or otherwise insert your

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influence in such a way as to settle things down and get on with business in an orderly fashion. See the chapter on NET CONTROL for additional tools in the NCS tool box.

Mistakes are made, and in the true amateur radio spirit, they are fixed in a pleasant way. The old saying goes, "If you have never made a mistake, you have never been a net control."

It is a lot of fun playing this music as competent players at the direction of an experienced leader. A snappy efficient traffic net on which all station's listed traffic is passed with dispatch (pun intended) is a rewarding experience for all.

4.11 DISPATCHING TRAFFIC ON NET FREQUENCY, OVERVIEW

Traffic may be dispatched on the net frequency at the expense of other net business and risk of making stations wait to check in or return to net. The policy regarding this action is often set by the net format, however the NCS may choose to do so based on net workload, available time, etc.

Brief WORDS for the NCS, are passed when disruption of other activities is minimal. WORDS between other stations, an unknown duration activity, are dispatched when the stations are free, usually after formal traffic involving those stations is passed.

Announcements and messages (QNC), etc., for all stations are obviously best done on the net when all check-ins are present, usually at the start of the net so other dispatching may proceed.

On some Local/Section nets, particularly on VHF/UHF repeaters, handling traffic on net is customary and is often done after brief informal traffic is passed and stations having no pending business are excused. This avoids making stations wait unnecessarily. Formal traffic is usually considered a higher priority than informal business in most other net situations.

Stations checking in following OPEN and SPECIFIC calls of any type may be asked to wait, or they may be dispatched to exchange traffic on the net with the full dispatch syntax.

* IMMEDIATE, or SPLIT dispatching methods may be used as shown in the later section, DISPATCH, 2 STNS TO STACK, using "HERE", or "HR" on CW, for the frequency. This is a special shortcut used mostly on Region/Area nets, and is not duplicated here in the "on-net" part.

* LIMITED QUANTITY: It is not uncommon for the NCS to have stations pass one message at a time on the net frequency to permit breaks to check in new or returning stations. The NCS may accomplish this with a limited quantity dispatch on the net frequency, or may simply interrupt exchanges on net frequency between messages to make OPEN or returning station calls.

* CALL SIGNS, EXAMPLES: Call signs W3RX receiving station, W3TX, W3RLY, etc., are used to show examples of dispatch syntax rather than using some form of shorthand. Suffixes RX, TX, RLY, etc., are used in similar fashion for calls and acknowledgments. These call signs are used for example purposes and not related in any way to the holders of those call signs.

4.11.1 DISPATCH, 2 STATIONS, ON NET

Assuming both stations copy each other and the NCS:

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If the NCS can not be heard by one of the stations, the QNV may be used and directed to the station that can copy the NCS, or the QNB relay method may be used, both shown later.

1) Customary dispatch method, first station addressed initiates the call:

VOICE:

NCS: W3RX W3TX HERE (dest [qty])

RX: W3RX [GOOD EVENING] READY TO COPY

TX: [W3TX] [GOOD EVENING]...; sends traffic

RX: ROGER 73 W3RX

TX: 73 W3TX

This is often shortened to:

NCS: W3RX W3TX HERE (dest [qty])

RX: READY TO COPY

TX: sends traffic

RX: ROGER 73 W3RX

TX: 73 W3TX

NCS: resumes net

CW:

NCS: W3RX W3TX HR (dest [qty])

RX: W3RX [GE] QRV

TX: [W3TX] [GE]...; sends traffic

RX: QSL 73 W3RX

TX: 73 W3TX

NCS: resumes net

This is often shortened to:

NCS: W3RX W3TX HR (dest [qty])

RX: QRV

TX: sends traffic

RX: QSL 73 W3RX

TX: 73 W3TX

NCS: resumes net

2) The (QNK) method. This form of dispatch on net is considered archaic and is discouraged in best current practice in favor of the dispatch in case 1. (QNR method likewise.)

“QNK: Transmit messages for ____ to ____ ”

TX receives the dispatch and makes the first call, the exchange on net implied. The dispatches would be of the form:

VOICE:

NCS: W3TX SEND W3RX (dest [qty]); or

NCS: [W3TX SEND (dest [qty]) TO W3RX]; literal usage.

TX: W3TX READY TO COPY?

RX: READY TO COPY (TX would then send the message(s) as above.)

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CW:

NCS: W3TX QNK W3RX (dest [qty]); on net is implied; or

NCS: [W3TX QNK (dest [qty]) W3RX]; literal usage

TX: W3TX QRV?

RX: [GE] QRV (TX would then send the message(s) as above.)

NOTES:

The FIRST station addressed makes the first call to begin the exchange.

Since both stations copy the NCS, only the RX first dispatch is needed here, thus enabling the short exchange. The order may be reversed, if needed, in which case the TX station initiates the exchange. This is seldom necessary unless only the TX is hearing the NCS.

If one station is not hearing the NCS, the QNV method, Establish Contact, may be used to direct the dispatch to the station copying the NCS. If RX and TX are not hearing each other, the QNB, RELAY, method may be used.

The NCS resumes control after both stations identify.

The NCS may dispatch a limited quantity of traffic on net, or one at a time for example, thus providing for a gap to check returning or new stations. Listen to the quantity carefully.

If the quantity is omitted, exchange the total for the destination(s).

The NCS may interrupt between messages to make net calls for any purpose even if the full quantity is dispatched.

NCS may excuse either or both of the stations in advance in which case the instruction would be part of the initial dispatch, however this is not often done for ON-NET dispatches. The NCS may excuse the station(s) when finished.

4.11.2 DISPATCH, 2 STATIONS, ESTABLISH CONTACT, ON NET, QNV

This technique combines the normal two station dispatch and a verify copy test to begin the exchange of traffic ON NET.

In this case the (freq) in the command will specify the NET FREQUENCY using "HERE". This is a special use of the QNV method.

The normal OFF NET use of QNV is presented later.

(QNV: "Establish contact with on this frequency. If successful, move to and send him traffic for")

When the NCS is unsure if two stations can copy each other well enough to exchange traffic, or is unsure one station is able to copy the NCS, this conditional dispatch is used.

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The technique is used to execute the dispatch command even if the NCS knows both stations can copy each other but one may not be hearing the NCS. The NCS should know from checking in the stations those which require relay. The station copying the NCS is addressed first.

Case 1): TX hears the NCS.

Case 2): RX hears the NCS.

* THE QNV DISPATCH ON NET:

CASE 1) TX hears the NCS:

VOICE:

NCS: W3TX CALL W3RX IF OKAY HERE (dest [qty])

TX: W3RX W3TX [HERE (dest [qty])] READY TO COPY?

If RX can copy, traffic exchanged, else TX reports no joy:

RX: READY TO COPY

TX: [W3TX]...; sends traffic;

RX: ROGER 73 W3RX

TX: 73 W3TX; TX makes last transmission;

NCS: resumes net

CW:

NCS: W3TX QNV W3RX HR (dest [qty])

TX: W3RX W3TX [HR (dest [qty])] QRV?

If RX can copy, traffic exchanged, else TX reports no joy:

RX: QRV

TX: [W3TX]...; sends traffic;

RX: QSL 73 W3RX

TX: 73 W3TX; TX makes last transmission;

NCS: resumes net

CASE 2) RX hears the NCS:

VOICE:

NCS: W3RX CALL W3TX IF OKAY HERE (dest [qty])

RX: W3TX W3RX [HERE (dest [qty])] READY TO COPY

If TX can copy, traffic exchanged, else TX reports no joy:

TX: [W3TX]...; sends traffic;

RX: ROGER (RX does not sign, forcing the long method)

TX: 73 W3TX

RX: 73 W3RX; RX used the long method to permit it to make the last transmission so the

NCS can hear the end of the exchange.

NCS: resumes net

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CW:

NCS: W3RX QNV W3TX HR (dest [qty])

RX: W3TX W3RX HR (dest [qty]) QRV

If TX can copy, traffic exchanged, else TX reports no joy:

TX: [W3TX]...; sends traffic;

RX: QSL (RX does not sign, forcing the long method)

TX: 73 W3TX

RX: 73 W3RX; RX used the long method to permit it to make the last transmission so the

NCS can hear the end of the exchange.

NCS: resumes net

NOTES:

The first station addressed initiates the call. Note that it is shown repeating the essence of the dispatch to alert the other station to what is happening.

The frequency and destination is sometimes omitted by experienced stations on Area/Region Nets, the ready-to-copy being sufficient.

NCS may include quantity in case the stations wish to reply that conditions are not good enough for that much traffic.

If copy is satisfactory, the two stations exchange the traffic. If the stations can not copy each other the NCS may use a relay or make other arrangements such as band/mode change.

The addressed station makes the last transmission as the signal for the NCS to resume the net. Other signals such as "BACK TO NET", or <AR>, may be heard in use.

Note that in the reversed order cases, the meaning of the "send him traffic for" part of the QNV definition is assumed also reversed; "receive from him traffic for".

This is an exceptional use of QNV ignoring the "move to" definition, the "Establish contact with" being key.

NCS may excuse either or both of the stations in advance in which case the instruction would be part of the initial dispatch, however this is not often done for ON NET dispatches. The NCS may excuse the station(s) when they finish.

4.11.3 DISPATCH, 3 STATIONS, RELAY ON NET, QNB

This technique involves the use of a third station for relay. There are several conditions possible to consider.

If either RX or TX can copy the NCS, and the RX and TX can copy each other, then the NCS can use the appropriately ordered dispatch to establish contact and pass their traffic as above (QNV). Should that not be possible, the methods below may be used.

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The NCS may determine in advance, or through a relay station , if the two stations can copy each other and which relay station copies both.

* VERIFY COPY

To verify copy the NCS or stations will usually ask HOW COPY [call], reply I COPY [call] or NO COPY [call]; on CW, QNJ [call]?, reply QNJ [call], or QNP. Note the ME/YOU usage of QNJ and QNP when no [call] is appended. See the “Q” signal list.

The QNV Establish Contact command may be used without further instructions to check copy. (W3RX QNV W3TX). See also NET CALLS, CALLS TO VERIFY COPY.

* RELAY CASES:

Case 1) All three stations copy NCS, but RX and TX can not copy each other. RLY relays the exchange.

Case 2) RX and TX can not copy each other, and can not copy NCS. RLY station calls and relays the dispatch and the exchange.

Case 3) The RX and TX can copy each other, but not the NCS. The RLY station simply relays the dispatch.

The NCS selects the case to use based on the verification of copy.

The NCS may elect to include (qty) in the dispatch in case a station or the relay was not able to copy it earlier, or the stations wish to object to the quantity under the conditions.

CASE 1) FULL RELAY, ON NET, ALL STATIONS COPY THE NCS, RX and TX can not copy each other.

NCS: W3RLY RELAY W3RX W3TX HERE (dest [qty])

RLY: W3TX W3RLY READY TO COPY

TX: [W3TX]...; sends the traffic to RLY;

RLY: ROGER W3RLY ; short method saves a transmission;

TX: 73 W3TX; signs to complete the first exchange;

RLY: W3RX READY TO COPY?

RX: READY TO COPY

RLY: sends traffic to RX;

RX: ROGER 73 W3RX; short method saves a transmission;

RLY: 73 W3RLY

NCS: resumes net

CW:

NCS: W3RLY QNB W3RX W3TX HR (dest [qty])

RLY: W3TX W3RLY QRV

TX: [W3TX]...; sends the traffic to RLY;

RLY: QSL 73 W3RLY; short method saves a transmission;

TX: 73 W3TX; signs to complete the first exchange;

RLY: W3RX W3RLY QRV?

RX: QRV

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RLY: sends traffic to RX;
RX: QSL 73 W3RX; short method saves a transmission;
RLY: 73 W3RLY
NCS: resumes net

CASE 2) FULL RELAY, ON NET: This is one of many combinations of poor copy situations encountered. The dispatch syntax is not in wide usage. The NCS may often resort to plain English to direct the desired results.

RX and TX can not copy each other, and can not copy NCS. RLY copies all.

VOICE:

NCS: W3RLY CALL AND RELAY W3RX W3TX HERE (dest [qty])
RLY: W3RX W3RLY; may ask HOW COPY if desired;
RX: W3RX
RLY: W3TX W3RLY HERE (dest [qty]) READY TO COPY
TX: [W3TX]...; sends the traffic to RLY;
RLY: ROGER W3RLY; short method saves a transmission;
TX: 73 W3TX; signs to complete the first exchange;
RLY: W3RX READY TO COPY?
RX: READY TO COPY
RLY: sends traffic to RX
RX: ROGER 73 W3RX; short method saves a transmission;
RLY: 73 W3RLY
NCS: resumes net

CW:

NCS: W3RLY CALL ES QNB W3RX W3TX HR (dest [qty])
RLY: W3RX W3RLY; may use [QNJ] to verify copy if required;
RX: W3RX
RLY: W3TX W3RLY HR (dest [qty]) QRV
TX: [W3TX]...; sends the traffic to RLY;
RLY: QSL 73 W3RLY; short method saves a transmission;
TX: 73 W3TX
RLY: W3RX W3RLY QRV?
RX: QRV
RLY: sends traffic to RX;
RX: QSL 73 W3RX; short method saves a transmission;
RLY: 73 W3RLY
NCS: resumes net

In the ultimate case the NCS may not even know if the RX and TX stations can copy the RLY. This can be established before the dispatch; or plain English may be used, or a syntax sequence might be employed such as (ES = and):

NCS: W3RLY QNV [ES] QNB W3RX W3TX HR (dest [qty])
RLY: calls each station to verify copy and pass the dispatch, then mediates the exchange.

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CASE 3) RELAYING THE DISPATCH, ON NET

RX and TX copy each other, but not the NCS. There is no customary syntax widely accepted for this technique. The following form may be used, or plain language may be used instead.

VOICE:

NCS: W3RLY SEND W3RX W3TX HERE (dest [qty])

RLY: W3RX W3TX HERE (dest [qty]); equivalent to normal dispatch.

RX calls TX, receives traffic, both sign.

RLY: 73 W3RLY; to mark the end of the exchange for the NCS;

NCS: resumes net

CW:

NCS: W3RLY SEND W3RX W3TX HR (dest [qty])

RLY: W3RX W3TX HR (dest [qty]); equivalent to normal dispatch.

RX calls TX, receives traffic, both sign;

RLY: 73 W3RLY; to mark the end of the exchange;

NCS: resumes net

NOTES:

The NCS may use the same relay technique to excuse a station or stations not copying the NCS, or to make other types of dispatches or requests.

The RLY station may use terms such as [END OF TRAFFIC], [BACK TO NET], or <AR> on CW, or equivalent to signal the NCS that the exchange is complete, although the NCS can usually detect completion from the sequence of RLY transmissions.

NCS may excuse either or both of the stations in advance, in which case the instruction would be part of the initial dispatch, however this is not often done for ON NET dispatches. The NCS may excuse the station(s) when they finish, with relay if required.

4.11.4 DISPATCH, BOOKS TO MULTIPLE STATIONS ON NET

This technique is customary for dispatching and sending booked traffic to multiple receiving stations on the net, each receiving different parts of the book. It is applied to books of messages, with separate message numbers going to separate addressees, with one combination of other fixed and variable parts.

For a bulletin type book, with one message number and text (no variable parts except addressee) to multiple or all stations on the net, see the QNC method in the next section..

The technique of booking messages is a transmission method to avoid repeating common parts of a number of individual messages. It is applicable to books of messages which can be handled by one station as well as those which can be handled by a number of different receiving stations. In the later case, the only difference in the transmission is the method and syntax used to manage the exchange of the variable parts with the separate receiving stations. Review the sections on Books To Multiple Stations in Chapters 2 and 3, and the reviews in the Exchanges On Net section later in this chapter, for the exchange examples.

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Sending a book to multiple stations is seldom done on Area/Region nets, although possible. Sending booked traffic to a single liaison is always acceptable.

Dispatching book traffic to multiple stations is an option of the NCS based upon the conditions, economies for the net, and the capabilities of the stations involved.

During the assigning process the NCS assigned each part of the book to specific RX stations and the TX station should have copied along (if that was not possible, the NCS will include the recipients in the dispatch as needed).

* DISPATCH AND EXCHANGE, TX POLLS READY TO COPY:

VOICE:

NCS: W3TX HERE BOOK [OF (qty)]; or to specify the recipients:

NCS: W3TX W3XA (dest [qty]) W3XB (dest [qty]) (etc.) HERE BOOK [OF (qty)]

TX: XA READY TO COPY?, or [W3XA READY TO COPY?]

XA: READY

TX: XB?, or W3XB?, (the TX may use suffixes to check stations ready);

XB: READY, etc., until all stations report ready;

TX: BOOK OF... (Sends book, settling with each RX station along the way.)

CW:

NCS: W3TX HR BOOK [OF (qty)]; or to specify the recipients:

NCS: W3TX W3XA (dest [qty]) W3XB (dest [qty]) (etc.) HR BOOK [OF (qty)]

TX: W3XA QRV?

XA: QRV

TX: XB, or W3XB (? not required. TX may use suffixes to check stations ready);

XB: QRV, etc., until all stations report ready;

TX: BOOK OF... (Sends book, settling with each RX station along the way.)

* ON BOTH MODES the TX station checks each RX station is ready to copy, then sends the fixed parts. TX identifies the station which is to copy the next variable parts, and after those parts are sent, again addresses that RX station to settle fills and acknowledge. When the total book exchange is completed the TX station sends its full call sign to return control to NCS.

* The full example of the sequence is shown in chapters 2 and 3, Books to Multiple Stations, and reviewed in Exchanging Traffic On Net later in this chapter..

* NCS OPTION TO POLL

It is the option of the NCS to choose to poll the RX stations to see if they are ready to copy, giving the (dest) assigned each in the query, thus saving the listing of the assignments in the dispatch. TX copies along for the records. This is seldom required.

VOICE;

NCS: ALL STATIONS READY TO COPY? W3XA PODUNK?

XA: READY, etc., until all stations report ready.

NCS: XB HOMETOWN AND RIVER CITY? (call suffixes used in poll)

XB: READY, etc., until all stations report ready. The NCS then dispatches the book by sending:

NCS: W3TX HERE BOOK [OF (qty)];

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CW;

NCS: QNC QRV? W3XA PODUNK?

XA: QRV

NCS: XB HOMETOWN AND RIVER CITY? (call suffixes used in poll)

XB: QRV, etc., until all stations report ready. Then NCS dispatches the book:

NCS: W3TX HR BOOK [OF (qty)]

The TX station still negotiates fills and the acknowledgment of each different variable part(s) with the respective RX station.

NOTES:

See the rules for exchanging books and Books To Multiple Stations in Chapters 2 and 3, and the reviews in Exchanges On Net later in this chapter. The second NCS dispatch option of repeating the assignments is seldom required. The TX station will either copy the assignments earlier in the net and address the RX stations for each destination, or ask who is taking that destination, at the beginning of each variable part(s). TX may, however, ask the NCS to list the recipients after the simpler dispatch. The TX station functions much like the NCS in this type exchange, having the advantage of having all stations listening on frequency.

The TX station groups all different parts to one station together so the exchange with that station may be contiguous.

The TX call for each station to check if ready to copy is usually done using suffixes or tactical calls for efficiency. The ready to copy query may be omitted after the first station call.

See also DISPATCH, MESSAGE(S) TO ALL STATIONS (QNC), ON NET.

4.11.5 DISPATCH, MESSAGE(S) TO ALL STATIONS, ON NET, QNC

FORMAL Bulletin Radiograms, ARES/RACES ALL STATION TRAFFIC, etc. These messages are single formal radiograms with one message number and text typically addressed to the net stations (net name initials, etc.), to several nets or groups, or to all or a subset of the ARES/RACES or other liaisons on the net. Liaisons accept and forward the message to other nets based upon the message address.

If separate numbers or addressees are given in the message use the BOOK to MULTIPLE STATIONS method above.

These messages are treated as a book of messages to multiple stations with the exception that they have no variable parts. They are listed on the net as a book to all specific type recipients or to all stations; as in a message from a served agency headquarters to all the liaisons on the net for district offices in all jurisdictions, or from the NM to all stations, etc.

The NCS will usually have the occasional bulletin traffic sent at the beginning of the net after all stations are checked in. Bulletins and books for the net delay the beginning of normal traffic handling and are seldom done on Area/Region Nets. A cumbersome alternative is to dispatch each net station off frequency with the book holder during the net.

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Case 1: A QNC message is really a book of messages to multiple stations on the net. It may be handled in the same fashion as the book transmission above (previous section) with only minor changes in the dispatch and sending syntax. The TX station polls ready to copy and polls for acknowledgment. This is the recommended method for passing such traffic.

Case 2: The NCS makes the ready to copy poll, TX polls for acknowledgment;

Case 3: A shortcut method omitting the ready to copy poll but with NCS making the poll for acknowledgment. Open loop traffic handling is risky business. See notes at end of section.

CASE 1) Presentation of QNC as a book, TX poll ready to copy and poll to acknowledge:
VOICE:

NCS: W3TX HERE MESSAGE TO NET; or ... [W3TX HERE BOOK (dest [qty])]
(where the list of net stations is presumed known by TX)

Or the recipients are tediously listed after W3TX:

NCS: W3TX W3XA W3XB, etc., HERE MESSAGE TO NET, or
... [W3TX W3XA W3XB, etc., HERE BOOK (dest [qty])]

TX: XA READY TO COPY?; or [W3XA READY TO COPY?] (TX polls.)

XA: READY

TX: XB?, or W3XB? (the TX may use suffixes to check the stations)

Etc., calling each station (about 2 seconds each); then the book is transmitted:

TX: NUMBER (msg) END NO MORE; or [BOOK OF (#)...]

(Note these books often have one number, multiple addressees.)

TX then calls each station for fills/acknowledgment:

TX: XA?, or W3XA?; (See case 3 below re NCS polling.)

XA: ROGER W3XA (Note ROGER acknowledges message, call sign meets ID rules.)

TX: XB?, or W3XB? (the TX station may use suffixes to check stations)

etc., polling all stations, about 3 seconds each;

TX: [THANK YOU 73] W3TX; returns control to the NCS

CW:

NCS: W3TX HR QNC; [W3TX HR BOOK (dest [qty]), or to specify recipients:

NCS: W3TX W3XA W3XB, etc., HR QNC; or [HR BOOK (dest [qty])];

TX: XA QRV?, or [W3XA QRV?]; (See case 2 below re NCS option.)

XA: QRV

TX: XB, or W3XB (? not required. TX may use suffixes to check stations);

Etc., calling until all stations report ready, then the book is transmitted:

TX: QNC NR... (msg) <AR> N; or

... [BOOK OF (#)... <AR> END BOOK <AR> N]

(Note these books often have one number, multiple addressees.)

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Roll then called for fills/acknowledgment:

TX: XA, or W3XA; (? not required. See case 3 below re NCS polling.)

XA: QSL W3XA (Note QSL acknowledges message, call sign meets ID rules.)

TX: XB, or W3XB

etc., polling all stations;

TX: [TU 73] W3TX; returns control to the NCS

CASE 2) The NCS, having the net list, may at its option call the net stations to check each is ready to copy to save having to pass the list to the TX station. TX copies along for records.

VOICE:

NCS: ALL STATIONS W3XA READY TO COPY?

XA: READY

NCS: XB?, or W3XB? (NCS may use suffixes to check stations)

Etc., polling all stations. The TX station makes a list of recipients for the record.

NCS: W3TX HERE MESSAGE TO NET; or [W3TX HERE BOOK (dest [qty])]

TX: sends the message, then polls each station for acknowledgment. (TX may ask the NCS to perform the acknowledgment as in case 3 below.)

CW:

NCS: QNC W3XA QRV?

XA: QRV

NCS: XB, or W3XB (? not required. NCS may use suffixes to check stations)

XB: QRV

Etc. polling all stations. TX makes list of recipients for record.

NCS: W3TX HR QNC; or [W3TX HR BOOK (dest [qty])]

TX: sends message, then polls the stations for acknowledgment, or asks NCS to perform

that task as in case 3 below.

CASE 3) Shortcut method, with all stations on frequency, omitting the check for ready to copy, and with the NCS calling roll for acknowledgment (TX can copy along for records).

This method is not consistent with traffic exchanging procedures. It assumes that All stations on the net are paying attention and ready to copy.

VOICE:

NCS: ALL STATIONS W3TX HERE MESSAGE TO NET

TX: NUMBER... (msg) END NO MORE; services any fills; then returns control to the NCS with the following request:

TX: NET CALL?, or [NET ACKNOWLEDGE?]

NCS: STATIONS ACKNOWLEDGE WHEN CALLED.. W3XA?

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XA: ROGER W3XA

NCS: XB?, or W3XB? Etc., until all stations acknowledge.

CW:

NCS: QNC W3TX HR QNC

TX: transmits the message, services any fills; then returns control to the NCS with the following request:

TX: NET QSL?; or [NET PSE QSL?]

NCS: QNC W3XA QSL?

XA: QSL W3XA

NCS: XB, or W3XB (? not required) Etc., until all stations acknowledge.

NOTES:

Transmitting to all stations without polling is risky business. Any net station distracted, unable to copy the dispatch, etc., will miss the traffic and require wasted net time to recover.

Some nets consider the transaction complete without an acknowledgment from each receiving station. This is also questionable and risky open loop traffic handling, but may be expedient in some cases. In these cases the NCS will sometimes ask each station receiving the traffic to acknowledge at a later time when convenient, such as when excusing the station. The NCS may assist with fills or repeat the message at that time if required. This technique should be used with care, and the TX station needs to have confirmation of delivery for each message.

Assuming stations are ready to copy, and/or assuming stations copied a message, without confirmation, can lead to missed traffic and cumbersome corrective actions, not to mention the risk to served agencies in missing important traffic.

The NCS poll for the ready to copy check (optional), TX transmission, and NCS poll for net station acknowledgment may be used effectively with minimal overhead.

The case 1 method is customary, efficient and certain, and is highly recommended.

The TX sending station in cooperation with the NCS must make sure careful records are kept of which stations received the message(s). It is the responsibility of the TX station to assure that the message is passed to all the intended addressees, relist those undelivered, or create service messages back to the originator regarding those not delivered for whatever reason. In other words, the book is treated as individual messages to each addressee (even though not named), each serviced in the same fashion as any other single radiogram.

For served agency and other critical traffic it is more certain to use unique numbers and addresses, sent using the BOOK to MULTIPLE STATIONS methods.

4.11.6 DISPATCH, INFORMAL ANNOUNCEMENTS, ETC.

The NCS will usually have such traffic sent at the beginning of the net after all stations are checked in. Announcements for the net delay the beginning of normal traffic handling and are seldom done on Area/Region Nets. Some Local/Section Nets provide a time for such words at the top of the net. Notices, net business topics, etc., not for written copy, are then expected and

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handled early. Acknowledgment by individual stations is not required, except at the discretion of the sending station or NCS, in which case an NCS poll may be conducted.

When the NCS is ready (HERE, or HR, may be omitted.):

VOICE:

NCS: W3TX [HERE] WORDS FOR NET, (informal announcement, etc.)

CW:

NCS: W3TX [HR] WDS [FOR] NET, (informal announcement, etc.)

The NCS may ask the net if anyone needs fills. Stations call to be recognized as in ADDITIONAL BUSINESS, then make their request.

4.12 DISPATCHING TRAFFIC OFF NET, STACKS, OVERVIEW

Net Managers work in cooperation with other nets on the bands to identify frequencies where stations can move off nets without mutual interference. Some net controls are able to check for clear frequencies with second receivers before dispatching. Net operations, however, have no special priority over other amateur activities. Each frequency should be checked by operators before setting up a stack operation. “Is this frequency in use?” on voice, or “QRL?” on CW, is the customary courtesy check to assure a frequency is not in use.

* **STACK DEFINITION:** The NCS may “stack” several stations on a frequency off the net. The first two stations on the frequency begin the stack and control the frequency, and exchange their traffic (send, receive, or swap). When they finish their exchange, the next station waiting in line calls one of those two stations. Those two then assume control of the stack.

Additional station(s) sent to the stack may either receive or transmit traffic, or swap traffic, and may carry instructions from the NCS related to stations being excused.

* **LIMITING THE STACK:** Stacks are usually limited to two operating stations and one station waiting in line. The NCS, after sending the first two stations to the stack, will dispatch additional stations one at a time thereafter. Subsequent stations are often dispatched after the return of one of the stack stations, limiting the stack to 2 or 3 stations, or based on timing or monitoring if earlier stations were excused in advance. See Dispatching 1 Station, Addition to a Stack.

* **MIXED STACKS** are not permitted. No station, having completed a stack exchange, should have to wait for another station’s exchange to be completed before doing another assignment on that stack. This would be difficult, confusing, and generally unworkable. The NCS will arrange the order so that each station is sent to the stack to exchange specific traffic. (Each additional station dispatched to the stack carries the next assignment.) When the exchange is completed, and no station calls it with another exchange, a station returns to the net and is dispatched again for additional business. In other words, once a station relinquishes control of the stack it must return to the net unless excused in advance. The NCS manages the sequence and makes it easy for stations to understand the order.

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* **PAUSING BEFORE RETURN TO NET.** Stations should briefly pause and listen for any waiting station to call before going back to the net. A missed assignment requires the NCS to have to repeat the dispatch at a later time when the stations are available.

* **UN-DISPATCHED COMMUNICATIONS:** It is considered poor practice to have a QSO on the stack frequency before or after the exchange is completed unless it is listed and dispatched by the NCS, or both stations are excused and no others are waiting.

Other stations should not engage active stations in the stack with words or traffic without being dispatched there by the NCS, unless the stack is clear and the involved stations are excused from the net.

* **FREQUENCY INSTRUCTIONS:** (freq) may be expressed as a frequency, an offset UP # or DOWN #, (DWN # or DN # on CW), another band, mode, etc.

* **IMMEDIATE and SPLIT DISPATCHES** are optionally used. A new station will list its traffic, the NCS will call a receive rep, and the NCS will continue the dispatch to the stack. The methods are presented in the dispatch sections. See Dispatch, 2 Stations to Stack.

* **ACKNOWLEDGING THE DISPATCH:** Stations acknowledging being dispatched off frequency generally use the words “(suffix) GOING” on voice (sometimes simply “GOING”, or “(call sign) GOING”); and “T” (or “G”) on CW. In all cases the stations customarily acknowledge in the sequence given in the dispatch syntax so all stations may be heard by NCS.

* **FAILURE TO CONTACT:** Stations should be familiar with the methods for moving off frequency and making contact. The receiving station, or relay station if involved, moves to the assigned frequency or nearest clear frequency in the same direction, checks if it is in use, and initiates the call. The sending station searches and responds.

If contact is not made in about 30 seconds both of the stations return to the net and report no joy as shown in RETURNING STATIONS. Additional stations dispatched to the stack unable to make contact return in similar fashion.

See Chapters 2 and 3, Station Operations, Moving Off Frequency..

4.12.1 DISPATCH, 2 STNS TO STACK, FULL, IMMEDIATE, SPLIT

These are the workhorse dispatch commands for initiating a stack off the net frequency.

Case 1: Two station syntax. If the NCS can not be heard by one of the stations, the Establish Contact and Move Off dispatch (QNV) may be used and directed to the station that can copy the NCS, as shown in the QNV section.

Case 2: The archaic CW QNY usage for two stations, avoided.

Case 3: IMMEDIATE DISPATCH, SKIPPING ACKNOWLEDGMENT, 4.12.1.1.

Case 4: SPLIT DISPATCH, 4.12.1.2.

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See also the discussion of stacks in OVERVIEW and DISPATCH, QNQ.

CASE 1): TWO STATIONS TO STACK:

VOICE:

NCS: W3RX W3TX (freq) (dest [qty])

RX: RX GOING (acknowledging in the order dispatched)

TX: TX GOING

To EXCUSE in advance:

NCS: W3RX W3TX (freq) (dest [qty]) W3RX EXCUSED; or

... [... W3TX EXCUSED]; or [... BOTH EXCUSED]

RX: 73 W3RX GOING; excused station uses full call sign at departure.

TX: TX GOING

CW:

NCS: W3RX W3TX (freq) (dest [qty])

RX: T (acknowledging in the order dispatched)

TX: T

To EXCUSE a station in advance:

NCS: W3RX W3TX (freq) (dest [qty]) W3RX QNX; or

... [... W3TX QNX]; or [... BOTH QNX]

RX: 73 W3RX G; excused station uses full call sign at departure.

TX: T

NOTES:

On both modes the station first addressed acknowledges first, second station next. Off frequency, the receiving station calls first. (See the sections on the EXCHANGE for the stack operation.) In the case of swaps, the first station dispatched may assume the receiving roll first, or the order of the traffic, if given, may be used to determine the sequence.

CASE 2): CW, "QNY":

This net "QN" signal, resembling the QSY change frequency signal, is archaic and is discouraged for the 2 station dispatch in favor of case 1. QNY does not convey sufficient information to the stations, and is even less effective for adding a station to a stack.

"QNY: Shift to another frequency (or to ____ kHz) to clear traffic with ____".)

CASES 3 and 4): IMMEDIATE and SPLIT dispatches may be used to dispatch a station following any OPEN or SPECIFIC call. They are shown in full detail only in the following two sections, but may be used in other dispatches, such as the QNQ type.

On both modes they are of the following form. Only CW is shown. On voice the same method is used with appropriate voicing rules, and "HERE" as the SPLIT DISPATCH station reply and "(suffix) GOING" as the dispatch acknowledgments, TRAFFIC for QTC, OVER for <AR>:

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4.12.1.1 IMMEDIATE DISPATCH, SKIPPED ACKNOWLEDGMENT, EXAMP.

CASE 3): Immediate dispatch, following a QNI. CW. Two types, A and B:

A: NCS CALLS FOR LIAISON		B: NCS ASSUMES LIAISON PRESENT	
QNI	W3TX 3RN TX QTC 2RN 3 <AR>	QNI	W3TX 3RN TX QTC 2RN 3 <AR>
NCS	2RN RX	NCS	W3TX W2RX UP 5 2RN
STN	W2RX 2RN RX QRU	W3TX	T (IN THE ORDER DISPATCHED)
NCS	W3TX W2RX UP 5 2RN	W2RX	T
3TX	T (IN THE ORDER DISPATCHED)		
2RX	T		(NOTE THAT W2RX WAS NOT YET CHECKED INTO THE NET. SEE NOTE BELOW.)

The stations are acknowledged by implication, the act of being dispatched indicating the NCS recognized both of them and their traffic lists, if any.

In example B, if W2RX had traffic, it could (and should) list before leaving frequency so the NCS can plan for handling the business.

The NCS may also immediately dispatch a returning station, or dispatch a single station with a QNQ, without first acknowledging, in the same manner.

4.12.1.2 SPLIT DISPATCH, EXAMP.

CASE 4): SPLIT DISPATCH, following a QNI, CW (similar form on voice).

* A new station checks into the net and lists its traffic. The call to W2RX by the NCS checks if a new liaison is present ready to check in, or returned to net, or if W2RX station is copying the NCS:

QNI: W3TX 3RN TX QTC 2RN 3 <AR>

NCS: **W2RX...** (pause for RX reply, new or returning station; the first part of the SPLIT)

2RX: T.. (W2RX replies, QRU implied if checking in. If W2RX had traffic, it would list, and the split would be aborted in favor of a full immediate dispatch..)

NCS: ... **W3TX UP 5 2RN** (the rest of the SPLIT dispatch)

2RX: T (in order dispatched)

3TX: T

* The outlet fails to reply by call sign. The SPLIT is aborted:

QNI: W3TX 3RN TX QTC 2RN 3 <AR> (from the beginning)

NCS: **W2RX...** (pause for W2RX, **no reply**)

NCS: 2RN RX, (immediately calls for liaison)

STN: W2XX 2RN RX QRU, (2RN rep QNI's, perhaps unexpected rep call sign or sub)

NCS: W2XX W3TX UP 5 2RN, (defaults to **Immediate Dispatch**, acknowledging both .)

2XX: T (in order dispatched)

3TX: T

* When no liaison responds at all, NCS tries the last resort, soliciting a volunteer:

QNI: W3TX 3RN TX QTC 2RN 3 <AR> (from the beginning)

NCS: **W2RX...** (pause for W2RX, **no reply**)

NCS: 2RN RX, (immediately calls for liaison, **no reply**)

NCS: VOL 2RN RX?, (if reply, NCS handles the station with **Immediate Dispatch**); or

NCS: W3TX <AS> (if no volunteer, simply acknowledges W3TX, asking it to wait)

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If W3TX had other traffic, the NCS could call for an outlet, or use an immediate dispatch for that traffic without asking W3TX to wait (thus extending the function of the Immediate Dispatch).

* The NCS could also initiate a SPLIT dispatch by beginning with a call for an expected returning station not yet checked back into the net. This may be used to expedite dispatching another station waiting on net with pending business (ahead of other stations checking in or returning). Assume W2RX is the returning station:

NCS: **W2RX...** (pause for returning RX to reply; the first part of the SPLIT)

2RX: RX.. (W2RX replies, checking back in)

NCS: **... W3TX UP 5 2RN** (the rest of the SPLIT dispatch)

2RX: T (in order dispatched)

3TX: T

* The SPLIT dispatch may be used also to expedite a returning station, or an expected liaison not yet checked into the net, for a QNQ addition to an existing stack.

NCS: **W2RX...** (pause for RX to reply; the first part of the SPLIT)

2RX: RX.. (W2RX replies, checking back in, or listing traffic if checking in for the first time.)

NCS: **... QNQ UP 5 W4TX 2RN** (the rest of the SPLIT dispatch if RX was QRU, else the Immediate Dispatch is used --- W2RX QNQ UP 5 W4TX 2RN.)

2RX: T

For the QNQ case, remember to use the "AFTER (station)" following W3TX for all voice stack additions, and on CW for the 2nd or additional stations to wait on the stack. (See the DISPATCH, 1 STATION, OFF NET, ADDED TO STACK, QNQ section for voice examples.)

NOTES:

Remember that the first part of the SPLIT call is for returning stations not yet checked back in, or expected new stations not currently checked in, or to verify a station is able to copy the NCS. It is not used as a check to see if net stations are paying attention. (See the "Awake?" and Split Dispatch comments in earlier sections.)

Generally, if more than a simple acknowledgment by the station or liaison called occurs, the NCS will default to the two call sign Immediate Dispatch to avoid the interruption of a listing from obscuring the Split Dispatch continuity. The cost in time of the default to immediate is small compared to the possibility that both stations would not hear or understand the full Split syntax.

Both stations are not excused in advance unless the NCS can monitor the stack frequency to verify the traffic is exchanged, or NCS has reasonable certainty that the traffic will be passed.

4.12.2 DISPATCH, 2 STATIONS TO STACK, OTHER BANDS/MODES

Dispatching to other bands and modes may be helpful in difficult propagation conditions. The command syntax is the same as above for dispatching 2 stations to a stack, and the (freq) statement is simply expanded to indicate the band/mode. The NCS may check with each station, directly or through relay, to verify they can work the proposed band/mode. Excusing in advance may be appended as above. Example on 75 meter SSB net:

NCS: W3RX W3TX 7095 PAN,(CW) or, W3RX W3TX 14090 AMTOR PAN 27

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4.12.3 DISPATCH, 2 STATIONS, ESTABLISH CONTACT, MOVE, QNV

This technique involves directly the two stations involved in the dispatch, as opposed to using a third station as relay as discussed in the RELAYS (QNB) section.

When the NCS is unsure if two stations can copy each other well enough to exchange traffic, a conditional dispatch is used.

QNV: "Establish contact with ____ on this frequency. If successful, move to ____ and send him traffic for ____"

The technique may also be used to evoke a RELAY of the dispatch command from one of the stations to the other when one station is not copying the NCS. The order of the dispatch may be reversed accordingly.

VOICE:

1) TX copies the NCS:

NCS: W3TX CALL W3RX IF OKAY (freq) (dest [qty])

TX: W3RX W3TX (freq); if no copy, TX reports to NCS;

RX: W3TX W3RX (freq); or [W3RX GOING]; or [(suffix) GOING]

(RX receives the command and moves off, TX follows)

TX: TX GOING; or

2) If the RX copies the NCS, W3TX and W3RX are dispatched in reverse order.

CW:

1) TX copies the NCS:

NCS: W3TX QNV W3RX (freq) (dest [qty])

TX: W3RX W3TX (freq); if no copy, TX reports to NCS;

RX: W3TX W3RX (freq); or [W3RX G]; or [T]

(RX receives the command and moves off, TX follows)

TX: T; or

2) RX copies the NCS: W3TX and W3RX are dispatched in reverse.

NOTES:

The first station addressed initiates the call and repeats the command to move for the other station. If copy is satisfactory, the two stations depart as shown, including signing out if excused in advance. If the stations can not copy each other the NCS may use a relay or make other arrangements such as band/mode change.

The dispatch may be directly to other bands or modes as well.

Skipped acknowledgment immediate and split dispatches after QNI may be used.

NCS may include quantity in case the stations wish to reply that conditions are not good enough for that much traffic.

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Note that in the reversed order cases, the meaning of the “send him traffic for” part of the QNV definition is assumed also reversed, i.e., “receive from him traffic for”

NCS may excuse stations in advance in which case the instruction would be at the end of the initial dispatch and relayed by the calling station (often at the stack).

Both stations are not excused in advance unless the NCS can monitor the stack frequency to verify the traffic is exchanged, or NCS has reasonable certainty that the traffic will be passed.

4.12.4 DISPATCH, 3 STATIONS, RELAYS, OFF NET, QNB

This technique involves the use of a third station relay. There are several conditions possible to consider. If either RX or TX can copy the NCS, and the RX and TX can copy each other, then the NCS can use the appropriately ordered dispatch as above (QNV) for them to establish contact, move off, and pass their traffic. Should that fail or not be possible, the methods below may be used.

The NCS may determine in advance, or through a relay station, if the two stations can copy each other and which relay station copies both.

* **VERIFY COPY:** To verify copy the NCS or stations will usually ask HOW COPY [call], reply I COPY [call] or NO COPY [call]; on CW, QNJ [call], reply QNJ or QNP, or C or N. Note the implied ME/YOU usage of QNJ and QNP when no [call] is appended. See the “Q” signal list. The Establish Contact QNV dispatch may be used without further instructions to verify copy. (W3RX QNV W3TX) See Net Calls, Calls to Verify Copy.

*** RELAY CASES:**

Case 1) When NCS AND the RLY station know in advance that all three stations, RLY, TX and RX, are able to copy the NCS, but RX and TX can not copy each other, the process becomes a simple triple dispatch.

Case 2) RX and TX can not copy NCS, and can not copy each other.

Case 3) RX and TX can not copy NCS, and RLY copy doubtful.

Case 4) The RX and TX can copy each other, but not the NCS. The RLY station simply relays the dispatch.

The NCS may elect to include (qty) in the dispatch in case a station or the relay was not able to copy it earlier, or the stations wish to object to the quantity under the conditions.

CASE 1): RELAY, TRIPLE DISPATCH, OFF NET, ALL STATIONS COPY NCS

The RLY station should wait and listen to check that both stations copy and leave. All three stations reply directly to the NCS (in the order of the dispatch works well).

VOICE:

NCS: W3RLY RELAY W3RX W3TX (freq) (dest [qty])

RLY: (suffix) GOING

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RX: (suffix) GOING
TX: (suffix) GOING

CW:
NCS: W3RLY QNB W3RX W3TX (freq) (dest [qty])
RLY: T
RX: T
TX: T

The RLY station initiates contact on the stack frequency.

All three stations return normally.

CASE 2): RELAY, QNB, OFF NET

RX and TX can not copy NCS, and can not copy each other:

This is one of many combinations of poor copy situations encountered. The dispatch syntax is not in wide usage. The NCS may often resort to plain English to direct the desired results.

The RLY station in this case repeats the dispatch and stations reply in a manner confirming receipt.

VOICE:

NCS: W3RLY CALL AND RELAY W3RX W3TX (freq) (dest [qty]); or
... [W3RLY CALL W3RX AND W3TX (freq) AND RELAY (dest [qty])]
RLY: W3RLY FOR RELAY W3RX W3TX (freq) (dest [qty])
RX: W3RX (freq); or [(suffix) GOING]
TX: W3TX (freq); or [(suffix) GOING]
RLY: W3RLY (freq); or [(suffix) GOING],

RLY verifies RX and TX copy, then leaves last. The RLY station initiates contact on the stack frequency. Upon their return, and hearing RX and TX, RLY informs the NCS:

RLY: RLY RX TX BACK, confirming all stations returned.

NCS: RLY RX TX

CW:
NCS: W3RLY CALL ES QNB W3RX W3TX (freq) (dest [qty]); or
... [W3RLY CALL W3RX ES W3TX (freq) QNB (dest [qty])]
RLY: W3RLY FOR QNB W3RX W3TX (freq) (dest [qty])
RX: W3RX (freq); or [T]
TX: W3TX (freq); or [T]
RLY: W3RLY (freq); or [W3RLY G]; or [T]

RLY verifies RX and TX copy, then leaves last.

The RLY station initiates contact on the stack frequency.

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Upon their return, and hearing RX and TX:

RLY: RLY RX TX

NCS: RLY RX TX

CASE 3): FULL RELAY, RX, TX, RLY DIFFICULTY

In the ultimate case the NCS may not even know if the RX and TX stations can copy the RLY. This can be established before the dispatch, plain English may be used, or a syntax sequence might be employed such as:

NCS: W3RLY QNV [ES] QNB W3RX W3TX (freq) (dest [qty])

RLY: calls each station to verify copy and pass the dispatch, then mediates the exchange at the stack.

In poor conditions the matter may be better handled by having the RLY station establish contact with RX as first step (QNV without a dispatch), RLY establish contact with TX second, then, if okay, dispatch the three stations to the stack.

Alternatively the NCS may choose to have RLY and TX make contact and move off to get the traffic into the hands of the RLY station, and make later arrangements for passing it to RX, perhaps on another band or mode, or with another relay.

CASE 4): RELAY OF DISPATCH, FOR OFF NET

The RX and TX can copy each other, but not the NCS. The RLY station simply relays the dispatch. There is no customary syntax widely accepted for this technique. Plain language may always be used. The following syntax may be employed:

VOICE:

NCS: W3RLY SEND W3RX W3TX (freq) (dest [qty])

RLY: W3RX W3TX (freq) (dest [qty]) ; equivalent to normal dispatch.

RX: RX GOING

TX: TX GOING

RLY: W3RLY; listens on net to relay return of RX and TX.

NCS: resumes net

Upon their return, and hearing RX and TX:

RLY: RLY RX AND TX BACK (RLY direct transmission like a returning station)

NCS: RLY RX TX

CW:

NCS: W3RLY SEND W3RX W3TX (freq) (dest [qty])

RLY: W3RX W3TX (freq) (dest [qty]); equivalent to normal dispatch.

RX: T

TX: T

RLY: W3RLY ; listens on net to relay return of RX and TX;

NCS: resumes net

Upon their return, and hearing RX and TX:

RLY: RLY RX TX (RLY direct transmission like a returning station)

NCS: RLY RX TX

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For the EXCHANGE see EXCHANGING TRAFFIC, OFF FREQUENCY, WITH RELAY, for cases 1, 2 and 3. Case 4 is a normal 2 station exchange.

NOTES:

NCS may excuse a station in advance in which case the instruction would be part of the initial dispatch and relayed.

Both stations are not excused in advance unless the NCS can monitor the stack frequency to verify the traffic is exchanged, or NCS has reasonable certainty that the traffic will be passed.

The NCS may use the same relay technique to excuse a station or stations not copying the NCS, or to make other types of dispatches or requests.

The RLY station will have to relay the return of the dispatched stations.

In each case the first station addressed in the dispatch replies first.

4.12.5 DISPATCH, 1 STATION, OFF NET, ADDED TO STACK, QNQ

These commands are used for dispatching an additional station to an existing stack where two stations are already exchanging traffic. Stacks off net are started as shown in the two station dispatches. A station on a stack may switch from sending to receiving traffic, or vice versa, based on the next station assigned to contact it on the stack, or traffic may be swapped.

* **LIMITING THE STACK, USE OF AFTER.** The NCS usually limits the number of stations on the stack to 3 (2 exchanging and 1 waiting to call its station). The NCS will usually wait until one of the first two stations returns, thus reducing the stack to 2, before dispatching an additional station (or dispatch based upon time or monitoring if stations are excused in advance).

All commands to add a station to a stack should make it clear that there is already a two station stack operating on the frequency (to understand that the frequency will be busy), and the order of calling. On voice the [AFTER (call sign)] inclusion is used for all such single addition dispatches to make this clear. On CW the QNQ dispatch signal contains that information for the first additional station, and [AFTER (call sign)] is used to specify the sequence for the 4th and extra additions (infrequently done except as last business dispatches). On CW: "QNQ: Move frequency to and wait for to finish handling traffic. Then send him traffic for".

This new station might be assigned to exchange traffic with a station already in control of the stack which is due to exchange with the other waiting station first. Failure to indicate the sequence usually results in disorganization and confusion at the stack.

* **MIXED STACKS** are not permitted. No station, having completed a stack exchange, should have to wait on the stack for another station's exchange to be completed before doing another assignment on that same stack. This would be difficult, confusing, and generally unworkable.

* **PAUSING BEFORE RETURN TO NET.** Stations should pause and listen for any waiting station to call before returning to net. Missed assignments cause loss of valuable net time.

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* TAG: If timing is such that a single addition to a stack is sent off late and the stack stations return to net right afterwards, the NCS may re-dispatch the addition's target station using the normal QNQ type command immediately... with caution. If it is likely that the additional station may soon return no joy, the NCS may choose to wait for that event and re-dispatch the two together. The NCS needs to watch the stack timing, but interruptions can sometimes get in the way. Ultimately, waiting for the stations playing tag to return to the net is certain... at the expense of net time.

* DISPATCH, ADDITIONAL STATION TO THE STACK, QNQ
Skipped acknowledgment immediate QNQ dispatches after QNI may be used.

It is permissible to send a station to a stack to either receive or send traffic, the last part of the definition being reversed by implication, or the stations may swap traffic.

Case 1) QNQ, one station dispatched to move to the stack.

Case 2) The old "QNY", avoided.

The first station addressed is the sole responder to these commands.

CASE 1): DISPATCH 1 STATION TO STACK, QNQ:

One station dispatched to MOVE and WAIT to clear traffic with a station already on a stack. The use of AFTER for both the third station and a fourth (or more) is peculiar to VOICE operation since the dispatched station must be informed that it is being dispatched to an already operating stack. Note there are two sequence choices shown for the "AFTER (call sign)" syntax. Putting the (dest[qty]) last is shown as first choice (second in brackets) although both will be heard in use. Only the first choice is shown in most examples.

VOICE:

NCS: W3XC (freq) W3XB AFTER W3XA (dest[qty]); or
... [W3XC (freq) W3XB (dest[qty]) AFTER W3XA]

XC: XC GOING; (note W3XC and W3XB are to exchange)

To EXCUSE a station in advance, add the following at the end:

NCS: ... W3XC EXCUSED; or

... W3XB EXCUSED; the other station in the exchange; or

... BOTH EXCUSED

STN: 73 W3XC GOING; excused station signs out at departure; or

If W3XB is excused, it is the responsibility of the dispatched station to inform the other station in the exchange that it is excused when the exchange on the stack is completed.

VOICE EXAMPLES:

NCS: W3TX UP 5 W3RX AFTER W3XX 3RN; or

... [W3TX UP 5 W3RX 3RN AFTER W3XX]; or with excusing,

NCS: W3TX UP 5 W3RX AFTER W3XX 3RN W3RX EXCUSED

TX: TX GOING

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NCS: W3TX UP 5 W3RX AFTER W3XX 3RN W3TX EXCUSED; or
NCS: W3TX UP 5 W3RX AFTER W3XX 3RN BOTH EXCUSED
TX: 73 W3TX GOING

CW:

The QNQ signal automatically informs the dispatched station it is going to an existing stack. For the 3rd station:

NCS: W3XD QNQ (freq) W3XB (dest [qty]);

Or, for a 4th station (or more), in order to make the stack sequence unambiguous:

NCS: W3XE QNQ (freq) W3XB AFTER W3XD (dest [qty]); or
... [W3XE QNQ (freq) W3XB (dest [qty]) AFTER W3XD]
STN: T; The station acknowledges and departs for the stack:

To EXCUSE a station in advance, add the following at the end of the line:

NCS: ... W3XD QNX; or
... W3XB QNX; the other station.
... BOTH QNX

XD: 73 W3XD G; station excused signs out at departure; or if W3XB is excused, it is the responsibility of the dispatched station to inform the other station in the exchange that it is excused when contact is made on the stack.

CW EXAMPLES:

NCS: W3TX QNQ UP 5 W3RX 3RN; or
NCS: W3TX QNQ UP 5 W3RX 3RN W3RX QNX (other station)
TX: T; or
NCS: W3TX QNQ UP 5 W3RX 3RN W3TX QNX; or
... W3TX QNQ UP 5 W3RX 3RN BOTH QNX
TX: 73 W3TX G (excused station signs out at departure)

For a 4th (or more) station:

NCS: W3TX QNQ UP 5 W3RX AFTER W3XX 3RN; or
... [W3TX QNQ UP 5 W3RX 3RN AFTER W3XX];
NCS: W3TX QNQ UP 5 W3RX AFTER W3XX 3RN W3RX QNX
TX: T
NCS: W3TX QNQ UP 5 W3RX AFTER W3XX 3RN W3TX QNX; or
... W3TX QNQ UP 5 W3RX AFTER W3XX 3RN BOTH QNX
TX: 73 W3TX G

*** IMMEDIATE DISPATCH OF NEW STATION TO THE STACK**

Skipped acknowledgment for new stations on both modes:

VOICE:

STN: W3TX 3RN TRANSMIT TRAFFIC 1RN 4 2RN 3 OVER; (new QNI)
NCS: W3TX UP 5 W2RX AFTER W3XX 2RN
STN: TX GOING

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CW:

STN: W3TX 3RN TX QTC 1RN 4 2RN 3 <AR>; (new QNI)

NCS: W3TX QNQ UP 5 W2RX 2RN;

STN: T

CASE 2): The “QNY”, 1 STATION USAGE:

The archaic QNY dispatch, although sometimes used in the past to dispatch a single station to a stack, should never be used for that purpose due to its ambiguity and not informing the dispatched station that it is going to an existing stack.

Use the QNQ methods in case 1 above.

NOTES:

Both stations are not excused in advance unless the NCS can monitor the stack frequency to verify the traffic is exchanged, or NCS has reasonable certainty that the traffic will be passed.

4.12.6 DISPATCH, BOOKS TO MULTIPLE STATIONS, OFF NET

Sending books to multiple stations is not usually done on Area/Region Nets. Booked traffic to a single liaison is acceptable of course.

Dispatching book traffic to multiple stations is an option of the NCS based upon the conditions, economies for the net, and the capabilities of the stations involved. During the assigning process the NCS assigned each part of the book to specific RX stations, and the TX station should have copied along (if not, the NCS will add the (dest [qty]) in the dispatch).

VOICE:

NCS: W3TX W3XA W3XB (etc.) (freq) BOOK [OF (qty)]; or

NCS: W3TX W3XA (dest [qty]) W3XB (dest [qty]) etc. (freq) BOOK [OF (qty)] (to specify recipients)

STNS: TX GOING, XA GOING, XB GOING, etc.;

* At the stack after checking the frequency is clear:

TX: W3XA W3TX READY TO COPY?

XA: READY

TX: XB?, or W3XB? (TX uses suffixes or tactical calls to check stations);

XB: READY, etc., (polling until all stations report ready)

TX: BOOK OF... (Sends book. Each station excused after its part of the book. Ch. 2.)

CW:

NCS: W3TX W3XA W3XB (etc.) (freq) BOOK [OF (qty)]; or

NCS: W3TX W3XA (dest [qty]) W3XB (dest [qty]) (etc.) (freq) BOOK [OF (qty)] (to specify recipients)

STNS TX: G, XA: G, XB: G, etc.;

At the stack after checking the frequency is clear:

TX: W3XA W3TX QRV?

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XA: QRV

TX: XB, or W3XB (? not needed. TX uses suffixes or tactical calls to check stations);

XB: QRV; etc., until all stations report ready;

TX: BOOK OF... (Sends book. Each station excused after its part of the book. See Chapter 3.)

The normal "T" acknowledgment for each station GOING is dispensed with in favor of "(suffix) G" where there are numerous stations responding for large books. If there are only 2 or 3 stations, the usual "T" from each, in order, without the suffix is sufficient.

NOTES:

See the BOOKS to MULTIPLE STATIONS in Chapters 2 and 3, and the reviews in Exchanges On Net later in this chapter. The TX station functions much like an NCS at the stack in this type exchange. The TX call for each station to check if ready to copy is usually done using suffixes for efficiency (full calls if suffix conflicts). The TX station groups all different parts to one station together so the exchange with that station may be contiguous.

It is incumbent upon the NCS to dispatch all the assigned stations possible off with the TX station at the same time else repeat transmissions of the traffic will be required.

All stations are not excused in advance unless the NCS can monitor the stack frequency to verify the traffic is exchanged, or NCS has reasonable certainty that the traffic will be passed.

4.12.7 DISPATCH, MESSAGE TO MULTIPLE STATIONS, OFF NET, QNC

Dispatching messages to all stations off net is an unusual event. The NCS is out of the loop for such activity off net thus removing options discussed in sending messages to all stations on the net. If required, handle the message to a group of stations off net using the DISPATCHING BOOKS TO MULTIPLE STATIONS, OFF NET, method above. Use the dispatch of all recipients option so that each station is clearly notified to move off net. Example:

NCS: W3TX W3XA W3XB W3XC W3XD UP 5 ARES BULLETIN

The QNC/book is sent after TX polling ready to copy, and acknowledged by a TX poll at the end. See Dispatching Message(s) to All Stations, on Net, QNC.

4.12.8 DISPATCH, EXCUSING IN ADVANCE

Dispatched stations are not excused in advance unless the NCS can monitor the stack frequency to verify the traffic is exchanged, or NCS has reasonable certainty that the traffic will be passed. Excusing them and closing the net is risky should the stations have difficulty. There would be no net to assist, and the traffic count of the net would be in question.

The NCS may close the net after the last such dispatch and monitor the net frequency or stack frequency for any stations reporting problems or amended quantities.

If the dispatched station is excused, the station signs out with its full call sign. If the station already on the stack is ordered excused, the dispatched station must carry the command to the stack and inform that station. Signing out when excused using the full call sign meets the ID requirements.

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Excusing stations in advance is discussed in most dispatching sections above. The call sign and EXCUSED, or QNX on CW, is used at the end of the dispatch line.

The generic form adds the following to the end of the dispatch:

VOICE:

NCS: ... (call sign) EXCUSED; or ... BOTH EXCUSED

CW:

NCS: ... (call sign) QNX; or ... BOTH QNX

Two station dispatch to stack, example:

VOICE:

NCS: W3RX W3TX UP 5 3RN W3RX EXCUSED

RX: 73 W3RX GOING (excused station signs out at departure)

TX: TX GOING; or

NCS: W3RX W3TX UP 5 3RN BOTH EXCUSED

RX: 73 W3RX GOING (excused station signs out at departure)

TX: 73 W3TX GOING (excused station signs out at departure)

CW:

NCS: W3RX W3TX UP 5 3RN W3RX QNX

RX: 73 W3RX G (excused station signs out at departure)

TX: T; or

NCS: W3RX W3TX UP 5 3RN BOTH QNX

RX: 73 W3RX G (excused station signs out at departure)

TX: 73 W3TX G (excused station signs out at departure)

Single additions to a stack:

VOICE:

NCS: W3TX UP 5 W3RX AFTER W3XX 3RN W3RX EXCUSED

TX: TX GOING; and excuses RX after exchange. Or;

NCS: W3TX UP 5 W3RX AFTER W3XX 3RN W3TX EXCUSED

TX: 73 W3TX GOING; signs clear. Or;

NCS: W3TX UP 5 W3RX AFTER W3XX 3RN BOTH EXCUSED

TX: 73 W3TX GOING; signs clear and excuses RX after exchange.

CW Examples:

NCS: W3TX QNQ UP 5 W3RX 3RN W3RX QNX, (3rd)

NCS: W3TX QNQ UP 5 W3RX AFTER W3XX 3RN W3RX QNX, (4th & +)

TX: T; and excuses RX after exchange. Or;

NCS: W3TX QNQ UP 5 W3RX 3RN W3TX QNX, (3rd)

NCS: W3TX QNQ UP 5 W3RX AFTER W3XX 3RN W3TX QNX, (4th & +)

TX: 73 W3TX G; signs clear. Or

NCS: W3TX QNQ UP 5 W3RX 3RN BOTH QNX, (3rd)

NCS: W3TX QNQ UP 5 W3RX AFTER W3XX 3RN BOTH QNX, (4th & +)

TX: 73 W3TX G; signs clear and excuses RX after exchange.

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NOTES:

If RX is excused, it is the responsibility of TX to inform RX it is excused after the exchange on the stack. A written reminder is useful when moving off to the stack.

RX may be dispatched in like fashion, traffic flow reversed, or swaps may be ordered..

Additional stations dispatched one at a time to existing stacks are not asked to excuse other stations in the stack exchange sequences other than the one with which they are assigned to exchange traffic. Others return to net or have already been excused in advance.

4.13 EXCHANGING TRAFFIC

In the following sections the exchanges on net and on a stack with and without the help of a relay station are shown for review. Remember that the dispatch may contain multiple messages, multiple destinations, books, bulletins, and/or traffic swaps.

The exchange of message traffic between stations constitutes a transaction. Each radiogram transmitted is introduced and ended with appropriate prosigns, prowords, or operational words, fills are negotiated as required, and the message(s) acknowledged at the end.

It is customary not to interrupt during these transactions, and, in a series of messages, until after all messages are concluded and acknowledged. This is marked by the stations signing with their farewells and full call signs. This is the signal that control is returned to the net or, off net, that the stack assignment is finished and the next station may call its contact.

On net the NCS may interrupt between individual messages to make net calls, or may dispatch limited quantities of listed traffic to accomplish that same purpose. If interrupted for a net call, the NCS will signal the stations to continue afterward, usually by sending the transmitting station's suffix and "K" or "GO AHEAD", etc.

Problems perceived with listed traffic may be addressed by stations making a normal "additional business" call to the NCS, followed when recognized by the question or suggestion.

There may be rare occasions when interruptions may be needed. An erroneous dispatch might be caught, for example, where the correct recipient or another station may wish to interrupt to prevent the sending station from having to repeat the message(s). Off net at a stack such an interruption may release the assigned receiving station from having to copy, and to be able to return to the net for other business. Care should be taken, however, not to interrupt the sequence of the stack, i.e., permit the stations to complete any other exchanges assigned.

In some cases a recipient will simply copy a message erroneously dispatched to it, allow the transmitting station to mark the message passed, then re-list the message later. Alternatively, the stations may return to net and correct the dispatch by re-listing the traffic.

Other routing matters, duplications, or corrections to a message, etc., may likewise be handled with an interruption to the NCS prior to the beginning of the exchange on net, or before stations acknowledge a dispatch. On or off the net, the station wishing to interrupt would send its call

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suffix, wait to be recognized, then make the input. The unusual interruption would be read by the NCS or stations as an urgent injection.

Such interruptions should be made with care, sparingly, and only when essential for problem solving or enhancing net efficiency. See also the sections on Net Calls; Flow, Call Types, Transactions, and Tail Ending.

Note that messages are acknowledged with “ROGER” on VOICE, “QSL” on CW. Expressions such as “ROGER YOUR MESSAGE NUMBER #” or “QSL” on VOICE are considered poor practice. ROGER on VOICE and QSL on CW imply all messages were received. Also remember that a “GO AHEAD”, or “K” on CW, is not required between each message transmitted in a series except when agreed upon on VHF/UHF repeaters. See Chapters 2 and 3 regarding Sending Multiple Messages.

4.13.1 EXCHANGING TRAFFIC, ON NET

See chapters 2 and 3, Station Operations, for the details of making contact and exchanging the traffic. The two station exchange, multiple messages to one station, books to one station, and books to multiple stations are all reviewed below.

1) REVIEW OF TYPICAL EXCHANGE, SINGLE MESSAGE, ON NET

See the later section for the exchange off net.

VOICE:

NCS: W3RX W3TX HERE (dest [qty])

RX: W3RX [GOOD EVENING] READY TO COPY;

TX: W3TX [GOOD EVENING] NUMBER... END NO MORE; sends traffic

RX: ROGER [73] W3RX

TX: [THANKS] 73 W3TX

often shortened to:

NCS: W3RX W3TX HERE (dest [qty])

RX: READY TO COPY

TX: NUMBER... END NO MORE (sends traffic, services fills)

RX: ROGER 73 W3RX; the short method, signing at acknowledgment.

TX: 73 W3TX

NCS: resumes net

Or:

RX: ROGER; the long method

TX: 73 W3TX

RX: 73 W3RX (forcing RX to send last for NCS copy if needed)

CW:

NCS: W3RX W3TX HR (dest [qty])

RX: W3RX [GE] QRV

TX: W3TX.[GE]....; sends traffic

often shortened to:

NCS: W3RX W3TX HR (dest [qty])

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RX: QRV

TX: NR... <AR> N, (sends traffic, services fills)

RX: QSL 73 W3RX; short method

TX: 73 W3TX

NCS: resumes net

Or:

RX: QSL; the long method

TX: 73 W3TX

RX: 73 W3RX (forcing RX to send last for NCS copy if needed)

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2) REVIEW OF SENDING MULTIPLE MESSAGES TO ONE STATION

This same technique is used ON NET and OFF NET in stacks once contact is made. The exchange of 4 messages is shown below written out, not voiced in all cases. Use the proper voicing rules for the type message groups sent.

VOICE:

RX: W3TX W3RX READY TO COPY; (short method of calling ready)

TX: (optional LISTENING BETWEEN GROUPS and/or quantity)

book of two R W3VPR ARL 15 ANNAPOLIS MD DEC 23
break (/.../) ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON break (/.../)

number 2 JIM SMITH
13 OAK LANE
BOSTON MA 01033 break
BETTY AND JOHN break (/.../)

number 3 BILL JONES
4 CEDAR RD
BALTIMORE MD 21228
410 555 3434 break
HARRY OP NOTE REPLY MDD

end book more (/.../)
number 22 R W1AW 11 NEWINGTON CT DEC 22
GEORGE SMITH
45 OAK DRIVE
PODUNK MD 21200
410 555 1234 break (/.../)
ADVISE IF YOU RECEIVED MY
EMAIL DATED MARCH 7 X
73 break
STEVE

end one more (/.../)
number 309 R W3FT ARL 3 BALTIMORE MD DEC 22
WILLIAM JONES
13 SLEEPY HOLLOW PKWY
PODUNK MD 21200
410 555 2456 break (/.../)
ARL SIXTY CHRISTMAS (/.../)
BUCK

end no more

RX: ROGER W3RX

TX: W3TX (Exchange complete)

The batch is sent continuously unless RX interrupts for repeats, otherwise fills requested at end of series.

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CW: SENDING MULTIPLE MESSAGES TO ONE STATION

This same technique is used ON NET and OFF NET in stacks once contact is made.

RX: W3TX W3RX QRV; (short method of calling ready)

TX: QSK...; if applicable, or [QTC 4 QSK...] to indicate quantity;

book of two R W3VPR ARL 15 ANNAPOLIS MD DEC 23

<BT> ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON <BT>

NR 2 JIM SMITH <AA>
13 OAK LANE <AA>
BOSTON MA 01033 <BT>
BETTY AND JOHN <BT>

NR 3 BILL JONES <AA>
4 CEDAR RD <AA>
BALTIMORE MD 21228 <AA>
410 555 3434 <BT>
HARRY <AA>
OP NOTE REPLY MDD <AR> end book <AR> B

NR 22 R W1AW 11 NEWINGTON CT DEC 22
GEORGE SMITH <AA>
45 OAK DRIVE <AA>
PODUNK MD 21200 <AA>
410 555 1234 <BT>
ADVISE IF YOU RECEIVED MY
EMAIL DATED MARCH 7 X
73 <BT>
STEVE <AR> 1

NR 309 R W3FT ARL 3 BALTIMORE MD DEC 22
WILLIAM JONES <AA>
13 SLEEPY HOLLOW PKWY <AA>
PODUNK MD 21200 <AA>
410 555 2456 <BT>
ARL SIXTY CHRISTMAS <BT>
BUCK <AR> N

RX: QSL W3RX

TX: W3TX (Exchange complete)

The batch is sent continuously unless RX interrupts for repeats, otherwise fills requested at end of series.

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3) REVIEW OF BOOK SENDING, TO ONE STATION

On both modes the exchange is sent continuously with no RX interruptions unless fills required.

VOICE: Transmission shown written (not voiced). Use proper voicing rules:

RX: W3TX W3RX READY TO COPY

TX: "book of three R W3VPR ARL 15 ANNAPOLIS MD JAN 1

break (/.../) ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON break (/.../)

number 2 JIM SMITH
13 OAK LANE
BOSTON MA 01033 break BETTY AND JOHN break (/.../)

number 3 BILL JONES
4 CEDAR RD
BALTIMORE MD 21228
410 555 3434 break HARRY OP NOTE REPLY MDD break (/.../)

number 4 CHUCK K3FT
C/O BTN 146R67
BALTIMORE MD break GEORGE

end book no more

RX: ROGER 73 W3RX

TX: THANK YOU 73 W3TX (exchange complete)

* (/.../), expected listening pauses for interruptions

CW:

RX: W3TX W3RX QRV

TX: QSK BOOK OF THREE R W3VPR ARL 15 ANNAPOLIS MD JAN 1

<BT>(/...)* ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON <BT>(/...)*

NR 2 JIM SMITH <AA>
13 OAK LANE <AA>
BOSTON MA 01033 <BT> BETTY AND JOHN <BT>(/...)*

NR 3 BILL JONES <AA>
4 CEDAR RD <AA>
BALTIMORE MD 21228 <AA>
410 555 3434 <BT> HARRY <AA>
OP NOTE REPLY MDD <BT>(/...)*

NR 4 CHUCK K3FT <AA>
C/O BTN 146R67 <AA>
BALTIMORE MD <BT> GEORGE <AR> END BOOK <AR> N

RX: QSL 73 W3RX

TX: TNX 73 W3TX (exchange complete)

* (/.../), PTT interrupts shown for non-QSK operation only.

4) REVIEW OF SENDING BOOKS TO MULTIPLE STATIONS

TX polls all stations ready to copy, sends fixed parts then variable parts addressing each receiving station in turn. (For the QNC all-station bulletin see the dispatch and next sections.) This same technique is used ON NET and OFF NET in stacks. The same form is used on CW (not shown), using NR, <AA>, <BT>, QRV, CW fill requests, and QSL, etc. See Chapter 3.

VOICE: Unlike the two station exchange, the TX station initiates the sequence. Message parts are shown written, not voiced. Use appropriate voicing rules.

TX: W3XA W3TX READY TO COPY?

RX1: READY TO COPY; or [READY]

TX: XB?, or W3XB?; (TX may use suffixes or tactical calls in this sequence.);

RX2: READY

TX: XC?

RX3: READY

TX: book of three R W3VPR ARL 15 ANNAPOLIS MD JAN 1

break (/.../) ARL SIXTY ONE X HAVING
A WONDERFUL TIME HERE X
HOPE TO SEE YOU SOON break (/.../)

RX3: XB STATION OF ORIGIN (W3XB needs fill. Fixed part fill requests
from RX stations are accepted here so all stations can benefit. ID is optional.)

TX: WHISKEY TREE VICTOR PAPA ROMEO

RX3: ROGER

TX: W3XA number 2 JIM SMITH (alerts RX1 to copy next part)

13 OAK LANE

BOSTON MA 01033 break BETTY AND JOHN break

W3XA? (checking with receiving station for acknowledgment)

RX1: ROGER W3XA (station excused from the stack if off net)

TX: W3XB number 3 BILL JONES (alerts RX2 to copy next part)

4 CEDAR ROAD

BALTIMORE MD 21228

410 555 3434 break HARRY

OP NOTE REPLY MDD break

W3XB?

RX2: WORD AFTER figure FOUR

TX: CEDAR I spell C E D A R

RX2: ROGER W3XB (station excused from the stack if off net)

TX: W3XC number 4 CHUCK K3FT (alerts RX3 to copy next part);

C/O BTN 146R67

BALTIMORE MD break GEORGE

end book no more

RX3: ROGER W3XC

TX: W3TX (EXCHANGE COMPLETE)

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5) REVIEW OF SENDING BULLETINS, QNC, TO MULTIPLE STATIONS

These messages generally have one message number, and are addressed to a group of recipients. TX polls all stations ready to copy, sends the message, then polls all stations for fills and acknowledgment. (See the dispatch section and Chapters 2 and 3.) This same technique is used ON NET and OFF NET in stacks. The same form is used on CW (not shown), using NR, <AA>, <BT>, QRV, CW fill requests, and QSL, etc. See Chapter 3.

VOICE: Unlike the two station exchange, the TX station initiates the sequence. Message parts are shown written, not voiced. Use appropriate voicing rules.

TX: W3XA W3TX READY TO COPY?

XA: READY; (ready to copy)

TX: XB?, or W3XB?; (TX may use suffixes or tactical calls in this sequence.);

XB: READY

TX: XC?

XC: READY

TX: book of three number 6 R W3TX 10 ANNAPOLIS MD JAN 1

DISTRICTS A B AND C break (/.../) (fixed multiple address)

ADVISE TOTAL NUMBER OF PERSONS

IN SHELTERS IN YOUR JURISDICTION break (/.../)

JIM SMITH DIR STATE EOC 012315 JAN 91

end book no more

TX: XA? (checking with receiving station A for acknowledgment)

XA: ROGER W3XA (station excused from the stack if off net)

TX: XB? (checking with receiving station B for acknowledgment)

XB:: WORD AFTER PERSONS

TX: IN

XB: ROGER W3XB (station excused from the stack if off net)

TX: XC? (checking with receiving station C for acknowledgment)

XC: ROGER W3XC

TX: W3TX (EXCHANGE COMPLETE)

The TX operator is responsible for keeping a record of recipients and servicing messages for which there is no outlet. Likewise for messages addressed to "ALL STATIONS", or "ALL DISTRICTS", etc. The list of successfully delivered messages must be made available to the originator (or originating agency). Such agency traffic is often marked by the date/time group shown after the signature, and is referenced in replies ("Your Number 6 012315", or sometimes simply "Your number 012315"). The message number sorts those sent in the same minute. When present, this time stamp obviates the need for a time-filed in the preamble. Local agencies may insist on using local time, in which case a time-filed should be used to indicate EST or EDT, and the date changed from the default UTC date to local date to agree with the time (see Ch. 1).

4.13.2 EXCHANGING TRAFFIC, ON NET, WITH RELAY

See chapters 2 and 3, Station Operations, for the details of making contact and exchanging the traffic.

* TYPICAL EXCHANGE:

VOICE:

NCS: W3RLY RELAY W3RX W3TX HERE (dest [qty])

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(The RLY station contacts RX to verify copy, then solicits the traffic from TX.)

RLY: W3RX W3RLY

RX: W3RX

RLY: W3TX W3RLY READY TO COPY

(TX sends the traffic to RLY.)

RLY: (fills) or ROGER W3RLY

TX: 73 W3TX

RLY: W3RX READY TO COPY?;

RX: READY TO COPY;

(RLY sends the traffic to RX.)

RX: (fills) or ROGER W3RX

RLY: [Excuses one or both of the stations if NCS so ordered.]

RLY: 73 W3RLY;

NCS: resumes the net after the last RLY transmission.

CW:

NCS: W3RLY QNB W3RX W3TX HR (dest [qty])

(The RLY station contacts RX to verify copy, then solicits the traffic from TX.)

RLY: W3RX W3RLY

RX: W3RX

RLY: W3TX W3RLY QRV

(TX sends the traffic to RLY.)

RLY: (fills) or QSL W3RLY

TX: 73 W3TX

RLY: W3RX QRV?

RX: QRV

(RLY sends the traffic to RX.)

RX: (fills) or QSL W3RX

RLY: [Excuses one or both of the stations if NCS so ordered.]

RLY: 73 W3RLY [Excuses one or both of the stations if NCS so ordered.]

NCS: resumes the net after the last RLY transmission.

If either station is unable to copy RLY, the RLY station may ask the other to attempt to establish contact and pass the traffic directly as a last resort to complete the assignment.

NOTES: The destination may be given by RLY in cases where stations were not copying NCS.

[END OF TRAFFIC], or [BACK TO NET], or equivalent, is sometimes heard to signal the NCS that the exchange is complete although the NCS can usually determine this from sequence.

4.13.3 EXCHANGING TRAFFIC, OFF FREQUENCY, STACKS

See chapters 2 and 3, Station Operations, for the details of making contact and exchanging the traffic. The frequency should be checked clear by the receiving or relay station which makes the

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first call. Those chapters discuss details of the searching process for the two stations essential to connecting successfully.

* PAUSING FOR A CALL, AN ESSENTIAL RESPONSIBILITY

When the stations complete the assigned exchange(s), BOTH stations should pause a moment to allow time for an additional station sent to the stack to call one or the other. Returning to the net too quickly can make a station miss a stack assignment forcing the net to repeat the process.

Also, see DISPATCH, 1 STATION, ADDITION TO A STACK for additional details about stack operation and control.

Exchange only traffic dispatched by the NCS.

* TYPICAL EXCHANGES, FIRST TWO STATIONS BEGINNING STACK VOICE:

Short method. See Chapter 2.

RX: IS THIS FREQUENCY IN USE?; if no response:

RX: W3TX W3RX READY TO COPY

TX: [W3TX]... ; traffic sent

RX: ROGER 73 W3RX

TX: 73 W3TX

The W3TX W3RX READY TO COPY call may be made on the first attempt. If no contact, repeat calls are made without the ready to copy statement, forcing the TX station to ask RX "READY TO COPY?" after contact, and RX to reply.

or; Long method. See Chapter 2.

RX: IS THIS FREQUENCY IN USE?; if no response

RX: W3TX W3RX; call repeated until contact

TX: [W3TX] READY TO COPY?; (forced to ask)

RX: READY TO COPY

TX: ... ; traffic sent

RX: ROGER, (long method)

TX: 73 W3TX

RX: 73 W3RX

Both stations pause and listen for calls before returning.

CW:

Short method. See Chapter 3.

RX: QRL?; if no response

RX: W3TX W3RX QRV

TX: [W3TX] QSK ... ; or [W3RX W3TX QSK ...]; traffic sent

RX: QSL 73 W3RX

TX: 73 W3TX

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The W3TX W3RX QRV call may be made on the first attempt. If no contact, repeat calls are made without, forcing the TX station to ask RX "Q RV?" after contact, and RX to reply QRV.

Or; Long method. See Chapter 3.

RX: W3TX W3RX; call repeated until contact

TX: W3TX QRV?; or [W3RX W3TX QRV?]

RX: QRV

TX: QSK ... ; traffic sent

RX: QSL

TX: 73 W3TX

RX: 73 W3RX

Both stations pause and listen for calls before returning.

* ADDITIONAL STATION ASSIGNED, CALLS AND JOINS CONTROL OF STACK

The next waiting additional station to join in control of the stack calls its station promptly after the exchange is complete.

VOICE:

XD: W3TX W3XD READY TO COPY [(dest)]; or

... W3RX W3XD READY TO COPY [(dest)]?, depending on the exchange direction;

CW:

XD: W3TX W3XD QRV [(dest)]; or

... W3RX W3XD QRV [(dest)]?, depending on the exchange direction;

The traffic is exchanged and both stations pause for additional calls before returning to the net.

If the NCS excused the additional station, it already signed out of the net when departing to the stack. If the NCS excused the stack station, the additional station must pass the command to that station at the conclusion of the exchange, as in:

VOICE:

XD: ROGER 73 YOU ARE EXCUSED W3XD

CW:

XD: QSL 73 UR QNX W3XD

The additional station may optionally indicate they are BOTH excused if that is the case; [...BOTH EXCUSED...]; or on CW, [...BOTH QNX...]. Words thereafter are permissible if desired.

NOTES:

Sending BOOKS and MULTIPLE MESSAGES to one station and BOOKS TO MULTIPLE RECEIVING STATIONS (or BULLETINS) is done in the same form off net as on net once contact is made. In the multiple station cases each receiving station is excused from the stack to return to net when its parts are concluded. See review of Exchanges On Net above and in Chapters 2 and 3 for details..

Multiple traffic destinations and/or swaps may be involved.

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If an exchange is incomplete, and there is an additional station waiting for the stack, the additional station may be able to assist with relay if there is difficulty. If that fails, the free station involved in the failed exchange should return to net and report no joy, and the next additional business should be handled on the stack as assigned.

If the last stations are not able to complete the exchange they should both return to the net to report.

If the quantity passed is altered, the TX station (or RX station if asked, or if the TX station is excused) should notify the NCS on return to the net frequency.

The failed exchange or altered quantity should be reported to the NCS even if both stations were excused in advance.

If the net is closed the NCS will often be listening to make note of the change or assist.

4.13.4 EXCHANGING TRAFFIC, OFF FREQUENCY, WITH RELAY

The dispatch of a third station to relay:

* TYPICAL EXCHANGE

NCS: W3RLY RELAY W3RX W3TX (freq) (dest [qty])

The RLY, RX and TX arrive at the stack frequency where the RLY station assumes control:
VOICE

RLY: IS THE FREQUENCY IN USE? If no response, then RLY establishes contact:
(The RLY station contacts RX to verify copy, then solicits the traffic from TX)

RLY: W3RX W3RLY

RX: W3RX

RLY: W3TX W3RLY READY TO COPY

TX: sends the traffic to RLY.

RLY: ROGER STAND BY

(RLY holds the TX station in case any confirmations needed.)

RLY: W3RX READY TO COPY?

RX: READY TO COPY

RLY: sends the traffic to RX.

RX: ROGER 73 W3RX

RLY: [Excuses one or both of the stations if NCS so ordered.]

RLY: W3TX 73 W3RLY

TX: 73 W3TX

CW:

NCS: W3RLY QNB W3RX W3TX (freq) (dest [qty])

RLY: QRL? If no response, then RLY establishes contact:

(The RLY station contacts RX to verify copy, then solicits the traffic from TX)

RLY: W3RX W3RLY

RX: W3RX

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RLY: W3TX W3RLY QRV

TX: sends the traffic to RLY.

RLY: QSL <AS>

(RLY holds the TX station in case any confirmations needed.)

RLY: W3RX QRV?

RX: QRV

RLY: sends the traffic to RX.

RX: QSL 73 W3RX

RLY: [Excuses one or both of the stations if NCS so ordered.]

RLY: W3TX 73 W3RLY

TX: 73 W3TX

All stations signed full calls to conclude the exchange.

The destination may be given by RLY in cases where stations were not copying NCS.

When the stations complete the assigned exchange(s), ALL stations pause to listen for calls, then return to net. Returning to the net too quickly can make a station miss a stack assignment forcing the net to repeat the process.

The RLY station listens for RX and TX on the net and relays them as returned to the NCS as required.

If either station is unable to copy RLY, the RLY station may ask the other to attempt to establish contact and pass the traffic directly as a last resort to complete the assignment.

See the sections dealing with DISPATCHING 2 STATIONS WITH RELAYS, ON NET and OFF NET, for explanations of the function of the RELAY station during the DISPATCH and the EXCHANGE.

Failed exchanges or altered quantities should be reported back to the NCS on net, even if all stations are excused, as discussed in normal stack exchanging above.

4.14 RETURNING TO THE NET

Stations report the job completed, or report problems, using different syntax when returning to the net.

The NCS should be advised of the nature of problems to help facilitate solutions.

Stations must pause to listen for calls before returning. After pausing for calls from another station dispatched to the stack, the free stations should return promptly. Other business may be pending for their stations.

It is considered poor practice to have a QSO on the stack frequency before or after the exchange is completed unless words were listed and dispatched by the NCS.

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Net or other stations at the stack should not engage in a QSO or unassigned traffic with a stack station unless dispatched there by the NCS for WORDS or traffic.

The NCS should always make frequent calls, or tail end pauses, during the net to permit returning stations to be able to check back in promptly. Such opportunities permit stations not able to complete their exchange to check back into the net to make other arrangements promptly.

Returning stations having no further pending business on the net may be excused immediately upon their return if not already excused in advance.

Stations may be excused in advance as discussed in DISPATCHING, EXCUSING IN ADVANCE. A station may be asked to carry an order from the NCS to excuse a station on the stack with which it is to make an exchange.

Stations should not interrupt transactions when returning. The practice of “tail ending”, checking back into the net at the conclusion of a transaction, or pause tail ending, is permitted on most if not all nets. If you are not sure about how to do this without interrupting transactions, wait for the NCS to make an OPEN call or a call for returning stations.

On some nets returning stations may be permitted to check back into the net in batches, each sending their suffix (“suffix BACK” on voice) in a series. The NCS will acknowledge their return likewise at its discretion. Technically this violates the transaction between a returning station and the NCS acknowledgment. If the NCS interrupts and acknowledges after the first station take this as a message that the NCS will not accept strings of returns. Check with your net regarding policy. STNS: RX TX XX, NCS: RX TX XX.

The NCS may stop the process and deal with a problem or make a dispatch or call when required.

It is considered poor practice for a station to return to the net and remind the NCS of its additional pending business. The NCS lists all business and may dispatch it in any order desired to accomplish an efficient net. NCS errors or omissions may be politely corrected with an “additional business” call if necessary.

4.14.1 RETURNING, COMPLETED EXCHANGE

VOICE:

STN: (suffix) BACK; implying job complete

NCS: repeats (suffix); or may immediately dispatch the station for an exchange.

Example:

RX: RX BACK

NCS: RX; or [W3RX W2TX UP 5 3RN]; or

... [W3RX 73 YOU ARE EXCUSED]; etc.

CW:

STN: (suffix); implying job complete

NCS: repeats (suffix); or may immediately dispatch the station for an exchange.

Example:

RX: RX

NCS: RX; or [W3RX W2TX UP 5 3RN]; or [W3RX 73 QNX]; etc.

The NCS automatically reads this re-check syntax as indicating that the dispatch assignment was completed successfully. It is not necessary for returning stations to add words indicating that they passed the assigned traffic, nor for the NCS to ask if the traffic was passed.

The NCS may ask for confirmation or questions regarding conditions on the assigned frequency for future reference if there is some reason to do so.

4.14.2 RETURNING, UNABLE TO CONTACT OR COMPLETE EXCHANGE

(CALL SIGN) + NO JOY, NO (SUFFIX), LOST (SUFFIX), (comments), etc.

Stations unable to make contact, or unable to make or complete the exchange(s) dispatched, should return to net promptly, even if excused in advance. If the net is closed the NCS may be monitoring their stack, or be monitoring the net frequency to assist.

Both returning stations should report the failure.

See Chapters 2 and 3 regarding searching for and contacting the assigned station(s). Learning the appropriate methods can help avoid missing exchanges. The receiving station, or relay station if assigned, finds a clear frequency close to that assigned, and initiates the call. The transmitting station searches to find that station. If no joy in thirty seconds to a minute the chances of connecting become slight and the stations should return to net and so report.

The use of the full call sign shown here for reporting back with no joy is intended to make the station's report distinct from the suffix used for return after successful completion of the job. This alerts the NCS to wait for the extra words. (Some nets may optionally prefer the use of the suffix followed immediately by the no joy report.)

Stations report the problem to the NCS upon returning.

VOICE:

STN: (call sign) NO JOY [comments]; or

STN: (call sign) NO (suffix); suffix of dispatched contact;

STN: (call sign) LOST (suffix) [comments];

NCS: (suffix) ROGER STAND BY; or may re-dispatch when both back, or use relay.

CW:

STN: (call sign) NO JOY [comments]; or

STN: (call sign) NO (suffix) ; suffix of dispatched contact;

STN: (call sign) LOST (suffix) [comments];

NCS: (suffix) R <AS>; or may re-dispatch when both back, or use relay.

NOTES:

Additional brief information [comments] may optionally be appended to the report such as "interference", "conditions", "no clear frequency", etc. (QRM, CONDX, QRN, FREQ QRL, etc., on CW). If the RX station, or RLY, is able to find a prospect for a good frequency, or has a suggestion for another band or mode, that information should be passed to the NCS as well (briefly).

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NCS replies with suffix, ROGER and “STAND BY”; (suffix, R, <AS>, on CW), re-lists the traffic, and will re-dispatch the assignment. NCS may arrange a relay station to help, or arrange other solutions to problems. Stations may be dispatched to other bands or modes to complete the assignment, or hooked up with individual relays for later dispatching.

4.14.3 RETURNING, REVISED QUANTITY HANDLED, ADD/CANCEL

There may be times when stations on the stack discover they have more or less traffic to pass than listed and dispatched, or may find the RX station may not be able to handle some. The honest mistake here is distinguished from the case of stations taking the initiative to swap traffic not dispatched but listed and pending on the net. The latter is considered poor practice.

The addition of one or two messages passed to complete the assignment in the dispatched block may take less time than returning to net and starting over from scratch. This is, of course, an exception to the “handle only traffic dispatched” rule, but the judgment call can save the net some time. The stations pass what they can, in the original dispatched block, and then return to the net and notify the NCS of the change for traffic count purposes. Even an excused station should return to net and inform the NCS of changes in quantity passed.

A station suddenly finding it has a significant additional quantity of traffic to pass should return to net and clear the quantity with the NCS. Other dispatches may have been planned based on the original workload estimate.

The NCS bases dispatching and timing upon quantities of listed traffic and may have already assigned the additional traffic to another station waiting on net, or expects the dispatched stations to complete their exchange in a certain amount of time.

The NCS may simply acknowledge the statement, or immediately dispatch the station for another exchange. Listen carefully.

VOICE:

STN: (call sign) BACK CHANGE (dest qty) TO (qty)

STN: (call sign) BACK CANCEL (dest qty)

STN: (call sign) BACK [PLEASE] ADD (dest qty)

NCS: (suffix) ROGER STAND BY; or may dispatch the station.

CW:

STN: (call sign) CHANGE (dest qty) TO (qty)

STN: (call sign) QTA (dest qty)

STN: (call sign) [PSE] ADD (dest qty)

NCS: (suffix) R <AS>; or may dispatch the station.

4.14.4 NCS CALL FOR A SPECIFIC RETURNING STATION

Based on listed traffic and the desired dispatching order, the NCS may wish to call a returning station before being flooded with numerous other calls.

This may seem like an obvious option, but returning stations can be taken by surprise. When returning and waiting for a chance to check back in listen for the call.

VOICE:

NCS: (call sign)?; or [(suffix)?], returning station specific call

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(The query inflection is used to distinguish the call from a dispatch.)

STN: (suffix) BACK; for job completed; or, if problem,

... (call sign) NO JOY; or (call sign) NO (suffix); etc.

NCS: either acknowledges with suffix or begins dispatch command

CW:

NCS: (call sign)?; or [(suffix)?], returning station specific call

(The (?) is sent to distinguish the call from a dispatch.)

STN: (suffix); implying job complete; or, if problem,

... (call sign) NO JOY; or (call sign) NO (suffix); etc.

NCS: acknowledges with suffix, or begins dispatch command.

NOTES:

The use of full call sign and query (?) clearly marks a request to reply by the NCS. This is the same method used by NCS to CALL SPECIFIC LIAISONS, STATIONS BY CALL, JOBS.

Immediate or split dispatches may be used.

4.15 ADDITIONAL BUSINESS, INFORMATION, OR REQUESTS

During the net operation stations check in and list business for the net, the NCS records the business, assigns and dispatches the listed business, and eventually excuses the stations and closes the net. Other sections deal with the mechanics involved in those activities.

There are numerous occasions during a net when additional business or requests need to be dealt with. The essence of the directed net governs the mechanics of how this is done as well.

Stations wishing to make transmissions first call to be recognized by the NCS, and, when recognized, make their request or list additional business. An orderly conduct of net operation is maintained by this discipline.

The NCS from time to time may have additional requests for the net stations. This is also done in a uniform way to make clear exactly what the NCS is doing.

4.15.1 STATION REQUESTS TO LIST BUSINESS

Obtaining recognition of the NCS to transmit for matters not as a specific immediate reply to an NCS request or net call is done by transmitting the call sign suffix.

Stations with additional business wait for the completion of a net transaction then seek to be recognized. This may be done following an OPEN NET CALL or any other net transaction except SPECIFIC CALLS closed to others as shown in other sections. Tail ending and pause tail ending may be used.

Stations once recognized may

* ADD or CANCEL TRAFFIC (See next section for syntax.);

* OFFER TO TAKE LISTED TRAFFIC;

* OFFER TO STORE AND FORWARD LISTED TRAFFIC;

* VOLUNTEER (for liaison or net jobs, etc.);

* OFFER OR REQUEST INFORMATION;

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- * OFFER TO RELAY STATIONS OR RELAY TRAFFIC BETWEEN STATIONS;
- * MAKE COMMENTS (to the NCS, and with permission, to the net---words for net);
- * REQUEST TO BE EXCUSED; etc.

The NCS will reply or add such business to the net task list and attempt to service it.

The NCS may make SPECIFIC NET CALLS as a result of many of the above requests. See the section on NET CALLS. Some requests may be acted upon immediately, others later at the NCS discretion.

VOICE:

STN: (suffix); to request recognition

NCS: repeats (suffix); to recognize the station

STN: [(call sign)] (req) [OVER]; makes its request or comment.

NCS: [(call sign)] [ROGER] STAND BY;

... [(call sign)] [(req)] STAND BY];

... [(call sign)] (reply) STAND BY];

(Or the NCS processes the request or dispatches the station.)

CW:

STN: (suffix); to request recognition

NCS: repeats (suffix); to recognize the station

STN: [(call sign)] (request) [<AR>]; makes its request or comment.

NCS: [(call sign)] [R] <AS>;

... [(call sign)] [(request)] <AS>;

... [(call sign)] (reply) <AS>;

(Or the NCS processes the request or dispatches the station.)

CW Example:

STN: XX

NCS: XX

STN: CAN QSP PODUNK FOR LATE SESSION

NCS: R <AS>

NOTES:

The method used is the essence of the directed net. Request to be recognized, be recognized, then make the request or comment.

The station's (suffix) and the NCS repeat of the (suffix) are self completing, implying "go ahead"; OVER and "K" are not needed. OVER, or <AR>, in the listing are used as end markers in transmissions of uncertain length as shown in initial check in methods. A request such as "NEED TO CLOSE STATION", or "QNX PSE", are sufficiently succinct to be self completing

The station response after being recognized includes the station's full call sign optionally for the most formal business listing, but is often dispensed with for simple requests and when there is no ambiguity about which station is transmitting.

The NCS responses are varied, ranging from a simple STAND BY, or <AS>, the end marker for the transaction, to a repeat of the request for the benefit of the net, or a reply to a request. If a

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station is volunteering for a liaison or auxiliary assignment the NCS will acknowledge with the full call sign and confirmation of the assignment, or, if only one station responds, will make it clear some way that the assignment is granted. "R" is often sufficient. The station needs to know clearly from the NCS that an assignment is granted or made.

ROGER, or "R", is used instead of the call sign to acknowledge requests primarily as a pleasant way to assure the station that its transmission is understood, and is often dispensed with.

Generally the NCS acknowledgments for task related requests are the same as shown for NCS calls for stations to perform various tasks, as presented in the respective sections.

The NCS may immediately make a net call based upon the request rather than formally acknowledge it, the net call providing that function by implication. The NCS may immediately dispatch the station for traffic which the station volunteered to take. Acknowledgment is implied.

In summary, the process minimally includes the suffix call, the suffix recognition, the request, and the NCS acknowledgment, or immediate dispatching of the request.

If a station needs to contact a station being excused, it simply inserts its (suffix). This may be done as an interruption to the transaction for emphasis. The NCS will suspect that the station probably needs contact and acknowledge. Interrupting a transaction in this fashion should be used sparingly, otherwise the NCS may choose to ignore the interruption.

A large variety of other words have been contrived on some Local/Section Nets for special purpose calls to the NCS (Contact, Relay, Break, Comment, Info, and so on.). Generally the (suffix) method is sufficient and preferred in most cases. This is the customary best practice.

4.15.2 ADDING OR CANCELING TRAFFIC

It is assumed such calls are made by stations already checked into the net.

VOICE:

STN: (suffix); to request recognition, or adds comment below when returning to net.

NCS: repeats (suffix); to recognize the station

STN: [(call sign)] PLEASE ADD TRAFFIC (dest [qty]) OVER

STN: [(call sign)] PLEASE CHANGE (dest qty) TO (qty) [OVER]

STN: [(call sign)] PLEASE CANCEL (dest [qty]) [OVER]

NCS: [ROGER] STAND BY; or dispatches station

CW:

STN: (suffix); to request recognition, or adds comment below when returning to net.

NCS: repeats (suffix); to recognize the station

STN: [(call sign)] PSE ADD QTC (dest [qty]) <AR>

STN: [(call sign)] PSE CHANGE (dest qty) TO (qty) [<AR>]

STN: [(call sign)] PSE QTA (dest [qty]) [<AR>]

NCS: R <AS>; or dispatches station

(Please may be optionally sent as PSE or PLS.)

CW Example:

STN: XX

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NCS: XX
STN: [W3XX] PSE ADD PODUNK 2 <AR>
NCS: R <AS>; or [W3RX W3XX UP 5 PODUNK]

The call sign is optional in the request since the NCS has already replied with the suffix to recognize the station. If there are stations with similar suffixes on the net the full call sign is used to avoid having the NCS adjust the wrong hook. "OVER" and <AR> are used only as required.

The NCS will acknowledge or dispatch the station for related or other business, or excuse the station if it has no further pending business.

The NCS, having no outlet for a station's traffic, may request if the station will hold the traffic. See EXCUSING STATIONS.

4.15.3 NCS ADDRESSING A STATION ON THE NET, REPLIES

When the NCS needs to address a station standing by on the net it will send "(call sign)?", and sometimes "(suffix)?". The query (?) and the voice inflection is recommended to avoid conflict with dispatching syntax and station's calls.

The station replies with its (suffix) to acknowledge. (Experienced ops on Area/Region Nets may sometimes reply with a simple "HERE", or "HR" or "T" on CW.)

Questions by the NCS should be answered as briefly as possible... with a simple "AFFIRMATIVE" or "NEGATIVE", "C" or "N" on CW, when possible. If a station can not do something asked of it by the NCS, excuses or explanations are usually not needed, although a suggested alternative may be useful.

Such calls are used for checking for specific returning stations (to expedite a dispatch), to make requests or solicit outlets or liaisons or auxiliary help, etc., etc. Numerous examples of calls for single and multiple responders are shown in the NET CALLS sections.

Again, the full call and query distinguish the call from a dispatch, acknowledgment, or station checking back in.

CW Example:

NCS: W3XX?; or [XX?]
STN: XX (or sometimes HR, T or K)
NCS: CAN U GO EAN TX AUX?
STN: C
NCS: W3XX W3TX UP 5 EAN 12

4.15.4 NET UNASSIGNED TRAFFIC

The NCS may make net calls periodically to solicit stations to handle unassigned business on the net task list. This may be done through specific calls to individual stations, specific calls for individual items, or the total list. See the sections on ASSIGN, CALL NET UNASSIGNED TRAFFIC LIST; and ASSIGN, UNASSIGNED TRAFFIC, SPECIFIC STATION REQUEST.

CW Example:

NCS: QNC QTC PODUNK LAUREL DC QSP?; or
NCS: W3RX QSP PODUNK?

4.15.5 EMERGENCIES

Should a station have an emergency, or come into the possession of emergency related information about an immediate threat to life or property which needs to be passed to officials, the station may declare an emergency to the NCS.

The station should declare “EMERGENCY THIS IS (call sign)” on voice, “EMERGENCY DE (call sign)” on CW, and then assist the NCS and the net stations in getting the information passed. Attempts to deliver the message(s) or information should not be limited to Amateur Radio. Use of telephone, internet, other radio services, etc. should be considered with the intention of delivery in the shortest time with certainty and reliability.

The internationally recognized distress call “MAYDAY” is also often used to declare such emergencies.

Use public safety agencies to assist. Use public safety agencies or private relief agencies such as the American Red Cross for notifications about deaths or serious injuries/illness.

International distress calls usually require notification of the US Department of State for assistance or coordination.

Maritime emergencies within or near US coastal waters may be assisted through the US Coast Guard. Aircraft emergencies may be assisted through the Federal Aviation Administration.

Public safety agencies (the police and fire departments) can usually handle such calls and contact the appropriate agencies.

Any incident within a local jurisdiction should be reported to that jurisdiction’s public safety agencies as well as any other specific agency selected. Local officials are prepared to take care of notifying and protecting citizens that may be affected.

See the FCC rules regarding handling emergency communications.

4.15.6 AVOIDING SPONTANEOUS COMMENTS, CRITICISM

Stations making transmissions without the permission of the NCS may be ignored by the NCS. Such transmissions are considered very poor practice. Take no offense, just be patient and seek recognition before transmitting. Without such direction a net may quickly fall into disorder.

Stations persisting in making such transmissions will likely be excused by the NCS, or informed that their activity constitutes interference to the net.

Stations, even if recognized, should avoid what is considered the bad practice of making critical comments about how the net should be run or actions of other stations. A good NCS will ask for help or information when needed. The time for a critique of the net is after it is closed, preferably off frequency or, better, off the air.

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Guidance from an experienced station or the NM may be offered with the appropriate tact and diplomacy---with NCS permission. The NCS may tactfully advise stations regarding conduct or procedures.

On the other hand, time permitting, and with NCS permission, tutorial information may be presented for the benefit of the net. This is not usually directed at any particular station. A station may certainly volunteer to explain something to another station, or the net, or assist in a task, all in the spirit of amateur radio cooperation and helpfulness.

If you have never made a mistake, you have never been a net control.

4.16 EXCUSING STATIONS

Any station checking into a net is obligated to remain in the net until either excused by the NCS or the net is closed by the NCS. Honoring this obligation is not only a courtesy to the NCS and net participants but also important to the conduct of net business. Leaving the net without notice, short of emergencies or equipment failure, is considered poor practice.

Farewells are shown before "EXCUSED" or "QNX", the line ending commands, but are sometimes reversed.

4.16.1 EXCUSING BY REQUEST

If a station must leave the net:

VOICE:

STN: (suffix)

NCS: (suffix)

STN: REQUEST TO BE EXCUSED [PLEASE OVER]; or

... CANCEL MY TRAFFIC REQUEST TO BE EXCUSED [PLEASE OVER]; or;

... REQUEST TO BE EXCUSED FOR (#) MINUTES [PLEASE OVER];

NCS: ROGER 73 (call sign) YOU ARE EXCUSED

STN: THANK YOU 73 (call sign), or;

STN: MUST LEAVE THE NET 73 (call sign) [OVER], checking out of net.

NCS: ROGER 73 (call sign) YOU ARE EXCUSED

CW:

STN: (suffix)

NCS: (suffix)

STN: PSE QNX; or [NEED QNX]; or

... QTA TFC PSE QNX; or

... QNT (#); request out for (#) minutes;

NCS: 73 (call sign) QNX

STN: TU 73 (call sign), or;

STN: QNO 73 (call sign), checking out of net.

NCS: 73 (call sign) QNX

4.16.1.1 ROVING LIAISONS

During disaster services many nets may be operating continuously in a given area. Liaisons roving between these nets to carry traffic should always check out of the net they are leaving and into the destination net. Stations should never leave a net without informing the NCS. Trying to

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work two nets at the same time sooner or later will cause inconvenience to one or both. A non-responding station will often cause wasted net time, delay other stations, or trigger the NCS to assign traffic to other handlers. This can disrupt the effectiveness of net routing during such situations.

When leaving temporarily the NCS will hold the station's traffic listed until return. NCS may not be able to hold the holders or recipients of traffic if a station is gone for an extended period. The NCS may ask if or when the station will return, and if listed business should be held.

A traffic assignment is canceled or reassigned if the original assignee leaves the net. When a station wishes to leave permanently the NCS will cancel its traffic or will ask permission to do so.

Two operator liaison stations, checked into each net, can greatly alleviate these problems by physically passing traffic between operators while stations remain resident on their nets.

If a station was assigned as a liaison, NCS will assume that it is still going to perform the liaison duties. If not, the station should advise the NCS it will not when it makes the request to leave. The NCS will find a replacement if possible. The NCS may ask to verify that the liaison job will be completed.

4.16.2 EXCUSING STATIONS INDIVIDUALLY

Many traffic nets excuse each station individually as the net business for that station is concluded. The NCS may excuse any station at any time. Stations may request to leave the net temporarily, or to be checked out of the net, at any time as above.

The choice of method is often determined by the format of the net. On Area/Region Nets, where most stations are liaisons, stations are excused when there is no further business pending for that station. On Area Nets a TX rep may be held in case help is needed until the RX rep from that Region checks into the net.

Stations may be excused in advance when dispatched off the net with their last traffic assignment. The methods are shown in the DISPATCH section.

VOICE:

NCS: (call sign) THANK YOU NO FURTHER BUSINESS 73 YOU ARE EXCUSED; or
... (call sign) [73] YOU ARE EXCUSED

STN: [73] (call sign)

CW:

NCS: (call sign) TU QRU 73 QNX; or (call sign) [73] QNX

STN: [73] (call sign)

On some Area/Region nets the NCS syntax may be even shortened to (call sign) GE where sufficient rapport exists. The response may be simply (call sign) to ID.

It is not unusual to hear additional comments appended at the end by the station excused, such as [GE] or [CU], [CUL], [dit.. dit], etc.

NOTES:

The “YOU ARE EXCUSED”, and “QNX” on CW, are command line ending self completing statements requiring no “OVER” or “K”. Farewells are usually placed ahead of them, but it is possible to hear “GOOD EVENING” or “73”, etc., appended at the end. This is not a critical issue since the excusing is an act of finality, the end marked with a pause following a contiguous transmission.

Other NCS farewell remarks, including the operator’s name and thanks for checking in or helping, are pleasantries helpful and encouraging for newcomers to hear. The exchanges should be brief as possible on busy nets, however.

* DIT DIT

If desired, the traditional “dit dit” (E E) is appended and responded to by the other station with “dit dit”. This is an evolved form of the old “shave and a haircut, two bits” ditty used earlier where the first station sent “E S E”, and the other station replied “E E”. A newer form making the rounds is the shorter “E” replied to with “E” by the other station. Such CW niceties may be used any time a station is signing clear.

4.16.3 EXCUSING IN ADVANCE AS PART OF DISPATCH

See the section on DISPATCH, EXCUSING IN ADVANCE and the other sections on dispatching. Syntax and examples are shown in those sections.

4.16.4 EXCUSING WITH REQUEST TO CANCEL, NO OUTLET (QTA)

The NCS will usually ask a station if it wishes to cancel traffic for which there is no outlet, or, in some cases, may simply inform the station that there is no outlet and excuse it. The later is done on Area/Region Nets when there is a missing liaison, although the NCS may ask other Region reps if they might relay the traffic. The station may also request further net action even if excused.

It is considered poor practice for a station to call to remind the NCS of its additional pending business unless it is clear that the NCS has failed to list or dispatch it.

The NCS lists all business and may dispatch it in any order desired to accomplish an efficient net. The exception, of course, might occur if the NCS errs and either begins to excuse a needed outlet, or excuses the holder itself, without having dealt with the traffic. The station may then seek recognition and remind the NCS. The request to be recognized may be done as an interruption to a transaction, if necessary, or a response to being excused.

VOICE:

NCS: W3TX HOLD (dest [qty])?;

TX: AFFIRMATIVE; or NEGATIVE CAN SOMEONE STORE AND FORWARD?; or

NCS: W3TX NO OUTLET (dest [qty])

TX: CANCEL; or requests store and forward;

NCS: 73 YOU ARE EXCUSED; or arranges relay

Or the direct release,

NCS: W3TX NO (dest) 73 YOU ARE EXCUSED

TX: 73 W3TX; or may request store and forward.

CW:

NCS: W3TX HOLD (dest [qty])?;

TX: C; or N STORE AND FWD PSE?; or

NCS: W3TX NO (dest [qty])?

TX: QTA; or requests store and forward;

NCS: W3TX 73 QNX; or arranges the relay;

Or the direct release,

NCS: W3TX NO (dest) 73 QNX

TX: 73 W3TX; or may request store and forward, etc.

4.16.5 EXCUSING MULTIPLE STATIONS IN A GROUP

On some nets, particularly at Local/Section level, numerous stations may have checked in to be available for outlets. If the NCS determines those stations will not be needed it may excuse a list of them all at once without required acknowledgment.

VOICE Example:

NCS: NO BUSINESS FOR THE FOLLOWING STATIONS.. THANKS FOR CHECKING IN.. W3XA W3XB W3XC W3XD 73.. NO RESPONSE NECESSARY.. YOU ARE EXCUSED;

Or simply

NCS: W3XA W3XB W3XC W3XD [THANKS 73] [NO RESPONSE] YOU ARE EXCUSED

Excusing one or two stations may be responded to by each in order as shown elsewhere.

Excusing more than two stations should be understood to require no response. If stations have followed ID guidelines elsewhere in this manual there is no ID issue here.

CW:

Although the same technique could be used on CW it is virtually never done. Stations are excused individually, and rarely by closing the net.

4.16.6 EXCUSING BY CLOSING THE NET

It is not mandatory for a net to excuse all stations individually. Many large voice nets excuse all stations at the end of net business simply by closing the net. This is a matter of individual net policy.

If stations have followed ID guidelines elsewhere in this manual there is no ID issue here.

On VOICE the NCS may, according to format, state that “ALL STATIONS ARE EXCUSED” to formalize the act. See CLOSING THE NET.

On CW closing the net with stations remaining on frequency is usually announced after QNC to make clear the announcement affects all stations. See CLOSING THE NET.

The NCS should not close the net until all business is handled, stations sent off frequency are excused in advance, traffic canceled, and/or liaisons assigned or substitutes assigned, if at all possible.

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Stations may be asked to “store and forward” traffic for which there was no outlet. In cases where a liaison had to depart to meet a net schedule an auxiliary station may be assigned to take traffic quickly and follow to the next net in hopes of catching outlets.

Primary liaisons must be excused in time to meet their next scheduled net on time.

4.17 CLOSING THE NET

The net is closed by the NCS to officially terminate the directed activity. This may be done at the conclusion of net business, dispatching of the last assigned traffic with stations excused in advance, after a minimum session time, or at a net format scheduled time determined by net policy.

The caveats regarding the integrity of the net traffic count discussed in the dispatching sections applies. If stations are off net frequency passing traffic, the NCS should monitor the stack, monitor the net frequency, or at least have a reasonable certainty that the traffic will be passed.

Some Local/Section nets have prepared closing statements for their nets. Consult with the Net Manager.

4.17.1 RELEASING LIAISONS ON TIME

Liaisons must be excused in time to meet their next net scheduled time, even if all their business is not concluded. The NCS should ask in such cases if the stations involved might be able to make a schedule to meet at another time to clear their traffic, or suggest alternatives if possible.

Auxiliary liaisons may be solicited to handle the traffic load to the assigned net in order to avoid delaying the primary liaison. Stations holding traffic are likely candidates.

Subsequent NTS scheduled nets rely upon liaisons arriving on time.

4.17.2 UNFINISHED BUSINESS

*** NO OUTLET:**

There may be no outlet for some traffic during a net session. The NCS will make every attempt to find an outlet, seek alternate routing, ask another station to hold and/or forward it later, or assign a special liaison to carry it to another net.

The NCS may ask the holding station if it wishes to cancel the message ("QTA" on CW). A request to cancel (or “hold”) traffic is done as a courtesy to the holding station. The NCS reserves the right to close the net without handling the traffic. See the section on EXCUSING, REQUEST TO CANCEL TRAFFIC, NO OUTLET (QTA).

*** UNASSIGNED LIAISON:**

The NCS is responsible for attempting to fill any unassigned liaison assignments... even to the extent of taking the job. The NCS will ask for a volunteer to fill the slot. The system depends upon the liaison links and every effort should be made to make the connections. The destination nets will be waiting for the arrival of liaisons.

*** STORE AND FORWARD:**

Traffic may be given to volunteer stations to be held for later sessions or later nets as an

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alternative to canceling its movement for another day. This is an often overlooked possibility. Volunteer when possible. The holding station may not be available for other nets or on subsequent days.

* FINAL DISPATCH:

The NCS may close the net, turning the frequency over to stations to conclude dispatched final exchanges on the net frequency. There is no need to keep the net open for such transactions.

4.17.3 CLOSE OF THE NET, CLOSING STATEMENT, NCS

* **ADHERE TO THE NET SCHEDULE** for closing time: Other nets may need the frequency. Liaison stations and others may have other nets or schedules to meet. If all business is not concluded at closing time, ask stations to hold traffic for later nets, or ask stations to meet after the net and finish up on another frequency if necessary, or assign auxiliary help.

* **CLOSING EARLY:** Terminating the net early is permissible under certain circumstances. The net manager should set a minimum time for a net session which will give fair chance to stations bringing traffic or other business to the net. On nets where most stations are liaison stations, as in the case of Region and Area NTS nets, this minimum time may be very short since the NCS knows when all expected stations have checked in and listed traffic. A few minutes are always allowed for other stations who might wish to check in.

After the minimum net time has elapsed, the NCS may terminate the net when net business is concluded.

The close of the net is the official termination of the directed period of the net session---the end of NCS control. Net session time begins with the calling of the net and ends at this point. Traffic count for the net is the number of formal radiograms passed between stations as dispatched by the NCS during the directed session period.

Closing the net while traffic is still being passed off frequency presents some risk if problems are encountered as discussed before. The NCS may close the net after the last traffic is dispatched, and will usually monitor and confirm that all tasks are completed, monitor the net frequency, or at least have reasonable certainty that the traffic in progress will be completed.

* CLOSING STATEMENT:

Some net formats call for a closing statement in addition which might indicate the net schedule, next meeting time, etc., as needed. Consult with the NM. Such remarks are give before the official "CLOSED", or "QNF", statement which officially terminates the directed net.

* CLOSING:

VOICE:

NCS: [(closing statement)]...; (net name) IS NOW CLOSED 73 THIS IS (call sign); or [ALL STATIONS ARE EXCUSED (net name) IS NOW CLOSED 73 THIS IS (call sign)]; when there may still be stations on the net.

CW:

NCS: [(closing statement)]...; (net name) QNF 73 [DE] (call sign) <SK>;

Or;

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NCS: [QNC] (net name) QNF 73 [DE] (call sign) <SK>; the [QNC] when there may still be stations on the net.

NOTES:

The CW prosign <SK> stands for “Out. Clear (end of communications, no reply expected.)” derived from the old Morse “30” (di-di-di-dah-dit.. long-dah) denoting the telegrapher’s end-of-shift closing. Some stations prefer <AR> for end of record transmission, or “CL” for “closing station”, or no ending sign at all.
