

COMMUNICATIONS S.O.I.

(SIGNALS OPERATING INSTRUCTIONS)

for Teotwawki Readiness Exercise 2019



T-REX 2019



Companion to AmRRON SOI Version 3

T-19 SOI V1.1 (AmRRON S.O.I. V3 Companion)

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At the onset of any event, you should complete a STATREP and an Abbreviated STATREP. Have them ready to send to your local network and Net Control Stations who call for STATREPs. Keep it updated, to include the DTG (Date Time Group). This lets others know your status ‘as of’ a specific time/date.

*****IMPORTANT*****

ALWAYS begin and end your message traffic, clearly stating:

“this is an exercise”

Whether in voice or text (digital) modes. And it is helpful to repeat it twice at the beginning of a message that could be mistaken as a real-world emergency.

“Exercise. Exercise.

...This is traffic for the T-Rex 2019 Training exercise...”

Section 1 General Overview of T-REX 2019

1.1 The Scenario: This year's scenario is based on a cyber attack. Recent real-world news and intelligence is revealing a very real increased risk to our telecommunications, commercial power, and industrial computerized safety control systems.

1.2 AmRRON's Operations: We are applying several TTPs (Tactics, Techniques, and Procedures) which we have used because they help us be more effective, but are not yet in all of our official procedures and guidance documents. This is a step toward final evaluation of several modes and procedures which will be added to future guidance, including Version 4 of the AmRRON S.O.I.

There will be several SIGCENS (Signals Centers) consisting of at least three (and up to ten) AmRRON operators working together at the same location to conduct and support AmRRON communications in their states or regions. Reports (such as your STATREP) and other information will be directed to the SIGCENS. The SIGCENS will produce summaries and briefs to distribute out to the network at LEAST once per day. They will distribute the reports and briefs through the backbone network to the Net Control Stations across the country.

Expect AIBs (AmRRON Intelligence Briefs), EXSUMS (Executive Summaries), Public Service Announcements, etc. from the nets.

1.2.1 The Initiating Station: As usual, there are dozens of volunteer radio operators across the country who will inject pre-developed (we call 'preloads') message traffic at specific times/dates in the form of SITREPs, SPOTREPS, etc. The Initiating Station may have traffic intended for a specific person in a nearby state or across the country, such as training welfare traffic (checking on grandma). Or, it could be a simulated request from a sheriff's department asking for volunteers to work in emergency shelters. It may be a SITREP reporting a riot or criminal networks taking advantage of the situation.

1.2.3 The Individual Operator: Be ready to submit your STATREP to each other in your local net, and pass a STATREP on up to NCS so they can forward those to the SIGCENS (Signals Centers). Everyone will be asked to give at least an initial STATREP. Subsequent STATREPS should be sent if your status changes. Be ready to relay traffic up the chain to an AmRRON Net Control Station (NCS), and be ready to receive reports from NCS to relay on to others. As a member of your community, you want to stay informed and inform others. You will want to monitor all the nets for reports, news, and information which could impact you and those around you, and your community. Be prepared to pass information along to your local nets, including the CH3 nets. Don't neglect the CH3 radio operators!

If you receive welfare check traffic, play along! For example, if someone on the net is asking for a welfare check on a loved one in your town, then take the welfare request. Simulate that you went to 123 Maple street, Your Town, Your State, and checked on grandma. Then you report back to the originating station that grandma is fine, or she left a note on her door that she's gone to an emergency shelter at XXX address. All welfare traffic *should* also include a response back to the originating station.

1.2.4 NCS (Net Control Stations): In most cases there should be an NCS directing the nets. They will request an initial STATREP from everyone in their nets and pass those on to SIGCENs. Just like in real-world emergencies, sometimes there is no NCS (they're dealing with their own emergencies, or communications equipment breaks, laptops go haywire, etc.). If there is no NCS and you have traffic to pass, then call "CQ AmRRON, Routine Traffic" etc., and find someone to assist you. NCS's will also be distributing reports, summaries, and briefs (AIBs) during the scheduled nets.

1.2.5 Backbone Operators: Noted by a /B or /b (slant b) after their callsign. The certified Backbone Ops are very experienced radio operators using advanced capabilities, modes, and procedures. They work to pass traffic across states and across the country and maintain their stations persistently (nearly 24/7). Their primary role is to ensure traffic is passed between NCSs, SIGCENs, and individual operators with Priority or higher traffic. They can also step in to an NCS role if necessary, act as an assistant NCS (ANCS), or simply stand by to help lighten the load for NCSs who are experiencing high traffic volume.

1.2.6 SIGCENs (Signals Centers): There will be five or six SIGCENs across the country, plus one National SIGCEN. Each SIGCEN will consist of approximately five operators who will be the hub for news and information. News and reports will be directed to the nearest regional or state SIGCEN, who will then compile the information and then distribute aggregate reports and briefs to keep the network informed.

Building a puzzle

- A. You hand your puzzle piece to NCS.
 - B. NCS hands it to a SIGCEN
 - C. If NCS can't reach a SIGCEN, he hands your puzzle piece to a Backbone operator, who is like a courier, and he passes your puzzle piece off to another Backbone operator like handing off a baton, until it reaches the SIGCEN.
 - D. SIGCEN takes all the puzzle pieces and puts them together. Then they take the assembled puzzle and hand it off to Backbone operators who then ensure all the NCSs have the assembled puzzle to hand to you.
- SIGCENs might not have all the puzzle pieces, but with enough puzzle pieces together a bigger picture starts to appear. And your puzzle piece helped!

1.3 T-REX S.O.I. - What is it, and why?

The T-19 S.O.I. (“ESS OH EYE”, not “soy”) is intended to be a ‘**companion**’ to Version 3 (the current official release) of the AmRRON Signals Operating Instructions.

WHY?

Since V.3 was released we have advanced in our capabilities, identified improved methods and modes, and have ‘unofficially’ implemented many new modes, software tools, and TTPs (Tactics, Techniques, and Procedures), which have helped us increase our operation’s effectiveness and efficiency.

We are working on Version 4 of the S.O.I., HOWEVER it simply is not ready for general release. There are a lot of things that the top level AmRRON Corps operators are still testing and evaluating.

The T-REX S.O.I. Supersedes the current AmRRON S.O.I. Version 3. If you encounter a conflict, the T-19 S.O.I. takes precedence.

1.4 How to participate in T-REX 2019

T-19 is a nationwide, scenario-based, grid-down emergency preparedness exercise. It is your opportunity to practice.

1. Print out the T-19 S.O.I. (this document) and add it to your comms binder, along with your regular V.3 AmRRON S.O.I.. Read through it carefully so that you know and understand it ahead of time (like, now!) .
2. Keep checking for T-REX 2019 news, announcements, and updates at:
<https://amrron.com/t-rex-2019/>
3. You may want to stay informed with the AmRRON Alerts Mobile App:
<https://amrron.com/2019/07/01/stay-informed-with-the-amrron-alerts-mobile-app-general-release-announcement/>
4. Monitor or participate in the regularly-scheduled nets prior to the exercise.
5. Practice filling out various reports (STATREP, Abbreviated STATREP, SITREP, etc.). Complete your STATREP and have it ready to go PRIOR to the net. See Section 6.3 (Page 18) of this S.O.I. For more information about Reports.
6. Fill out the ‘THIS STATION NET SCHEDULE’ form on page 11 and print it out to keep at your station. This will be a valuable reference at your station.

GRID DOWN BEGINS FRIDAY, JULY 26th, 1900hrs ZULU TIME

7. On Friday, July 26th, at 1900hrs Zulu time (Noon in the Pacific Time Zone, 3pm Eastern) you simulate that you are 'grid down'. No cell phones, no internet, no electricity, etc.

8. End of exercise (ENDEX) is 1900z (Noon Pacific) on SUNDAY.

9. What is expected of every radio operator during the exercise:

- a) STEP 1. Fill out an initial STATREP and an Abbreviated STATREP.
- b) Refer to the net schedule and participate in all the nets you are able to
- c) Follow ALL INSTRUCTIONS of NCS during the nets. Scheduled nets are DIRECTED NETS. If NCS asks for assistance or relays be ready to assist.
- d) Unless you have emergency/Immediate traffic, do not check in to a net until NCS asks for check-ins. During voice nets, when NCS asks for check-ins, you check in with your call sign, phonetically, and wait for him to acknowledge you.
- e) If you do not have traffic, then be silent and listen. If you want to conduct a radio check, be sure that others with traffic have finished with their business.
- f) One of the very first things NCSs will do is ask for stations to report their initial STATREPS. You should always have this ready to go PRIOR to a net. If there is a high volume of traffic, NCS may ask for abbreviated STATREPS, and may request them in a different digital mode, such as JS8Call or FSQ4.5.
- g) Have all of your traffic prepared before the net.
- h) Monitor the airwaves and learn the cause, size, scope, and effects of the event, to stay informed and inform others.
- i) Conduct local voice nets where you have established them, and if you can conduct local (VHF/UHF) digital nets, that's a huge bonus.
- j) Don't forget to monitor CH3 and pass on announcements and news in your area.
- k) ALWAYS note that this is only a training exercise at the beginning and the end of your traffic.

"Exercise, Exercise, Exercise... The following SITREP is part of the T-REX 2019 emergency communications exercise..."

"This is only a training exercise, this is [callsign], out."

Section 2 AmRRON Frequency/Mode Plan

AmRRON Frequency/Mode Plan			
BAND/ USE	Frequency	Mode	Notes
80 Meter HF (Amateur Radio)			
80 Meters (State/Rgnl)	3.818 - LSB	Voice	See Digital Mode Operations Guide in Section 5 (beginning page 12)
	3.588 - USB	Digital	
40 Meter HF (Amateur Radio)			
40 Meters (State/ Rgnl)	7.242 - LSB	Voice	See Digital Mode Operations Guide in Section 5 (beginning page 12)
	7.110 - USB	Digital	
20 Meter HF (Amateur Radio)			
20 Meters (Continental)	14.342 - USB	Voice	See Digital Mode Operations Guide in Section 5 (beginning page 12)
	14.110 - USB	Digital	
2 Meter VHF (Amateur Radio)			
2 Meters (Local/Area)	146.420	Voice	Digital 2m nets normally use MT-63 1KL mode.
	144.500	Digital	
CH-3 (CHANNEL 3) PROJECT - No Licensing Required			
CB	26.985	Voice	AM
FRS	462.6125	Voice	No Sub-Channel
MURS	151.940	Voice	No Sub-Channel
CB RADIO (Single SideBand) - No Licensing Required			
CB (SSB)	Channel 36 27.365 LSB	Voice	Same as CH3 CB (Time/Procedure)

Section 3 AmRRON Scheduled Nets (2-8-2-8)

The 2-8-2-8 net schedule (also referred to as 'The S.O.I. Schedule'), refers to the four net cycles which occur over each 24-hour period while AmRRON is activated (during emergencies or training exercises).

A new net cycle begins every six hours at 0200z, 0800z, 1400z, and 2000z (or 2am, 8am, 2pm, 8pm Zulu time -- aka UTC time).

Each net cycle begins with a thirty minute national voice net, followed by a thirty minute digital net, each conducted with a single NCS and at least one ANCS. The national digital nets are then followed by 30-minute 'Rolling' nets, beginning in the Eastern Division, then rolling westward through each subsequent time zone.

Refer to the Net Schedules in the following pages and note that each net schedule is indicated by the Zulu Time in the header.

0200Z Nets						
(Evening in U.S.)						
Time (Zulu)	Time (Local)	V = Voice Net D = Digital Net				Notes
Nationwide Net						
0200		V 7.242 LSB				One single NCS plus at least one ANCS.
0230		D 7.110 USB				
Regional Rolling Nets						
		Eastern	Central	Mountain	Pacific	
0300		V 3.818				V=Voice (LSB) D = Digital (USB) Digital Modes: Contestia 4/250 1000wf FSQ 4.5 default 1500wf JS8Call 1750 to 2250 wf Remember to have RxID turned on.
0330		D 3.588	V 3.818			
0400		V 146.420	D 3.588	V 3.818		
0430		D 144.500	V 146.420	D 3.588	V 3.818	
0500			D 144.500	V 146.420	D 3.588	
0530				D 144.500	V 146.420	
0600					D 144.500	
NCS may choose to switch modes most suitable for the situation.						

0800Z Nets						
(Night in U.S.)						
Time (Zulu)	Time (Local)	V = Voice Net D = Digital Net				Notes
Nationwide Net						
0800		V 7.242 LSB				One single NCS plus at least one ANCS.
0830		D 7.110 USB				
Regional Rolling Nets						
		Eastern	Central	Mountain	Pacific	
0900		V 3.818				V=Voice (LSB) D = Digital (USB) Digital Modes: Contestia 4/250 1000wf FSQ 4.5 default 1500wf JS8Call 1750 to 2250 wf Remember to have RxID turned on.
0930		D 3.588	V 3.818			
1000		V 146.420	D 3.588	V 3.818		
1030		D 144.500	V 146.420	D 3.588	V 3.818	
1100			D 144.500	V 146.420	D 3.588	
1130				D 144.500	V 146.420	
1200					D 144.500	
NCS may choose to switch modes most suitable for the situation.						

1400Z Nets						
(Morning in U.S.)						
Time (Zulu)	Time (Local)	V = Voice Net D = Digital Net				Notes
Nationwide Net						
1400		V 14.342 USB				One single NCS plus at least one ANCS.
1430		D 14.110 USB				
Regional Rolling Nets						
		Eastern	Central	Mountain	Pacific	
1500		V 7.242				V=Voice (LSB)
1530		D 7.110	V 7.242			D = Digital (USB)
1600		V 146.420	D 7.110	V 7.242		Digital Modes: Contestia 4/250 1000wf FSQ 4.5 default 1500wf JS8Call 1750 to 2250 wf Remember to have RxID turned on.
1630		D 144.500	V 146.420	D 7.110	V 7.242	
1700			D 144.500	V 146.420	D 7.110	
1730				D 144.500	V 146.420	
1800					D 144.500	
NCS may choose to switch modes most suitable for the situation.						

2000Z Nets						
(Mid-day in U.S.)						
Time (Zulu)	Time (Local)	V = Voice Net D = Digital Net				Notes
Nationwide Net						
2000		V 14.342 USB				One single NCS plus at least one ANCS.
2030		D 14.110 USB				
Regional Rolling Nets						
		Eastern	Central	Mountain	Pacific	
2100		V 7.242				V=Voice (LSB)
2130		D 7.110	V 7.242			D = Digital (USB)
2200		V 146.420	D 7.110	V 7.242		Digital Modes: Contestia 4/250 1000wf FSQ 4.5 default 1500wf JS8Call 1750 to 2250 wf Remember to have RxID turned on.
2230		D 144.500	V 146.420	D 7.110	V 7.242	
2300			D 144.500	V 146.420	D 7.110	
2330				D 144.500	V 146.420	
2400					D 144.500	
NCS may choose to switch modes most suitable for the situation.						

Section 4 AmRRON Persistent Presence Nets

At pretty much any time of day someone, some *where* is on the air.

AmRRON has grown considerably and in each of the most recent real-world disasters there were adequate numbers of radio operators on the air so that if someone called for help, there was normally someone on the air to hear the call.

While the Scheduled S.O.I. Nets are considered 'controlled' nets (meaning they are run by Net Control Station operators), the Persistent Presence Net is not controlled. Operators may make contact and pass traffic as the situation requires.

The 'Persistent Presence' Digital Net was implemented for:

- Operators who have sufficient backup power and the time to continue monitoring between the Scheduled S.O.I. Net cycles.
- Maintaining a lifeline for those who need to pass priority or emergency traffic when there is not a scheduled net taking place.
- Allowing for stations to assess band conditions and determine propagation paths to other stations, through beaconing (or sounding/heartbeating) and signal reports.
- Creating an opportunity for stations to directly pass point to point traffic, relieving the scheduled S.O.I. nets of congestion.

The following schedule has been developed as guidance reflecting our experience of which bands perform best at various times of the day and night. Band conditions can and do deviate sharply from our general expectations.

PERSISTENT PRESENCE DIGITAL NET			
ZULU	Eastern	Pacific	Band/Freq.
20:00 - 22:00	16:00 - 18:00	13:00 - 15:00	20M 14.110
22:00 - 02:00	18:00 - 22:00	15:00 - 19:00	40M 7.110
02:00 - 16:00	22:00 - 12:00	19:00 - 09:00	80M 3.588
16:00 - 20:00	12:00 - 16:00	09:00 - 13:00	40M 7.110

Section 5 Digital Mode Operations

5.1 DIGITAL MODE OPERATIONS: GENERAL GUIDANCE

This section is designed to instruct operators who are already familiar and have a working knowledge of digital software as to which frequencies, modes, and configurations to use, and other useful information. It is NOT designed to teach the new individual operator *how* to set up or become familiar with digital communications software.

Resources are listed here for the self-motivated new operator who wishes to learn about, locate, set up, and practice with various digital modes prior to T-Rex or the next real-world communications emergency.

5.2 Digital Modes List

FLDIGI

- Contestia 4/250 Primary mode for AmRRON HF operations
- MFSK-32 Primary for sending flmsg or flamp tfc
- MFSK-64 If condx excellent and wide signal does not interfere with adjacent traffic
- MT-63 1KL Primary mode for AmRRON UHF/VHF digital mode ops

- FSQ 4.5 Use running a second instance opened in FLDIGI for group or direct messaging, sending alerts, relaying messages, sending small files, such as .txt files or small images, beaconing (sounding), and assessing band path quality between stations.

FLMSG

MFSK-32 or -64 Sending and receiving message forms, AmRRON custom forms (.k2s), or other preformatted forms in flmsg.

FLAMP

MFSK-32 or -64 Send/Receive files with error correction, and allows for block fills for missing fills.

JS8CALL

Allows for weak signal beaconing (heartbeating), direct messaging, relaying messages, and assessing band path quality, etc.

gARIM

File sharing, sending, retrieving, and direct messaging with FEC (Forward Error Correction). Can connect with other stations directly in ARQ for file

sharing and have the ability to authenticate with the other station. Can leave files for retrieval while station unattended.

5.3 DIGITAL MODE OPERATION: WATERFALL LOCATIONS

1000 on WF: Contestia, MFSK, and other general use FLDIGI modes

1500 on WF: FSQ4.5 or FSQCall beaoning and chat modes

1750-2250 on WF: JS8Call beaoning and weak signal messaging

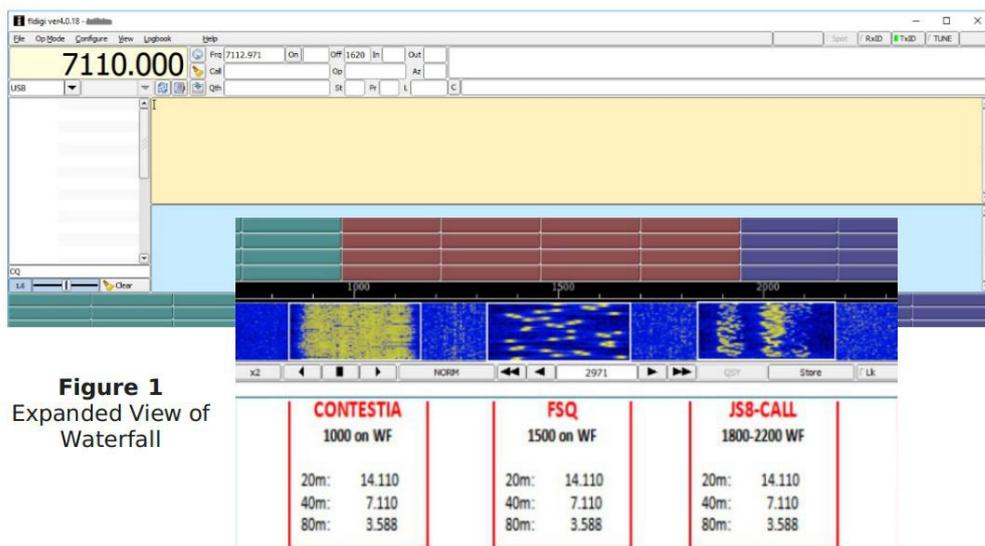


Figure 1
Expanded View of
Waterfall

For more detailed information the White Paper is located at:

<https://amrron.com/2019/05/08/digital-mode-waterfall-designation-white-paper/>

5.4 DIGITAL MODE OPERATIONS (Basic)

1. FLDIGI Digital Modes:

WATERFALL: 1000

A. CONTESTIA 4-250 (PRIMARY OPERATING MODE FOR AmRRON NETS)
USED FOR: Scheduled nets and net check ins, general communications use by NCSs for beginning HF digital nets, and for operators to make contact and communicate with the rest of the AmRRON Network.

B. MFSK-32 (and sometimes MFSK-64):

USED FOR: Sending forms, images, and files (such as when using FLMSG or FLAMP). NCS may choose to switch to an MFSK mode for general use during nets if band conditions favor it.

2. FSQ 4.5 (in FLDIGI):

WATERFALL: 1500 (by default - cannot be changed)

A. Open a second instance of fldigi and select FSQ 4.5 mode

B. FSQ is used for exchanging quick chat messages between operators, beaoning and determining path quality between operators, and for sending/receiving files.

DIGITAL MODE OPERATIONS (Intermediate)

IMPORTANT Disable beaoning (sounding, heartbeating, etc.) during scheduled nets and deselect the 'AUTO' button in JS8Call.

FSQ or **FSQCall** (either by opening a second instance of FLDIGI or running a stand alone FSQCall program)

JS8Call To see the posting at AmRRON.com, click [HERE](#)

FLMSG

FLAMP

Note: FLDIGI must be open BEFORE you open FLMSG and FLAMP

DIGITAL MODE Information and resources

Experience shows that digital communications over radio (especially HF) are far superior to voice for transmitting reports, forms, and other formatted information. We use several digital modes.

THE SOFTWARE IS FREE, and the programs vary in complexity. The most common digital modes and programs can be set up and used by beginners and novice operators.

Digital Mode Resources: IF YOU ARE NEW (to digital mode communications)...

Go to the following postings to learn how to download, set up, and practice receiving digital communications, step by step.

- [How to Receive Ham Radio Digital Communications](#)
- [Digital Communications](#)
- [Digital Communications - A Practical Exercise](#)
- [So You Want To Practice Decoding Digital Modes](#)
- [White Paper: AmRRON Intelligence Brief](#)
- [Basic Digital Communications Setup](#) (for sending and receiving)
- [AmRRON Forms for Digital Reports](#) (FLMSG forms)

Programs: (a recap)

- FLDIGI (Primary and minimum requirement for receiving digital text)
 - FLMSG (sending and receiving formatted forms, works with FLDIGI)
 - FLAMP (send and receive error free files, including block fills for missing data, works with FLDIGI)
 - FSQ (beaconing, text chat, and sending/receiving files)
- JS8Call (Used for beaconing, determining signal strength, sending short messages, and coordinating with other operators.)
- gARIM (As a graphical interface application using the ARDOP TNC and the ARIM modeFile sharing and messaging)
- Winlink - (email over radio. Only used after two stations have coordinated with one another to connect).

Some information here is redundant and needs to be revised for better clarity. We will continue to develop this and edit the content, especially as we work to merge this information with the latest AmRRON S.O.I. to develop the future Version 4 S.O.I. After T-REX 2019. Thank you for your patience!

Section 6 Reports and Forms

6.1 Established forms. These are forms that can and should be used by all operators when they have information to pass about details during a disaster. Located under the Forms tab at AmRRON.com, and in the AmRRON S.O.I. Version 3.

SITREP (Situation Report) A SITREP is simply a report of a situation as it relates to a location, entity, or events. It explains what just happened, what is happening, or the current state during an event. A SITREP is issued when there are more details which need to be explained than what can reasonably be put in a SITREP (which is simply a 'snapshot' of what is happening around the individual radio operator). A SITREP is more suitable when there is more of a *'story to tell'*.

If there is a more complex situation or more details need to be added than what the standard STATREP form allows for, then the same format can be used as a guide and a SITREP may be created using the AmRRON Blank Form, or even a text (.txt) document which can be sent over the air using FLAMP, gARIM, FSQ 4.5, PAT, ARIM, or other file transferring mode or program. Experienced operators should choose the method he thinks is the most suitable for the situation.

SPOTREP (also known as a SALUTE report). This is the format for reporting enemy activity, modeled after the military reporting system which uses the mnemonic SALUTE (Size, Activity, Location, Unit/Uniform, Time, and Equipment). Disasters can create opportunities for criminal activity, and in some cases criminal elements form into organized elements and adopt military style tactics. The SPOTREP is a way to report hostile groups or individuals, especially when they pose an organized and significant risk to a community.

STATREP

SEE BELOW ON PAGE 18

SPOTREPS and STATREPS should be sent at the onset of an event, and when there is a significant change to their initial status/situation.

Reports should be sent to others in your local network, as well as to higher up NCSs and/or SIGCENS

6.2 Distributed Traffic

This section briefly covers methods for distributing news, information, and intelligence from AmRRON National and regional SIGCENs to the radio operators throughout the network. This is relatively new for AmRRON, and has thus far been unofficial. Distributed Traffic is our effort to take raw information and intelligence, process it and organize it, and develop usable intelligence to help everyone stay informed of what is happening beyond your immediate world (which can become very small in a grid down situation).

AIB (AmRRON Intelligence Brief)

The AIB was implemented in the Spring of 2019 as a way to distribute a brief synopsis or an aggregate report of intelligence or news which could affect you. These can be a simple bulleted list of intelligence highlights, or a short description of updates, and in any case they are designed to help you keep situational awareness during an event.

During non-operational times, the AIB is distributed each Tuesday from AmRRON National, and may only be distributed throughout the network by radio or courier. Click [HERE](#) to learn more about the AIB as it is used during non-operational times.

EXSUM (Executive Summary)

The Executive Summary is a more detailed report of events and may be sent out daily or weekly, or as the situation calls for it. During T-Rex each regional SIGCEN and the National SIGCEN should produce a daily EXSUM covering the previous 24 hours.

PSA (Public Service Announcement)

In real-world emergencies in the past, AmRRON operators have assisted local officials and have passed along information to the public and throughout the network, such as evacuation updates and recommended safe travel routes during wildfires from the mayor and fire chief.

6.3 STATREP (Status Report)

What is a Status Report?

It is a snapshot report to let others know that you are there, and what your status is. It helps others in the network determine the size, scope, and effects of a disruptive event.

The STATREP (status report) is a snapshot report of the situation at your location, as much as you are able to directly observe or experience (or ascertain and confirm through others among your local contacts).

The STATREP covers communications, power, medical services, and other infrastructure in your immediate vicinity.

The report (which is a modified version of the Army MARS format) covers the status of a number of important public services in the referenced county. It uses a standardized system to report status ensuring consistency in reporting. Data used in the report can come from personal observation or from personal observations collected by other MARS members, amateur radio operators in ARES or RACES groups, or knowledgeable individuals. Specifically, the County Status covers the Operational status of Public Power, Water, Sanitation, Medical Care, Transportation and Communications systems.

This general guide has been modified to fit the customized AmRRON STATREP. After corroboration among AmRRON Corps, the following changes have been made:

1. Addition of line numbers to facilitate line item Voice or Text reporting when the custom html form cannot be used.
2. The addition of the Modified Mercalli Scale for reporting damage or effects felt from earthquake or major explosion.
3. Radiological Reporting for operators with radiation detection equipment, when applicable.
4. City/County/State. Often times a station operator may not know what grid square he is in, especially if he has been forced to relocate, or is deployed to an unfamiliar area. However, he almost always knows what city (and possibly county) and state he is near/in.

There is an FLMSG custom form available at www.AmRRON.com which can be imported into your NBEMS Custom Forms Folder, which opens in html in a web browser for viewing, editing, and printing.

The HTML version of the AmRRON custom STATREP V2 form looks like this:

If the operator is unable to access or use the custom form above, the following format may be used to give the report via voice, text, Winmor, etc.

Line (or Field)

1. To _____
2. From _____
3. Time of Report (YYYYMMDD-HHMM) _____
4. Grid Square _____
5. City/County/State _____
6. FIPS Code _____ (not used by AmRRON unless by request)
7. EVENT or EXERCISE _____
8. MSGID _____ -
9. MSG# _____
10. Mercalli Score (Earthquake or major explosion) _____
11. Radiological Survey (if detection/monitoring capable) _____
12. Addl Info: _____
13. POWER: Y R P B N
14. WATER: Y P C N
15. SANIT: Y P N
16. MEDICAL: Y P R F N
17. COMMS: Y P N
18. TRANSP: Y P N
19. INFORM: C E G A R

NOTE: If you do not know, then respond 'U' (Uniform) or "Unknown."

Have the report filled out and prepared prior to attempting to send the STATREP.

Instructions:

LINE 1: To (Either another specific station or 'QST' to anyone who may copy you)

LINE 2: From (this is the station generating the report -- you)

LINE 3: Time of Report DTG: YYYYMMDD-HHMMz
(Year Month Day, and 24hr time format, and generally always Zulu time)

LINE 4: Grid Square (four or six digit) if known. Should actually be your Grid Locator, or may also be gps grid coordinates.

LINE 5: City/County/State

LINE 6: FIPS Code (Not used by AmRRON, but if requested from cooperating agency, FIPS Code consists of zip code with 0 zero placed before zip code).

LINE 7: Exercise/Event Operation Name
(Training or real world; example: T-Rex 2017 or Hurricane Michael)

LINE 8: Message ID-

Line 9: Message Number

Line 8&9 Explanation:

Line 8 is the time HHMM followed by the last three of the operator's call (for this example, operator's call is N7XYZ)

Line 9 is the sequential number for that station's traffic. So if that is his 12th message he has put out, it would be 012.

So, when put together it should read 1430XYZ-012

LINE 10: [Mercalli Score](#) as felt by reporting party (or N/A)
See Modified Mercalli Scale chart on Page 23.

LINE 11: Radiological Report (or N/A)

Due to the various devices and measuring units used for reporting area radiation and absorbed dosages, it may be helpful to have a conversion chart printed out from:

<https://www.remm.nlm.gov/radmeasurement.htm>

LINE 12: Additional Information. This is not a place to tell your story. It is a place to clarify a detail (Only 101.5FM on air) or to place an urgent need (ex. Need a doctor or need H2O, or rqst shelter listings)

LINE 12: Power

Y – Yes. Commercial power is fully functional in the county except for routine maintenance. (“Green” is sometimes used to report this status by power companies.)

R – Rolling Blackout. Planned outages with little warning intended to ease stress on the power grid.

P – Partial Blackout. Unplanned interruption of commercial power only in parts of the county.

B – Brownout. Reduction in voltage used as an emergency measure to prevent system failure.

N – No. A Blackout has occurred. Complete unplanned commercial power interruption in the county.

LINE 13: Water

Y – Yes. Fully functional water service in the county except for routine maintenance. (Green).

P – Partial. Unplanned interruption of water service only in parts of the county.

C – Contaminated. Water service is available but contaminated and should not be used.

N – No. Complete unplanned water service interruption.

LINE 14: Sanitation

Y – Yes. Fully functioning sanitation service in the county except for routine maintenance.

P – Partial. Unplanned interruption of sanitation service only in part of the county.

N – No. Complete unplanned sanitation service interruption.

LINE 15: Medical

Y – Yes. Fully functioning and staffed hospitals and clinics with spare capacity available.

P – Partial. Unplanned decrease of capacity in the county due to loss of facilities.

R – Partial due to personnel. Unplanned decrease in capacity due to loss of personnel.

F – Full. Facilities are at maximum capacity and can’t handle new patients.

N – No. Not available. Medical facilities are unusable due to loss of personnel or infrastructure.

LINE 16: Communications

Y – Yes. Fully functioning commercial and civil government local communications.

P – Partial. Commercial communications out but local government communications are operational.

N – No. Complete loss of local communications and government communications.

LINE 17: Transportation

Y – Yes. Fully functioning mass transit, roads, and rail systems except for routine maintenance.

P – Partial. Unplanned interruption in service or loss of road/rail in parts of the county.

N – No. Complete loss of mass transit systems. Roads remain available except for those damaged.

LINE 18: Information (What information sources are functional?)

C – Commercial Broadcast. This includes non-validated sources such as local radio and TV news.

E – EAS. Government Broadcast. Information received from EAS/IPAWS over any media.

G – Civil government or public officials other than EAS/IPAWS such as from an EOC.

A – Amateur. Information originated by amateur radio operators and not validated or coordinated by public officials.

R – Relay. Information originated by civil government that is subsequently relayed through amateur radio.

NOTE: If you do not know, then respond 'U' (Uniform) or "Unknown."

A dash or hyphen symbol, – is used if no source is required based on the fact that nothing negative is reported. If no source is required since nothing negative is reported, the field should be filled with a "- ". Basically, if all other Fields have a "Y" (Yes) answer, then quoting a source is not required. When a problem in an area exists and any entry other than a "Y" is entered, then a source must be cited. This provides a way to confirm or trigger other events that may provide support to an area.

When giving the report via voice, for example, you can say either: "Line one four (14)..." or "Water..."

Simple Text Version

For transmitting text via digital modes when:

- A. FLDIGI/FLMSG software may not be working properly or is not otherwise available

-or-

- B. Basic text format is simply the most suitable for the situation

LINE:

- 1.[TO]
- 2.[yourcall]
- 3.[DTG]
- 4.[grid sq]
- 5.[city, county, state]
- 6.[FIPS] <- Not used by AmRRON unless rqsted by coop agency
- 7.[Exercise/Event]
- 8.[message ID] <- last 3 char in call sign followed by time
- 9.[message#] <- sequential 3 DTG.
- 10.[mercalli score] or na (not applicable)
- 11.[radiological] or na (not applicable)
- 12.[additional info]
- 13.[power]
- 14.[water]
- 15.[sanitation]
- 16.[medical]
- 17.[communications]
- 18.[transportation]
- 19.[information]

6.4 The Abbreviated STATREP

This is used for brevity, such as when using low power/weak signal modes, such as CW or JS8Call, or when it is more practical due to a high volume of operators reporting in. NCS may call for abbreviated STATREPS during digital and voice nets, then if anyone has something significant or more noteworthy to report, he can send a full STATREP, or even a SITREP if more details are warranted.

field 1 - conditions @ operators location

(a - all stable / b - moderate disruptions / c- severe disruptions)

field 2 - operator's location by state

field 3 - operator's position (h-home / m - mobile / p - portable)

[The following fields may be omitted if "all is okay" and all services available]

field 4 - commercial power (y - yes / i - intermittent / n - no)

field 5 - water (y - yes / c - contaminated / n - no)

field 6 - sanitation (y - yes / n - no)

field 7 - medical (y - yes / n - no)

field 8 - grid communications (y - yes / n - no)

field 9 - transportation (y - yes / n - no)

*****NOTE***** If there is an emergent or urgent need for the commercial services listed, add an **E** - emergent or **U** - urgent after the field needed.

It would look something like this:

A WV H (normal conditions or when all is well with no disruptions)

A WV H Y Y Y YU Y Y (real ops / training / exercises)

**It would probably be advisable to disable "spot" on the FT8call console unless you want your brevity code sent out worldwide on "PSKreporter".

Each operator should keep an abbreviated STATREP current, updated at least once a day, and stored in their JS8Call Station Info and FSQ QTC fields, for other stations to query your status, especially if you are unattended.

Be sure to precede the abbreviated STATREP with 'STAT' and the DTG indicating when you last updated your STATREP.

JS8Call: File > settings > General > Station > Station Info field

FLDIGI: Configure > Modems > FSQ > QTC field

Example for a station in Idaho at his home QTH when all is well:

stat 20190726-1700z A ID H

Additional info could be stored in the field after the abbreviated STATREP

Section 7 Modified Mercalli Scale

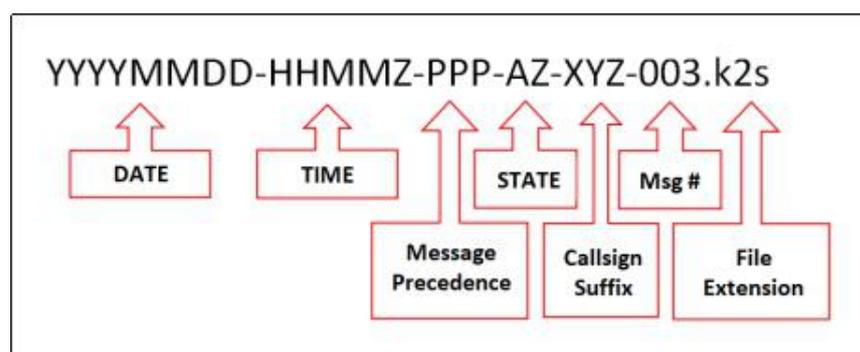
Modified Mercalli Scale		Richter Magnitude Scale
I	Detected only by sensitive instruments	1.5
II	Felt by few persons at rest, especially on upper floors; delicately suspended objects may swing	2
III	Felt noticeably indoors, but not always recognized as earthquake; standing autos rock slightly, vibration like passing truck	2.5
IV	Felt indoors by many, outdoors by few, at night some may awaken; dishes, windows, doors disturbed; motor cars rock noticeably	3
V	Felt by most people; some breakage of dishes, windows, and plaster; disturbance of tall objects	3.5
VI	Felt by all, many frightened and run outdoors; falling plaster and chimneys, damage small	4
VII	Everybody runs outdoors; damage to buildings varies depending on quality of construction; noticed by drivers of automobiles	4.5
VIII	Panel walls thrown out of frames; fall of walls, monuments, chimneys; sand and mud ejected; drivers of autos disturbed	5
IX	Buildings shifted off foundations, cracked, thrown out of plumb; ground cracked; underground pipes broken	5.5
X	Most masonry and frame structures destroyed; ground cracked, rails bent, landslides	6
XI	Few structures remain standing; bridges destroyed, fissures in ground, pipes broken, landslides, rails bent	6.5
XII	Damage total; waves seen on ground surface, lines of sight and level distorted, objects thrown up into air	7

Section 8 General Guidance

8.1 File Naming Protocol

When creating messages, and especially when submitting SITREPS, SPOTREPS, Narrative text reports, welfare traffic, etc, the file naming structure is critically important for organizing, retrieving, and handling high volumes of traffic during an emergency.

<https://amrron.com/2019/03/04/white-paper-file-naming-protocol/>



Precedence level indicated 3 TIMES in case portions of the message are garbled, and so that it more easily catches the eye.

8.2 Message Precedence

How important is your message traffic? As individual operators we become invested in what we do and often think it's the most important message in the world. It may be true, but just in case, use the following guide to determine the message precedence you place on your traffic.

ROUTINE (R):

Non-Emergency info, News Reports, Health/Welfare, Administrative, etc.

PRIORITY (P):

Non-Emergency but very important and/or time sensitive

IMMEDIATE (I): (you say "emergency traffic" when talking to other hams)
EMERGENCY TRAFFIC. Danger of loss of life or limb is occurring or is Imminent

FLASH (O):

Flash 'Command & Control' traffic overrides all other traffic. Is NOT initiated by individual radio operators. Extreme national security or other strategic threat.