AmRRON SOI SUPPLEMENTAL FOR DUMMIES

This is a proposed supplemental document to the AmRRON SOI version 4.0

It’s objective is to provide a simple understanding about your role as an AmRRON Radio Operator, and to provide procedural guidelines regarding digital modes and speeds. “The How To’s” of what and why we do things. This is not an in depth review but instead attempts to clarify some of the challenging pages. It is assumed that you have a basic grasp of all the modes.

1. So why do we exist?
   (a) To provide communications to the conservative, christian, patriot community and leadership during a disaster, uprising or collapse.

2. How do we accomplish this?
   (a) We train and use nationwide like-minded Ham Radio Operators skilled in the art of radio with a large degree of emphasis on digital modes.

Our Signals Operating Instructions or SOI is a fancy way of saying “Radio Plan” and that plan is written to include all of AmRRON regardless of your radio skills. Here is a breakdown of members…

Relays/Redoubters – Unlicensed radio operators and/or “listeners”
   1. This group is the residential “street level” of operators
      (a) they can use the CH3 program, Shortwave, Black Echo and scanners
      (b) they can also use the shortwave to decode distant digital messages with a laptop and the free FLDIGI program.

AmRRON Ham Radio Operators – Licensed radio operators
   1. This group does the heavy lifting, providing crucial communications nationally, regionally and locally.
      (a) Primarily with HF radio both voice and digital

AmRRON Corps Members
   1. The AmRRON Corps team is group of communicators dedicated to learning and being involved at a higher level. Often involved in creating policy and exercise procedures.

During an event or exercise there should be four groups of operators or stations

Lets start with SIGCEN’s

SIGCEN – A military word for Signals Center that is located close to the leadership to help them make strategic decisions. There could be as few as one radio operator up to several. It should also include an intelligence element.

NCS – Net Control Station is an experienced radio operator whose role is to direct radio traffic. They could be located anywhere and without them it would be like untangling fishing line. This person must take a lead role using his/her experience to provide guidance with all modes of radio.
**Initiators/Relays** – This is where the crucial information comes from! These operators collect National, Regional and local information by scanning all types of radio frequencies including CH3. These can also be radio operators not affiliated with AmRRON.

**CH3** – Relays/Redoubters using FRS, MURS and CB channel 3 are the local street level operators providing information to the initiators and then back to their community. They also can use scanners, shortwave and black echo.

The following is a graphic to illustrate the path of communications.
The rest of this is geared towards the Digital Communicators who need a little clarification and/or guidance.

Remember the wider the mode the faster, but faster modes need great conditions and can take out other modes. Use faster modes judiciously. Always announce mode changes!

Question

1. “What mode do you use and where on the waterfall?”
   (a) **Contestia 4/250** centered at 1000 on the waterfall is our main mode.
      i. This is commonly used during our practice nets and to make contact before changing modes. It is also used for casual conversations during “peace time”

   (b) **MFSK 32** is our next most common mode. Being wider it should be centered at 900 on the waterfall. **WF** will designate waterfall from this point on.
      i. It is used mostly for sending small pictures and forms using FLAMP or FLMSG
      ii. MFSK 16 is slower but more robust (powerful) and is used during bad propagation and to send block fills for FLAMP.
      iii. MFSK 64 should only be used if you have a great pathway to your intended recipient. Please be aware that this is a very wide mode, taking up half of the wf. Please center all MFSK at 900 on the wf, this will allow Contestia and FSQ to rum simultaneously.

   (c) **FSQ** is automatically centered at 1500 on the wf and should be used for primarily for beaconing.
      i. Beaconing helps us to determine the path quality between stations.
      ii. For example a signal report greater than 10 db usually allows for a fast mode such as MFSK64. Any report between 5 db and 10 will need a slower mode perhaps MFSK32. Any report with a minus (IE:-4 db) would require a much slower mode such as MFSK16. You can find the s/n information in the bottom left corner area of FLDIGI.

   (d) **Winlink (REPC)** is also automatically centered at 1500 on the wf and connects stations with each other enabling retrieving and depositing of emails and files. Winlink is used on a different frequency then FSQ.
      i. Sometimes we pass FLMSG files (k2’s) using Winlink

   (e) **JS8Call** offset for beaconing should be set anywhere between 1700 and 2200 on the waterfall. This will not interfere with any of the other modes on the same frequency.
**Helpful Hints**

**Contestia**

- Is a great mode that usually can get through 90% of the time when voice won’t work.
- Be aware that the signal on the wf will drift. Do your best to keep it at 1000.
- Just start transmitting and begin typing your message. Do NOT pre-type your message during a QSO. It makes others think you are having difficulties or are done talking. Contestia goes slow enough for even the worst typist.
- It is typically used during Nets and to coordinate before switching to another mode.

**MFSK**

- MFSK 32 is the typical speed used by us and is twice as wide on the wf as Contestia. For that reason please center at 900 on the wf. MFSK 16 is used primarily for FLAMP block fills. More later on FLAMP and FLMSG.
- MFSK drifts a lot more than Contestia and it is crucial that the red lines on the edge of the signal are manually lined up by the receiving person to get the intelligible information.
- When sending an MFSK signal please allow others time to line up on their end by allowing some dead air signal before the message. I usually do that by just sending “sync up now” with 4 or 5 empty lines in FLDIGI prior to the actual message.
- Is used by AmRRON to send a small pictures. Please keep under 300 X 300 pixels or it will take very long to send and tie up the frequency. Remember when finished sending the picture you must manually stop the transmitting. The bottom right T/R button in FLDIGI can be used to stop transmitting.
- MFSK is also used for FLAMP & FLMSG
- MFSK is not a mode for casual conversation as it is much faster than Contestia and will frustrate you as you try to keep up with it. Confine its usage to FLAMP, FLMSG and Pictures.
- MFSK 64 is very fast and requires a very good pathway. It is a very wide mode that can wipe out other signals on the wf. Please be careful when using MFSK 64.

**FSQ**

- Although conversations are possible with FSQ, it is used by us to mainly check the path between two or more stations via timed automatic “beaconing”. Please be aware that this can interfere with other signals. Do not use if not needed. If you have a solid signal between you and a station you know you will be exchanging info with then there is no need for FSQ.
- FSQ locks down on 1500 on the wf and cannot be changed. Do not use on the Winlink/Repac frequencies.

**Winlink**

- Also locks onto 1500 on the wf and is as wide as MFSK 32
- We use it to connect to other stations and send and retrieve files such as email and/or FLMSG files which can later be opened by the recipient via FLMSG.
- Winlink can also be used to bridge the gap to internet/email via the radio where there is no Wifi
- Using this along with the AmRRON custom forms allows for a greater degree of confidentiality.
- Always make a contact with Contestia prior to using Winlink to check propagation and to coordinate with the other station.
• after a couple failed attempts at connection please try another station or try later because Winlink can tie up the frequency for quite some time.

ARIM
• an experimental mode that combines the tools of several modes
• if you are using it please do not use on the standard AmRRON frequencies
• we are in the process of assigning a frequency
• SIGCEN’s may elect to have a 3rd HF dedicated to ARIM

JS8
• a possible mode we may use if all other modes don't work. As it is a very powerful and narrow mode needing only low power to reach thousands of miles.
• it is limited to only sending 16 characters at a time and is clock dependent.
• We may use in the future with a brevity code, Please stay around 2000 on the waterfall.

FLAMP VS FLMSG

“Is better to send an accurate message slowly than an incomplete message faster!”

FLAMP via MFSK32 using AmRRON custom FLMSG forms is our “Gold Standard” for sending messages. Why?
  1. It allows for accurate and discreet handling of messages that can be viewed on an organized form that can be printed and given to others.
     (a) How?
        i. You edit and save an AmRRON custom form using FLMSG
        ii. then you use FLAMP to send that same K2 file
     (b) procedural
        i. FLDIGI must be opened before FLAMP for it to work correctly
        ii. first make contact with Contestia to determine a reliable path to another station.
        iii. Send your FLAMP message using MFSK. Speed is dictated by S/N report.
        iv. After he/she sends a “confirmed 15” report back to you (100%) ask them to relay the entire message. It is preferable to have two stations in others states do this to saturate a region with the message. (disregard this portion if you have reached your intended recipient) This should ensure a complete message is received by many stations. Remember some stations just have shortwave radio and can not TX.
       A. When both relays are complete the relay stations should give control back to the NCS.
       B. The NCS then asked if there is anyone needing 5 or less block fills. Coordination with the relay stations may be helpful here. Use MFSK16 for fills.
       v. If after 3 failed attempts by the original sender, then you are free to use FLMSG. Keep in mind that the message can be viewed by others on FLDIGI without our custom forms.
       vi. If being discreet is unimportant then use FLMSG instead because it doesn't need 100% copy to receive the k2s file.
Winlink

1. Current Dedicated frequencies for Winlink/REPAC are
   (a) center 3583.5 dial 3582
   (b) center 7073.9 dial 7072.4*bad QRM lately, full of other modes. Suggest changing to center 7081.5 dial 7.080
   (c) center 14082.5 dial 14081

2. use Contestia to prearrange a connection with Winlink

The following diagram illustrates the FLDIGI waterfall with the modes using the standard SOI
*you will not see the Winlink or Arim on the waterfall because their on a different frequency*

Guidelines for SIGCENS’s and NCS’s are addressed in a different SOI.

The following are recommended frequency changes for ARIM to keep everyone in their lanes.

14.115  7.115  3.593
AmRRON has scheduled voice and digital nets for the purpose of passing traffic. We practice message handling because one day we may be the only patriot lifeline someone may be able to depend on. It is crucial that we are efficient and trained in our radio skills.

As you know digital radio is a major work horse for us. It shines when voice is in the tank. We depend on digital to send a majority of out traffic, but in order for it to be efficient we must apply some helpful guidelines.

Unpredictable band conditions have and will be the norm for a couple years while were at the bottom of the solar cycle, so the need to apply these guidelines is even more important.

1. Please pay attention to the preamble, it may have changed and include important changes to the Net format.
2. It is important to listen and recognize NCS instructions throughout the net. Stations wishing to check in or send traffic should not send in the blind! This only creates net congestion, doubling and makes the net chaotic. If you have tried checking in (only one time please) and can't get NCS to acknowledge you, please wait until he calls for relays and see if another station will relay you in.
3. After that, a NCS will select one or two stations (ANCS’s) to ask for relays, then if still needed you can respond to the relay station like the example below.
4. Example:
   “de k1xyz / Joe / Mn / no traffic.”
5. Hopefully someone will hear your request and relay you in, if not then no amount of sending in the blind will work either. Plus you may be stepping on traffic. All tfc goes through NCS!
6. The last possibility to check in would be after the close of the Net. Most NCS’s stand by for a couple of minutes after the close of the Net in case any last minute reports or check ins occur.
7. In a real world scenario follow the SOI schedule and your bound to get your traffic out.
8. Furthermore, remember during any AmRRON exercise it is not a contest. Please do NOT try and collect as much information as you can. If you can passively collect the messages then by all means go ahead. Your goal is too pass crucial information. For example if someone asks you for msg#122 that refers to McDonalds down the street out being out of power 3 days ago, it is insignificant. If you and the other operator spend 20 minutes trying to exchange msg#122 then you are probably interfering with much more important messages trying to be sent to a particular destination.
9. Lastly, during a scheduled net (emergency or regular) if you cant hear NCS do NOT blindly ask for a relay. If a ANCS (alternate net control station) or another operator asks for relays then by all means give him your call and/or information. If you don't hear anyone then wait until you do. This is why we have a SOI schedule. Print it out and keep it by your radio. Get a battery powered clock and set it to zulu time. Keep pen and paper close by. In a real situation an executive summary will be sent at the end of the day, apprising you of the days events.