

Operations

Net Frequencies

1. Introduction

The purpose of Gwinnett County Amateur Radio Emergency Service® (ARES®) is to provide communications services to Served Agencies. This document defines the Amateur Radio frequencies to be used during the operation of training nets as well as during times of emergency operations.

2. Responsibilities

The Gwinnett County ARES® Planning Committee is responsible for development of this Standard Operating Guideline (SOG).

Each participant in Gwinnett County ARES® nets is responsible for being familiar with and following the procedures defined in this document. Each member of Gwinnett ARES® should program these frequencies into their radios to permit rapid frequency changes to the desired frequency.

3. Related Publications

NET 1-1 Net Control Station Procedures

NET 1-2 Net Operations

4. Definition of Terms

ARES® Amateur Radio Emergency Service® (ARES® and Amateur Radio Emergency Service® are registered service marks of the American Radio Relay League.)

GARS Gwinnett Amateur Radio Society

GTS Gwinnett Technical Society

LAN Local Area Network

MACG Metro Atlanta Communications Group

NBFM Narrow Band Frequency Modulation

NCS Net Control Station

SEDAN Southeastern Emergency Digital Association Networks

Served Agency A public service agency with which Gwinnett ARES® has established a support agreement through the implementation of a formal Memorandum of Understanding.

UHF Ultra High Frequency – generally considered from 300 MHz to 3000 MHz. This includes the frequencies in the 440 MHz amateur radio band.

VHF Very High Frequency – generally considered from 30 MHz to 300 MHz. This includes the frequencies in the 6-meter, 2-meter and 220 MHz amateur radio bands. It is more commonly considered as referring to the 2-meter band.

5. Guideline

5.1. Frequencies

The following frequencies will be used by Gwinnett County ARES® during training and emergency operations as prescribed by the appropriate Operation Plan.

Frequency	Usage	Repeater Provider	Call
147.075 MHz (+) PL 82.5 CTCSS 203.5 (Activations Only)	Primary Net Repeater	GARS	W4GR/R
444.525 MHz (+) PL 82.5	Secondary Net Repeater	GARS	W4GR/R
442.850 MHz (+) PL 82.5	Alternate UHF Repeater	GTS	WB4HJG/R
444.000 MHz (+) PL 127.3	Alternate UHF Repeater	MACG	WB4QDX/R
440.800 MHz (+) PL 100	Portable UHF Repeater	Gwinnett ARES®	WX4NET/R
147.045 (-) PL 82.5	Portable VHF Repeater	GARS	W4GR/R
53.11 MHz (-MHz) PL 82.5	6 Meter Repeater	GARS	W4GR/R
147.420 MHz Simplex	Primary VHF Simplex		
146.505 MHz Simplex	Secondary VHF Simplex		
446.100 MHz Simplex	Primary UHF Simplex		
446.150 MHz Simplex	Secondary UHF Simplex		
145.03 MHz Packet	Gwinnett Co. LAN	Gwinnett ARES®	LVL WX4NET-7
144.39 MHz Packet	APRS Node	GARS	W4GR
145.77 MHz Packet	SEDAN Node	GARS	LVL W4GR-7
3.975 MHz LSB	Section NTS Net Low		
7.277 MHz LSB	Section NTS Net High		

If other frequencies are required for specific functions, they will be announced and coordinated at the time required if not included in specific operating plans.

5.2. Frequency Usage

Actual frequency usage and channel designations will be defined in the appropriate operating plans.

5.3. Repeater Recovery

With the dependency on repeaters for broad coverage in the VHF and UHF bands, consideration must be given to the possibility that a repeater may fail or become unusable for various reasons. The following procedure is to be used in the event a repeater becomes inoperable:

1. The NCS will begin operating in simplex mode on the output frequency of the used repeater. That is the frequency being listened to by the members of the particular net.
2. The NCS should request a station with the best elevation/coverage to assume net control responsibilities. This will provide maximum coverage to all other members of the net. If the new NCS does not have a roster of stations involved in the net, the net roster (by tactical call signs if used) will be provided to the new NCS by the NCS relinquishing net control responsibilities.
3. The new NCS will attempt to contact each station in the net. If problems exist in contacting every station, stations located in positions that may be able to relay will be

asked to determine if they can contact the station(s) that cannot communicate directly with the NCS. This process will continue until all stations are accounted for. (NOTE: Any priority traffic that is presented must be handled if at all possible and takes precedence.)

4. If an alternate repeater is available, the original NCS should move to the alternate repeater after transferring control to the new NCS. The NCS operating in simplex mode on the original repeater frequency will begin moving stations one at a time to the alternate frequency, beginning with the ones that must have a relay to contact the NCS. This will verify transition of all stations to the alternate repeater and do so in a controlled fashion.
5. Participants that may not be able to hear instructions from the NCS or its relays should periodically monitor any alternate repeater frequency(s) that may be designated in the applicable operating plan to determine if the net has moved. If not successful the participant should attempt to contact someone on an a different net that may be operating to support the applicable operating plan to solicit instructions.

Always remember – The NCS is always in charge of the net for which he is responsible, including the move to an alternate frequency. All members of the net are to follow the NCS's instructions.

5.4. FM Cross-band Repeat Simplex (NBFM)

Based on standards established by the SouthEastern Repeater Association, Inc., the following frequencies are authorized for use in mobile cross-band repeater operation as might be found in a mobile being used to cross-band a lower power 70 cm radio used inside a facility to a 2 m repeater system. Care should be taken to avoid interference with others using a similar capability closely located.

445.7375	445.7625	445.7750	445.7875
445.8125	445.8250	445.8375	445.8500
445.8625	445.8750	445.8875	445.9000

In addition, the following VHF simplex frequencies may be used when cross-band operation is needed to access UHF repeaters:

146.400*	146.415*	146.430*	146.445*
146.460*	146.475*	146.490*	146.535
146.550	146.565	146.580	146.595
147.405*	147.435*	147.450*	147.465*
147.480*	147.495*	147.510	147.525
147.540	147.555	147.570	147.585

* These frequencies may be coordinated for repeater inputs and care should be taken to prevent interference to repeaters using these input frequencies.

Please note: DO NOT use 146.520 for emergency operation as this frequency is the national calling frequency. It may be monitored for transient operators that may be responding and providing instructions on the frequency(s) to be used.

6. Release Information

Stan Edwards, WA4DYD, Emergency Coordinator, is the author of this document.

The date of publication for this document is May 30, 2005, and adds the GARS portable VHF repeater and adds a list of VHF simplex frequencies.