

# Net Control Business Script

## Low Power Simplex Mode Operation

### 1.1 BUSINESS SCRIPT DIRECTIONS

Please follow the directions listed below when using the script.

- a. The text within quotes should be broadcast to the net as written.
- b. Notes within the script provide additional information to the NCS. They are displayed in **Blue** and should not be broadcast to the net.
- c. The place holders *<FCC Call sign>*, *<tier 2 call sign>*, should be replaced with the FCC Call Sign of the individual identified in the script.
- d. The **ACTION** statements within the script describe the actions to be performed by the NCS or the station called by the NCS. They are displayed in **Red** and should not be broadcast to the net.

## 2 BUSINESS SCRIPT

The following business script was used during the PACS Monthly Training Drill that took place on February 24<sup>th</sup>, 2022.

### 2.1 NET DESCRIPTION

The following information is applicable to this week's training net.

- a. Date: **Thursday** February 24<sup>th</sup>, 2022
- b. Time: 1930 Hours Local
- c. Duration: 1 Hour
- d. Type: Voice traffic will take place on the W4ACS repeater and on the Pinellas Countywide simplex frequency.
- e. Net Control: WA1RYQ operating from the Pinellas EOC

Pinellas ACS/ARES® Training Drill  
24 February 2022

f. Support material:

- (1) *Pinellas ACS/ARES® Emergency Communications and Standard Operating Procedures* document
- (2) *PACS February 2022 Training Drill – Incident Briefing (ICS 201)*

## 2.2 NET OBJECTIVES:

The following objectives have been assigned to Pinellas ACS February Training Drill.

- a. Establish a county wide simplex net using normal RF power levels in accordance with the procedures documented in the *Pinellas ACS/ARES® Emergency Communications and Standard Operating Procedures* document.
- b. Transition the simplex net to a low RF power setting and back-up DC power sources (If available).
- c. Exchange message traffic and network operations data within a simplex net.

## 2.3 SESSION NOTES:

The following session notes are applicable to this month's Drill.

- a. A detailed description of simplex net operation is documented in the *Pinellas ACS/ARES® Emergency Communications and Standard Operating Procedures* document. This document is located on our website.

## 2.4 NET ACTIVITIES:

The following procedure will be used to conduct the drill.

### **BEGIN DRILL**

**Note:** *The NCS will activate the ACS/ARES® Tactical-Resource Net on the W4ACS repeater system using the procedure for ACTIVATION LEVEL 1 that is documented in Appendix E of the Communications Plan. The NCS will clearly state that the reason for the activation is a TRAINING DRILL.*

Pinellas ACS/ARES® Training Drill  
24 February 2022

Note: *Because this is a training exercise designed to evaluate simplex network operations, Echolink check-ins will not be solicited.*

**ACTION** – *Establish the Tactical-Resource net in accordance with the procedure documented in the communications plan.*

Note: *After net check-in is complete, the NCS will review the objectives and planned activities for the evening's training drill.*

*"Good evening, to the net. This is the February 2022 training drill for Pinellas County ACS. Before we get started with the drill, let me briefly walk everyone through tonight's plan."*

*"We have three objectives for tonight's training drill:*

- 1. "Establish a county wide simplex net using normal RF power levels in accordance with the procedures documented in the Pinellas ACS/ARES® Emergency Communications and Standard Operating Procedures document."*
- 2. "Transition the simplex net to a low RF power setting and back-up DC power sources (if available)."*
- 3. "Exchange message traffic and network operations data within a simplex net."*

*"Tonight's Training drill is divided into three parts:"*

*"Part one of the drill will transition the net to a county wide simplex net on a frequency of 146.430 Mhz. This is Pinellas ACS Simplex Plan A."*

*"We will attempt to bring everyone into the net by assigning multiple relay stations."*

Pinellas ACS/ARES® Training Drill  
24 February 2022

*“First, The Net Control Station will request net check-ins. The stations heard by Net Control will be referred to as Tier two Relays.”*

*“Once the NCS has completed checking in the stations it can hear, the NCS will request that each of these tier 2 stations in turn (or one at a time) request check-ins. The stations heard by a tier 2 station will be called tier-3 stations. Once a tier 2 relay station has finished collecting net check-ins, the tier 2 relay station will report back to Net Control with a list of additional net stations.”*

*“For Example, if the NCS can only hear 2 stations, A and B, The NCS will first direct station A to request net check-ins. Once Station A reports back to Net Control with its list of new check-ins, The NCS will direct station B to request net check-ins. An important note: If you hear multiple requests for check-in, please only check-in once and only once.”*

*“Now depending on the size of the network and the distribution of stations throughout the county, we may need to perform a tier 3 level net check-in. To perform a tier 3 net check-in, the NCS would request, in turn, that each of its tier 2 relays (these are the stations directly heard by the NCS) direct each of their tier 3 station to request net check-ins. Once each of the tier 3 stations under the control of a tier 2 station has completed net check-in, the tier 2 station will report back to net control with a list of additional net stations.”*

*“Once the check-in phase of the net is complete, we will start part two of the drill. During part 2, the NCS will notify all Tier-2 stations that the net is transitioning to a casualty mode configuration. Casualty mode is defined as 5-watts or less of RF output power and a back-up DC power source if*

Pinellas ACS/ARES® Training Drill  
24 February 2022

*available. The NCS will request, in turn (one at a time), that each Tier-2 station deliver the announcement to each subordinate Tier-3 station."*

*"Each Tier-2 station will report back to the NCS after each subordinate Tier-3 station has acknowledged the network configuration change."*

*"Once the net has transitioned to low power, the NCS will again call for check ins using the same procedure outlined for part one of the drill."*

*"Once the low power check-in phase of the net is complete, we will start part three of the drill. During part three, the NCS will send an announcement to all stations. Each relay in turn will send the announcement to its lower-level tier. Each recipient must acknowledge receipt."*

*"When the last Tier 2 relay station reports that all its subordinate stations have acknowledged the receipt of the announcement, the net will transition back to the W4ACS repeater system for questions, comments, and net shutdown."*

*"Are there any questions before we transition to phase 1 of the drill?"*

**ACTION – Acknowledge comments and questions**

**Note:** *Following the question-and-answer period, the NCS will pause for 1-minute and then announce on the output frequency of the W4ACS repeater system that the net is now operating in simplex mode on a frequency of 146.430 Mhz.*

*"This is <FCC Call Sign>, the NCS for the Pinellas ACS Tactical-Resource Net. The Pinellas ACS Tactical-Resource net will now transition to simplex mode on a frequency of 146.430 Mhz. I say again..."*

Pinellas ACS/ARES® Training Drill  
24 February 2022

*"This is <FCC Call Sign> Out."*

**Note:** *The NCS and the net participants transition to the designated simplex frequency.*

**Note:** *Once on the simplex frequency, the NCS will call for check ins, checking in those stations the NCS can hear. The stations heard by Net Control will be referred to as Tier-2 Relays.*

*"This is <FCC Call Sign> the NCS for the Pinellas ACS Tactical-Resource Net. I will now take check-ins from all stations for the net. Please speak slowly, clearly, and phonetically. Please call now."*

**ACTION – Acknowledge check-ins by call sign**

*"<FCC Call sign> next station please."*

**Note:** *Following the check-in of Tier-2 relays, the NCS will request, in turn (one at a time), that each of the Tier-2 relay stations call for check-ins and then report back to net control with their list of additional net stations.*

*"This is <FCC Call Sign>; <tier 2 call sign> Please request check-ins to the net. Once check ins are complete, report back to Net Control with your list of stations."*

**ACTION – Repeat for each Tier-2 relay.**

**Note:** *Depending on the size of the network and the distribution of stations throughout the county, the NCS may need to perform a Tier-3 level net check-in. If a Tier-3 check-in is required, The NCS will Request, in turn (one at a time), that each the Tier-2 relay stations direct each of their subordinate Tier-3 stations to call for net check-ins.*

*"This is <FCC Call Sign>; <tier 2 call sign> Please direct each of your tier 3 stations to request check-ins to the net. Once check ins are complete, report back to Net Control with your list of stations."*

Pinellas ACS/ARES® Training Drill  
24 February 2022

**ACTION** – Repeat for each Tier-2 relay as required until all net stations have been accounted for.

**Note:** Once the check-in phase of the net is complete, the NCS will notify all Tier-2 stations that the net is transitioning to low power. The NCS will request, in turn (one at a time), that each Tier-2 station deliver the announcement to each subordinate Tier-3 station.

“This is <FCC Call Sign>; <tier 2 call sign> Please notify each of your tier-3 stations that the net is transitioning to low power. Direct each of your tier-3 stations in turn to notify their subordinate tier-4 stations of the network configuration change. Report back to net control when each tier-3 station confirms that the network configuration change has been acknowledged. The network configuration change will take place AFTER the acknowledgement has been sent to net control.”

**ACTION** – Repeat for each Tier-2 relay.

**Note:** All stations will transition to low power.

**Note:** The NCS will again call for check ins, checking in those stations the NCS can hear. The transition to low power will likely change the make-up of Tier-2 and Tier 3 stations.

“This is <FCC Call Sign> the NCS for the Pinellas ACS Tactical-Resource Net. I will now take check-ins from all stations for the net. Please speak slowly, clearly, and phonetically. Please call now.”

**ACTION** – Acknowledge check-ins by call sign

“<FCC Call sign> next station please.”

**Note:** Following the check-in of Tier-2 relays, the NCS will request, in turn (one at a time), that each the Tier-2 relay stations call for check-ins and then report back to net control with their list of additional net stations.

Pinellas ACS/ARES® Training Drill  
24 February 2022

*"This is <FCC Call Sign>; <tier 2 call sign> Please request check-ins to the net. Once check ins are complete, report back to Net Control with your list of stations."*

***ACTION – Repeat for each Tier-2 relay.***

**Note:** *Depending on the size of the network and the distribution of stations throughout the county, the NCS may need to perform a Tier-3 level net check-in. If a Tier-3 check-in is required, The NCS will Request, in turn (one at a time), that each the Tier-2 relay stations direct each of their subordinate Tier-3 stations to call for net check-ins.*

*"This is <FCC Call Sign>; <tier 2 call sign> Please direct each of your tier 3 stations to request check-ins to the net. Once check ins are complete, report back to Net Control with your list of stations."*

***ACTION – Repeat for each Tier-2 relay as required until all net stations have been accounted for.***

**Note:** *Once the Net Check-in phase of the net is complete, the NCS will send an announcement to all Tier-2 net participants. The NCS will request, in turn (one at a time), that each Tier-2 station deliver the announcement to all Tier-3 Stations.*

*"This is <FCC Call Sign>; <tier 2 call sign> Please notify each of your tier-3 stations that the net is returning to the W4ACS repeater system at <Local time +5 Minutes>. Direct each of your tier-3 stations in turn to notify their subordinate tier-4 stations of the network frequency change. Report back to net control when each tier-3 station confirms that the network frequency change has been acknowledged."*

***ACTION – Repeat for each Tier-2 relay.***

**Note:** *Once the last tier-2 station has reported that all Tier-3 stations have acknowledged receipt of the announcement, the NCS will wait for the designated time and then Transition back to the W4ACS repeater system.*



Pinellas ACS/ARES® Training Drill  
24 February 2022

**Note:** *After returning to the W4ACS repeater system, the NCS will perform a rollcall of all stations.*

*"This is <FCC Call Sign> the NCS for the Pinellas ACS Tactical-Resource Net. I will now perform a rollcall of all net stations. When your call sign is announced, please acknowledge that you are on frequency."*

*"<FCC Call Sign>"*

**ACTION – Repeat for each Net participant.**

*"That completes tonight's planned training activities. If you have a comment or question, please provide me with your call sign, slowly, clearly, and phonetically so I don't make a mistake when I respond. And then ask your question or provide me with your comment."*

*"This is <FCC Call Sign>."*

**ACTION - PAUSING FOR QUESTIONS**

**Note:** *Once all questions have been addressed, the NCS will deactivate the net in accordance with the procedure documented in appendix E of the communications plan.*

**END DRILL**

Pinellas ACS/ARES® Training Drill  
24 February 2022

## 2.5 QUESTIONS AND COMMENTS.

The following table contains a summary of the comments and questions provided by the membership during the presentation.

No.	Call Sign	Comments	Response
	KA4EBX	Several times during simplex net operation the audio level of the NCS became extremely low and it was difficult for net participants to hear. This problem was reported by several net participants.	The microphone associated with the radio at the EOC is a hand mic. The NCS operator, WA1RYQ, is most likely at fault; however, recommend that additional testing be performed to confirm that it was an operator error.
	WA1RYQ	The procedure used to change the net power level from high power to low power was confusing. It did not clearly state when the power level change should take place.	Modify procedure to specify a specific time at which the entire net will transition to low power.
	WA1RYQ	Recreating the timeline of net activities is an important task during an activation event. The NCS found that it was difficult for the NCS to both manage the net and keep an accurate log of activities.	If possible, the NCS should record the net so that the exact timeline can be verified against the notes taken during the net. If the NCS can not record the net, request that the alternate NCS or another net participant record the net activities.
	WA1RYQ	The logging procedure used by the NCS did not enable the NCS to easily identify missing stations during simplex net operation. This caused the NCS to miss a total of three stations during the simplex net.	Develop a better approach for logging and tracking net participants. The new approach cannot rely on the internet, phone line, or cellular service.
	WA1RYQ	Recommend that a training class for net control operators be developed and offered to the member ship.	

### 2.5.1 Net Control Log.

The following table contains a list of the stations participating in the net; the net segments during which each unit checked-in with the NCS, and each unit's corresponding simplex tier level.

**Table I. Net Control Log**

	Call Sign	Net Check-ins			
		W4ACS	Simplex High Power	Simplex Low Power	W4ACS Final Rollcall
1	KC4SXO	X	Tier-2	Tier-2	X
2	N2KBD	X	Tier-2	Tier-2	X
3	KM4BGO	X	Tier-2	Tier-2	
4	KM4DYP	X	Tier-3 – WD4SCD	Tier-3 – WD4SCD	X
5	KG1AES	X	Tier-2	Tier-2	
6	N2DW	X	Tier-2	Tier-2	X
7	KO4JUI <sup>1</sup>	X			X
8	KG4HNS	X	Tier-2	Tier-2	X
9	KO4KGP	X			
10	KJ4FXX	X	Tier-2	Tier-3 – N2DW	X
11	WD4SCD	X	Tier-2	Tier-2	X
12	W7WMS	X	Tier-2	Tier-2	X
13	KA4EBX		Tier-2	Tier-2	X
14	WR6N		Tier-3 – KG4HNS		
15	W8IM		Tier-3 – KA4EBX	Tier-2	X
No Other net Check-ins					
16					

<sup>1</sup> KO4JUI notified the NCS during the final question and answer segment of the net that he may have missed the direction to transition to simplex operation.

Pinellas ACS/ARES® Training Drill  
24 February 2022