

Region 9 Army MARS Training Topics for “phone bridge” use

TRAINING TOPIC – Basic MARS ALE Software Overview

SESSION INTENT –This lesson is intended to be an introduction to this software package.

REFERENCES – Mars ALE User Guide

EXPECTED TIME TO DELIVER – 60 Minutes

CONTENT OUTLINE & KEY POINTS –

1. What is ALE?
2. How is ALE Used?
3. What equipment is needed?
4. How does ALE work?
5. How do you use ALE?
6. Reliability
7. How is ALE Used in the MARS Community
8. Open discussion about ALE

SAMPLE ALE CONFIGURATION SCREENS

The screenshot displays the MARS-ALE software interface. The main window title is "MARS-ALE MIL-STD-188-141C 2G ALE/AQC-ALE Modem/Controller". The interface includes a menu bar (File, Edit, Dialog Bars, Configuration, Tools, Channels, Addresses, Scan, Call, Data, AQC, Clear, Fill, Help), a toolbar with various icons, and a main display area showing a list of channels and a status bar at the bottom.

The main display area shows a list of channels with the following columns: ID, RX FREQ, MODE, TX FREQ, MODE, T/R GRPS, SND, SELF, ANT, PWR, USE KEY. The data is as follows:

ID	RX FREQ	MODE	TX FREQ	MODE	T/R GRPS	SND	SELF	ANT	PWR	USE KEY
10	24760000	HZ USD	24768000	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
09	20518500	HZ USD	20518500	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
08	17545000	HZ USD	17545000	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
07	14935000	HZ USD	14935000	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
06	11105000	HZ USB	11105000	HZ USB BX	0001 000	9CBAAR	000 008	B	000	
05	9290000	HZ USD	9290000	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
04	7639500	HZ USD	7639500	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
03	6850500	HZ USD	68505000	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
02	5205000	HZ USD	5205000	HZ USD BX	0001 000	9CBAAR	000 008	B	000	
01	4438500	HZ USD	4438500	HZ USB BX	0001 000	9CBAAR	000 008	B	000	

The status bar at the bottom shows: FRQ 04438500 USD | STOPPED | RX | LINKED | ASYNC_EOM | 1800hz | 8D1ST1SPNA | BRDT=1 | BRD75L | I | N | V | S | ARQMIN150 | FS=100 | RC=10 | ARQMAX1200

MIL-STD ALE Options

ALE Mode

 AQC ALE/NORMAL 2G ALE
 Link Protected AQC Burst

Scan Rate

 1 2 5 10

Radio Type

Enable/Disable

<input type="checkbox"/> Sounding	<input checked="" type="checkbox"/> Display Sounds	<input checked="" type="checkbox"/> Linked TWX	<input type="checkbox"/> Use RTS for PTT
<input type="checkbox"/> No Resound	<input type="checkbox"/> Display Bad Data	<input type="checkbox"/> MOTD	<input type="checkbox"/> Use DTR for PTT
<input type="checkbox"/> This IS Sound	<input checked="" type="checkbox"/> PTT Status Display	<input checked="" type="checkbox"/> Log to disk	<input type="checkbox"/> Use RTS for QS/S
<input checked="" type="checkbox"/> LQA Data	<input checked="" type="checkbox"/> Freq. Display	<input type="checkbox"/> Zulu Day Flush	<input type="checkbox"/> Use RTS for Mute
<input type="checkbox"/> LQA Polling	<input type="checkbox"/> Display Date	<input type="checkbox"/> Hourly Flush	<input type="checkbox"/> Use DTR for Mute
<input type="checkbox"/> LQA in Call	<input type="checkbox"/> Listen Before TX		<input type="checkbox"/> Use CAT for Mute
<input type="checkbox"/> LQA Ranked	<input type="checkbox"/> Listen Calls		
<input type="checkbox"/> Best LQA	<input type="checkbox"/> Listen Mode		
<input checked="" type="checkbox"/> Allcalls	<input type="checkbox"/> Linked Batch		
<input checked="" type="checkbox"/> Anycalls	<input type="checkbox"/> UnLinked Batch		
<input type="checkbox"/> Wild Cards	<input type="checkbox"/> QRZ		

Release Resources

 Radio 1 Com Port
 Radio 1 ALT PTT
 PC Sound Device
 ATU Com Port

Parameters

<input type="text" value="65"/> Sounding Period	<input type="text" value="300"/> TWA	<input type="text" value="12"/> SCLC	<input type="text" value="10"/> Radio 1 Com Port	<input type="text" value="0"/> Radio Emulation Com Port
<input type="text" value="5"/> Resound Period	<input type="text" value="30"/> PTTD ms	<input type="text" value="10"/> Listen time	<input type="text" value="0"/> Radio 1 ALT PTT Port	
<input type="checkbox"/> Best LQA Attempts	<input type="text" value="1000"/> LQA Timeout	<input type="text" value="15"/> TX Audio Level	<input type="text" value="0"/> GPS Com Port	
<input type="checkbox"/> 2nd LQA Attempts	<input type="text" value="30"/> Frame Votes	<input type="text" value="10"/> RX Audio Level	<input type="text" value="0"/> ATU Com Port	<input type="text" value="100"/> ms DTR BYPASS
<input type="checkbox"/> Attempts All Chans.	<input type="text" value="3"/> Frame Errors	<input type="text" value="0"/> UnMuted Audio	<input type="text" value="0"/> ANT SW Com Port	<input type="text" value="100"/> ms RTS TUNE
<input type="text" value="0"/> ATU Tune Words	<input type="text" value="10"/> Sync Votes	<input type="text" value="0"/> Muted Audio	<input type="text" value="0"/> TNC Com Port	
<input type="text" value="0"/> ATU Tune Level	<input type="text" value="0"/> Sync Errors		<input type="text" value="GENERIC"/> <input type="text" value="9600"/> <input type="text" value="CTS/RTS"/>	
	<input type="text" value="4"/> DCD Threshold		<input type="text" value="USB"/> <input type="text" value="0"/> Freq. Offset Khz. <input type="checkbox"/> +	
	<input type="text" value="25"/> LBT Threshold		<input type="checkbox"/> Hw Modem: Remote Com Port <input type="checkbox"/> Data Com Port	

ALE Retry Parameters

 Linking Call
 LQA Polling
 AMD TWX
 DTM ARQ
 DBM ARQ

Max Frame Time

 DBM
 DTM

MOTD

MIL-STD Data Modem Options

Data Modem State
 OFF LINKED ALWAYS

Data Modem Parameters

MODEM TYPE: MARS-ALE
MODEM MODE: MS110A
DATA MODE: ASYNC_EOM
ASYNC/SYNC: 600S
PSK CARRIER (Hz): 1800

ASYNC Data Framing Parameters

Data Bits: 5 6 7 8 9

Start Bits: 0 1 Stops Bits: 0 1 2

Parity: NONE EVEN ODD

Alphabet: ASCII BAUDOT

Hardware Modem Serial Control Port
Baud: 9600 Flow: CTS/RTS Data Bits: 8 Stop Bits: 1 Parity: NONE

Hardware Modem Serial Data Port
Baud: 9600 Flow: CTS/RTS Data Bits: 8 Stop Bits: 1 Parity: NONE
 RTS keys PTT only

Hardware Modem Ethernet Port
IP Address: [] [] [] [] Control Port: [] Data Port: []
 Socket/Serial

Hardware Modem Addresses
(Enter Addresses in HEX) Controller: [] Modem: []

Cancel OK

FS-1052 DLP Options

Immediate Mode
 Negotiate Every Series

100 Frame Size (56..1023) 10 Retry Count (1..100)

150 BPS Minimum ARQ Datarate
1200 BPS Maximum ARQ Datarate
600 BPS Default ARQ Datarate

ARQ Mode
 Fixed Long Interleave
 Variable
 Circuit Short Interleave

Broadcast Mode
75L Datarate/Interleave
1 Transmissions (1..50)

Activity Status Level
 1 2 3 4

Listen Mode HEX

Cancel OK

