

STANDARD ALE IN 141A AND ALE400 EASY WITH MULTIPSK (4.5)

Updated the 7th of February 2018.

Introduction

In this document it will be found 4 forms (snapshots of Multipsk screen with indications to the « how to operate ») which shows the basic functions of ALE in 141A and ALE400 modes. Auxiliary options are neglected (descriptions will be found in the manual).

It is based on ALE400 and applicable to 141A (except that in 141A, there is no need to manage the Slave/Master mode, the AFC and the RS ID detection).

Notes about the help in Multipsk:

- * for the contextual help, click on the right button of the mouse, with the focus over the mode button "ALE400", for example).
- * use also the button hints (wait a fraction of second over a button).

List of the forms *(snapshots a bit old as Standard ALE has been separated from ARQ FAE, but still applicable)*

Sounding and answer

Call to a Ham or to a net

AMD message to a Ham

Scanning (for Multispk with licence)

Differences between 141A (standard) and ALE400 (non standard)

The ALE400 system has exactly the same functions as the ones of the "141A" of Multipsk except that:

- * the bandwidth is 400 Hz instead of 2000 Hz as in standard 141A (so ALE400 can be transmitted anywhere where 500 Hz digital modes are authorized),
- * the modulation speed (50 bauds instead of 125 bauds) and consequently the text throughput are 2.5 slower,
- * no fix frequency (as in MFSK16...), the automatic tuning being able to be done thanks to the RS/ID transmission,
- * the S/N is 5 dB better: - 9 dB.

Sounding and answer

Help TCP/IP Mdem Oscillo Spectrum Transceiver Country/Loc on Exit

About Personal CPU Sampling freq PC (>=) MHz Mixer Level Over Panoramic: PSK CW RTTY

Licence Clocks 16 bits Identifiers 450 166 66 Input Output 0 %

1 Call ? Name Freq Mhz Mode Ur RST My RST R S Locator ? QTH Notes Opt. ? Clear Logbook Record

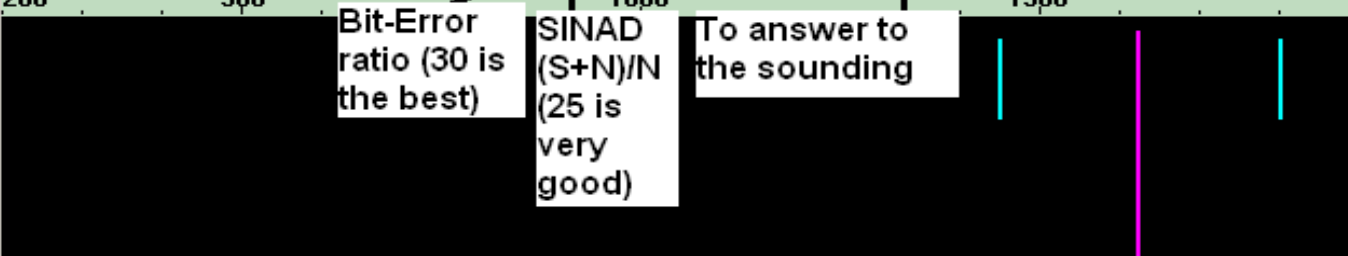
Modes RS ID sounding appears here TX: ALE400

TX frequency RX frequency Fr. difference My: B?? S?? FRM: F9XYZ

1625.0 Hz 1625.0 Hz 0.0 Hz B30 S25 AFC Options Answer to FRM Scan Call QRZ

200 500 1000 1500 2000 2500 Spectrum Waterfall High

BPSK31	63	125	PSKFEC31	PSK10	MT63
QPSK31	63	125	CHIP64/128	PSK63F DIGISSTV	
PSKAM10	31	50	PSK220F	CW/CCW(OOK-FSK)	
PACKET+APRS			Pactor1	1382	ASCII
RTTY 45	50+SYNOPSIS	75	100	GMDSS	DominoF
Amtor FEC-Navtex	Amtor ARQ			SITOR A	DominoEX
THROBX THROB	MFSK16			MFSK8	Contestia
PAX/PAX2	DTMF 141A	ALE400		OLIVIA	RTTYM
FM HELL	PSK H	FELD HELL		HELL 80	VOICE
Filters	Analysis	Binaural		HF FAX	SSTV



CQ	CQ	500 "8"	CALL	NORMAN	3 NORMANDI	Normandie	Anglais	
File	MACROS	Clear	Repeat	UTC/GMT	NORMANDIE	Louise	Anglais co	CARAC HELL

MIL-STD-188-141A mode parameters

OK Cancel Default parameter

Frames reception options

- Fixed RX frequency (750 to 2500 Hz) in "141A"
- If variable QRG, standard initial QRG: 1625 Hz

Frames transmission options

- Sounding "THIS WAS" (answer not required)
- Sounding of 15 sec (instead of 30 sec)

Frames display options

- Display of messages, only
- Display of frame abstract
- All frames display (included DATA, REPEAT)
- One correction by Golay frame authorized
- A line between each frame, otherwise a space

Options for non-limited Multispk version

- Time displayed for each frame
- Short ring on frame reception
- Frequency displayed (if Commander connected)

Call signs (15 characters maximum) for individual call

F6CTE CALL3 CALL4 CALL5 CALL6

Local net address (6 characters maximum) for multiple call

NET001 2 Individual or net call without answer required (pre) Ring on call of this station or on the specified net a

Open nets (HFL and QRZ) followed by the personal Ham

HFL 5 QRZ 3 Ring on HFL or QRZ call (for non-limited M

Message "AMD" sent with the individua

- Saving of received and transmitted messages in the radio-mail (butt
- Saving of all received messages and calls in the radio-mail (button

Long frames (0 to 63 characters) rather than short frames (0 to 30 c

No control of the CRC, only for monitoring (neither CQ nor answer to

Ring on detection of a general call (CQ) (for non-limited Multispk)

Ring on detection of a message for which you are the addressee (fr

Options for the sounding

Reception of the sounding

Answer (call) to F9XYZ

F9XYZ answers

F6CTE sends an acknowledgment

[Sounding THIS WAS] [from F9XYZ] (his BER=30 + SINAD=26)

[End of TX] individual call as answer to a sounding (or "anyall") from F9XYZ

[Call] [from F9XYZ] [to F6CTE] (his BER=30 + SINAD=25)

[End of TX] acknowledgment of the answer to the sounding (or "anyall") of F9XYZ

Snapshot Print Fonts Clear Double Height 76 STOP 31/10/07 22:09:47 UTC SpotC.

Démarrer C:\RXTXMULTI... Gestionnaire d... 2 NTVDM.EXE 2 MULTIPSK C:\RXTXMULTI...

RX/TX screen Patrick LINDECKER (F6CTE) 4, avenue du

Call to a Ham or to a net (local, QRZ or HFL)

Help TCP/IP Mdem Oscillo Spectrum Transceiver Country/Log word QSO Config Func Program Beacon LAR

About Personal CPU Sampling freq PC (>=) MHz Mixer Level Over Panoramic:
 Licence Clocks 16 bits Identifiers 450 166 66 Input Output 0% PSK CW RTTY

1 Call ? Name Freq Mhz Mode Ur RST My RST R S Locator ? QTH Notes Opt. ? Clear Logbook Record
 0 141A 599 599 Push to call Cluster L A DXKeeper Cont F

Modes RS ID Video ID QRGs RS ID detection Sound card Mode ARQ FAE CQ End Mail
 TX: ALE400 MODE RX: ALE400 Aux. functions Mode Slave Master Unproto Answer PSE LQA

TX frequency RX frequency Fr. difference Mv: B?? S?? FRM:
 1625.0 Hz 1625.0 Hz 0.0 Hz B30 S21 AFC Options Sounding (TI) Scan Call F9XYZ
 200 500 1000 2000 2500 Answer to FRM Stop End

EC31 PSK10 MT63
 QPSK31 63 125 CHIP64/128 PSK63F DIGISSTV
 PSKAM10 31 50 PSK220F CW/CCW(OOK-FSK)
 PACKET+APRS Pactor1 1382 ASCII
 RTTY 45 50+SYNOPSIS 75 100 GMDSS DominoF
 Amtor FEC-Navtex Amtor ARQ SITOR A DominoEX
 THROBX THROB MFSK16 MFSK8 Contestia
 PAX/PAX2 DTMF 141A ALE400 OLIVIA RTTYM
 FM HELL PSK H FELD HELL HELL 80 VOICE
 Filters Analysis Binaural HF FAX SSTV

200 500 1000 2000 2500 Spectrum Waterfall High

Hz (P450=+) 3.3 4.3

Push to terminate the linked state (useless with Multipsk)

Selection of the Ham to call HFL or QRZ can be selected (open nets) as the local net (NET001 here).

MIL-STD-188-141A mode parameters

Auxiliary functions for the 141A mode (AMD and ARQ FAE messages and answer to open cancel Default parameters Transceiver Help

This panel opens with the button "Aux. functions" on the RX/TX screen. Help S/N max=option options (750 to 2500 Hz) in "141A" Standard initial QRG: 1625 Hz

Management To push, if on reception of QRZ or HFL calls, you want to automatically answer.

Open nets on which you want an automatic answer: QRZ HFL

F9XYZ answers F6CTE calls F9XYZ

[End of TX] call "THIS IS" to F9XYZ
 [Call] [from F9XYZ] [to F6CTE] (his BER=30 + SINAD=21)
 [End of TX] (call) acknowledgment to F9XYZ

F6CTE acknowledges F9XYZ

F9XYZ stored here HFL and QRZ are open nets. Any Ham can answer.

It can be added a message

Display options
 Display of messages, only
 Display of frame abstract
 All frames display (included DATA, REPEAT)
 One correction by Golay frame authorized
 A line between each frame, otherwise a space

Options for non-limited Multipsk version
 Time displayed for each frame
 Short ring on frame reception
 Frequency displayed (if Commander connected)

Scanning options (transceiver in USB)
 For non-limited Multipsk version (except buttons "Forward")
 USB RTTY CW RTTY-B Additional sounding Stop on first answer

1845000	Hz	OK	Forward	3617000	Hz	OK	Forward
7030500	Hz	OK	Forward	10145500	Hz	OK	Forward
14100500	Hz	OK	Forward	14109500	Hz	OK	Forward
18106000	Hz	OK	Forward	21117500	Hz	OK	Forward
24926000	Hz	OK	Forward	28117500	Hz	OK	Forward
50162500	Hz	OK	Forward	144162500	Hz	OK	Forward

Monitoring time (sec) on a channel: 1 2 5 10 20
 Attention to the relays which should click if you QSY between bands...
 Stop on the first received frame, otherwise continuous monitoring
 Stop and answer on call of this station, otherwise answer without stop
 Stop and answer on HFL or QRZ call, otherwise answer without stop

Callsigns (15 characters maximum) for individual calls - File "CALL_141A.TXT"
 F9XYZ F6CTE CALL3 CALL4 CALL5 CALL6 CALL7 CALL8 CALL9 CALL10

Local net address (6 characters maximum) for multiple call, followed by the answer delay (1 to 99 seconds)
 NET001 2 Individual or net call without answer required (preamble THIS WAS)
 Ring on call of this station or on the specified net address (for non-limited Multipsk)

Open nets (HFL and QRZ) followed by the personal Ham time slot. These nets are open to any answer.
 HFL 5 QRZ 3 Ring on HFL or QRZ call (for non-limited Multipsk) Management in "Aux. functions"

Message "AMD" sent with the individual or net calls ("Call" button)

Saving of received and transmitted messages in the radio-mail (button "Mail"), for the Ham call only
 Saving of all received messages and calls in the radio-mail (button "Mail") (for non-limited Multipsk version)

Snapshot Print Fonts Clear Double Height 76

Démarrer C:_ALE Gestionnaire d... 2 NTVDM.EX

RX/TX screen Patrick LINDECKER (F6CTE) 4, avenue du Square BURES-SUR-YVETTE 91440 FRANCE

AMD MESSAGE TO A HAM

Help	TCP/IP	Mdem	Oscillo	Spectrum	Transceiver	Country/Lo									
About	Personal	CPU	Sampling freq.	PC (>=) MHz	Mixer	Level	Over	Panoramic:							
Licence	Clocks	16 bits	Identifiers	450 166 66	Input	Output	0 %	PSK/CW/RTTY							
1	Call ?	Name	Freq Mhz	Mode	Ur RST	My RST	R S	Locator ?	QTH	Notes	Opt. ?	Clear	Logbook	Record	
			0	141A	599	599						Cluster L	A	DXKeeper	Cont F
Modes	RS ID	Video ID	QRGs	RS ID detection	Sound card	Mode	ARQ FAE	CQ	End	Mail					
	TX: ALE400	MODE		RX: ALE400	Aux. functions	Slave	Unproto	Answer	PSE LQA						
TX frequency	RX frequency	Fr. difference	Mp: B?? S??	FRM: F9XYZ	Sounding (TI)	Scan	Call								
1625.0 Hz	1625.0 Hz	0.0 Hz	B30 S18	AFC	Options	Answer to FRM	Stop	End	QRZ						

BPSK31	63	125	PSKFEC31	PSK10	MT63
QPSK31	63	125	CHIP64/128	PSK63F DIGISSTV	
PSKAM10	31	50	PSK220F	CW/CCW(OOK-FSK)	
PACKET+APRS			Pactor1	1382	ASCII
RTTY 45	50+SYNOPSIS	75	100	GMDSS	DominoF
Amtor FEC-Navtex	Amtor ARQ	SITOR A	DominoEX		
THROBX	THROB	MFSK16	MFSK8	Contestia	
PAX/PAX2	DTMF	141A	ALE400	OLIVIA	RTTYM
FM HELL	PSK H	FELD HELL	HELL 80	VOICE	
Filters	Analysis	Binaural	2500	HF FAX	SSTV

AMD messages can be exchanged between Hams

Here is the message to send to F9XYZ

F9XYZ if present is obliged to answer (automatic answer)

[End of TX] AMD message "THIS IS" to F9XYZ
 [Call] [from F9XYZ] [to F6CTE] [his BER=30 + SINAD=18]
 [End of TX] [call] acknowledgment to F9XYZ

Auxiliary functions for the 141A mode (AMD and ARQ FAE messages and answer to open net calls)

This panel opens with the button "Aux. functions" on the RX/TX screen. Help S/N max=-15 dB

Management of calls: Add this call to the list: F9XYZ See the file Lists up-to-date

AMD message to send: **Click to send the message**
 HERE IS AN AMD TEST MESSAGE (90 CHARACTERS MAXIMUM IN CAPITAL). **Send** End in THIS... IS WAS

Open nets on which you want an automatic answer: QRZ HFL Mail (RX/TX)

Link with: F9XYZ Erase

Selective call in ARQ FAE Call-> F9XYZ End From: To:

APRS position transmission in FAE mode: Authorized File to send + folder Send mail (+ file) Attached file

ARQ FAE mail to send: Erase Reset link or connection attempt

ARQ FAE SMTP server (IP: 127.0.0.1 / Port 25): Outlook Express Disconnection Reset transmission

To authorize Multipsk (as a SMTP server) to import the mails from Outlook Express (or equivalent), click on the button "Outlook Express".
 To forbid data exchange, click on "Disconnection".

RX/TX screen Patrick LINDECKER (F6CTE) 4, avenue du Square BURES-SUR-YVETTE 91440 FRANCE

Scanning or sounding+scanning

Help TCP/IP Mdem Oscillo Spectrum Transceiver Country/Loc
 About Personal CPU Sampling freq PC (>=) MHz Mixer Level Over Panoramic: PSK/CW/RTTY
 Licence Clocks 16 bits Identifiers 450 166 66 Input Output 0%
 1 Call ? Name Freq Mhz Mode Ur RST My RST R S Locator ? QTH Notes Opt. ? Clear Logbook Record
 Modes RS ID Video ID QRGs RS ID detection Sound card To start the scanning End Mail
 TX: ALE400 MODE RX: ALE400 Aux. functions Answer PSE LQA
 TX frequency RX frequency Fr. difference Mv: B?? S?? FRM: Sounding (TI) Scan Call
 1625.0 Hz 1625.0 Hz 0.0 Hz B30 S20 Answer to FRM Stop End QRZ
 200 500 1000 1500 2000 2500 Spectrum Waterfall High

CQ CQ 500 "8" CALL NORMAN 3 NORMANDI Normandie Anglais
 File MACROS Clear Repeat UTC/GMT NORMANDIE Louise Anglais co CARAC HELL

If "Additional sounding" is pushed, a detection time will precede the sounding and the monitoring time.

Scanning options panel

If OK is pushed, the QRG will be scanned (here 1.845 MHz)

MIL-STD-188-141A mode parameters

OK Cancel Default parameters Transceiver Help

Frames reception options

- Fixed RX frequency (750 to 2500 Hz) in "141A"
- If variable QRG, standard initial QRG: 1625 Hz

Frames transmission options

- Sounding "THIS WAS" (answer not required)
- Sounding of 15 sec (instead of 30 sec)

Frames display options

- Display of messages, only
- Display of frame abstract
- All frames display (included DATA, REPEAT)
- One correction by Golay frame authorized
- A line between each frame, otherwise a space

Options for non-limited Multispk version

- Time displayed for each frame
- Short ring on frame reception
- Frequency displayed (if Commander connected)

Scanning options (transceiver in USB)

For non-limited Multispk version (except buttons "Forward")

USB RTTY
 CW RTTY-R
 Additional sounding Stop on first answer

1845000 Hz	OK	Forward	3617000 Hz	OK	Forward
7030500 Hz	OK	Forward	10145500 Hz	OK	Forward
14100500 Hz	OK	Forward	14109500 Hz	OK	Forward
18106000 Hz	OK	Forward	21117500 Hz	OK	Forward
24926000 Hz	OK	Forward	28117500 Hz	OK	Forward
50162500 Hz	OK	Forward	144162500 Hz	OK	Forward

Monitoring time (sec) on a channel: 1 2 5 10 20

Attention to the relays which should click if you QSY between bands...

- Stop on the first received frame, otherwise continuous monitoring
- Stop and answer on call of this station, otherwise answer without stop
- Stop and answer on HFL or QRZ call, otherwise answer without stop

Callsigns (15 characters maximum) for individual calls - File "CALL_141A.TXT"

F6CTE CALL3 CALL4 CALL5 CALL6 CALL7 CALL8 CALL9 CALL10

The received frames will appear here.
 To connect Commander
 Commander (DXLAB) must be started

Snapshot Print Fonts Cle
 Démarrer C:\RXTXMU... Commander ... 23:29