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

The call of the Ham sounding appears here.

To sound:
- Bit-Error ratio (30 is the best)
- SINAD (S+N/N) (25 is very good)

To answer to the sounding:
- Reception of the sounding
- Answer (call) to F9XYZ
- F9XYZ answers
- F6CTE sends an acknowledgment

Options for the sounding

[Sounding THIS WAS] [from F9XYZ] (this BER-30 + SINAD-26)
[End of TX] individual call as answer to a sounding for "any call" from F9XYZ
[Call] [from F9XYZ] (this BER-30 + SINAD-25)
[End of TX] acknowledgment of the sound to the sounding (or "any call") of F9XYZ
Call to a Ham or to a net (local, QRZ or HFL)

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

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

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

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

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

Local net address (6 characters maximum) for multiple calls, followed by the answer delay (1 to 99 seconds)

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 Multispk version
AMD MESSAGE TO A HAM

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 F6CETE] [his BEH=30 + SINAD=18]
[End of TX] [call] acknowledgment to F9XYZ
If "Additional sounding" is pushed, a detection time will precede the sounding and the monitoring time.

Scanning options panel

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

The received frames will appear here.

To connect Commander

Commander (0XLAB) must be started

Monitoring time (sec) on a channel:

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 OR2 call, otherwise answer without stop

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