

AUTEX EASY WITH MULTIPSK (4.51)

Introduction

In this document, it is proposed:

- A simple use description of the AUTEX mode for a meeting with 2 participants, using a snapshot (page 3).
- Several pieces of information about AUTEX (pages 1 and 2). Details will be found in the Multipsk manual.

For questions about Multipsk, ask them on the Multipsk IO group
To visit this group on the Web, go to: <https://groups.io/g/multipsk>

Quick description

The AUTEX modes permit to organize a meeting between 2, 4, 7 or 13 people maximum. Text messages can be transmitted from any person to any other person participating to the meeting, in pseudo full duplex (protocol one, not physical one), each person being sure that his messages will be read by the other participants. So, each one will be sure to read all the texts sending by the other participants to the meeting. It is a mode without errors (if an error is detected, the frame is re-transmitted until complete reception). So, it can be considered as an extended ARQ mode.

The proposed set of characters permits to exchange in all ASCII-ANSI languages (English, French, German, Russian...), but not those with ideograms (as Japanese).

It is also possible to send geographical positions and small files (<=10Kb).

A "soft decision" Memory ARQ is implemented. It makes the transmission more reliable. The general principle is to average frames. It is done in a soft way by averaging I/Q levels of different frames.

Necessary conditions for the "Master", to organize his/her meeting

The "Master" is the Ham who initiates and controls the meeting and the "Slaves" (or "Users") are the other Hams (1 to 12) who answer to the "Master" call and participate to his/her meeting.

Note: "Master" and "Slave" are terms employed in net terminology (not very smart, but easily understood).

The more the number of participants:

- the more the transmissions must be reliable. It is obvious that at two participants, the probability to get a transmission problem (finishing in a disconnection) is weak whereas this probability is much more important at 13. To reduce it, from 4 participants and beyond, all the participants must be in the same zone (small at 13 participants and larger at 4),

- the more powerful must be the "Master" station and the "Master" PC. His/her station must be powerful because it transmits at a high baud speed. So logically, at 4 participants, the power must be 3 times bigger than the mean user power. At 7 participants, it will be 6 times bigger and at 13 participants, 12 times bigger.
His/her PC must be very powerful because he/she has to decode all the user transmissions in the same time.

Important:

- In a general way, to do QSO in AUTEX, the propagation conditions must be constant (without QSB ("fading")), for example in USB on 40, 80 m or 160 m in the nearby area (zone of 50 to 100 km maximum), or in FM or in USB on 144 MHz (144.165 MHz for example).
- once connected, the user must avoid to move the Multipsk windows or to use other programs, because this could temporarily block Multipsk, which can lead to a disconnection.

Recommended frequencies

Ham frequencies proposed are:

- for Autex 2 and 4: 1839, 3582, 7040, 10147, 14080, 18105, 21082, 24915, 28080 kHz
- for Autex 7 and 13 : 1840, 3600, 7080, 7037, 14106, 21110, 29210 kHz

Links about the AUTEX mode

- "[Sound files in Autex2 and 4.zip](#)" (sound files in Autex 2 and 4, with a presentation in English and French)
- CURSO MULTIPSK CAPITULO 7 - Modo AUTEX (in Spanish with English subtitles):
<https://www.youtube.com/watch?v=E8eIWS8MQtY&feature=youtu.be>

About the help in Multipsk:

- To bring up the text manual (contextual sensitive one), click on the right button of the mouse, with the cursor over the mode button "**AUTEX**", for example, or any other button. In the example, only the AUTEX help will be displayed.
- Also use the button hints. For this, wait a fraction of second over a button.
- The Multipsk/Clock/OMMap manuals can be downloaded in the form of PDF files here: http://f6cte.free.fr/Help_PDF.ZIP

General hints (advices) about Multipsk

http://f6cte.free.fr/Hints_about_Multipsk.pdf

Simple use description for a 2 Hams meeting

The "Master" Ham ("M") clicks on the "Start the meeting" button. Let's suppose that another Ham ("S1") joins the meeting by clicking on the "Enter" button. After connection ("Connected" state), they can chat, send their position or a small file. Their data (call sign, QTH, Locator...) will be transmitted regularly via the secondary channel. The meeting will end if the "Master" Ham clicks on the "End the meeting" button or if the other Ham leaves the meeting by clicking on the "Quit" button. For details, use the AUTEX manual (right click over the mode button "AUTEX").

The screenshot displays the AUTEX software interface during a meeting. At the top, there are various menu options like 'TCP/IP', 'Sdr spectrum', 'Transceiver', etc. The main chat area shows a message: "My name is Patrick". Below the chat, there are buttons for "Start the meeting", "End the meeting", "Enter", and "Quit". The "Enter" button is highlighted, indicating a participant has joined. The interface also shows a secondary channel data window with fields for call sign, name, and location. Annotations provide a step-by-step guide to using the software for a two-person meeting.

The meeting can take place with 2, 4, 7 or 13 participants maximum.

The message to send will be typed in this editor. Click on the "Send" button or type the <ESC>, <Alt> or <Enter> key. Messages can be sent at any moment.

Except the secondary channel data field, this window is only for reading (and control). Don't write in the editing windows!

Window of the "Master" ("M"), the one who initiates the meeting, by clicking on the "Start the meeting" button.

Window of the Ham ("S1") who joins the meeting, by clicking on the "Enter" button. He/She will leave the meeting by clicking on the "Quit" button.