

v18.1.0.73 AutoSeq functionality description

There are two functionalities being used for operation: autoselection while DX Call window is empty and autosequencing if there is any callsign in the DX Call window. Autosequencing will not be transmitting CQ if there is a callsign in DX Call window.

Autosequencing functionality in JTDX is based on QSO history data structure where all CQ messages and messages that have user's callsign being recorded.

QSO history data structure will be cleaned up if band is changed, specific callsign can be cleaned up from the history using click of the right mouse's button on the Clear DX button.

Also previous attempts to make QSO to specific callsign will be cleaned up from the history at 'hisCall myCall myGrid' message transmission.

Autoselection functionality is priority based one, priorities are being ranked according to the Notifications tab settings.

Autoselection will ignore any 'worked B4' call if there is any 'new one' criterion is selected in Notifications tab of the settings.

'Worked B4' is being recognized by Notifications functionality on residual principle after checking to all selected 'new one' criteria. Autoselection can not recognize 'Worked B4' if there is not any 'new one' criterion selected in the Notifications tab of settings.

Autoselection will be choosing signal with the best SNR while getting two or more incoming calls with equal priority or if there is not any 'new one' criterion is selected in the Notifications tab.

JTDX providing several autoselection modes where user can choose the best one according to the processing power of the CPU and user's needs.

Autoselection functionality has two parts: searching for any incoming calls(AutoSeq1,2,3) and searching through received CQ messages(AutoSeq4+).

AutoSeq1 'Call First'.

In this mode software will respond to the first incoming answer to your CQ. AutoSeq1 will change message being transmitted if first answer to CQ or message at QSO is decoded after beginning of TX interval. AutoSeq1 works in similar way to AutoSeq WSJT-X.

AutoSeq2 'Call decoded till start of TX interval'.

In this mode software will be searching for any incoming call till start of TX interval, then will answer to the best one in terms of priority and/or SNR. All incoming calls or received messages at QSO decoded during message transmission will be ignored.

AutoSeq3 'Call based on end of decoding'.

This mode can be used on fast CPUs if there is wide bandwidth being used for decoding.

Software will be waiting till end of decoding then will answer to the best one in terms of priority and/or SNR.

In this mode software can start transmission with previously transmitted message and may change message during transmission. User shall be careful while selecting AutoSeq3 in wideband decoding mode, as any change of TX message beyond 2nd..3rd second of TX interval will decrease chances of getting this message decoded.

AutoSeq4+ 'Search through received CQ messages'. This mode can only be used together with mode 2 (AutoSeq4+2) or mode 3 (AutoSeq4+3). Software searches through all decoded CQ messages, if there is no incoming call, to select the best one in terms of priority and/or SNR and will answer to selected CQ message. TX CQ direction is not supported yet, RX CQ direction processing is supported. This option providing very efficient operation in terms of QSO ratio.

In scenario where user answered to someone's CQ, JTDX will transmit CQ (or directional CQ) message when QSO is finished if TX signal is not being overlapped with the last QSO party operator's signal. To avoid this functionality user can activate 'Single shot QSO' option.

JTDX operation depends on the logging mode:

To prevent fully automatic operation autosequencing cycle shall be broken if there is no operator's action is performed.

- In autologging mode(Enable automatic logging of QSO) software switches off Enable Tx button when QSO is finished and action from user is required to switch Enable TX button back on to continue operation.

- In 'Prompt me to log QSO' or manual logging software will brake cycle (will switch Enable TX button off) if QSO is not logged before end of QSO (73 message is decoded). Hence software will not let setup operate while being unattended. Software will continue cycle of operation if user accepted QSO prior to decoding of the final 73 message.

If QSO is logged before getting ending QSO '73' message, upon decoding this message:

JTDX in AutoSeq1 mode will answer to the first valid incoming call or will continue to call CQ if there is no valid incoming calls.

JTDX in AutoSeq2 and AutoSeq3 modes will search for any new best incoming call and will answer it. It will continue to call CQ if there is no any valid incoming call received.

JTDX in AutoSeq(4+2) and AutoSeq(4+3) modes will search for any new best incoming call and will answer it. It will find and answer to the best CQ message if there is no any valid incoming calls.

Software in AutoSeq(4+2) and AutoSeq(4+3) modes will continue to call CQ if there is no valid incoming calls and no any valid CQ message decoded.

Directional CQ RX/TX messages.

Directional CQ message transmission and AutoSeq1,2,3:

Autoselect recognize incoming calls according to the transmitted direction: CQ DX, CQ + continent, CQ + (two character any prefix) directions

are being supported by autoselect, where continent is [SA NA EU AS OC AN AF].

Software will answer those incoming calls that match to the transmitted direction, and will not answer other calls with exception to new DXCC.

If user called (CQ + common country prefix), country prefix being taken from cty.dat file, software will answer to the best incoming call from this country and will ignore other incoming calls.

If user called (CQ + not common country prefix), like CQ JH, software will answer to any callsign starting from JH, for instance to JH1AAA, but will ignore

any other prefixes, for example JA1AAA.

Software will answer to exactly matching prefix, for instance AutoSeq will answer to JH1AAA and will not answer to JA1AAA if operator called CQ JH

AutoSeq 4+ support of received directional CQ messages processing:

Processing of CQ DX, CQ + continent, CQ + (two character main country prefix) received messages is supported, where continent is [SA NA EU AS OC AN AF].

AutoSeq searching will process received CQ message according to it's direction.

In AutoSeq4+ functionality (searching through CQ messages on the band) autoselection does not yet take in account direction in user's transmitted directional CQ message.

Additional AutoSeq related options:

'Answer worked B4 calls' option can be activated to provide operation with the worked B4 calls in AutoSeq mode.

'Single shot QSO' option can be activated to turn of 'Enable Tx' button and prevent any message transmission when QSO is finished.

'Auto RX frequency filter' option is implemented to assist users with slow CPUs, it will simply switch on Filter button when any incoming call is received or if 'hisCall myCall myGrid' message is transmitted and will handle this frequency Filter switched on until QSO is finished. CQ message transmission and 73 message reception will trigger switching off of the Filter button. Narrow frequency filter lets user to decode signals quickly, and AutoSeq3 mode can be used together with AutoFilter on the slow CPU.

Recommended settings: one can use AutoSeq1 on slow CPUs, AutoSeq2,6 on average CPUs and AutoSeq3,7 on average and fast multicore CPUs. AutoTx button shall be switched on to provide proper autosequencing operation.