

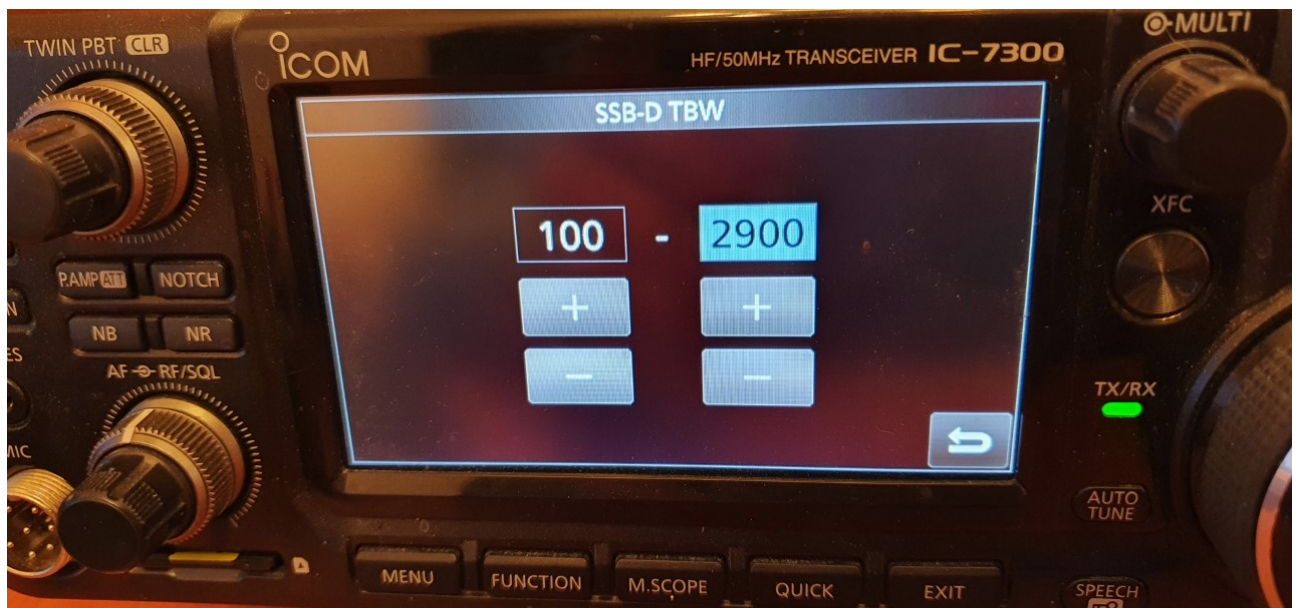
Hello,

The new **VARA HF v4.3.0** includes a new **VARA HF Tactical** mode designed for the Army Forces and other professional EMCOMM organizations which use Tactical HF Rigs for the operations. **But it can be used with some Ham rigs, mainly with the Icom IC-7300.**

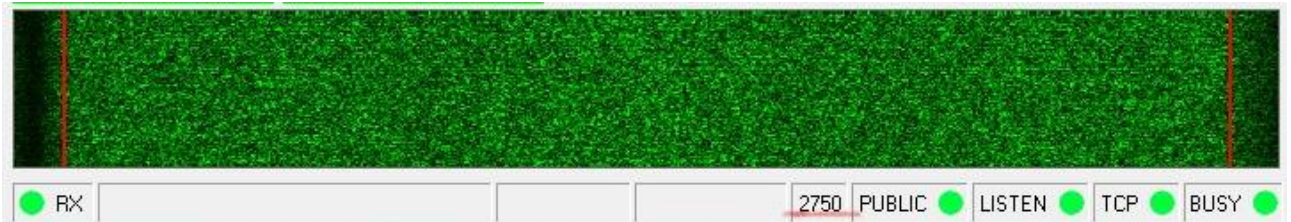
VARA HF Tactical has 2750Hz bandwidth and reach a 20% more performance than the standard VARA 2300.

VARA HF v4.3.0												
Level	VARA HF 2750 (Tactical)				VARA HF 2300 (Standard)				VARA HF 500 (Narrow)			
	Symbol Rate	Carriers	Mod.	Net Rate (bps)	Symbol Rate	Carriers	Mod.	Net Rate (bps)	Symbol Rate	Carriers	Mod.	Net Rate (bps)
1	23	40	FSK	18	23	32	FSK	18	23	11	FSK	18
2	47	20	FSK	41	47	16	FSK	41	47	11	FSK	41
3	47	20	FSK	82	47	16	FSK	82	47	11	FSK	61
4	94	20	FSK	175	94	16	FSK	175	94	2	BPSK	88
5	94	3	4PSK	270	94	3	4PSK	270	94	2	4PSK	177
6	94	4	4PSK	363	94	4	4PSK	363	94	3	4PSK	270
7	94	6	4PSK	549	94	6	4PSK	549	42	11	4PSK	441
8	94	8	4PSK	735	94	8	4PSK	735	42	11	4PSK	588
9	94	10	4PSK	922	94	10	4PSK	922	42	11	4PSK	705
10	94	13	4PSK	1203	42	49	4PSK	2011	42	11	8PSK	884
11	42	59	4PSK	2423	42	49	4PSK	2682	42	11	8PSK	1060
12	42	59	4PSK	3230	42	49	4PSK	3219	42	11	16QAM	1286
13	42	59	4PSK	3877	42	49	8PSK	4025	42	11	32QAM	1543
14	42	59	8PSK	4848	42	49	8PSK	4830				
15	42	59	8PSK	5817	42	49	16QAM	5872				
16	42	59	16QAM	7074	42	49	32QAM	7050				
17	42	59	32QAM	8489								

VARA HF Tactical requires **open TX filter from 100-2900 Hz**. This is easy for the most of the high-class rigs in SSB, but not in SSB-D where menus are limited to 2400Hz only. **The exception is the Icom IC-7300**, where you can config the TX filter 100-2900 for SSB-D even, making it the perfect rig for VARA HF tactical usage.



The RX filters should cover the red lines in the waterfall, like this:



In the Icom IC-7100, however, the transmit bandwidth is limited to 300-2700 automatically, if you select DATA mode. So this rig it's not compatible with VARA HF tactical, unless you turn off the DATA mode.

**NOTE:** When the data mode is selected, the audio input from the [MIC] connector is automatically cut, and the audio input from the [ACC] socket is used as the default.\*<sup>1</sup>

Also, when the data mode is selected, the fixed settings listed below are automatically selected:

- Speech compressor: OFF
- Transmit bandwidth: MID\*<sup>2</sup>
- Tx tone (Bass): 0
- Tx tone (Treble): 0

\*<sup>1</sup>Select the connector(s) for the desired modulation to input in the "DATA MOD" item of the Set mode. (p. 17-24)

\*<sup>2</sup>Fixed to the default value of 300 Hz to 2700 Hz.

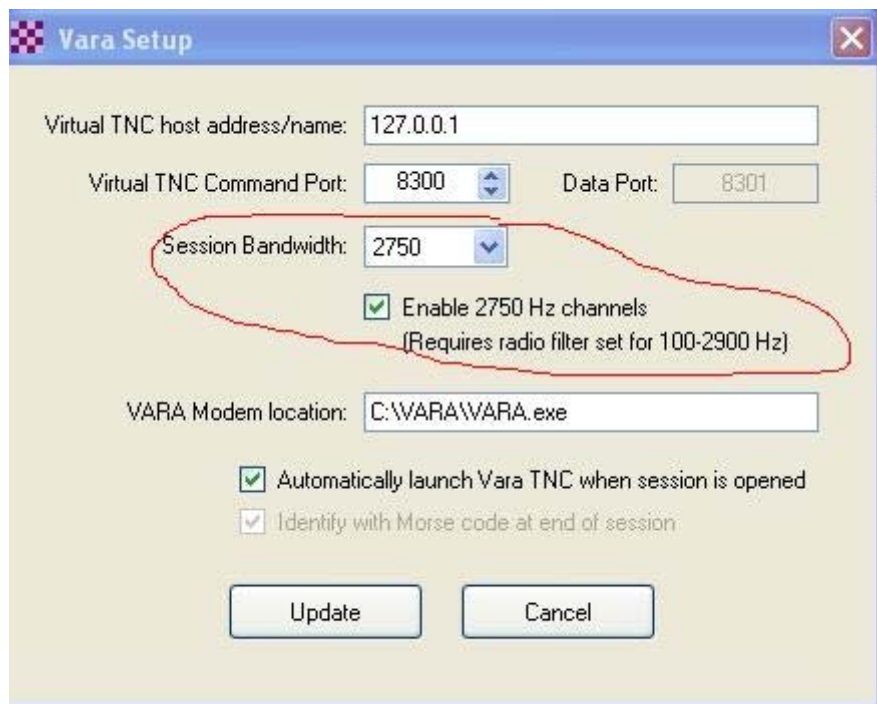
↑ NO COMPATIBLE

In others rigs, like the **TS-590S**, will be necessary change from SSB-D to SSB and maybe reroute the USB source to ACC using the menu item #63, (in case you need to use the ACC connector). **In any case, this operation is complex and requires read the rig manuals, so it's not practical for the average user.**

VARA HF 2750 is compatible with VARA HF 2300 stations. In such case, the communication will be adjusted automatically to VARA HF 2300 mode.

Mode compatibility		
Client	Gateway	Link
500	500	500
2300	500	-----
2750	500	-----
500	2300	500
2300	2300	2300
2750	2300	2300
500	2750	500
2300	2750	2300
2750	2750	2750

In **Winlink Express**, a new option allows to use the 2750 mode, in case you have a compatible rig.



**VARA Chat v1.2.1** and **VARA Terminal v1.1.3** have been updated to house this new mode:

