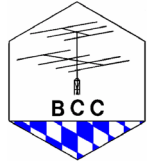


Contest Transceiver: **ORION**

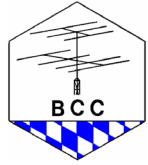
Ein heißer Apparat für die Wintermonate !





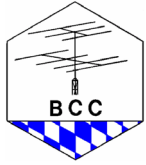
General Specs (I):

- **Software-Defined Radio (SDR)**
- 2x 32-bit floating-point ADI SHARC DSP processors
- Full Dual Receive capability (*simultaneously*)
- **Vy high RX IP & Dynamic Range, Vy Low Phase-Noise**
- **Up to 7 “Selectable” Roofing Filters**
- **590 RX IF - DSP Bandwidth Filters (*Shape Factor: 1.05:1*)**
- Programmable AGC Response Time
- Diversity Reception using both Receivers
- **Continuous Real-Time Spectrum Display Band Monitor**
- **Instant Two Radio Mode (*connect 2x PA's*)**
- 100-watt PA 100% Continuous Duty (*w. optional fan*)



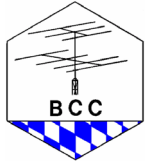
General Specs (II):

- Audio Equalization for both TX and RX
- “Panoramic Stereo Receive” feature
- Adjustable Rise and Decay time for CW Waveform
- Nine (9) Adaptive DSP Noise Reduction Filters
- Dual Noise Blankers
- **Voice Keyer and CW Memory Keyer built-in**
- 60-Meter Ready (*5 MHz Band: Firmware Update*)
- “Panic” on-the-fly Reset Button
- Flash-ROM Update Capability (*via Internet*)
- **30-Day Money Back Guarantee if not fully satisfied!**
 - **Only in U.S.A.**

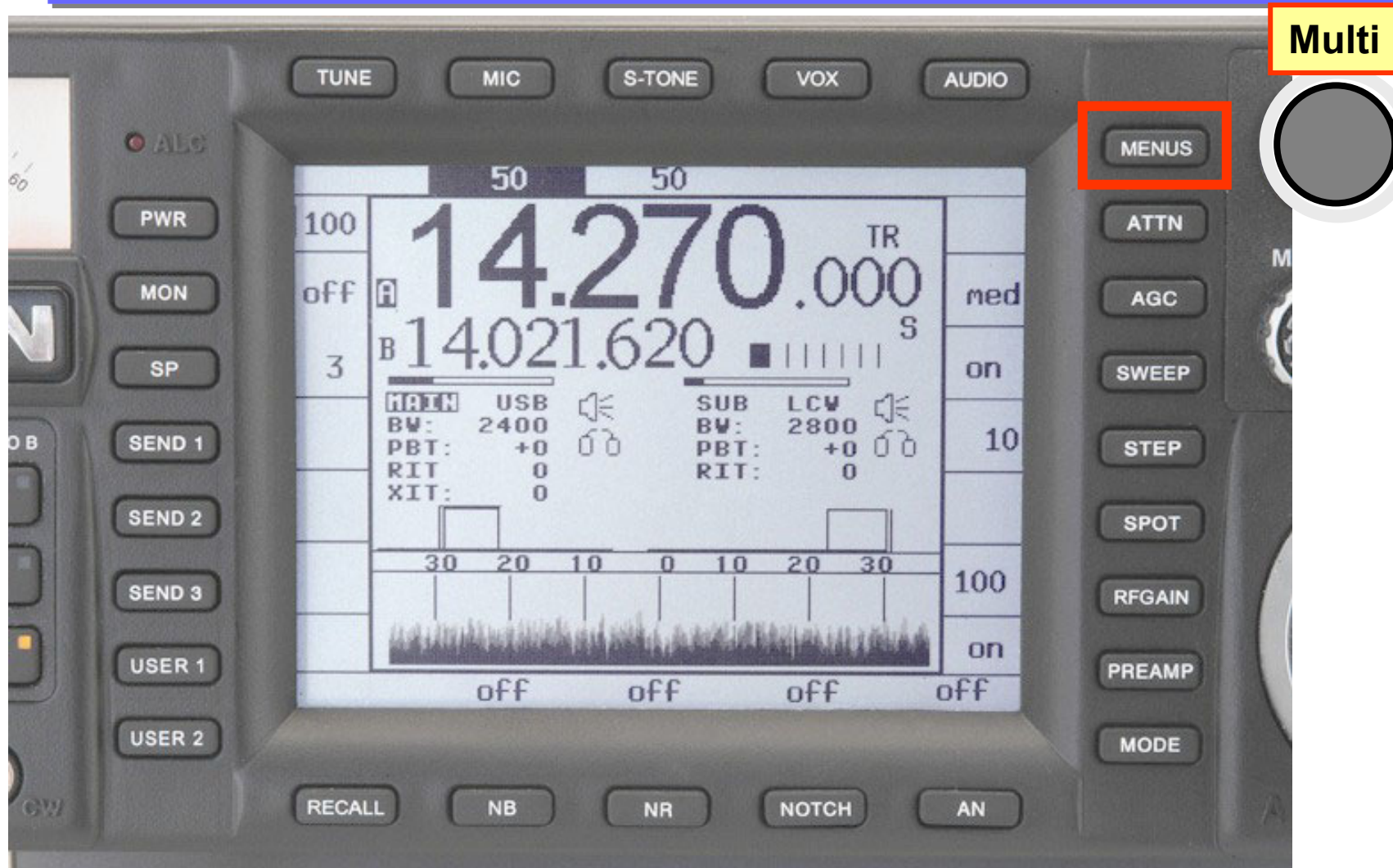


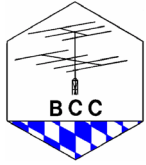
1000 Features: Easy to Use ?



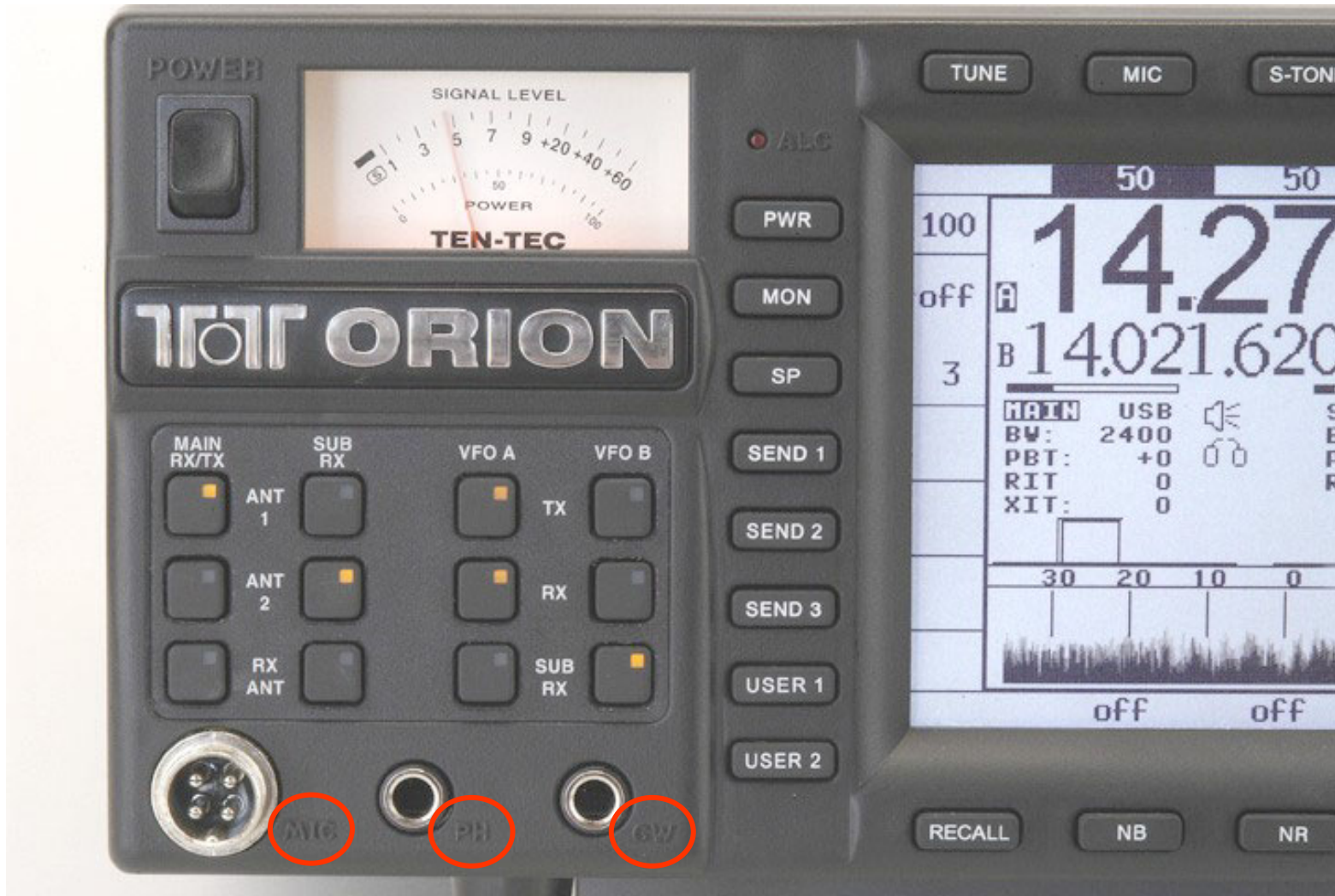


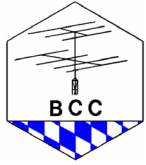
1000 Features: Easy to Use !



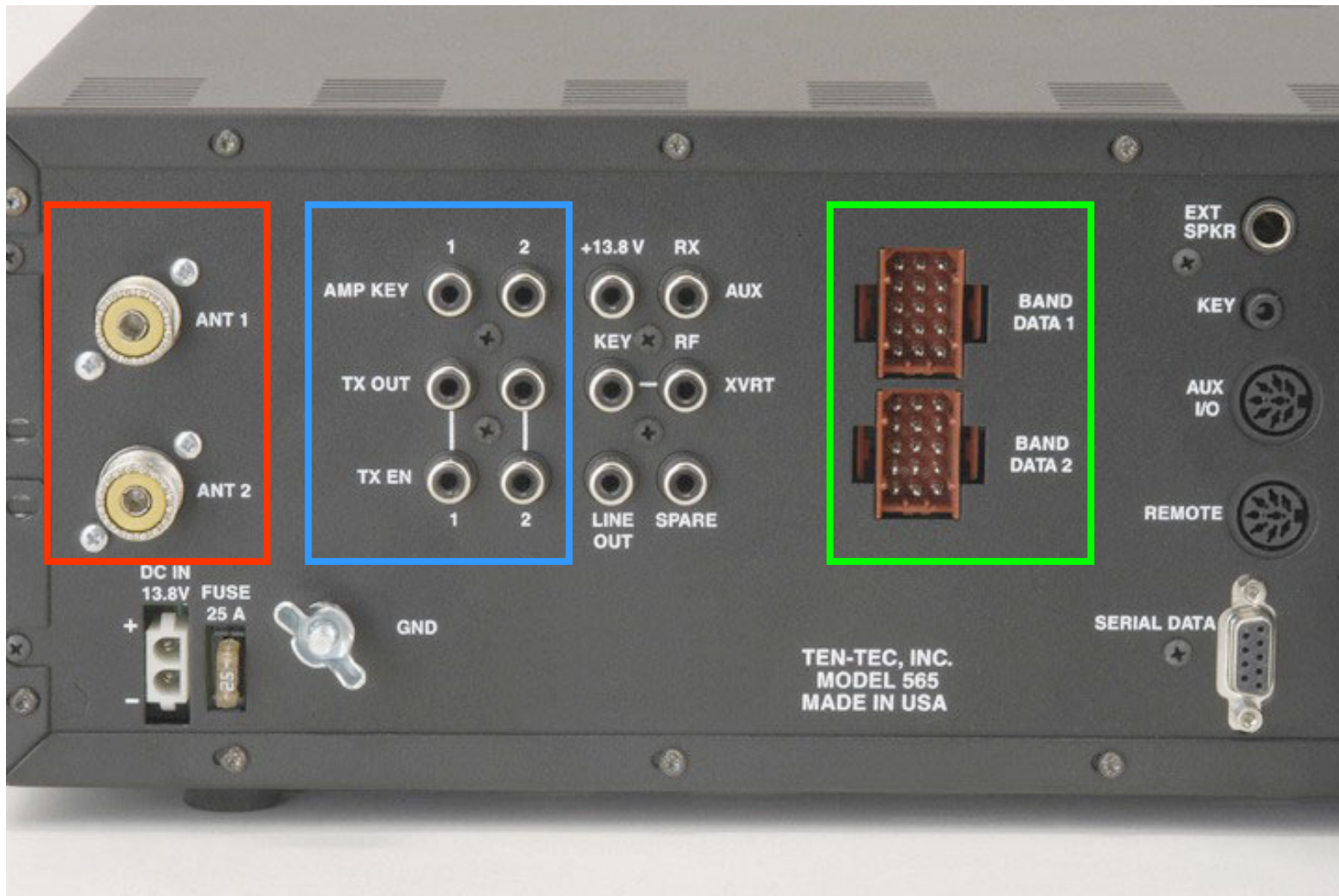


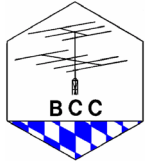
1000 Features: Easy to Use !





Instant Two Radio Mode

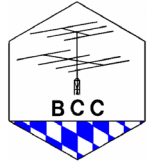




Top Ten ORION-to-FT-1000 Band Data Converter



Now available from Top Ten Devices is the **“BD-O” for use with the Ten-Tec Orion transceiver.** As with other TTD decoders, this unit comes standard with sink driver outputs (switches to ground), and can be fitted with a source driver module (switches 12 Vdc to the outputs). Better yet, an existing Top Ten Yaesu decoder can be converted to a BD-O by installation of an additional circuit board. You can do this at home, or Top Ten can install it for you. **This is an excellent option for those converting from a Yaesu transceiver to the Orion.**



Roofing Filters

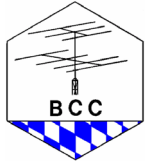
- ORION has 4 (standard) + 3 (optional)

Standard

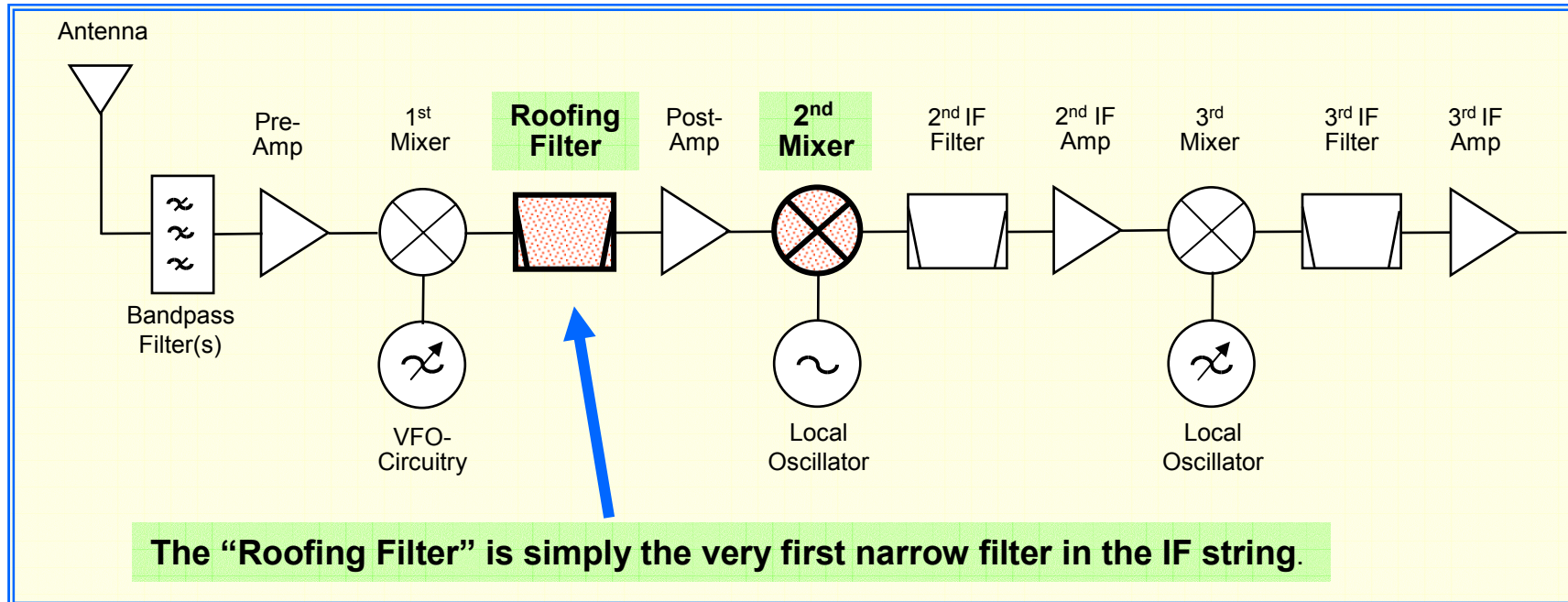
- 20.0 kHz
- 6.0 kHz
- 2.4 kHz
- 1.0 kHz

Optional

- 1.8 kHz
- 500 Hz
- 250 Hz

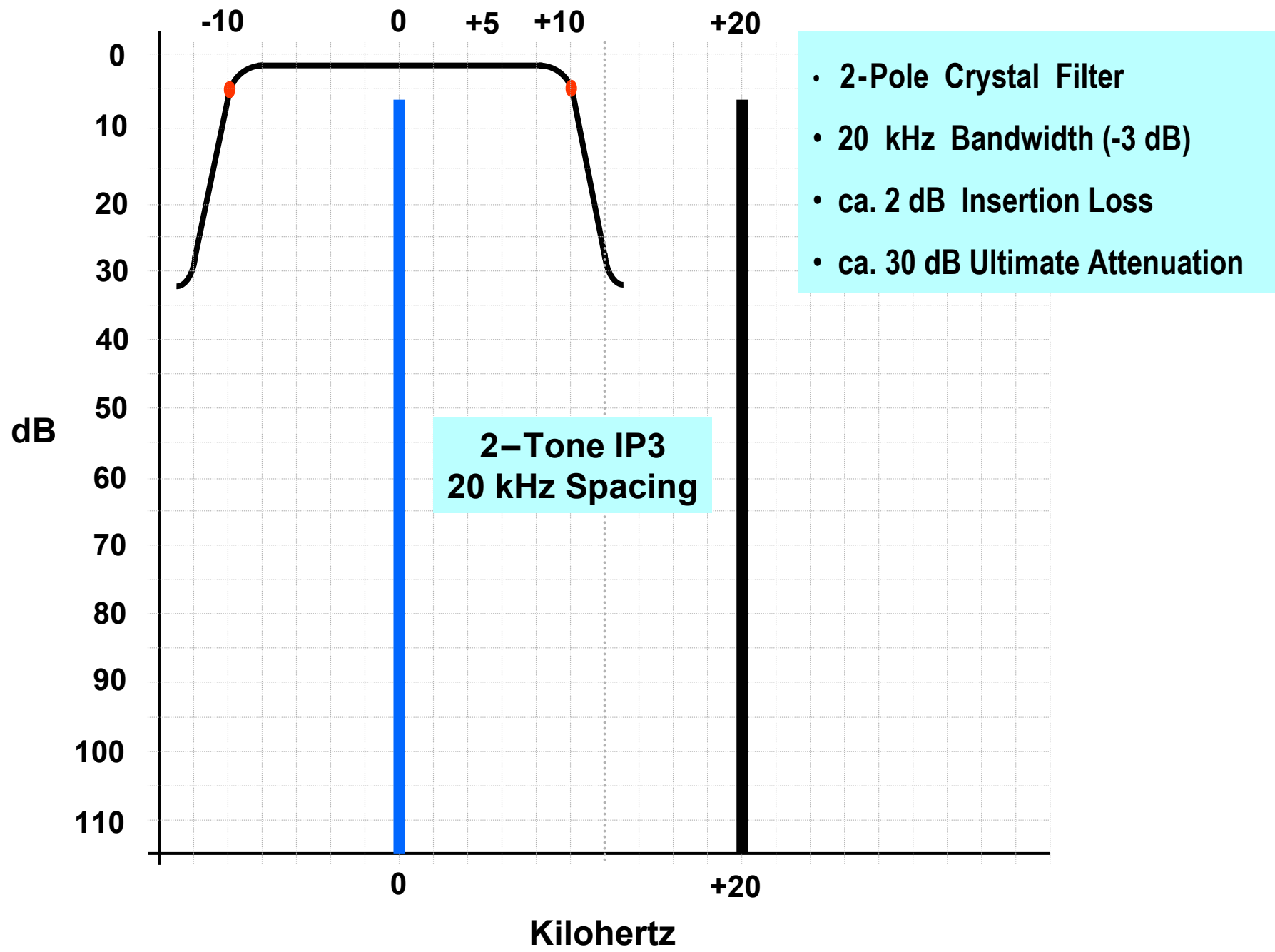


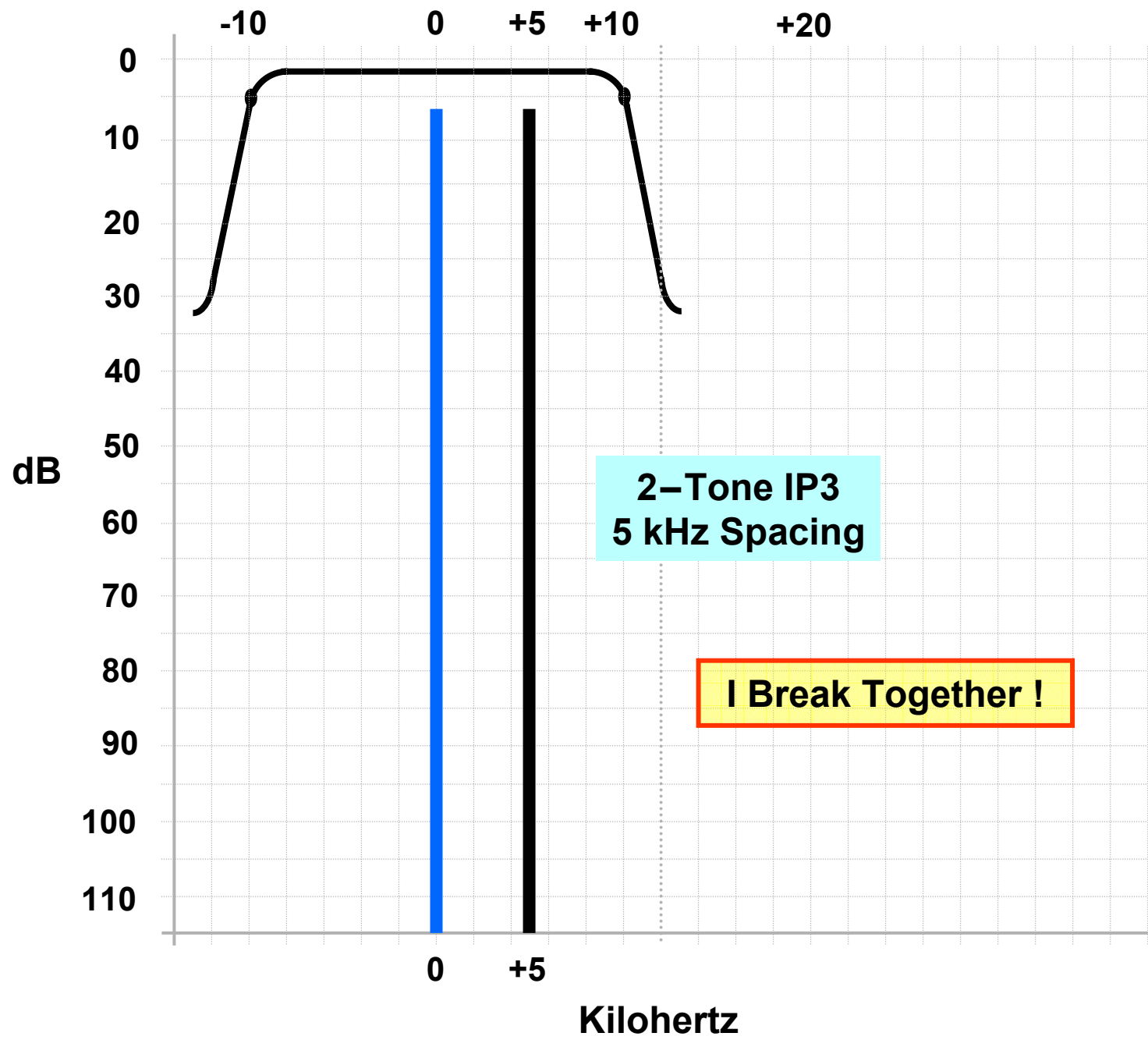
What is a Roofing Filter ?

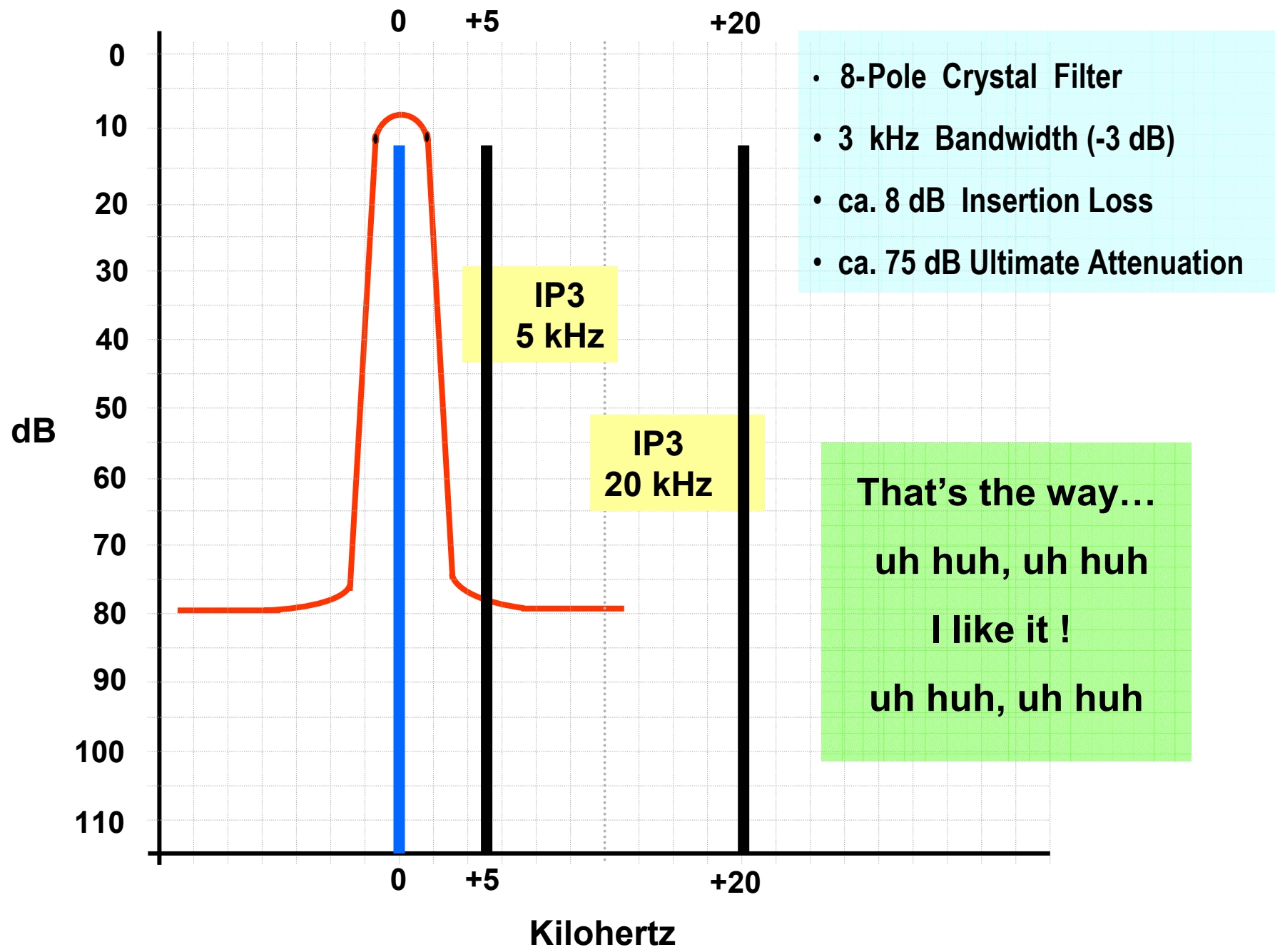


Ganz einfach gesagt:

- Das Roofing Filter soll der **Schutzengel** sein für den 2. Mischer und alles was danach kommt
- (Der 2. Mischer ist der Übeltäter, der für den “Wellensalat” zuständig ist!)







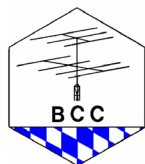
- 8-Pole Crystal Filter
- 3 kHz Bandwidth (-3 dB)
- ca. 8 dB Insertion Loss
- ca. 75 dB Ultimate Attenuation

IP3
5 kHz

IP3
20 kHz

That's the way...
uh huh, uh huh
I like it!
uh huh, uh huh

Kilohertz



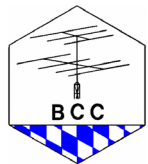
Transceiver Comparison Table

Source: ARRL Labs	MDS** (dBm) Sensitivity	2-tone DR3	2-tone DR3	BDR 'Desense'	BDR 'Desense'	IP3	IP3
		20 kHz	5 kHz	20 kHz	5 kHz	20 kHz dBm	5 kHz dBm
Ten-Tec ORION	-128 / -136	95 dB	92 dB	129	130	+ 23	+22
Elecraft K2	-130 / -136	97 dB	91 dB	134	135	+21	+21
Ten-Tec Omni VI+	-133	97 dB	86 dB	123	119	+12	+8 *
FT1000MP Mk V	-128 / -135	97 dB	83 dB	142	119	+15	-5.2
B'holz TS-2000	?	?	69 dB	?	?	?	-15
Icom IC756 PRO II	-131 / -141	97 dB	76 dB	118	100	+20	-18.8
Icom IC-775 DSP	-138 / -143	105	Not Tested	137	Not Tested	+20	Not Tested

** PreAmp On / Off

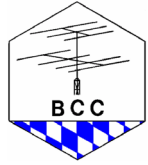
Weak Signal Reception
In the presence of
Strong Signals

* Not tested by ARRL



CON's (Negatives)

- Currently, **NO PTT** on **CW** mode
- Some not happy with the PLL “step”.
 - 1 Hz is too slow for scanning band
 - 10 Hz seems to tune in steps
- Voice Memory Keyer too **SLOW !**
- Headphone Jack: Russian Roulette
 - “**Jumpin’ Jack Flash**”
- No Carrying Handle



Links to more Information

- www.appellofunk.de
- <http://www.tentec.com/TT565.htm>
- <http://lists.contesting.com/archives/html/TenTec/>
- <http://www.doug-smith.net/orion.htm>

N4PY Radio Control Software

<http://www.ralabs.com/n4py/>

14.240 Orion V1.00

File View Help

Radio Sweep Memory Settings Time Mute Call Calibrate Tx Loop Speech Exit

Tx Ant1 Polling FWD CW 14.011.960 TxL Pwr 6
M Ant1 HNB Vox 600 10 Hz VFOA
S Ant1 MNotch Spot USB 14.239.950 LOC 10:27:28
SmtVFO BinRx ManMD AttnB 160 160 60
Attn 80 80 49
Attn 40 60 41

Main Sub N4PY 14.1 14.2 14.3 14.4
AN NVV NR NB KS SQ RF
2400
6.00 4.00 3.00
2.80 2.60 2.40
2.20 1.80 600
400 200 100
Store Scan Recall
AM VFO A VFO B PBT
LSB FAST A FAST B RIT
USB FILTER A FILTER B XIT
CW LO CUT HI CUT A / B
FM SAM A = B
SPLIT 1 Hz 10 Hz 250 Hz
RTTY Sto SP DUAL Rcl SP LOCK 1 kHz 5 kHz 10 kHz

TX VA VB
30 40 31
20 20 25
17 17 22
15 15 19
12 12 16
10 10 13
10FM 6 11
Mon 2 MWV
AmTr GEN ID
T-X Xmit Disable

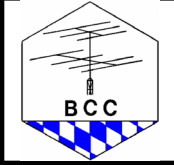
Auto Trn Bypass

14.100 14.140 14.180 14.220 14.260 14.300 14.340 14.380
80 70 60 50 40 30 20 10 0
Format Log Normal Track Receiver
Style Solid Range 300 kHz Continuous
High Resolution

Transmitter
Preferences
Preferences2
Preferences3
Preferences4
Frequency Scan
Colors
Call Sign, TopTen
6 & 2 TransV
User 1 & 2 TransV
User 3 & 4 TransV
User 5 TransV
RTTY, KB Settings
Steps
Transmitter
CW Settings
SSB Settings
Vox, Line Controls
Remote Pod Fkeys
Remote Pod 4-9
Remote Pod 0-3
Interface
Interface2
Fast AGC
Medium AGC
Slow AGC
Prog AGC 1
Prog AGC 2

Transmitter Control
Tuner Power 27
Amp Key1 Delay
Amp Key2 Delay
 Enable Intrnl Tuner
 Enable Extrl Tuner

Start MS-DOS Prompt 14.240 Orion V1.00 10:27 PM



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We're all about hams

We're here to help hams

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