

Oktober 2006, Elmar Rohé

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Specifications

Base Kit: (Mainframe Controls, Collection of Standard Tuners, 2000 Channel Memory, Scanner, HF & IF Band Scope, Table Editor)

Option HF Analyses: (HF Waterfall, NF Waterfall, Master Slave Operation, Relays, Scheduler)

Option NF (Audio Scope, Fast Fourier Transformation Analyses, RMS, Signal Generator, Recorder, Scheduler)

Option Internet: (LAN Support, WAN Support, Remote Recorder, Voice over IP)

System Requirements: WindowsXP, W2K or Windows98/SE.

FFT and Windows98/SE or W2K require DirectX8 (*free Download from Microsoft*).

Standard PC ≥500Mhz, ≥128 MB Memory, RS232 direct or through USB, Sound Card, Monitor ≥1024x768, ≥16 Bit Color, ≥100 MB free disc space

Base Kit (Mainframe)	Option Waterfall Analyses	Option NF Analyses	Option Internet
Mainframe Tuner Memory, Radio Table, Scan Operation HF-Analyses Map Parameter Table Band Scope, IF Scope	HF Waterfall NF Waterfall, Sonogram Relays Scheduler	Audio Scope FFT Analyses rms Measurement Recording Signal Generator	Option Internet Voice over IP Remote Recording

[Table: Supported Receiver Colour Code "Power" LED](#)

[Table: Display Mouse Functions](#) [Table: Frequency Keyboard- and Mouse Functions](#)

[Picture: Frequency Keyboard- and Mouse Functions](#)

Base Kit

Mainframe

Modules: TUNER FUNCTIONS, PANORAMA DISPLAY and TUNING:

Receiver Controls depending on selected RX

- **Functions Button** e.g. **AGC**, **AFC**, **DSP** etc.
- Slider e.g. **Volume**, **Squelch**, **Shift** etc.
- Traffic Control LED to/from Receiver and Network, **AFC** Correction
- Functions e.g. **M**emory, **P**arameter and **S**lave
- Master/Slave Operation. With Button **S** activated the Tuner will be set in „Slave“ Mode, i.e. the actual Program can receive and interpret Data like Frequency, Mode and Filter from another CRX Programming acting as „Master“
- **Panorama Display** 360 * 256 Pixel
- Option Buttons e.g. **HF**, **IF**, **B**and **S**cope and **map** Module {Standard}
- Option Buttons e.g. HF Module: Module **w**, **W**, **SA**, **T**/Scheduler {Waterfall OPTION}
- Option Buttons e.g. NF Module: **AF**, **FFT**, **rms**, **SG**, **REC** {NF OPTION}
- Info Scope: Error Diagnosis Remote Operations **TCIP**, **VoIP**, **rec** {Internet OPTION}
- **Frequency Selection** via Dialer/Tuning Knob, Keyboard or Memory Module
- Modulation, Bandwidth and Frequency Step
- Mouse Keyboard
- Tuning Knob or Info Centre
- Window Calculation and Auto Adjusting of the Module Tower

- **I**nfo Board [Eventlogger]; blinking light on new event
- Personal individual Layout Design
- Fonts are ARIAL by default. Any other installed Font may be selected via **P**arameter Set-up

Tuner

Supports Scanner, Short-wave, Blackbox, PC- and Wideband Receiver for Amateur or Professional purposes. *Please Refer to [Table RX](#).*

Highspeed Scroll**m**ouse („one-Hand-Mouse-Operation“). ScrollWheel placed on the Tuning Knob will set next lower/higher Frequency



Transparent Mouse-Icons e.g. Frequency, Frequency Step*, Modulation and Filter



Slider Icons







S-Meter Selection e.g. Analogue or Digital:

calibrated Scale with free defined Colours



Huge Digital Display calibrated in S-Units or μ **V** small Displays (0..255) for min., actual and max. Values. Reset **C**



Colour Code "Power" LED


	RX off
	RX on
	RX standby; Port offline
	Remote RX handshaking
	Remote RX online
	Remote RX Error; Press Button „I“ for Details

ICOMs PCRxxxx Receiver may be operated across WAN/LAN/WLAN with TCP/IP Protocol.

Support your own Band Plan and edit the Table AUTOMODE.TXT with an ordinary CSV Editor. On manual Frequency Input and Corresponding Frequency with the Table, Mode and Filter will be automatically set.

Frequency Keyboard- and Mouse Functions:

SPACE	erases Frequency
<BS>	erases Character before Cursor
<Delete>	erases Character after Cursor
Dot	adds „000“ three Zeros. [k] Key adds three Zeros; [m] Key adds six Zeros
<Esc>	restores last Frequency
123<Enter>	terminates Inputs and sets Frequency in RX
Double Click	adjusts Frequency to full KHz or MHz (=>30 MHz)
+ (Plus)	Adds Step Frequency to Frequency
- (Minus)	Subtracts Step Frequency from Frequency
	Per Mouse: Adds last Frequency. Value must be previously entered per Mouse
	Per Mouse: Subtracts last Frequency. Value must be previously entered per Mouse

	Per Mouse: Erases Frequency
	Per Mouse: Numerical Frequency Input
	Per Mouse: Comma
	Per Mouse: Terminates Entries. Multiplication * 1000
	Per Mouse: Terminates Entries. Multiplication * 1000000

TUNING: Pushing one of the left placed Radio Buttons will call the corresponding Module. On Top the Display for Modulation, Filter and Frequency. Below the Selection Arrows for Modulations, Filter and in-between the switchable Automode. Just in the middle the Power Knob; at the right a Selection of Frequency Steps. Below the Tuning Knob and the Mouse Keyboard; this field can be turned into an Info window.



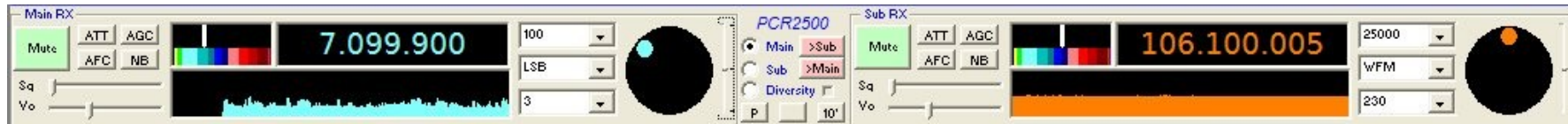
Duplex Receiver i.e. PCR2500 will show the active RX Information as „Main“ or „Sub“.

Fast Recall up to two additional Step Frequencies can be stored by clicking <ALT> right Mouse on the left or right arrow Button. With Mouse Over the stored value will be overtaken.

Dual Receiver

The ICOM PCR2500 can be tuned in an extra Window in order to support both Receiver [Main] and [Sub] as well as Diversity Mode.

The picture shows both Receiver active with Signal History Display below S-Meter and Frequency Display each.
*Colour determines Mainframe situation: Orange = currently not active in Mainframe; Cyan = currently **active** in Mainframe Display*



Memory

Display at a Glance: 20...360 Channels = 1 up to 18 Banks

Selection of Starting Bank # [1..99]

Selection Number of Banks [1...18] *Limitation caused by Monitor Space*

Channels may be selected via [Channel Button] or by Mouse Wheel in Scroll Field

+/- Channel [Channel]

Frequency +/- Frequency Step [Band]

Frequency +/- Frequency Step, pass of Pass Frequencies [Band Pass]

Disable Channel/Band

Direct Store of actual Frequency



Visualisation of actual Channel Mode via Mouse Icon

Complex Scanning System via Timing Parameter

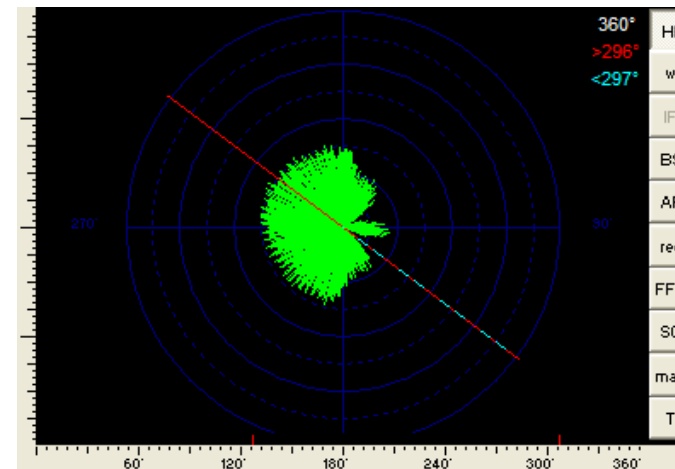
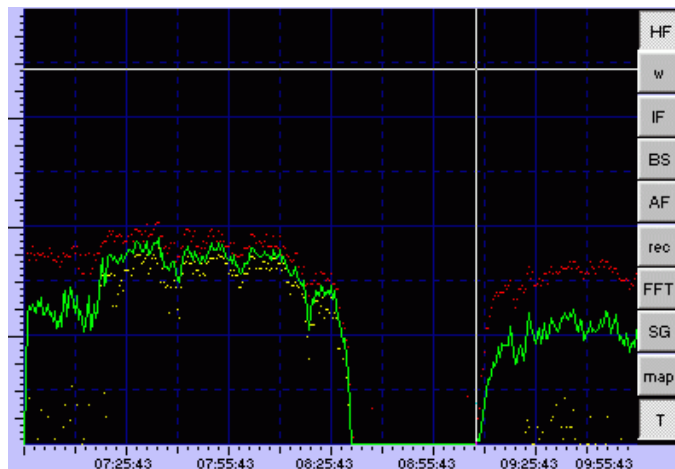
Selection of Predefined Timing Parameter for typical applications

Scan Progress Bars for each Band

Direct Input of Pass Frequencies; Callable Radio Table Editor; extra Help Window

A left Mouse Click on BANK Information Field starts Signal Monitoring on all Channels (*up to 20*)

HF-Analyses



Station Clock: switchable, MESZ/UTC selectable

360 Step Signal Graph, min/max, Time or Degree, Busy (Squelch)

Digital Display for Average and Peak Values min/max (resetable)

Sweep Time 1s to 24h, Single or Continuous Loop, manual Stop, and Storage Mode

Linear, Circular and „reverse“ Circle Graph (*e.g.. Rotor Antenna Operation*)

manually or automatically Signal Storage on disc files

Threshold Adjustment for circle and signal calculations

Read and Analyses of Circle Diagrams (forward/backward Signals: max, sub, add and Burst); Mouse Over Spectrum: Setting of Frequency, Modulation and Filter with Right Mouse Click

Signal Graph Style: Dot and/or Dotted Lines for Average and Peak Values (min/max)

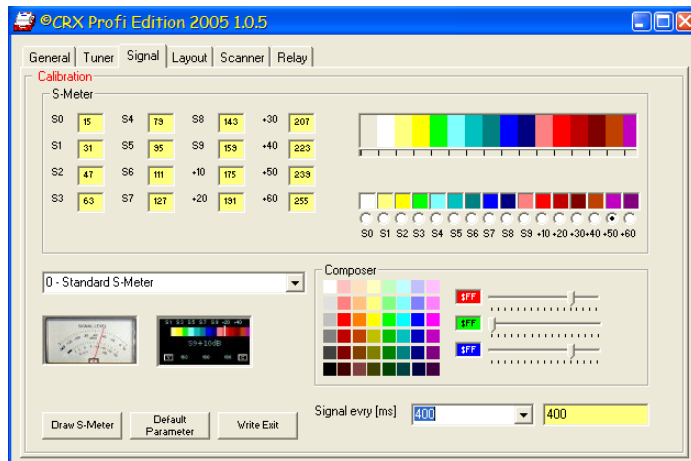
<shift>[HF] opens extra Window.

map / MAP

Display your own Map or picture.

Display in Panorama Display [map] or extra Window [<shift>map]

Parameter



Parameterkarte SIGNAL

CRX-Parameter is a standalone Program and can be also called via 

Index Card SIGNAL: S-Meter Selection (analogue or digital), Calibration

Index Card TUNER

TCP/IP URL Address for LAN or Internet

Port Address (*must be unlocked in Firewall*); VoIP Port will be set to Port Address+1

User:Password for your own Security

Index Card LAYOUT

Option: Select your favourite Background Picture

Option: Sliders in Background Colour

Eventlogger Background Colour. Text Colour will be set automatically to its Complementary

Index Card RELAY

Comm Port and Port Sharing

Relay Board Address (Boards are cascable, 1...255)

for each Relays: Relays Type (normal, bipolar, reset), Label, Help Text

Dependency Matrix for Relays Combinations (*e.g. „AMP" is a normal „+12V Power Relays" and auto switches bipolar HF-Relays „Antenna 2"*)

Bipolar Pulse Time (Response Time of corresponding Bipolar Relays)

Display Mouse Functions

*Duplex RX = i.e. ICOM PCR2500, set Data in Sub RX; if Waterfall Window and Scan in Sub RX, Data will be set in Main RX;

Slave RX = second CRX Tuner Program in Slave Mode. Button **I will switch Info window on/off

HF=HF-Scope; w=Waterfall Scope; W=Waterfall Window; IF=IF/ZF Band Scope; BS=Band Scope; FFT=Fast Fourier Scope

Module	Shift	Ctrl	Alt	left	right	Function
HF						Signal Measurement
HF				X		Sum Calculation over the selected Mouse Field
w,W,IF,BS						HF and IF Spectrum Analyses
w,W,IF,BS					X	Set measured Frequency
w,W,IF,BS			X		X	Set measured Frequency, Mode & Filter to Slave** RX
w,W,IF,BS		X			X	Set measured Frequency to Duplex* RX.
w,W,IF,BS	X	X			X	Set measured Frequency, Mode & Filter to Duplex* RX
W		X		X		Horizontal Scale: Determines Notch Areas. Clears with [Clear Notch] <i>These Notch Areas are for graphical purposes only. During SCAN Notch Table (BANK 0) is used.</i>
W	X	X		X		Positioning and Drawing of an Info Box on the Display, containing Frequency, Time and Signal.

Module	Shift	Ctrl	Alt	left	right	Function
W		X		X		[roi]: Start Position of the „Region of Interest“
W				X		[roi]: Dragging. After Mouse Button release the Field will be fixed
W		X				Switch between Large and Small Cross Hair Cursor [roi]: RoI Field Positioning during Mouse Movement
roi						Field Disposition (R egion o f I nterest) in the Waterfall Window with horizontal and vertical Sliders (see also Mouse Functions [W]). Average and Limit Calculations for Time and Frequency. ZOOM Function with Signal Boundary Calculation. Choice of Colour Expand Painting. Scale offset. Requires a .CSV file (<i>will be produced during Scan</i>)
BS						[m] & [ScrollRadio] with Mouse Wheel: selects next Radio from Table
FFT						Audio Spectrum Measurement

Band Scope, IF Scope

Vertical Scale Lines: metric or filterable Radio Stations (*Station Name, Modulation and free text*)

Spectrum Graph with 360 channel Resolution

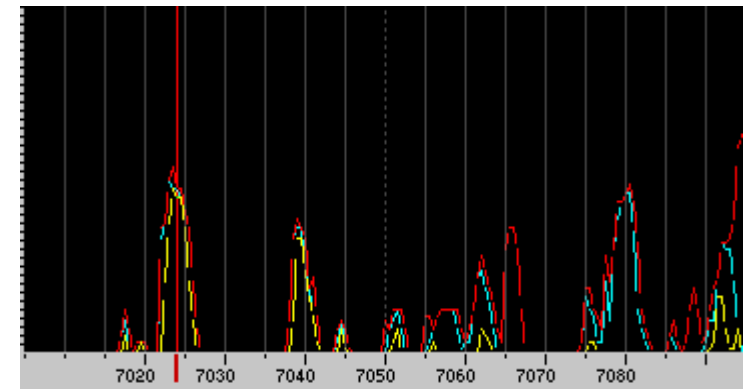
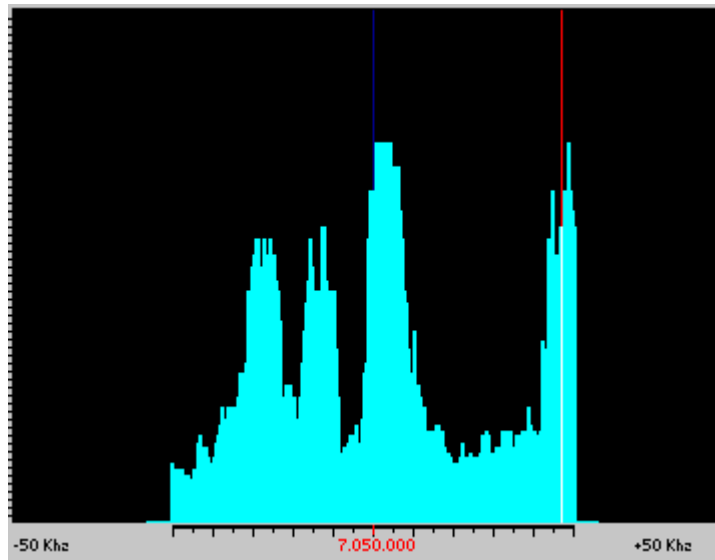
Spectrum Graph with up to 1024 channels and up to 1024 lines per file in extra Waterfall Window

Mouse Wheel: Fast Radio Selection <Shift>

Synchronous Red Frequency Marker

IF Scope is supported by ICOM PCRxxxx Tuner. Band Width $\pm 5 \dots 200(5000^*)$ KHz, Channel Width 0,05...50(100*) KHz. (*PCR1500 or higher)

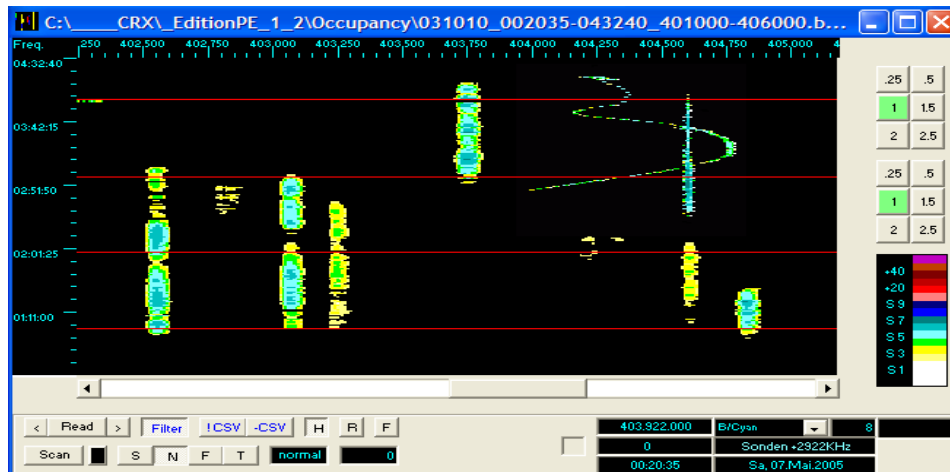
Band Scope: Spectrum Graph switchable between Bar and Line. IF Scope: Spectrum Graph switchable between Bar and Dots.



IF Scope +/-50KHz with 500 Hz Resolution storage_____BandScope 180 Channels 500 Hz each

Option Waterfall Analyses

HF Waterfall



HF Wasserfall im skalierbaren Fenster

Determination of the optimal Scan Speed. Scan/Recording in Panorama Display [w]

Scan/Recording and Playback in a scalable Window [W]. Zoom ([0.25] to [2.5] for X and Y)

Unlimited Long-term Recordings with up to 1024 lines and 24 hour per file. Saved as .CSV and .BMP

Optional **H** Hour Mask and **R**adio bar Mask along with **F**iltering

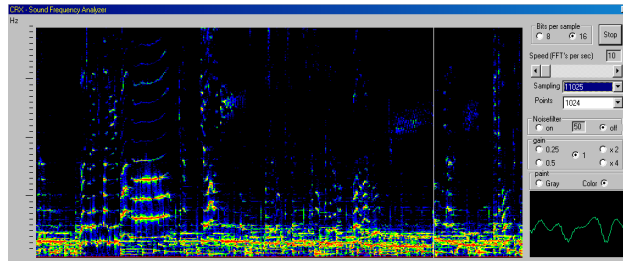
Positioning and Frequency Info box Painting: Frequency, Recording Time, S-Value

Calibrated Signal Painting; Scale offset (0...-50KHz) e.g. Fast Scan Frequency Correction

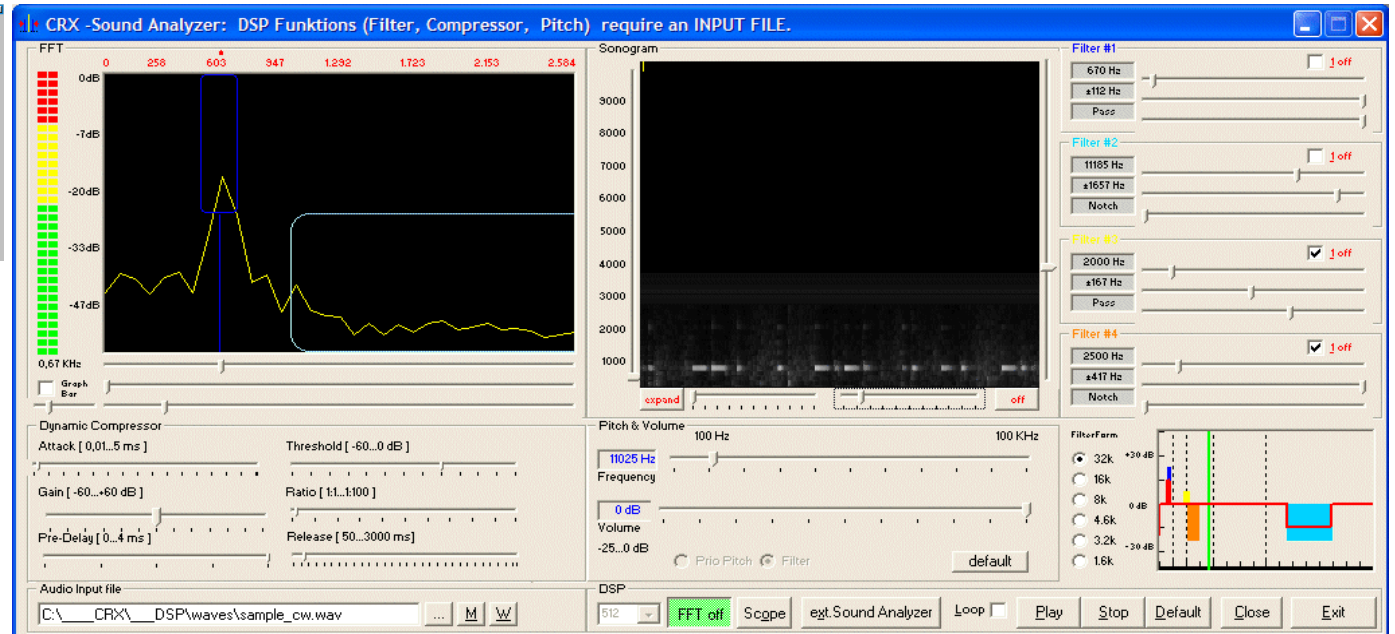
Frequency Mask out. Signal Spread with all Signal Colours

RoI (= **R**egion **o**f **I**nterest **A**nalyses): Time-, Frequency-, Signal; Delta Measurement; Zoom

NF Waterfall



extra Sonogram – WindowsXP



DSP Prozessor with graphical Filters, FFT and Sonogram

Audio File Analyses

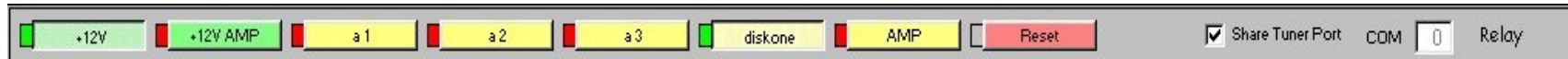
Four Filter DSP Processor with Dynamic Compressor and Pitch

FFT Analyses and VU Meter with additional Scope

Sonogram

Comfortable Filter Set-up per Mouse

RELAY Board



Example: Powerrelays, 5 Bipolarrelays für Antennen and Verstärker, 1 Bipolar Reset-Relays

Supporting Relays Board „8 Relays serial by Conrad 967720“.

Relays can be controlled via Tuner Port (sharing) or via separate RS232 Port

Supporting downstreamed Bipolar Relays and Relays combinations. All Bipolar Relays can be cleared via Button [Reset]

Radio Button Colour Code:

[Power]	Monostable Relays	e.g.. Power Supply Tuner
[Antenna]	Bistable Relays	downstreamed bipolar HF Antenna Relays
[Reset]	Reset Bistable Relays	Reset Coils of all Bistable Relays

Scheduler

The screenshot shows the Scheduler software interface. At the top, there is a status bar with fields for frequency (801.000), date and time (19.Apr.04 17:41:12), a counter (0), and a timer (-00:57:24). Below this is a toolbar with buttons for 'Schedule', 'Cancel', and a 'go' button. The main area contains a table with columns: active, Frequency, mode, filter, Date, on, Time, off, remarks, UTC, REC, HF, Water, P, chan, Step, and Freq. Two jobs are listed: one at 801.000 AM with a 15 K filter and a 1m duration, and another at 123.456.000 USB with a 2.8K filter and a 5m duration. To the right of the table is a calendar for April 2004, showing dates from 1 to 30. Below the calendar are buttons for 'Read Table', 'Clear Table', 'Write Table', 'Quit', and 'GO!'. At the bottom right, there is a 'Scheduler' logo and a 'UTC' button.

active	Frequency	mode	filter	Date	on	Time	off	remarks	UTC	REC	HF	Water	P	chan	Step	Freq
<input checked="" type="checkbox"/>	801.000	AM	15 K		17:41:12	1m		Test	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60	600	
<input checked="" type="checkbox"/>	123.456.000	USB	2.8K	22.04.04	18:00:00	5m			<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1000	1000	
<input type="checkbox"/>									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>									<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Modul Termin(ator) with Scheduler: Planner

Up to eight Jobs can be planned, monitored and controlled

Job Types: Frequency/Mode/Filter, Time, Duration, UTC

Time Controlled HF Measurement, Audio Recording, HF Waterfall Scanning

Comfortable take-over of actual Parameters (Frequency, Mode, Filter, Frequency Step) per double-click

Option NF Analyses

Audio Scope

Audio Signals via Panorama Display

Recording



Aufnahme

Manual or time controlled Recording including Operational Data e.g. Frequency Change, Squelch

Automatic Squelch Pausing

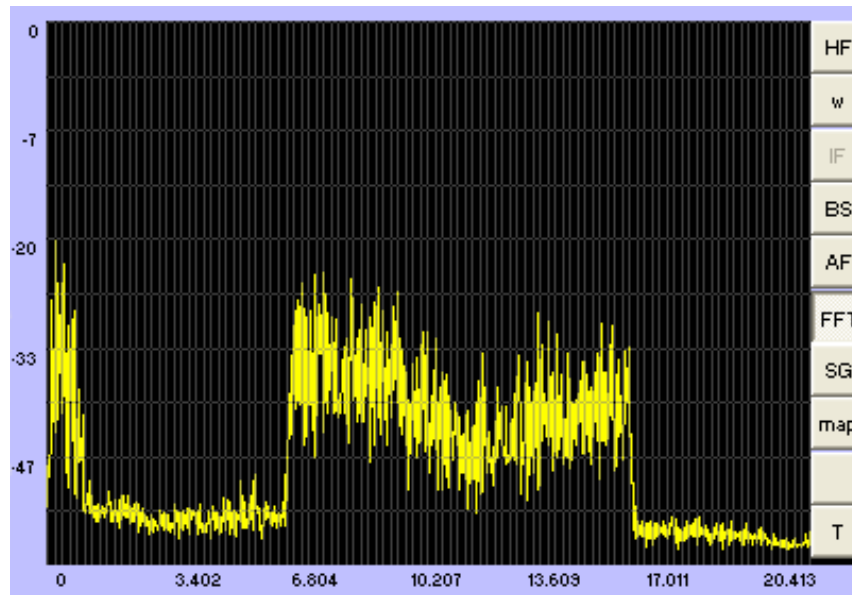
Playback

Playback Positioning by Time or Event

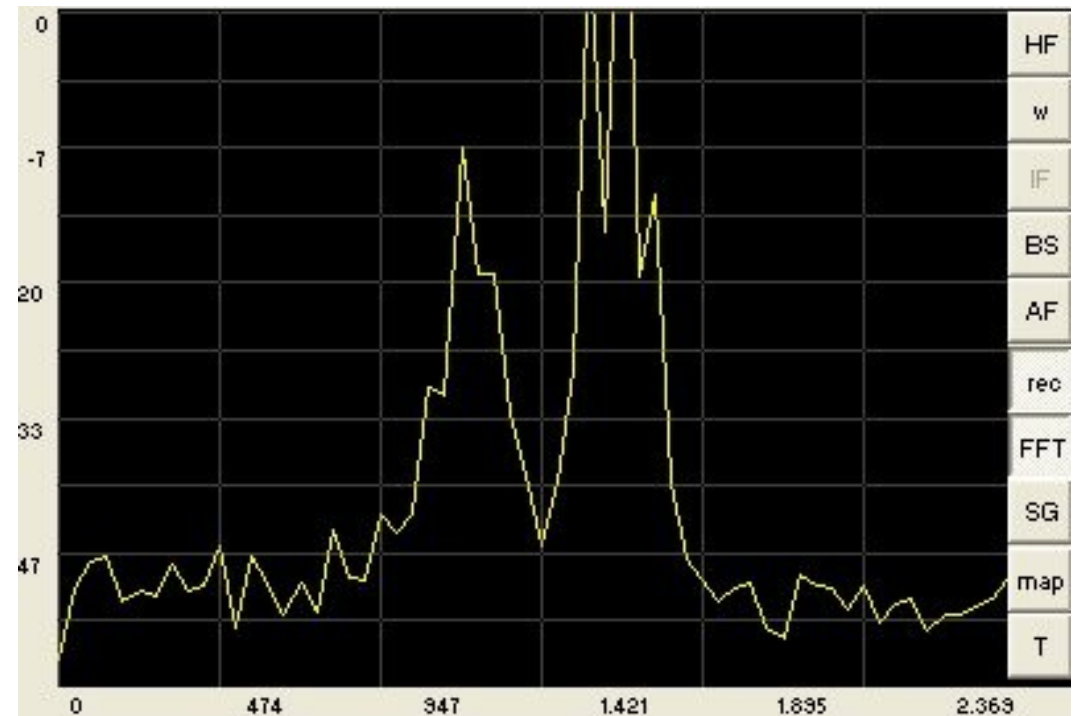
Callable Windows Record- and Playback Slider

VU - Meter

FFT Analyses



DRM Signal vom unterstützten TT RX320 Empfänger



RTTY Signal

Scalable FFT Graph in Bar, LED or Line Style

Selection and Mirror

Filter: none, Triangle, Hanning, Hamming, Welch, Gaussian, Parzen

Log Scale, Colour Scale, Peak Holding, Energy

FFT Size, Sample Rate, Gain

Analyses per Mouse

rms Measurement



RMS Messung

RMS Measurement with different Modes

Signal Generator

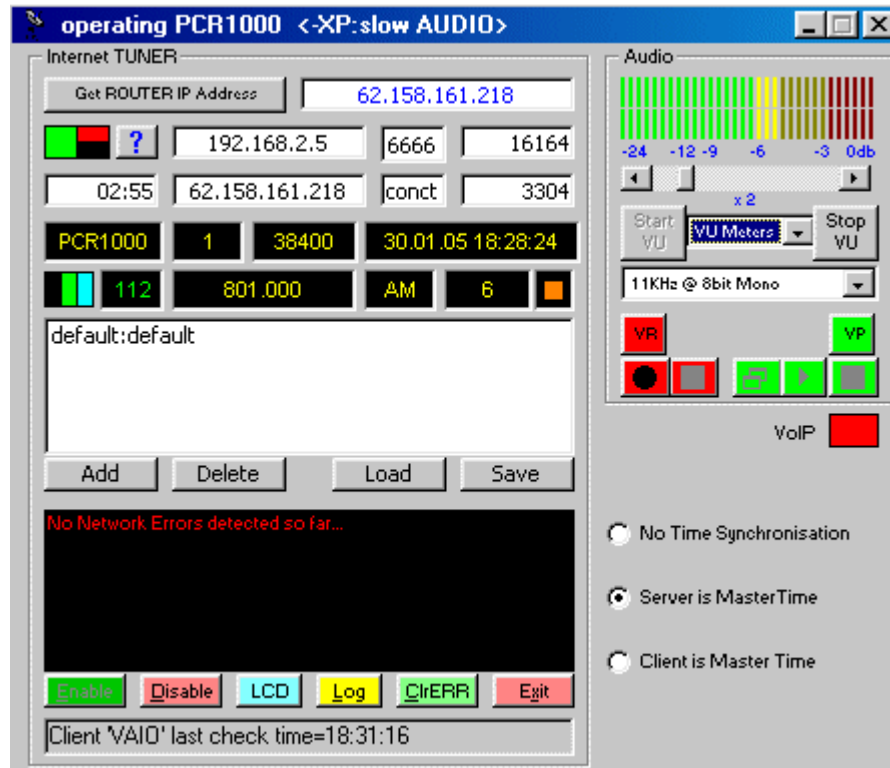


Signal Generator with Standard Signal forms and Definition of private forms

Selection of standard Signal Forms and Design of Complex Forms

Option Internet

CRX-Remote



Remote Server activ

WINRADIO 1xxxx and ICOM PCRxxx are supported via **TCP/IP** as single RX as part of the Internet or LAN.

Server Program for Remote Tuner with specific Protocol to/from the CRX-PE Commander

Transparent Client (*CRX-Commander*) and Server (*remote Tuner*) Operation

Display of Internet Parameter: TCP/IP Server, Client and Port Address

Display of Tuner Parameter: Tuner, Port Address, Baudrate

Display of Internet Transaction Data: On Time, send & received Bytes, Status

Display of Tuner Status: Power, Send, Receive

Display of Operational Data: Frequency, Modulation, Filter

Display of Signal (0-255) and Squelch at the Server and Client side

ErrorLog and ErrorReport at the Server and Client side

Client Administration (User:Password) at the Server and Client side

Audio Recording at the Server side *(additional VoIP on Client side possible)*

VU-Meter at the Server and Client side

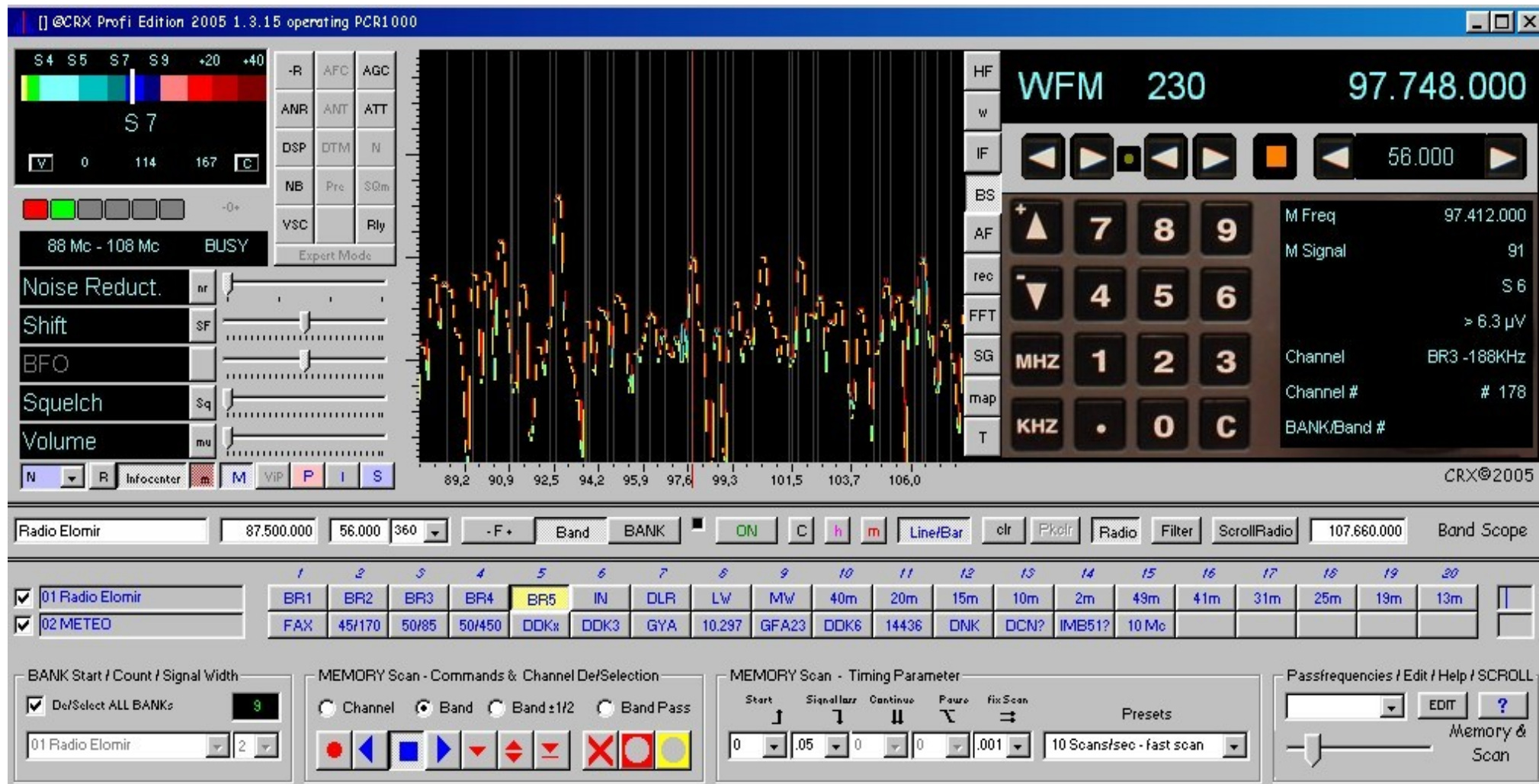
Voice over **IP** at the Client side (Listening)

Time synchronisation between Server and Master (off, Server is Master, Client is Master)

LCD Display Support (Printerport 2x40 Matrix by Pollin)

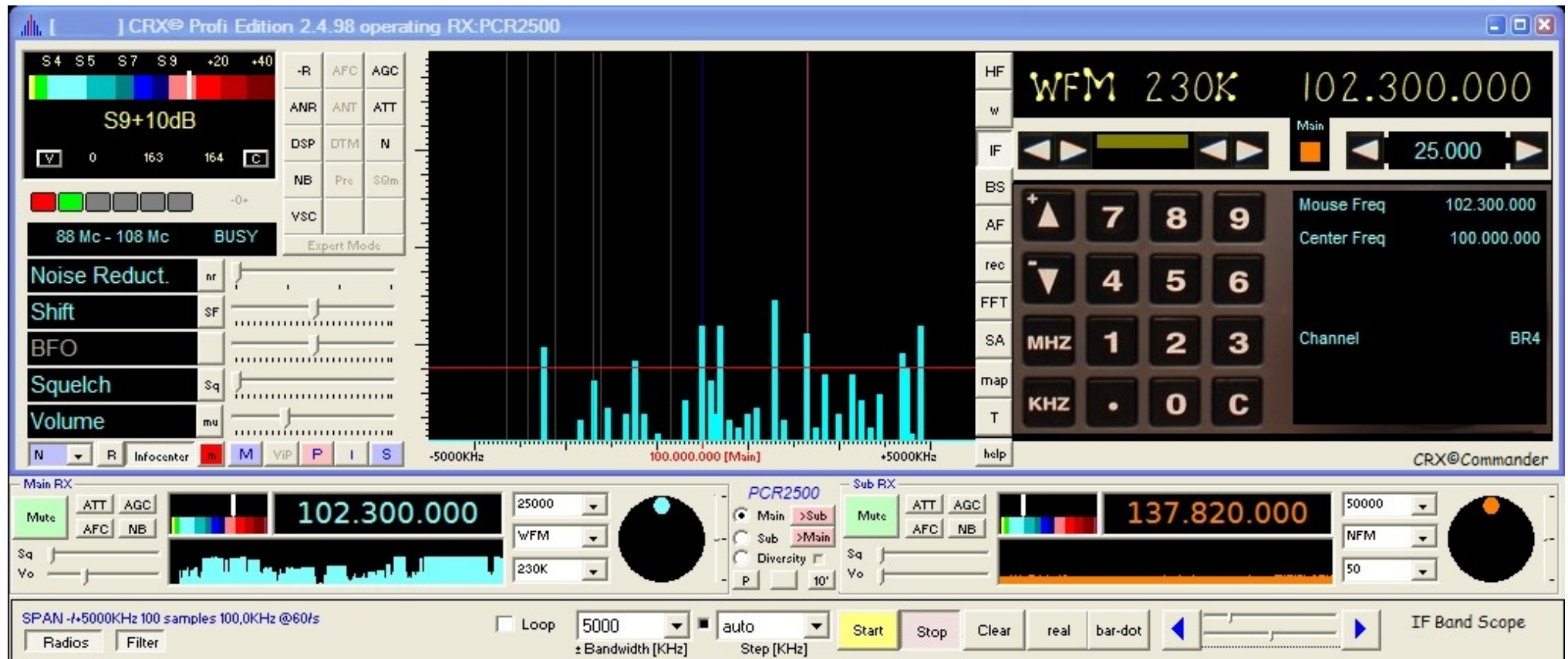
Help Window with Example Configurations PC, LAN & WAN

rec Remote Recording Overlay



BandScope Spectrum with Radio Station Overlay. **Memory** with two Banks. Digital S-Meter. **InfoCentre** showing Channel Data at Mouse Position

CRX-PE ©2006 Example IF Scope with ICOM Tuner PCR2500 (Note: Special Font in Frequency Field):



IF Band Scope (Example):

Spectrum Display ± 5 MHz, Middle Frequency 100 MHz (Display: blue Line). Radio Station Mask (Display: grey Lines, pressed Button „Radios“. The number of Stations can be limited by „Filter“ ; example used Station Name „BR“). Signal Threshold via upper Slider (Display: red horizontal Line). Branch to next Signal \geq Threshold via Arrow Buttons or via lower Slider using Wheel Mouse or Keys (Display: red vertical Line)

Table: CRX Tuner Support *(other Models on Request)*

Tuner	AR3000A	AR5000	AR8200 MK-II, MK-III AR8600 MK-II	EK895 EK896	FRG100	NRD535 NRD545 3	RX320	RX340	PCR2500 PCR1500 PCR1000 PCR100 R2500 R1500	ICOM_ CI-V tested: R20, R72, R75, R7100, R8500, R9000	WR1000	WR1500
AFC		Y	Y	Y					Y*	++++		
AGC		Y				Y	Y	Y	Y		Y	Y
ANR									Y			
ATT		Y	Y	Y		Y		Y	Y		Y	Y
ATTI		20/10dB *		-10dB**				20dB	20dB			
BandData			y						PCR1500/2500 ±500KHz PCR100x ±200KHz			
DSP									Y			
DTMF									y			

Tuner	AR3000A	AR5000	AR8200 MK-II, MK-III AR8600 MK-II	EK895 EK896	FRG100	NRD535 NRD545 3	RX320	RX340	PCR2500 PCR1500 PCR1000 PCR100 R2500 R1500	ICOM_ CI-V tested: R20, R72, R75, R7100, R8500, R9000	WR1000	WR1500
Mute *=by SW	Y	*	*				*	*	*	*	Y	Y
MuteSQ	Y											
NB				Y		Y			Y			
VSC		y							Y			
<i>max Signal</i>	16*16 A...P	255	255	120*2.1 25	128*2	150*1.7	255*0,0 4	150*1 .7	255	**	255	255
<i>SquelchMgnt</i>		Y	Y	Y+++		Y	****		Y		****	****
<i>PowerMgnt</i>		Y	Y		Y				Y		Y	Y
<i>VFOMgnt</i>		Y	y									
<i>AntennaMgnt</i>		Y	y									
<i>VersionSupport</i>		Y		Y			Y				Y	Y

Tuner	AR3000A	AR5000	AR8200 MK-II, MK-III AR8600 MK-II	EK895 EK896	FRG100	NRD535 NRD545 3	RX320	RX340	PCR2500 PCR1500 PCR1000 PCR100 R2500 R1500	ICOM_ CI-V tested: R20, R72, R75, R7100, R8500, R9000	WR1000	WR1500
<i>Baudrates</i>	4.8 - 9.6K	4.8 - 19.2K	4.8 - 19.2K	0.3-38.4	4.8k	4.8k	1.2 K	75B-38K	9.6. + 38K PCR1500/2500 38K	1.2 - 19.2K	auto	auto
<i>Frequency</i>	.1 - 2.036	.01 - 2.600	.01 - 2.400 ³	.01 - 30	.05 - 30	.05 - 30	.1 - 30	.05 - 30	.01 - 1.300 PCR1500 .01- 3300 PCR2500 MAIN: .01-3300 SUB: 50-1300		.5 - 1300	.15 - 1.50
<i>Unit Support</i>				1 + 99				128*		4		
<i>Scans/s normal</i>	1	3	3	6	1	2	1	3	25	1	19	19
									Autonotch			
Notch				1. Notch		±2.4k ±1K ³		Y	ANR			
NotchD				0		2400 0 ³		0	8			
NotchL				-5000		500 -1023 ³		-2000	0			

Tuner	AR3000A	AR5000	AR8200 MK-II, MK-III AR8600 MK-II	EK895 EK896	FRG100	NRD535 NRD545 3	RX320	RX340	PCR2500 PCR1500 PCR1000 PCR100 R2500 R1500	ICOM_ CI-V tested: R20, R72, R75, R7100, R8500, R9000	WR1000	WR1500
NotchR				+5000		2400 1023 ³		+2000	15			
Squelch		Y	Y	Y, dbμV		N, Y ³	Software	Y	Y		Y*****	Y*****
SquelchD		0	0	0		0 ³	0	0	0		0	0
SquelchL		0	0	0		0 ³	0	0	0		0	0
SquelchR		255	255	120		255 ³	255	150	255		255	255
Shift				Passband		Passband		Y	Y			Y
ShiftD				0		0		0	128			0
ShiftL				-9000		-2000 -2550 ³		-4000	0			-3000
ShiftR				+9000		+2000 2550 ³		+4000	255			+3000
BFO		AudioSQ *	AudioSQ *	Y		Y	Y	Y				

[illegible]

<i>Tuner</i>	AR3000A	AR5000	AR8200 MK-II, MK-III AR8600 MK-II	EK895 EK896	FRG100	NRD535 NRD545 3	RX320	RX340	PCR2500 PCR1500 PCR1000 PCR100 R2500 R1500	ICOM_ CI-V tested: R20, R72, R75, R7100, R8500, R9000	WR1000	WR1500
Mode	WFM NFM AM USB LSB CW	FM AM LSB USB CW auto	WFM NFM AM USB LSB CW SFM WAM NAM SAM	AM FM LSB USB CW ISBUSB ISBLSB	LSB USB CW CWn AM Amn FM	RTTY AM FM LSB USB CW FAX ECSS-USB ECSS-LSB WFM ³	AM LSB USB CW	AM FM LSB USB CW CW1 ISB SAM	AM NFM WFM LSB* USB* CW* *=PCR1000 *PCR1500 only up to 1300MHz *PCR2500 only MAIN RX		SSB AM FMW	CW LSB U Amn AM F FMn
Filter	auto	0.5 , 2.8, 6 15, 30, 110 220, auto	auto	0.15...8 KHz	auto	WIDE INTER NARR AUX	0,3...8 KHz 34 DSP filters + 12 KHz out für DRM	0,1...16 KHz (67 filters)	2.8, 6, 15 50, 230		auto	auto