



AA-600

RigExpert

Kort agenda för kvällen

- Genomgång av instrumentet
 - Vad kan man göra
 - Vi mäter lite praktiskt



- Visning av AntScope2
 - Vi kollar vad kan man göra



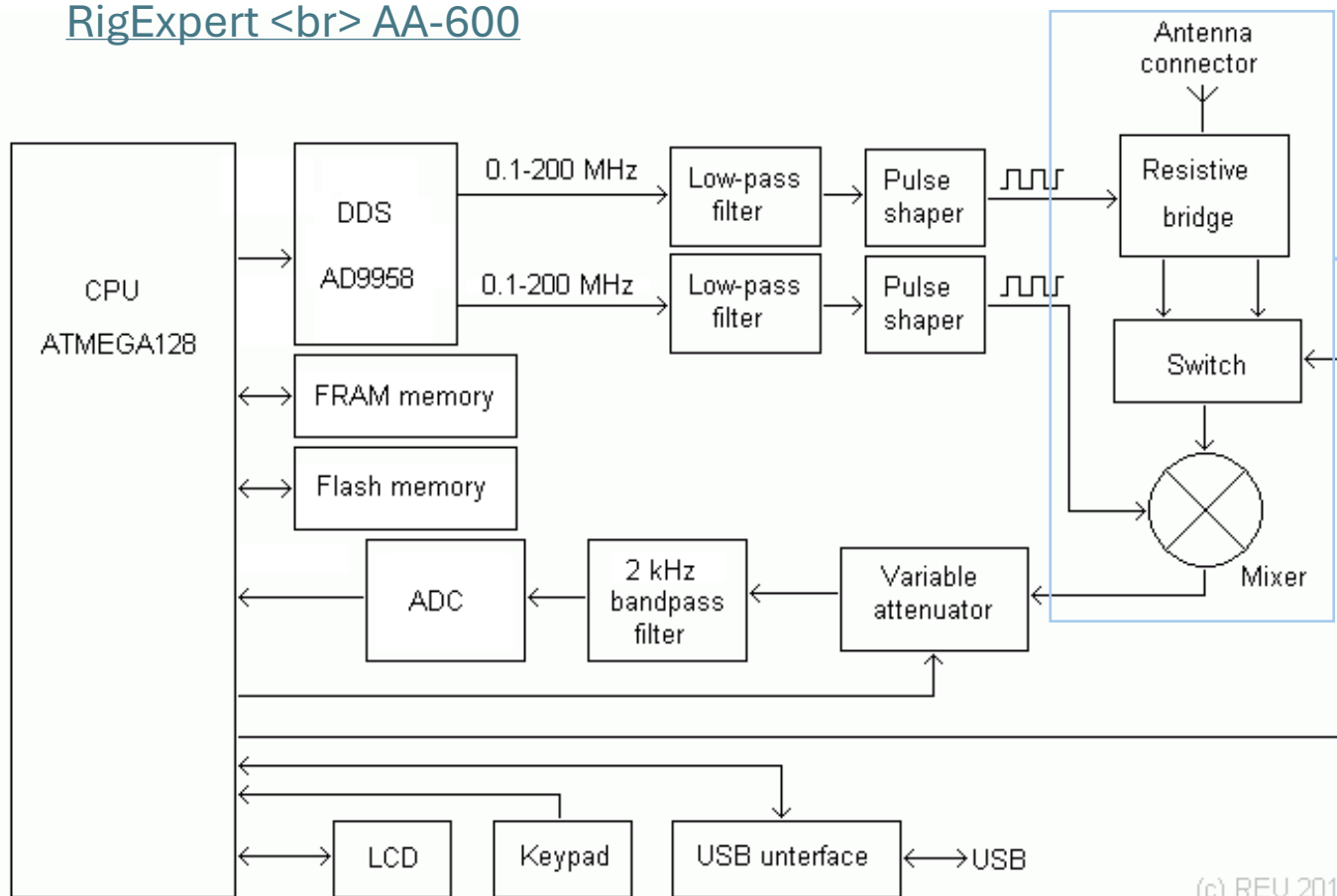
Specifikationer



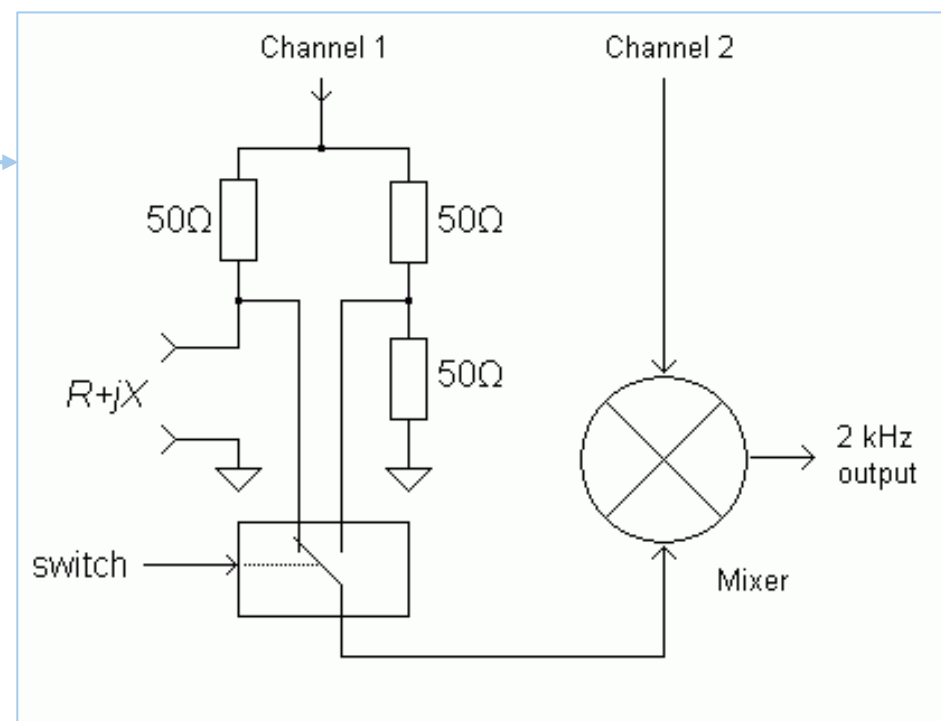
Frequency range	<ul style="list-style-type: none"> • 0.1 to 600 MHz
Frequency entry	<ul style="list-style-type: none"> • 1 kHz resolution
SWR measurement range	<ul style="list-style-type: none"> • 1 to 10 in graph mode • 1 to 100 in numerical modes
R and X range	<ul style="list-style-type: none"> • 0...1000, -1000...1000 in graph mode • 0...10000, -10000...10000 in numerical modes
Display modes	<ul style="list-style-type: none"> • R, X graph, 80 points • Smith (or polar) chart, 80 points • SWR at single or multiple frequencies • SWR graph, 80 points • SWR, return loss, R, X, Z, L, C at single frequency • TDR (Time Domain Reflectometer) graph
RF output	<ul style="list-style-type: none"> • Connector type: N • Output power: -10 dBm (at a load of 50 ohms) • Output signal shape: square, 0.1 to 200 MHz. For higher frequencies, harmonics of the main signal are used.
Power	<ul style="list-style-type: none"> • Max. 3 hours of continuous measurement, max. 2 days in stand-by mode when fully charged batteries are used • Three 1.2V, 1800...3000 mAh, Ni-MH batteries, type AA • When the analyzer is connected to a PC or a DC adapter with USB socket, it takes power from these sources
Interface	<ul style="list-style-type: none"> • 320x240 color TFT display • 6x3 keys on the water-proof keypad • Multilingual menus and help screens • USB connection to a personal computer
Dimensions	<ul style="list-style-type: none"> • 230x100x55 mm (9x4x2")
Operating temperature	<ul style="list-style-type: none"> • 0...40 °C (32...104 °F)
Weight	<ul style="list-style-type: none"> • 650g (23 Oz)
Accessories inside the box	<ul style="list-style-type: none"> • Battery charger • N-to-UHF adapter • NiMH rechargeable batteries (3 pcs) • RigExpert AA-600 • Soft case with straps • USB cable • User's manual
GTIN-13	<ul style="list-style-type: none"> • 4820185420037
Note	<ul style="list-style-type: none"> • Specifications are subject to change without notice • Made in Ukraine

Inuti skalet

RigExpert
 AA-600

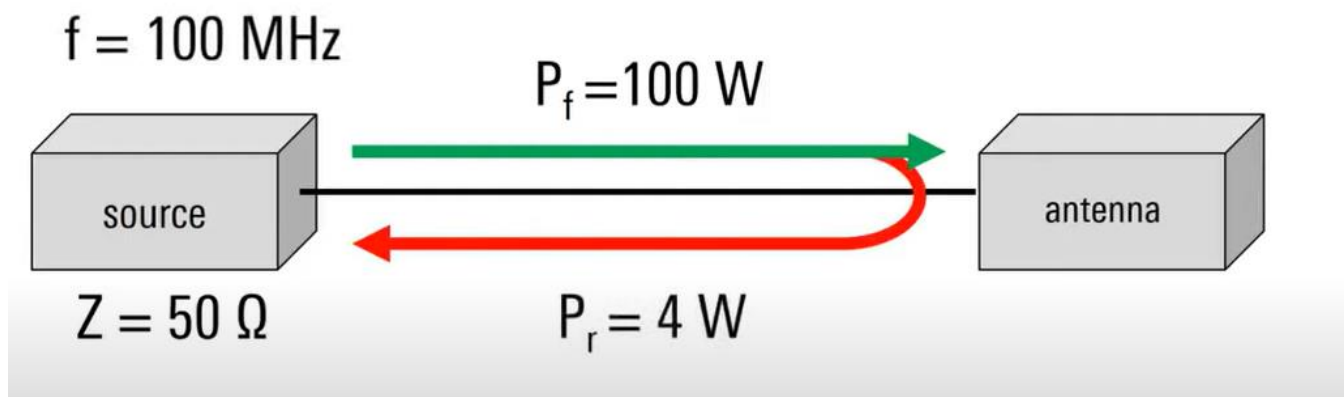
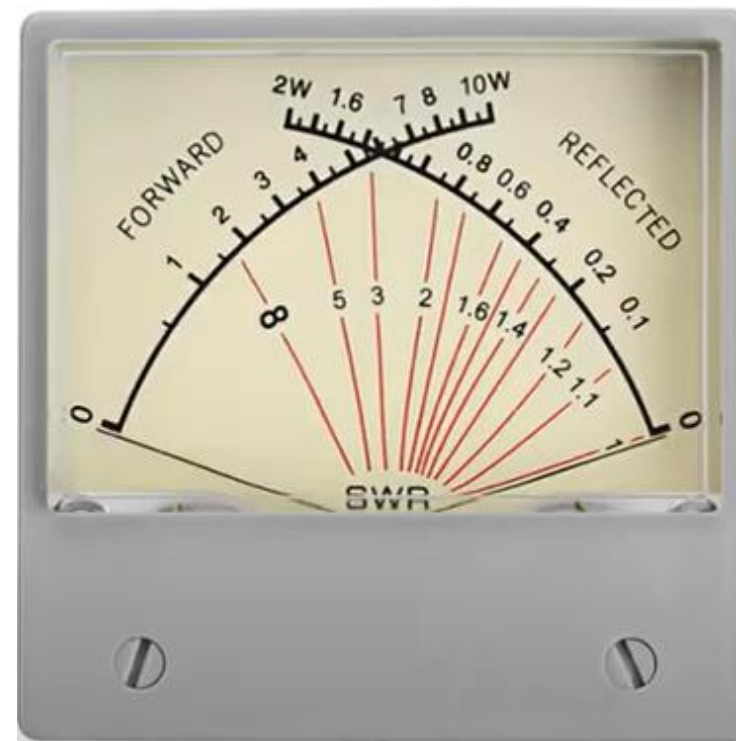


(c) REU 2011



Mäta stående våg

Return Loss (dB)	VSWR	Reflected Power (%)	Through Power (%)
1	17.39	79.43	20.57
2	8.72	63.10	36.90
3	5.85	50.12	49.88
4	4.42	39.81	60.19
5	3.57	31.62	68.38
6	3.01	25.12	74.88
7	2.61	19.95	80.05
8	2.32	15.85	84.15
9	2.10	12.59	87.41
10	1.92	10.00	90.00
20	1.22	1.00	99.00
30	1.07	0.10	99.90
40	1.02	0.01	99.99



AA-600, Funktioner

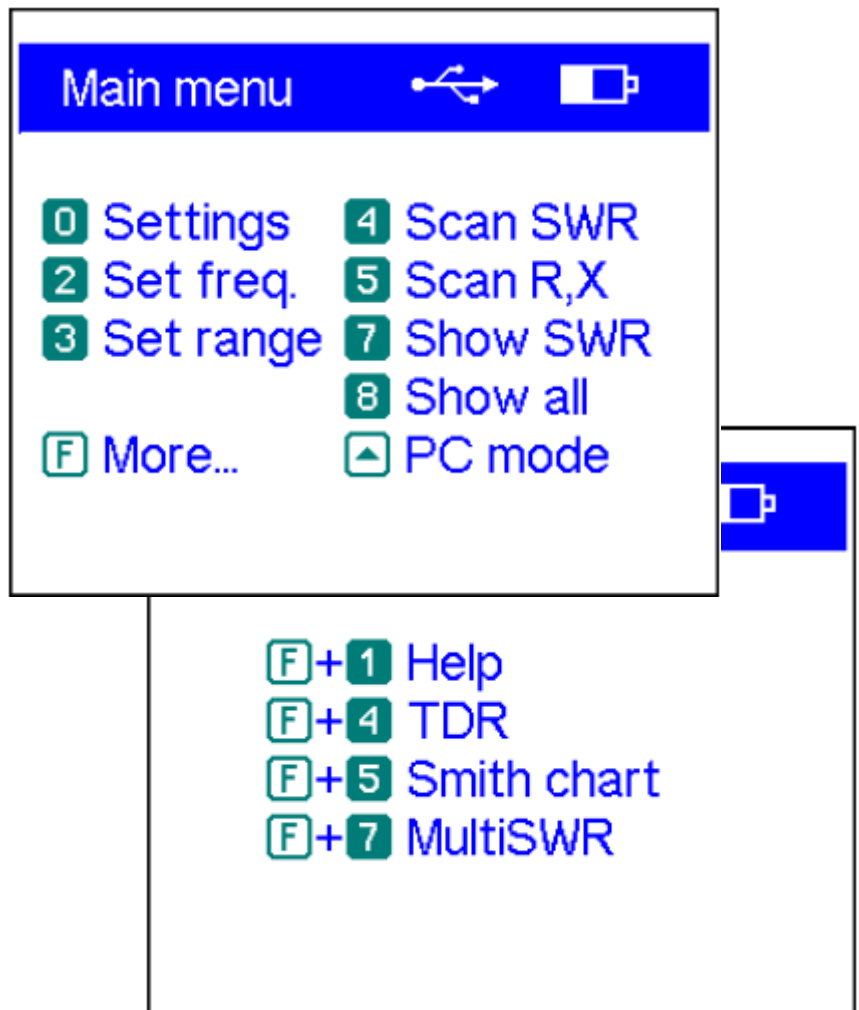
Grundfunktioner

- SWR
 - Graf eller mätar-läge
 - Singel eller Multipunkt
- R och X
 - Graf
- TDR/DTF
 - Kabellängdsmätning
 - Sveper och räknar på R och X
 - Mäter anpassning längs kabel
- Smith
 - Graf
- Visa allt

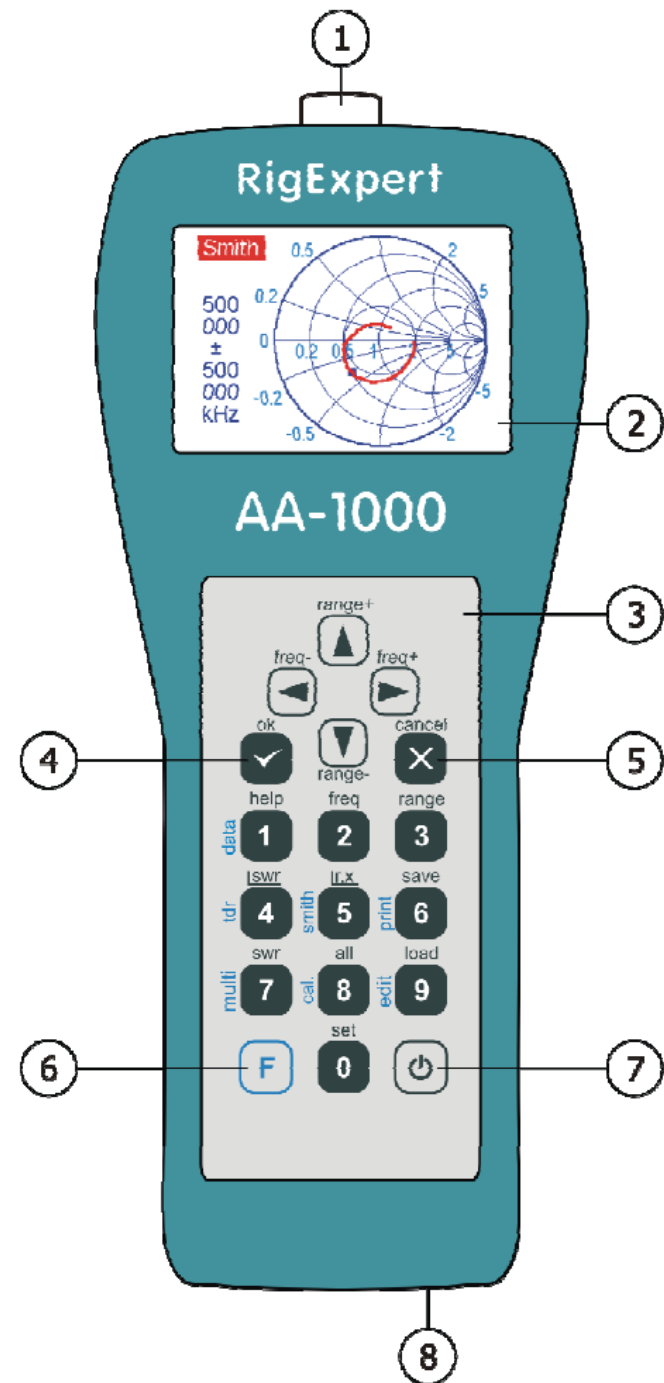
Andra mycket bra funktioner

- SWR2Air mode
 - Hjälp vid tuning
- Kalibrering
 - OSL (Open-Short-Load)
- Minnesfunktioner
 - Spara kurvor
- Andra funktioner
 - Mäta kabel-karakteristik
 - Mäta koaxial stubbar
 - Mäta C och L
 - Mäta transformator, traps
 - RF signalgenerator

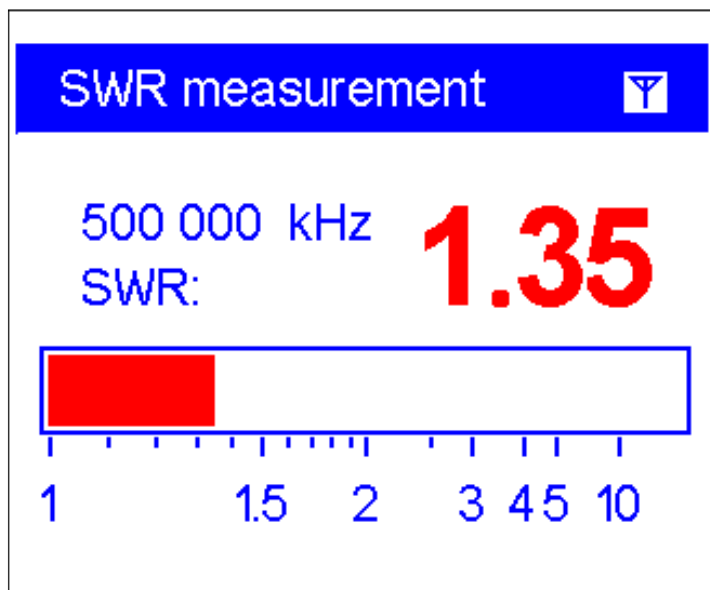
Översikt



1. Antenna connector
2. LCD (Liquid Crystal Display)
3. Keypad
4. Ok button (start/stop measurement, enter)
5. Cancel button (exit to main menu, cancel)
6. Function button (hold for a combination, such as +)
7. Power on/off button
8. USB connector

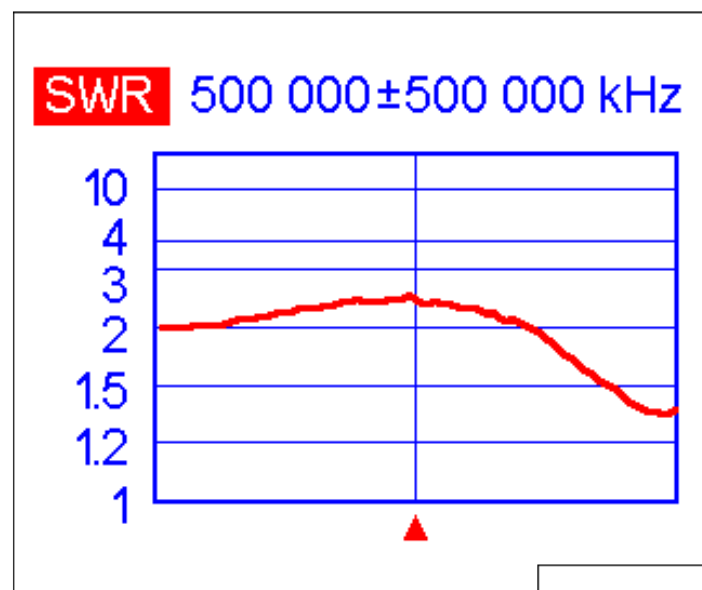


SWR



- ✓ - start/stop measurement
- ◀, ▶ - change frequency
- F+◀, F+▶ - change fq. x10
- 2 - set frequency
- ✕ - exit

Press any key to continue

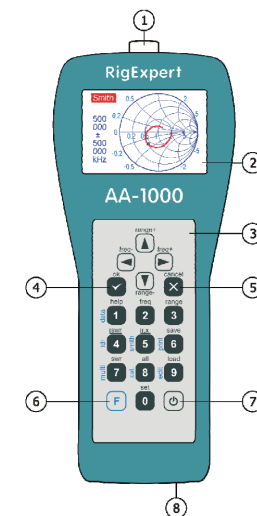


F+1 →

Data at cursor

500 000 kHz	SWR: 2.7
RL: 6.8 dB	IZI: 31.8 Ω
R: 23.0 Ω	X: -21.9 Ω
	C: 14.5 pF
RII: 43.8 Ω	XII: -46.1 Ω
	CI: 6.9 pF

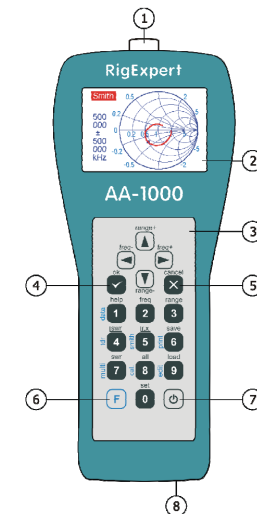
Press any key to continue



SWR, Multi-frekvens

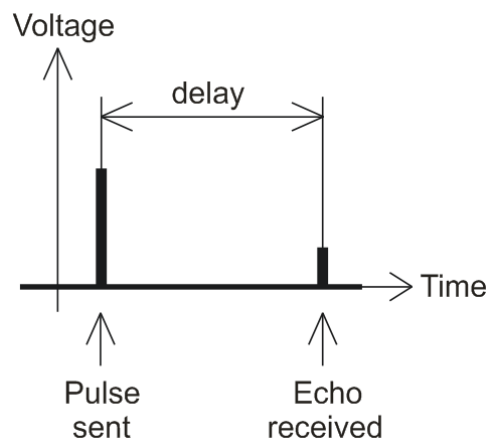
MultiSWR	
▶ 1 852 kHz	SWR: 1.02
42 630 kHz	SWR: 1.03
75 228 kHz	SWR: 1.05
100 000 kHz	SWR: 1.07
850 000 kHz	SWR: 1.5

MultiSWR	
▶ 1 852 kHz	<input type="text"/>
42 630 kHz	<input type="text"/>
75 228 kHz	<input type="text"/>
100 000 kHz	<input type="text"/>
850 000 kHz	<input type="text"/>



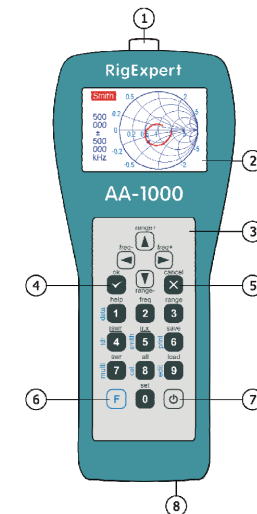
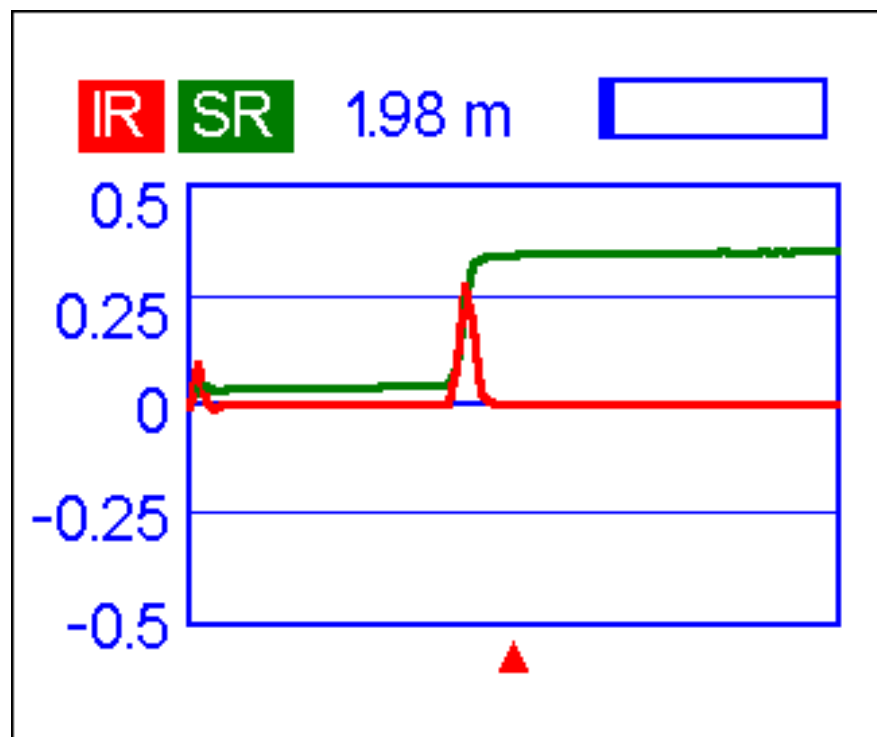
TDR

Traditionell TDR



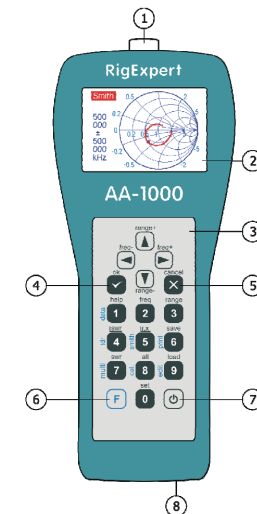
IR= Impulse response
SR=Step response

- FDR Frequency Domain Reflecometer är mer korrekt
 - Mäter hela frekvensspannet
 - Genom R och X och räknar instrumentet SWR (IFFT) längs med ledningen



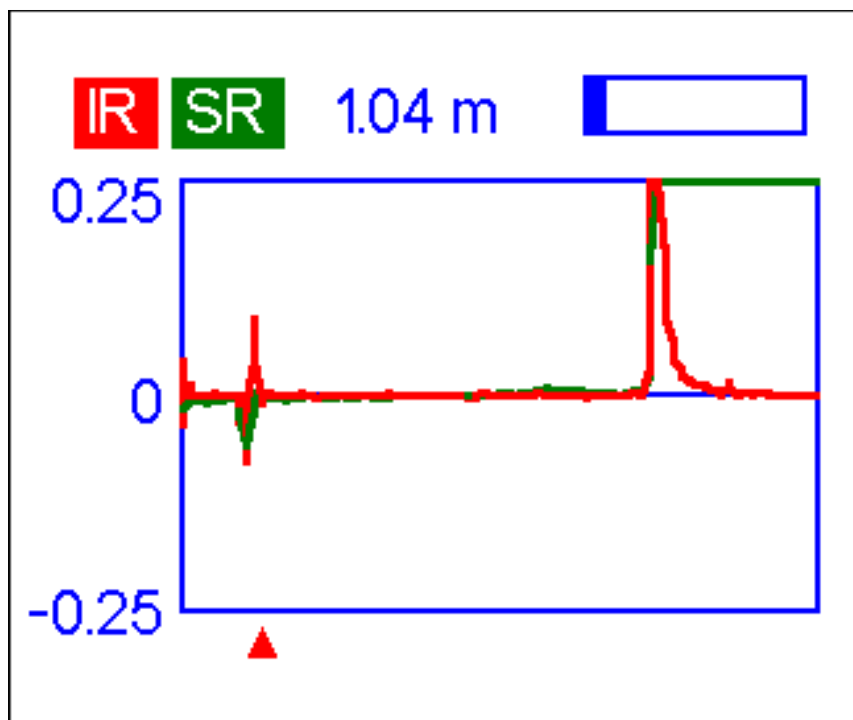
DTF

- Distance to fault
 - Mäta på kabel för att se var ett problem finns
 - Viktigt att ha rätt velocity inställd



Settings (page 2 of 4)

- 2 Frequency correction
- 3 Units ▶ meters
- 4,5 Cable velocity factor
▶ 0.66 (RG-58)
- 6 System impedance ▶ 50 Ω
- 7 R,X graph ▶ parallel
- 0-next, ✓-apply, ✗-discard



AntScope2

- Lite smidigare sätt att göra mätningar på
- Lättare att spara resultat

