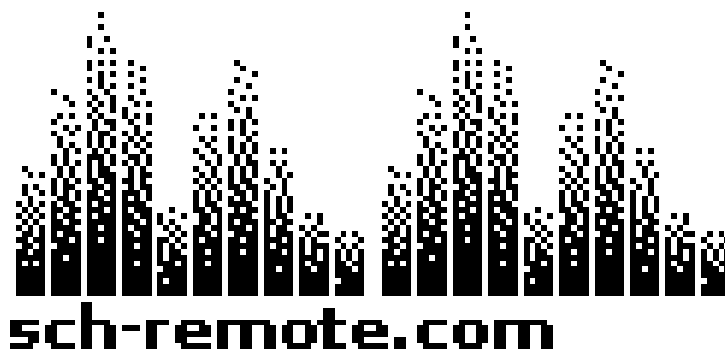


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EVOR03xx

Data Sheet



LCD display based VU meter / Oscilloscope /
RTA / Envelope / X-Y plot

Features

- 2.7" FSTN LCD Display
- Single 5V power supply by USB connector
- 5 viewing modes: VU meter, 10 band real time spectrum, Oscilloscope, Envelope, X-Y plot
- Top/bottom or left/right view of each mode
- Custom 0dB reference setup in range from 100mV to 10V
- 64 programmable presets storing the view mode, view options and reference level
- Wide bandwidth input signal 15 Hz - 20 kHz
- Pass thru connectors

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Rear panel connectors

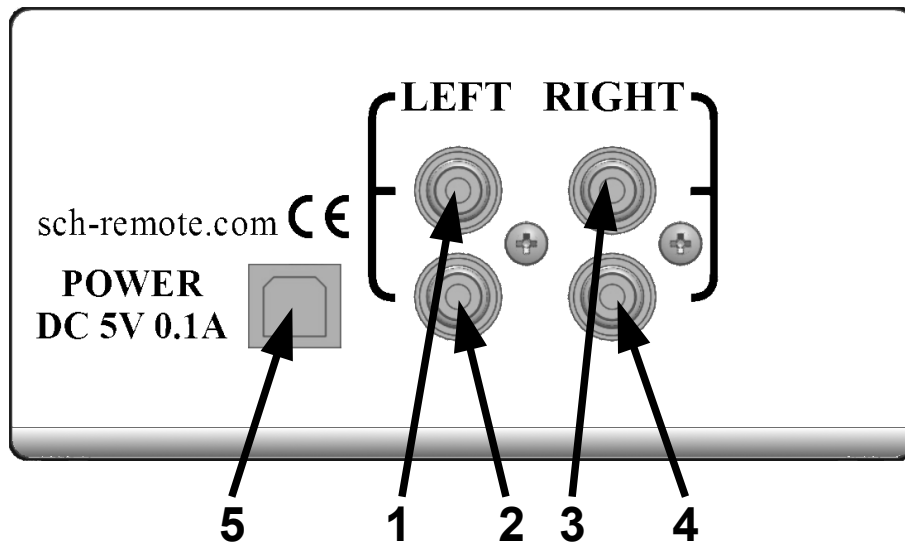


Figure 1: Rear panel connectors

Table 1: Rear panel connectors

Connector	Description
1, 2*	Audio signal for LEFT channel
3, 4*	Audio signal for RIGHT channel
5**	5V power supply

Note:

* Top and bottom RCA connectors (1-2 and 3-4) are internally connected. Such configuration is useful for building a pass thru connection.

** USB connector is used only for power supply and not support any data exchange.

Navigation trough menus

Encoder

Navigation trough device menus is done with front panel encoder. It can be rotated and pushed.

Main view

In the main view is displayed the audio signal in currently selected mode. Encoder rotation select next or previous stored preset. Pushing the encoder brings setup menu.

Setup Menu

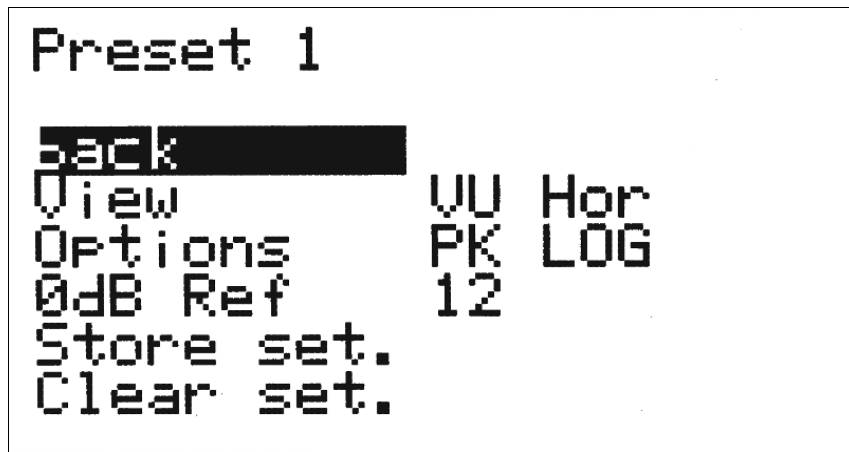


Figure 2: Setup menu

In the left column are listed all available operations and parameters. In the right column are shown current parameters value. Clicking on selected option open a sub menu where by encoder rotation it can be changed.

Table 2: Setup options

Menu	Option
back	Go back to main view with selected options
View	Select between: VU/SPECT/OSC/ENV/X-Y Hor/Vert view
Options	Select view dependent options
0dB Ref	Adjust the signal gain for desired reference level
Store set.	Store current configuration to a preset
Clear set.	Delete a preset, making its position free

Note:

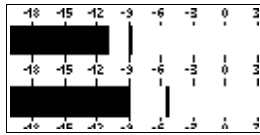

Currently selected view options are lost when a new preset is selected.

View modes and view options

There are available 5 view modes, each with horizontal/vertical sub mode selectable from the setup menu.

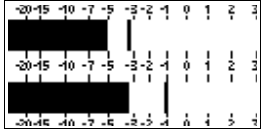
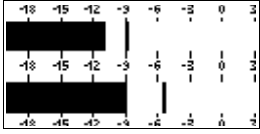


All views have a common option for display inversion.

Table 3: Display inversion option

NOI - No Inversion	INV - Inversion
	

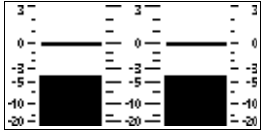
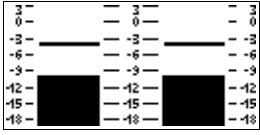
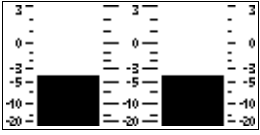
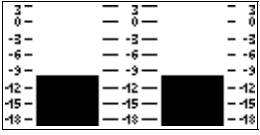
View: VU Horizontal (VU-Meter)

Available options: Peaks/No Peaks, Linear scale/Log scale

<p>PK, LOG</p> 	<p>PK, LIN</p> 	<p>NPK, LOG</p> 	<p>NPK, LIN</p> 
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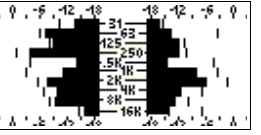
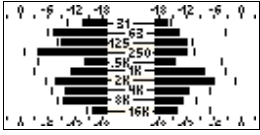
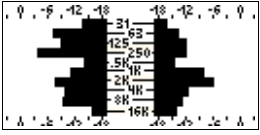
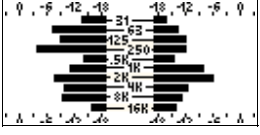
View: VU Vertical (VU-Meter)

Available options: Peaks/No Peaks, Linear scale/Log scale

<p>PK, LOG</p> 	<p>PK, LIN</p> 	<p>NPK, LOG</p> 	<p>NPK, LIN</p> 
--	--	--	---

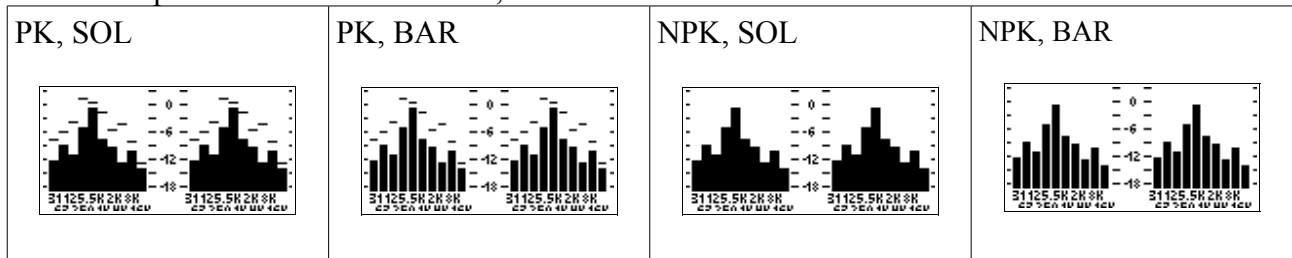
View: SPECT Horizontal (10 band spectrum RTA)

Available options: Peaks/No Peaks, Bars scale/Solid scale

<p>PK, SOL</p> 	<p>PK, BAR</p> 	<p>NPK, SOL</p> 	<p>NPK, BAR</p> 
--	--	--	---

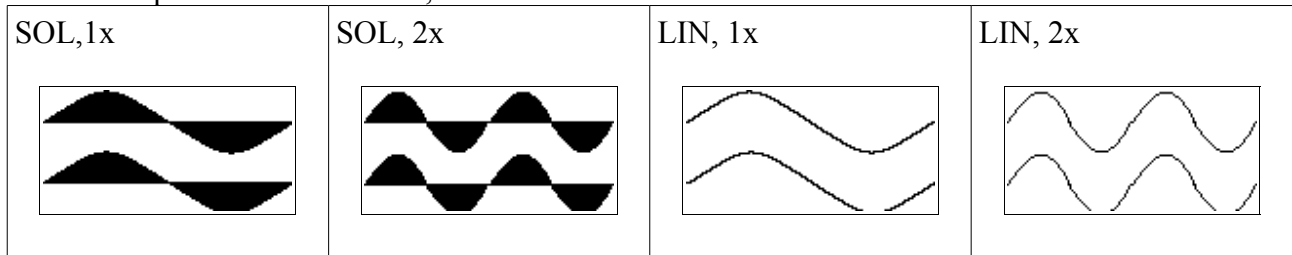
View: SPECT Vertical (10 band spectrum RTA)

Available options: Peaks/No Peaks, Bars scale/Solid scale



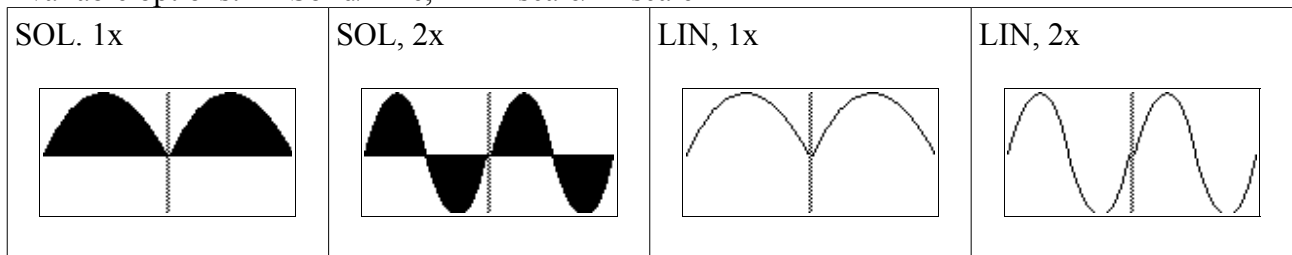
View: OSC Horizontal (Oscilloscope)

Available options: Solid/Line, 1x scale/2x scale



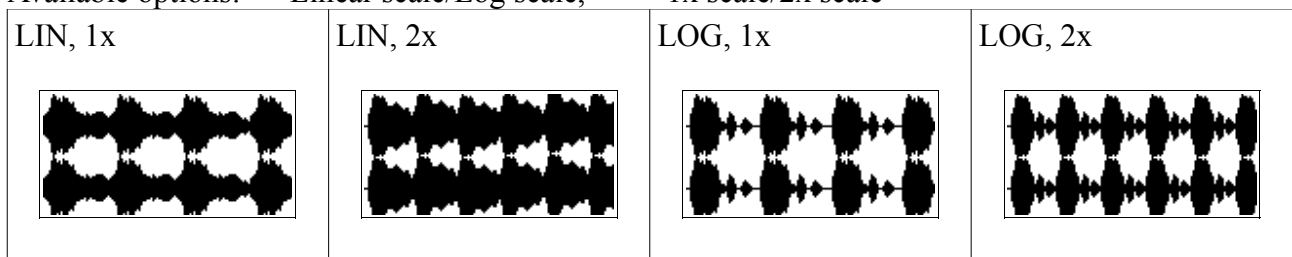
View: OSC Vertical (Oscilloscope)

Available options: Solid/Line, 1x scale/2x scale



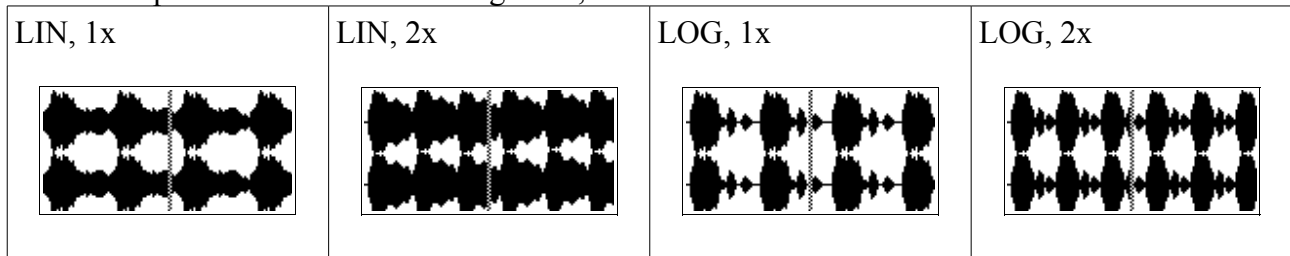
View: ENV Horizontal (Envelope)

Available options: Linear scale/Log scale, 1x scale/2x scale

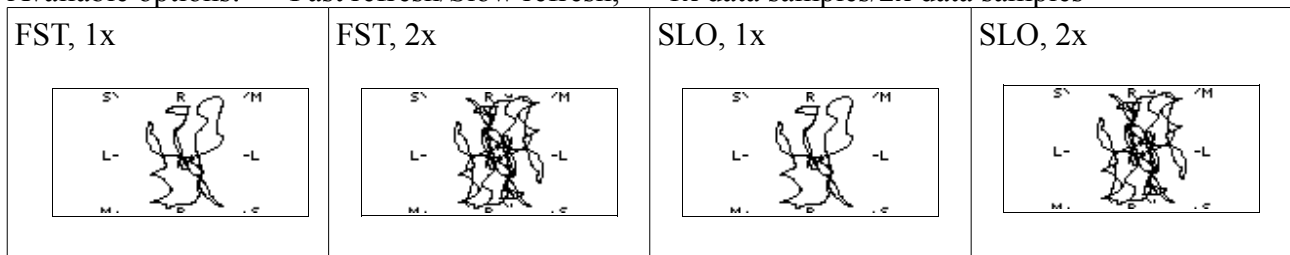


View: ENV Vertical (Envelope)

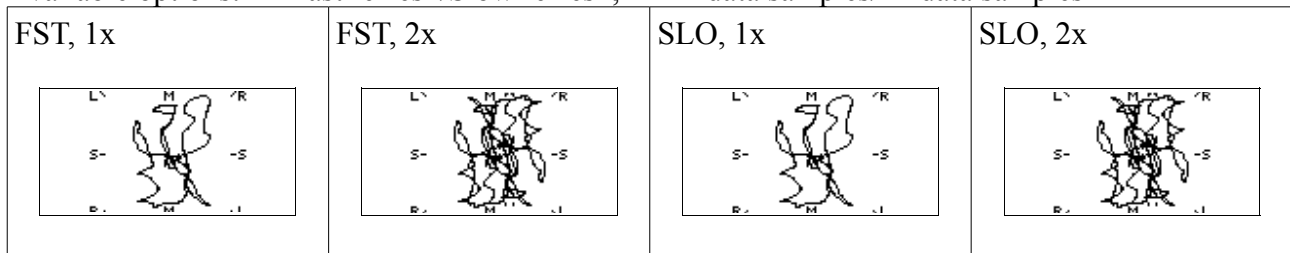
Available options: Linear scale/Log scale, 1x scale/2x scale

**View: X-Y Diagonal**

Available options: Fast refresh/Slow refresh, 1x data samples/2x data samples

**View: X-Y Vertical**

Available options: Fast refresh/Slow refresh, 1x data samples/2x data samples

**Gain setup for 0 dB reference**

Each preset has own 0 dB reference setup. It is done trough 129 gain steps.

Table 4: 0dB reference levels

Gain	Vrms	dBv	dBu	Gain	Vrms	dBv	dBu	Gain	Vrms	dBv	dBu
0	10,9150	20,76	22,98	50	3,6458	11,24	13,45	100	0,9153	-0,77	1,45
5	9,6861	19,72	21,94	55	3,2661	10,28	12,50	105	0,7332	-2,70	-0,48
10	8,6323	18,72	20,94	60	2,9179	9,30	11,52	110	0,5618	-5,01	-2,79
15	7,7187	17,75	19,97	65	2,5976	8,29	10,51	115	0,4002	-7,96	-5,74
20	6,9191	16,80	19,02	70	2,3019	7,24	9,46	120	0,2475	-12,13	-9,91
25	6,2134	15,87	18,09	75	2,0280	6,14	8,36	125	0,1031	-19,74	-17,52
30	5,5860	14,94	17,16	80	1,7738	4,98	7,20	126*	0,0751	-22,48	-20,26
35	5,0245	14,02	16,24	85	1,5370	3,73	5,95	127*	0,0475	-26,47	-24,25
40	4,5190	13,10	15,32	90	1,3160	2,38	4,60	128*	0,0201	-33,93	-31,71
45	4,0617	12,17	14,39	95	1,1092	0,90	3,12				

Note:

Real values may differ by $\pm 0,1$ dB

* Gain levels above 125 doesn't meet the frequency range specification

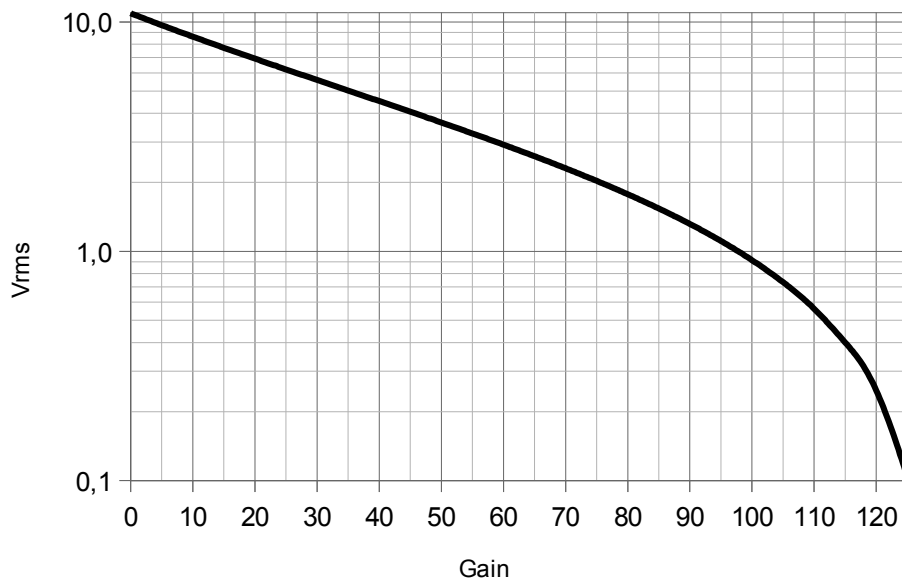


Figure 3: Gain to Vrms diagram

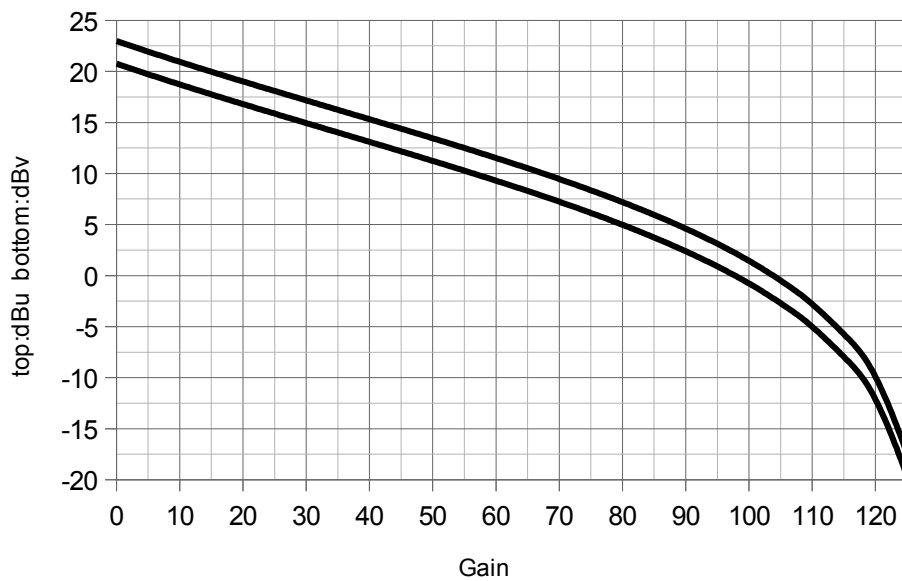


Figure 4: Gain to dBu and dBv diagram

Reset to factory default

Device can be reset to stock presets, by following procedure:

- Push and hold encoder
- Apply a power supply to the device
- Release the encoder
- Select "Store set." for preset 1

Electrical characteristics

DC characteristics

 $0^{\circ}\text{C} < T_a < 70^{\circ}\text{C}$

Symbol	Characteristic	Min	Typ	Max	Units
V _{DD}	Supply Voltage	4,8	5	5,2	V
I _{DD}	Operating Current		80	100	mA
V _{IN}	Input level DC offset	-20	0	20	V
	Input level AC peak-peak			40	V
	0dB reference setup	0,103		10,91	V
		-19,74		20,76	dBv
		-17,52		22,98	dBu
	0dB reference error	-0,1		0,1	dB
	Channels gain error	-0,1		0,1	dB
R _{IN}	Input impedance	46	51	56	kΩ

AC characteristics

Symbol	Characteristic	Min	Typ	Max	Units
F _{MIN}	Minimum input frequency		15		Hz
F _{MAX}	Maximum input frequency		20		kHz
	Maximum input frequency X-Y plot		16		kHz

Mechanical characteristics

Characteristic	Value	Units
Width	125	mm
Height	65	mm
Lenght - case	93	mm
Lenght - with encoder and RCA connectors	120	mm
Weight	0,800	kg

