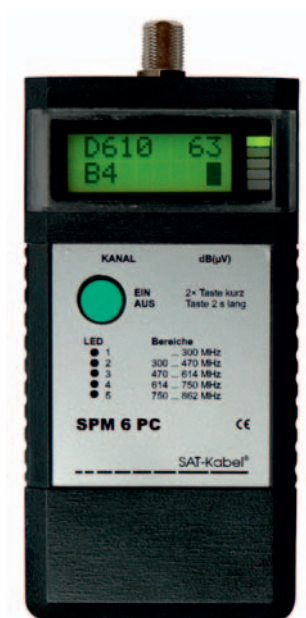




SPM 6PC

Devices as of version v2.01



RF level meter

Thank you for purchasing a product of the Company SAT-Kabel. This manual is intended to provide you with the functions of the device

If you have questions about the device, or have suggestions for further improvements, please let us know.



The displayed version of the device software in the images is illustrative and does not have to represent the current state.

The manual has been compiled in good faith. Mistakes and changes and additions reserved

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1. General

The processor-controlled level meter SPM 6 PC is a compact and handy designed device ideal for fast level control of the local loop cans TAG. It is therefore particularly useful for sales people (media consultant) of a cable operator to easily check the cable connection at the subscriber.

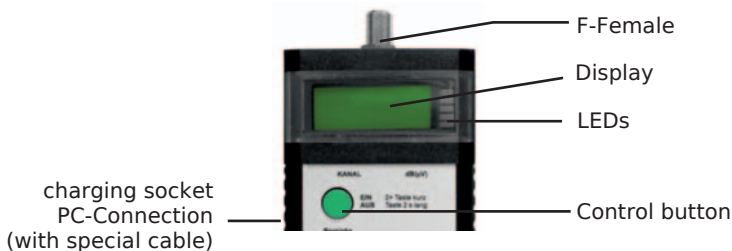
The working principle is based on level measurement with a predetermined channel lists of the respective cable TV network. For the test level are bar graphs and assigned appropriately colored LEDs. The level values of each channel can be displayed directly after the test.

With the now existing PC interface and our software to the device, you can easily create the required channel list even if the corresponding information for the cable TV network are available or not.

2. Scope of delivery

- 1x SPM 6 PC incl. NiMH-accumulator (6 V/300 mAh)
- 1x Power supply 230 V_{AC}/12V_{DC}
- 1x Connecting cable with F-type connectors
- 1x Adapter (F-female to IEC female)
- 1x Manual

3. Functional elements

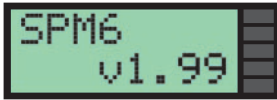


4. Preparation level test

- 1 | The included connection cable with F-type connectors is hand-tight to unscrew by hand with one of the two identical F-plug to F-connector of the level tester. Use of any other cable connection is not recommended.
- 2 | On the free F-cable connector of the enclosed adapter (F-female to IEC female) is then screwed firmly with his F-connector. Then the level meter is connected with the screwed cable connection by plugging the IEC socket on the TV socket on the junction box.

5. Switch on the device

briefly



1 | The device is switched on by **briefly pressing the button once**. It first appears for about 1 s, the device type and the version number of the implemented device software.

(v2.01 - 10.12.2013)



The display then changes to the state of charge of the battery with the voltage output value and is also visualized with a horizontal bar graph. Typical display value is in the range

5.8 V-7, 2 V. At 5.5-5.7 V all LEDs, that are currently active for the level measurement flash.

In return test flashes 3 LED red. The operating time is approximately 15 minutes. If the battery voltage falls below 5.5 V, the device automatically switches off and is only after connecting the power charger to operate again. By switching on an LED test takes place. In this case, all the LEDs light up simultaneously for 1 s each red, then yellow and finally green.

briefly



2 | In an **immediately following short keypress** SPM remains on 6 PC. The display shows the channel list is displayed.

1s

For multiple channel lists in the unit that may require s to be selected by pressing the key for about 1. If the button is pressed after power a second time, so the unit turns off again, just after 2 minutes without pressing a key.

6. Scan and evaluate forward

briefly



Another short press now triggers the scan with the selected channel list. The five LEDs are now ready for automatic evaluation active.

6.1 SCAN with LED-display

In this mode, searches the "SPM 6 PC" continued for five consecutive sections by reference channels in CATV frequency range, which can be chosen freely marked in the channel list.

The five frequency bands and the allocation of the LED printed sindaufdem meter. On the basis of the "SPM 6 PC" stored limit values for the minimum / maximum levels at outlets (TAD) associated with "SCAN" continually held an evaluation.

The evaluation result for each frequency range is shown (yellow / green red /) by the corresponding LED. The display for the entire sub-region varies on the worst level value in the reference channels concerned.

LED/Bar	Area	Frequency area	(channels)
1	B1	... 300 MHz	(D114, S11, S20)
2	B2	300 ... 470 MHz	(D378, D442, D466)
3	B3	470 ... 614 MHz	(D538, D610)
4	B4	614 ... 750 MHz	(D746)
5	B5	750 ... 862 MHz	(D818)

A not existing channel assignment above 470 MHz and 614 MHz in the level 3 (lack of network expansion or lack of channel occupancy) leads to corresponding red LED displays. In these cases, from the "bad not yet be concluded that the expansion of state or a 862 MHz suitability of the house distribution system" display.

The following figure shows the evaluation of the scan by LED. The top LED (LED1) shows the evaluation result of sub-area 1, the next LED indicates the sub-region 2, etc. If the scanned reference channels of the subregions



area 1 were found to be "right," the relevant LED is green, otherwise the display is determined by the worst channel in each subarea.

6.2 SCAN with bar display



After another short push button, the display shows the evaluation of the scan by LED and a five-part vertical bar graph. In this case, the height of a bar represents the result of the particular

area (Pkt.6.3). The top LED indicates the overall result of each measurement point: poor, borderline, in order.

6.3 Evaluation

Signal format and modulation	Level dB(μV)		
	poor / unsuitable	borderline	all right
Balkenanzeige			
LED-color	RED	YELLOW	GREEN
PAL (Standard B/G)	<57 >80	57 ... 59 78 ... 80	60 ... 77
DVB-C 64 QAM	<47 >73	47 ... 49 68 ... 73	50 ... 67
DVB-C 256 QAM	<53 >79	53 ... 55 74 ... 79	56 ... 73

7. Single channel display and evaluation.



When you re short press the indication changes in the single channel measurement and evaluation.

The display four pieces of information are visible:

top left:	measured channel / channel	» D114 «
top right:	reference level in dB (μ V)	» 65 «
bottom left:	corresponding portion in the channel and reference channel is and is used for its evaluation of the level value level value as a bar graph.	» B1 «
rechts unten:		» All Right «

Zusätzlich gibt die oberste LED (LED1) das Anzeigeergebnis rot, gelb oder grün wieder (siehe Abschnitt 6.3). Bei in der Kanalliste aktivierten, aber nicht referenzierten Kanälen wird als Bereich » **B0** « angezeigt. Dadurch ist eine Einzelmessung auch dieser Kanäle möglich.

7.1 Channel labels

In the single-channel representation of the channels with the adjacent additives are identified at the beginning.

S = Special analog channel
K = analog channel
D = digital channel/midfrequency

7.2 Single channel selection and manual reading of level values

By further short press switches the display always changes to the next higher channel / reference channel. In addition, the top LED (LED1) the display result visualized here in addition red, yellow or green (according to Section 6.3)

After the channels were durchgetastet, one arrives at the next short push back into the mode "SCAN". You can also by a long press (> 1 s) change from each individual measurement to the mode "SCAN".



**Next Turn
next channel**

Briefly press the button.



**Zurück zum Modus
SCAN schalten**

The key for longer than 1 second. There will be a change in the mode "**SCAN**" (LED-evaluation).



ATTENTION! If the button is not pressed for more than two minutes, the SPM 6 PC automatically shuts off and must be repaired by re-pressing the button briefly again in function. (see PKt. 5)

8. Switch of the device



Hold the button for about 2 seconds, until next stand-the image appears in the display. Then release the button. The device can be switched off at any time.

9. Charge device



The level tester can either use the attached adapter plug power adapter (Input 230 VAC, output 12 VDC/450 mA) or using the included car charger cable in place of the cigarette lighter of a vehicle (12 V) can be loaded.

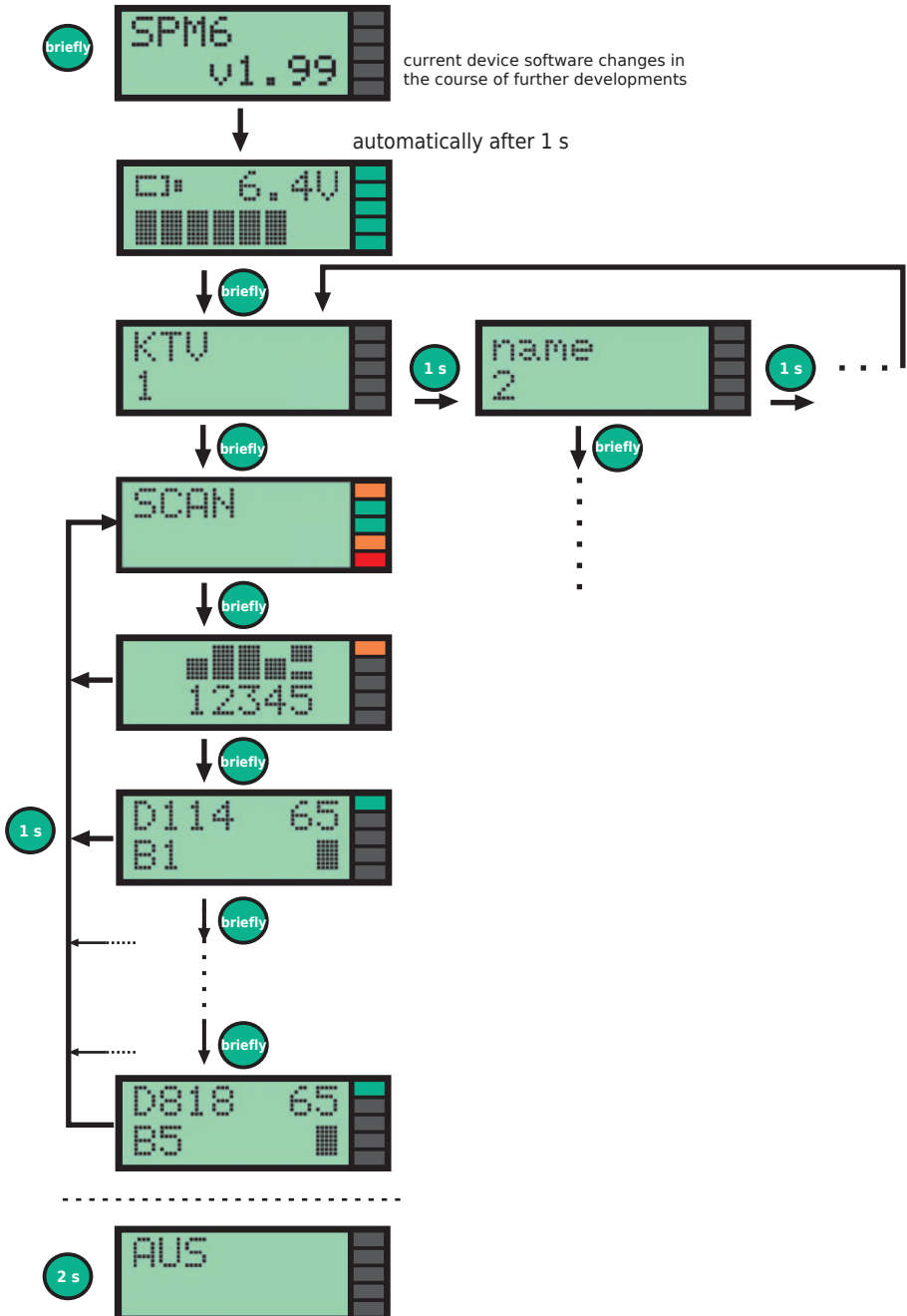
After connecting the charge process starts, and the top-range LED flashes red. 20 s after the start of loading the backlight is switched off. In Full load-ladenem battery the top LED (LED 1) lights green.

10. Technical data and equipment

leveltester

frequency area	5-900 MHz
level area	40-90 dB(μ V)
measurement accuracy	$\pm 2,0$ dB
RF input	F-female, 75 Ohm
operation	button, menu assisted
display	5 color-LED
	LCD 2 x 8 signs, 5 mm heigh, illuminated
power supply	NiMH-Akku 6 V, rated capacity 300 mAh
current draw	ca. 60 mA in LED operationca. 90 mA with illuminateddDisplay
dimensions	120 mm x 60 mm x 25 mm
weight	130 g includubg accumulator

11. Functional diagram



12. Cleaning and care

The housing surfaces should be cleaned with a soft, dry, lint-free cloth. Any aggressive cleaning agents or solvents may be used.

Garantie

July 2006

For the device has a durability guarantee (hereinafter called warranty) admitted to following terms and conditions:

- This warranty applies to purchased in Germany New Device.
- New devices and their components exhibiting defects within 24 months of purchase due to manufacturing defects and / or material defects will be repaired by SAT-Kabel ®.
- For wear parts, such as batteries, keypads, housings, bags, power cable, warranty for 6 months from the purchase applies.
- The guarantee is void if tampered with by the purchaser or third parties.
- Damage caused by improper handling or operation, incorrect positioning or storing, improper connection or installation are not covered in the warranty.
- We calculate the unjustified use our service with the usual for our services payment for material, labor and shipping costs.
- Repairs will be made only with a completed service request form.

Forms for service accompanying documents and other information in the terms and conditions below:

www.sat-kabel.de

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