



HD Field Meter, T2 TV & SAT, Spectrum analyzer, MPEG HD pictures, SCR & SAT constellation.



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Correct power OFF/ON procedure

Correct power OFF/ON procedure for ROVER instruments to avoid occasional Memory Plans and navigation cancellation.

The **"HOME"** key has four timed functions:

- 1. One shot = turn-ON
- 2. One shot (when on) = always goes the to HOME MENU
- 3. If kept pressed for 2 seconds = turn-OFF
- 4. Kept pressed for about 10 seconds = HW reset, Forced turn-off, (interrupts the ongoing data saving in memory).

• POWER ON:

Press once the **"HOME"** key and wait until the start-up is completed, about 20 seconds (do not press it again during the start-up phase).

• POWER OFF:

Press and hold the **"HOME"** key, the instrument will emit a first beep immediately and a second BEEP after about 2 seconds, then release immediately the **"HOME"** key (even if the display is still active and shows the batteries instructions).

• CAUTION:

Do not keep pressed the **"HOME"** key after the second BEEP, to avoid starting the HW reset function (forced turn-off see poit 4).

Basically, every time you turn off the instrument, it needs about ten seconds to save the data in memory before turn-off.

If accidentaly you interrupt this storing process, activating the HW Reset function the data in memory could be corrupted. In any case you can restore the memory plans yourself with a PC by following the instructions in the "F.A.Q." under the heading "Simple SW self repair".

www.roverinstruments.com



no	Name	Function
1	DC&RF IN ON-OFF	Remote bypass switch
2	RF SAT/TV Ingress	SAT input connector 950/2.150 MHz TV/CATV input connector 47-1.000 MHz
З	SPECT Key	Press to visualize spectrum
4	HOME Key	Press to turn on. Keep pressed to turn off.
5	PLAN Key	Press to select SAT, TV & CATV memory plans
6	VOLUME Key	Press to regulate the volume and other adjustments
7	DC@RF IN	LED on with remote control active
8	BATT. CHARGE	LED on during battery charge
9	MAINS	LED on when the meter is connected to the mains power supply
10	CATV Key	Press to go to CATV measurement screen
11	TV Key	Press to go to TV measurement screen
12	SAT Key	Press to go to SAT measurement screen
13	Encoder	Press to confirm, rotate to select
14	Power Supply	External power supply connector, 12/18 Volt DC
15	USB	For PC connection
16	VIDEO input	RCA analog video input connector

DC@RF IN remote power switch_



CAUTION:

If on the coaxial cable to be tested is present a power supply, turn the switch DC@RF IN to "OFF" otherwise you may risk permanent damage to the instrument

'HOME' Screen-

Press the 'HOME' key to go to the home screen, then rotate the wheel to navigate in the 'SAT', 'TV' or 'CATV' icons and press the wheel to select the measurement mode required:



Press the 'HOME' key at any time to return to the home screen.

Navigation

IMPORTANT:

The few simple steps described below describe how to use the meter using the mechanical commands: keyboard and encoder (rotate and press).

For instruments equipped with TOUCHSCREEN display, the same operations can be performed by touching the mentioned menu item directly on the display.

• DISPLAY ZONES

- U Tuning parameters
- Picture
- Measurements
- Transport Stream info
- Ontext sensitive menu



NAVIGATION USING MECHANICAL COMMANDS

How to select from the menus and adjust the value:

- Rotate the wheel and select from the menu required (fig. 1)
- Press the wheel (fig. 2)
- Rotate the wheel to adjust the value (fig. 3)
- Press the wheel and confirm the selection (fig. 4)

Example of TV/CATV channel selection:



How to select from the menus and change a value using the drop down menus:

- Rotate the wheel and select the menu required (fig. 1)
- Keep the wheel pressed for 2" to visualized the drop down menu (fig. 2)
- Rotate the wheel to adjust the value (fig. 3)
- Press the wheel and confirm the selection (fig. 4)

Example of TV/CATV channel selection:



Example of SATELLITE transponder selection (TP/TS):





How to select the frequency and set the value using the numerical keyboard:

- Rotate the wheel and select frequency (FREQ) (fig. 1)
- Keep the wheel pressed for 2" to visualize the keyboard (fig. 2)
- Press the relative number keys to digit the frequency value required, rotate the wheel to navigate within the window (fig. 3)
- Finally rotate the wheel and select enter (fig. 4)
- Press the wheel and confirm the selection (fig. 5)



NAVIGATION USING MIXED COMMANDS: MECHANICAL & TOUCH

- Touch a value in the menu (fig. 1)
- Rotate the wheel to adjust the value (fig. 3) or touch the value required (fig. 2)
- Press the wheel and confirm the selection (fig.3) or touch the monitor outside the drop down menu (fig.3)

Eg. TV/CATV channel selection:

Eg. SATELLITE transponder selection (TP/TS):



Example of TV- CATV remote power supply selection (DC & RF):



Select from the menus and adjust the value using the drop down menu:

- Touch a value in the menu (fig. 1)
- Touch again to visualize the drop down menu (fig. 2)
- Rotate the wheel to adjust the value (fig. 3) or touch the value required (fig. 3)
- Press the wheel and confirm the selection (fig. 4), or touch the monitor outside the drop down menu (fig. 4)



Example of TV channel selection:

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Example of SATELLITE transponder selection (TP/TS):



Example of remote TV - CATV power supply selection (DC & RF):



Select the frequency and set the value using the numerical keyboard:

- Touch FREQ (fig. 1)
- Touch again to show the menu "INSERT FREQ" (fig. 2)
- Touch the numbers to digit the required frequency value (fig. 3)
- Finally touch enter and confirm the selection (fig. 4)





Volume & Configuration





Volume selection is immediately active, press "ENTER" for the Display configuration and other important settings.

BATTERY SAVING & TIMER OFF

Settings for battery save mode:



Choose "BATTERY SAVING" from the volume screen. In ON mode, if no key is pressed, after 30 seconds, the display brightness is reduced and after 5 minutes the meter automatically turns off. Press any key to temporarily reset the battery save mode.

LT: dBu\ NGUAGE: ENGLISI YS BEEP: LO\ SP.LIGHT: FULL O\	1						
YS BEEP: LOW	i						
SP.LIGHT: FULL OF							
TTERY TEST: OFF	:						
CK							
SETTINGS AND CONFIGURATION MENU							
	ск						

Navigate in "CONFIGURATION MENU" then "METER" in the volume screen and set the "TIMER OFF" value required. The meter will turn off after 5 or 10 minutes of inactivity. Press any key to interrupt the automatic turn-off.

Discovery_

Identifies the modulation of a tuned TV channel in the TV master PLAN:





Navigate in the "CONFIGURATION MENU" in the VOLUME window.

TV Mode_____

CONFIGURATION MENU			
METER		LNB L.O.:	0.0 MHz
τv	\rightarrow	C/N TYPE:	IN BAND
SAT		DISCOVERY:	TERR. ONLY
CATV			
METER INFO			
SAT&TV THRESHOLD			
DIAGNOSTIC			
		BACK	
EXIT			
SETTINGS A	ND	CONFIGURATION	MENU

Navigate in "TV" and then "DISCOVERY" and set the identification mode:

- TERR ONLY,
- TERR & CABLE.

CATV (Cable) Mode_

CONFIGURATION MENU]						
METER		LNB L.O.:	0.0 MHz				
ТV		C/N TYPE:	OUT BAND				
SAT		DISCOVERY:	CABLE ONLY				
CATV	\rightarrow						
METER INFO							
SAT&TV THRESHOLD							
DIAGNOSTIC							
		ВАСК					
EXIT							
SETTINGS AND CONFIGURATION MENU							

Navigate in "CATV" and then "DISCOVERY" and set the identification mode:

- CABLE ONLY,
- TERR & CABLE.

NOTES:

- DISCOVERY mode is active only if the antenna cable is connected to the instrument.

- DISCOVERY mode is not active if you use a manual or automatic memory plan (Manual Memory or Automemory).





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SAT Channel Plan screen

"Satellite information (mux data) is provided in cooperation with LyngSat www.lyngsat.com"

Digital SAT measurement displays DVB-S & DVB-S2

PLAN	MODULAT	DiS	POL/BND	EDEO	TRANSP				
				FREQ					
HBIR13	DVB-S2	B	HL/18	10971.0	TS123				
POWER: 7	POWER: 78.5dBuV								
30 40	0 50	60	70	80 90	9 100				
MER:16.3	3dB								
4 6	8	10	12 14	16	18 20				
bBER:9x1 PER: 4x1			•••		(
ERR:	Θ			ľ	PICTURE				
NID:	318 N	ETW: EU	TELSAT 13		MENU & 📍 🔒				

Main Measurements

MODULAT

PLAN

PIANO	MODULAZ	DiS	POL/BND	FREQ	TRANSP
HBIR13	DVB-S2	В	HL/18	10971.0	TS123
NOME	TI	PO EN	C		SRF 1 HD
SRF 1 HD SRF zwei RTS Un HD RTS Deux Test17205	р ТV- НD ТV-	HD S HD S HD S		EUTELSAT	-
	25		Vpid:	502 Api	d: 503 17201
DATA:	1	6/12/2	013 TELET		SI
			ENCRI	(PT.:	Viaccess
NID:	318	ETE: EU	ITELSAT 13		MENU & 🚺 🧲

Navigate in PICTURES and press the encoder wheel to visualize the services list and pictures. Press SAT to return to the measurements





POL/BND

FREQ

TRANSP

DiS

8PSK Constellation. Navigate in "ZOOM" and select the constellation square window to enlarge.



If the input signal is too high, the meter warns with the following message: "TOO HIGH".

NOTES: for the services list and pictures, see paragraph: LIST MPEG SERVICE

Related Functions









Identifies the tuning parameters of a digital unknown signal





Digital TV measurement displays DVB-T & T2_

CHAN

8M/32K

1/16 64QAM

PP4

NONE

MENU & 🕇 🔓

OmA

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PLAN	MODULAT	B₩	DC@RF	FREQ	CHAN		
EUROPE	DVBT&H	8	OFF	698.00	49		
POWER: 62.3dBuV							
30 4	0 50	60	70	80 90	9 100		
MER:35.1dB							
8 12	16 2	.0 24	28	32	36 40		
bBER:2x10-5 aBER: <10-8							
ERR:	θ				TCTORE		
NID:	12289 <mark>N</mark> I	ETW: Med	iaset4		MENU & 🕇 🔒		

MODULAT CHAN PLAN BW DC@RF FREQ EUROPE DVBT&H 8 OFF 698.00 49 ENG Rete4 Servizio12 Rete4 Ν TV TV Canale5 N Italia1 NN TGCOM24 1630 APTD SERV.ID.: TELETEXT: 4004 5/12/2013 DATE YES VIDEO RATE: 4.86 Mb/s Clean TSID: 940 CID: 301 (0x12D) MENU & 7 🔓

Main Measurements

B₩

8

DC@RF

0FF

INFO

1864 (0x748)

DVB-T2 Constellation.

Navigate in "ZOOM" and select the

constellation square window to enlarge.

FREQ

810.00

: L1PRE

ZOOM: FULL

MODULAT

DVBT2

PLAN

EUROPE

- TSID

Navigate in PICTURES and press the encoder wheel to visualize the services list and pictures. Press TV to return to the measurements.



If the input signal is too high, the meter warns with the following message: "TOO HIGH".

NOTES: for the services list and pictures, see paragraph: LIST MPEG SERVICE

Related Functions









Identifies the tuning parameters of a digital unknown signal

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Analog TV Measurements_____

Navigate in "CHAN" to select the required channel.

PLAN	MODULAT	AUDIO	DC@RF	FREQ	CHAN				
MANU25	AN.TV	6.0FM	OFF	311.25	s22				
LEVEL: 70.9dBuV									
30 4	0 50	60	70	80 90	9 100				
A/V:16.3	2dB								
68	10 12	14	16 1	.8 20	22 24				
					PICTURE				

Main measurements



Navigate in picture and press the encoder wheel to visualize the picture. Press again to go back to the measurements.

Analog Video Input_____

Connect an analog video signal to the appropriate RCA connector.





Select VIDEO IN. EXT to visualize the Video Input







Digital CATV measurement display DVB-C

PLAN	MODULAT	CONST	DC@RF	FREQ	CHAN				
EUROPE	DVB-C	QAM64	OFF	305.50	s21				
POWER: 75.4dBuV									
30 4	0 50	60	70	80 91	9 100				
MER:>36	dB								
8 12	16 2	0 24	28	32	<mark>36</mark> 40				
bBER: <1 aBER: <1		(PICTURE				
ERR:	0				TCTORE				
NID:	1 N	ETW: AST	RA 1		MENU & 🕇 🕞				

Main Measurements

PIANO MODU	JLAZ	COSTEL	CC@RF	FREQ	CANALE
MANU25 DVE	3-C	QAM64	0FF	306.00	s21
NOME	TIP	0 ENC		Ju	welo pur
Juwelo pur	ΤV	N			
K-TV .	τv	N			1.1.1
Deutsches Mus	ΤV	N		No.	atte Chin
Lustkanal.TV	TV	Ν		1-1-1-1-1	
MB SmartCast	ΤV	N		III III VAVA COMIS	ACTO A 1
Erotik 24	τv	N			ASTRA 1
RAPS	DATA	N	🔻 Vpid:	201 Api	d: 300
DATA:	10	5/12/201		ERV. :	12600
DATI VIDEO:		.04 Mb/s	. IELE	TEXT: IPT.:	NO chiaro

Navigate in PICTURE and press the encoder wheel to visualize the services list and pictures. Press CATV to return to measurements.



DVB-C Constellation. Navigate in "ZOOM" and select the quadrant of the constellation to enlarge

MODULAT PLAN CONST DC@RF FREQ CHAN MANU25 DVB-C QAM64 0FF 306.00 s21 POWER: TOO HIGH 100 70 80 98 MER:>36dB 40 16 bBER: <10-9 aBER: <10-9 PICTURE ERR: Θ NETW: ASTRA 1 MENU & 🕇 🔒

> If the input signal is too high, the meter warns with the following message: "TOO HIGH".

NOTES: for the services list and pictures, see paragraph: LIST MPEG SERVICE

Related Functions





CATV channel PLAN selection





HELP Identifies the tuning parameters of a digital unknown signal



Spectrum Analyzer screens_____



Press the spectrum key again to activate the "MAX HOLD" function.





Related Functions



Finds the tuning parameters of a digital unknown signal



Navigate in "MENU" to visualize the additional spectrum functions

Navigate in "SPAN" to modify the value or directly select the active span value:





Press to cycle through spectrum analyzer screens

IST LIST (MPEG Service) show & select available MPEG TS services



PLAN	MODULAT	B₩	DC@RF	FREQ	CHAN				
EUROPE	DVBT&H	8	OFF	698.00	49				
POWER: 6	2.3dBuV								
30 4	0 50	60	70	80 90	9 100				
MER:35.3	1dB								
8 12	16 2	0 24	28	32	36 40				
bBER:2x10-5 aBER: <10-8 ERR: 0									
NID:									

Navigate in PICTURE in the TV-CATV-SAT measurement windows and press ENTER.

PLAN	MODULAT	B₩	DC@RF	FREQ	CHAN
EUROPE	DVBT&H	8	12V	698.00	49
NAME	TYPE	ENC			Rete4
Servizio Rete4 Canale5 Italia1 La 5 TGCOM24	TV TV TV TV TV TV	N N N N N			lediaset4
Iris	τv	N	VPID:	1630 API	D: 1631
DATE: VIDEO RA		0/06/20 .59 Mb/	TELEI	EXT:	4004 YES Clear
- TSID	: 940 Cl	D: 301	(0x12D)		MENU & 7 🔒

Rotate the encoder to navigate between services



Press ENTER to return to the services list and pictures.

PLAN	MODULAT	B₩	DC@RF	FREQ	CHAN
EUROPE	DVBT&H	8	0FF	698.00	49
NAME	TYF	E ENC			Rete4
Servizio1	.2 DAT/	A N			
Rete4	τv	N	100	a VO.	
Canale5	тν	N			
Italia1	тν	N			
La 5	τv	N			and the second se
TGC0M24	тν	N		M	ediaset4
Iris	TV	N	VPID:	1630 API	D: 1631
DATE:	5	/12/2013	SERV.		4004
VIDEO RAT		.86 Mb/s	TELE		YES
UTDEU KAI	4	. 00 PID/ 5	ENCRY	/PT.:	Clear
TSID	: 940 []	D: 301	(0x12D)	1	MENU & 7 🔂

Press ENTER to access the list of services and pictures.

PLAN	MODULAT	B₩	DC@RF	FREQ	CHAN
EUROPE	DVBT&H	ВТ&Н 8		698.00	49
NAME	TYF	PE ENC			Rete4
Servizio1	2 DAT	A N			
Rete4	τv	Ν		An In	
Canale5	τv	N	and the second	And the states	
Italia1	тν	N	Black	and the	
La 5	тν	N			and the state of t
TGCOM24	тν	N		M	ediaset4
Iris	TV	N	VPID:	1630 API	D: 1631
DATE:	1	4/11/20	13 SERV		4004
VIDEO RAT		.73 Mb/s	TELE	TEXT: YPT.:	YES Clear
NID:		MENU & 7 🔓			

Press ENTER, select the picture by rotating the encoder and press ENTER to enlarge it.

PLAN	MODULAT	B₩	DC@RF	FREQ	CHAN
EUROPE	DVBT&H	8	0FF	698.00	49
NAME	TYP	E ENC		-	Rete4
Servizio1	L2 DATA	N		*	T
Rete4	тν	N		A	
Canale5	тν	Ν			-
Italia1	тν	Ν			
La 5	TV	Ν		10	ediaset4
TGC0M24	τv	N		Pit	ediaset4
Iris	τν	N	VPID:	1630 APID	1631
DATE:	14	/11/20	13 SERV		4004
VIDEO RA		99 Mb/	IELE		YES Clear
TSID	: 940 CI	D: 0 (0x0)	N	1ENU & 7 🔐

Rotate the enconder wheel to navigate in Vpid - Apid and press ENTER to return to the measurements, or press the SAT/TV/CATV measurement key.



The "help" function identifies the tuning parameters of a digital TV or SAT unknown signal:

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How to use the "HELP" function_



Spectrum mode move the "mrk.Fr" to the center of a digital carrier.



In measurement mode when the lock icon is open (the signal is not locked).





Press to start the search



The "help" function will try to identify the tuning parameters of the selected digital carrier.



At the end of the search (the word "FOUND" will be shown in the 3 boxes) the meter automatically shows the measurement display and the picture of the selected carrier (if available).

SAT: SAT SCR





Navigate in "CONFIGURATION MENU" from the "VOLUME" screen.

	CONFIGURATION MENU	
	METER	
	тv	
	SAT	$\overline{}$
	CATV	
	SAT SCR	
	METER INFO	
	SAT&TV THRESHOLD	
	DIAGNOSTIC	
	EXIT	
Ī	SETTINGS A	ND CONFIGU



Navigate in "SAT SCR" and press ENTER

CONFIGURATION MENU							
METER		LNB TYPE:	INVERTO				
TV		SCR USER:	USER N.1				
SAT		SCR FREQ:	1210MHz				
CATV		SCR CABLE TEST					
SAT SCR	\rightarrow						
METER INFO							
SAT&TV THRESHOLD							
DIAGNOSTIC		ВАСК					
EXIT							
SETTINGS AND CONFIGURATION MENU							

Navigate in "LNB TYPE" and choose the LNB/MULTISWITCH model,

navigate in "SCR USER", and choose the user number to test (USER 1-8),

Press "SPECT" to display the spectrum or "MEAS" to start measuring,

or navigate in "SCR CABLE TEST" to perform in spectrum mode the SCR LNB/ MULTISWITCH 8 frequencies check (USER 1-8).





AUTOMEMORY (TV)-

To automatically store all the existing channels in a city or building. Navigate in "AUTOMEMORY TV" and press the wheel:

MEMORY MENU										
AUTOMEMORY tv	\rightarrow	FROM PLAN:	EUROPE							
SAVE DATALOGGER		TO FILE N:	AUTO 2							
RECALL DATALOGGER		LEVEL:	> 55 dBuV							
MANUMEMORY		POWER:	> 45 dBuV							
FILE MANAGER		DISCOVERY:	TERR. ONLY							
		DC@RF:	OFF							
EXIT		START SAVE?								
		ВАСК								
MEMORY MENU										

Set the desired parameters:

Navigate in "to FILE N" and select the destination file "AUTO" where the search must be saved.

Navigate in "LEVEL" and set the minimum level threshold of the analog channels searched. Navigate in "POWER" and set the minimum power level of the digital channels searched.

Navigate in "DISCOVERY" and set the channel search mode,

- TERR ONLY (terrestrial only),
- TERR & CABLE (terrestrial & cable),

Navigate in "START SAVE" to create a new channel plan and to activate the search.

NOTE: If the words "START OVERWRITE" appear, the selected file will be overwritten, wait a few mins, the meter indicates the recorded ANALOG & DIGITAL Channels.



Upon automemory completion the new plan is automatically selected.

Logger SAVE_

MEMORY MENU									
		FROM FILE:	AUT	02					
SAVE DATALOGGER	\rightarrow	Data File:	LOG	i. 1					
RECALL DATALOGGER		Point:	POIN	IT 1					
MANUMEMORY		STOP&GO:		NO					
FILE MANAGER		TERR DC@RF:		0FF					
		START SAVE?							
EXIT		AVAILABLE LOGGER	:99						
-		BACK							
MEMORY MENU									

Analog Ch Digital Ch PASS MARG FAIL EXIT STOP PLAN: AUTO 2 CHAN: 37 32 36 37 38 42 LOGGER FUNCTION

DATA LOGGER run

Navigate in "SAVE DATALOGGER" and set the parameters required. Touch "START SAVE" to create a new log file

NOTE: if the MANU plan has mixed TV and SAT programs, the STOP&GO function will assist when running a LOGGER asking to move the cable lead from a TV to a SAT signal source or vice-versa.

Logger RECALL



Navigate in "RECALL DATALOGGER" and Set the LOG file parameters. Touch "RECALL?" to see them,

L0G. 1 F	POINT 1	EXIT							
NAME	ТҮРЕ	PWR LVL	MER C/N	bBER A/V	aBER PER				
E5	DVB-T	63.6	33.7	2.0E-05	<e-08< th=""></e-08<>				
E8	DVB-T2	58.5	10.7	<e-06< td=""><td><e-08< td=""></e-08<></td></e-06<>	<e-08< td=""></e-08<>				
21	DVB-T	68.2	24.4	<e-06< td=""><td><e-08< td=""></e-08<></td></e-06<>	<e-08< td=""></e-08<>				
22	DVB-T	56.6	23.2	5.0E-03	<e-08< td=""></e-08<>				
26	DVB-T	60.6	21.5	9.0E-03	<e-08< td=""></e-08<>				
30	DVB - T	60.2	24.9	1.0E-03	<e-08< td=""></e-08<>				
32	DVB - T	66.1	16.6	5.0E-02	3.0E-02				
36	DVB - T	58.8	32.4	6.0E-05	<e-08< td=""></e-08<>				
37	DVB - T	60.4	34.4	4.0E-05	<e-08< th=""></e-08<>				
38	DVB-H	61.9	32.0	<e-06< th=""><th><e-08< th=""></e-08<></th></e-06<>	<e-08< th=""></e-08<>				
42	DVB-T	57.3	10.7	1.0E-02	2.0E-02 🧡				
RECALL DATALOGGER									

Browse through measurements saved in the log file,



Rotate to Navigate.

BATTERY TEST & BATTERY REGENERATION

This procedure explains how to regenerate/check your batteries and calibrate the battery charge indicator.

USEFUL ADVICE:

- Charge the batteries every night after use, even if they are not completely discharged;
- Always use the "BATTERY SAVE" & "TIMER OFF" functions to increase your meter's autonomy;
- The maximum capacity of the batteries and battery charge indicator's accuracy improves by up to 20% if you carry out many battery test cycles;
- Do not replace the batteries: first carry out 3 to 5 battery test cycles until you recover the maximum capacity of the batteries.

"BATTERY TEST" INSTRUCTIONS & PROCEDURE:

1. Before carrying out the test connect the meter to the original battery charger:

- Turn on the meter;
- Press the volume key and select "configuration menu" (fig. 1);
- Select the word "meter" and press "ENTER" to confirm (fig. 2);
- Select "battery test" and select "on" (fig. 2);
- Press "enter" to confirm;
- Carefully read the various screens, pressing "enter" in succession;
- In the last instructions window, select "start" and press "enter" to start the test.

WARNING: the procedure will be cancelled if you select "exit" on any screen.



FIG. 1*



```
FIG. 3*
```

IMPORTANT ADVICE:

- Do not connect any type of load to the "f" input connector (Inb, tv head-end, amplifiers, etc.).
- Extract the conditional access module (cam), if it is present in your meter.
- 2. The battery test takes approx. 18 Hours (charging/discharging/recharging activities and measurement of the battery autonomy), during this time the meter must not be used. At the end of the test the meter will turn off automatically. In order to make sure that the test has been carried out correctly, all the meter's commands are blocked except for the reset function, which remains active so that the meter can be turned off if necessary.
- 3. The batteries will be completely charged at the end of the test.
- 4. To check the battery test results, enter METER SETUP, select BATTERY TEST function and read the results: for example 13OACLY (fig.3) = 130 minutes. The "Y" of YES confirms that the battery is still good enough, whereas an "N" for NO indicates that it could be faulty, too deteriorated or that the cycle was interrupted.

IMPORTANT NOTES:

If the test is interrupted using "reset", the battery charge indicator may provide incorrect indications, therefore repeat the battery test procedure.

* The displays shown in this guide may change according to the model and are subject to change without notice. If you connect your meter, using the S.M.A.R.T. Pro program, from the usb port to the pc, you can download the screens shown above.

LI-ION POLYMER BATTERIES

IMPORTANT:

- ALWAYS TURN THE INSTRUMENT OFF BEFORE CONNECTING THE BATTERY CHARGER;
- DO NOT LEAVE THE BATTERIES DISCHARGED FOR LONG PERIODS;
- ALWAYS CHARGE THE BATTERIES AT NIGHT FOR AT LEAST 7 HOURS, EVEN IF THEY ARE NOT COMPLETELY DISCHARGED.

USEFUL INFORMATION:

- 1. The batteries supplied are high quality and tested individually, their autonomy depends on the following conditions:
 - the LNB power consumption: Single, Dual or Quadruple;
 - the external temperature: with temperatures of less than 10°C, 20% of the capacity is lost;
 - the age of the batteries: a 10% loss in efficiency each year;
 - Remember that the TIMER OFF function, that automatically turns off the Meter after 5 o 10 minutes of inactivity, saves up to 30%.
- 2. The battery indicator has a tolerance (like all battery powered electronic devices) according to the following factors:
 - the battery's charging percentage;
 - external temperatures;
 - battery wear and tear;
 - +/- 2%.

ICONS SHOWING THE BATTERY CHARGE STATUS:



BATTERY AUTONOMY:

The battery autonomy is up to a maximum of 3 hours.



RECHARGEABLE BATTERY

This device contains a built-in Li-Po (Lithium polymer) battery that can be recharged many times. The battery contains chemicals that might wear with time even if not used. Please dispose of batteries properly.

Do not take the battery pack apart or expose it to extreme temperatures (over 50°C). If the device has been exposed to very low or high temperatures, let it rest at room temperature before use.

RECHARGING THE BATTERY

The Battery must be recharged at room temperature (about 20°C) with the device turned off. To avoid premature failure of the battery never leave the device with an empty battery for prolonged periods.

POWER SUPPLY (MAINS) AND BATTERY CHARGE (CHRG) LED STATUS



INSTRUMENT	CONNECTED TO THE MAINS POWER SUPPLY	LED MAINS	▼ LED BATT CHRG	NOTES
OFF	YES	ON	ON	Batteries in fast charge
OFF	YES	ON	OFF	Battery charge completed
OFF	YES	ON	Flashing 0.5 SECONDS OFF 0.5 SECONDS ON	Abnormal battery temperature. The recharge cycle has been suspended automatically and will automatically reset.

METER MAINTENANCE

CLEANING THE METER

Keeping the meter clean from dust and dirt is easy and helps mantain optimum working conditions over the years. The cleaning procedure is simple and quick and requires only minor attention.

Never use aggressive, chemical products (diluent) and/or abrasive or rough clothes, which may damage plastics and displays.

Always use a soft cloth, dampened with a solution of water and alcohol or a de-greasing, non-abrasive liquid soap.

The keyboard and display should be gently cleaned. Rubbing the keyboard and/or the display(s) may seriously damage their functions.

MAINTENANCE AND CARE OF THE METER

This meter has been designed to withstand severe conditions of use. Even so, its life can be prolonged by respecting some simple and effective rules:

- The meter has not been designed to withstand high temperatures (over 60°C or 140° F). These temperatures can be easily reached when the meter is left in a car, especially behind the windshield, or in a trunk. The LCD display and/or other details could easily be damaged by extreme temperatures.
- The internal battery could rapidly loose its efficiency if exposed to high or low temperatures. This may result in reduced meter autonomy when powered by its internal battery.
- When recharging the internal battery, allow good air circulation around the meter and the adapter: do not cover it with clothes and do not recharge the battery when the meter is in its transport case.
- The meter is not waterproof, even if it is protected against incidental water drops. If it comes into contact with water electronic circuits may be damaged. Allow the meter to dry thoroughly before trying to turn it on. Do not use hairdryers or other strong heating sources, just leave the meter at room temperature. If necessary, contact Rover Laboratories S.p.A. for technical assistance.

Disposal of Electronic Equipment _

Disposal of electric / electronic equipment (applicable in all CEE countries and wherever a separate waste collection system is applied).

This symbol on the packaging indicates that the product should not be considered domestic waste. The product, at the moment of disposal, should be brought to a waste collection point with the proper facilities to manage electrical/electronic appliances.



Electric/electronical appliances, if not disposed of correctly, may have negative consequences on your health and the environment. Furthermore, a proper recycling procedure helps mantain natural resources.

For more information about the correct disposal of this product, please refer to your local waste disposal management offices or the shop where this product was bought.

- NOTES -

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wecare@roverinstruments.com

skype® only for call wecare.roverinstruments



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