

# DVB-C J-83

## CATVmeter



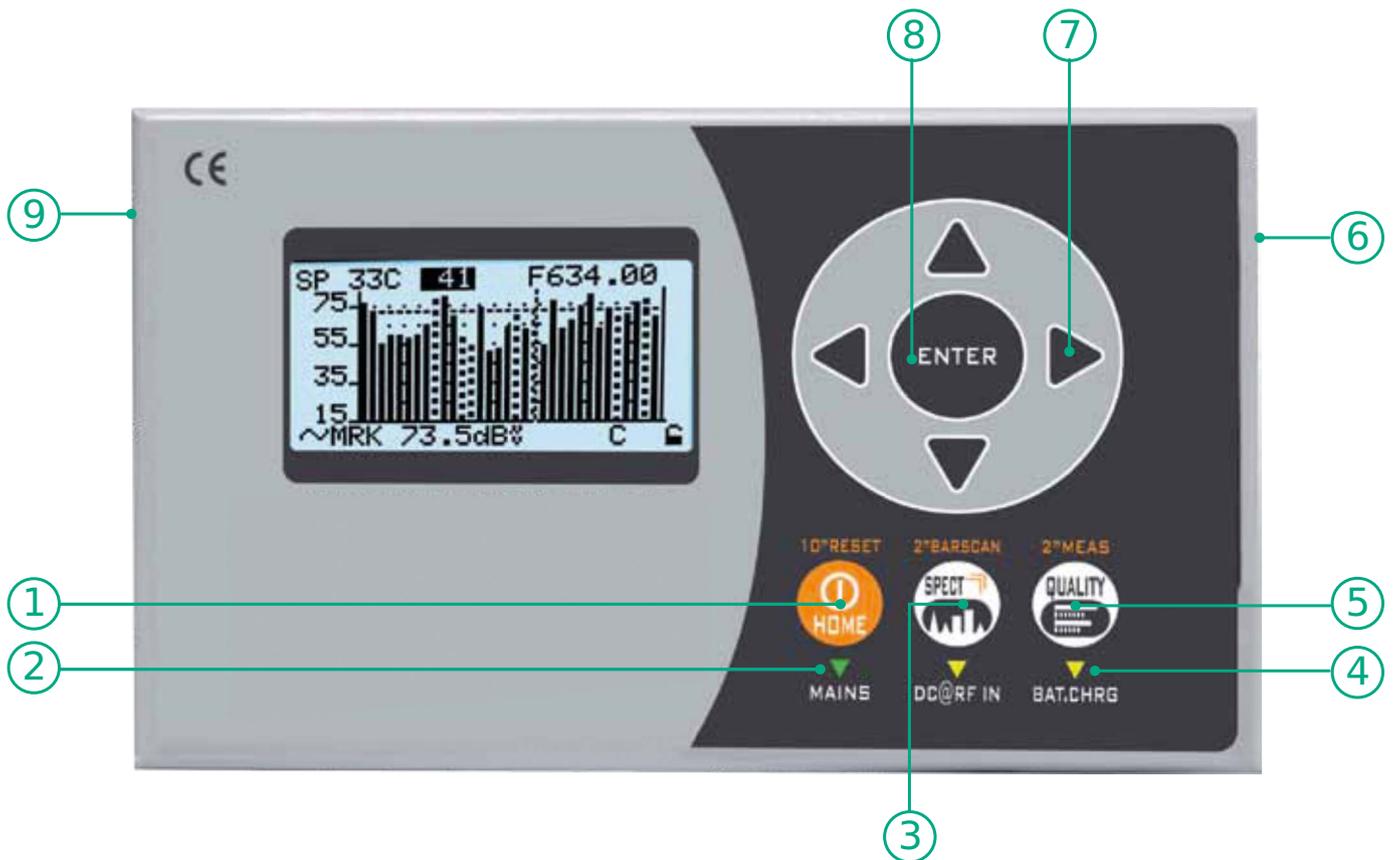
*User Manual*

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# Front Panel & Keys



1	HOME Key	Press to turn on. Keep pressed to turn off.
2	MAINS	LED on when the meter is connected to the mains power supply
3	SPECT Key	Press to visualize spectrum
4	BAT. CHRГ	LED on during battery charge
5	QUALITY Key	Press to visualize signal quality
6	RF TV Input	TV/CATV input connector 47-1.000 MHz
7	Arrow keys	Press to select and adjust values/fields
8	ENTER	Press to select/confirm
9	USB/Power Supply	5 V power supply connector via MICRO-USB and for PC connection

**N.B:**  
To comply with European standards, we used a Micro-USB connector in the instrument, because the European Community does not recommend providing power supplies. This meter can be charged and used directly from a PC via the USB socket, or using any MICRO-USB, 5V, 1A power supply.

# Navigation

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## • pOWER

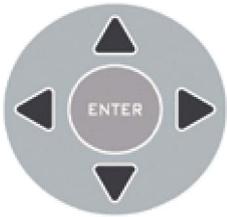


To turn on press the 'HOME' key.



To turn off keep the 'HOME' key pressed.

## • ARROW KEYS



Press the arrow keys to select the menu required or to adjust the value in a selected field (number/menu).

## • ENTER



Press to select a menu or to confirm.

## • RESET HARDWARE



With the meter turned on keep the 'HOME' key pressed for 10 sec. and then turn on again.

## • RESET SOFTWARE



With the meter turned off, turn the instrument on keeping the "ENTER" key pressed and only release when the boot has been completed.

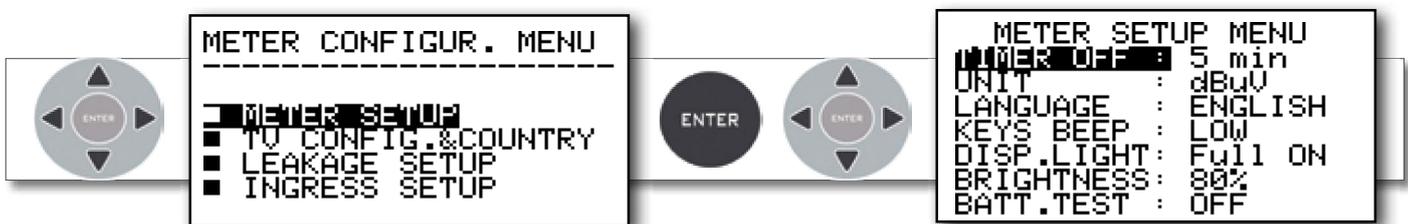
# Configurations

Press the 'HOME' key, use the arrow keys to select "CONFIG", then press "ENTER".

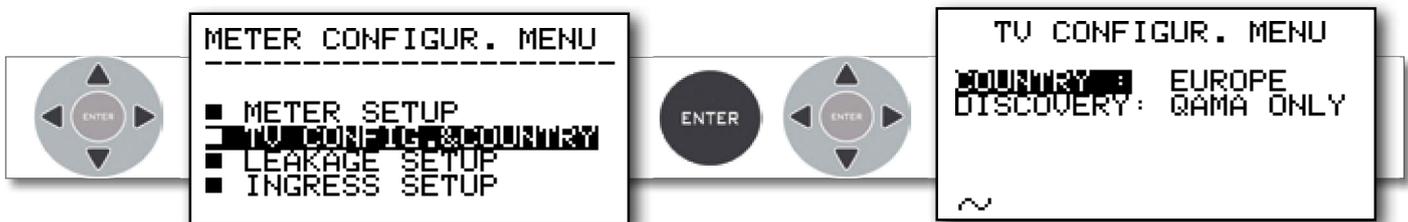


Use the arrow keys to select and adjust the settings/values in the various menus.

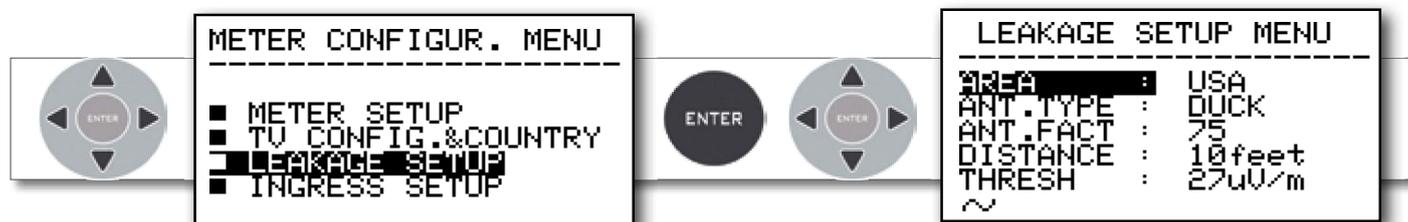
## CONFIGURATION OF THE INSTRUMENT PARAMETERS:



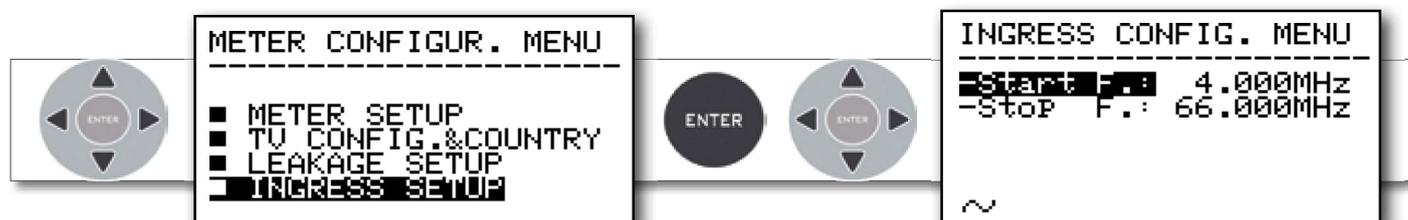
## COUNTRY CONFIGURATION & DISCOVERY MODE:



## LEAKAGE PARAMETERS CONFIGURATION:



## INGRESS PARAMETERS CONFIGURATION:



# “PLAN” Screen and Navigation

Press the “HOME” key, use the arrow keys to select “PLAN”, then press “ENTER”.

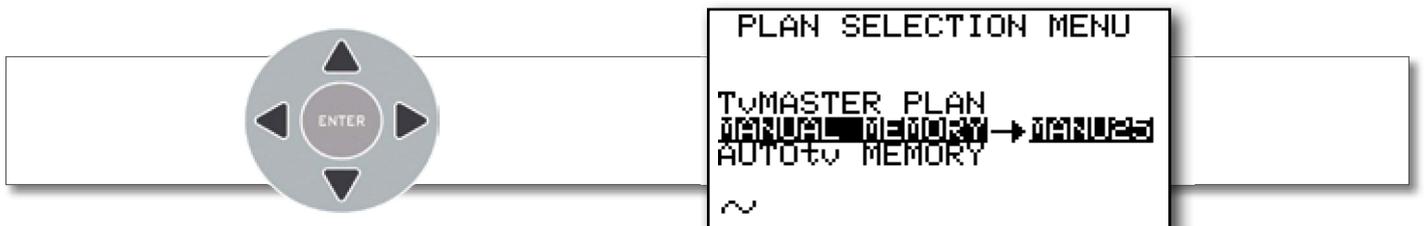


Use the arrow keys to select the ▾ MASTER (Tv MASTER PLAN) memory plans you wish to use, manual (MANUAL MEMORY) or automatic (AUTOTV MEMORY).

## MASTER TV PLAN SELECTION:



## MANUAL MEMORY SELECTION:

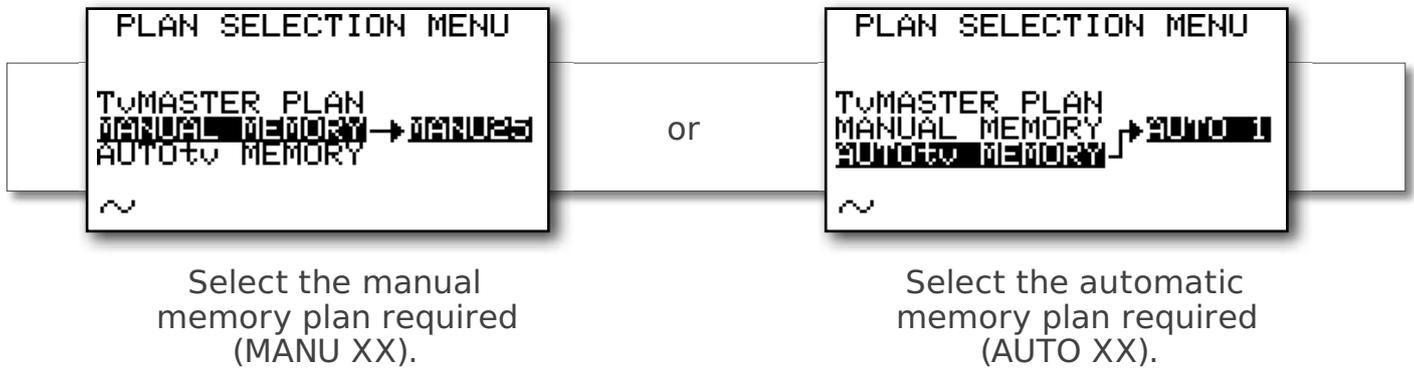


## AUTO MEMORY SELECTION:



# QUALITY measurement screen

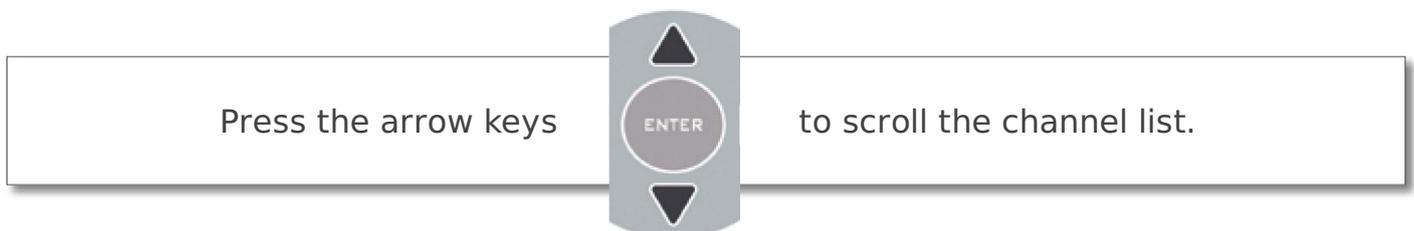
Measure the quality and power of up to 140 channels in blocks of 8 channels.



DIGITAL CHANNEL:



ANALOG CHANNEL:



Press the "HOME" key, use the arrow keys to select "MEAS", then press "ENTER".

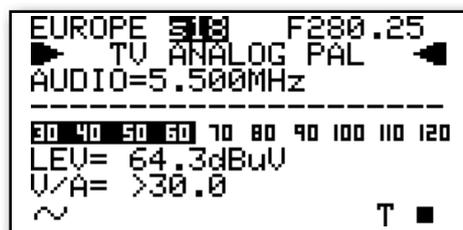


Or keep the "QUALITY" key pressed for 2 seconds.



## Analog TV Measurement screen

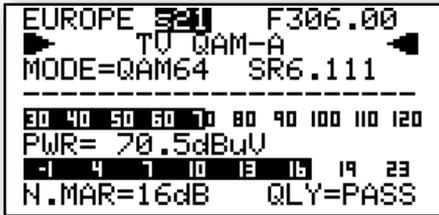
Use the "LEFT" and "RIGHT" keys to select the field required.  
Use the "UP" and "DOWN" arrow keys to adjust the value.  
Keep pressed to rapidly adjust.



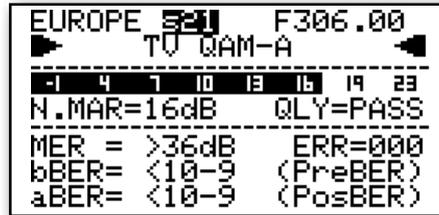
Signal Level (LEV)  
Report carrier VIDEO-AUDIO (V/A)

# DVB-C Digital CATV Measurement screen

Repeatedly press the “ENTER” key to navigate in the TV measurement screens.  
Use the “LEFT” & “RIGHT” keys to select the field required.  
Use the “UP” & “DOWN” arrow keys to adjust the value.  
Keep pressed to rapidly adjust.



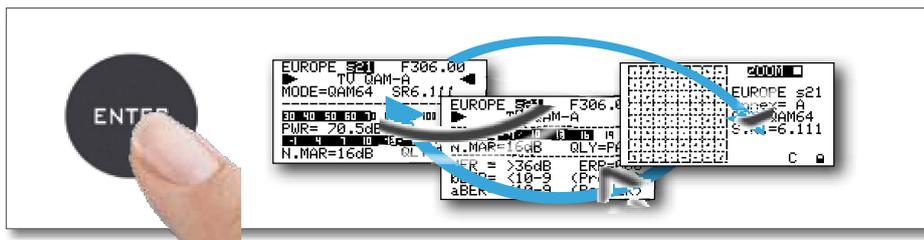
Digital Average Power (PWR)  
Noise Margin (N.MAR)  
Quality (QLY)



MER  
BER before Viterbi (bBER)  
BER after Viterbi (aBER)



64 QAM Constellation

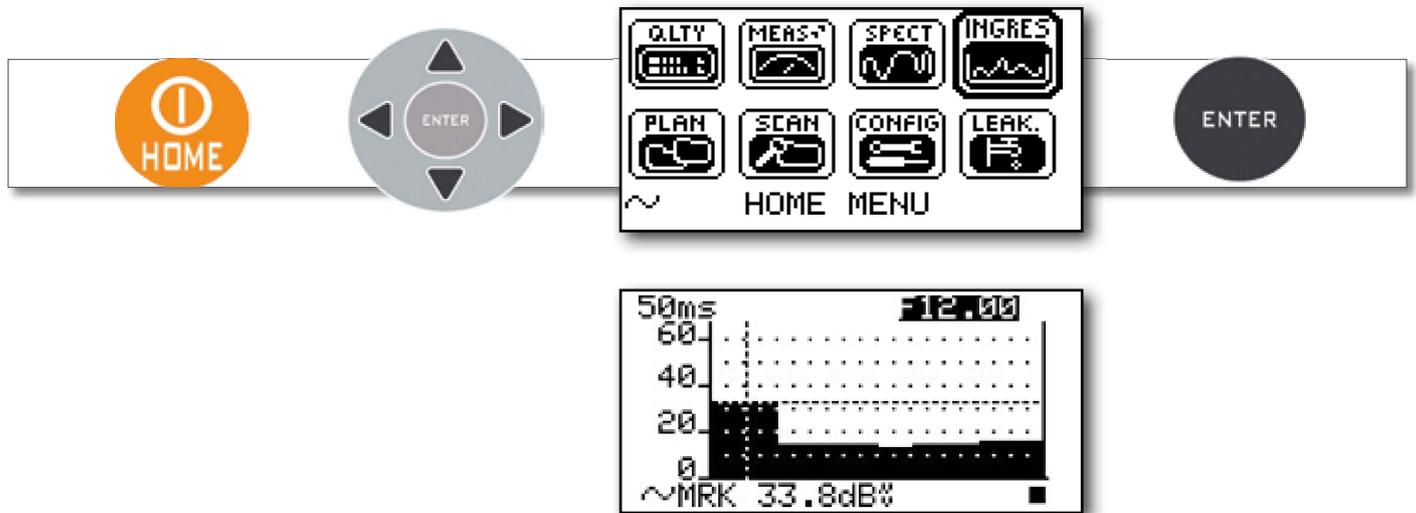


Press to navigate  
in the TV  
measurements

# INGRESS MEASUREMENT SCREEN

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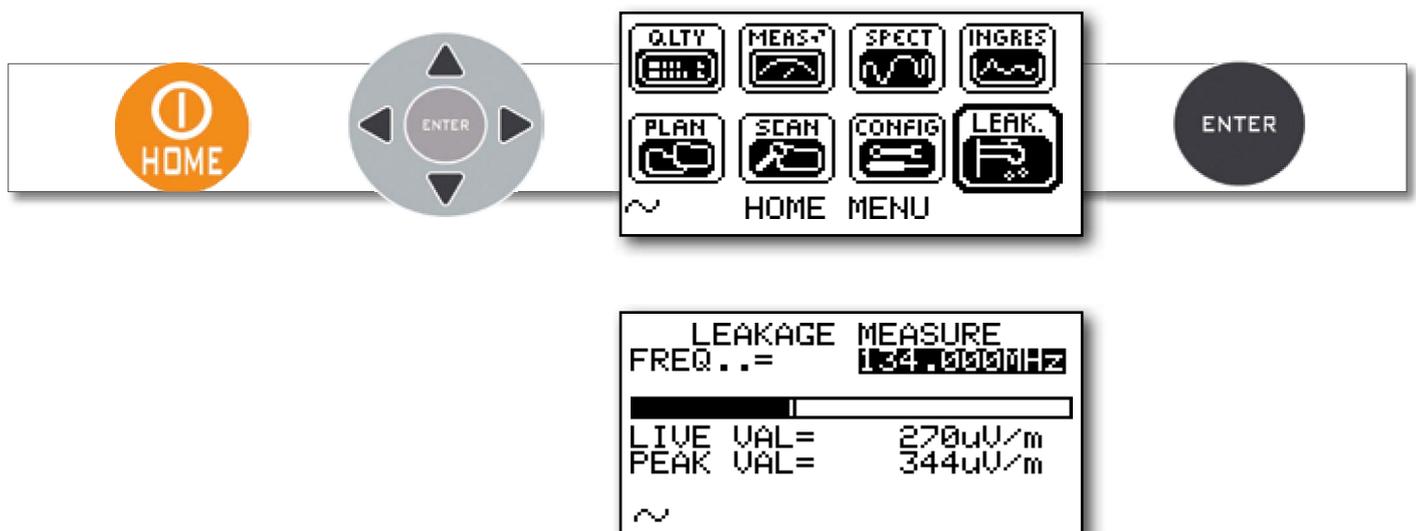
Press the "HOME" key, use the arrow keys to select "INGRESS", then press "ENTER".



# LEAKAGE MEASUREMENT SCREEN

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Press the "HOME" key, use the arrow keys to select "LEAK", then press "ENTER".



# SPECT Spectrum analyzer

Press the "SPECT" key to go to Spectrum mode



Or press the "HOME" key, use the arrow keys to select "SPECT", then press "ENTER".

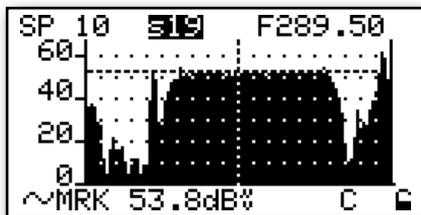


## SPECTRUM ANALYZER SCREENS



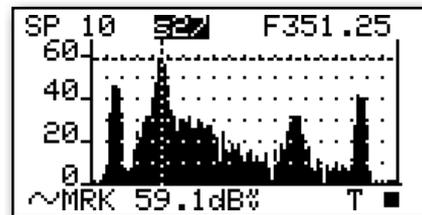
Use the arrow keys to select and adjust the spectrum's numerical values: SPAN (SP) - BANDWIDTH (B) - FREQUENCY (F) - REFERENCE LEVEL

### DIGITAL TV SIGNALS SPECTRUM

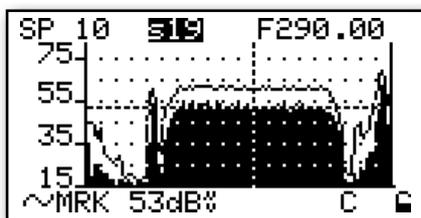


Fast spectrum

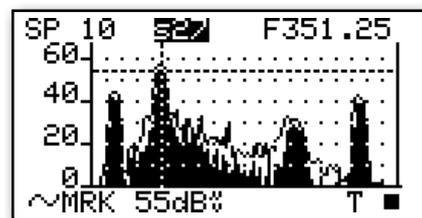
### ANALOG TV SIGNALS SPECTRUM



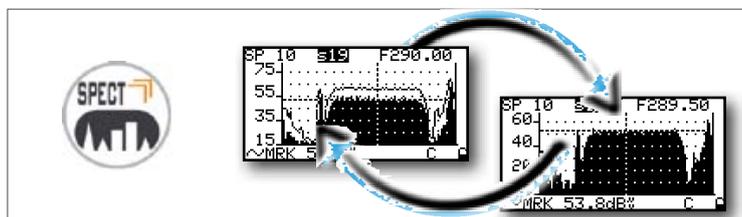
Fast spectrum



Fast spectrum with memory peak (MAX HOLD)



Fast spectrum with memory peak (MAX HOLD)

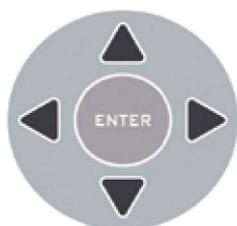


Press to cycle through spectrum analyzer screens

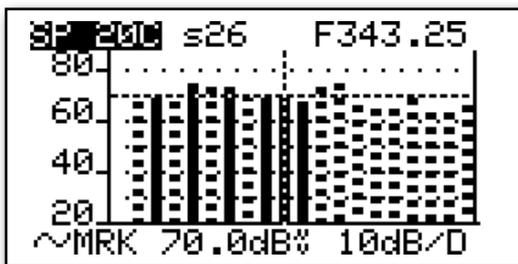
# TV: BARSCAN level/power of all channels

In the TV standard canalization the meter displays the level/power of all TV channels. In MANUAL MEMORY or AUTOMATIC TV MEMORY (AUTOTV MEMORY) the meter displays the memorized channels and distinguishes analog and digital signals using two different bars.

Press the "SPECT" key for 2 seconds to visualize the Barchart



Use the arrow keys to select and change the barchart's numerical values:  
SPAN (SP) - CHANNEL - FREQUENCY (F) -  
RESOLUTION (dB/D) - REFERENCE LEVEL



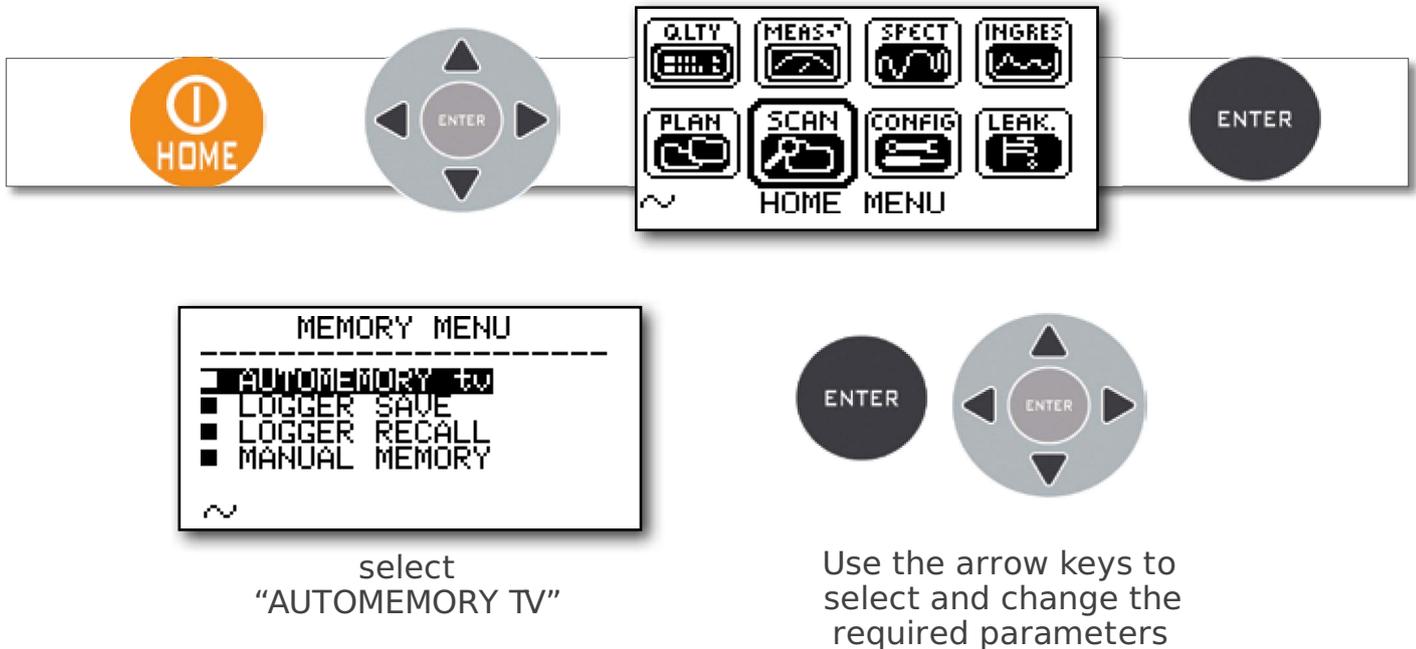
■ ANALOG CHANNELS  
⋮ DIGITAL CHANNELS

Barscan (level bar chart)

# SCAN: channel plans and log files

## TV: AUTOMEMORY TV

To automatically store all the existing channels in a city or building. Press the "HOME" key, using the arrow keys select "SCAN", then press ENTER.



- Select " DESTINAT" and select the destination file "AUTO" where the search must be saved (fig 1).
- Select "DISCOVERY" and set search mode (fig 1),
- Select "LEVEL" and set the minimum level threshold of the analog channels searched (fig 1).
- Select "POWER" and set the minimum power level of the digital channels searched (fig 1).
- Select "START" to create a new channel plan and to activate the search (fig 1).

N.B.:

If the word "OVERWRITE" appears, the selected file will be overwritten.

Wait a few minutes (fig 2), the meter indicates the recorded ANALOG & DIGITAL Channels (fig 3).



Fig 1  
Set the desired parameters and select "START"

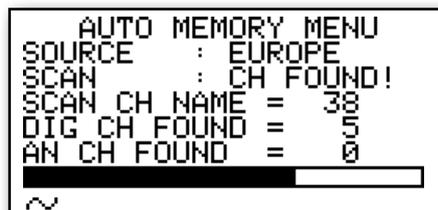


Fig 2  
Memorization in progress

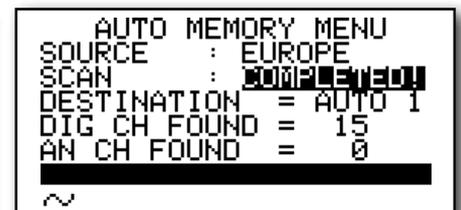
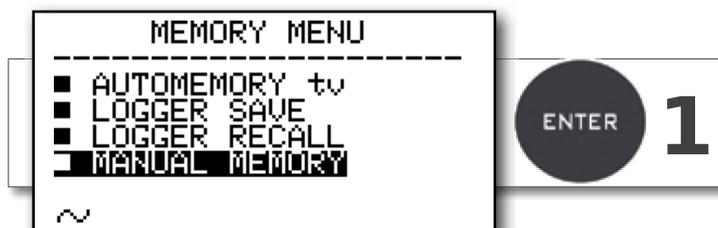


Fig 3  
Memorization complete

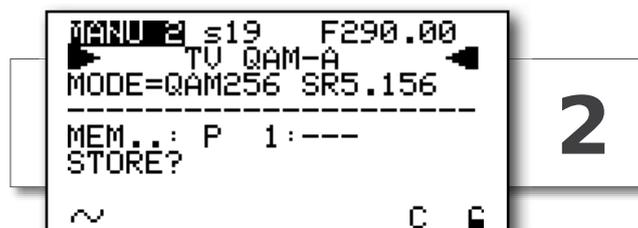
# TV: MANUAL MEMORY

How to create/edit a manual memory plan.

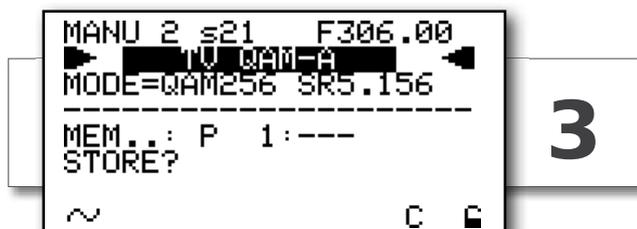
Press the “HOME” key, use the arrow keys to select “SCAN”, then press “ENTER”.



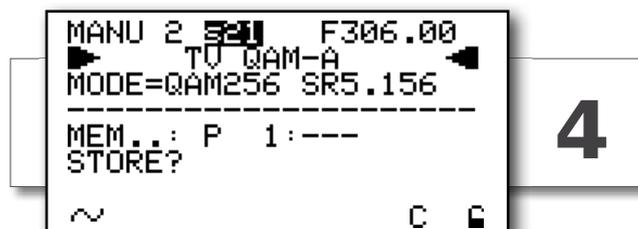
Select “MANUAL MEMORY” and press “ENTER”



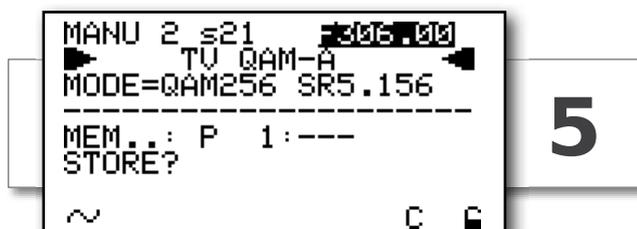
Use the arrow keys “UP” and “DOWN” and select the manual plan required



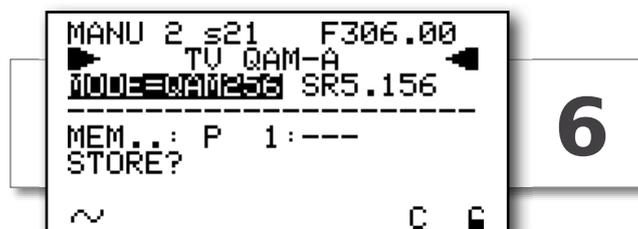
Use the “UP” and “DOWN” keys and select the type of signal required



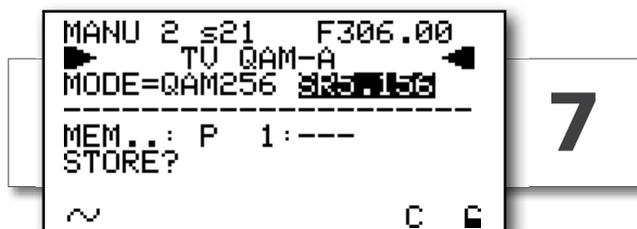
Use the “UP” and “DOWN” keys and select the channel required



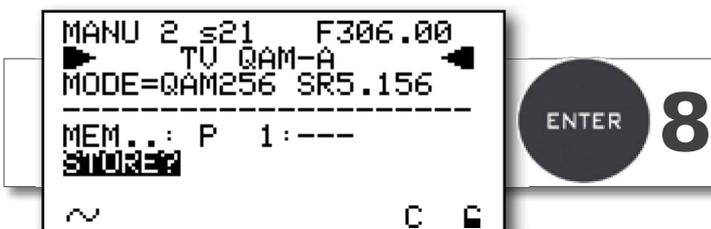
Use the “UP” and “DOWN” keys and select the channel required



Use the “UP” and “DOWN” keys and select the type of signal required



Use the “UP” and “DOWN” arrow keys to select the required Symbol Rate (SR) value.



Select “STORE” and press “ENTER” to memorize

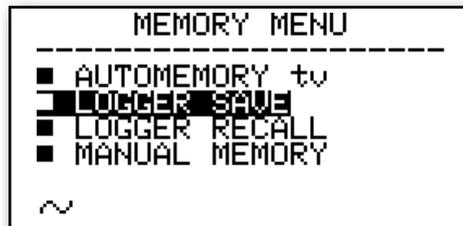
N.B.: When the memorization of a channel has finished, follow the steps described above to add other channels in the same memory plan, or in a new one. The instrument automatically suggests the zone “MEM ..: Pxx: \_\_\_”, the memory position where you can save or overwrite the new channel.

# LOGGER

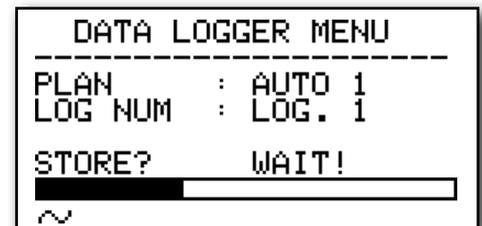
Use the arrow keys to select and change the items/values in the various menus.

## LOGGER SAVE

Press the "HOME" key, use the arrow keys to select "MEMORY", than press "ENTER".



Select **LOGGER SAVE** and press "ENTER".



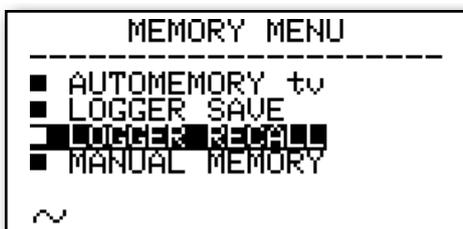
Set the desired parameters and select "STORE?" to create a new LOG file.

"DATA LOGGER" in progress.

N.B.:

If the word "OVERWRITE" appears, the selected log will be overwritten. Wait a few minutes for the Datalogger to complete.

## LOGGER RECALL



Select "Logger RECALL" and press "ENTER".



Select the "LOG" (LOG NUM) number to be recalled and select "RECALL".

CHAN	IPWR	aBER	MER	TYPE
s18	65	9		iAntU
s19	63	<E-9>	>40	QAMA
s20	65	11		iAntU
<b>s21</b>	<b>68</b>	<b>2E-9</b>	<b>&gt;40</b>	<b>QAMA</b>
s22	67	14		iAntU
s23	73	2E-9	>40	QAMA

Press the arrow keys to select the measurement of the required signal.



# 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 Home key (fig. 1);
  - Select the word “CONFIG” and press “ENTER” to confirm (fig. 1);
  - Select “METER SETUP” and press “ENTER” (fig. 2);
  - Select the word “BATT. TEST” and press the “RIGHT” keys to select “ON”;
  - 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\*

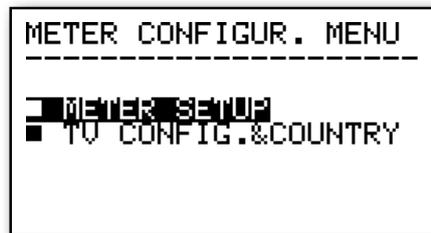


FIG. 2\*



FIG. 3\*

## IMPORTANT ADVICE:

- Do not connect any type of load to the “F” input connector (LNB, TV head-end, amplifiers, etc.).
  - Extract the conditional access module (CAM), if it is present in your meter.
2. The battery test takes approx. 12 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” (fig. 2), select “BATTERY TEST” function and read the results: for example 220BBLY (fig. 3) = 220 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

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## 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 or 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 of between: 2 hours min. and 4 hours max.



## WARNINGS

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### RECHARGEABLE BATTERY

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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

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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

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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 temporarily and will automatically reset.

# Meter Maintenance

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## CLEANING THE METER

Keeping the meter clean from dust and dirt is easy and helps maintain 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:

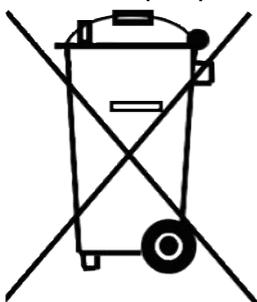
- The meter has not been designed to withstand high temperatures (over 60°C or 140° F). These temperatures can be easily reached when the meter is left in a car, especially behind the windshield, or in a trunk. The LCD display and/or other details could easily be damaged by extreme temperatures.
- The internal battery could rapidly lose 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 SAT-Kabel GmbH for technical assistance.

# Disposal of electronic equipment

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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/electronic appliances, if not disposed of correctly, may have negative consequences on your health and the environment. Furthermore, a proper recycling procedure helps maintain 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.

# SAT-Kabel<sup>®</sup>

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Errors, technical amendmends and developments are subject to change without notice!