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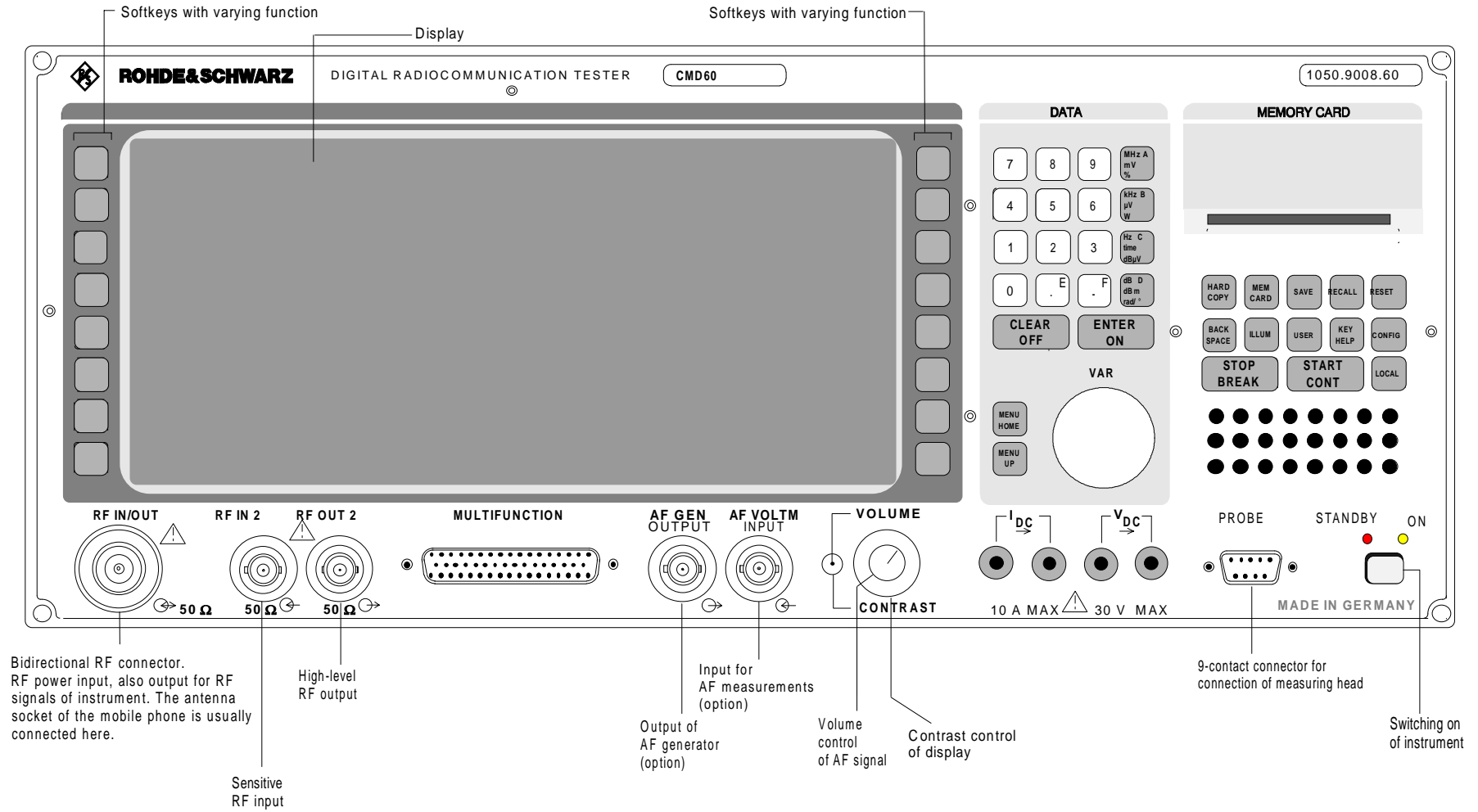
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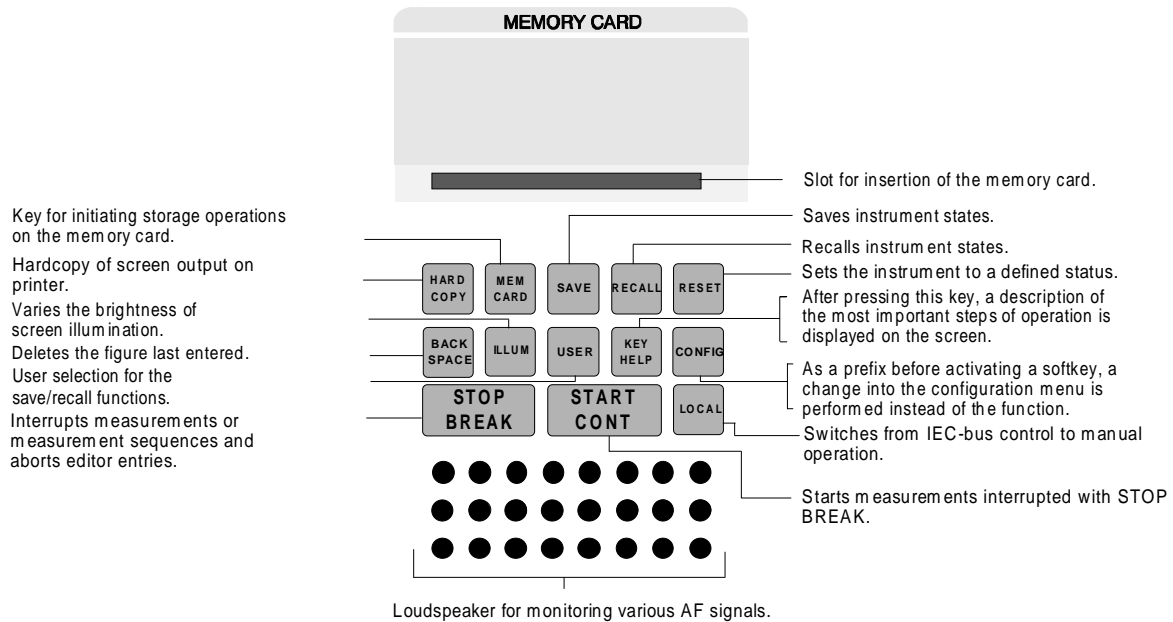
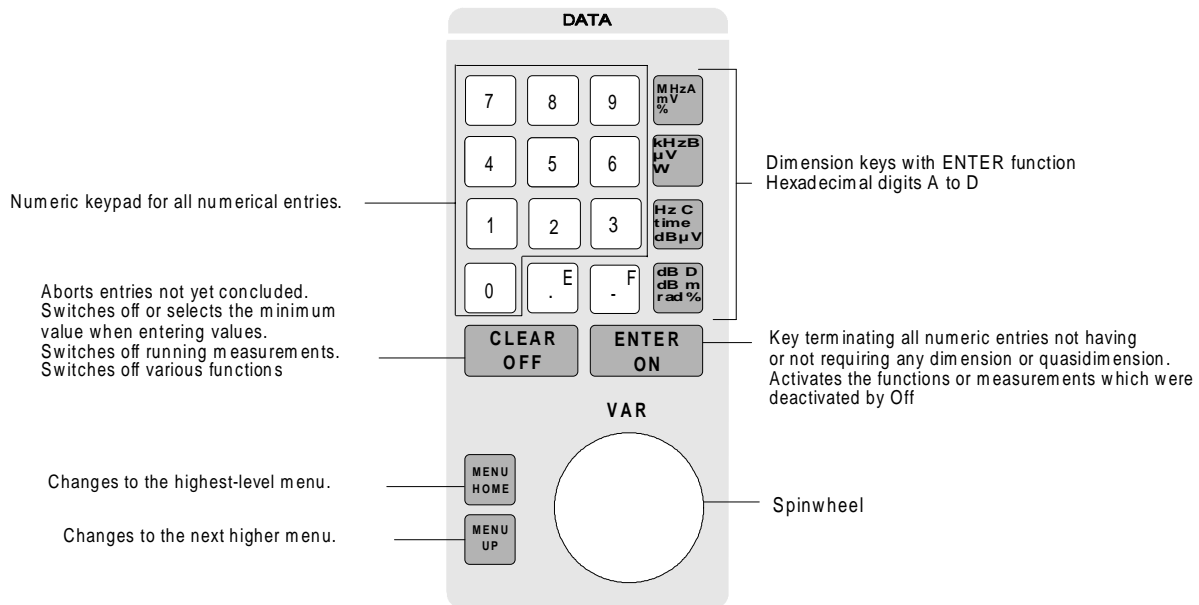
1 Preparation for Use

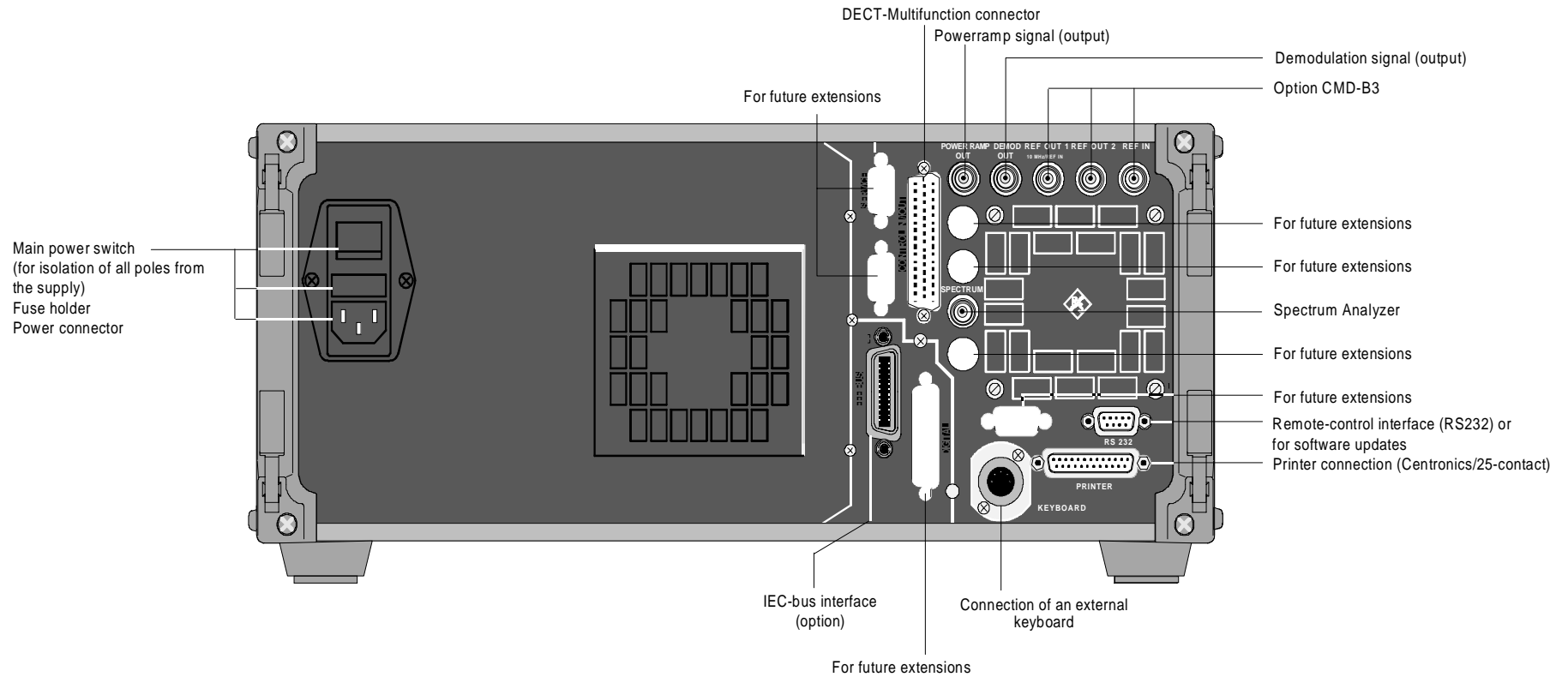
- Take the instrument out of the shipping box and check whether the items listed are all included.
- Carefully check the instrument for mechanical damage. Should the instrument be damaged, immediately notify the forwarder which shipped the instrument to you. Therefore make sure to keep the box and packing material.
- For further transport or shipment of the instrument, the original packing should also be used. It is urgently recommended to use the protective caps included in the shipping box for protection of the front and rear panel. This serves to prevent damage e.g. to the controls on the front panel.

1.1 Explanation of Front-panel and Rear-panel Views

The next pages show the front and rear views of the instrument, each with brief explanations of the controls and connectors.

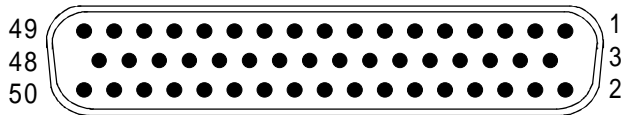






Note:

A number of different numbering conventions exists for this type of connector.



Pin assignment of 50-pin CONTROL IN/OUT connector

Pin	Signal name	Direction	Type	Description
1	TPE1	O	D	ADPCM1 signal
2	+5V	O	A	+5V for external use, max. 15mA !
3	CLK1	O	D	ADPCM1 signal
4	RPE1	O	D	ADPCM1 signal
5	REFOUT3	O	D	see section 2.5.4.2
6	TPI2_IN	I	D	ADPCM2 signal, not supported
7	TPI1_IN	I	D	ADPCM1 signal
8	RPI2_IN	I	D	ADPCM2 signal, not supported
9	RPI1_IN	I	D	ADPCM1 signal
10	PO2_OUT	O	D	ADPCM2 signal, not supported
11	PO1_OUT	O	D	ADPCM1 signal
12	/NRM/PCM_OUT	O	D	BMC signal, not supported
13	FS2_OUT	O	D	BMC signal, not supported
14	FS1_IO	I/O	D	BMC signal, not supported
15	DO_OUT	O	D	BMC signal, not supported
16	DI_IN	I	D	BMC signal, not supported
17	DCK_IO	I/O	D	BMC signal, not supported
18	12/32/SLOT_OUT	O	D	BMC signal, not supported
19	R_DATA_IN	I	D	RX data via switch to BMC, not supported
20	T_DATA_IN	I	D	External modulation (TTL) of RF generator, see section 2.4.4.4
21	/PWRINT/	O	D	indicates RX power by negative edge
22	CLK100_OUT	O	D	100Hz frame signal of BMC, 1:FP->PP, 0:PP->FP
23	T_DATA_OUT	O	D	the data stream sent by BMC
24	SYNC_LO_IO	I/O	D	DECT time synchronization signal, master: Out, see S.2.5.4.2
25	SYNC_HI_IO	I/O	D	DECT time synchronization signal, master: Out, see S.2.5.4.2
26	MAS/SLV/OUT	O	D	CMD60 mode: master: Hi, slave: Low, see section 2.5.4.2
27	TXD	O	D	reserved
28	RXD	I	D	reserved
29	VG2		A	ADPCM2 analog ground, not supported
30	GND			
31	MIC2MINUS	I	A	ADPCM2 signal, not supported
32	MIC2PLUS	I	A	ADPCM2 signal, not supported
33	GND			
34	RE2MINUS	O	A	ADPCM2 signal, not supported
35	RE2PLUS	O	A	ADPCM2 signal, not supported
36	GND			
37	BZ2MINUS	O	A	ADPCM2 signal, not supported
38	BZ2PLUS	O	A	ADPCM2 signal, not supported
39	EXTTRG	I	D	Trigger input, see section 2.4.4
40	RF_T_PWR_RMP	O	D	indicates the TX power ramp
41	VG1		A	ADPCM1 analog ground
42	GND			
43	MIC1MINUS	I	A	ADPCM1 microphone input, see section 2.4.5
44	MIC1PLUS	I	A	ADPCM1 microphone input, see section 2.4.5
45	GND			
46	RE1MINUS	O	A	ADPCM1 headphones, see section 2.4.5
47	RE1PLUS	O	A	ADPCM1 headphones, see section 2.4.5
48	GND			
49	BZ1MINUS	O	A	ADPCM1 buzzer
50	BZ1PLUS	O	A	ADPCM1 buzzer

1.2 Putting into Operation

1.2.1 Setting up the Instrument

For bench measurements, it is recommended to fold out the feet at the bottom of the instrument.



For convenient operation of the instrument note the following:

- Do not cover the ventilation openings!
- Ambient temperature 0 to 45 °C.
- Avoid moisture condensation. If it however occurs, the instrument must be wiped dry before switching on.
- Note the warm-up time of the temperature-controlled OCXO reference oscillator (option).

1.2.2 Mounting in a 19" Rack

Using the rack adapter ZZA-94 (order number 396.4905.00) the instrument can be mounted in 19" racks according to the mounting instructions supplied.

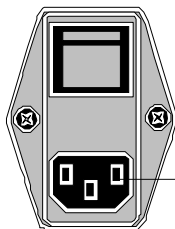


As the power switch is situated at the rear of the instrument, an all-pole mains disconnection must be near at hand for safety reasons when the instrument is mounted in a rack!

1.2.3 Connecting the Instrument to the AC Supply

The CMD is equipped with an AC voltage detection, i.e. it is automatically set to the respective AC supply voltage. (Range: AC voltage 90 to 132 V and 180 to 265 V; 47 to 440 Hz).

- Plug the supplied power cable into the rear power connector and connect the CMD to the current supply.



Power connector

1.2.4 How to ensure EMC

In order to avoid electromagnetic interference, the instrument may only be operated in the closed state and with all shielding covers. Only appropriate shielded signal and control cables may be used.

1.2.5 Switching on the Instrument

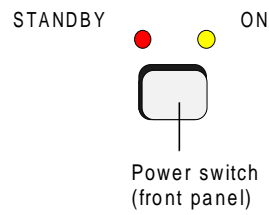
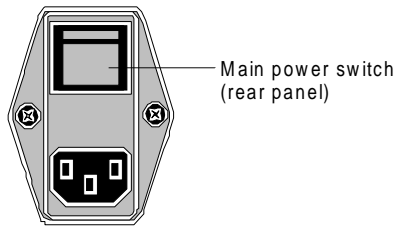
As soon as the main power switch at the rear of the instrument is in the OFF position, the complete instrument is disconnected from the power supply. If it is set to the ON position, the instrument is in standby mode or in operation, depending on the position of the power switch at the front of the instrument.

Standby position:

Only the reference frequency oscillator is supplied with operating voltage and the yellow LED (STANDBY) is illuminated.

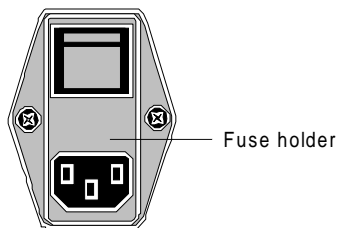
ON position:

The green LED (ON) is illuminated, all modules of the instrument are supplied with operating voltage.



1.2.6 Power Fuses

The CMD is equipped with two fuses complying with the label of the power supply. The fuses are located in the extendable fuse holder, which is inserted between power connector and main power switch.



1.2.7 Operation

When the DUT has been connected to the front panel for measurement, make sure that the rear connector for the spectrum analyzer is terminated by 50 Ω , either using the supplied 50- Ω terminator or a 50- Ω spectrum analyzer or signal generator. An open connector will lead to false results of the level measurement. Termination of the front-panel sockets not used is not required.