DIGITAL EEG SIMULATOR

The digital EEG simulator is a digital signal generator simulating a real patient during tests and demonstrations of EEG recording instruments. Battery powered operation, being small of size and low weight make it ideal for demonstration at exhibitions or fairs

Instructions for use:

Operation.
Connect the EEG simulator as described under " Connection to EEG equipment". The slide switch on the front of the simulator switches the simulator ON and OFF. A LED diode (green light) flashes once every 2 seconds to indicate that the simulator is ON. The output signals are electrode signals recorded against the reference electrode "REF". This enables remontaging of the electrode inputs to any desired montage. Note that on some electrodes there is no signal. The presence of signal on specific electrodes depends on the Eprom present in the EEG simulator. There are various EEG's stored in Eprom available, for more information contact the manufacturer.

Battery replacement.
Remove the cover from the battery compartment by displacing the clip. Remove the battery from the compartment. Pull the battery clip carefully off the battery terminals and fit it on the new battery noting the correct polarity. Place the new battery into the compartment and refit the cover.

Connection to EEG equipment.
A transition cable must be used to make the electrical connection between the digital EEG simulator and the electrode inputs of most EEG amplifiers. The exact electrode positions are descibed in the enclosed table " Flatcable transition cable connections". EEG amplifiers made by specific manufacturers (Medelec, Oxford) are fitted with a 25 way D-connector intended for direct connection of an electrode cap ("ElectroCap") The EEG simulator can be connected directly to the 25 way D connector of these EEG amplifiers.

Cautions and warnings.

- The intended use of the digital EEG simulator is the generation of test signals to display syntetic EEG waveforms for product promotion fairs and sales meetings.
- The digital EEG simulator is not intended to be used in a patient environment.
- The digital EEG simulator may not be used to verify the performance or to perform calibration of EEG amplifiers and EEG recording instruments.

Specifications:

Circular EEG duration	***:***	***60 seconds***
Sample frequency	***:***	***120Hz***
Digital to Analog conversion	***:***	***8 bits***
Crosstalk between channels	***:***	***> -40dB***
EEG signal output levels:		***5 to 500uV, typically 50uV***
EEG signal output impedance	***:***	***1,8 kilo-ohms***
Number of active outputs	***:***	***Maximum 32***
Power	***:***	***9V block battery (e.g. Duracell MN1604)***
Power consumption	***:***	***approx. 2,5mA***
Battery life time	***:***	***approx. 200 hours operation***
Dimensions	***:***	***121 * 70 * 23 mm***
Weight	***:***	***160g***

Flatcable transition cable connections:

25 pin connector:

Pin nr.	Pin colour	Wire colour.	Signal
1.	white	brown	Fp1
14.	red	brown	Fp2
2.	white	red	F3
15.	red	red	F4
3.	white	orange	C3
16.	red	orange	C4
4.	white	yellow	P3
17.	red	yellow	P4
5.	white	green	O1
18.	red	green	O2
6.	white	blue	F7
19.	red	blue	F8
7.	white	purple	T3
20.	red	purple	T4
8.	white	grey	T5
21.	red	grey	T6
9.	white, long	white	ground
22.	red	white	Cz
10.	white	black	Fz
23.	red	black	Pz
11.	white	grey	A1
24.	red	grey	A2
12.	white	purple	Pg1
25.	red	purple	Pg2
13.	white	blue ground	or ref

9 pin connector

Pin nr.	Wire nr.	Signal
1.	1. (Red)	Oz
6.	2.	25
2.	3.	26
7.	4.	27
3.	5.	28
8.	6.	29
4.	7.	30
9.	8.	31
5.	9.	32

For more information contact your local distributor or:

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