ELECTROSTATIC DISCHARGE SIMULATOR SYSTEM

NSG 433

OPERATING INSTRUCTIONS

Publ. 1501E

1 Safety considerations

ATTENTION

This instrument and all the accessories mentioned in this manual operate at high voltage. Any careless handling or non-observance of the operating instructions can result in unpleasant consequences.

Care should be taken to ensure that only trained personnel work with the instrument.

The instrument should be discharged before any interruption in its use. Disconnect the instrument from the mains and discharge it at the end of all working sessions.

Persons fitted with a heart pacemaker must not use the instrument nor remain in the test vicinity while it is in use.

Component replacements and internal adjustments must be carried out only by qualified service personnel.

Non-observance of the operating instructions while working with high voltage equipment can be lethal!

SCHAFFNER ELEKTRONIK AG, Luterbach, Switzerland and the associated sales organisations accept no responsibility for personal or material damage or for any consequential damage that results through irresponsible operation of this instrument.

4 Operating elements

1 Display instrument (DVM)

2 Earth connection

3 Earthing cable

4 Earth connection for laboratory cable

5 "Cont/Single" switch

6 HV level adjustment

7 Pulse trigger button

8 Test finger (IEC-conform)

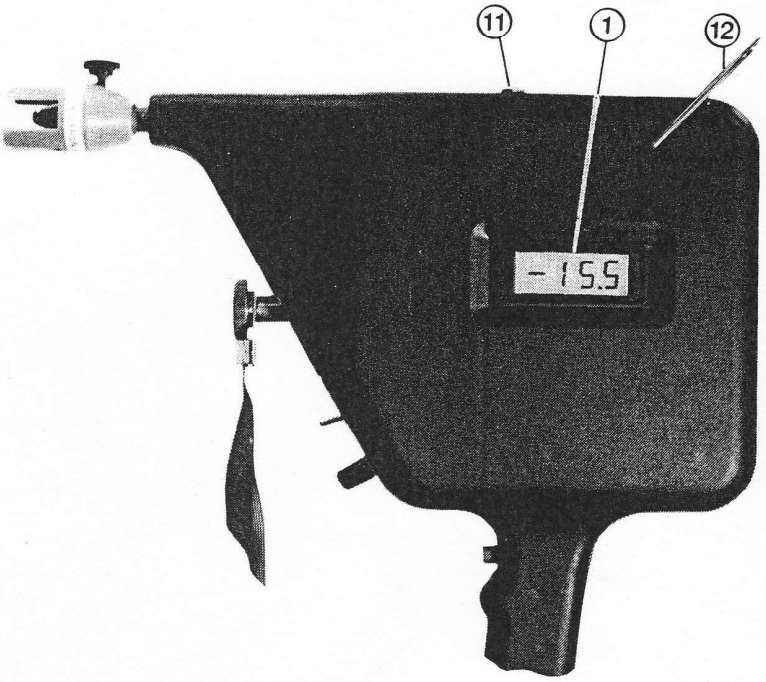
9 Spacing ring

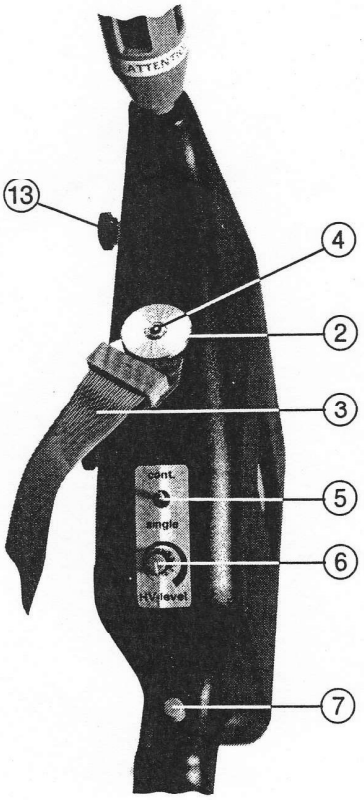
10 Locking screw

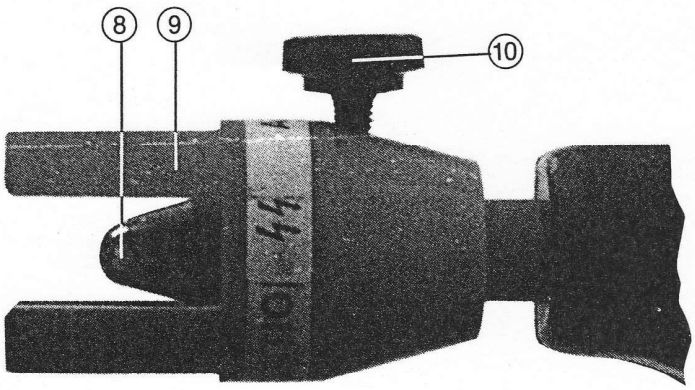
11 Mounting for options

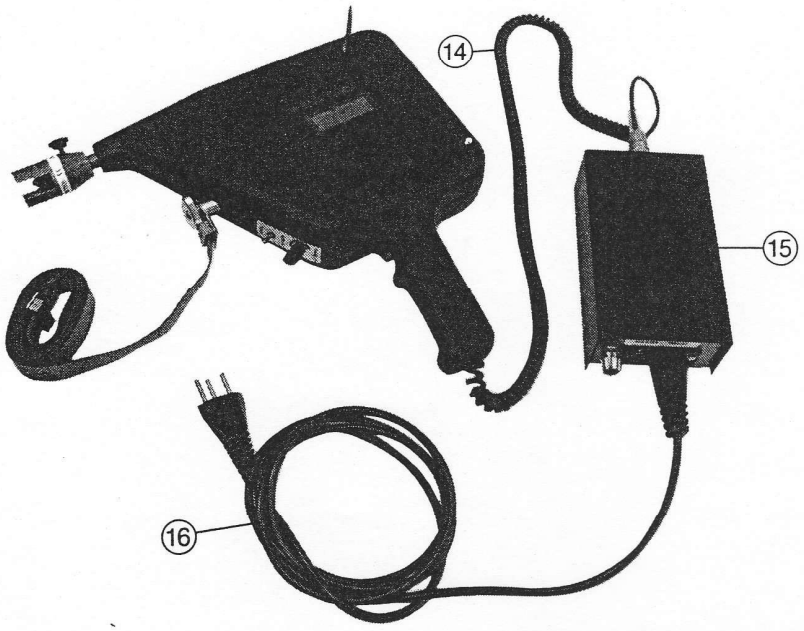
12 Suspension sling

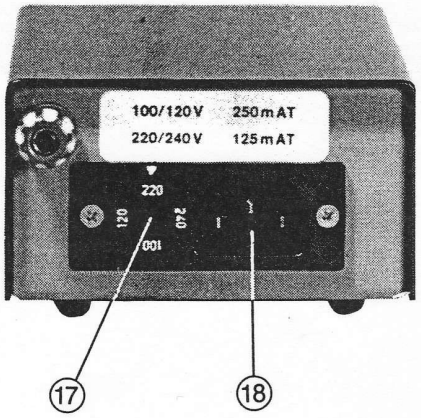
13 HV cascade











14 Spiral power cable

15 Power supply

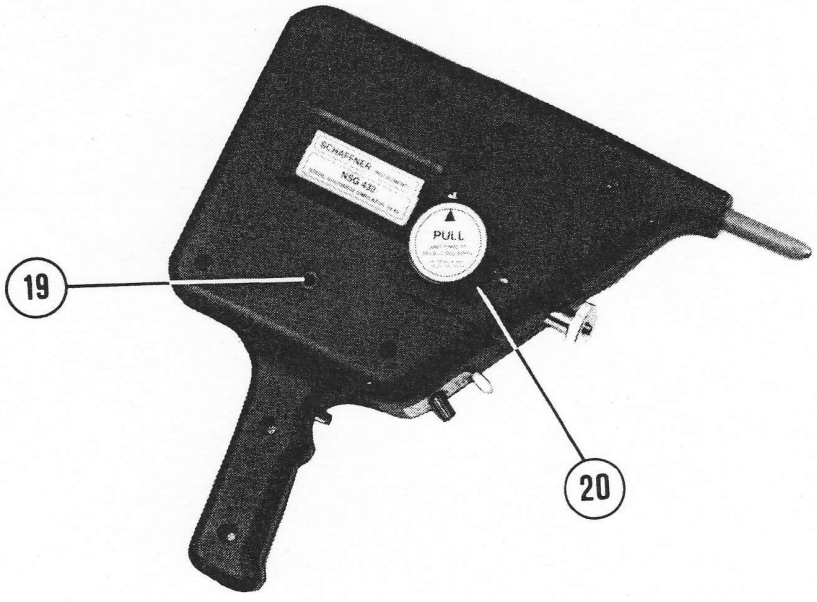
16 Mains cable

17 Voltage selector with fuse

18 Mains connection

19 Bush for tripod-mounting

20 Polarity selector (+/-)



12.2 Technical specifications
(in conformity with IEC 801-2)

Discharge voltage V_o (air-discharge)	2 - 18 kV
Discharge voltage V_o (with contact discharge adapter)	2 - 9 kV
Polarity	Positive/Negative (switchable)
Discharge capacitor C_s	150 pF ± 10%
Discharge resistor R_d	330 Ω ± 10%
Operating modes	Single/Repetitive discharge
Test finger	Conforms to IEC 801-2
Max. discharge energy	47 mJ
Rise time (air-discharge)	< 1 ns for voltages ≤ 8 kV
Rise time (with contact discharge adapter)	0.7 - 1 ns
First current peak at a voltage set to: 2 kV	7.5 A ± 10%
4 kV	15 A ± 10%
6 kV	22.5 A ± 10%
8 kV	30 A ± 10%
(using contact discharge adapter)	
Current pulse shape	conforms to IEC 801-2
Voltage indication tolerance (LCD)	± 5%
Holding time	> 5 s
Charging resistor R_{ch}	100 MΩ