

MICROFLOCKER



Operating Instructions

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MICROFLOCKER SYSTEM

IMPORTANT	READ AND UNDERSTAND THESE OPERATING INSTRUCTIONS BEFORE USING THE MICROFLOCKER
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THIS EQUIPMENT MUST NOT BE OPERATED BY ANY PERSON THAT IS FITTED WITH A 'PACEMAKER' DEVICE OR HAS A HEART CONDITION.



REMEMBER – electricity and water do not mix!
Keep the Microflocker clear of all known liquid sources.



IMPROPER USE CAN CAUSE ELECTRIC SHOCK

RESPIRATORY & EYE PROTECTION must be worn while applying or handling loose flock. Disposable respirators must be CE marked and should also be marked with disposable respirators standard EN 149: 2001. The masks should provide protection to at least FFP2 level.

- **NEVER** use as a 'STUN GUN' or 'IMMOBILSER'
- **NEVER** look into the applicator when the unit is switched on
- **NEVER** touch the electrostatic charging plate in the flock applicator when the unit is switched on. The charging plate will hold a charge for up to one minute after the Microflocker has been switched off.
- **ENSURE** that the HT cable is kept clean to ensure no leakage of static charge
- **NEVER** use near paints, adhesives or powders which are flammable. If in doubt, please consult the manufacturers' data sheet.
- **DO NOT** wear rubber gloves or rubber-soled shoes when operating the Microflocker unless an earth strap is worn.



IT IS RECOMMENDED THAT AN EARTH STRAP IS WORN

This will assist in the dissipation of static charges from the operator, limiting the chance of shock from charge build up.

- **ALWAYS** wear eye and respiratory protection when operating the Microflocker
- **NEVER** drop the Microflocker as damage may occur which could compromise its safe operation

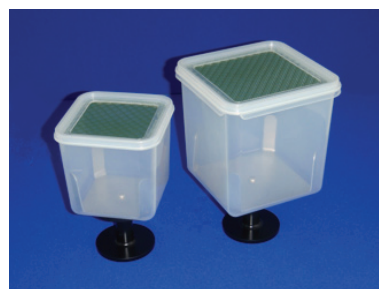


DO NOT dispose of this equipment with normal waste. Under the WEEE directive (Waste Electrical and Electronic Equipment Directive – Directive 2002/96/EC), electrical equipment should be returned to the manufacturer for possible recycling. Please return equipment to Campbell Coutts Ltd for recycling or disposal.

MICROFLOCKER SYSTEM COMPONENTS



GENERATOR



**OPTIONAL 4" & 5" Sq.
APPLICATORS**



FOOTSWITCH



EARTH LEAD



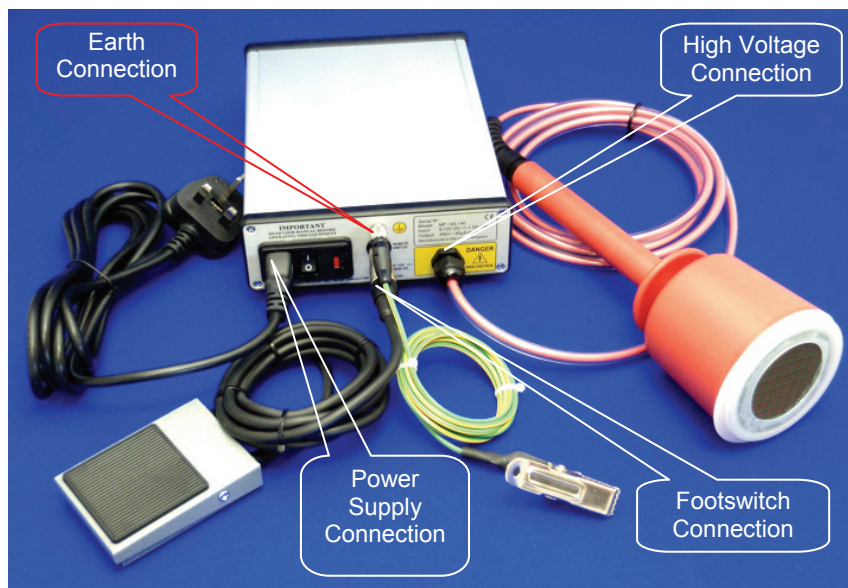
75mm APPLICATOR SET



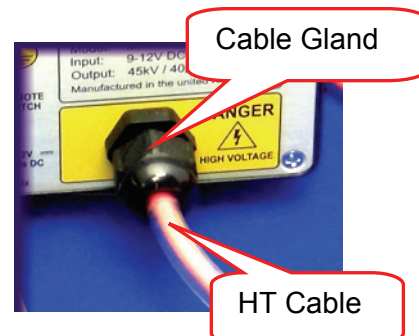
**35mm APPLICATOR SET
(Optional Accessory)**

MICROFLOCKER FLOCKING SYSTEM

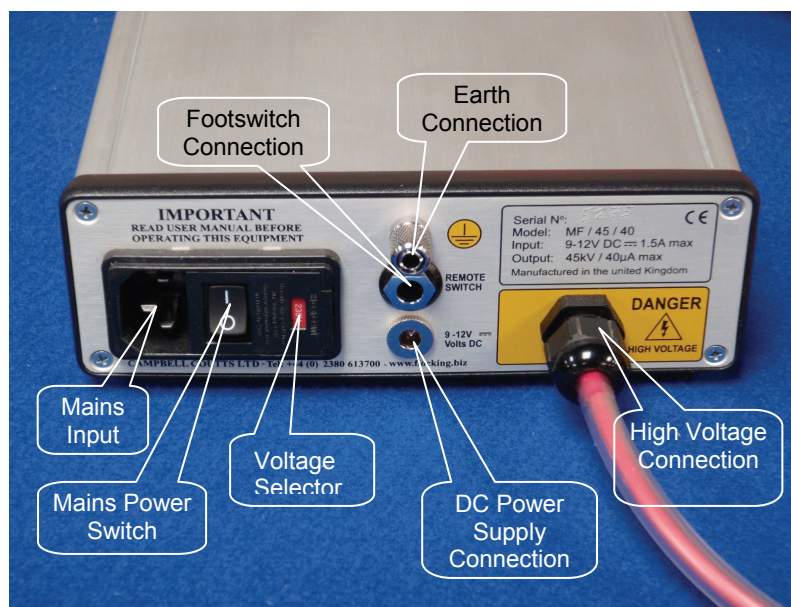
CONNECTION INSTRUCTIONS



Ensure that the HT Cable is pushed fully home into the connection & tighten the cable gland.



Check that the voltage selector is displaying the correct voltage setting for your region (either 230V or 115V). If this is not the case, see below for how to set the Microflocker to the correct voltage.



How to set the Voltage

- 1) Determine which voltage setting is required (either 230V or 115V).
- 2) Unclip the back panel.
- 3) Using a small flat-headed screw driver, **gently** prise out the red fuse cartridge.
- 4) Turn the red fuse cartridge clockwise by 180°.
- 5) Replace the red fuse cartridge, pushing it fully home.
- 6) Clip the back panel back into position, the amended voltage setting should now be visible through the aperture of the back panel.

Back Panel – Clip open at this point



Aperture through which the voltage setting is visible

MICROFLOCKER FRONT PANEL LAYOUT



1. Power On/Off switch. This switch operates on the low voltage side of the supply power. The switch on the back panel is the Mains On/Off switch.
2. Power "On" indicator. This light is lit when the Power switch on the front Panel (1) is switched to the "On" position.
3. A 2A anti-surge fuse is fitted to protect the unit.
4. The High Voltage indicator lamp illuminates when the generator is producing the high voltage output.
5. The output voltage selection switches adjust the output voltage to the following levels.

Switch Position	Output Voltage kV dc	Applicator
0	20.5	35mm & 75mm
1	23.0	35mm & 75mm
2	25.5	35mm & 75mm
3	28.0	35mm & 75mm
4	30.5	35mm & 75mm
5	33.0	35mm & 75mm
6	35.5	75mm Only
7	38.0	75mm Only
8	42.5	75mm Only
9	45.0	75mm Only



**DO NOT USE THE 35mm Applicator above setting 5
(Risk of electric shock)**

ASSEMBLING THE APPLICATOR & FILLING THE POT

FILLING THE FLOCK APPLICATOR POT

1. Remove Mesh Front carefully to avoid damaging the mesh
2. **IMPORTANT - TURN OFF** the power switch on the front panel whilst filling the flock container. **Safety Glasses** should be worn to eliminate possible eye hazards due to flock fibres emanating from the applicator head.
3. **IMPORTANT** - In certain circumstances, the aluminium charging plate may temporarily retain electrostatic charges, even after the power switch has been turned off. Before replenishing the applicator with flock it is always 'Best Practice' to dissipate these charges. To do so, remove mesh front and hold the earth lead clip to the charging plate. A small 'electric arc' may be observed at this point. This arc is not harmful if safety advice has been followed.
4. The applicator is now ready to receive flock. We suggest that the applicator only be filled to about 3/4 of its capacity to allow effective electrostatic charging.
5. Ensure that the applicator mesh is replaced firmly in position.



Fill the pot
with flock



Clip the lid
onto the
top of the
pot



Slide the
pot into the
applicator
handle



DO NOT USE THE 35mm Applicator above setting 5

(Risk of electric shock)

MICROFLOCKER FLOCKING SYSTEM

OPERATING INSTRUCTIONS

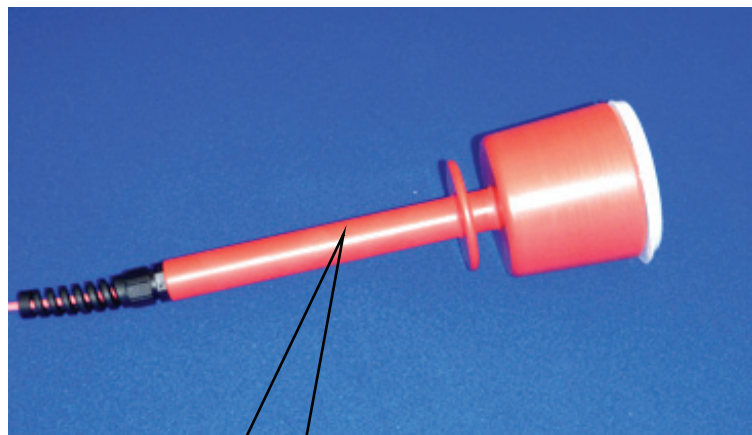
FLOCKING

IMPORTANT - When the Microflocker is in use it should only be held by the small diameter of the handle and never by the large diameter to avoid the risk of an electric shock.

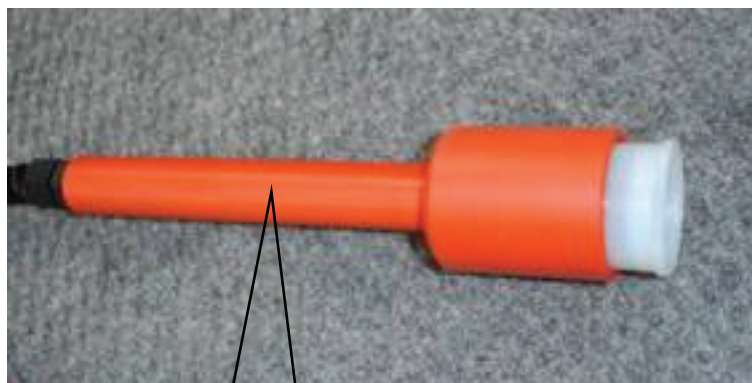
NEVER HOLD THE APPLICATOR BY THE LARGE DIAMETER DURING OPERATION



RISK OF ELECTROSTATIC SHOCK!!



**Only hold the
applicator HERE**



**Only hold the
applicator HERE**



DO NOT USE THE 35mm Applicator above setting 5

(Risk of electric shock)

FLOCKING INSTRUCTIONS

Preparation of Flocking Area

Ensure that work area is clean and clear of any and all flammable substances. Also that provision has been made to contain any excess flock. Ensure that the surface to be flocked is clean and grease free (to enable a good contact for the adhesive).

1. Select the desired flock and fill the hand applicator. Do **NOT** fill the applicator more than $\frac{3}{4}$ full.

When using two or more flocks of different length, always apply the longest flock first and end with the shortest flock.

2. Select an appropriate mesh size for the applicator. The fine mesh should be used for flock up to and including 1mm long and for flock longer than 1mm the coarse mesh should be used. It may be necessary to experiment with the mesh size to get the best flow of flock.
3. Cover the area to be flocked with a suitable / recommended adhesive. The adhesive must remain wet during the flocking process, so only coat an area that can be flocked before the adhesive starts to dry.

Guidelines for Adhesive Application

For the flock fibres to adhere adequately to the substrate it is necessary for at least 10% of the overall flock length to be embedded in adhesive. For this to occur, three things are essential, firstly, that enough adhesive is applied to the substrate. Secondly, that the substrate does not absorb the adhesive. Thirdly, that the adhesive is wet when it is flocked into.

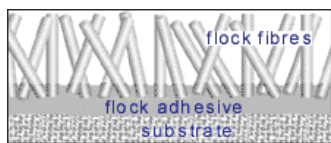
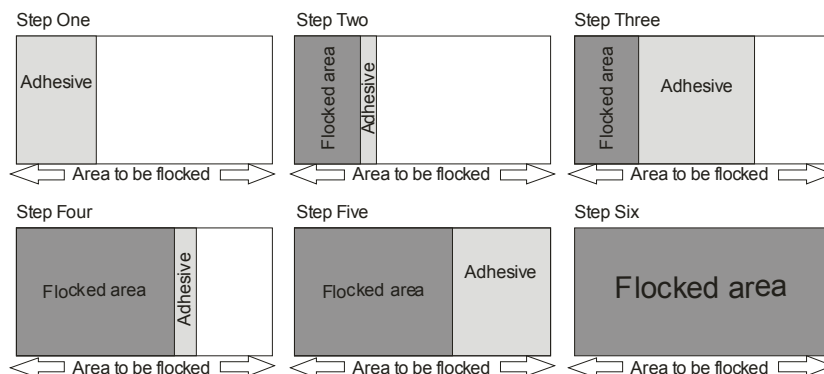


Diagram showing at least 10% of the length of the flock fibres imbedded in adhesive

If the substrate is porous (e.g. wood) or absorbs some of the adhesive that has been applied, then it will be necessary to prime the area to be flocked prior to the application of adhesive. To prime the area, it is usually sufficient to apply a thinned down layer of the adhesive and allow it to cure/set. Once that has been done, you can apply a heavier deposit of the adhesive (in a non-thinned down state) to flock into.

If you intend to flock a large area, it is unlikely that the adhesive will remain wet for long enough for the area to be flocked all at once. Therefore, in order to flock a large area, it has to be done in stages employing the “wet edge” technique.

Diagram describing the “wet edge” technique



The edge of “unflocked” adhesive is painted over with fresh adhesive once the flocking of that section has been completed. In this way, it is possible to seamlessly cover a large area with flock.

FLOCKING INSTRUCTIONS (continued)

4. Connect the crocodile clip on the earth lead, to the adhesive coated object. The clip should make contact with the adhesive or, if the item to be flocked is non-conductive, flat and thin (e.g. t-shirt, wallpaper, greetings card, etc) a metal plate can be placed below / behind the object and the crocodile clip connected to that.
5. It is recommended that the operator is suitably earthed, using an earth strap to stop static build up.
6. Point the applicator head at the object to be flocked. The applicator head can be pointed in any direction (up, down, left, etc) whilst flocking, but if a lot of flocking is to be carried out with the applicator head downwards, it is recommended that an optional 'fingered' charging plate should be fitted, as the flock may lose contact with the charging plate, resulting in the flock not being charged properly (which would lead to substandard flocking).
7. Depress the foot switch to charge the flock. It may be necessary to agitate the flock by gently shaking the unit while flocking. Flock fibres should now come out of the mesh from the applicator head and cover the object.

The distance between the applicator mesh and the object to be flocked should be approximately 125mm / 150mm (5- 6 inches) maximum.

8. Do **NOT** put hand close to the applicator pot while in use.
9. Move the applicator across the area to be flocked, ensuring that sufficient flock is flowing. If "balling" occurs or flock is being "stubborn to flow through the mesh, agitate the applicator as you flock.
10. If the flock builds up on the mesh, clean the mesh and reduce the voltage setting of the Microflocker.
11. Once the flock has been applied to the desired level, release the foot switch and put the hand applicator down.
12. Gently shake the excess flock from the flocked area, but do NOT touch the flocked area.
13. Follow instructions given by your adhesive manufacturer as to how to set/cure the adhesive.
14. Once the adhesive has set, excess flock may be removed more vigorously and the flocked area may be touched.

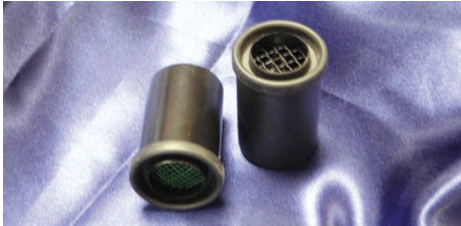
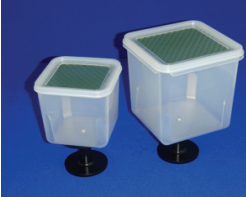
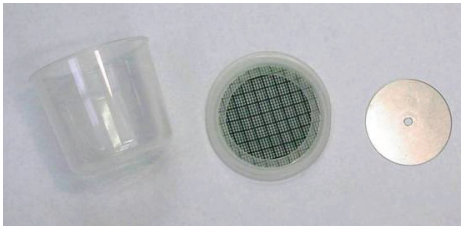
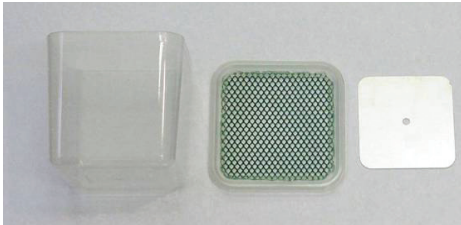
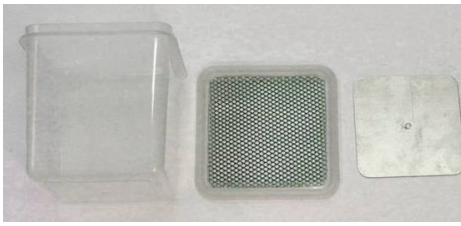
Contact Campbell Coutts Ltd sales department on 02380 613700 for further information.

TROUBLE SHOOTING GUIDE FOR FLOCK SPRAYING

PROBLEM	CAUSES	SOLUTION
Flock not adhering to adhesive	Too thin a layer of adhesive	Increase adhesive application
	Adhesive has been allowed to skin	Consult adhesive manufacturer in order to increase 'open' time of adhesive Flock more rapidly after applying adhesive
	Rapid absorption of adhesive into porous substrates i.e. wood, paper etc	Prime surface
	Poor Earthing / Grounding	Improve Earthing / Grounding. If necessary using an earth pin into adhesive
Flock not forming pile effect	Poor electrostatic charge	Check the voltage setting and increase, if necessary
	Poor Earthing / Grounding	Improve Earthing / Grounding
	Poor electrostatic charging as a result of poor condition of flock	Change flock (also refer to Manufacturers Data Sheet)
Problem applying correct amount of adhesive	Viscosity of adhesive low	Reduce addition of water / solvent or consult adhesive manufacturer
	Surface preparation of the article required	Prepare surface so that it accepts adhesive
	Incorrect adhesive for the surface	Consult adhesive manufacturer
	Contamination of the surface i.e. silicone release agents on plastics	De-grease & key articles to be flocked with correct cleaning solution
Electric shocks	Static build-up in operators body then a 'Discharge' to earth / ground	Wear leather soled shoes (not PVC or rubber) Wear earthed / grounded wrist / shoe straps Refer to DCA Service Department if necessary
	Mains supply not earthed or grounded	Check supply. Does 'extension' lead have an earth / ground conductor? Check applicator gun/footswitch earth / ground conductor Refer to DCA Service Department if necessary
	Voltage set too high	Check the setting of the voltage and turn down, if necessary
Electric shocks / excessive arcing or sparking	HT Cable not inserted / connected properly	Refer to instructions
	Faulty cable	Refer to DCA Service Department
	Flock applicator held incorrectly	Hold behind Red Safety Disc, as indicated on page 7.
	Output voltage setting too high	Reduce setting
WARNING Excessive arcing or sparking will damage the equipment	Applicator too close to work surface	Hold applicator further away from work while applying flock.



MICROFLOCKER SPARES & ACCESSORIES

Description		
		
<u>MICROFLOCKER</u> Complete with a 75mm applicator assembly, two applicator pots, one coarse and one fine mesh, a power lead, a foot switch and an earth strap		
		
<u>35mm APPLICATOR ASSEMBLY KIT</u> Complete with two applicator pots, a fine mesh and a coarse mesh		
	MF/4 - Small round 0.03 ltr pot complete with connector, charging plate and fine mesh front	MF/Adp – Adaptor to fit 100mm and 125mm applicator pots to 75mm applicator handle 
	MF/1 - Small round 0.25 ltr pot complete with connector, charging plate and fine mesh front	FB/1A - Fine or Coarse mesh front for medium 3" round pot 
	MF/2 - Medium square (0.8 ltr/4 sq.) pot complete with connector, charging plate and coarse mesh front	FB/2A - Fine or Coarse mesh front for medium 4" sq. pot 
	MF/3 - Large square (1.8 ltr/5 sq.) pot complete with connector, charging plate and coarse mesh front	FB/3A - Fine or Coarse mesh front for large 5" sq. pot 



Microflocker

Technical Specification

High Voltage DC Output	20.0 to 45.0 kV negative DC
Maximum output current	40 micro amps
Mains input	115/230 VAC , 50 ~ 60 Hz
DC input	9 to 12 VDC
Generator dimensions	170W x 60T x 250D
Generator weight (without battery)	2.0 kg
System weight including accessories	3.0 kg

Declaration of Conformity

for the

DCA Electro Spray Microflocker

Manufactured by:

Campbell Coutts Ltd, Unit 7 Tower Industrial Estate,
Tower Lane, Eastleigh, Hampshire SO50 6NZ, England

Statement of Conformity

Based on test results using appropriate standards,
the product is in conformity with
Electromagnetic Compatibility Directive 89/336/EEC
and Low Voltage Directive 73/23/EEC

ROHS Compliant

Complies with Directive 2005/95/EC

The Conformity is indicated by the symbol



Suppliers of.....

Flocking equipment

Flock

Adhesives

Adhesive Applicators

Pigments

Protective Clothing

DCA Electrostatics

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