

Braun flex integral 6550 ultra speed

5704





**BINC Rev:** 11/97

## Service Documentation

### Spare Parts List

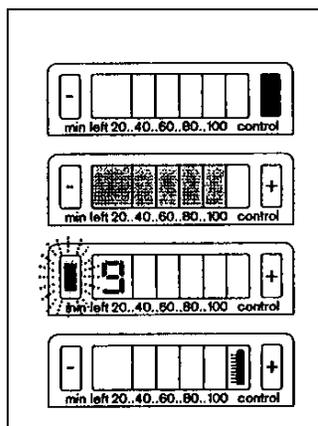
**BAG Rev:** 8/97

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Pos. No.	Part Description	Part Number
1	Protective cap	5503074
2	Shaving foil frame	5505765
3	Cutter block	5504766
4	Swivel frame	5504630
5	Sealing plate	5503014
6	Bearing screw	5504046
7	Screw	5504099
8	Head carrier	5504631
9	Lower frame	5505032
10	Chassis; with no. 11 to 16	5504639
11	Locking pin	5504087
12	Spring	5504200
13	Lever	5504089
14	Spring	5504090
15	Latch	5504926
17	Motor	5704627
18	PCB	5704625
19	Cover	5504638
20	Hood	5504112
21	Sliding plate	5705636
22	Lever	5504093
23	Leg spring	5504095
24	Leg spring	5504092
25	Transmission lever	5504091
26	Seal	5504059
27	Display	5704634
28	Contact strip	5504057
29	Cord socket, cpl.	5505638
30	Contact spring	5504067
31	Housing case	5704628
32	Locking button	5704036
33	Display window	5704635
34	End cap	5704642
35	Screw	5586038
36	Plug pin	5705055
	Coiled cord	5002704
	Cleaning brush	5503120
	Case	5478830

### Description of shaver

Principle	Battery power supply with eco-friendly nickel-hydride batteries. Oscillating head with triple shaving system. Long hair trimmer can be additionally switched on. Charging and battery display.
Housing	Plastic material, chromium-plated.
Shaving head frame:	Plastic material with integrated shaving foil and medium trimmer, can be snapped off by means of a push-button switch.
Hollow cutter block:	Plastic material blades 2 x 27, diameter 6 mm.
Long hair trimmer:	Can be activated by means of a central sliding plate.
Drive:	2.4 V d.c. motor.
Power transmission:	Via eccenter and oscillating frame onto the shaving system.
Power supply:	By 2 built-in, rechargeable batteries resp. automatically by a built-in battery charger and independently from the mains voltage or frequency.
Display	Multifunctional display:



1. Batteries are empty. The device is in the process of being charged (green LED) is illuminated.
2. After approx. 60 minutes of charging, the batteries are recharged. Green LED turns off.
3. Figure < 9 > indicates that 9 minutes remain for shaving. The red LED is blinking when the shaver is switched on.
4. Cleaning symbol (see use instructions).

**Maintenance of the battery**

The device is provided with automatic battery maintenance, i.e. it discharges automatically once a year in order to regain the full battery capacity. This process takes approx. 7 hours.

**Disposal of the battery**

Opening the shaver, described hereafter, destroys the device and has only to be done at the **end of the device's lifetime**. The cord socket (29) is provided with a screw mechanism to ensure easy recycling. Open the housing by piercing and turning the mechanism (e.g. with a coin). Now, the batteries can be removed and orderly disposed.

**Technical details**

Voltage range	12 - 240 V
Charging time	from 100 V upwards: approx. 1 hour, at 12 V: approx. 20 hours; when completely discharged: at least 4 hours.
Power consumption	approx. 5 Watts.
Cutter block amplitude	2.8 mm.
Number of revolutions with operating battery	after a minimum of 3 minutes charging time.
only cutter block	min. 6900 rev./min. max. 8500 rev./min.
with long hair trimmer	min. 6600 rev./min.
Operating capacity after full recharge	approx. 60 shaving minutes.

Note: Before dismantling the unit, **carry out the "electronics-reset and test" analysis** which is described on pages 9-10.

### Dismantling

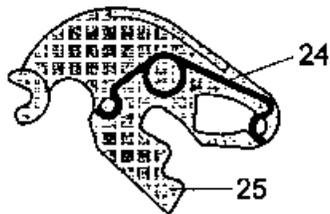
The dismantling procedure is described in a logical order. For individual repairs, the order of the description can be altered.

- Shaving foil frame (2) - to be unlocked by pushing button "A";  
- to be removed.
- Cutter block (3) - to be removed.
- Swivel frame (4) - Unscrew bearing screws (6).  
- Remove swivel frame (4).
- Plug pins (35) - to be taken off the sides with a needle.
- End cap (33) - unscrew screws (34).  
- remove end cap (33).
- Display window (32) - to be pulled downwards out of the housing case (30).
- Housing case (30) - unlock locking button (31).  
- take off housing case (30).
- Head carrier (8) - unscrew screws (7).  
- remove head carrier (8).
- Lower frame (9) - to be removed by prying open with a knife between head  
carrier (8) and lower frame (9).
- Cover (19) - to be taken off by unHINGING the 4 notches "B" on the  
sides.
- PCB (18) - to be held underneath the batteries.  
- to be taken out off the chassis (10).
- Motor (17) - Motor lower side to be unHINGED out of plastic holder "C".  
- Motor axis to be pushed out of oscillating bridge.
- Cord socket (29) - to be removed by snapping out notch "D" in the  
chassis (10).
- Display (27) - to be pushed out of the chassis (10); to be removed.
- Hood (20) - to be taken off the leading pins on the left and right sides  
of the sliding plate (21).
- Sliding plate (21) - to be pulled upwards out of the chassis (10), when switch  
is in position "2". (Care has to be taken that the leg spring  
(24) and transmission lever (25) do not slip away.)

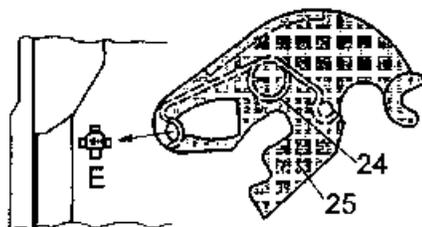
### Reassembly

The reassembly has to be performed in reversed order. However, attention has to be paid to the following points:

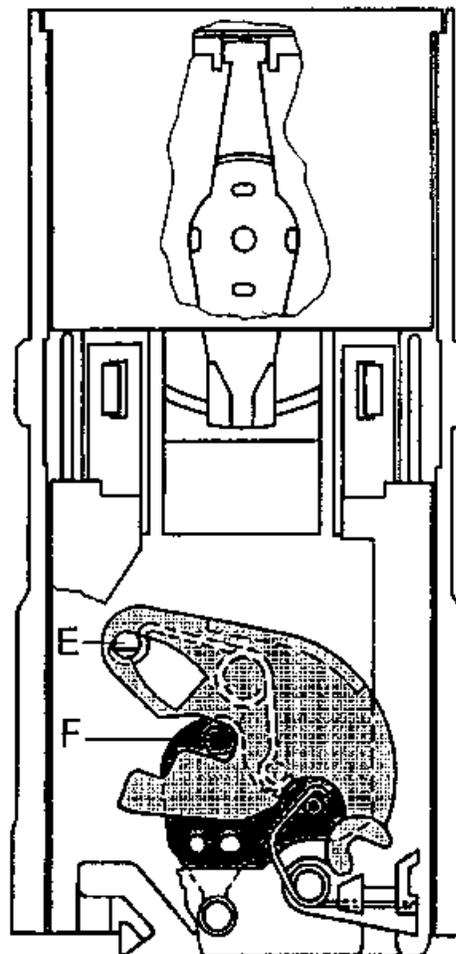
- Sliding plate (21) - Before inserting the sliding plate (21) please ensure that the transmission lever (25) and leg spring (24) are assembled correctly. (If necessary, attach transmission lever (25) with leg spring (24) to pin "E" of the sliding plate, while positioning cam "F" of the lever (22) in the switching coulisse, as shown in diagram).



Position of spring in transmission lever.



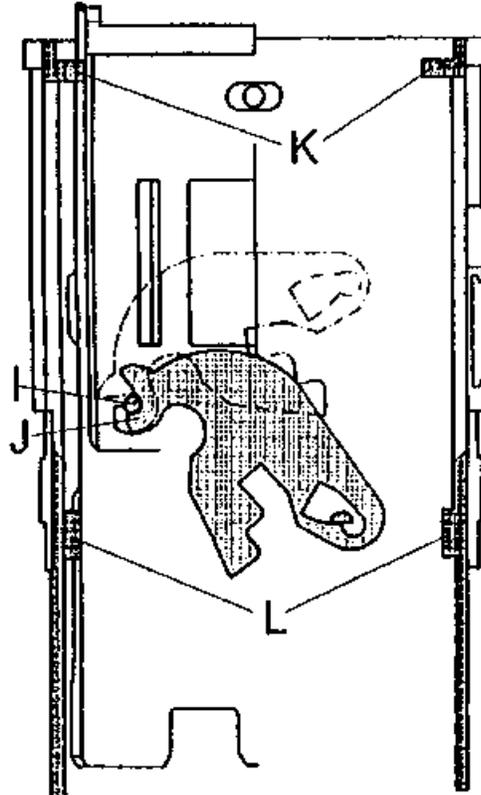
Transmission lever on pin "E" Position of coulisse "F" in transmission lever "E" in the sliding plate.



- With your thumb, position switch "G" of the sliding plate (21) as shown in dia. (extension "H"). At the same time, with your middle finger, secure the transmission lever (25) on the backside of the sliding plate to prevent unhinging or slipping away (see dia. "sliding plate").
- In this position, the sliding plate (21) is, now, to be pushed through the leads "K" into the chassis.
- Switch "G" must remain in the position described above.
- Shortly before the lower edge of the sliding plate (21) reaches lead "L", the cradle "J" channels in the chassis pin "I".
- Release switch "G". By pressing on the long hair trimmer, the sliding plate must be pushed downwards through the leads "L". Hereby, the single-throw switch channels in automatically (See diagram).



Sliding plate



Transmission lever function under sliding plate

- **Attention!** Do not check the function of the long hair trimmer after inserting the sliding plate otherwise the transmission lever will unhinge and the sliding plate will have to be attached again!
- Display (27) - to be inserted in the chassis with the contact strips (28) pointing towards the lower end. Ensure that the contact strips are free of grease and dirt.
- Motor (17) - Apply a small amount of Vaseline to the motor axis and eccentric pin.  
- Snap into holder with the spring's wide side pointing downwards.
- Cover (19) - to be hanged into the chassis (10) exactly with the notches "B".
- Housing case (30) - The latch (15) in the chassis and the locking button (31) have to be in position "unlock".
- Swivel frame (4) - to be inserted in head carrier (8) with the unlocking pin towards button "A".  
- Motor eccentric to be inserted in oscillating bridge lead.  
Bearing screws (6) to be tightened carefully.
- All functions to be tested.

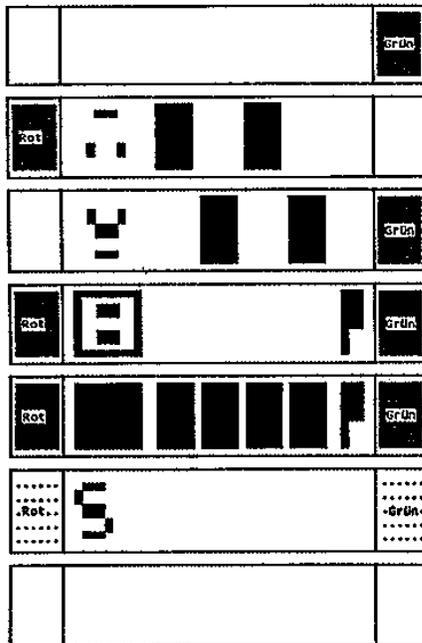
### Electronics-Reset and Test (Don't open appliance).

The electronics test can only be started out of the Reset mode.

Procedure:

- Device to be discharged out of standard operation, until "0" is displayed.
- Connect to mains power for approx. 20 sec., but less than 2 min. Display is empty, only green LED is illuminated.
- Device to be totally discharged (approx. 10 min.; Display "0"). Keep the unit switched on for further 15 min., then switch off.
- Connect to mains power.
- Switch on device. Reset-and control functions are displayed (see dia.). Now, the device has to be switched off.

Before starting selftest:



after approx. 0.25 sec

after approx. 0.5 sec

after approx. 0.5 sec

after approx. 0.5 sec

red and green LED illuminated

This is a 5 as version control  
The red LED illuminates only, when pad 9

No display, provided that the mains power and motor are still switched on.

### Power supply and battery test

After accomplishing the aforementioned electric test (i.e. in a discharged mode) recharge the appliance for a period of 15 minutes, then remove it from the power supply.

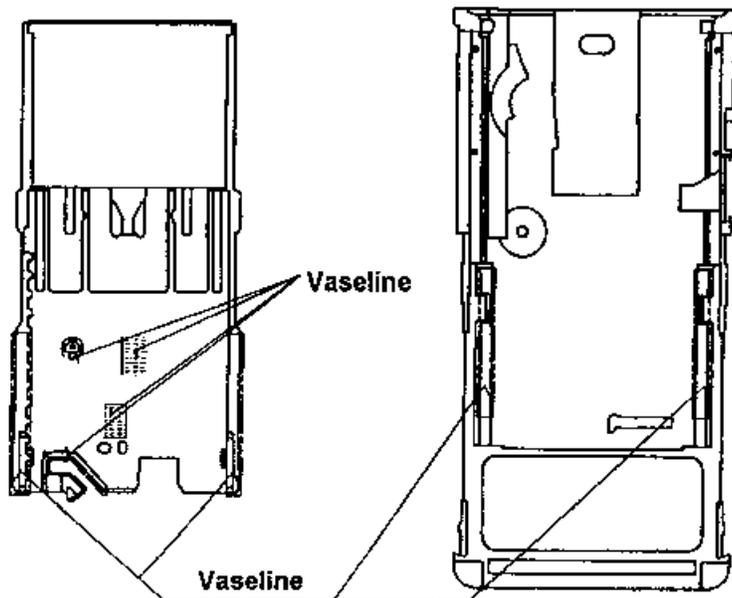
- Important! Oil the cutter system.
- Let the appliance run into a discharged state. After the motor has come to a full stop, the display must indicate "0".
- Switch off the appliance.
- Recharge the appliance control the energy or power consumption respectively by means of an ammeter (measuring range 0 to 200 mA max.) or a watt meter (measuring range 0 to 200 watts max.). After 90 minutes max. the recharging process is accomplished, and the appliance switches to the recharged state (ammeter and watt meter needle respectively fall into the range of "0").

If these values are maintained within this range, the P.C.B. is functional.

**Attention:** If the appliance is removed from the power supply for more than 10 minutes after total recharge is accomplished, a boost charge of approx. 5 minutes will take place before the appliance switches over to the recharged state.

## Lubricating Schedule

When exchanging the sliding plate (21), some Vaseline has to be applied to the slip planes and levers marked on the lower side.



**Possible Malfunctions**

<b>Malfunction</b>	<b>Possible Cause</b>	<b>Action</b>
Bad shaving quality.	<ul style="list-style-type: none"> <li>- Resonating shaving foil frame.</li> <li>- Jammed cutting heads.</li> <li>- Loose foils.</li> <li>- Medium trimmer does not work.</li> <li>- False operation (shaver position).</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange shaving foil frame.</li> <li>- Exchange cutting heads.</li> <li>- Exchange shaving foil frame.</li> <li>- Exchange shaving foil frame probably exchange cutting heads.</li> <li>- Explain how to operate the shaver.</li> </ul>
Skin irritation.	<ul style="list-style-type: none"> <li>- Deformed or damaged foils.</li> <li>- Medium trimmer snapped out.</li> <li>- Broken welding spot medium trimmer</li> <li>- Jammed medium trimmer.</li> <li>- Jammed cutting heads.</li> <li>- Broken blades.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange shaving foil frame.</li> <li>- Exchange cutting heads.</li> <li>- Exchange cutting heads.</li> </ul>
Damaged foil.	<ul style="list-style-type: none"> <li>- Mechanically damaged, fall.</li> <li>- Deformed when attached or removed.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange shaving foil frame.</li> <li>- Exchange shaving foil frame.</li> </ul>
Shaver too noisy.	<ul style="list-style-type: none"> <li>- Resonating shaving foil frame.</li> <li>- Resonating medium trimmer.</li> <li>- Swivel frame has end play.</li> <li>- Swivel frame has a radial play.</li> <li>- Sliding seal is (partially) snapped out.</li> <li>- Resonating unlocking plate.</li> <li>- Bearing screw is loose or missing</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange shaving foil frame.</li> <li>- Exchange shaving foil frame.</li> <li>- Exchange head carrier, swivel frame and shaving foil frame.</li> <li>- Exchange swivel frame and shaving foil frame.</li> <li>- Exchange sliding seal.</li> <li>- Exchange swivel frame.</li> <li>- Replace and tighten screw; exchange head carrier, if necessary.</li> </ul>
Shaving foil frame does not snap in.	<ul style="list-style-type: none"> <li>- Jammed notches or unlocking plate.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange swivel frame and shaving foil frame.</li> </ul>
Shaving foil frame does not snap out.	<ul style="list-style-type: none"> <li>- See above.</li> <li>- Unlocking button has not been pushed.</li> </ul>	<ul style="list-style-type: none"> <li>- See above.</li> <li>- Instruct customer.</li> </ul>

Cutting head does not snap in.	<ul style="list-style-type: none"> <li>- Bearing axis 2 is too rough.</li> <li>- Not orderly snapped in after cleaning</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange cutting heads.</li> <li>- Instruct customer. (Attach 90°)</li> </ul>
Hair dust is falling out of the shaver.	<ul style="list-style-type: none"> <li>- Dust catcher is overloaded.</li> </ul>	<ul style="list-style-type: none"> <li>- Instruct customer.</li> </ul>
Shaver does not work.	<ul style="list-style-type: none"> <li>- No display</li> <li>- Display "0" (SAT)</li> <li>- Defective switch</li> <li>- Defective motor contact</li> <li>- Short hair system eccentric jumped out of swivel slot</li> </ul>	<ul style="list-style-type: none"> <li>- Recharge for min. 4 hrs.</li> <li>- Recharge for min. 1 hour.</li> <li>- Clean and grease contacts; exchange chassis.</li> <li>- Exchange motor; clean and grease contact on PCB.</li> <li>- Dismantle and reassemble swivel frame; exchange if necessary.</li> </ul>
Lock switch does not function.	<ul style="list-style-type: none"> <li>- Spring is not orderly snapped in (Service)</li> </ul>	<ul style="list-style-type: none"> <li>-Spring to be snapped in correctly.</li> </ul>
Sliding plate does not function.	<ul style="list-style-type: none"> <li>- Switch spring unhinged, overstretched</li> <li>- When switching back from pos. 3 to pos. 1, pos. 2 is passed.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange sliding plate.</li> <li>- Determined by the concept; instruct customer.</li> </ul>
LHT cannot be switched on.	<ul style="list-style-type: none"> <li>- Broken locking pin.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange preassembled chassis</li> </ul>
Head does not swing; hooks.	<ul style="list-style-type: none"> <li>- Broken locking pin.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange preassembled chassis</li> </ul>
Sluggish head.	<ul style="list-style-type: none"> <li>- Wrong bearing screw. (Service)</li> <li>- Eccenter positioned too high.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange screw.</li> <li>- Exchange preassembled motor.</li> </ul>
Shaver is open.	<ul style="list-style-type: none"> <li>- False operation.</li> </ul>	<ul style="list-style-type: none"> <li>- Instruct customer, exchange disposal unit</li> </ul>
Shaver is warming up considerably during recharging process (SAT).	<ul style="list-style-type: none"> <li>- Battery lug is torn off.</li> <li>- Faulty joint contact</li> <li>- Defective electronics</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange PCB.</li> <li>- Exchange PCB.</li> <li>- Exchange PCB.</li> </ul>
Time of operation is too short.	<ul style="list-style-type: none"> <li>- Not completely charged</li> <li>- Defective electronics</li> </ul>	<ul style="list-style-type: none"> <li>- Recharge for min. 4 hrs.</li> <li>- Exchange PCB.</li> </ul>

## Display Super AT

Jumping display.	<ul style="list-style-type: none"> <li>- Motor current too high.</li> <li>- Damaged motor contacts.</li> <li>- Not completely charged.</li> <li>- Defective electronics.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange swivel frame, shaving foil frame, cutting head and motor.</li> <li>- Exchange motor, clean and grease contacts on PCB</li> <li>- Recharge for min. 1 hour.</li> <li>- Exchange PCB.</li> </ul>
Display unlogical (short term).	<ul style="list-style-type: none"> <li>- Self-test is activated.</li> </ul>	<ul style="list-style-type: none"> <li>- Instruct customer.</li> </ul>
Display does not return to "0".	<ul style="list-style-type: none"> <li>- Not fully recharged.</li> </ul>	<ul style="list-style-type: none"> <li>- Recharge for min. 1 hour.</li> </ul>
No display	<ul style="list-style-type: none"> <li>- Not recharged.</li> </ul>	<ul style="list-style-type: none"> <li>- Recharge for min. 4 hrs.</li> </ul>
Missing segments.	<ul style="list-style-type: none"> <li>- Faulty display contacts.</li> </ul>	<ul style="list-style-type: none"> <li>- Clean contact strips and surrounding area; exchange contact strips, if necessary.</li> </ul>
Spots on display.	<ul style="list-style-type: none"> <li>- Loose display.</li> </ul>	<ul style="list-style-type: none"> <li>- Replace display.</li> </ul>
Visible dirt particles.	<ul style="list-style-type: none"> <li>- Display seal is not orderly assembled.</li> </ul>	<ul style="list-style-type: none"> <li>- Clean; new seal.</li> </ul>
Black display after recharging process.	<ul style="list-style-type: none"> <li>- Defective electronics.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange PCB.</li> </ul>
Red LED is not illuminated.	<ul style="list-style-type: none"> <li>- Not fully recharged.</li> <li>- Defective electronics.</li> </ul>	<ul style="list-style-type: none"> <li>- Recharge for min. 1 hour.</li> <li>- Exchange PCB.</li> </ul>
Green LED is not illuminated.	<ul style="list-style-type: none"> <li>- Defective electronics.</li> </ul>	<ul style="list-style-type: none"> <li>- Exchange PCB.</li> </ul>