Read the instructions carefully before using the pinbrazing unit. 
*Check that all parts are received.*

**ECONECT SAFE 94355**

- ECONNECT  
  SAFE 94450
- SB15 Gun  
  SAFE 91017
- Ground device  
  SAFE 80730
- Grinder  
  SAFE 593070
- Tool case  
  SAFE 9524
- Carrying Harness  
  SAFE 9523

Guarantee: Units 12 months, batteries 6 months. Valid only when using original parts, batteries and chargers supplied or approved by SAFETRACK®. The guarantee will expire if the equipment was used or has been used with non-original spare parts, consumables or not used in accordance with the instructions.
**Technical specification**

Voltage: 39V DC  
No. of brazings/charge: 40-60  
Unit weight incl.batteries: 9.8 Kg  
Dimensions LxWxH (mm): 250x265x255  
Temperature range: -20 °C - +55 °C
Connect the charger to the grinder / charging outlet on the unit then to the mains. The battery is fully charged after about 4 hours (if completely discharged).

**If the batteries are left uncharged, they may be damaged.**

![Battery charging LED diagram](image)

**Heating time and number of brazings**

The build-in heating element automatically heat up the batteries. (Heating time)

Possible amount of brazings (See actual brazing pin)
Warning!
Always use eye protectors when grinding and brazing!

NOTICE!
Use only the carbide burr and grinder specially made for brazing. Other type of grind stones etc will leave a surface not suitable for brazing. Keep the carbide burr and the braze surface clean and free from oil, grease, paint, glue, galvanization etc.

Preparation of the rail.
- Connect the grinder to the unit.
- Grind the brazing and ground area until you have an even and clean surface. Move the grinder up and downwards.

- Immediately, within 7 seconds, apply braze flux to the rail enough to cover the whole brazing area. Grind only one brazing area at a time to prevent contamination of following brazing areas.

- Attach the ground magnet on the same rail/work piece where the brazing should be done.

- Try to attach the magnet within 0,5m from brazing area.
Caution!
Always use supplied eye protectors (dark glasses) with UV protection when grinding or brazing!
Persons with eye disease, photo phobia or persons who takes medicine that can increase the eyes sensivity for UV radiation must follow their doctors recommendation about exposing themselves for arcs and flashes.

Important!
Make sure the fingers on the electrode holder is tight around the electrode, otherwise remove the ring holder and squeeze the fingers together to secure a good electric contact.

Operation.

- Connect the brazing gun, power and trigger cable to the unit.

- Connect the ground device to the unit.

- Press on/off button and select SAFEBOND 1 by pressing the "setting" button. The unit will remember what setting was used last.

- Load the gun with braze electrode and ferrule.

- Apply a very small amount braze flux to the top side of the lug, just enough to wet the even part of the braze electrode facing the lug.

- Make sure to braze in center of the lug. The shape of the lug (see red area in picture besides) will help you to place it right.
- Press the gun firmly, with both hands as shown, with the cable shoe, ferrule and braze electrode to the work piece.

- Pull the trigger just once. The electronics will automatically control the brazing process.

If the brazing is aborted to early “ERROR” will turn on. The brazing should be redone for a good result. The lamp will be shut down after 8 seconds.

**Important!**

Don´t turn your head around while brazing. It´s better to shut your eyes during the process.

- Hold the gun in place for 7 seconds after the brazing while the braze solidifies. Remove the gun without (re-)pulling the trigger!

- Immediately, after removing the gun, eject the used electrode and ferrule by using the outer sleeve around the electrode and ring holder. Otherwise the electrode holder will be destroyed by the heat.

**Caution!**

The electrode and ferrule is very hot. Avoid contact with them after brazing to prevent injury. Do not place the hot parts close to any inflammable or combustible material.

- Clean the brazing and the surrounding area of the rail from excessive flux.

The brazing is completed.

**Important!**

Keep always the consumables protected in the sealed plastic bag until they will be used.

**NOTICE!**

The battery indicator “LOW BATT” flashes when the batteries are almost discharged, when the “LOW BATT” is constantly lit the batteries are discharged and you can’t do any more pin brazing. Charge the battery.
MAINTENANCE

Perioically maintenance of SB15 automatic gun.

DAILY:
Check that all cables and lugs are tight always twist the plug in to the outlets on the units.

AFTER APPR. 400 BRAIZINGS:
Check that the electrode holder is tight to the gun, otherwise a spark can destroy the axle, use spanners as the figure shows. Reassemble in reverse order.

Check that the carbon don’t go too loose in the electrode holder, when it does push together with your fingers. Otherwise you can have a contact fault or a spark can arise. Reassemble in reverse order.

Make sure, never twist the axle when mounting the electrode holder.

EQUIPMENT
- Make sure the batteries always are fully charged.
- Check the cables from time to time, so damages have not arise.
- Even the contact surface on the ground magnet with a file from time to time.
- Make sure that the carbon with the ferule passes easily in the gun, centered.

BRAZING PINS AND FERRULES
- Keep them dry.

RAILBONDS AND CABLE LUGS
- Keep them free from oxidation.
- Keep them free from contamination like: Grease, oil.
- Make sure that there are no damages on them.

SETTING RIGHT LIFT HEIGHT
The SB15 brazing gun self adjust to the same lift height every time. See separate instruction for the gun.
Error indications on the unit:

“ERROR” led is lit.
- The temperature of the battery is over +55 °C.
  **Action:** Wait until the light goes out, then the temperature dropped and it is possible to braze again.

“ERROR” led flashes.
- The temperature of the battery is below +10 °C.
  **Action:** Leave the unit on, the built-in heating element will heat up the battery. Wait until light goes out and the temperature has risen, and it is possible to braze.

“ERROR” and “LOW BATTERY” led flashes.
- The temperature of the battery is below +10 °C and the battery is almost discharged.
  **Action:** Charge the batteries.

“ERROR” Led is lit after a braze.
- The pin brazing was not complete.
  **Action:** The braze should be remade to achieve good results.
  The Led turns off after 8 seconds.

“ERROR” Led glows.
- Failure of a sensor in the unit.
  **Action:** The unit should be sent for repair.

"LOW BATTERY” Led flashes.
- Battery is almost discharged

"LOW BATTERY” led is lit.
- Battery are discharged. Charge the batteries.

**Nothing happen when you press the buttons.**
- The electronics may have gotten stuck.
  **Action:** Remove control 5A fuse for a short time, put it back again.

**The brazing nerver stops.**
- The electronics may have gotten stuck.
  **Action:** Remove the gun and the ground magnet from the rails and disconnect them from the unit as soon as possible.
  Remove the control 5A fuse, check that nothing has been damaged before the fuse is put back.
MAINTENANCE

Replace the fuses:
Push and unscrew anti-clockwise to remove fuse holder. Replace fuse and mount fuse holder.

NOTE!
Control: 5A fuse.
Grinder: 15A fuse.

Special functions:

1. **Battery indicator:**
   Press and hold the “SETTING” button, while you push the “ON / OFF” button. “LOW BATTERY” LED will light. Release the buttons. The LEDs on the front panel show the charge status of battery.

2. **Lifting height control:**
   First the step above.
   Press “Settings” and the lights start flashing, at this point, you can check the lifting height of the gun.

3. Pressing “Settings” one more time and you goes back to battery indicator.
Lift level adjustment.

**IMPORTANT!**
The normal liftheight is 0.9mm this is very important for the arc and energy amount. Too high liftheight increase the risk of a “coldbrazing”, too low liftheight reduce the time and increase misfires.

Lift level tool
SAFE 91246

B.5.1. Insert this end in to the gun.

B.5.2. Press and hold “SETTING” and press =”ON/OFF”. When “LOW BATTERY” is lit, release buttons. Press “SETTING” and the leds will start to blink. In this mode it is able to check the lift height.

**Important!**
Press the tool completely against the gun then pull the trigger. Otherwise the gun may be damaged!

**Important!**
Hold the gun so the tool is horizontal.

B.5.3. The lift level is calibrated when the inner rod, made of brass, on the tool is in same level as the outer plastic sleeve. Tolerance ±0.2 mm.

If the gun is not calibrated see seperate instruction for
Advanced maintenance work
Adjusting the liftevel.

B.6. Reset correct liftheight at a SB15 gun. Only when to reset a maladjusted gun.

Fit the instrument SAFE 91246 on the gun as in B.5.

B.6.2. Connect the cables to the pinbrazing unit and switch on the power.

B.6.3. Take off the plastic plug with the needle in the upper small hole in the front of the gun.
IMPORTANT, never adjust in the hole where the big plug is!

B.6.4. When liftheight is too low. Use the 3mm hexagon spanner and adjust the screw in the small hole anti-clockwise about 1/4 of a turn then check with the instrument as in B.5.

B.6.5. When liftheight is too high. Use the 3mm hexagon spanner and adjust the screw in the small hole clockwise about 1/4 of a turn then check with the instrument as in B.5.

If all is ok, fit the plug in the hole again.

If not ok, send for repair.