

Short manual for the  
V450-005-008 Mother-Transponder for SCC 5.0  
F1.38.3

### General functional description

The mother transponder is used in the baby module of the SCC 5.0 software. It is used to legitimize the affiliation of a mother or a family member to a newborn in a maternity station or similar. The newborn is accordingly equipped with a baby transponder. Using the SCC 5.0 software and a pairing station (LF), the mother and baby transponders are assigned to each other and linked to form a family.

### Tasks of the mother transponder

- **Permitted detection area:** If the mother and baby transponders pass through a **"allowed"** detection area, the baby is protected by the mother and no alarm is triggered. However, if a baby transponder passes alone through an **"allowed"** detection zone, this triggers a **"baby alone"** alarm. A nurse transponder can also follow the baby transponder through the permitted detection zone without triggering an alarm.
- **Forbidden detection area:** It is possible to create forbidden detection areas in which mother and baby together trigger a **"runaway alarm"** and alarm suppression is only possible with a nurse transponder.
- **Diaper-changing table:** On the changing table, the baby transponder can be removed in the presence of the mother or nurse transponder without triggering an alarm. If the baby stays alone on the changing table, a "baby alone" alarm is triggered.
- **Emergency call:** An emergency call can also be triggered by pressing a button on the master transponder. In the case of an emergency call outside an LF field, the last known LF ID is transmitted. Basically, the emergency call transmission is possible inside as well as outside of all LF fields. If the emergency call is triggered

outside the HF reception, it is repeated every 2 seconds and ends only as soon as HF reception is available again or after 8 minutes. The transmission is also indicated by the flashing of the red LED.

**This function is only possible with master transponders with emergency call function (button available on the transponder; article number: V450-005-008 and V450-006-008).**

The battery low notification is transmitted for evaluation with every transmission in an LF field and when an emergency call is sent, starting from a shortfall of 30% of the battery capacity.

The version and battery status can be read out by the Raphael-Check.

If the battery status is low, this is indicated by the red flashing of the LED in the active field (normal green) and during the acknowledgement confirmation (normal green LED for 6 seconds) by a short red glow.

The mother transponder ID can be set by means of LF module in programming mode. The transponder ID is between 9000-9999.

### **Acknowledgement by the nursing transponder F2.38.1**

Briefly press the button on the nursing transponder. The red LED now flickers for 6 seconds. During this time, press the button on the emergency transponder. The red flickering of the LED of the nursing transponder ends immediately and then lights up green for 6 seconds.

The LED of the emergency call transponder lights up green for approx. 6 seconds as confirmation.

### **Explanation of LED light behavior for mother transponders with emergency call function (V450-005-008 as well as V450-006-008)**

- LED lights up red for 17 seconds for emergency call transmission
- LED flashes green for 6 seconds as acknowledgement confirmation
- LED flashes red every 2 seconds if no HF reception
- LED flashes red every 2 seconds if no RF reception and low battery

- LED flashes green every 1.2 seconds in active LF field
- LED flashes red every 1.2 seconds in active LF field if low battery
- LED flashes red briefly and then lights up green for 6 seconds as an acknowledgement function when the battery is low.
- LED flashes green depending on the set heartbeat for each heartbeat transmission

### Changing the battery

1. Loosen the four screws on the back of the transponder (Torx T3).
2. Remove the transponder electronics and replace the battery (battery type CR2032).
3. Put the transponder electronics back into the housing. Make sure that the electronic components are not damaged.
4. Close the housing again with the screws. Tighten the screws with a torque of 0.25 Nm.

Energy consumption in standby mode: approx. 0.008 mA

Energy consumption in transmit mode: approx. 15 mA for 6 ms

Batteries type CR 2032, capacity 240mAh

If the transponder is permanently in the detection field, the battery lasts for approx. 80 days\*.

If the transponder is never in the detection field, the battery will last up to 1.2 years\*.

For safety reasons, it is recommended to check the battery four times a year, at regular intervals, using a battery tester (Raphael check available on request).

\*The values stated always go out from a quality battery as good as new.  
Please do not use no-name or cheap batteries.

The battery low notification is transmitted for evaluation with every transmission in an LF field and when an emergency call is sent, starting from a shortfall of 30% of the battery capacity.

The readout of the version and the battery status is possible to the Raphael-Check.

If the battery status is low, this is indicated by the red flashing of the LED in the active field (normal green) and during the acknowledgement confirmation (normal green LED for 6 seconds) by a short red glow.

The mother transponder ID can be set using the LF module in programming mode.

### **Cleaning**

The transponders can be cleaned with a commercial spray disinfection. The Raphael Medi strap can be disinfected and can also be used for several residents. However, it is recommended to replace the strap after approx. 12 months.