

# **TELTONIKA FMB+FMB Backup Tracker Instructions**

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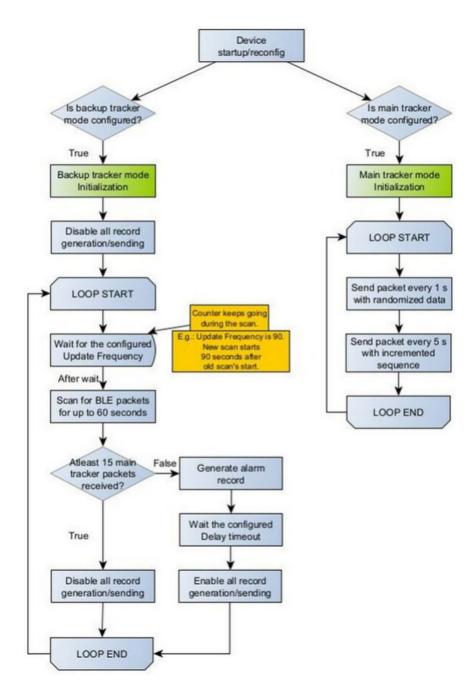
# **Introduction to Backup Tracker functionality**

FMB+FMB Backup Tracker is a new feature which allows to transform device's work-mode to work as a backup tracker.

Each backup tracker's scan cycle lasts up to 60 seconds. If during those 60 seconds the Backup tracker is:

- Able to catch 15 valid Main tracker packets, the scan will stop and the device will wait for next cycle to start.
- Unable to catch at least 15 valid Main tracker packets, an alarm record will be generated with AVL ID 1153. After delay timeout (s) is reached, device will send that generated record to the server and enable other record generation/sending (Periodic and Eventual record).

# **Backup functionality logic**



Each time the device is starts up or gets reconfigured, it checks if either main or backup tracker modes are enabled on the current configuration.

Both modes have some common initialization procedures:

- Check if Sleep Mode (ID: 102) is configured to Ultra Sleep (4). If it is, set Sleep Mode to Disabled (0). This means that both tracker modes overwrite configured Ultra Sleep mode and it's impossible to use Ultra Sleep mode with this functionality enabled;
- Non stop scanning (ID: 1115) is set Disable (0);
- BLE connection control (ID: 1112) is set to Prohibit (0);
- All BLE connectionless functionalities are set to Disabled (0).

Then, both modes have some unique initialization procedures (specific to the tracker mode): Main tracker mode:

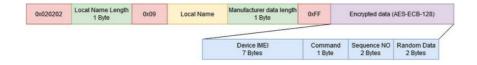
- Beacon Detection (ID: 134) is set to Disabled (0);
- · BLE packet sending gets initialized and works according to flowchart.

### Backup tracker mode:

- Beacon Detection (ID: 134) is set to All (1);
- All record generation is disabled. This means that if the device is not detecting the main tracker and starts generating records, it can be reconfigured or hard reset, and it will only start generating records again after the next failed scan (aka after next alarm record).
- Record sending is queued up to stop. Device waits for any currently queued up record sending to finish, so
  there might be a delay for this full record sending stop to occur.



### **Packet format**



#### **Parameter list**

Paramete r ID	Name	Data T ype	Value range			
			Min	Max	Defa ult	Description
70200	FMB Tracker m	Uint8	0	2	0	0 – Disabled; 1 – Main; 2 – Backup.
70201	FMB Tracker m ode	String	_	15	_	IMEI of the tracker which is configured as a main tracker
70202	Update frequen	Uint16	60	65535	120	Frequency, at which backup tracker should star t scanning for Main Tracker BLE packets.
70203	Delay timeout	Uint16	0	65535	0	Delay, after which backup tracker starts sendin g records after an alarm occurs

### Firmware compatibility

To start working with FMB + FMB functionality 03.27.13.Rev.452 firmware or newer will be required to be used. You can check what devices are compatible with using this firmware on **Compability table for FMB + FMB** backup tracking page.

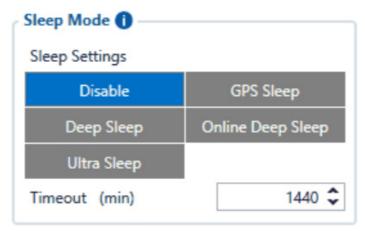
### Limitations

Since the feature relies on Bluetooth® functionality, all of the existing Bluetooth® limitations are applied. One of such limitations is the fact that FMB devices only store up to 100 BLE devices per scan. This means, that if there are more than 100 BLE devices in the surrounding environment, backup tracker being able to catch main tracker packets in time gets reduced.

# Setup instructions

# To ENABLE backup feature on FMBxxx device: Both devices:

• Make sure Ultra Sleep mode → Disabled

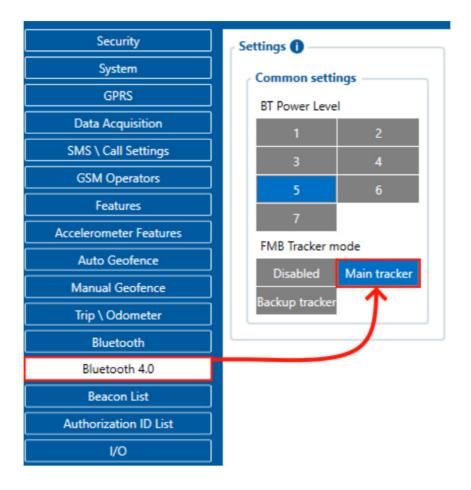


• Bluetooth® → BT Radio set to Enable(visible)



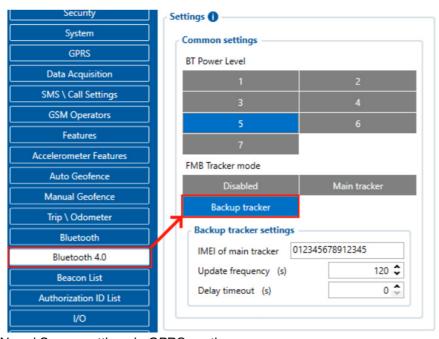
# Main device:

• Bluetooth® 4.0 → select Main Tracker



# **Backup device:**

- Bluetooth® 4.0 → select Backup Tracker
- Enter main device IMEI (15 digits)
- Set Update frequency to how frequent you want backup tracker to scan.
- Set Delay timeout to delay sending alarm record. Leave it default (0) if you want to immediately receive alarm record.



• Configure your APN and Server settings in GPRS section.

# Parsed data

### **AVL Data Packet**

	AVL Data Packet Part	HEX Code Part		
	Zero Bytes	00 00 00 00		
	Data Field Length	00 00 00 4A		
	Codec ID	8E		
	Number of Data 1 (Records)	01		
	Timestamp	00 00 01 6B 41 2C EE 00 (GMT: Monday, June 10, 2019		
	Priority	11:36:32 AM)		
	Longitude	01		
	Latitude	00 00 00 00		
	Altitude	00 00 00 00		
	Angle	00 00		
	Satellites	00 00		
	Speed	00		
	Event IO ID	00 00		
	N of Total ID	04 81 (AVL: 1153 – Backup Tracker Alarm)		
AVL Data	N1 of One Byte IO	00 05		
	1'st IO ID	00 01		
	1'st IO Value	00 01 (AVL ID: 1, Name: DIN1)		
	N2 of Two Bytes IO	01		
	1'st IO ID	00 01		
	1'st IO Value	00 11 (AVL ID: 17, Name: Axis X)		
	N4 of Four Bytes IO	00 1D		
	1'st IO ID	00 01		
	1'st IO Value	00 10 (AVL ID: 16, Name: Total Odometer)		
	N8 of Eight Bytes IO	01 5E 2C 88		
	1'st IO ID	00 02		
	1'st IO Value	00 0B (AVL ID: 11, Name: ICCID1)		
	2'nd IO ID	00 00 00 00 35 44 C8 7A		
	2'nd IO Value	00 0E (AVL ID: 14, Name: ICCID2)		
	NX of X Byte IO	00 00 00 00 1D D7 E0 6A		
	Number of Data 2 (Number of Total Re	00 00		
	cords)	01		
	CRC-16	00 00 29 94		



# **Documents / Resources**



<u>TELTONIKA FMB+FMB Backup Tracker</u> [pdf] Instructions FMB FMB Backup Tracker, FMB FMB, Backup Tracker, Tracker

# References

# • User Manual

### Manuals+, Privacy Policy

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