

Renogy Bluetooth Module Transparent Transmission Specification

Bluetooth Scanning Phase

- **Bluetooth Name Format:** RNG + Product Name + Last 8 digits of SN

Example: For BT + REGO 48V MPPT, the Bluetooth name will be RNGREG048MPPT00000001.

Note: If the Bluetooth name length limit is encountered, use RNG + Product Name Code + Last 8 digits of SN.

Standard BLE communication parameters such as RSSI and MAC address must support broadcasting.

Crucial Note (Special Attention): The MAC address must be advertised in the advertisement packet during the scanning phase for the iOS client to retrieve and use.

```
advertisementData: [  
  "kCBAAdvDataTimestamp": 669721008.977609,  
  "kCBAAdvDataIsConnectable": 1,  
  "kCBAAdvDataTxPowerLevel": 0,  
  "kCBAAdvDataRxPrimaryPHY": 0,  
  "kCBAAdvDataLocalName": "BT-TH-66D8373B",  
  "kCBAAdvDataServiceUUIDs": <__NSArrayM 0x2834993b0>(  
    FFD0  
  ),  
  "kCBAAdvDataManufacturerData": <609866d8 373b>,  
  "kCBAAdvDataRxSecondaryPHY": 0  
] RSSI: -89
```

Bluetooth Communication Phase

Read / Notification Channel (Notify)

Platform	Service UUID	Characteristic UUID
iOS	0xFFE0	0xFFE1
Android	0000ffe0-0000-1000-8000-00805f9b34fb	0000ffe1-0000-1000-8000-00805f9b34fb

Usage Example:

```
BLEManager.default()?.notification(  
    connectServiceUUID,  
    characteristicUUID: connectCharacteristicUUID,  
    peripheral: device,  
    enableState: true  
)
```

Write Channel

Platform	Service UUID	Characteristic UUID
iOS	0xFFD0	0xFFD1
Android	0000ffd0-0000-1000-8000-00805f9b34fb	0000ffd1-0000-1000-8000-00805f9b34fb

Usage Example:

```
BLEManager.default()?.bleManagerPeripheral(  
    cb,  
    writeValue: command.writeValue,  
    serviceUUID: sendServiceUUID,  
    characteruisticUUID: sendCharacteruisticUUID,  
    encryption: false,  
    response: true  
)
```

Important Notes:

- **Write Property:** The write operation **must** support the `WithResponse` property, **not** `WithoutResponse`.
- **Bluetooth Attributes:** The Bluetooth properties must include both `Name` and `LocalName` properties, and the correct data must be written according to our company's requirements.

Example: RNG23MPPT00000000