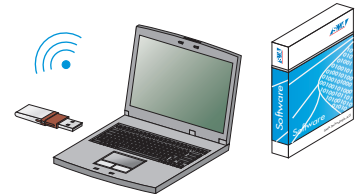# Quick Reference Guide
for Bluetooth installation

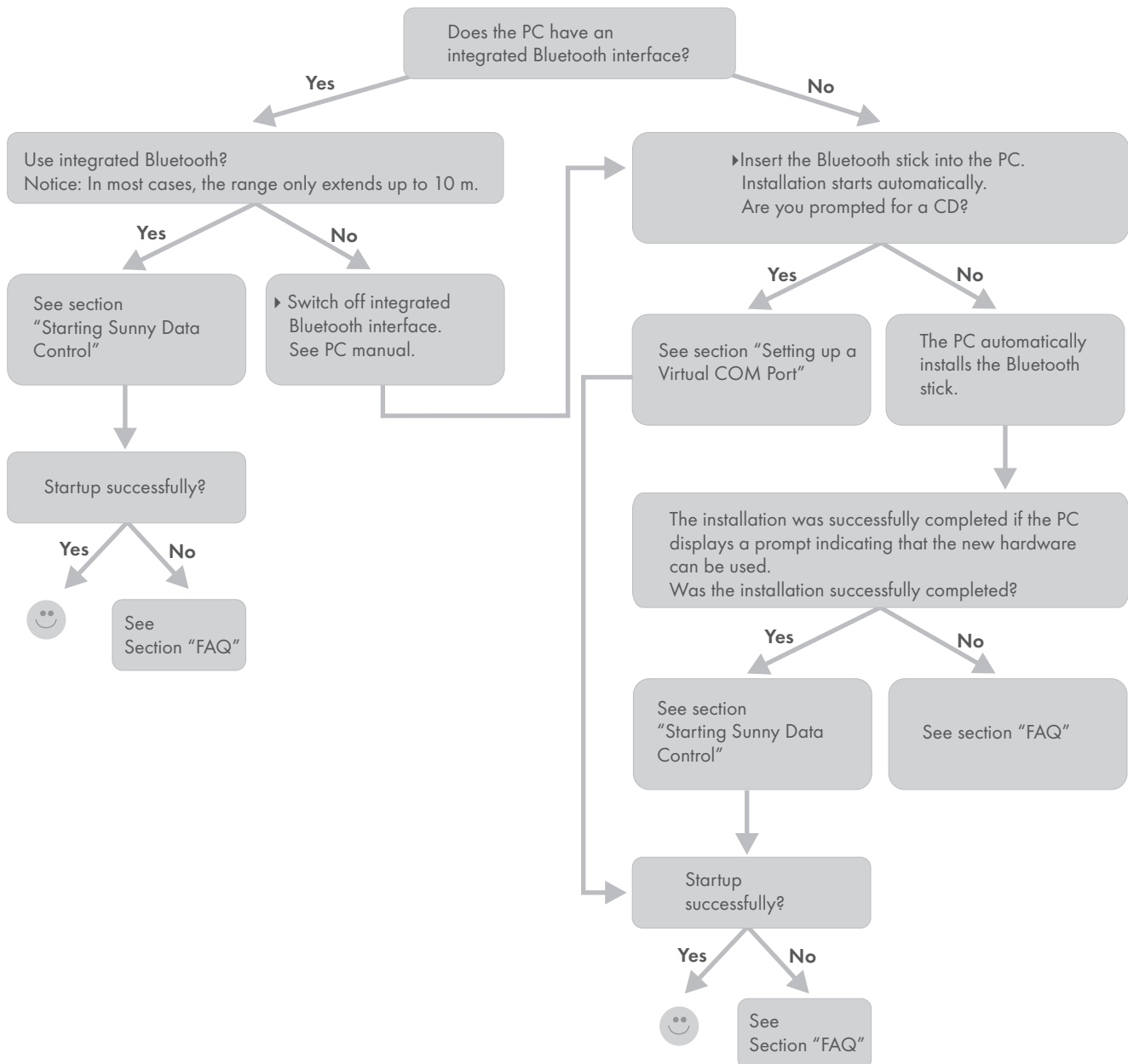# SUNNY DATA CONTROL 4.0

1. Requirements

- PC or laptop with integrated Bluetooth interface (range generally only extends up to 10 m).
  Alternative: USB Bluetooth stick (range of Bluetooth Class 1 = up to 100 m).
- Operating systems: Windows 2000, Windows XP, Windows Vista
- SMA Sunny Data Control 4.0 software, available in the download section at www.SMA.de.

i **Note: Wait to install the software CD provided with the Bluetooth stick!**

There are different procedures depending on the requirement.
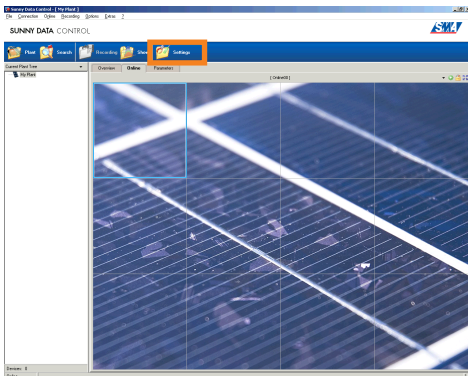Follow the operating steps in the process diagram.
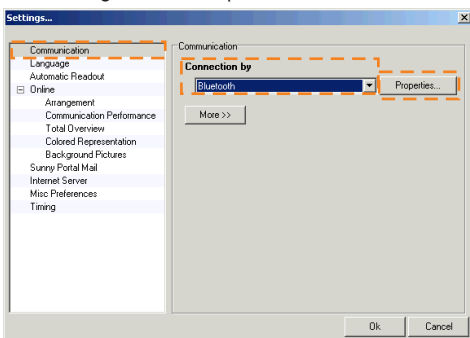
2. Process diagram

Does the PC have an integrated Bluetooth interface?

Yes → Use integrated Bluetooth?
Notice: In most cases, the range only extends up to 10 m.

No → ▶ Insert the Bluetooth stick into the PC.
Installation starts automatically.
Are you prompted for a CD?

Yes → See section "Starting Sunny Data Control"

No → ▶ Switch off integrated Bluetooth interface.
See PC manual.

See section "Starting Sunny Data Control" → Startup successfully?

Yes → ☺

No → See Section "FAQ"

Are you prompted for a CD?
Yes → See section "Setting up a Virtual COM Port"

No → The PC automatically installs the Bluetooth stick.

The installation was successfully completed if the PC displays a prompt indicating that the new hardware can be used.
Was the installation successfully completed?

Yes → See section "Starting Sunny Data Control"

No → See section "FAQ"

See section "Starting Sunny Data Control" → Startup successfully?

Yes → ☺

No → See Section "FAQ"

Requirement:
Inverter must be operating.
Bluetooth-ID 1 or higher must be set.
ID = 1: Inverters are not interlinked, only inverters operating within the range are received.
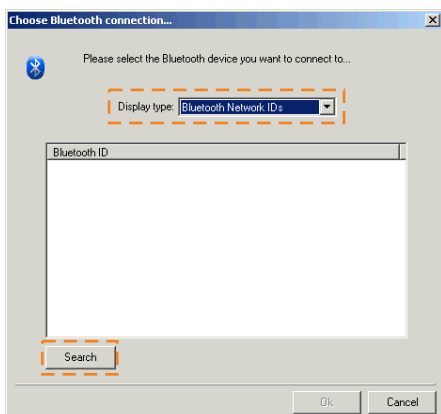ID > 1: Inverters interlink, as a result, all interlinked inverters can be received.

▸Install Sunny Data Control as described in the Sunny Data Control manual.
▸Start Sunny Data Control.
▸Click the "Settings" icon.

The "Settings" window opens.

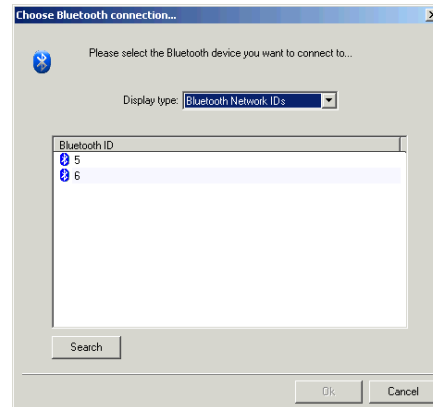▸Select the "Bluetooth" entry in the "Connection by" drop-down list.
▸Click <Settings>.
▸Click <Change>.
The "Choose Bluetooth connection..." window opens.

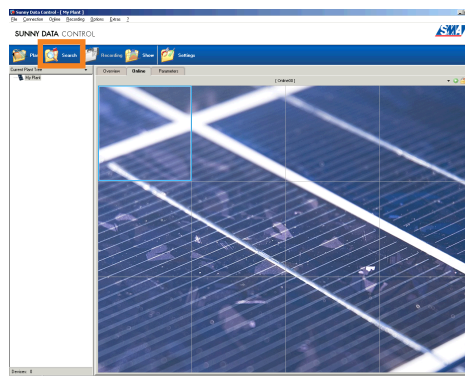▸Select the "Bluetooth IDs" or "Individual Bluetooth devices" entry (point-to-point connection) in the "Display type" drop-down list.
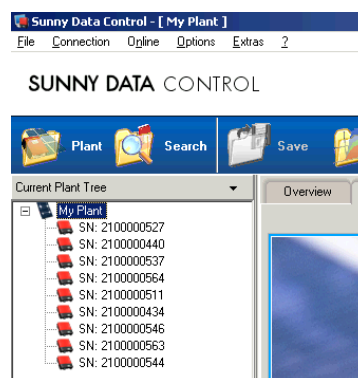▸Click <Search>.

Sunny Data Control searches for and lists the Bluetooth IDs of the available devices.

▸Select the ID set in the inverters and click <Ok>.
▸Close the windows by clicking <Ok>.
▸Click the "Search" icon.

▸Enter the number of inverters to be detected and confirm with <Ok>.
▸Sunny Data Control establishes a connection to the inverters using this ID and lists them in the system tree.

▸Wait for the detection to end.
▸Compare the serial numbers in the system tree with the serial numbers of your inverters.
  ▸If other or not all inverters have been detected, see FAQ.
  ▸If all your inverters and no other inverters have been detected, drag the system or individual inverters into the "Spot values" window.
▸Startup has been successfully completed.
Additional features of Sunny Data Control 4.0 are described in the Sunny Data Control manual.

☒The startup of the Bluetooth interface integrated in the PC was not sucessfully.

? Sunny Data Control cannot operate using the integrated Bluetooth solution or Bluetooth stack.
▸Set up a virtual COM port as described in section "Setting up a Virtual COM Port" in this quick reference guide.

☒No devices were found.

? There is no Bluetooth interface integrated into the PC and no Bluetooth stick is connected.
? There are no inverters within reception range.
? The existing inverter is set to Bluetooth ID "0" (Bluetooth off).
  ▷ Set the Bluetooth ID of the inverters to an ID greater than "1". For the inverter to assume the new Bluetooth ID, it must be rebooted (AC and DC off as described in the inverter manual.)
? Sunny Data Control does not support the installed Bluetooth stack. By default, Sunny Data Control supports Microsoft, Toshiba, BlueSoleil and Bradcom stacks.

☒Only 1 inverter is displayed.

? The inverters are set to the Bluetooth ID "1" and are therefore not interlinked.
▸ Set all of the system's inverters to a Bluetooth ID between "2" and "F".

☒There are more inverters displayed than the system consists of.

? In this case, a system is nearby that uses the same Bluetooth ID.
▸ Set another available Bluetooth ID for the inverters.

☒Which Bluetooth IDs are still available?

▸ Click the "Settings" icon in the Sunny Data Control.
▸ Select the "Bluetooth" entry in the "Connection by" drop-down list.
▸ Click <Settings>.
▸ Click <Change>.
▸ Select the "Bluetooth IDs" entry in the "Display type" drop-down list.
▸ Click <Search>. All available Bluetooth IDs nearby are displayed. All Bluetooth IDs not displayed here are probably still available.

☒How do I find out which Bluetooth ID is set for my inverters?

There are two options available.
▸ Switch off the AC line circuit breaker of the inverter and secure it to prevent it being reactivated.
▸ Switch off the supply voltage to the signaling contact and secure it to prevent it being reactivated (if applicable).
▸ Unplug the Electronic Solar Switch (ESS).
▸ Wait until the inverter is completely switched off.
▸ Check whether the LEDs, display and, if applicable, the error signal have gone out.
▸ Plug the Electronic Solar Switch (ESS) back in.
▸ Switch the AC line circuit breaker back on.
▸ The position of the Bluetooth ID switch, among other things, is displayed when the inverter is booted again.

Or: see the next column.

-Or-
▸ Open the inverter as described in the inverter manual.
▸ Read the switch position of the Bluetooth ID.

☒I have already installed the software provided with the Bluetooth stick. How should I proceed?

▸ We recommend deinstalling the software first and then following the instructions in this quick reference guide. If you cannot establish a functional Bluetooth connection to the system, reinstall the software provided with the stick.
▸ Then set up a virtual COM interface as described in section "Setting up a Virtual COM Port" in this quick reference guide.

☒I cannot switch off the Bluetooth interface which is integrated in The PC.

? Can I still use a stick?
▸ A Bluetooth stick may be used parallel to an existing integrated Bluetooth interface.
▸ Set up a virtual COM interface as described in section "Setting up a Virtual COM Port"" in this quick reference guide.

☒The error message "The connection to the system was Interrupted" is displayed.

? If this error message is displayed, the PC connection to the inverter or system has been interrupted.
  This connection will not be re-established.
  All other connections between the inverters, even during faults or interruptions, are automatically re-established or the program searches for alternative connections to other devices.
▸ Confirm the error message with <Ok>.
▸ Open the "Spot values/Spot value request" menu.
▸ Click <Activate> or use the "Ctrl+B" shortcut.

☒Which Bluetooth stacks does Sunny Data Control support by Default?

? Microsoft
? Toshiba
? BlueSoleil
? Broadcom
Other Bluetooth stacks can be used through a virtual COM port.

☒After successfully installing a Bluetooth stick, my integrated Bluetooth interface no longer works.

? Unfortunately, SMA cannot rule out problems occurring when installing several sticks and stacks on a PC or laptop. Some installations override other installations or configure the system So that competing installations no longer function properly.

☒Where can I find more information on Bluetooth in SMA products?
▸ Sunny Data Control manual
▸ Sunny Boy 4000TL-20 / 5000TL-20 manual
▸ At SMA's internet site: www.SMA.de

Only carry out the operating steps in this section if instructions in the FAQ section suggest doing so.

i **Requirement:**
Inverter must be operating.
Bluetooth-ID 1 or higher must be set.
ID = 1: Inverters are not interlinked, only inverters operating within the range are received.
ID > 1: Inverters are interlinked, as a result, all interlinked inverters are received.

▸Start the Bluetooth software of the PC operating system using the icon in the taskbar or the system control.
▸-or-
▸Install the software CD provided with the Bluetooth stick.
▸Set up a virtual COM port as described in the manual of the Bluetooth stick.

i **Note:**
Write down or remember the number of the set virtual COM port.
Write down or remember the number of the outgoing COM port if the Bluetooth environment should setup an "outgoing COM port" as well as an "incoming COM port".

The software of the Bluetooth stick displays the friendly names of the inverters within reception range.
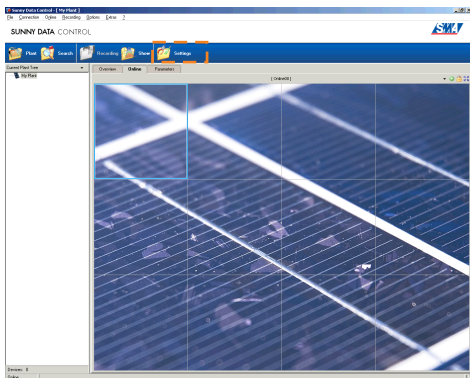Example: SMA0003dSN: 2100000439 SN2100000439
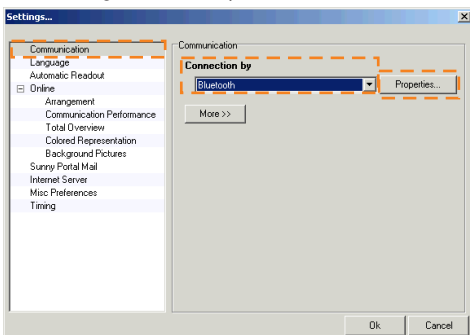   ⬑ Bluetooth ID of this inverter (here: ID3)
Select an inverter that has the required Bluetooth ID to connect to all inverters with this ID.
If the software of the Bluetooth stick allows, set it so that a connection is not established until the application starts.

▸Install Sunny Data Control as described in the Sunny Data Control manual.
▸Start Sunny Data Control.
▸Click the "Settings" icon.
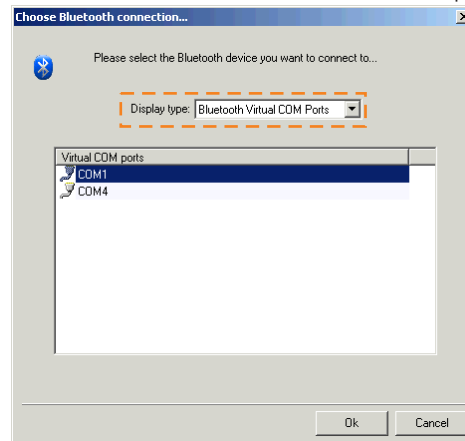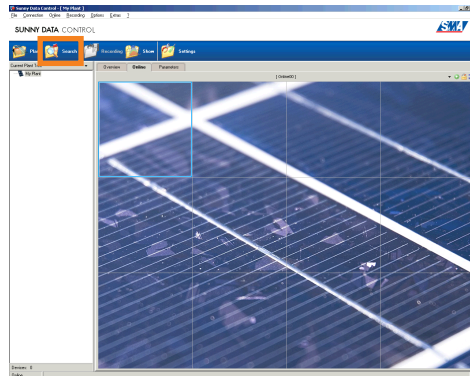
The "Settings" window opens.

▸Select the "Bluetooth" entry in the "Connection by" drop-down list.
▸Click <Settings>.
▸Click <Change>.
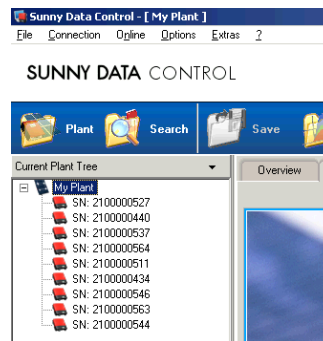
The "Choose Bluetooth connection..." window opens.

▸Select the "Bluetooth COM Ports" entry in the "Display type" drop-down list.
▸Select the established virtual COM port and click <Ok>.
▸Close the windows by clicking <Ok>.
▸Click the "Search" icon.

▸Enter the number of inverters to be detected and confirm with <Ok>.
▸Sunny Data Control establishes a connection to the inverters using this ID and lists them in the system tree.

▸Wait for the detection to end.
▸Compare the serial numbers in the system tree with the serial numbers of your inverters.
  ▸If other or not all inverters have been detected, see FAQ.
  ▸If all your inverters and no other inverters were detected, drag the system or individual inverters into the "Spot values" window.

▸Startup has been successfully completed.
  Additional features of Sunny Data Control 4.0 are described in the Sunny Data Control manual.