CAR SYSTEM DIGITAL

QUICK GUIDE

FALLER ®

Index number: 161345/2

Get started! This quick guide shows you how to connect all the components of the Car System Digital with one another quickly and easily. Depending on the constellation of your hardware, the quick guide provides two different options: connection with the Master and connection with the Radio Master. Please observe the following steps when establishing the connection. You will find further information in the Car System Digital software instructions, which are automatically available to you after installation.

STEP BY STEP

1 Software installation
› Plug the **Car System Digital USB stick** into a free USB port in your computer.
› In Windows Explorer, you will see two new drives with the following descriptions:
  • Software_Handbuch_Beispiele (Software manual examples)
  • Updates_Backup
› Click on »**Software_Handbuch_Beispiele**« (Software manual examples) and inside this folder, click on the folder »**Setup**«.
› Double-click the file »**FallerSetup_x.x.x.xx.exe**« and follow the instructions on the screen to carry out the installation.
› Confirm the **licence agreements**.
› In addition to the software, **drivers for the USB communication** are also installed. Please also confirm the licence agreements for these.

2 Connecting the Master or Radio Master
› With the accompanying USB cable / To a free USB port

3 Licensing and registration of the software
› Software serial number = enter licence key and accept (see product identity card: software serial number e.g. ABCDE FG123 456DE XXAB2)
› Contact the FALLER technical service and request a 3-digit registration code (tel.: +49 7723 651-241 or email: Technischer-Kundendienst@faller.de)
If you would like to register the software online, please establish an internet connection and enter your email address upon request.
› Write the registration code in the product identity card
› Enter and accept the registration code
› Software is ready for use

4 Installing satellites
› For a 3-dimensional recording, a minimum of 3 satellites are required.
› Ideally, the satellites should be installed at **distances of equal spacing** to create an equilateral triangle above the system: **approx. 0.6 – 1.5 m distance between the satellites.**
› The maximum distance between a vehicle and the satellites may not exceed 5 m. If necessary, expand your scenario with further satellites.
› The satellites must be installed in one plane, above the ground in parallel to the system. The distance between the system and the satellite plane should be between 0.5 and 3 m. If the satellites are positioned too closely above the system, this can result in distortions in the measurement.
› The power supply for the satellites can be satisfied by the Car System Digital Master, Art. 161354 (max. 6 satellites), a transformer, Art. 180641 or a sufficiently dimensioned power supply unit with approx. 18 – 22 V DC.
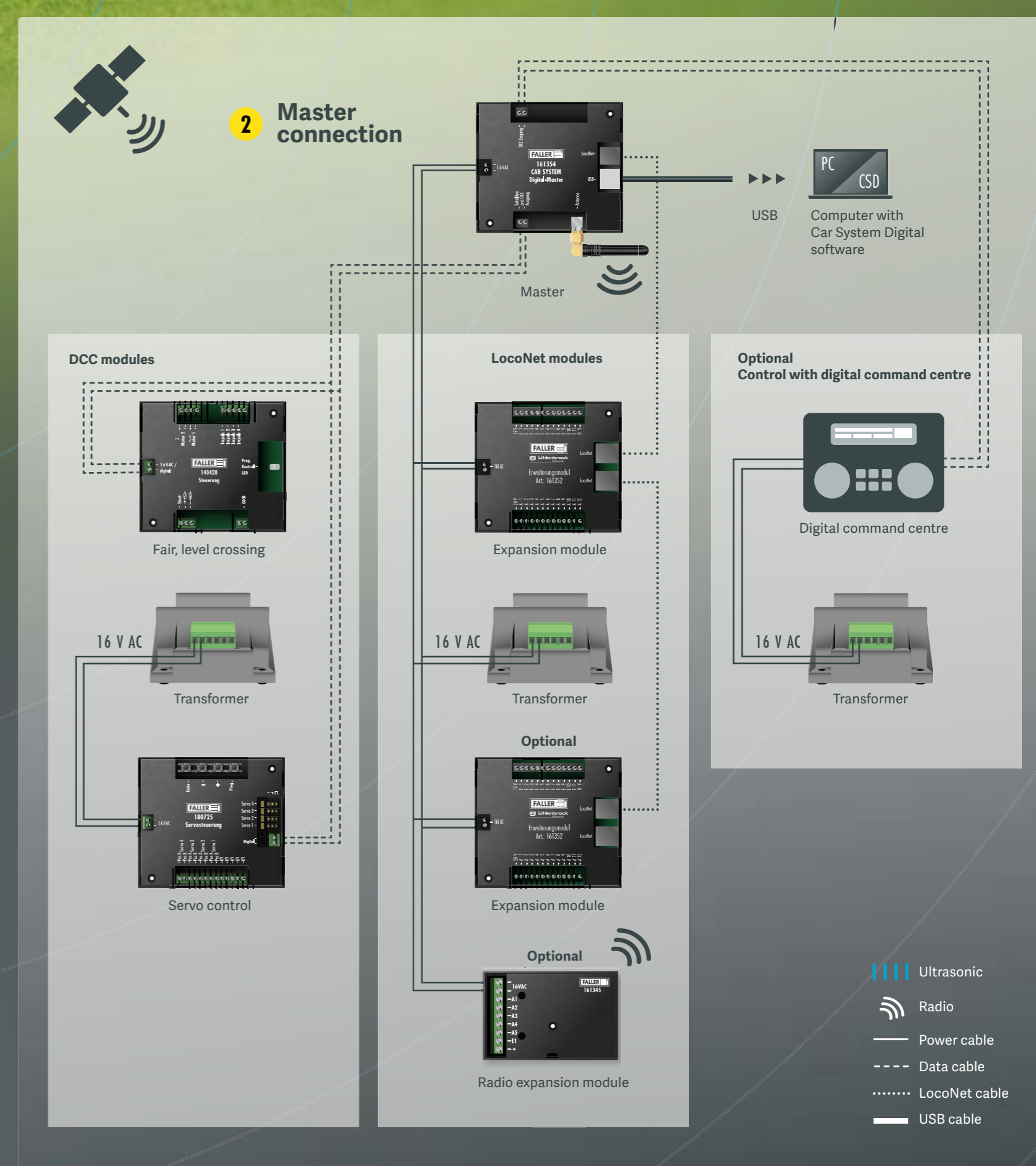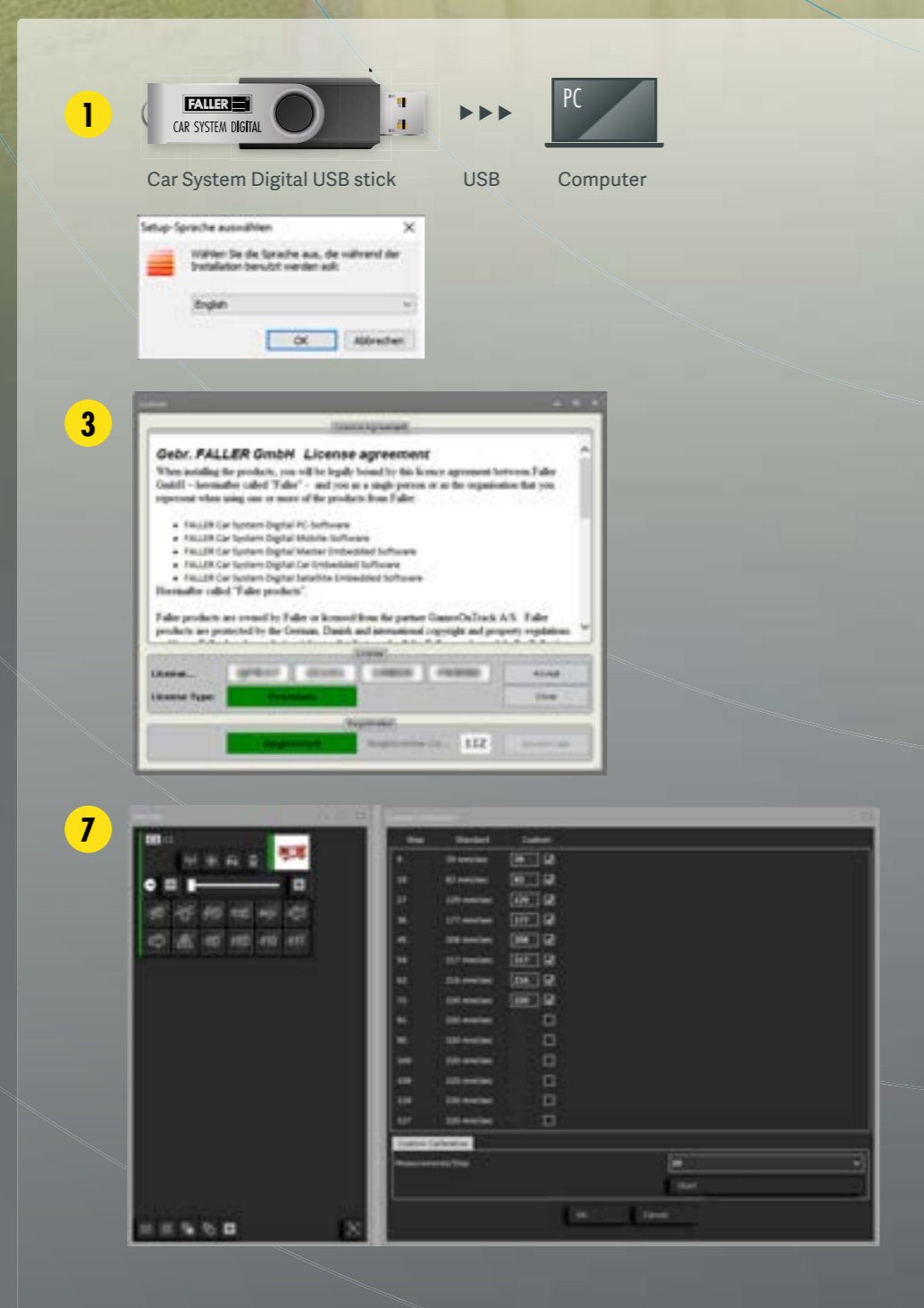
5 Preparing the system
› Define **three points** on the system that you would like to use as a reference (calibration points).
› The calibration points should be **on one plane to the greatest extent possible**, but do not necessarily have to be located on the road itself.
› **Mark** the calibration points on the system so that you can find them again, and measure the distances between the points.
› Enter the **distances between the points** into the corresponding input mask in the software.
› The (imaginary) line between the first two calibration points corresponds to the later system adjustment in the software.
› Follow the **instructions in the software** in order to calibrate the system and record the routes.

6 Localisation of the vehicles
› Every **digital vehicle** has an **ultrasonic transmitter**.
› The **satellites** contain corresponding **ultrasonic receivers**.
› All transmitters and receivers communicate with the computer via the Master/Radio Master. **Using the period of time it takes the ultrasonic signals** from a vehicle to reach the satellite, the software calculates the vehicle's **position**.
› Since ultrasound cannot penetrate walls, e.g. tunnel walls, **shadowed sections of the road** are manually recorded in the software. Using this recording and the speed of the vehicle, the software is able to calculate the exact position of the vehicle.

7 Setting up the vehicle
› Start the vehicle and position it on the road.
› The system will automatically recognise the vehicle.
› Go to "View" and then "Show Vehicles" in the software, then select the corresponding type of vehicle and tap "Calibration" to calibrate the vehicle according to the digital vehicle instruction manual.

The software calculates the vehicle's position using the varying periods of time it takes the ultrasonic signal to reach the satellites.

0.6 – 1.5 m

0.6 – 1.5 m

All satellites are located on one plane in parallel to the system.

0.5 – 3 m distance between the system and the satellite plane

0.6 – 1.5 m

Satellites with ultrasonic receivers

Radio connection to Master or Radio Master

Shadowed sections are manually recorded in the software.

Three calibration points, which should be on a plane as parallel to the satellite plane as possible, serve as a reference for the satellite positions in relation to the system.

max. 5 m distance between vehicle and satellite

0.4 – 2 m

0.4 – 2 m

0.4 – 2 m

Vehicle with ultrasonic transmitter

Radio connection to Master or Radio Master

Information on the Car System Digital USB stick

Software installation screens

1 — Car System Digital USB stick | USB | Computer

2 Radio Master connection

Radio Master | USB | Computer with Car System Digital software

Radio modules

Radio expansion module
16 V AC
Transformer
Optional
Radio expansion module

2 Master connection

Master | USB | Computer with Car System Digital software

DCC modules
Fair, level crossing
16 V AC — Transformer
Servo control

LocoNet modules
Expansion module
16 V AC — Transformer
Optional
Expansion module
Optional
Radio expansion module

Optional Control with digital command centre
Digital command centre
16 V AC — Transformer

Legend
- Ultrasonic
- Radio
- Power cable
- Data cable
- LocoNet cable
- USB cable