# SPC200R(V100) Speedometer

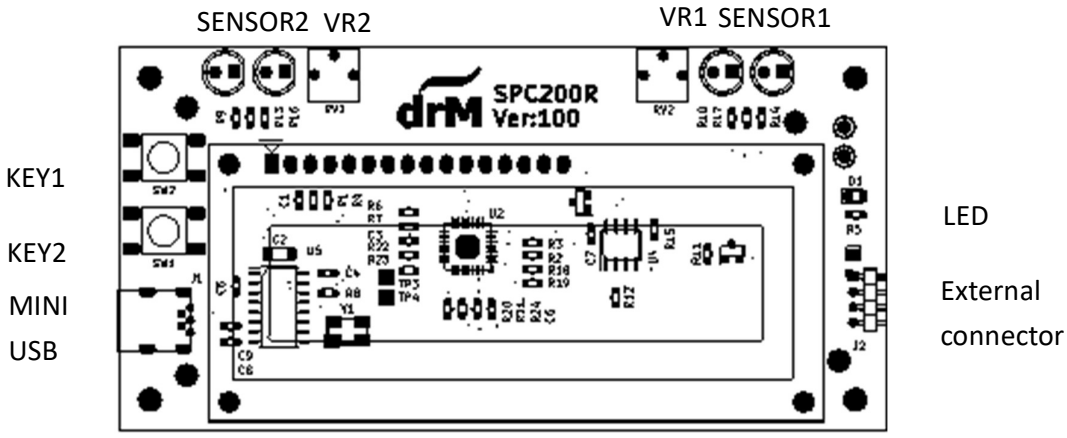
# Ver1.00

# SPC200R

## Features

1. For Z/N/TT/S/HO/OO/O/1/G gauge
2. Power by Mini USB 5V
3. Large LCD display
4. Freely switch Z/N/TT/S/HO/OO/O/1/G gauge
5. Divided into four regions, the United States, the United Kingdom, Europe, and Japan.
6. Two detection modes, reflective and occlude.
7. Size 100mm x 50mm x 14mm

## Panel description




| | |
|---|---|
| SERSOR1 | Sensor 1 |
| SERSOR2 | Sensor 2 |
| Key1 | Select key 1 |
| Key2 | Select key 2 |
| MINI USB | Power 5V input |
| LED | Power display |
| VR1 | Sensor 1 sensitivity adjustment |
| VR2 | Sensor 2 sensitivity adjustment |
| External connector | Connecting an External Detector |

## Instructions for use

1. Use a 5V adapter for the power supply.
2. The power 5V is plugged in by Mini USB.
3. After turning on the power, the LED lights up and the LCD display “drM SPC200R”.
4. After 3 seconds, it will directly enter the detection state.

5. After the train passes through the detection zone. The LCD will display speed for 3 seconds.
6. After the SPC200R enters the detection speed state.

- Switch AREA

1. Press KEY1 or KEY2 in the detection state to enter the area selection.

2. Press KEY2 to enter the menu, press KEY1 to return to detection mode.
3. After entering, the area name will be displayed.

4. Press KEY1 to select the area, press KEY2 to confirm.

5. After confirmation, the scale menu will appear.
6. Press KEY1 to select the scale, press KEY2 to confirm.

7. After confirmation, the area and scale will be stored, and the area and scale will be used for detection after power-on.

- Switch mode

1. The SPC200R has two detection modes (reflection and occlude).
2. The train body color is a bright color system using reflection mode.
3. The train body color is a dark color system using occlude mode.
4. Before powering on, press KEY1 and power on again until the menu appears.
5. KEY1 selects the detection mode, KEY2 confirms.

6. KEY1 mode selection, KEY2 confirm mode.
7. Use the reflection mode to detect that there can be no objects that reflect the light source in front.
   Use the Occlude mode to detect objects that reflect light sources on the opposite side of the track, such as white acrylic or white paper to provide reflected light sources.
8. When using the **Reflection mode**, make sure that there are no other objects in the viewing path of the sensors that can interfere with the detection. When the screen don't reset, but stays in a loop, there is something permanent in its field. Move the object or adjust the sensitivity of the sensors.
9. Use **Reflection mode** when the body color is light to reflect light.
10. When using the **Occlude mode** to detect objects that reflect light sources on the opposite side of the track, place a white object or white sheet of plastic/paper to provide reflection.
11. Use **Occlude mode** when the body color is dark and cannot reflect light.

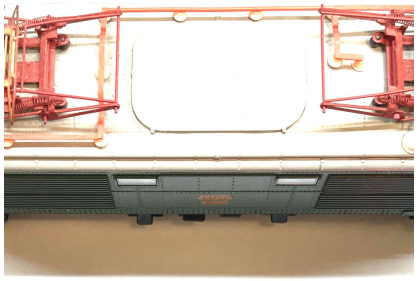
- Sensor sensitivity adjustment
    1. Before powering on, press KEY1 and power on again until the menu appears.
    2. KEY1 selects the Sensor ADJ, KEY2 confirms.

3. After confirmation, the following screen will appear.

4. Place the vehicle in front to measure the distance.

5. Clockwise rotation detection is weak. Counterclockwise rotation detection is strong.

6. Adjust VR until the LCD shows OK!!



- Switch KM/H, MPH
    1. Before powering on, press KEY1 and power on again until the menu appears.
    2. KEY1 selects the SPEED UNIT, KEY2 confirms.

    3. KEY1 unit selection, KEY2 confirm unit.
    4. After the unit is confirmed, it will be automatically saved.

- Lap timing
    1. Before powering on, press KEY1 and power on again until the menu appears.
    2. KEY1 selects the SPEED UNIT, KEY2 confirms.
    3. Select set time

4. KEY2 enter Lap timing.

5. When the vehicle passes through the detection area, it will start timing, and it will stop when it passes again.

6. The end of the display time is about 3 seconds, after which it will enter the detection state again.
7. To exit the lap time, press KEY1 or KEY2. The screen will then show the detection speed state.

- **Toggle internal/external detector**

1. Before powering on, press KEY1 and power on again until the menu appears.
2. KEY1 selects the Sensor Mode, KEY2 confirms.

3. Select internal or external.
4. KEY2 confirms.
5. When switching the internal detector, the external detector will be disabled. When switching the external detector, the internal detector will be disabled.
6. Select the external connector, please connect the SPC200RE detector. Do not connect external connectors other than SPC200 series to avoid damage to the host.

- Idle Times

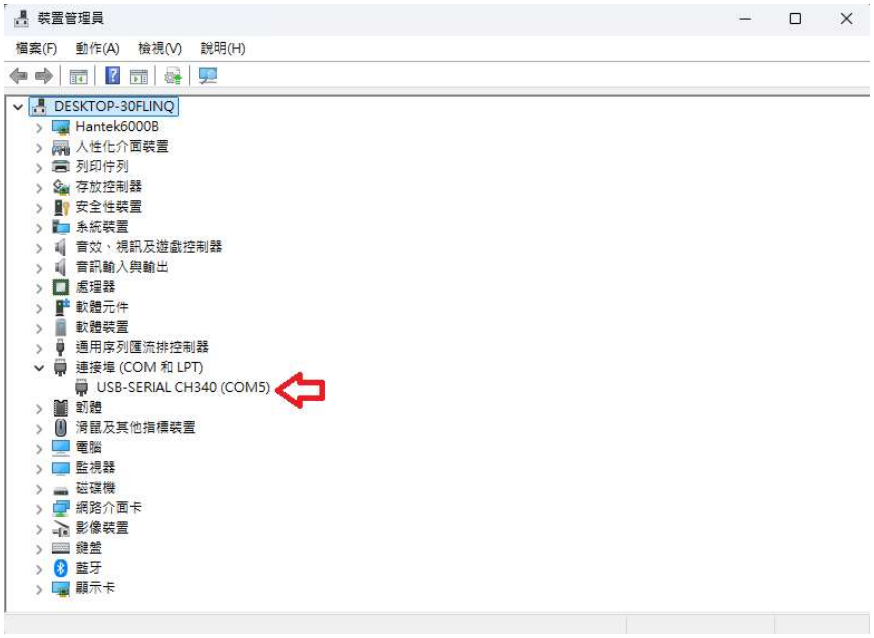
1. Before powering on, press KEY1 and power on again until the menu appears.
2. KEY1 selects the Idle Times, KEY2 confirms.

3. KEY1 unit selection, KEY2 confirm unit.
4. After the unit is confirmed, it will be automatically saved.
5. There are three idle times: 2 minutes, 10 minutes, and OFF.
6. When the idle time is reached, the speedometer will turn off the LCD screen and IR LED. When you need to reawaken the speedometer, press KEY1 or KEY2.
7. When Idle times is selected as OFF, it is recommended to turn off the power when the speedometer is not in use. Note that long-term use of infrared detection will affect the LED life.
8. The external detector cannot be turned off in idle mode. It is recommended to turn off the power when not in use.

- **Connection Instructions**

1. **Connect to PC via Mini USB**

   After connecting the SPC200R device to your computer using a Mini USB cable, a new COM port will appear in the **Device Manager**, as indicated by the red arrow in the figure below.




2. **Install and Launch SPC200R Software**

   Install the **SPC200R PC software**. Once installation is complete, launch the software. In the main interface, select the appropriate **COM port** under the *Device* dropdown menu and click the **Connect** button. When the button turns green, the connection is successfully established.

3. **Data Synchronization**

   Once connected, the software will automatically display real-time speed data whenever an update is received from the SPC200R device.

4. **Change Region, Specification, or Speed Unit**

   To change settings such as the region, specification, or speed unit, simply select the desired options within the software and click the **Setup** button. These changes will be applied after the next speed measurement, and the software will reflect the updated settings accordingly.

**Disconnecting the Device**

If you need to disconnect the SPC200R from the computer, click the **Connect** button again. When it turns red, it indicates that the device has been safely disconnected. You can then unplug the Mini USB cable.

## Precautions

- Do not place any conductive materials (liquid, metal...) on the SPC200R.
- Do not remove or replace any components under the speedometer.
- Keep out of the reach of children under 14 years of age.
- The occurrence of the above situations will cause the speedometer to be damaged.
- The speedometer will malfunction due to the presence of infrared rays in the light. Please avoid using the speedometer in these lights. Such as sunlight, mobile phone photography lights.
- If the detection LED is used continuously for a long time, the brightness will gradually decrease, which will eventually lead to poor detection. Please turn off the power when the speedometer is not in use.