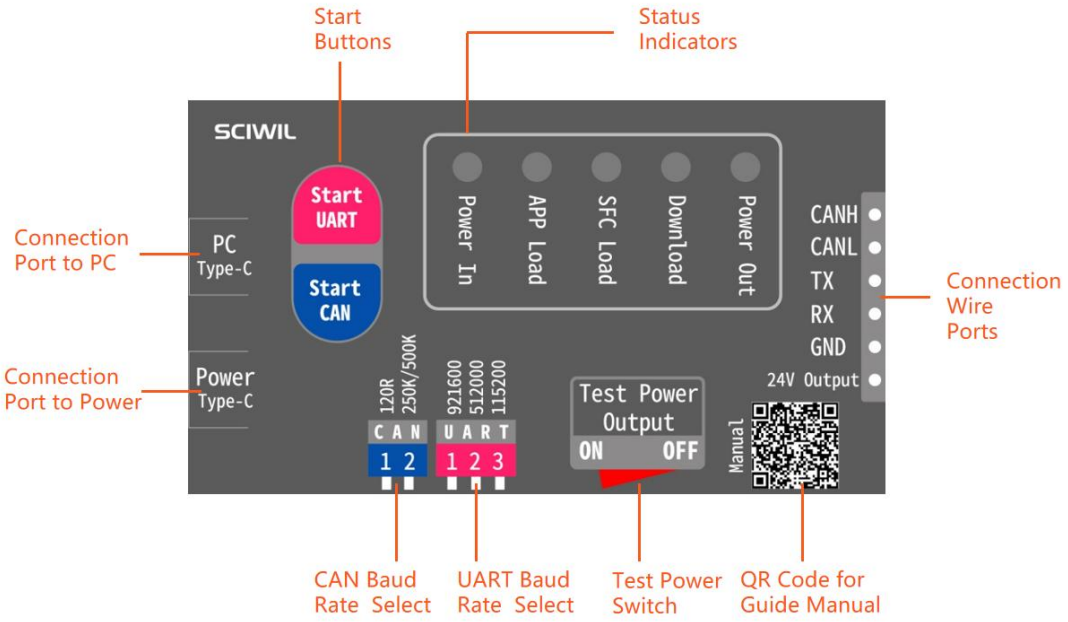
Sciwil SW-PRG02 Upgrade Tool

Operation Manual V1.0

1. System Overview

The Sciwil SW-PGR02 offline programmer is a firmware update tool designed specifically for electric two-wheelers. It supports firmware downloading to upgrade displays via both CAN and UART communication. The system integrates an intuitive status indication mechanism, providing real-time operational feedback through indicators and a buzzer to ensure reliability and operability during the firmware update process.



Main Functions

- **Dual communication methods** – Supports firmware download via CAN and UART
- **Status indication** – Clear operational feedback via indicators and buzzer
- **Button control** – Physical buttons for quick selection of communication method

2. Indicator Information

Buttons

Button	Function
Start UART	Download/burn firmware via UART port
Start CAN	Download/burn firmware via CAN port

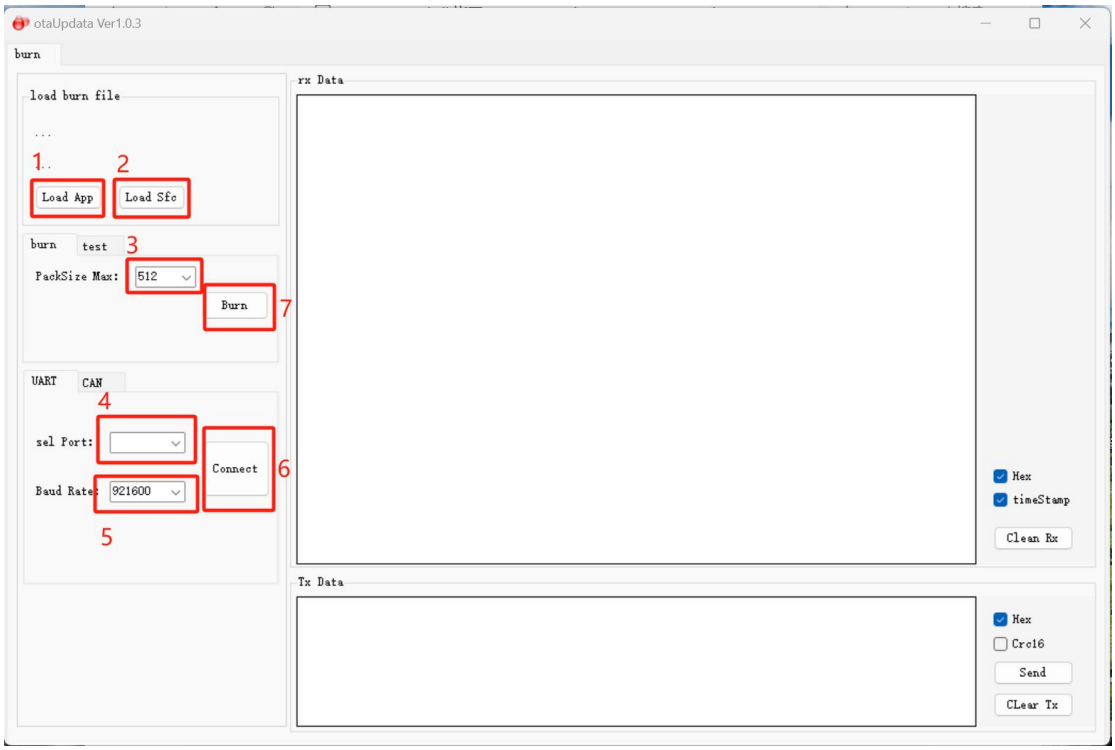
Indicator and Buzzer

Indicator	Function
Power In	Input power indicator
APP Load	APP firmware status indicator
SFC Load	SFC firmware (resource) status indicator
Download	Download status indicator
Power Out	Output power indicator
Buzzer	Success or error tone

3. Operation

3.1 Downloading Program from PC (Skip if pre-downloaded)

3.1.1 Launch the host software "otaUpdata" on PC (no installation required)



3.1.2 Load Firmware

- In the software, click **[App Load]** and select the corresponding program file (.bin format, smaller size).
- For TFT displays, also click **[SFC Load]** and select the corresponding program file (.bin format, larger size).

3.1.3 Select Packet Size

Select **512** (for TFT display) or **256** (for VA segment code display).

3.1.4 Select Port Number

Select the COM port automatically recognized by the PC for the programmer. If uncertain, re-plug the programmer to check.

3.1.5 Select Baud Rate

Select **921600** (for TFT display) or **115200** (for VA segment code display), or choose according to actual requirements.

3.1.6 Click [Open Serial Port]

3.1.7 Download Program

Click **Burn**, then immediately turn on the programmer switch. At this point, products with non-zero power-on (that can be activated by swiping a card) should automatically start upgrading.
For other products, briefly press the power button once to start burning.

3.2 System Power-On

3.2.1 Firmware Package Check

Upon power-on, the system automatically checks for available firmware packages.

3.2.2 Status Indication

- If an APP firmware package exists : **APP Load** lights up green.
- If an SFC firmware package exists: **SFC Load** lights up green.

3.3 UART Firmware Download

3.3.1 Baud Rate Selection

The programmer supports **250K** and **500K** CAN download baud rates.

Switch State	Baud Rate (bps)
921600 ① **ON** 512000 ② OFF 115200 ③ OFF	921600
921600 ① OFF 512000 ② **ON** 115200 ③ OFF	512000
921600 ① OFF 512000 ② OFF 115200 ③ **ON**	115200

3.3.2 Start Burning

Press the **[Start UART]** button.

3.3.3 During Burning

- When downloading APP: **APP Load** LED blinks yellow.
- When downloading SFC: **SFC Load** LED blinks yellow.

3.3.4 Burning Complete

- **Success** : **Download** LED solid green, buzzer sounds **1 beep**.
- **Failure** : **Download** LED solid red, buzzer sounds **3 beeps**.

3.4 CAN Firmware Download

3.4.1 Termination Resistor Selection

The programmer can enable/disable the internal 120 Ω termination resistor via a DIP switch.

120R(1)	Termination Resistor Connected
ON	Yes
OFF	No

[Figure: DIP switch location – see original media/image5.png]

3.4.2 Baud Rate Selection

The programmer supports 250K and 500K CAN download baud rates.

250K/500K(2)	Download Baud Rate (bps)
ON	250K
OFF	500K

3.4.3 Start Burning

Press the **[Start CAN]** button.

3.4.4 During Burning

- When downloading APP: **APP Load** LED blinks yellow.
- When downloading SFC: **SFC Load** LED blinks yellow.

3.4.5 Burning Complete

- **Success** : **Download** LED solid green, buzzer sounds **1 beep**.
- **Failure** : **Download** LED solid red, buzzer sounds **3 beeps**.

4. Status Description

4.1 LED Status

Status	APP Load	SFC Load	Download	Power Out	Remark
Idle	Solid green	Off	Retains last download status	Off	APP firmware package present
	Off	Solid green	Retains last download status	Off	SFC firmware package present
	Solid green	Solid green	Retains last download status	Off	Both APP and SFC firmware packages present

Status	APP Load	SFC Load	Download	Power Out	Remark
Downloading	Blinking yellow	Maintains pre-download status	Off	Solid red	Burning APP firmware
	Blinking yellow	Maintains pre-download status	Off	Solid red	Burning SFC firmware
Download Complete	Same as idle	Same as idle	Solid red	Flashes 3 times	Download failure
	Same as idle	Same as idle	Solid green	Solid on	Download success

4.2 Buzzer Status

Buzzer State	Meaning
1 beep	Burn successful
3 beeps	Burn failed