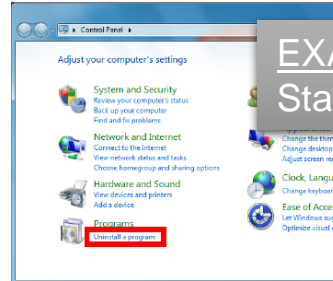# YAMAHA e-Bike Diagnostic software

YAMAHA MOTOR CO., LTD.

SPV QA/Service

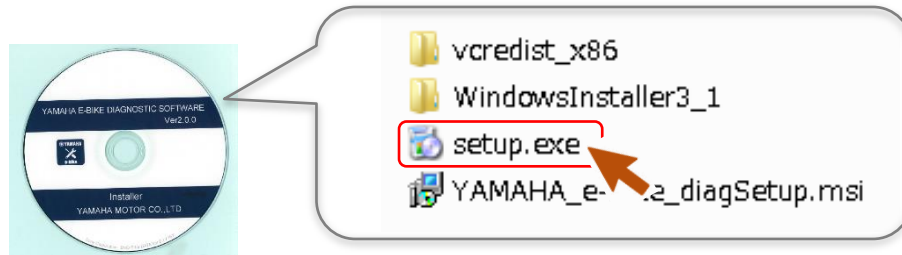June 2013

■ Installation

* If the PC has already installed Ver.1, please uninstall Ver.1 before installing Ver.2

EXAMPLE
Start > Control Panel > Programs > Programs and Features

1. Software installation

- vcredist_x86
- WindowsInstaller3_1
- setup.exe
- YAMAHA_e-...e_diagSetup.msi

Select an execute file "setup.exe"
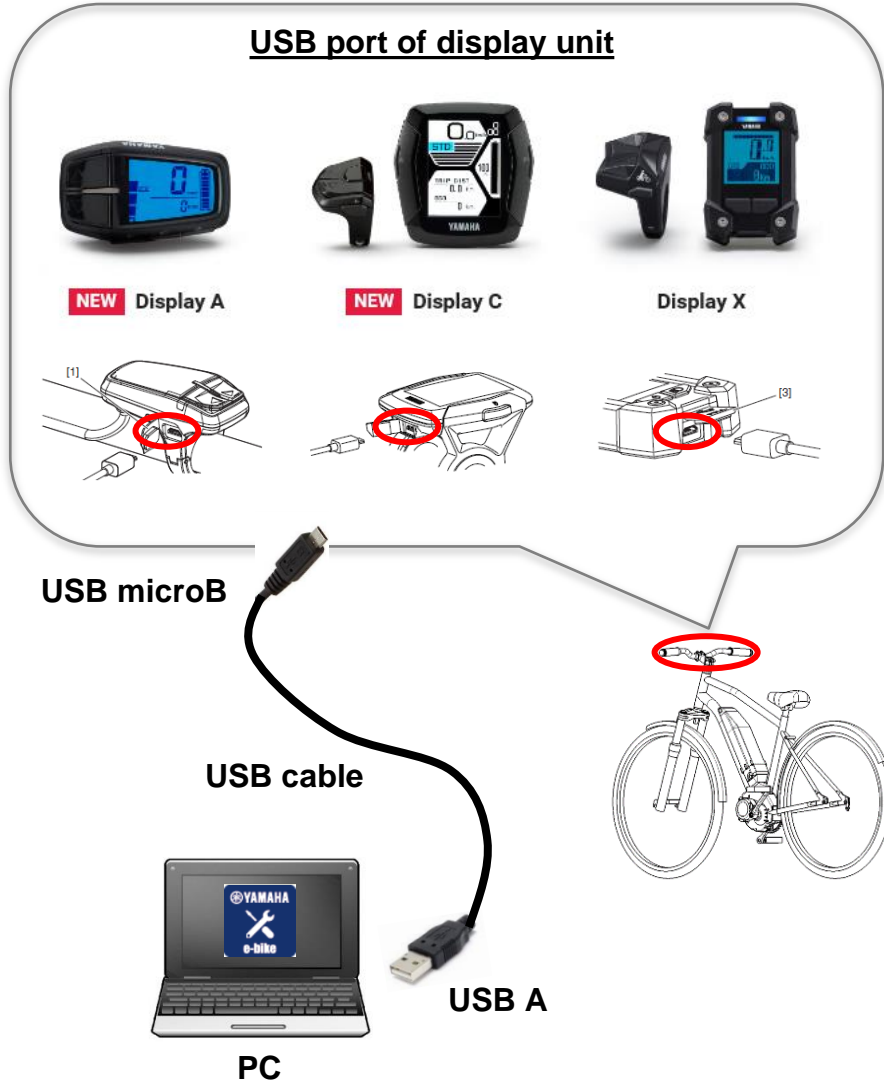
1. Device driver installation

Operating system	Installer
Windows 7 32bit And previous	"C:\Program Files\STMicroelectronics\Software\Virtual comport driver\Win7\dpinst_x86.exe"
Windows 7 64 bit	"C:\Program Files (x86)\STMicroelectronics\Software\Virtual comport driver\Win7\dpinst_amd64.exe"
Windows 8 32bit [1]	"C:\Program Files\STMicroelectronics\Software\Virtual comport driver\Win8\dpinst_x86.exe"
Windows 8 64bit [1]	"C:\Program Files (x86)\STMicroelectronics\Software\Virtual comport driver\Win8\dpinst_amd64.exe"

Select an execute files that matches your PC system.

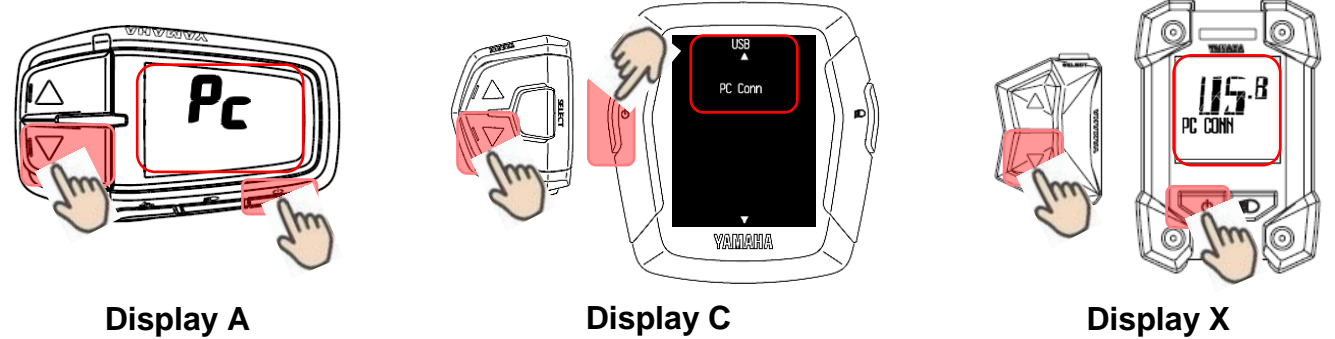* For other Windows versions, please download the driver by yourself.
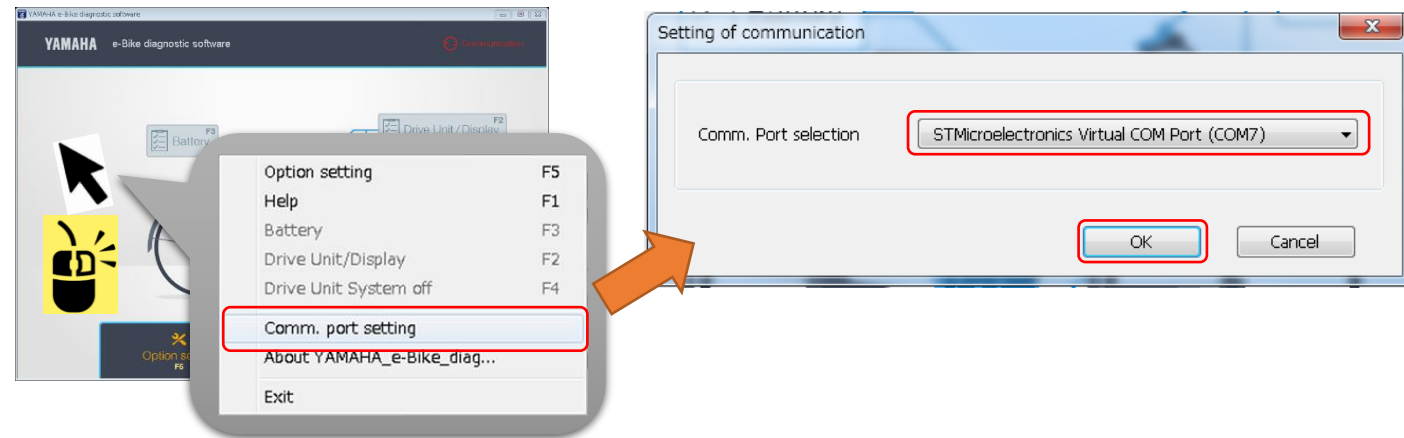
■ Hardware setup

Connection

USB port of display unit

NEW Display A   NEW Display C   Display X

[1]   [3]

USB microB

USB cable
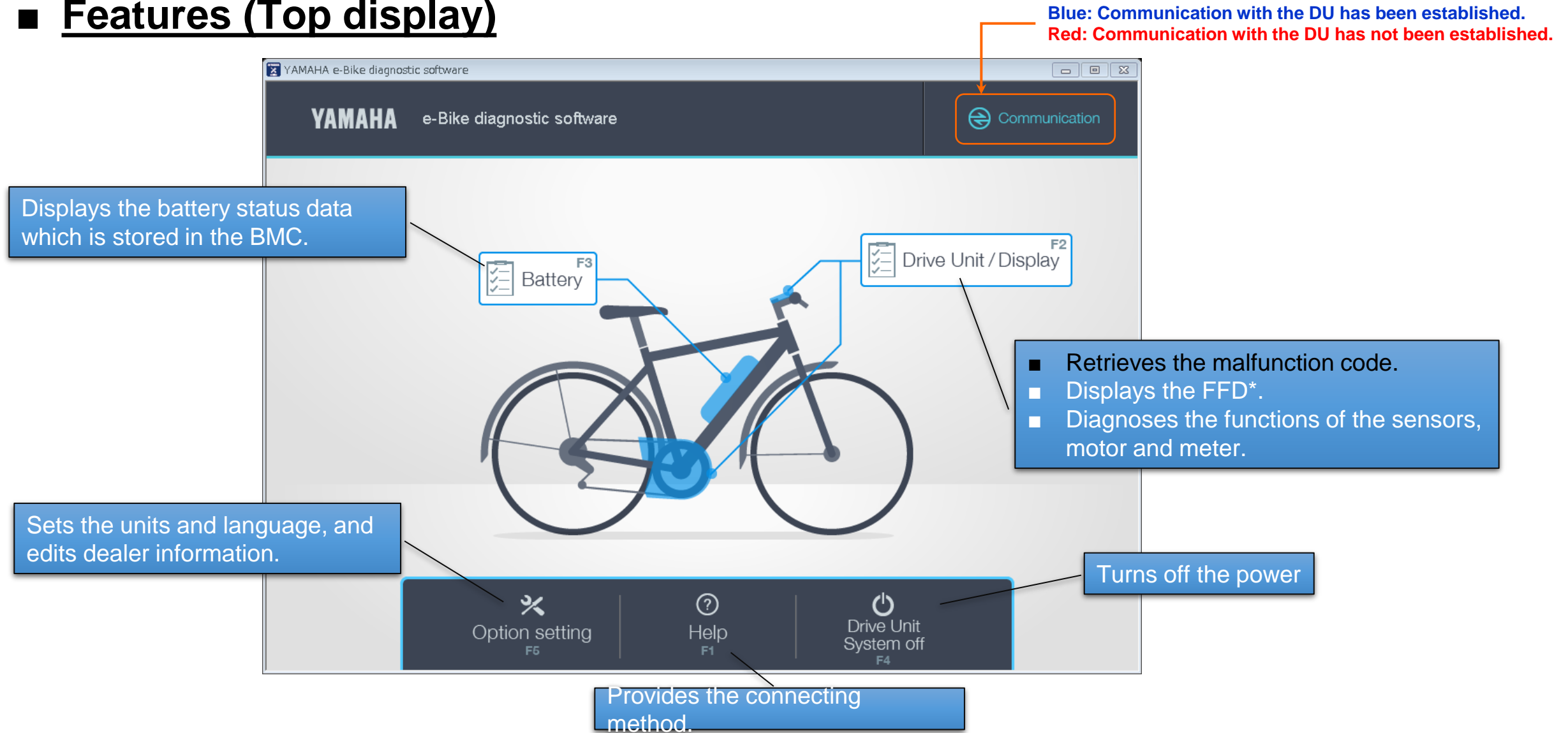
USB A

PC

Startup

1. Connect the USB cable.
2. Continue to push "assist mode switch (Down)" and "Power switch" over 2 sec. After 2 sec., "Pc" (for display A), "USB PC CONN" (for display C&X) will display on the meter

Display A   **Display C**   **Display X**

1. Launching the software
2. Right-click on the display, and select the comm. Port selection.

Option setting	F5
Help	F1
Battery	F3
Drive Unit/Display	F2
Drive Unit System off	F4
Comm. port setting	
About YAMAHA_e-Bike_diag...	
Exit	

Setting of communication

Comm. Port selection   STMicroelectronics Virtual COM Port (COM7)

OK   Cancel

■ Features (Top display)

YAMAHA e-Bike diagnostic software   ⊕ Communication

Displays the battery status data which is stored in the BMC.

F3 Battery

F2 Drive Unit / Display

- ■ Retrieves the malfunction code.
- ■ Displays the FFD*.
- ■ Diagnoses the functions of the sensors, motor and meter.

Sets the units and language, and edits dealer information.

Turns off the power

Option setting
F5

Help
F1

Drive Unit
System off
F4

Provides the connecting method.

FFD*
The freeze frame data (FFD) is the operation data when a malfunction was detected.
This data can be used to identify when the malfunction occurred and check the Drive Unit conditions when it occurred.

■ Features (Drive Unit / Display) 1/2

■ Retrieves the malfunction code.
■ Displays the FFD* when you click each malfunction codes.

Code 31 : No communication signals

Mileage:	0 hour
Occurrence time from system ON:	0 hour 00 min
Speed:	0 km/h (0 mph)
Cadence:	0 rpm
Battery voltage:	40 V
Drive Unit inside temperature:	24 ℃
Torque sensor reference voltage:	0.5 V

SAMPLE

(Refer to next slide)

YAMAHA e-Bike diagnostic software

Drive Unit / Display Malfunction — YAMAHA e-Bike diagnostic software — Communication

Code 31 Disconnected	Code 31 No communication signals	Code 31 Wiring failure between the torque sensor and the controller

System function test

			Note
Speed sensor	0 times	☐ OK ☐ Failed	
Motor output current	0 %	☐ OK ☐ Failed	
Torque sensor reference voltage	0.5 V	☐ OK ☐ Failed	
Display unit function check	✓ Check	☐ OK ☐ Failed	
Motor rotation check	✓ Check	☐ OK ☐ Failed	

Option

< Back Esc

✕ Erase malfunction history F6

🖶 Print F7

⬇ Save F12

Prints the inspection results

Save the parameter files (*.bin)

Erase malfunction history
(All malfunction history will be deleted)

■ **Features (Drive Unit / Display) 2/2**

Checks the functionality of the speed sensor operation.
(Number will increase when rotate the wheel with sensor.)

Checks the functionality of the motor current.
(Number will increase when applying the rear brake and strongly pressing on the pedals.)

Displays the condition of the torque sensor reference voltage.

Checks the functionality of the display unit operation.
(All segments will illuminate when you click the button)

Checks the functionality of the motor operation.
(The motor will rotate when you click the button)

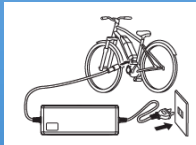You can select the inspection result and fill in the memo.

■ Features (Battery)

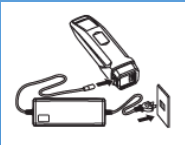Displays the battery status data which is stored in the BMC.

"Residual battery capacity"
Displays the charging capacity.
(Battery deterioration capacity is not displayed in this software)

"Total number of battery charging cycles"

Definition of "1 cycle"

Charge
(Connect the battery pack to charger)

Discharge
(Assist running)

YAMAHA e-Bike diagnostic software

Battery   YAMAHA e-Bike diagnostic software   Communication

Battery information

Battery voltage:	40.9	V
Inside temperature:	26.1	℃
Residual battery capacity:	92	%
Total time since first charge:	166	day

Total number of battery charging cycles:	1	times
Charge start from... 0-24%:	1	times
25-49%:	0	times
50-74%:	0	times
75-100%:	0	times

Option

Save the parameter files (*.bin)

Print F7   Save F12

< Back Esc

Prints the inspection results

SAMPLE

YAMAHA

Inspection results

Date	03.7.2018	Frame serial No.	xxxxx-0000000
Customer	Yamaha Rider	Battery serial No.	xxxxx-0000000
		Mileage	120 km

Battery information

Battery voltage	40.9 V	Total number of battery charging cycles:	1 times
Inside temperature	25.6 ℃		
Residual battery capacity	92 %	Charge start from...	
Total time since first charge	166 day	0-24%:	1 times
		25-49%:	0 times
		50-74%:	0 times
		75-100%:	0 times

YAMAHA MOTOR
Address:
Contact:
E-mail:
URL: