Program Box for SUPER VORTEX Gen2

PROGRAM BOX Gen2

firmwareVer.01.03R001 670A02532B

USER MANUAL

Thank you for your purchasing PROGRAM BOX Gen2.
Before you start to use your new Program Box, please reas these instructions carefully to enjoy optimum performance. Keep thsi manual in a safe place for future reference.

⚠ NOTICE   PRECAUTIONS AND WARNINGS

■This program box is designed for use with SANWA 2.4GHz radio systems. FUnctionality of this program box with radio system bands other than SANWA may differ. Carefully check the function of the radio system when a band other than SANWA is used.
■When plug the battery into program box, please observe correct polarity (+/−). Plugging the battery into program box with reverse polarity will damage the ESC beyond repair!
■This program box is not waterproof. Do not run through water or allow the Program Box to become wet with moisture, or the program box can be damaged.

PROGRAM BOX Gen2 FEATURES AND SPECIFICATIONS

■It will adjust every setting of SUPER VORTEX Gen2 and SUPER VORTEX Gen2 PRO including firmware updates.
■Compatible with micro SD card. By using micro SD card, you can save the setting of SUPER VORTEX Gen2/PRO in micro SD card.
 (※Micro SD Card is optional item.)
■PROGRAM BOX Gen2 is compatible with your micro SD or micro SDHC card.
 ※When you delete the data of micro SD card, please delete the file from PC. PROGRAM BOX Gen2 cannot delete the data of micro SD card.

SPECIFICATIONS

■Working voltage ·3.6V～7.4V
■Dimensions · · · · · · 86.2 x 59.0 x 19.2mm(w/o protuberance)
■Weight · 75g

WHAT'S INCLUDED

■COM CABLE · 1 pc.
■BATTERY BOX · · · · · · · · · · · · · · · · · · · 1 pc.
■User Manual · · · · · · · · · · · · · · · · · · · 1 pc.

OVERVIEW

●Connect PROGRAM BOX Gen2 and SUPER VORTEX Gen2 with COM Cable.
IMPORTANT) Prior to use, please update the firmware of SUPER VORTEX Gen2(firmware ver.01.03R001) and SUPER VORTEX Gen2 PRO. To use PROGRAM BOX Gen2 with Super Vortex Gen2, firmware of ESC must be the latest one.
   Without updating frimware of ESC, ESC cannot be used with PROGRAM BOX Gen2.

●ABOUT BATTERY
   When connected with SUPER VORTEX Gen2/PRO ESC, power is supplied from BEC of SUPER VORTEX Gen2/PRO.
   If you use the included battery box, PROGRAM BOX Gen2 can be operated without ESC.
※When used with battery box, if battery is low, PROGRAM BOX Gen2 will not work properly.
   If "LOW BATTERY" is displayed, please replace battery shortly.
※When used with battery box, the setting data can be saved into micro SD card, but it cannot be saved into ESC.

※Some menu of PROGRAM BOX Gen2 needs to be set to function properly, and others are for future development.
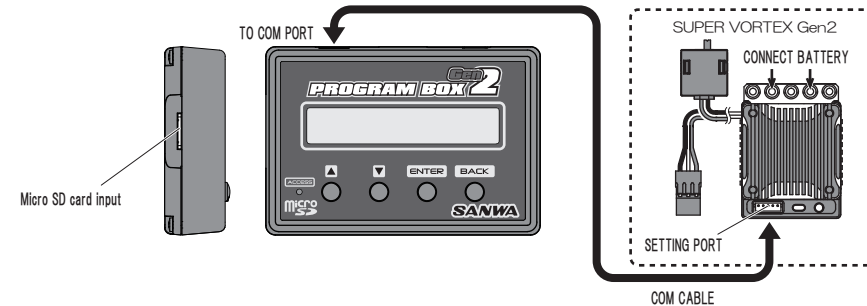   Please be careful about the use.

COM Port   Battery Connector

SUPER VORTEX Gen2
SUPER VORTEX Gen2 PRO
Connect battery

TO COM PORT

micro SD card input

ACCESS LED   DOWN BUTTON (DOWN)   BACK BUTTON (BACK)
UP BUTTON (UP)   ENTER BUTTON (ENTER)
SETTING PORT   COM CABLE

1
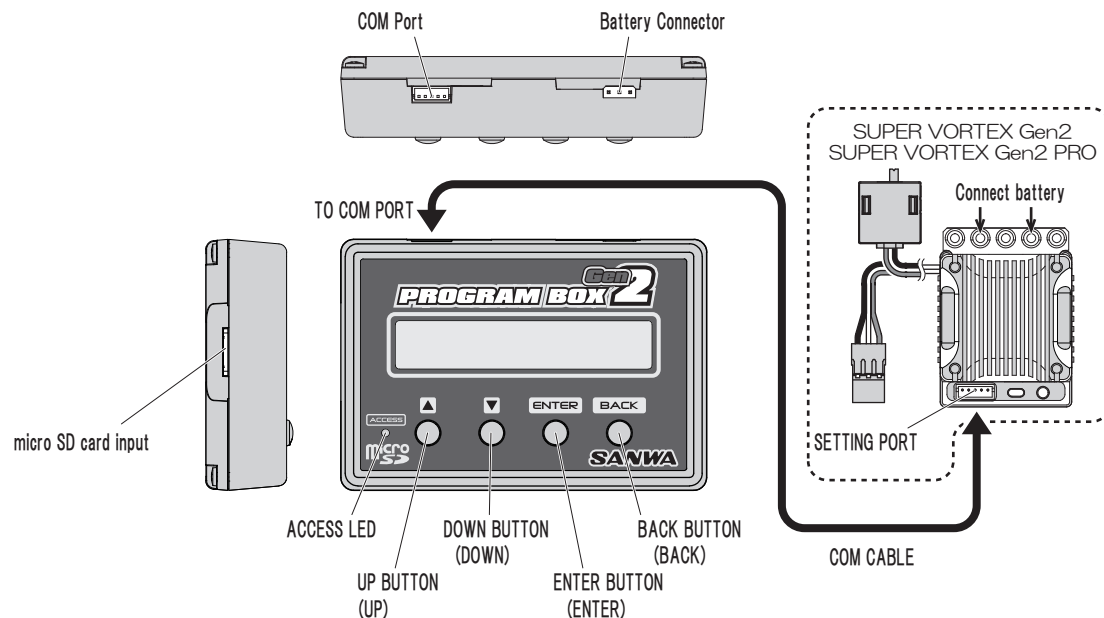
PROGRAM BOX Gen2   PIOR TO USE

●Firmware Ver.01.03R001 (Program Box Gen2) is not compatible with SUPER VORTEX Gen2. Please upload to firmware before using.
· If connected with ESC, when the firmware of ESC is not the same as PROGRAM BOX Gen2, discrepancy of firmware will be displayed.
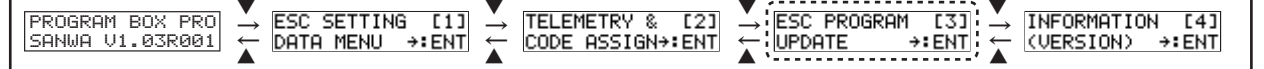
```
ESC         N:BCK
CONNECT OK?Y:ENT
```
ENTER "ESC CONNECT OK ?" (CONNECTION CONFIMATION) SCREEN. And the right screen will be displayed.

```
Version Not Same
Please Update!!
```
After the left message, the right screen indicate that the firmware of ESC is not the same as Program box.

```
BOX:V01.03R001
G2 :V01.02R003
```
BACK↓
```
INFORMATION  [4]
<VERSION>  →:ENT
```
By BACK operation, it'll move to INFORMATION.

⚠ Caution To upload firmware will be initialized the setting dates in Program Box Gen2. Please save to the setting dates in Micro SD Card, and write the setting date to SUPER VORTEX Gen2/PRO after updated.
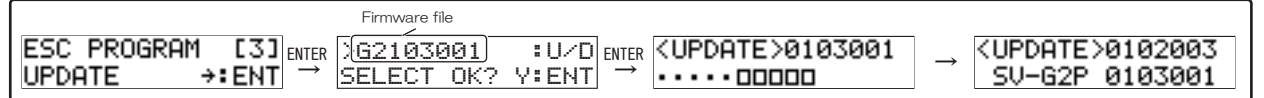
1)DOWNLOAD the latest firmware into your micro SD card from our website and insert your micro SD card into PROGRAM BOX Gen2.
※You can use any OS for the writing.
 2)Connect PROGRAM BOX Gen2 with SUPER VORTEX Gen2 by COM Cable.

TO COM PORT

SUPER VORTEX Gen2
CONNECT BATTERY

Micro SD card input

SETTING PORT

COM CABLE

3)MOVE TO ESC PROGRAM UPDATE MENU

```
PROGRAM BOX PRO      →   ESC SETTING  [1]   →   TELEMETRY &   [2]   →   ESC PROGRAM  [3]   →   INFORMATION  [4]
SANWA V1.03R001      ←   DATA MENU  →:ENT   ←   CODE ASSIGN→:ENT   ←   UPDATE    →:ENT   ←   <VERSION>  →:ENT
```

4)AFTER press ENTER, File selection screen will come out. And choose the firmware file (G21012003) and ENTER.

Firmware file

```
ESC PROGRAM  [3]
UPDATE     →:ENT
```
ENTER →
```
:G2103001  :U/D
SELECT OK? Y:ENT
```
ENTER →
```
<UPDATE>0103001
····00000
```
→
```
<UPDATE>0102003
SV-G2P 0103001
```

5) ESC firmware is upgraded. And PROGRAM BOX Gen2 is linked to work with SUPER VORTEX Gen2.
   After ESC firmware is upgraded, when you power on SUPER VORTEX Gen2 connected with PROGRAM BOX Gen2, connection confirmation menu will come out. Select the menu accroding to your setting.

※The firmware can be saved form our website. The update way is same as to update firmware for SUPER VORTEX Gen2 PRO in the above.

PROGRAM BOX Gen2   ABOUT MENU

●PROGRAM BOX Gen2 has the following four menu. First, ESC SETTING MENU allows you to change each setting SUPER VORTEX Gen2/PRO. Secoundly, TELEMTRY & CODE ASSIGN MENU allows you to change each setting on telemetry and CODE AUX. Thirdly, ESC PROGRAM UPDATE MENU allows you to update the firmware of ESC. And finally, INFORMATION MENU allows you to confirm the firmware version of ESC and Program Box. Select the menu you need.

```
PROGRAM BOX PRO
SANWA V1.03R001
```

```
ESC SETTING  [1]
DATA MENU  →:ENT
```
ESC SETTING MENU allows you to change each setting of SUPER VORTEX Gen2/PRO.

```
TELEMETRY &   [2]
CODE ASSIGN→:ENT
```
TELEMTRY & CODE ASSIGN MENU allows you to change each setting of telemetry and CODE AUX.
※To be able to use this menu, micro SD card must be inserted.

```
ESC PROGRAM  [3]
UPDATE     →:ENT
```
ESC PROGRAM UPDATE MENU allows yout to upgrade the firmware of SUPER VORTEX Gen2/PRO.

```
INFORMATION  [4]
<VERSION>  →:ENT
```
INFORMATION MENU allows you to confirm the firmware of SUPER VORTEX Gen2/PRO and PROGRAM BOX.

2

●ABOUT ESC SETTING MENU
　ESC SETTING MENU allows you to change each setting of SUPER VORTEX Gen2/PRO.
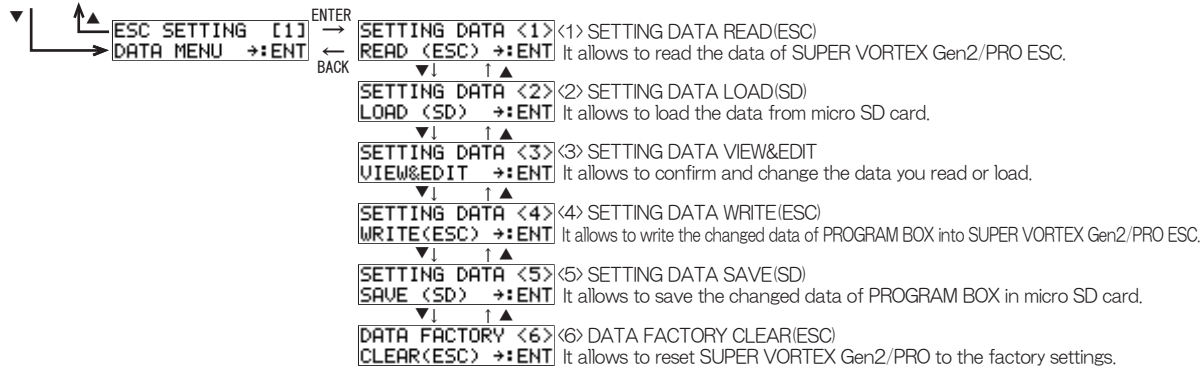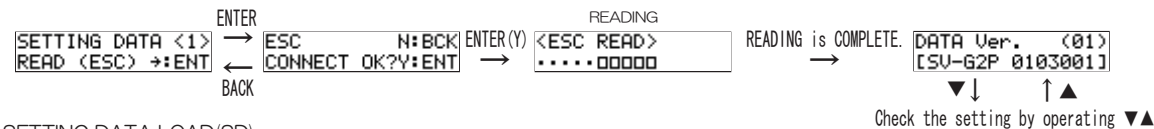※The normal process of setting is "READING ESC data", "CHANGING setting by Program Box", and at last "WRITING the changed values into SUPER VORTEX Gen2/PRO ESC".
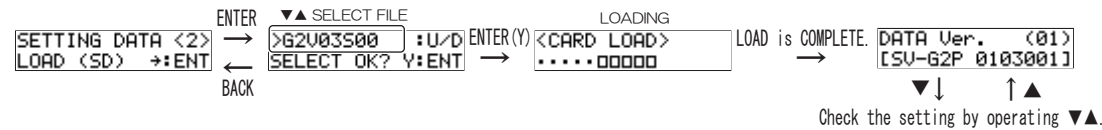
```
PROGRAM BOX PRO
SANWA V1.03R001
```

```
      ▼    ↑▲  ESC SETTING  [1]  ENTER→  SETTING DATA <1>  <1> SETTING DATA READ(ESC)
         →  DATA MENU →:ENT  ←BACK  READ (ESC) →:ENT  It allows to read the data of SUPER VORTEX Gen2/PRO ESC.
                            ▼↓  ↑▲
                            SETTING DATA <2>  <2> SETTING DATA LOAD(SD)
                            LOAD (SD) →:ENT  It allows to load the data from micro SD card.
                            ▼↓  ↑▲
                            SETTING DATA <3>  <3> SETTING DATA VIEW&EDIT
                            VIEW&EDIT →:ENT  It allows to confirm and change the data you read or load.
                            ▼↓  ↑▲
                            SETTING DATA <4>  <4> SETTING DATA WRITE(ESC)
                            WRITE(ESC) →:ENT  It allows to write the changed data of PROGRAM BOX into SUPER VORTEX Gen2/PRO ESC.
                            ▼↓  ↑▲
                            SETTING DATA <5>  <5> SETTING DATA SAVE(SD)
                            SAVE (SD) →:ENT  It allows to save the changed data of PROGRAM BOX in micro SD card.
                            ▼↓  ↑▲
                            DATA FACTORY <6>  <6> DATA FACTORY CLEAR(ESC)
                            CLEAR(ESC) →:ENT  It allows to reset SUPER VORTEX Gen2/PRO to the factory settings.
```

・<1> SETTING DATA READ(ESC)
　It allows to read the saved data of SUPER VORTEX Gen2/PRO ESC.

```
             ENTER                              READING
SETTING DATA <1>  →  ESC      N:BCK  ENTER(Y)  <ESC READ>  READING is COMPLETE.  DATA Ver.   <01>
READ (ESC) →:ENT  ←  CONNECT OK?Y:ENT  →  ·····□□□□□  →  [SV-G2P 0103001]
             BACK                                                    ▼↓     ↑▲
                                      Check the setting by operating ▼▲.
```
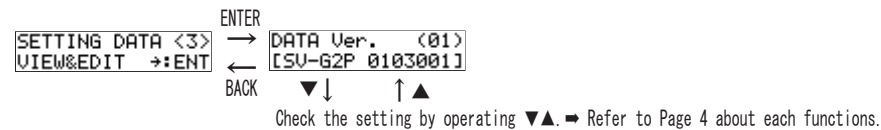
・<2> SETTING DATA LOAD(SD)
　It allows to load the saved data of micro SD card.
※When no data is saved in micro SD card, you cannot choose any file.
※Without carrying out <4>SETTING DATA WRITE(ESC), the changed data of SD card will be not applied to SUPER VORTEX Gen2/PRO ESC.
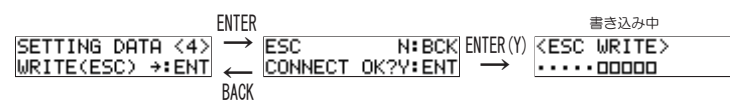
```
             ENTER  ▼▲ SELECT FILE              LOADING
SETTING DATA <2>  →  >G2V03S00   :U/D  ENTER(Y)  <CARD LOAD>  LOAD is COMPLETE.  DATA Ver.   <01>
LOAD (SD) →:ENT  ←  SELECT OK? Y:ENT  →  ·····□□□□□  →  [SV-G2P 0103001]
             BACK                                                    ▼↓     ↑▲
                                      Check the setting by operating ▼▲.
```

・<3> SETTING DATA VIEW&EDIT
　It allows to change and confirm the data of PROGRAM BOX which is read from ESC or loaded from SD card.

```
             ENTER
SETTING DATA <3>  →  DATA Ver.   <01>
VIEW&EDIT →:ENT  ←  [SV-G2P 0103001]
             BACK  ▼↓   ↑▲
       Check the setting by operating ▼▲. ➡ Refer to Page 4 about each functions.
```

・<4> SETTING DATA WRITE(ESC)
　It allows to write the changed data of PROGRAM BOX into SUPER VORTEX Gen2/PRO.
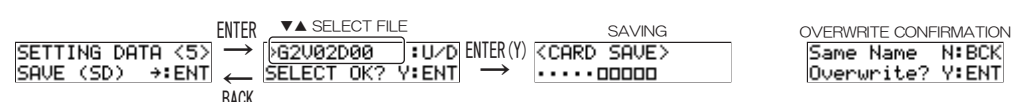※Without carrying out <4>SETTING DATA WRITE(ESC), the changed data will not be applied to SUPER VORTEX Gen2/PRO ESC.

```
             ENTER                              書き込み中
SETTING DATA <4>  →  ESC      N:BCK  ENTER(Y)  <ESC WRITE>
WRITE(ESC) →:ENT  ←  CONNECT OK?Y:ENT  →  ·····□□□□□
             BACK
```

・<5> SETTING DATA SAVE(SD)
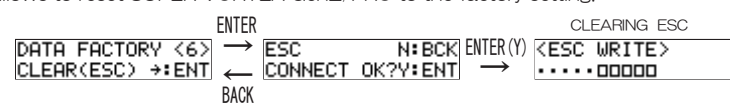　It allows to save the changed data of PROGRAM BOX into micro SD card.
　50 file name for saving is selectable amoung [G2V02S00 ~ G2V02S49].
　If the chaosen file alrady have the saved data, after confirmation screen, the data will be overwrited.
※If you change the file name from PC, the file cannot be opened in PROGRAM BOX.

```
             ENTER  ▼▲ SELECT FILE              SAVING              OVERWRITE CONFIRMATION
SETTING DATA <5>  →  >G2V02D00  :U/D  ENTER(Y)  <CARD SAVE>  Same Name  N:BCK
SAVE (SD) →:ENT  ←  SELECT OK? Y:ENT  →  ·····□□□□□  Overwrite? Y:ENT
             BACK
```

・<6> DATA FACTORY CLEAR(ESC)
　It allows to reset SUPER VORTEX Gen2/PRO to the factory setting.

```
             ENTER                              CLEARING ESC
DATA FACTORY <6>  →  ESC      N:BCK  ENTER(Y)  <ESC WRITE>
CLEAR(ESC) →:ENT  ←  CONNECT OK?Y:ENT  →  ·····□□□□□
             BACK
```

※After clearing ESC, throttle neutral / end position will also be cleared. So clibrate the throttle postion again.

●ABOUT ARRANGEMENT OF SETTING MENU (The firmware Ver.01.03R001)
　When SUPER VORTEX Gen2/PRO is connected into PROGRAM BOX and the setting data of SUPER VORTEX Gen2/PRO is transfferd to PROGRAM BOX. And the setting data is changed in PROGRAM BOX. After the changed setting data of Program Box is writen in ESC, the seting data will be applied to ESC.
　To cahnge values, ENTER the menu you want to change, and change the values in the chosen menu by UP BUTTON [▲] /DOWN BUTTON [▼]

⚠ NOTICE After changing the values, make sure to write the changed data into SUPER VORTEX Gen2/PRO. (Refer to Page 3)

```
ESC CONNECTION
CONFIRMATION     ENTER
ESC      N:BCK  →  DATA Ver.   <01>  →  SETTING DATA <3>
CONNECT OK?Y:ENT    [SV-G2P 0103001]      VIEW&EDIT →:ENT
                       ▼↓  ↑▲      BACK
```

The maximum values which ESC has will be displayed when PROGRAM BOX is conected with ESC.
*These functions is not adjustable.

Menu	Display		ENTER/BACK	Value Display	VALUES
・TEMP1 (FET TEMP.)	`TEMP1 FET   (02)` `MAX [101]°C`				
・TEMP2 (MOTOR TEMP.)	`TEMP2 MOTOR (03)` `MAX [102]°C`				
・TEMP3 (CPU TEMP.)	`TEMP3 CPU   (04)` `MAX [103]°C`				
・MOTOR RPM (MAXIMUM RPM)	`MOTOR REV.  (05)` `MAX [ 36500]rpm`				
・BATTERY VOLT. (MINIMUM VOLT.)	`BATTERY     (06)` `MIN [3.6]V`				
・MODE 1 (CUT-OFF VOLT.)	`M01 CUT-BT  (07)` `[6.4]V →:ENT`	ENTER→ ←BACK	`M01 CUT-BT  (07)` `>6.4V    :U/D`	VALUES [OFF/3.0 ~ 7.0V]
・MODE 2 (REVERSE)	`M02 BACK    (08)` `[OFF] →:ENT`	ENTER→ ←BACK	`M02 BACK` `>OFF     :U/D`	VALUES [OFF(W/O reverse)/ON(With reverse)]
・MODE 3 (THERMAL PROTECTION) [ESC/MOTOR TEMP.]	`M03 HEAT-P  (09)` `[120/ 80]°C→:ENT`	ENTER→ ←BACK	`M03 HEAT-P` `>120/ 80°C :U/D`	VALUES [120/80℃,120/90℃,120/100℃,120/110℃,120/120℃,OFF]
・MODE 4 (BOOST)	`M04 BOOST   (10)` `[OFF] →:ENT`	ENTER→ ←BACK	`M04 BOOST` `>OFF     :U/D`	VALUES [OFF/ON]
・MODE 5 (CHANNEL ID)	`M05 CH-ID   (11)` `[ 2]ch→:ENT`	ENTER→ ←BACK	`M05 CH-ID` `> 2ch  :U/D`	VALUES [1/2/3/4]※This function is for future equipment. Please choose [2] as standard.
・DATA 1 (THROTTLE PUNCH)	`D01 TH-PAN  (12)` `[ 0] →:ENT`	ENTER→ ←BACK	`D01 TH-PAN` `> 0    :U/D`	VALUES [0 ~ 100]
・DATA 2 (NEUTRAL BRAKE RATE)	`D02 N-BR-R  (13)` `[ 0] →:ENT`	ENTER→ ←BACK	`D02 N-BR-R` `> 0    :U/D`	VALUES [0 ~ 100]
・DATA 3 (DRIVE FEEL)	`D03 DRV-F   (14)` `[ 60] →:ENT`	ENTER→ ←BACK	`D03 DRV-F` `> 60   :U/D`	VALUES [0 ~ 100]※Initial value is [60].
・DATA 4 (NEUTRAL BRAKE FEEL)	`D04 N-BR-F  (15)` `[ 20] →:ENT`	ENTER→ ←BACK	`D04 N-BR-F` `> 20   :U/D`	VALUES [0 ~ 100]※Initial value is [20].
・DATA 5 (BRAKE FEEL)	`D05 BR-F    (16)` `[ 0] →:ENT`	ENTER→ ←BACK	`D05 BR-F` `> 0    :U/D`	VALUES [0 ~ 100]
・DATA 6 (BOOST RATE)	`D06 BOST-R  (17)` `[ 0] →:ENT`	ENTER→ ←BACK	`D06 BOST-R` `> 0    :U/D`	VALUES [0 ~ 100]
・DATA 7 (TURBO)	`D07 TURBO   (18)` `[ 0] →:ENT`	ENTER→ ←BACK	`D07 TURBO` `> 0    :U/D`	VALUES [0 ~ 100] ※Change from 23,000rpm to 3,000rpm (1step 200rpm)
・DATA 8 (BOOST STARTING RPM)	`D08 BOST-S  (19)` `[ 0] →:ENT`	ENTER→ ←BACK	`D08 BOST-S` `> 0    :U/D`	VALUES [0 ~ 50]※If the value is increased to more than 50, no change will happen.
・DATA 9 (BOOST ACCELERATION)	`D09 BOST-A  (20)` `[ 0] →:ENT`	ENTER→ ←BACK	`D09 BOST-A` `> 0    :U/D`	VALUES [0 ~ 100] ※Increase the amount of boost per 1,000rpm. Recommended value:17.5T「45~80」, 13.5T「14~45」, Modified「1~8」
・DATA 10 (NEUTRAL DEAD BAND)	`D10 DEAD-B  (21)` `[ 25] →:ENT`	ENTER→ ←BACK	`D10 DEAD-B` `> 25   :U/D`	VALUES [10 ~ 50]※Initial value is [25].
・DATA 11 (Full brake rate)	`D11 F-BR-R  (22)` `[ 0] →:ENT`	ENTER→ ←BACK	`D11 F-BR-R` `> 0    :U/D`	VALUES [0 ~ 100]
・DATA 12 (Turbo slope)	`D12 TB-SLP  (23)` `[ 0] →:ENT`	ENTER→ ←BACK	`D12 TB-SLP` `> 0    :U/D`	VALUES [0 ~ 100]
・DATA 13 (Turbo release slope)	`D13 TB-REL  (24)` `[ 0] →:ENT`	ENTER→ ←BACK	`D13 TB-REL` `> 0    :U/D`	VALUES [0 ~ 100]
・DATA 14 (Turbo delay)	`D14 TB-DLY  (25)` `[ 0] →:ENT`	ENTER→ ←BACK	`D14 TB-DLY` `> 0    :U/D`	VALUES [0 ~ 100]

In thick-blocked table is additional new functions for Super VORTEX Gen2 PRO.

```
BACK → DATA Ver.   <01>
       [SV-G2P 0103001]
```

TELEMETRY function of program box is compatible with only SANWA telemetry-compatible radios (M12S/M12S-RS/EXZES ZZ/M12/ EXZES Z/MT-44/MT-4S/MT-4/MT-S). CODE 10 is compatible with only M12S/M12S-RS/EXZES ZZ/MT-44.

●ABOUT TELEMETRY&CODE ASSIGN MENU (Firmware Ver.01.03R001)
TELEMETRY&CODE ASSIGN MENU allows to change each setting of telemetry and CODE ASSIGN.

※This menu is for future development. As of today, replacement of telemetry data display and assignment ON/OFF for CODE AUX are available.
· Make sure to insert micro SD card when you use this menu.
The initial display when micro SD card is inserted for the first time is as follows;

```
NO AS-FILE N:BCK          <CARD CREATE>          T00 TLM1    (01)
CREATE OK? Y:ENT  ENTER→  ·····□□□□□        →    CH[2] R[ 1]→:ENT
```
```
<<<<NO CARD>>>>
Please Insert !!
```
NOTE) This is displayed because of no file comaptible with SD card.　After creating the file, move to TLM1(01).　If ENTER while micro SD card is not inserted, warning message will come out.

· TELEMETRY MENU
※TELEMETRY DATA to radios are limited to four functions.
Changing the value of [R](※RETURN) allows to change the radios' display of telemetry.(It depends on the display unit.)
Factory programmed setting: TLM1(FET TEMP. of SUPER VORTEX Gen2/PRO), TLM2(MOTOR TEMP.), RPM1(MOTOR RPM), VOLT(BATTERY VOLT.).
(01) TLM1・・・SETTING MENU for Telemetry 1 (FET TEMP. of SUPER VORTEX Gen2 is factory-programmed.)
(02) TLM2・・・SETTING MENU for Telemetry 2(MOTOR TEMP. is factory-programmed.)
(03) RPM1・・・SETTING MENU for MOTOR RPM 1
(04) RPM2・・・SETTING MENU for MOTOR RPM 2 ※Factory-programmed setting is "OFF". NOTE : No radios can display RPM2 as of today.
(05) VOLT・・・SETTING MENU for RECEIVER VOLTAGE
※[CH] for each menu is changeable. If throttle CH is changed to any other than throttle CH2 becaouse of tyep change of M12S/M12S-RS/EXZES ZZ/ MT-44,please change CHANNEL setting to the chosen CH. In normal, please use throttle channel [2].
※When CH setting or telemetry display function is set as "0", the function will be OFF.

Factory-programmed setting is OFF.

```
T00 TLM1    (01)   T01 TLM2    (02)   T03 RPM1    (03)   T04 RPM2    (04)   T05 VOLT    (05)
CH[2] R[ 1]→:ENT   CH[2] R[ 2]→:ENT   CH[2] R[ 4]→:ENT   CH[0] R[ 0]→:ENT   CH[2] R[ 6]→:ENT
 CH    TELEMETRY    CH    TELEMETRY    CH    TELEMETRY    CH    TELEMETRY    CH    TELEMETRY
SETTING DISPLAY FUNCTION  SETTING DISPLAY FUNCTION  SETTING DISPLAY FUNCTION  SETTING DISPLAY FUNCTION  SETTING DISPLAY FUNCTION
```

CH SETTING	VALUE
CH1[ST]	1
CH2[TH]	2
CH3	3
CH4	4
CH SETTING OFF	0

TELEMETRY DISPLAY FUNCTION [R]	VALUE	
FET TEMP.	1	TLM1/TLM2 ONLY
MOTOR TEMP.	2	
CPU TEMP.	3	
MOTOR RPM	4	RPM ONLY
MAXIMUM MOTOR RPM	5	

TELEMETRY DISPLAY FUNCTION [R]	VALUE	
BATTERY VOLT.	6	VOLT ONLY
TIMING ADVANCE VALUE	7	
MAXIMUM FET TEMP.	8	TLM1/TLM2 ONLY
MAXIMUM MOTOR TEMP.	9	
MAXIMUM CPU TEMP.	10	
FUNCTION OFF	0	

※The value of 10 - 99 of TELEMETRY DISPLAY FUNCTION[R] will not function.

· CODE AUX MENU
(06) AUX1CODE01・・・Factory-programmed setting is MODE 5 (Throttle punch) of SUPER VORTEX Gen2/PRO.
(07) AUX1CODE02・・・Factory-programmed setting is MODE 6 (Neutral Brake rate) of SUPER VORTEX Gen2/PRO.
(08) AUX1CODE03・・・Factory-programmed setting is MODE 7 (Drive feel) of SUPER VORTEX Gen2/PRO.
(09) AUX1CODE04・・・Factory-programmed setting is MODE 8 (Neutral Brake Feel) of SUPER VORTEX Gen2/PRO.
(10) AUX1CODE05・・・Factory-programmed setting is MODE 9 (Brake feel) of SUPER VORTEX Gen2/PRO.
(11) AUX1CODE06・・・Factory-programmed setting is MODE 10 (Boost Rate) of SUPER VORTEX Gen2/PRO.
(12) AUX1CODE07・・・Factory-programmed setting is MODE 11 (Turbo) of SUPER VORTEX Gen2/PRO.
(13) AUX1CODE08・・・Factory-programmed setting is MODE 12 (Boost starting RPM) of SUPER VORTEX Gen2/PRO.
(14) AUX1CODE09・・・Factory-programmed setting is MODE 13 (Boost Acceleration) of SUPER VORTEX Gen2/PRO.
(15) AUX1CODE10・・・Factory-programmed setting is MODE 14 (Neutral dead band) of SUPER VORTEX Gen2/PRO.

```
AUX1CODE01  (06)   AUX1CODE02  (07)   AUX1CODE03  (08)   AUX1CODE04  (09)   AUX1CODE05  (10)
CH[2] D[01]→:ENT   CH[2] D[02]→:ENT   CH[2] D[03]→:ENT   CH[2] D[04]→:ENT   CH[2] D[05]→:ENT
 CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING
SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION
```
```
AUX1CODE06  (11)   AUX1CODE07  (12)   AUX1CODE08  (13)   AUX1CODE09  (14)   AUX1CODE10  (15)
CH[2] D[06]→:ENT   CH[2] D[07]→:ENT   CH[2] D[08]→:ENT   CH[2] D[09]→:ENT   CH[2] D[10]→:ENT
 CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING
SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION
```

CH SETTING	VALUE
CH1[ST]	1
CH2[TH]	2
CH3	3
CH4	4
CH 設定 OFF	0

CODE AUX SETTING FUNCTION [D]	VALUE
THROTTLE PUNCH	01
NEUTRAL BRAKE RATE	02
DRIVE FEEL	03
NEUTRAL BRAKE FEEL	04
BRAKE FEEL	05
BOOST RATE	06
TURBO	07

CODE AUX SETTING FUNCTION [D]	VALUE
BOOST STRTING RPM	08
BOOST ACCELERATION	09
NEUTRAL DEAD BAND	10
FULL BRAKE RATE	11
TURBO SLOPE	12
TURBO RELEASE SLOPE	13
TURBO DELAY	14
FUNCTION OFF	00

※The value of 11 - 99 of CODE AUX SETTING FUNCTION [D] will not function.
※Don't assign the same function to the different CODE. It will damage the equipment.

· (16) AUX2CODE01 ～ (25) AUX2CODE10・・・This is for future development. No setting is factory-programmed.

```
AUX2CODE01  (16)   AUX2CODE02  (17)   AUX2CODE03  (18)   AUX2CODE04  (19)   AUX2CODE05  (20)
CH[0] D[00]→:ENT   CH[0] D[00]→:ENT   CH[0] D[00]→:ENT   CH[0] D[00]→:ENT   CH[0] D[00]→:ENT
 CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING
SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION
```
```
AUX2CODE06  (21)   AUX2CODE07  (22)   AUX2CODE08  (23)   AUX2CODE09  (24)   AUX2CODE10  (25)
CH[0] D[00]→:ENT   CH[0] D[00]→:ENT   CH[0] D[00]→:ENT   CH[0] D[00]→:ENT   CH[0] D[00]→:ENT
 CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING      CH    SETTING
SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION   SETTING FUNCTION
```

· (26) TELE&CODE WRITE(ESC)
It allows to write the changed data of PROGRAM BOX about telemetry and CODE AUX into ESC.
※Without carrying out (26)TELE&CODE WRITE(ESC), the changed data will not be applied to SUPER VORTEX Gen2/PRO.

```
                      ENTER                      ENTER(Y)
TELE&CODE   (26)   →  ESC       N:BCK   →        <ESC WRITE>
WRITE(ESC) →:ENT   BACK CONNECT OK?Y:ENT         ·····□□□□□
```

```
PROGRAM BOX PRO
SANWA V1.03R001
```

When PROGRAM BOX is connected with SUPER VORTEX Gen2/PRO, confirmation screen is displayed.

```
ESC SETTING   [1]        ENTER    SETTING DATA <1>        ESC          N:BCK
DATA MENU   →:ENT          →      READ <ESC> →:ENT        CONNECT OK?Y:ENT
                         ←
                         BACK             ▼↓   ↑▲
                                 SETTING DATA <2>                ENTER
                                 LOAD <SD>   →:ENT
                                          ▼↓   ↑▲        ENTER
                                 SETTING DATA <3>          →     Firmware    (01)
                                 VIEW&EDIT  →:ENT          ←     [SV-G2  0102003]
                                          ▼↓   ↑▲        BACK         ▼↓   ↑▲
                                 SETTING DATA <4>                TEMP1 FET   (02)
                                 WRITE(ESC) →:ENT                MAX [101]°C
                                          ▼↓   ↑▲                     ▼↓   ↑▲
                                 SETTING DATA <5>                TEMP2 MOTOR (03)
                                 SAVE (SD)   →:ENT               MAX [102]°C
                                          ▼↓   ↑▲                     ▼↓   ↑▲
                                 DATA FACTORY <6>                TEMP3 CPU   (04)
                                 CLEAR(ESC) →:ENT                MAX [103]°C
                                                                     ▼↓   ↑▲
                                                                MOTOR REV.  (05)
                                                                MAX [ 36500]rpm
                                                                     ▼↓   ↑▲
                                                                BATTERY     (06)
                                                                MIN [3.6]V
                                                                     ▼↓   ↑▲
TELEMETRY &  [2]         ENTER    T00 TLM1    (01)        M01 CUT-BT  (07)
CODE ASSIGN→:ENT           →      CH[2] R[ 1]→:ENT        [6.4]V  →:ENT
                         ←                ▼↓   ↑▲                     ▼↓   ↑▲
                         BACK    T01 TLM2    (02)         M02 BACK    (08)
                                 CH[2] R[ 2]→:ENT              [OFF]   →:ENT
                                          ▼↓   ↑▲                     ▼↓   ↑▲
                                 T03 RPM1    (03)         M03 HEAT-P  (09)
                                 CH[2] R[ 4]→:ENT         [120/ 80]°C→:ENT
                                          ▼↓   ↑▲                     ▼↓   ↑▲
                                 T04 RPM2    (04)         M04 BOOST   (10)
                                 CH[0] R[ 0]→:ENT              [OFF]   →:ENT
                                          ▼↓   ↑▲                     ▼↓   ↑▲
                                 T05 VOLT    (05)         M05 CH-ID   (11)
                                 CH[2] R[ 6]→:ENT         [  2]ch→:ENT
                                          ▼↓   ↑▲                     ▼↓   ↑▲
```

The maximum values which ESC has will be displayed when PROGRAM BOX is conected with ESC.

The menu for future equipment.

The menu for future equipment.

```
AUX2CODE01  (16)         AUX1CODE01  (06)  .......  D01 TH-PAN  (12)  MODE 5
CH[0] D[00]→:ENT         CH[2] D[01]→:ENT           [  0]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE02  (17)         AUX1CODE02  (07)  .......  D02 N-BR-R  (13)  MODE 6
CH[0] D[00]→:ENT         CH[2] D[02]→:ENT           [  0]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE03  (18)         AUX1CODE03  (08)  .......  D03 DRV-F   (14)  MODE 7
CH[0] D[00]→:ENT         CH[2] D[03]→:ENT           [ 60]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE04  (19)         AUX1CODE04  (09)  .......  D04 N-BR-F  (15)  MODE 8
CH[0] D[00]→:ENT         CH[2] D[04]→:ENT           [ 20]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE05  (20)         AUX1CODE05  (10)  .......  D05 BR-F    (16)  MODE 9
CH[0] D[00]→:ENT         CH[2] D[05]→:ENT           [  0]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE06  (21)         AUX1CODE06  (11)  .......  D06 BOST-R  (17)  MODE 10
CH[0] D[00]→:ENT         CH[2] D[06]→:ENT           [  0]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE07  (22)         AUX1CODE07  (12)  .......  D07 TURBO   (18)  MODE 11
CH[0] D[00]→:ENT         CH[2] D[07]→:ENT           [  0]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE08  (23)         AUX1CODE08  (13)  .......  D08 BOST-S  (19)  MODE 12
CH[0] D[00]→:ENT         CH[2] D[08]→:ENT           [  0]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE09  (24)         AUX1CODE09  (14)  .......  D09 BOST-A  (20)  MODE 13
CH[0] D[00]→:ENT         CH[2] D[09]→:ENT           [  0]   →:ENT
     ▼↓   ↑▲                  ▼↓   ↑▲                     ▼↓   ↑▲
AUX2CODE10  (25)         AUX1CODE10  (15)  .......  D10 DEAD-B  (21)  MODE 14
CH[0] D[00]→:ENT         CH[2] D[10]→:ENT           [ 25]   →:ENT
     ▼↓   ↑▲                                              ▼↓   ↑▲
TELE&CODE   (26)                                    D11 F-BR-R  (22)  MODE 15
WRITE(ESC) →:ENT                                    [  0]   →:ENT
                                                         ▼↓   ↑▲
                                                    D12 TB-SLP  (23)  MODE 16
                                                    [  0]   →:ENT
                                                         ▼↓   ↑▲
ESC PROGRAM  [3]                                    D13 TB-REL  (24)  MODE 17
UPDATE      →:ENT                                   [  0]   →:ENT
                                                         ▼↓   ↑▲
INFORMATION [4]                                     D14 TB-DLY  (25)  MODE 18
(VERSION)   →:ENT                                   [  0]   →:ENT
```

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