

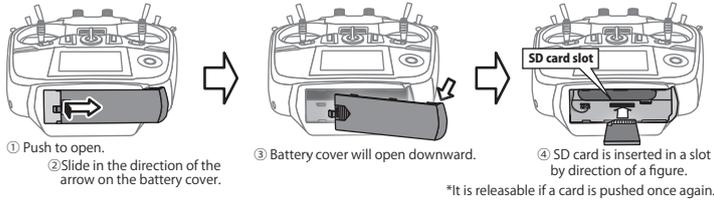
# T14SG / FX-22 SOFTWARE UPDATE MANUAL

## [Updating procedure]

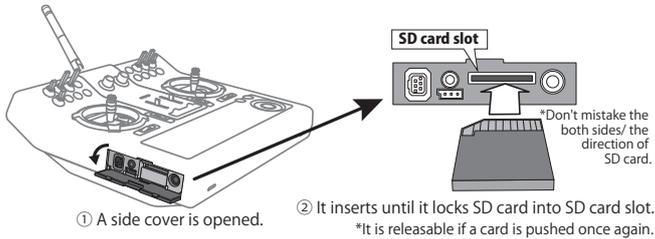
### 1. SD card format

1. You will first want to format your SD card to the 14SG/FX-22. If you are using an existing SD card, any data previously saved to it will be deleted during the "format". We suggest you either save this data on your computer or purchase a new card.

#### T14SG:



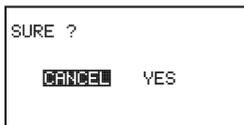
#### FX-22:



2. After inserting the new SD card into the transmitter, turn on the power switch. You will see the word "FORMAT" if you have not previously used this card in the transmitter.



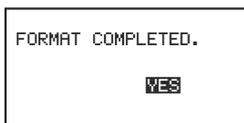
3. Please select "YES" and touch "RTN".



4. The following screen is displayed during formatting.



5. When the format is completed, the following screen is displayed.



6. Turn off the power switch and remove the SD card from its slot.

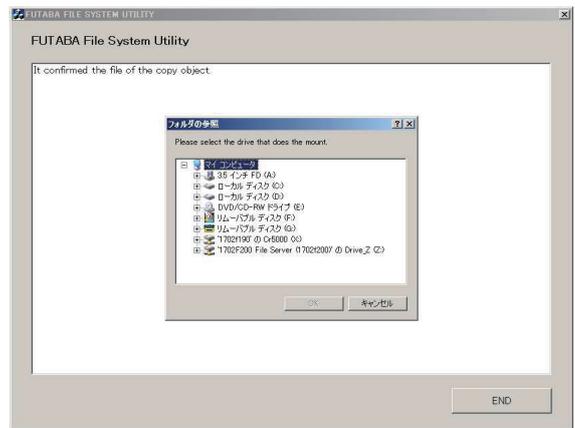
## 2. Preparing the software update card.

1. Please unzip the zipped file. The following files will be created.

- T14sgUpdate.exe
- T14sgUpdate.dat
- T14SG\_UPDATE.dat
- T14SG\_TS.bin
- T14SG\_AP.bin
- T14SG\_UPLD.bin

2. Insert the "formatted" SD card into a card reader in your PC.

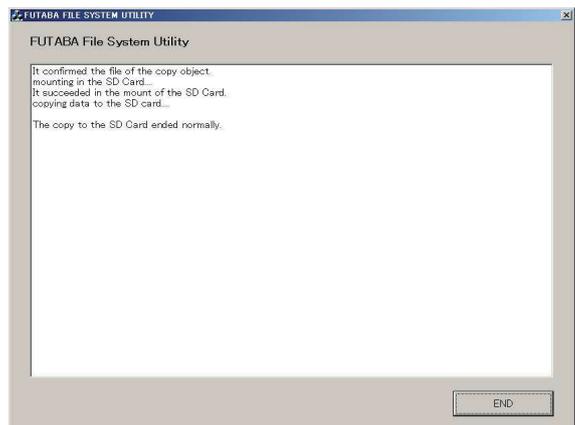
3. Please run "T14sgUpdate.exe".



4. Select the drive that your card reader is assigned to in your PC.



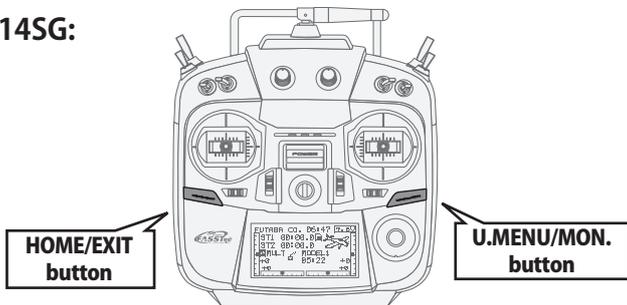
5. After the Update files are copied to the SD card, the following screens are displayed. Click the "End" button.



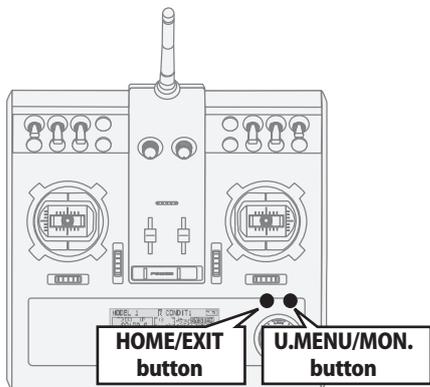
### 3. Update software of T14SG/FX-22

1. Please insert the SD card which includes the update file.
2. Push the HOME/EXIT button.
3. While still holding the HOME/EXIT button, power on the transmitter.

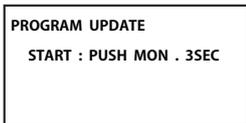
T14SG:



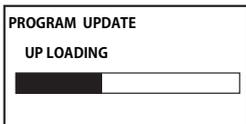
FX-22:



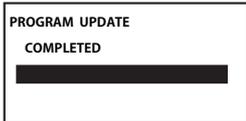
4. After a few seconds, the following screen is displayed.



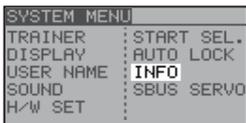
5. Push the U.MENU/MON. button for three seconds. The software update will begin.



6. When the update is complete, the following screen is displayed. Turn off the power switch.



7. Remove the SD card.



8. Please check the software version at INFO in SYSTEM menu.



# T14SG/FX-22 Installing Speech Data Ver.2

Before installing the speech data, you will need to update your T14SG/FX-22 software to Version 2.0 or later.

If the software version of T14SG /FX-22 is before Ver.2.0, the speech data can not be installed.

Ver.4.x software of T14SG/FX-22 is not able to play the Ver.1 sound data. After updating to Ver.4.x , please install the Ver.2 sound data to T14SG/FX-22.

There are three language versions, English, German, and Japanese, in speech data. It is possible to install only one language. If you install a second language, it will override the first one that you installed.

## [Installing procedure]

### 1. Making of card for installing speech data

1. Please unzip the zipped file. The following files will be created.

#### English Version

- T14sgInstallSoundEng.exe
- T14sgUpdate.dat
- T14SG\_INSTALL\_SOUND.dat
- T14sgSpeechEng1.bin
- T14sgSpeechEng2.bin
- T14sgSpeechEng3.bin

#### German Version

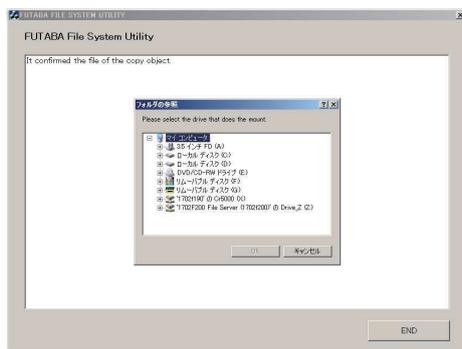
- T14sgInstallSoundEng.exe
- T14sgUpdate.dat
- T14SG\_INSTALL\_SOUND.dat
- T14sgSpeechGer1.bin
- T14sgSpeechGer2.bin
- T14sgSpeechGer3.bin

#### Japanese Version

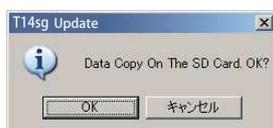
- T14sgInstallSoundEng.exe
- T14sgUpdate.dat
- T14SG\_INSTALL\_SOUND.dat
- T14sgSpeechJpn1.bin
- T14sgSpeechJpn2.bin
- T14sgSpeechJpn3.bin

2. Install the already formatted SD card into your PC's card reader.

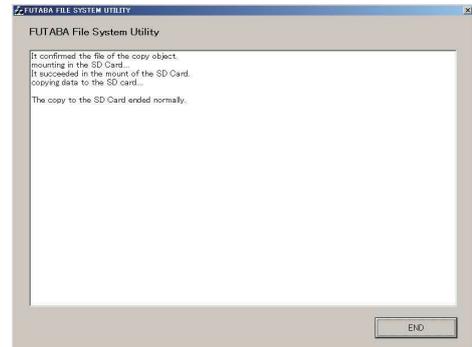
3. Please run "T14sgInstallSound\*\*\*.exe".



4. Select the drive that your card reader is assigned to in your PC. Click "OK".



5. After the Update files are copied to the SD card, the following screens are displayed. Click the "End" button.



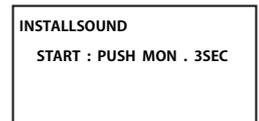
### 2. Install speech data of T14SG/FX-22

1. Please insert the SD card which includes the installing speech data.

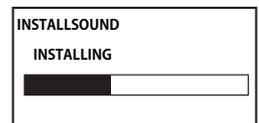
2. Push the HOME/EXIT button.

3. Still holding the HOME/EXIT button, power on the transmitter.

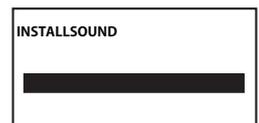
4. After a few seconds, the following screen is displayed.



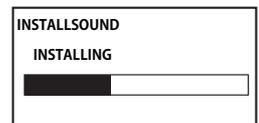
5. Press the U.MENU/MON. button for three seconds. The speech data begins to install.



6. After about 16 seconds, uploading reaches the right of the progress bar, and then begins again after a pause.



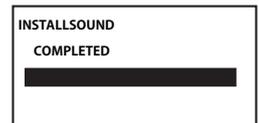
7. The uploading may appear to progress slowly.



8. The progress bar will again upload. This can take a few minutes.(About. 2 min.)

And, "COMPLETED" is displayed.

**(Don't turn off the power before COMPLETED is displayed.)**



9. Please detach SD card.

10. Please check the language at TELEM.SET. menu in LINKAGE menu.

# T14SG/FX-22 Software Update Changes (Version 4.x)

This software update modifies features found on the 14SG/FX-22. If you have questions about these updated directions, please consult your instruction manual or futaba-rc.com for further details. Refer to the original manual where applicable but replace the steps indicated below with these instructions.

## 1.Sound Data

The version of the sound data is Ver.2. Vario Melody of sink is improved. It is more continuously.

\*Ver.4.x software of T14SG/FX-22 is not able to play the Ver.1 sound data. After updating to Ver.4.x, please install the Ver.2 sound data to T14SG/FX-22.

The version of the sound data which has installed can be checked at TELEM.SET screen.



## 2.SOUND (Vario Melody Volume)

The Vario Melody volume is added. The Vario Melody Volume is added to adjust by the hardware. (stick, trim, lever, switch)

### VARIO MELODY

This is the volume of Vario Melody only.

Setting range : 0 (silent) ~ 30 (maximum)

The hardware for the adjustment is selectable.

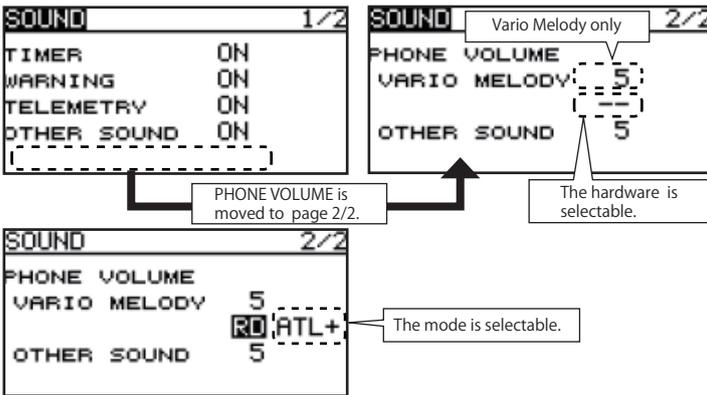
Setting range : J1, J2, J3, J4, T1, T2, T3, T4, SA, SB, ,SC, SD, SE, SF, SG, SH, LS, LD, RD, RS, (SI, SJ) \* ( ) is for FX-22 only.

The operation mode of the adjustment hardware is selectable.

**ATL+ :** When the operation direction is right or down or C.W., the volume is increased.

**ATL- :** When the operation direction is right or down or C.W., the volume is decreased.

**SYM. :** The center position is minimum volume. The both end points are maximum volume.



## 3.VARIOMETER (Vario Melody Setting)

Vario Melody Setting is added to the variometer of the Altitude Sensor and GPS sensor.

(SBS-01A, SBS-01G, GPS-F1675, VARIO-F1712, VARIO-F1672)

\*At GPS-F1675, VARIO-F1712 and VARIO-F1672, the MODE1-MODE4 setting of ACT/INH button has been deleted.

### RANGE

This is the variable range of the Vario Melody.

↑ (Climb side) : When the variometer is greater than this value, Vario melody is not variable.

Setting range : OFFSET value ~ +50m/s (SBS-01A, SBS-01G)  
 OFFSET value ~ +50.0m/s (GPS-F1675, VARIO-F1712)  
 OFFSET value ~ +300.00m/s (VARIO-F1672)

↓ (Sink side) : When the variometer is less than this value, Vario melody is not variable.

Setting range : -50m/s ~ OFFSET value (SBS-01A, SBS-01G)  
 -50.0m/s ~ OFFSET value (GPS-F1675, VARIO-F1712)  
 -300.00m/s ~ OFFSET value (VARIO-F1672)

### OFFSET

This is the changing point of climb and sink. When the variometer is greater than this value, Vario Melody is climb type. When the variometer is less than this value, Vario Melody is sink type.

Setting range : RANGE ↑ setting value ~ RANGE ↓ setting value

### DEADBAND

Vario Melody is not output in this range.

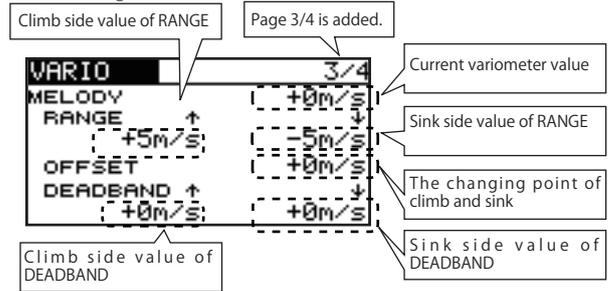
↑ (Climb side) : When the variometer is less than this value, Vario melody is not output.

Setting range : 0m/s ~ +50m/s (SBS-01A, SBS-01G)  
 0.0m/s ~ +50.0m/s (GPS-F1675, VARIO-F1712)  
 0.00m/s ~ +300.00m/s (VARIO-F1672)

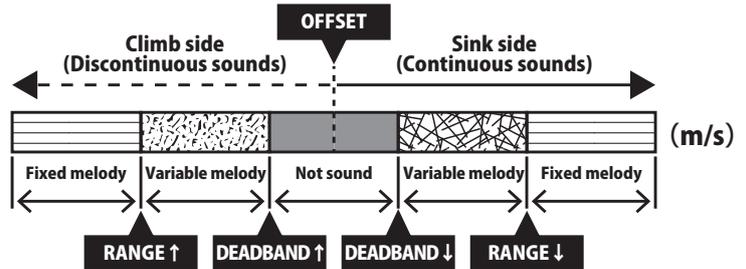
↓ (Sink side) : When the variometer is greater than this value, Vario melody is not output.

Setting range : -50m/s ~ 0m/s (SBS-01A, SBS-01G)  
 -50.0m/s ~ 0.0m/s (GPS-F1675, VARIO-F1712)  
 -300.00m/s ~ 0.00m/s (VARIO-F1672)

\*These settings can be set each sensors.



[The relation of Vario Melody settings]

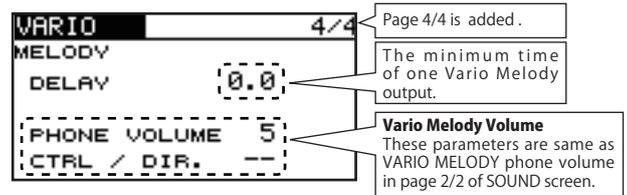


### DELAY

The output vario melody does not change during the delay time. In other words, this is a minimum time of Vario melody output.

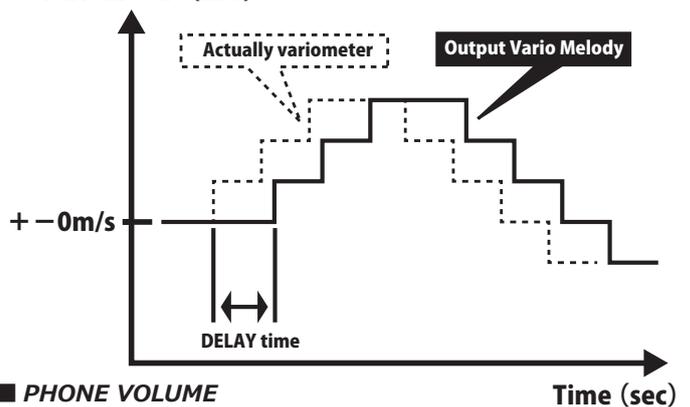
Setting range : 0.0, 0.5, 1.0, 1.5 sec

\*This parameter is effective to all variometers.



[Vario Melody Delay]

Variometer (m/s)



### PHONE VOLUME

### CTRL / DIR.

These parameters are same as VARIO MELODY phone volume in page 2/2 of SOUND screen.

These parameters are effective to all variometers.

\*The parameters in page 4/4 are common to all variometers.

## 4.TELEM.SET. (Telemetry Alarm Duration and Repeat time)

The repeat time and duration time for the telemetry alarm (buzzer, vibration and speech) can be set.

### REPEAT

It is a repeat time of an alarm output.

Setting range : INH, 1s ~ 240s

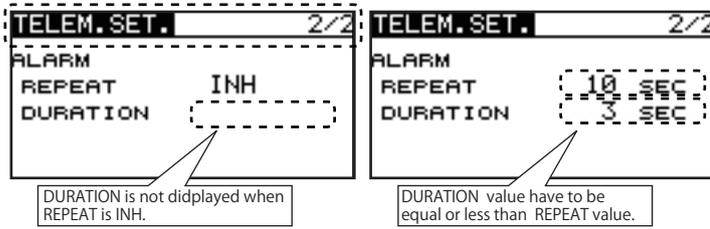
### DURATION

It is an alarm output time.

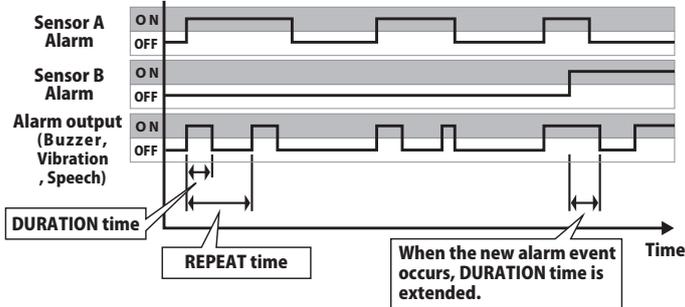
Setting range : 1s ~ 30s

\*DURATION value has to be less than REPEAT value.

\*DURATION time is extended when the other alarm event occurs.

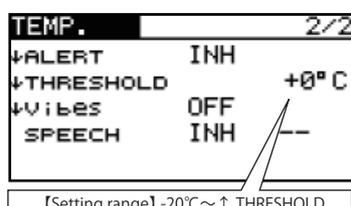
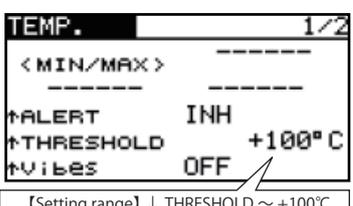
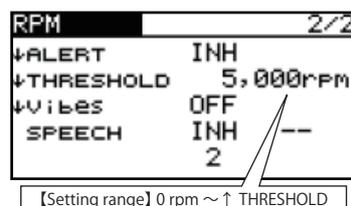
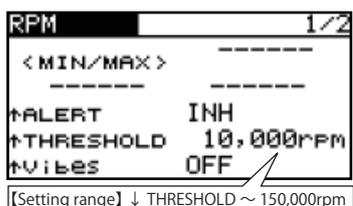
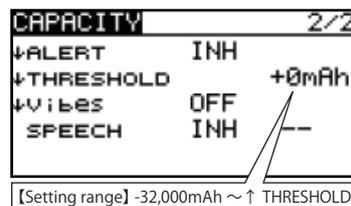
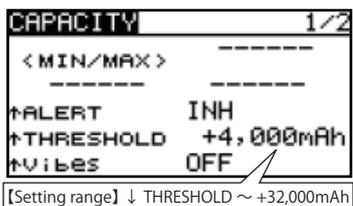
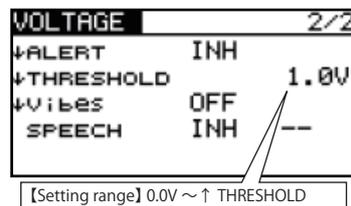
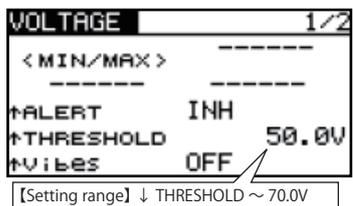
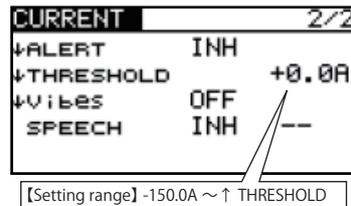
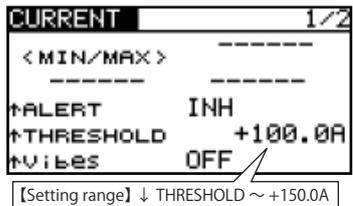
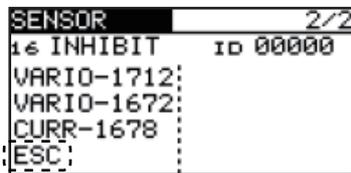


[ Duration and Repeat time for Telemetry Alarm ]



5.SENSOR (Apply to new ESC)

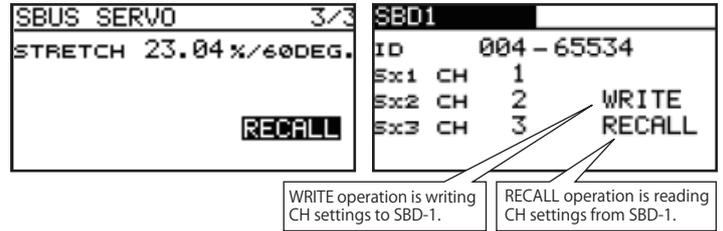
New **Robbe's ESC** which includes some sensors is applied.  
 Sensors : Current, Voltage, Current capacity, RPM and Temperature  
 The slot which can be registered : 1, 2, 3, 8, 9, 10, 11, 16, 17, 18, 19, 24, 25, 26, 27  
 Using slots : 5 slots  
 Please refer the instruction manual of T145G / FX-22 for each setting.



6.S.BUS SERVO

(SBD-1 CH setting)

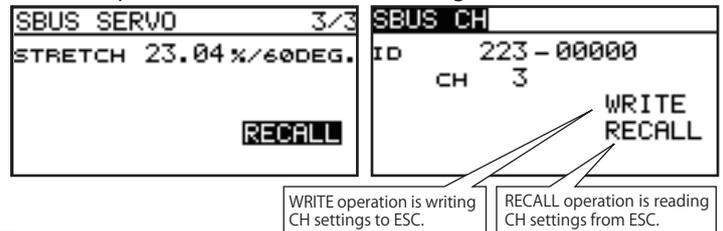
- CH setting of SBD-1 is available.
- Please connect the SBD-1 and the battery to S.I/F port with 3 ways hub or Y harness.
- \* The battery is not necessary at FX-22. FX-22 outputs the voltage for SBD-1.
- Please select S.BUS SERVO menu in SYSTEM menu.
- Please move to page 3/3.
- Please operate RECALL button. (RECALL is chosen. ⇒ RTN is pushed. ⇒ RTN is pushed for 1 second.) SBD-1 setting screen is shown.



- Please set CH to each port of SBD-1. (SX1, SX2 and SX3)
- \* Setting range : CH1 ~ CH12, DG1, DG2
- Please operate WRITE button. (WRITE is chosen. ⇒ RTN is pushed. ⇒ RTN is pushed for 1 second.)
- The settings are changed.
- When the WRITE operation is success, the message "COMPLETED" is shown.
- When the WRITE operation is failure, the message "FAILED" is shown.

(S.BUS CH setting)

- CH setting of new **Robbe's ESC** is available.
- Please connect the ESC to S.I/F port.
- \* At FX-22, DO NOT connect the ESC to S.I/F directly. Please use 3 ways hub without battery line. Or, please use the switch for BEC output and turn off the BEC output.
- Please connect the battery to the ESC.
- Please select SBUS SERVO menu in SYSTEM menu.
- Please move to page 3/3.
- Please operate RECALL button. (RECALL is chosen. ⇒ RTN is pushed. ⇒ RTN is pushed for 1 second.) CH setting screen is shown.

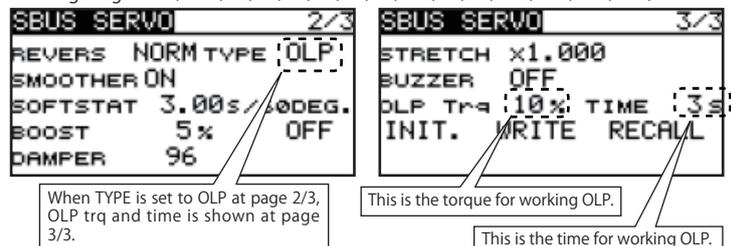


- Please set CH.
- \* Setting range : CH1 ~ CH12, DG1, DG2 (ESC does not work in DG1 and DG2.)
- Please operate WRITE button. (WRITE is chosen. ⇒ RTN is pushed. ⇒ RTN is pushed for 1 second.)
- The settings are changed.
- When the WRITE operation is success, the message "COMPLETED" is shown.
- When the WRITE operation is failure, the message "FAILED" is shown.

7.S.BUS SERVO (OLP setting)

When the servo type is OLP mode, the torque and time for OLP can be set. When the load is greater than this setting torque and continues over this setting time, OLP works.

- Trq**  
This is the torque for working OLP.  
Setting range : 10% ~ 100% (100% is the maximum torque of the servo which you are setting.)
- TIME**  
This is the time for working OLP.  
Setting range : 0.2, 0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30 sec



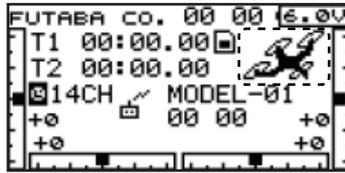
\*If the setting of OLP torque and time is decreased, it is easier to work OLP. Then, please be careful not to work OLP at usual operation.

## 8. MODEL TYPE (Addition of MULTIROTOR)

MUTIROTOR type is added to MODEL TYPE.



- When a model type is MULTIROTOR, an icon for exclusive use is displayed on HOME screen.

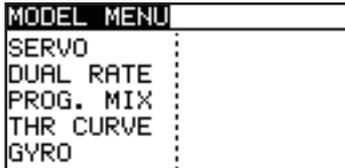


- When a model type is MULTIROTOR, the LINKAGE menu is below. (It is FASSTest 14CH mode. It differs at other mode.) Please refer FUNCTION OF LINKAGE MENU in the instruction manual of T14SG/FX-22 for each function.

\*STK ALARM is an additional function for all model types.

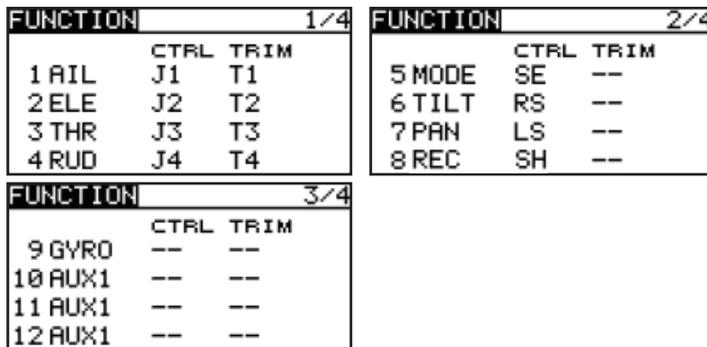


- When a model type is MULTIROTOR, the MODEL menu is below. Please refer FUNCTION OF MODEL MENU in the instruction manual of T14SG/FX-22 for each function.



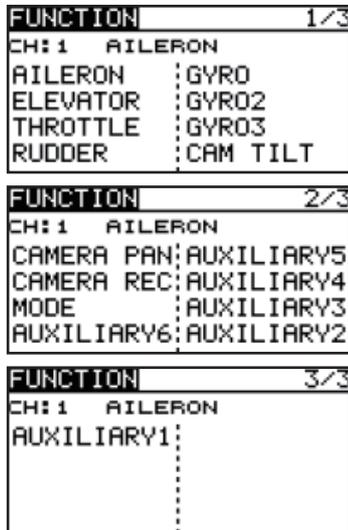
\*GYRO menu is same as GYRO for the airplane.  
\*THR CURVE menu is same as THR CURVE for the airplane.

- The default setting of CH and functions are below;



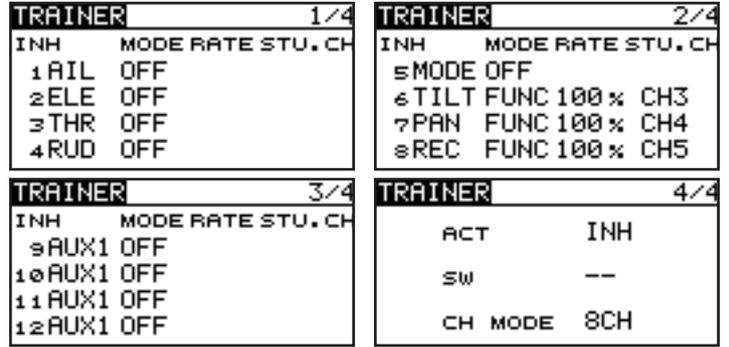
- The functions which can be set are below.

| FUNCTION   |       |
|------------|-------|
| Normal     | Short |
| AILERON    | AIL   |
| ELEVATOR   | ELE   |
| THROTTLE   | THR   |
| RUDDER     | RUD   |
| GYRO       | GYR   |
| GYRO2      | GYR2  |
| GYRO3      | GYR3  |
| CAM TILT   | TILT  |
| CAMERA PAN | PAN   |
| CAMERA REC | REC   |
| MODE       | MODE  |
| AUXILIARY6 | AUX6  |
| AUXILIARY5 | AUX5  |
| AUXILIARY4 | AUX4  |
| AUXILIARY3 | AUX3  |
| AUXILIARY2 | AUX2  |
| AUXILIARY1 | AUX1  |



\*CAM TILT, CAMERA PAN, CAMERA REC and MODE which are added for MULTIROTOR do not have any special functions. They are same as AUXILIARY functions.

- The default settings of TRAINER at MULTIROTOR are below. It is easy to set TRAINER, when the student radio is used for camera gimbal control.



\*Please do not use REVERSE, END POINT and any other Mixers at student transmitter.

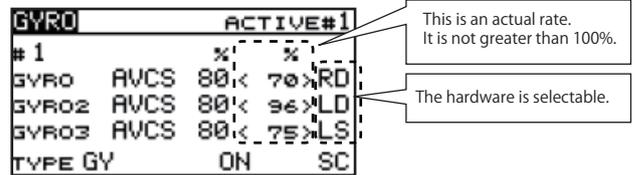
## 9. GYRO (Corresponding model type : AIRPLANE / GLIDER and MULTIROTOR)

The fine tuning hardware setting is added to GYRO for AIRPLANE and GLIDER.

Setting range :

**GY type :** Setting rate  $\pm 20\%$  (The actual rate has not to be greater than 100%)

**NORM type :** Setting rate  $\pm 10.0\%$  (The actual rate has not to be greater than 100%)



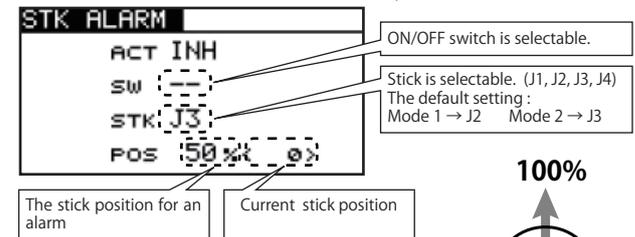
This is an actual rate. It is not greater than 100%.

The hardware is selectable.

## 10. STICK ALARM (Corresponding model type : All Model Types)

An alarm (single beep) can be sounded at the specified stick position.

- Alarm function ON/OFF can be set by switch.

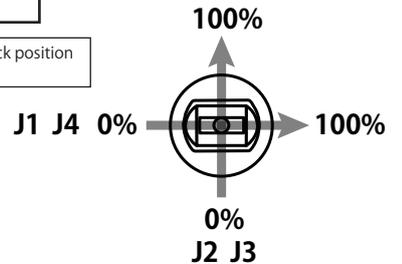


ON/OFF switch is selectable.

Stick is selectable. (J1, J2, J3, J4)  
The default setting :  
Mode 1 → J2 Mode 2 → J3

The stick position for an alarm

Current stick position



## 11. TIMER (ST1 and ST2 speech function)

Speech function is added to TIMER (ST1 and ST2).

When mode is UP timer or DOWN timer, the speech outputs is available. It is phone output only.

- ↑ mode

The voice outputs each minute of the time elapsed from timer start.

**Ex. one minute, . . . two minutes, . . .**

It outputs voice 20 seconds before reaching to the target time.

**Ex. twenty seconds**

It is counted down by voice from 10 seconds before reaching to the target time.

**Ex. ten, nine, eight . . . three, two, one**

- ↓ mode

The voice outputs each minute of the time remaining up to the alarm time.

**Ex. . . . ten minutes, . . . nine minutes, . . .**

It outputs voice every 10 seconds from 50 seconds before reaching to the target time.

**Ex. fifty seconds, . . . forty seconds, . . .**

It is counted down by voice from 10 seconds before reaching to the target time.

**Ex. ten, nine, eight . . . three, two, one**

\*The voice alarm of timer is delayed from the actual time.

\*During logging telemetry data, the voice alarm is delayed more.

\*The priority of the timer speech is higher than the telemetry speech. Then,

the telemetry speech is stopped and the timer speech is outputted, when the telemetry speech is outputted.

\*Usually, the priority of the speech of ST1 is higher than ST2. However, the timer which has started 10 seconds countdown is given the priority. However, the timer which has started 10 seconds countdown is given the priority.

\*The telemetry speech can not be outputted during 10 seconds countdown.

| TIMER  |                 | TIMER  |                 |
|--------|-----------------|--------|-----------------|
| ST1    | 00:00.00 RESET  | ST2    | 00:00.00 RESET  |
| MODE   | UP START --     | MODE   | UP START --     |
| ALARM  | 10:00 ↑ STOP -- | ALARM  | 10:00 ↑ STOP -- |
| MEMORY | OFF RESET --    | MEMORY | OFF RESET --    |
| Vibes  | OFF SPEECH INH  | Vibes  | OFF SPEECH INH  |

## 12.DG1,DG2 at FASSTest 14CH mode

When R7008SB can be set to Mode C or Mode D, and it is FASSTest 14CH mode, DG1 is output from CH13 (CH5 port) and DG2 is output from CH14 (CH6 port).

\*Regarding R7008SB operation mode, please refer the instruction of T145G/FX-22 and R7008SB.

\*It is FASSTest 14CH mode only that DG1 and DG2 are output from CH13 and CH14.

**R7008SB CH Mode table**

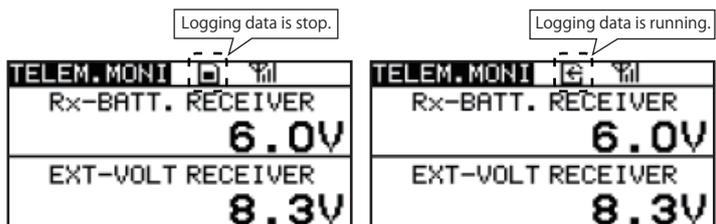
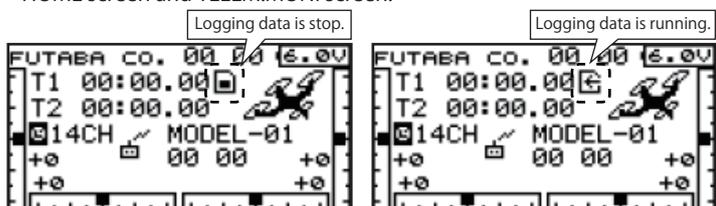
| Output connector | Channel           |             |                   |                   |
|------------------|-------------------|-------------|-------------------|-------------------|
|                  | Mode A<br>1 ~ 8CH | ModeB<br>CH | ModeC<br>9 ~ 16CH | ModeD<br>9 ~ 15CH |
| 1                | 1                 | 1           | 9                 | 9                 |
| 2                | 2                 | 2           | 10                | 10                |
| 3                | 3                 | 3           | 11                | 11                |
| 4                | 4                 | 4           | 12                | 12                |
| 5                | 5                 | 5           | 13                | 13                |
| 6                | 6                 | 6           | 14                | 14                |
| 7/B              | 7                 | 7           | 15                | 15                |
| 8/SB             | 8                 | S.BUS       | 16                | S.BUS             |

DG1 is output from CH13 (CH5 port)

DG2 is output from CH14 (CH6 port)

## 13.TELEMETRY DATA LOG (icon)

The card icon indicates that the telemetry data logging function works at HOME screen and TELEM.MONI screen.



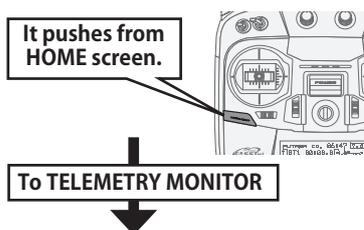
## 14.TELEM.MONI (The extension of the number of telemetry data which is shown)

The number of telemetry data which is displayed to TELEM.MONI screen is extended. It is 16 items (4 pages) maximum.

The page number is memorised automatically.

Then, TELEM.MONI screen shows the page which was shown at last time.

\*The page is memorised even if the power is turned off.

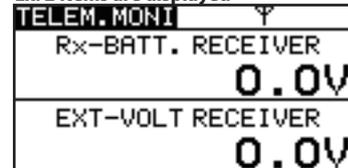


You can display any items on the telemetry screen up to 16 items at FASSTest 14CH mode. The benefit of expansion of a character will be obtained by choosing the display items 1 and 2.

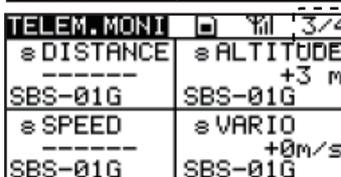
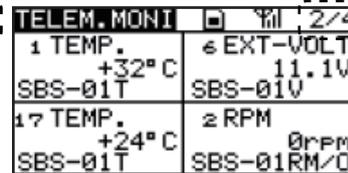
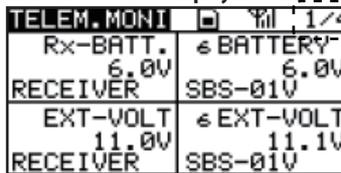
Ex. 1 item is displayed



Ex. 2 items are displayed



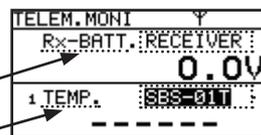
Ex. 4-16 items are displayed



### TELEMETRY MONITOR set up

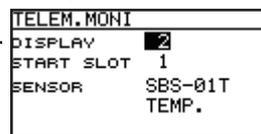
① The HOME/EXIT button is pushed from HOME screen and TELEMETRY MONITOR is called.

② Move the cursor to the "RECEIVER" or "SENSOR" (SBS-XXX etc.) and touch the RTN button.

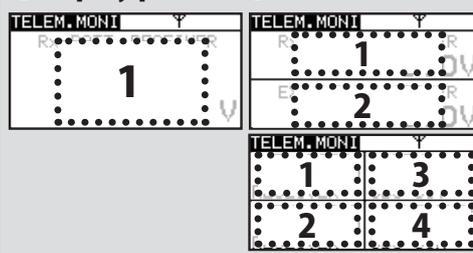


If a cursor is moved to items (Rx-BATT, EXT-VOL, TEMP. etc.) and RTN is touched, the alarm setting screen of the item will be displayed.

③ You will use the "Display" function to choose how many sensors are shown on your Telemetry monitor.



### [ Display position ]



④ If you want to show two sensors on your Telemetry screen, select 2 in "Display". Then move down to the Sensor to select which other item is shown.



When using a sensor that has two or more functions, you will want to scroll to select which will be displayed. (ALTITUDE,VARIO, etc.)

⑤ If you want to show three sensors on your Telemetry screen, select 3 in "Display". Then move down to the Sensor to select which other item is shown.

⑥ To SENSOR "-----" selection will reduce a display item.