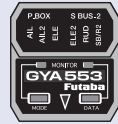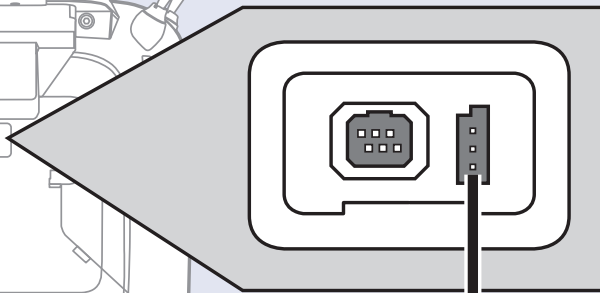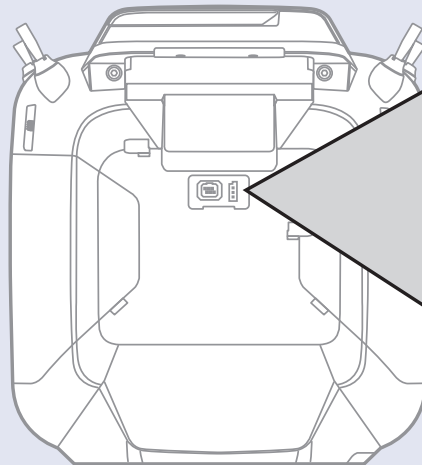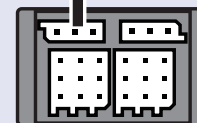## GYA553 setting

By connecting the T16IZ(S) and the 6-axis gyro GYA553 for airplanes, you can set the GYA553.

Connection T16IZ(S) and GYA553
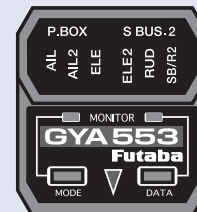
T16IZ(S)

**Reciver Connection Cable (included with gyro)**

GYA553

⚠ **CAUTION**

❶ **Be sure to connect and disconnect the GYA553 and T16IZ(S) connection cable with the power off.**
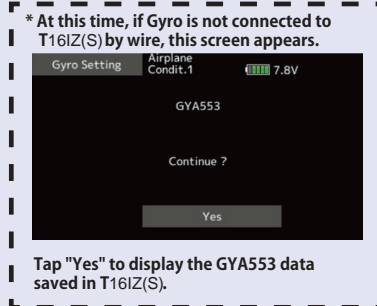
SETTING

1

Model menu	Model1 Normal	7.8V	1/1
Servo monitor	Condition select	AFR	
Dual rate	Program. mixes	Sequencer	
Pitch curve	Throttle curve	Acceleration	
Throttle hold	Swash mixing	Throttle mixing	
Pitch → Needle	Pitch → Rudder	Gyro	
Governor	Gyro Setting		

1. Select "Gyro setting" on the last page of Airplane Model Menu

2

Gyro Setting   Airplane Condit.1   7.8V
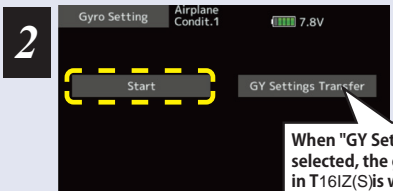
Start   GY Settings Transfer

When "GY Settings Transfer" is selected, the gyro setting data saved in T16IZ(S)is written to the gyro.

2. Select "Start"

* At this time, if Gyro is not connected to T16IZ(S) by wire, this screen appears.

Gyro Setting   Airplane Condit.1   7.8V

GYA553

Continue ?

Yes

Tap "Yes" to display the GYA553 data saved in T16IZ(S).

GYA 553 DATA

GYA 553

Select "Start"
This will download the gyro data to the T16IZ(S).

3

GYA553	Airplane Condit.1	7.4V
Holding Power	C5	6.4V
AIL Gyro	OFF	Basic Menu
ELE Gyro	OFF	
RUD Gyro	OFF	
Gyro Version	2.0	

To Basic menu

3. Home screen is displayed

◆ When copying data from Gyro A to Gyro B

Gyro Setting   Airplane Condit.1   7.8V

Start   GY Settings Transfer

GYA 553 A

DATA A

DATA A

Connect the gyro A to the T16IZ(S) and press [Start]. (Enter the data of A into T16IZ(S))

Gyro Setting   Airplane Condit.1   7.8V

Start   GY Settings Transfer

GYA 553 B

DATA A

DATA A
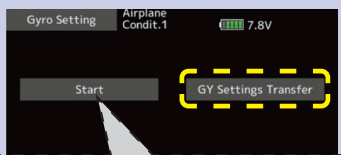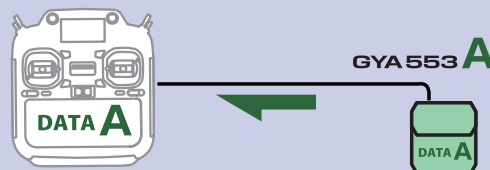
If you press Start here, the B data will be download to the T16IZ(S)and the A data will be lost.

Connect Gyro B to T16IZ(S)and press [GY Settings Transfer]. (Put data on A into gyro B)

Gyro setting GYA553
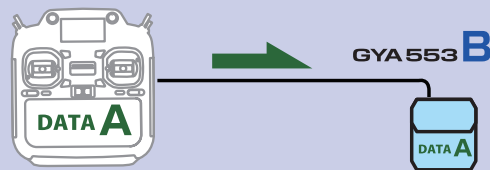
Home screen

On the home screen, basic information such as gyro operation mode, sensitivity, battery voltage are displayed.

Gyro operation mode / Gyro gain
Displays "AVCS" or "Normal" opera-tion mode and gyro gain of aileron (roll), elevator (pitch) and rudder (yaw) axis.

GYA553 Software version
The software version of the connected GYA553 is displayed.

Battery voltage
Displays the voltage of the receiver battery connected to GYA.

GYA553	Airplane Condit.1	7.4V
Holding Power	C5	6.4V
AIL Gyro	OFF	
ELE Gyro	OFF	Basic Menu
RUD Gyro	OFF	
Gyro Version	2.0	

Basic menu

Home screen

GYA553	Airplane Condit.1	7.4V
Holding Power	C5	6.4V
AIL Gyro	OFF	
ELE Gyro	OFF	Basic Menu
RUD Gyro	OFF	
Gyro Version	2.0	

Basic menu

Basic Menu	Airplane Condit.1	7.8V
Config		
SBus Basic		

◆ Config

Config	Model1 Condit.1	7.6V	1/9
Gyro Set Dir	Up	Left	Down	Right
Wing	Normal	ELEVON
Tail	Normal	V-Tail
Servo Type	DG:285Hz	AN: 70Hz
SB/R2 Out	SBus(HS)	RUD2	Ch3(Thr)	SBus(Std)

◆ S.BUS basic

SBus Basic	Model1 Condit.1	7.6V	1/4
AIL	CH1	Gain AIL	CH5
ELE	CH2	Gain ELE	CH7
		Gain RUD	CH8
RUD	CH4	ELE2	INH
AIL2	INH	RUD2	INH

Gyro setting GYA553

Config

Config 1/9 Gyro set mounting direction

Config	Model1 Condit.1	7.6V	1/9

Gyro Set Dir	Up	Left	Down	Right
Wing	Normal	ELEVON		
Tail	Normal	V-Tail		
Servo Type	DG:285Hz	AN: 70Hz		
SB/R2 Out	SBus(HS)	RUD2	Ch3(Thr)	SBus(Std)

Set the mounting direction of GYA. Set mounting direction with reference to figure below.
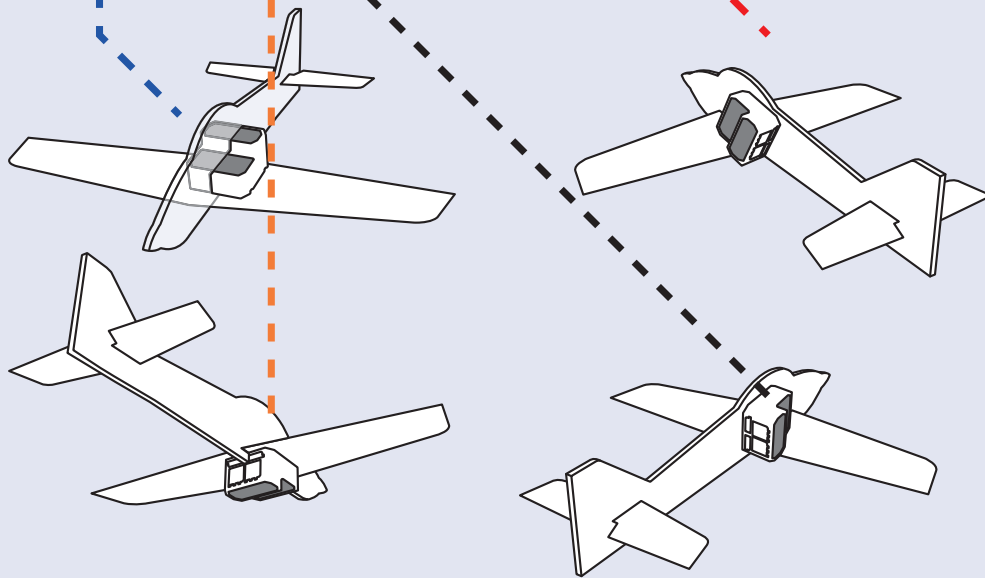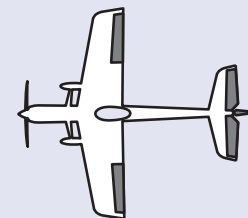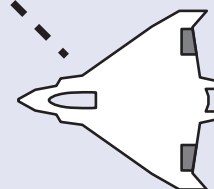

Config 1/9 WING/TAIL

Set with the wing type/tail type of GYA553. The wing type/tail type of the transmitter is not used and is normal.

· Turn off the elevon/V-tail mixing on the transmitter side.
· Do not use transmitter sub-trim. Adjust using the gyro neutral offset.
· When using the S.BUS servo, you can also use the neutral offset function of the S.BUS servo setting parameters.

Config	Model1 Condit.1	7.6V	1/9

Gyro Set Dir	Up	Left	Down	Right
Wing	Normal	ELEVON		
Tail	Normal	V-Tail		
Servo Type	DG:285Hz	AN: 70Hz		
SB/R2 Out	SBus(HS)	RUD2	Ch3(Thr)	SBus(Std)

Select wing type

Select tail type

Config

Config　1/9　Servo type

Config	Model1 Condit.1	🔋 7.6V	1/9

| Gyro Set Dir | Up | Left | Down | Right |
Wing	Normal	ELEVON		
Tail	Normal	V-Tail		
Servo Type	DG:285Hz	AN: 70Hz		
SB/R2 Out	SBus(HS)	RUD2	Ch3(Thr)	SBus(Std)
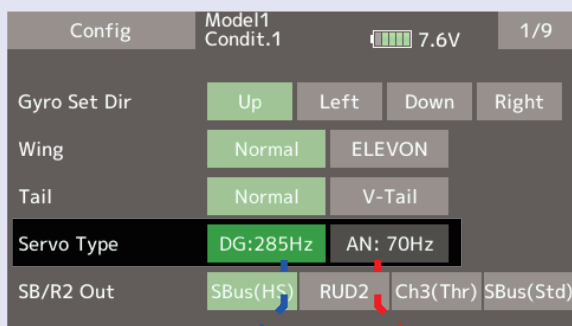
Digital servo　　**Analog servo**

Select the servo type according to the servo to be used.

Digital servo → DG : 285 Hz
Analog servo → AN : 70 Hz

The stability of digital-servo mode of a flight increases in order to perform a high-speed control action.

Config　1/9　SB/R2 OUT

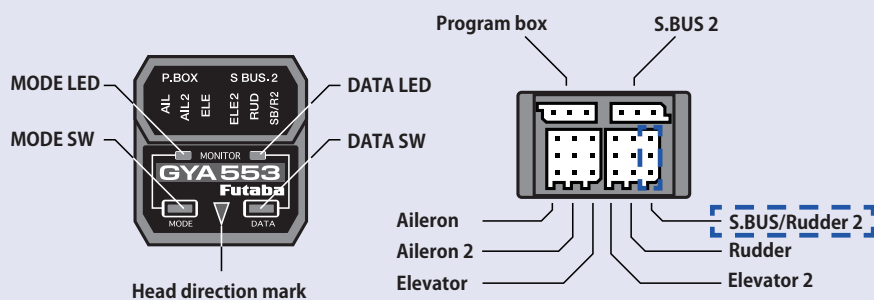| Config	Model1 Condit.1	🔋 7.6V	1/9

Gyro Set Dir	Up	Left	Down	Right
Wing	Normal	ELEVON		
Tail	Normal	V-Tail		
Servo Type	DG:285Hz	AN: 70Hz		
SB/R2 Out	SBus(HS)	RUD2	Ch3(Thr)	SBus(Std)
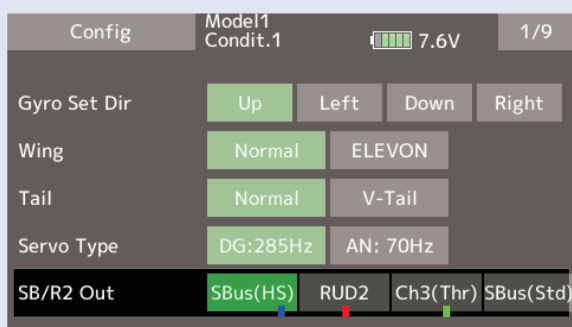
S.BUS　　**Rudder 2**　**Throttle**

S.BUS devices can be connected to this port.

When using two rudder servos

Select the SB/R2 port.

MODE LED — P.BOX　S BUS-2 — DATA LED

AIL　AIL 2　ELE　ELE2　RUD　SB/R2

MODE SW — MONITOR — DATA SW

GYA 553　Futaba

MODE　DATA

Head direction mark

Program box　　S.BUS 2

Aileron
Aileron 2
Elevator

S.BUS/Rudder 2
Rudder
Elevator 2

Config

Config 2/9 Gyro direction

It is the direction settting of the gyro. Be careful as it will crash if the direction is reversed.

For dual aileron, dual elevator, and dual rudder aircraft, check the operating direction of each second aileron/elevator/rudder.

Config	Model1 Condit.1		7.6V	2/9

Gyro Dir

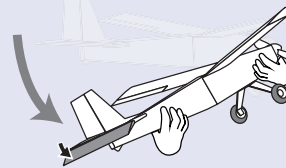| AIL	Normal	AIL2	Normal
ELE	Normal	ELE2	Normal
RUD	Normal	RUD2	Normal
AIL3	Normal	AIL4	Normal

Tilt the airplane to the left on the ground and check that the ailerons operate to the right.
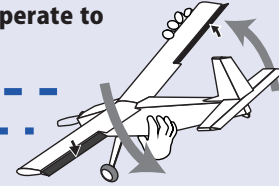
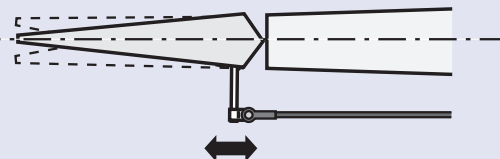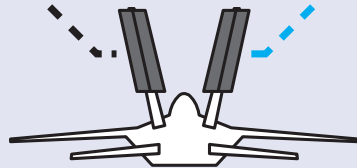**Turn the airplane to the right on the ground and check that the rudder operates to the left.**
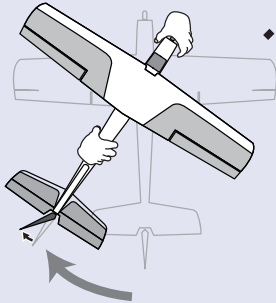
Raise the airplane with its nose upward and check that the elevator operates downward.

Config 3/9 Neutral offset

Config	Model1 Condit.1		7.6V	3/9

Neutral Offset

AIL	+0	AIL2	+0
ELE	+0	ELE2	+0
RUD	+0	RUD2	+0
AIL3	+0	AIL4	+0

Neutral position setting for each servo.
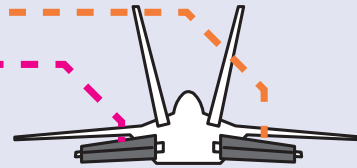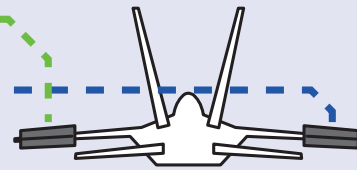
**This will move the neutral to the desired position.**

Config

Config	Model1 Condit.1		7.6V	4/9
Srv.Limit				
AIL	100 %	100 %		
ELE	100 %	100 %		
RUD	100 %	100 %		
AIL3	100 %	100 %		

This is the limit setting for each servo. The position of the maximum operation is read into the gyro in the first setting.

Config	Model1 Condit.1		7.6V	5/9
Srv.Limit				
AIL2	100 %	100 %		
ELE2	100 %	100 %		
RUD2	100 %	100 %		
AIL4	100 %	100 %		

Aileron example

Maximum angle
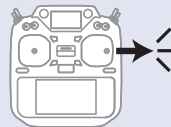
Stick to full right
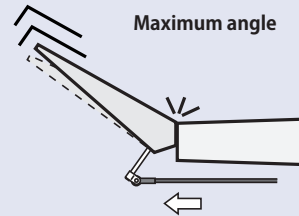
Adjust the value (%) to reach the maximum operating position

Stick to full left
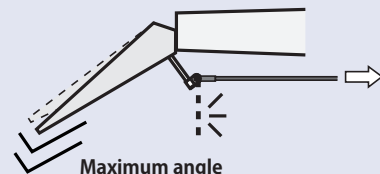
Maximum angle
Adjust the value (%) to reach the maximum operating position

Config

Config   6/9   Holding Power

It is a function to adjust the posture holding force of the aircraft in AVCS mode.

Decreasing the value weakens the holding power and makes the operation feeling closer to the normal mode.

The current rate numbers C1 to C5 are displayed by operating the channel of the transmitter.

Like the flight condition function of the transmitter, you can set up to 5 different data for the attitude holding force rate of the aircraft in AVCS mode by operating the switch from the transmitter, and switch between them. You can set the holding power rate selector switch to the channel with the AFR function of the transmitter, and set the point for each rate on the AFR point curve to switch. It is also possible to use the flight condition function to work with the flight condition switch.

Config 6/9

| Config | Model1 Condit.1 | 7.6V | 6/9 |

Holding Power C3 / BK

AIL	100	C3
ELE	100	C3
RUD	100	C3

C1-C5 switch button

With the switch button, the "holding power" of each rate (C1 to C5) can be displayed and adjusted.

Display and adjust the current rate numbers C1 to C5 by operating the channel on the transmitter.

S.BUS Basic 2/4

| SBus Basic | Model1 Condit.1 | 7.6V | 2/4 |

Holding Power   CH12   C3 / BK
-100   0   100

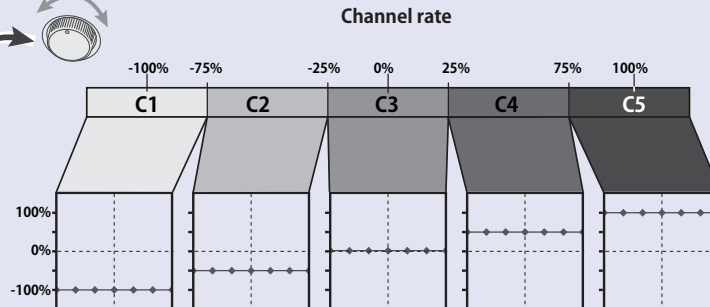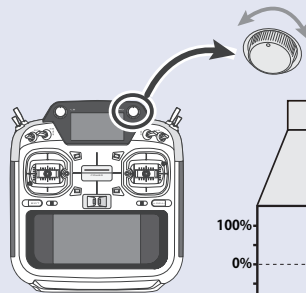| C2 | P2 |
C3	P3
C4	P4
C5	P5

By operating the channel of the transmitter, the channel position of the current rate numbers C1 to C5 will be displayed in green.

When set to SW of DG1 or DG2

C1

C5

Switch channel rate

| -100% | -35% | 0% | 35% | 100% |

| C1 | | | C5 |
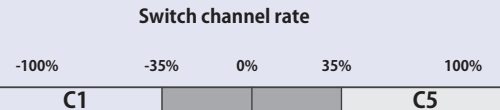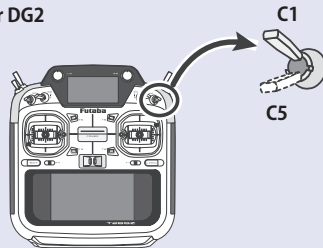
When set to dial or lever

Channel rate

| -100% | -75% | | -25% | 0% | 25% | | 75% | 100% |

| C1 | C2 | C3 | C4 | C5 |

100%
0%
-100%

Config

Config 7/9   4D Flight (Backward flight) Gyro Reverse Mode Adjustment

Page 7 is for setting the gyro reverse mode. This is a special setting for 4D backward flight. Select whether to reverse the control direction of the aileron, elevator, and rudder when flying backward. Normally, when flying backward, the steering direction of all the rudder is reversed, so the control direction of the gyro is also reversed.

Switching between forward (FW) and reverse (BK) uses the same CH12 signal as the holding force. Up from near the midpoint of the throttle stick is forward, and down is reverse.

For details on setting the switching point, please refer to the transmitter settings.

In gyro reverse mode, the gyro controls in the same direction as the aircraft's tilt. Switch between forward and reverse to check that the gyro control direction changes correctly.

Config 7/9

Config	Model1 Condit.1	7.6V	7/9

4D Flight   C3 / BK

AIL   Inhibit

ELE   Inhibit

RUD   Inhibit

S.BUS Basic 3/4

SBus Basic	Model1 Condit.1	7.6V	3/4

4D Flight   CH12   C3 / BK

-100   0   100

BK

Config 8/9   4D Flight (Backward flight) Mode Adjustment

Page 8 is for setting the gyro reverse mode. This is a special setting for 4D backward flight.

The AET (BK) and AET (FW) functions estimate the aircraft's flight attitude during forward and backward transitions and optimize gyro control. If the aircraft's attitude changes quickly, decrease the value. If the attitude changes slowly, increase the value. The correction values for forward and backward transitions can be set independently. The setting range is 0 to 30. The OPC parameter adjusts the speed when the control amount increases and decreases. The setting range is 0 to 27. The values in the setting example are the standard setting values for SkyLeaf-ST. The optimal value will vary depending on the aircraft characteristics and flight style.

Config	Model1 Condit.1	7.6V	8/9

4D Flight   C3 / BK

	AET(BK)	12	AET(FW)	8
OPC AIL	INC	6	DEC	6
OPC ELE	INC	6	DEC	6
OPC RUD	INC	6	DEC	6

Config 9/9   Reset

Config	Model1 Condit.1	7.6V	9/9

Data reset   Reset
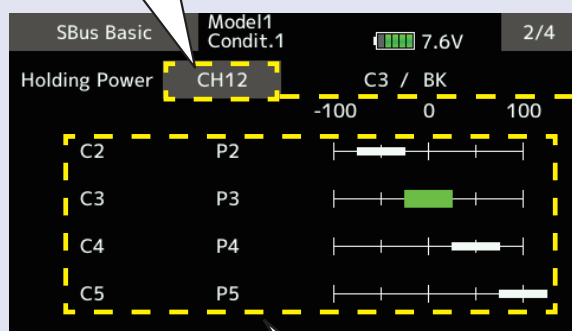
Reset each Config item. It returns to the initial value.

SBUS Basic menu

Set the CH for each function according to the transmitter to be used. Any unused functions should be set to INH (Inhibited).

SBus Basic — Model1 Condit.1 — 7.6V — 1/4

AIL	CH1	Gain AIL	CH5
ELE	CH2	Gain ELE	CH7
		Gain RUD	CH8
RUD	CH4	ELE2	INH
AIL2	INH	RUD2	INH
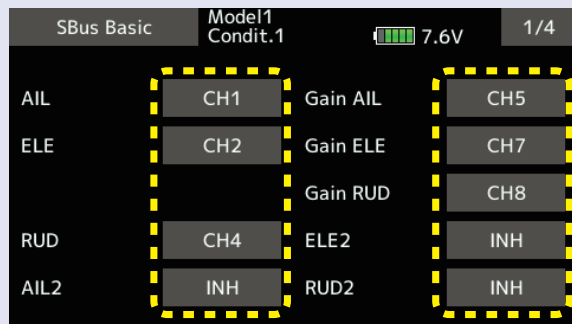
The channel of each function can be changed.

Tap to move to the rate switching CH setting page.

SBus Basic — Model1 Condit.1 — 7.6V — 2/4

Holding Power CH12 C3 / BK
-100   0   100

C2	P2	
C3	P3	
C4	P4	
C5	P5	

Holding Power C2 to C5

SBus Basic — Model1 Condit.1 — 7.6V — 2/4

Condition

CH1	CH5	CH9	CH13	DG1	
CH2	CH6	CH10	CH14	DG2	Reset
CH3	CH7	CH11	CH15	INH	
CH4	CH8	CH12	CH16		Close

Tap the CH used for rate switching to select it.

SBus Basic — Model1 Condit.1 — 7.6V — 3/4

4D Flight CH12 C3 / BK
-100   0   100

BK

SBus Basic — Model1 Condit.1 — 7.6V — 3/4

Condition

CH1	CH5	CH9	CH13	DG1	
CH2	CH6	CH10	CH14	DG2	Reset
CH3	CH7	CH11	CH15	INH	
CH4	CH8	CH12	CH16		Close

SBus Basic — Model1 Condit.1 — 7.6V — 4/4

Auto Recovery.SW	CH10	Reset	S.Bus
AIL3	INH		
AIL4	INH		

ON-OFF channel for auto recovery

Reset each S.BUS function. It returns to the initial value.

! 10 CH ON
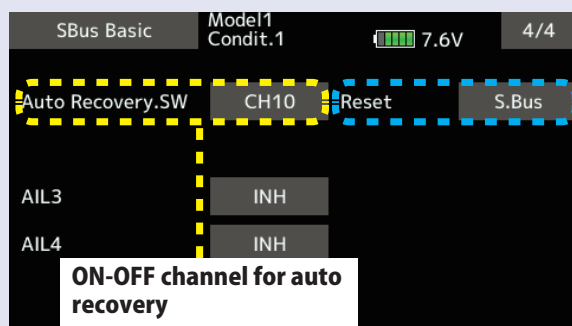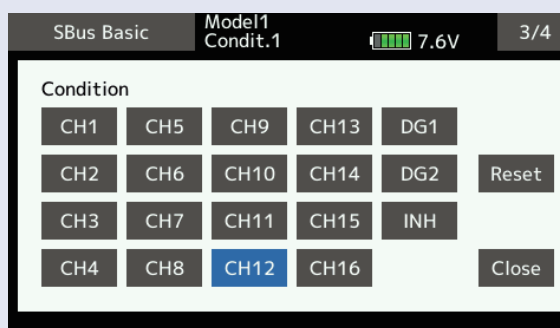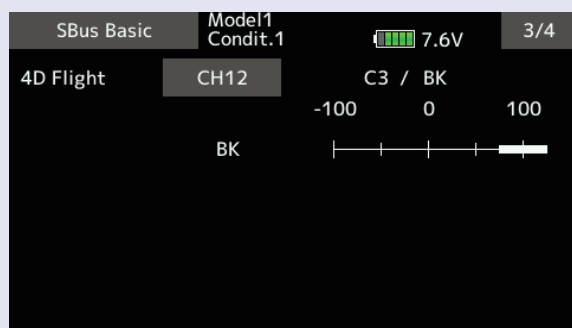
⚠ **WARNING**

❶ Always verify that the S.BUS function assignments match your transmitter's function (in the FUNCTION menu) assignments. If any changes are made within the transmitter function assignments, then it will also be necessary to make the changes within the S.BUS function assignments. To change the channel, GYA553 and T16IZ(S) must be connected.