![Futaba]

T12FG/FX-30 Software Update
(Version:2.0)

The T12FG transmitter software version has been updated; the following functions have been added or modified. Please reread the instruction manual supplied with this set.
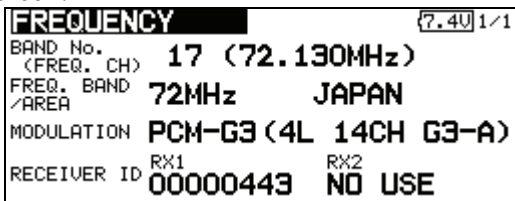
PCM-G3+ system support

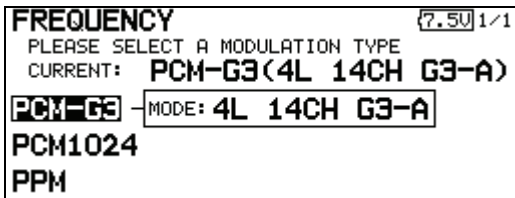The PCM-G3+ improved version of the current PCM-G3 is supported.
- Communication mode switching function (4L mode, 2L mode)
  A 2L mode with greater stability has been added.
  ※In the 2L mode, the response is approximately 40% lower than that of the 4L mode.
- Channel mode switching function (14 channel mode, 10 channel mode)
  The response is improved approximately 40% over that in the past by switching to the 10 channel mode. (Compared to our PCM-G3)
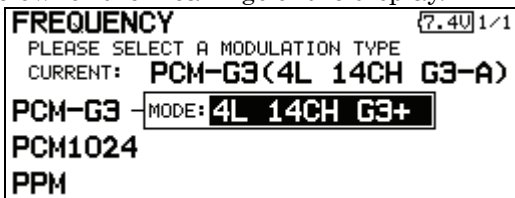
Setting Method

1. Insert the MZ-FM RF module into the T12FG, and set the power switch to ON.
2. Select [FREQUENCY] from the linkage menu, and press the EDIT button to call the frequency menu.
3. Select "MODULATION" and press the EDIT button to call the modulation type selection screen.


```
FREQUENCY                      7.4U 1/1
BAND No.
(FREQ. CH)   17 (72.130MHz)
FREQ. BAND
/AREA        72MHz      JAPAN
MODULATION   PCM-G3(4L 14CH G3-A)
RECEIVER ID  RX1          RX2
             00000443   NO USE
```

4. Select "MODE" of "PCM-G3".

```
FREQUENCY                      7.5U 1/1
PLEASE SELECT A MODULATION TYPE
CURRENT:  PCM-G3(4L 14CH G3-A)

PCM-G3 –MODE: 4L 14CH G3-A
PCM1024
PPM
```

5. Turn the EDIT dial and select the modulation mode and press the EDIT button. See the table below for the meanings of the display.

```
FREQUENCY                      7.4U 1/1
PLEASE SELECT A MODULATION TYPE
CURRENT:  PCM-G3(4L 14CH G3-A)

PCM-G3 –MODE: 4L 14CH G3+
PCM1024
PPM
```

Modulation mode display	Corresponding receiver, operation mode
4L 14CH G3-A	R5014DPS/R5114DPS Mode A
4L 14CH G3-B	R5114DPS Mode B
4L 14CH G3+	PCM-G3+ 4L 14 channel mode
2L 14CH G3+	PCM-G3+ 2L 14 channel mode
4L 10CH G3+	PCM-G3+ 4L 10 channel mode
2L 10CH G3+	PCM-G3+ 2L 10 channel mode

Channel Mode Setting

When a PCM-G3+ receiver is used, the channel mode can be selected.
- 14 channel mode
  Channels 1 - 12, DG1, and DG2 operate the same as the current PCM-G3 receiver.
- 10 channel mode
  This mode can use channels 1 - 8, DG1, and DG2 for a total of 10 channels. The number of channels is smaller, but response is approximately 40% better than that of the 14 channel mode.

Communication Level Setting

When a PCM-G3+ receiver is used, the communication level can be set.
- 4L mode
  This is the same high-speed transmission mode as the current PCM-G3 receiver.
- 2L mode
  This is a communication mode that emphasizes stability. When communication in the 4L mode is unstable, select this mode. Response is approximately 40% lower than that of the 4L mode.

Receiver Type Setting

Select the receiver type matched to the type of receiver.
- When using an R5014DPS/R5114DPS in mode A, select [4L 14CH G3-A].
- When using an R5114DPS in mode B, select [4L 14CH G3-B].
- When using a PCM-G3+ receiver, select one of the following:
  [4L 14CH G3+]
  [2L 14CH G3+]
  [4L 10CH G3+]
  [2L 10CH G3+]

6. When [PCM G3] is selected and the EDIT button is pressed, a confirmation screen is displayed. When the EDIT button is pressed, the modulation type is changed.

```
FREQUENCY                    7.4U 1/1
BAND No.
 (FREQ. CH)   17 (72.130MHz)
FREQ. BAND
/AREA        72MHz      JAPAN
MODULATION   PCM-G3 (4L 14CH G3+ )
RECEIVER ID  00000443   CHANGED. SURE ?
             NO USE         YES
```

7. A channel relocation confirmation message is displayed. When [YES] is selected and the EDIT button is pressed, the channel is changed to the modulation mode default value. When [NO] is selected and the EDIT button is pressed, channel relocation is not performed.

```
FREQUENCY                    7.4U 1/1

CHANNEL RELOCATION ?

[YES] SELECTION SETS THE CHANNEL ORDER
SUITABLE FOR PCM G3 14CH.

                  YES     NO
```

■ When the PCM-G3+ 10 channel mode was selected when the model type was helicopter, the standard layout of the channel functions is different from that of the 14 channel mode. The 10 channel mode channel location initial values are shown below.

Channel	H-1,H-2,HE3,HR3,HN3,H-3	H4,H-4X
1	Throttle	Throttle
2	Rudder	Rudder
3	Gyro	Gyro
4	Governor	Governor
5	Needle	Aileron
6	Aileron	Elevator
7	Elevator	Pitch
8	Pitch	Elevator 2
VC1	AUX1	AUX1
VC2	AUX1	AUX1
VC3	AUX1	AUX1
VC4	AUX1	AUX1

Other function additions and modifications

2.4G model check operation

When the TM-14 2.4G module is installed, radio waves are now automatically radiated when the power is turned on.

■ When the MZ-FM module is installed, a radio waves confirmation screen is displayed the same as in the past.

Range check function operating procedure

When the TM-14 is installed, start from the state in which the radio waves were stopped by the following procedure because the Range Check function cannot be used while radio waves are being radiated.

1. While pressing the EDIT button, turn on the power switch. A confirmation screen is displayed. Select [NO]. Since radio waves are not radiated, Range Check is performed.

```
MODEL1          CONDIT1      7.8U
BAND No.  2.4GHz
                FASST MULT   GLIDER



       TRANSMIT ?   YES  NO
```

■ In the RANGE CHECK mode, the green LED of the transmitter blinks.

No operation alarm

If a stick or switch was not operated for 30 minutes, an alarm screen was displayed and the radio waves were stopped to prevent radio interference with other sets. However, this has been changed so that the radio waves are not stopped.
In addition, when a stick or switch is operated while the alarm screen is being displayed, the alarm is reset and the display returns to the home screen.

```
PLEASE TURN OFF
POWER SWITCH
```

Multi-language support

Dutch, French, Spanish, Czech, and Italian displays are supported.

■ This function only supports transmitters marketed in Europe.

■ The languages which can be selected are different depending on the update software.

Update software	Corresponding languages
.	English, Japanese, German
*.*A1	English, Dutch, French
*.*B1	English, Spanish, Czech
*.*C1	English, German, Italian

1. Update to the software containing the languages to be used. Turn on the power, and select [INFORMATION] from the system menu.

```
INFORMATION                  7.9U 1/1
PRODUCT ID   : 00300008
LANGUAGE     : ENGLISH
VERSION      : 1. 7    AREA   JAPAN
MEMORY CARD SIZE:  970 MODEL
CARD FREE SIZE :   967 MODEL
```

2. Select "LANGUAGE", and press the EDIT button.
3. Select the language by turning the EDIT button, and press the EDIT button.
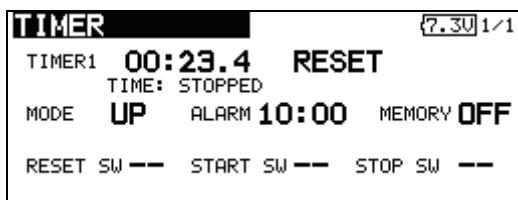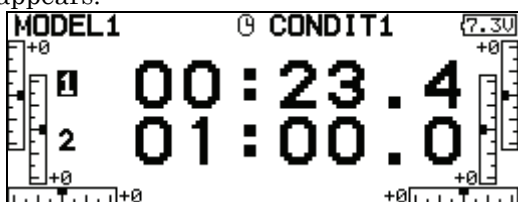
Timer display screen

An expanded timer display function has been added.

1. When the cursor is moved to the clock icon "🕓 " of the home screen, the timer display screen appears.
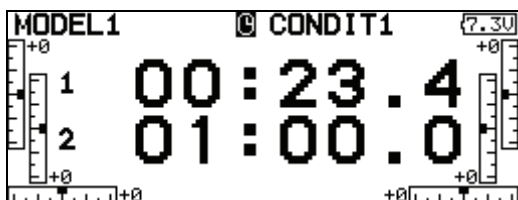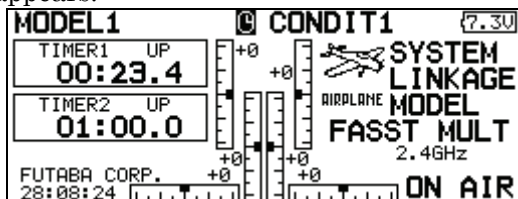
2. Move the cursor to "1" of the timer display screen, and press the EDIT button. The timer 1 setup screen appears.

■ When the cursor is moved to "2" and the EDIT button is pressed, the timer 2 setup screen appears.
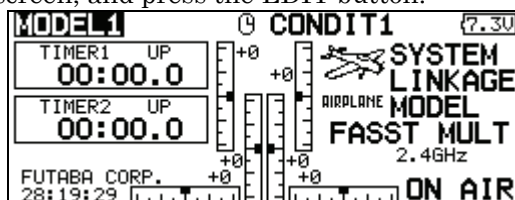
3. Move the cursor to the clock icon "🕓" of the timer display screen, and press the EDIT button. The display returns to the home screen.
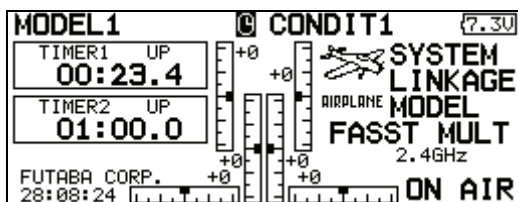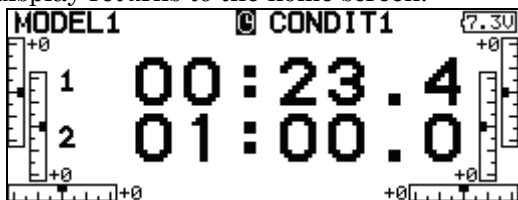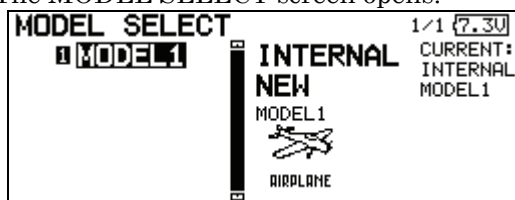
Model selection

The MODEL SELECT screen can now be opened directly from the home screen.

1. Move the cursor to the model name on the home screen, and press the EDIT button.

2. The MODEL SELECT screen opens.

SD card capability capacity

SD cards up to 2GB can now be used.

Automatic edit lock function (FX-30 only)

The automatic edit lock function mounted in the FX-30 has been discontinued.

■ The automatic edit lock function automatically locks the EDIT key immediately after the home screen was opened and when an edit operation was not performed within 5 seconds at the home screen.

Trainer student channel setting function

Which channel of the signal from the student's transmitter can be fetched as the instructor functions input signal when "FUNC" or "MIX" was set as the trainer function instructor's transmitter mode setting can be set. This makes trainer connection easy even when the instructor side and student side channel assignment is different.

■ When the instructor's transmitter mode is set to "NORM", the signal of the same channel of the student's transmitter is output as is. (The same as before.)

<Example of student CH settings>

Student side			Instructor side	Student CH
CH1	Aileron		Elevator	CH2
CH2	Elevator		Rudder	CH4
CH3	Throttle		Throttle	CH3
CH4	Rudder		Aileron	CH1
CH5	Gear		Aileron 2	--
CH6	Flap		Flap	CH6
CH7	Aileron 2		Gear	CH5
CH8	Aux 5		Aux 5	CH8
CH9	Aux 4		Aux 4	CH9
CH10	Aux 3		Aux 3	CH10
CH11	Aux 2		Aux 2	CH11
CH12	Aux 1		Aux 1	CH12

1. Select [TRAINER] from SYSTEM MENU.
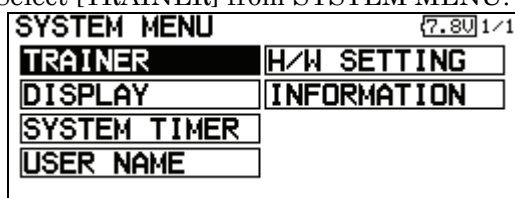
2. Select "TEACHER/STUDENT" and select [TEACH] by turning the EDIT button.

```
TRAINER                    7.8V 1/5
     ACT/INH          INH
     TEACHER/STUDENT  TEACH
     12/8 CHANNEL     8CH

     SWITCH           SH
```
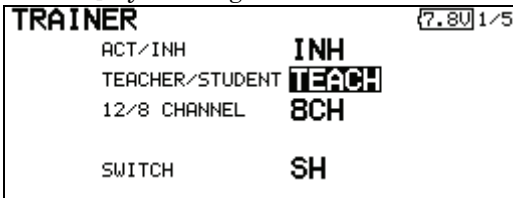
3. When [FUNC] or [MIX] is selected as the mode of the channel to be set, the [STU.CH] setting button is displayed. (When [NORM] [OFF], [STU.CH] setting is not performed.)

```
TRAINER                    7.8V 2/5
CH FUNCTION     MODE  SW  RATE  STU.CH
1 AILERON       FUNC  --  +100  CH2
2 ELEVATOR      OFF   --
3 PITCH         OFF   --
4 RUDDER        OFF   --
```
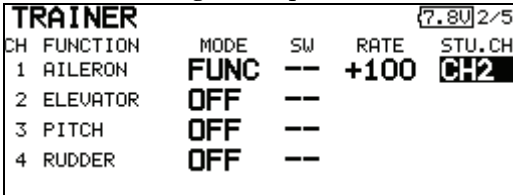
4. Turn the EDIT button, and select the channel.
■ Adding a student channel function has made it possible to use mixing of the functions allocated to VC by trainer function. (Tailless wing elevator and glider butterfly functions)
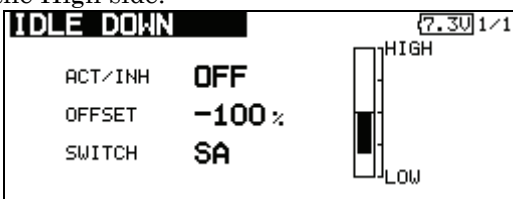
```
TRAINER                    8.0V 5/5
CH FUNCTION      MODE  SW  RATE  STU.CH
VC1 ELEVATOR     FUNC  --  +100  CH2
VC2 CAMBER       OFF   --
VC3 AUXILIARY1   OFF   --
VC4 AUXILIARY1   OFF   --
```
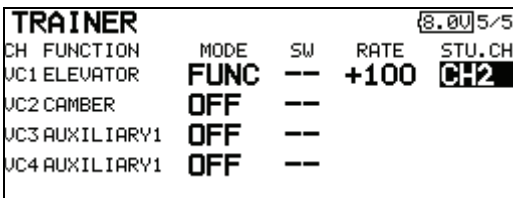
Fail safe initial value

■ The throttle channel fail safe initial value has been changed to Hold.
■ The throttle channel battery fail safe initial value has been changed to OFF.
■ The battery fail safe release switch initial value has been changed to NULL (OFF).
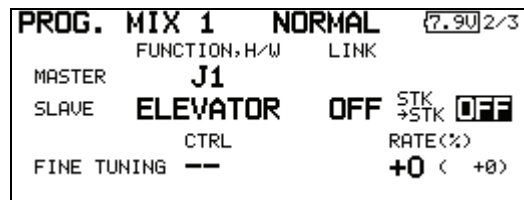
IDLE DOWN

The IDLE DOWN rate input range has bee changed from 0〜+100% to -100〜+100%.
■ When a minus rate is input, offset is applied to the High side.

```
IDLE DOWN                  7.3V 1/1
                              ┌─┐HIGH
     ACT/INH    OFF           │ │
     OFFSET     -100%         │█│
     SWITCH     SA            └─┘LOW
```
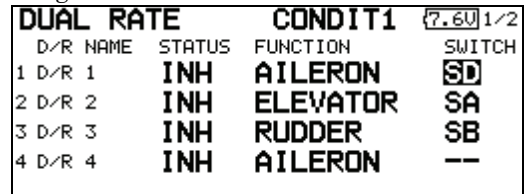
Programmable mixing

The programmable mixing (in mixing mode) STK to STK mixing function can be used even when the Master is a stick or other hardware.
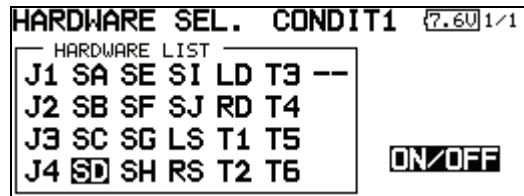
```
PROG. MIX 1    NORMAL       7.9V 2/3
         FUNCTION,H/W    LINK
  MASTER      J1
  SLAVE    ELEVATOR   OFF  STK→STK OFF
              CTRL           RATE(%)
  FINE TUNING  --            +0 ( +0)
```

Dual rate switch

Alternate mode can now be assigned to Dual rate (D/R) switch.

1. Select "SWITCH" of the D/R that you want to configure.

```
DUAL RATE         CONDIT1    7.6V 1/2
  D/R NAME  STATUS  FUNCTION   SWITCH
1 D/R 1     INH     AILERON    SD
2 D/R 2     INH     ELEVATOR   SA
3 D/R 3     INH     RUDDER     SB
4 D/R 4     INH     AILERON    --
```

2. Select a switch from the list, and select "ON/OFF" mode.

```
HARDWARE SEL.  CONDIT1    7.6V 1/1
─ HARDWARE LIST ─
J1 SA SE SI LD T3 --
J2 SB SF SJ RD T4
J3 SC SG LS T1 T5
J4 SD SH RS T2 T6        ON/OFF
```

3. Select "ALTERNATE" and select the mode with the EDIT dial.

```
ON/OFF          CONDIT1    7.6V 1/1
 SD
     ▶OFF
      OFF
      ON
              ALTERNATE ALTERNATE
```
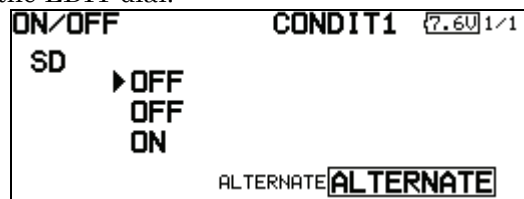
Switch channel

Logic switches can now be assigned to DG1 and DG2.
■ The number of logic switches which can be set in combination with the condition switch is 10.
■ Alternate setting is also possible at logic switch setting.

1. Select operation switch DG1 or DG2 on the Function screen.

```
FUNCTION       NORMAL      7.5V 5/5
CH FUNCTION    CONTROL  --- TRIM ---
DG1            SD
DG2            SA
```
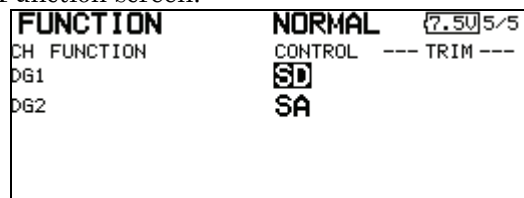
2. When "MODE" is set to LOGIC, logic switches can be assigned.

```
SWITCH         NORMAL      7.4V 1/1
              MODE
              SINGLE

              SWITCH
              --
```
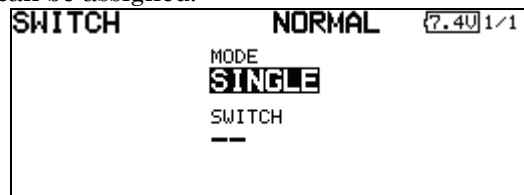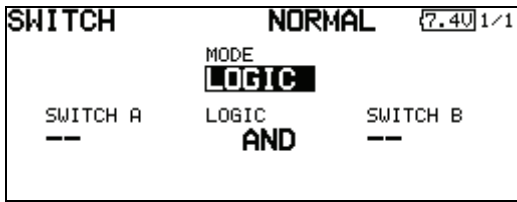
Throttle Limiter

Throttle limiter limit value

The limit value at the operation hardware neutral position can now be adjusted using the throttle limiter.

1. Switches from INH to Rate display when the cursor is aligned with the "CENTER" button on the "THR LIMITER" screen (4th page of THR CURVE) and the EDIT button is pressed for 1 second or longer.

```
THR CURVE      NORMAL    7.4U 4/4
+125                 THR LIMITER        AFR
+100
+75                  ACT/INH GROUP     SWITCH
+50                  ON    SINGLE SB
+25
  0                  HIGH  LOW  CENTER CONTROL
-25                  70% 20%  45% RS
POS +65.5 RATE +83.0
```

2. When the "CENTER" rate is changed, the limit value at the neutral position of the hardware set to "CONTROL" can be adjusted.

```
THR CURVE      NORMAL    7.4U 4/4
+125                 THR LIMITER        AFR
+100
+75                  ACT/INH GROUP     SWITCH
+50                  ON    SINGLE SB
+25
  0                  HIGH  LOW  CENTER CONTROL
-25                  70% 20%  28% RS
POS +65.5 RATE +83.0  RESET:ROT. KEY(1SEC)
```
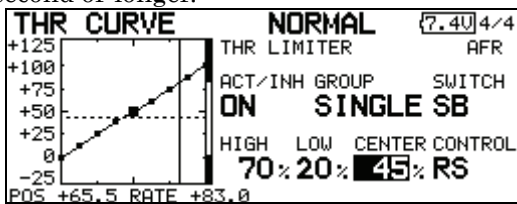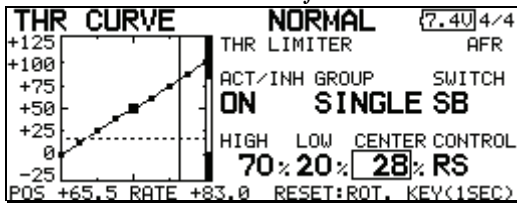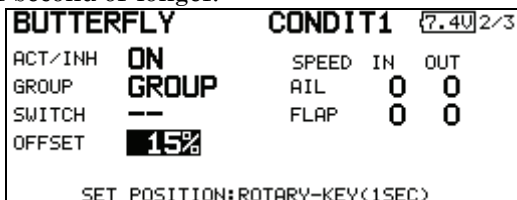
■ The limit value at the neutral position of the control hardware when "CENTER" was switched to INH (conventional operation) is the center value between "HIGH" and "LOW".

■ The "CENTER" rate when "CENTER" was switched from INH to Rate display is reset to the center value between "HIGH" and "LOW".

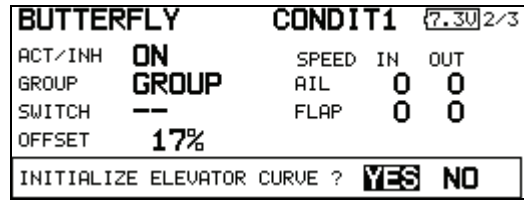■ The "CENTER" rate can be set between "HIGH" and "LOW".

Butterfly offset setting

A function which automatically initializes the elevator setting curve when butterfly offset setting was performed has been added.
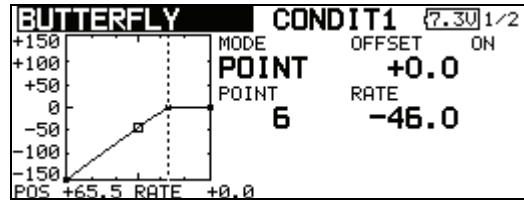
1. Set the cursor to "OFFSET" on the BUTTERFLY screen and press the EDIT key for 1 second or longer.

```
BUTTERFLY      CONDIT1   7.4U 2/3
ACT/INH  ON          SPEED  IN   OUT
GROUP    GROUP       AIL     0    0
SWITCH   --          FLAP    0    0
OFFSET   15%
         SET POSITION:ROTARY-KEY(1SEC)
```

2. When YES is selected when "INITIALIZE ELEVATOR CURVE ?" was displayed, the "ELE SETTING" curve is initialized.

```
BUTTERFLY      CONDIT1   7.3U 2/3
ACT/INH  ON          SPEED  IN   OUT
GROUP    GROUP       AIL     0    0
SWITCH   --          FLAP    0    0
OFFSET   17%
INITIALIZE ELEVATOR CURVE ?  YES  NO
```

3. When the "ELE SETTING" screen is opened, the curve is initialized.

```
BUTTERFLY      CONDIT1   7.3U 1/2
+150
+100          MODE      OFFSET    ON
+50           POINT     +0.0
  0           POINT     RATE
-50            6        -46.0
-100
-150
POS +65.5 RATE  +0.0
```

■ When NO was selected at step 2, the "ELE SETTING" curve is not initialized.
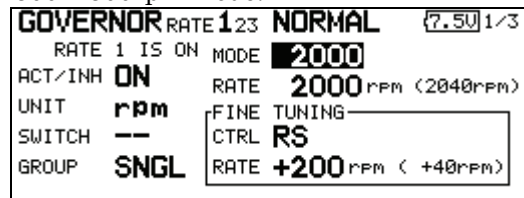
Edit lock

If the power was cut while edit lock was ON, edit lock will also be ON at the next starting.

Governor

Speed display mode

The governor rate speed display mode can now be selected.

1. Select the display mode with "mode" of the governor screen.

■ 2000: 2000rpm mode

■ 2500: 2500rpm mode.

```
GOVERNOR RATE 123 NORMAL   7.5U 1/3
  RATE 1 IS ON  MODE  2000
ACT/INH  ON     RATE  2000rpm (2040rpm)
UNIT     rpm    ┌FINE TUNING──────┐
SWITCH   --     │CTRL  RS          │
GROUP    SNGL   │RATE  +200rpm ( +40rpm)│
```

■ The 2500rpm mode and 2000rpm mode are different when rate is 50.0% (=1500rpm). At rates below 50.0%, the display is the same for both modes.

■ When the 2500rpm mode is set, 100.0%=2500rpm. The maximum value is 110.0%=2700rpm.

■ When the 2000rpm mode is set, 100.0%=2000rpm. The maximum value is 110.0%=2100rpm. (Conventional specifications)

■ There is no change in the transmitter output even when the 2500rpm mode and 2000rpm mode are switched. Calibration must be performed at the governor side.

End point initialization

"TRAVEL" and "LIMIT" of the governor channel end point can now be initialized when the governor setting "ACT/INH" button was operated.
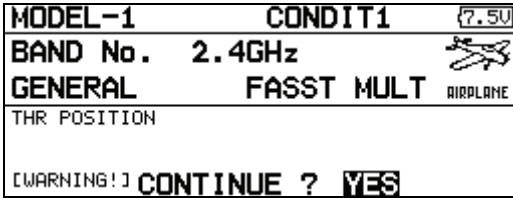
■ When switched from INH to ACT (ON or OFF), "TRAVEL" is initialized to 100 and "LIMIT" is initialized to 155.

■ When rates 1, 2, and 3 are switched to INH, "TRAVEL" is initialized to 100 and "LIMIT" is initialized to 135 under all conditions.

Warning display

Throttle stick position warning
A warning is displayed when the throttle stick is at the high side (1/3 or more the same as THR cut operation) at power ON. (Airplane/helicopter only)
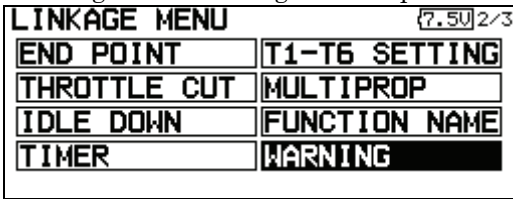
```
MODEL-1        CONDIT1    (7.5U)
BAND No.  2.4GHz              ✈
GENERAL        FASST MULT  AIRPLANE
THR POSITION

[WARNING!] CONTINUE ? YES
```

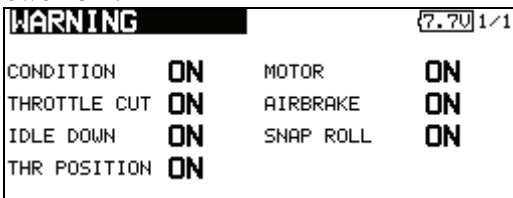■ When the throttle stick is returned to the low side, the warning display goes off.

Warning display ON/OFF setting
The warning display at power ON can be turned ON/OFF for each function. Use by setting functions which may be dangerous if operated at power ON to ON. Initial setting is all ON.

1. "Warning" of the Linkage menu opens.

```
LINKAGE MENU         (7.5U) 2/3
END POINT      T1-T6 SETTING
THROTTLE CUT   MULTIPROP
IDLE DOWN      FUNCTION NAME
TIMER          WARNING
```

2. The settings can be changed individually. When set to [OFF], a warning is not displayed at power ON.

```
WARNING              (7.7U) 1/1

CONDITION    ON    MOTOR      ON
THROTTLE CUT ON    AIRBRAKE   ON
IDLE DOWN    ON    SNAP ROLL  ON
THR POSITION ON
```
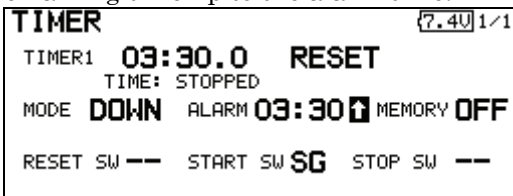
Timer

Alarm mode
A mode which sounds an alarm every minute during the remaining time up to the timer alarm time has been added.
1. Open the Timer screen.
2. Change the setting by pressing ▲ or▼ button.
■ ▲: An alarm sounds every minute of the elapsed time from timer start. (Conventional mode)
■ ▼ : An alarm sounds every minute of the remaining time up to the alarm time.

```
TIMER                (7.4U) 1/1

TIMER1 03:30.0  RESET
       TIME: STOPPED
MODE DOWN  ALARM 03:30▲ MEMORY OFF

RESET SW --  START SW SG  STOP SW --
```
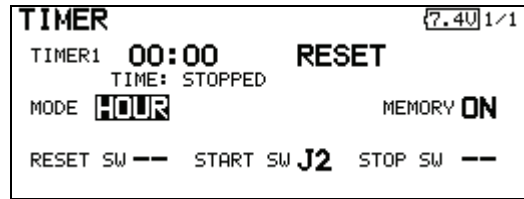
HOUR mode
An HOUR mode which counts up to 99 hours 50 minutes has been added to the timer modes.
■ This mode is convenient when used at engine maintenance period and other long-term measurements.
■ When the HOUR mode is set, "xx (hour)：xx (minute)" is displayed on the count time display. Seconds are not displayed.
■ When the HOUR mode is set, ":" blinks each second during timer operation.
■ When the HOUR mode is set, the alarm function/lap time measurement function are inhibited.

1. Open the Timer screen.
2. Set MODE of the Timer screen to HOUR.

```
TIMER                (7.4U) 1/1
TIMER1 00:00     RESET
       TIME: STOPPED
MODE HOUR              MEMORY ON

RESET SW --  START SW J2  STOP SW --
```

Switch setting
The timer switches can now be set for each condition.
■ Only timer 1 start SW and stop SW can be set.
■ The default setting is Group.
1. Open the Timer screen.

```
TIMER          CONDIT1   (7.5U) 1/1
TIMER1 00:00.0   RESET
       TIME: STOPPED
MODE   UP   ALARM 10:00↑ MEMORY OFF

RESET SW --  START SW ██  STOP SW --
```

2. Set the group setting button of the condition you want to set the switches individually to the single mode "Sngl".

```
SWITCH         CONDIT1   (7.5U) 1/1
               GROUP
               SINGLE
               SWITCH
               --
```

3. Set the switches.

```
SWITCH         CONDIT1   (7.5U) 1/1
               GROUP
               SINGLE
               SWITCH
               SA
```
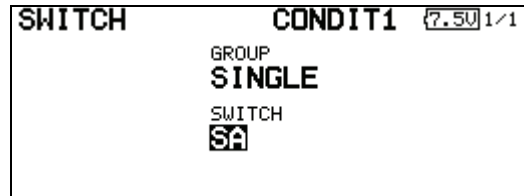
4. Switch the condition and set the switch of each condition.

```
SWITCH         CONDIT2   (7.5U) 1/1
               GROUP
               SINGLE
               SWITCH
               ██
```
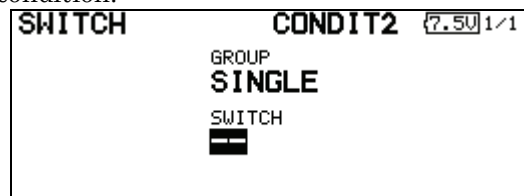
AFR settable function

The functions which perform AFR setting have been changed.

- ■ When model type is airplane/glider
- ■ The AFR settable functions depend on whether the model is one wing type or tail type. The functions shown in the table below change.
- ■ When model type is helicopter
- ■ AFR of GOVER ER2, GYRO2, and GYR03 can now be set.

Function	less than Ver1.8	Ver1.8						
		Wing Type						
		1AIL	2AIL	2AIL+1FLP	2AIL+2FLP	2AIL+4FLP	4AIL+2FLP	4AIL+4FLP
AILERON2	×	○	×	×	×	×	×	×
AILERON3	×	○	○	○	○	○	×	×
AILERON4	×	○	○	○	○	○	×	×
FLAP2	×	○	○	○	×	×	×	×
FLAP4	×	○	○	○	○	×	○	×
ELEVATOR2	×	△1	△1	△1	△1	△1	△1	△1
RUDDER2	×	△2	△2	△2	△2	△2	△2	△2

△1 If the tail type is "elevator". Otherwise, ○.

△2 If rudder type is "winglet", x. Otherwise, ○.

(The update Modification contents in editor version 1.3)

⚠CAUTION

🛈 To support new features model memories must be updated to version 1.3. Once the 1.3 update is installed into your transmitter, the model memory update will automatically occur when you select the model the first time. After this update has been performed the model memory will no longer be compatible with software versions prior to 1.3.
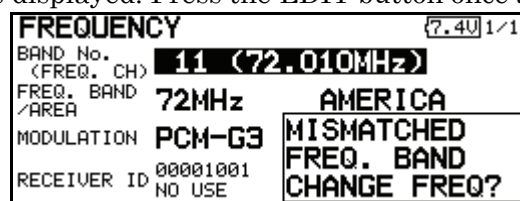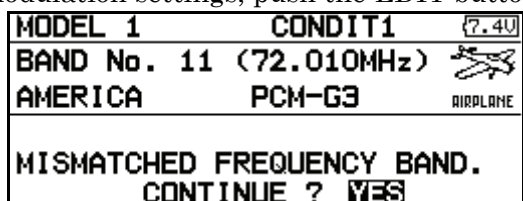
Changing the RF Modulation

The T12FG and FX-30 transmitter is compatible with Futaba's TM-14 Module FASST 2.4GHz system.

- ■ When switching from the existing MZ-FM or FX-FM module to the TM-14, the TM-14 to the MZ-FM or the FX-FM module, or similar situation, it is necessary to reset the band accordingly.
- ■ When using the TM-14 and Futaba FASST receiver, it is necessary to link the transmitter module to the respective receiver prior to using them for the first time. This process will only be necessary the first time that these items are used. The unique identification code will be stored in the receiver.
- ■ When using the TM-14 FASST system, the DSC function has been disabled as it is unnecessary. Futaba's FASST system will prevent any RF interference issues which might have arisen in the previous RF modulation.
- ■ The multiprop function cannot be used.

How to Set the Band

1. With the transmitter's power OFF, remove the existing RF module and replace it with the TM-14 module.
2. Turn ON the transmitter's power switch. Since the RF module was replaced by an RF module that varies from the previous settings, an on-screen warning is displayed. To change the modulation settings, push the EDIT button.

```
MODEL 1        CONDIT1      7.4U
BAND No. 11 (72.010MHz)    ✈
AMERICA        PCM-G3        AIRPLANE

MISMATCHED FREQUENCY BAND.
      CONTINUE ? YES
```

3. In the linkage menu, select the frequency setting [FREQUENCY], and push the EDIT button. A message confirming the band change is displayed. Press the EDIT button once again.

```
FREQUENCY               7.4U 1/1
BAND No.
(FREQ. CH)   11 (72.010MHz)
FREQ. BAND
/AREA        72MHz      AMERICA
MODULATION   PCM-G3     MISMATCHED
RECEIVER ID  00001001   FREQ. BAND
             NO USE     CHANGE FREQ?
```

- ■ Please note
  This will automatically select Futaba's FASST MULT setting. If, however, you are using a

receiver which employs the FASST 7-Channel settings, please see the section entitled Channel Mode Selection which follows.

4. A channel mode selection screen is displayed. Press the EDIT button.

```
FREQUENCY                    7.5V 1/1


SYSTEM      FASST MULT

                    CHANGED. SURE ?
                         YES
```
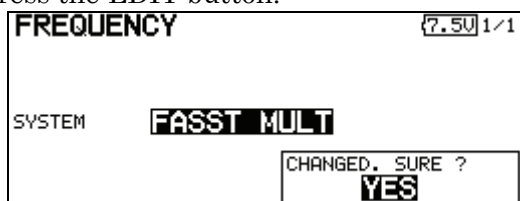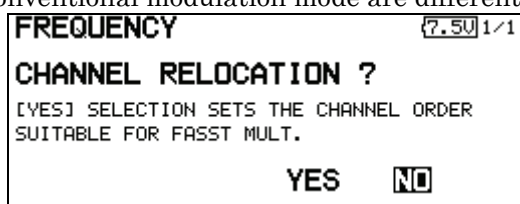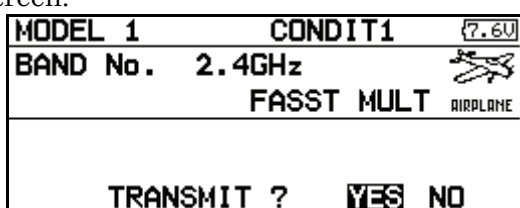
5. A function channel relocation confirmation screen is displayed. When the [YES] is selected and the EDIT button is pressed, the function channel assignment changes to the optimum setting in the FASST system. When the [NO] is selected and the EDIT button is pressed, the setting does not change.

🛈 After the channels have been relocated you must verify that the receiver connections are correct and verify that all of the settings within the transmitter are correct before flying.

■ In the FASST system, the optimum channel assignment and optimum setting in the conventional modulation mode are different.

```
FREQUENCY                    7.5V 1/1

CHANNEL RELOCATION ?

[YES] SELECTION SETS THE CHANNEL ORDER
SUITABLE FOR FASST MULT.

                     YES     NO
```

6. The band setting changes accordingly to reflect the selection of the 2.4GHz band. The display will return to the frequency confirmation screen.

```
MODEL 1          CONDIT1    7.6V
BAND No.  2.4GHz            ✈
                 FASST MULT  AIRPLANE


         TRANSMIT ?   YES  NO
```
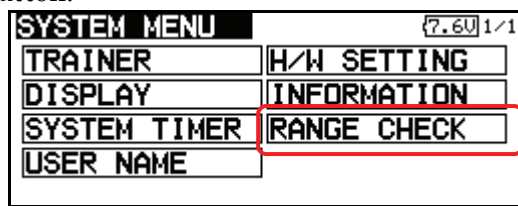
Range Check Mode Operation

The 'range check mode' reduces the transmission range of the radio waves to allow for a ground range check.
■ The range check mode, when activated, will continue for 90 seconds unless the user exits this mode early.
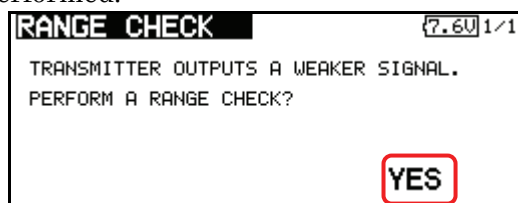
⚠WARNING

🚫 Do not fly in the range check mode.
■ Since the range of the radio waves is short, if the model is too far from the transmitter, control will be lost and the model will crash.
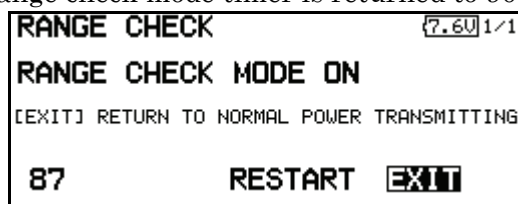
1. Turn ON the transmitter's power switch. Select 'NO' on the frequency confirmation screen.
■ For safety, the RANGE CHECK mode can not be selected while the RF transmission is active.

2. With the system menu selected press the EDIT button, choose the RANGE CHECK selection from the menu options and press the EDIT button.

```
SYSTEM MENU                  7.6V 1/1
TRAINER          H/W SETTING
DISPLAY          INFORMATION
SYSTEM TIMER     RANGE CHECK
USER NAME
```

3. The RANGE CHECK screen is displayed. To activate the RANGE CHECK mode select 'YES' and then press the EDIT button. During the RANGE CHECK period, the RF power is reduced to allow the ground range tests to be performed.

```
RANGE CHECK                  7.6V 1/1

TRANSMITTER OUTPUTS A WEAKER SIGNAL.
PERFORM A RANGE CHECK?


                        YES
```

4. The Range Check function automatically exits after the 90 second time limit has expired. The remaining time is displayed on the left side of the transmitter's screen. Should you complete the range check before the 90 seconds has passed, select [EXIT] and press the EDIT button.
■ When the [RESTART] button is pressed, the range check mode timer is returned to 90.

```
RANGE CHECK                  7.6V 1/1

RANGE CHECK MODE ON

[EXIT] RETURN TO NORMAL POWER TRANSMITTING

87               RESTART  EXIT
```

■ Please note, upon expiration of the 90 seconds, or when [EXIT] is selected and the EDIT button is pressed, the transmitter will automatically return to the normal RF operation as noted on the display.

5. When [EXIT] is selected and the EDIT button is pressed, the RANGE CHECK mode is disabled and the 12FG will begin transmitting at full power.

```
RANGE CHECK                  7.6V 1/1

 CURRENTLY TRANSMITTING (RF ON)
 RANGE CHECK IS UNAVAILABLE
```
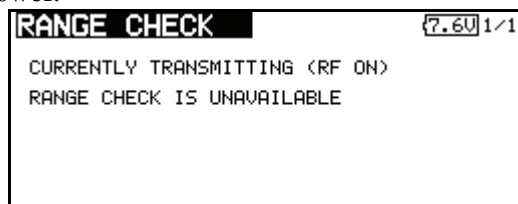
- After exiting the Range Check mode, the function cannot be selected again. To select the Range Check mode again you must cycle the transmitter power switch.

Channel Mode Selection

When using the TM-14 RF module with the transmitter, there are two modes of operation available: multi-channel mode (as utilized in conjunction with the R6014FS receiver) and 7-channel mode (used for receivers such as the R617FS). It is important to set the channel mode selection to match the receiver being utilized in the model. Please refer to the chart below as a reference guide.

| Transmitter		Receiver		
		R606FS R616FFM	R607FS R617FS	R608FS R6014FS
TM-14 Module	Multi-ch mode	–	–	Compatible
	7ch mode	Compatible	Compatible	–

1. Access the frequency setting [FREQUENCY] in the linkage menu and then press the EDIT button. The currently selected transmission mode is displayed.
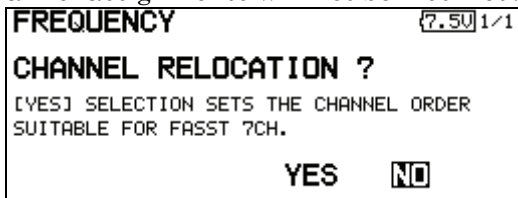
```
FREQUENCY              7.6U 1/1

SYSTEM    FASST MULT
```

2. To change the mode selection, select the alternate transmission mode.
   [FASST MULT] : Multi channel mode
   [FASST 7CH] : 7 channels mode

```
FREQUENCY              7.5U 1/1
CURRENT: FASST MULT

          FASST MULT
          FASST 7CH
```
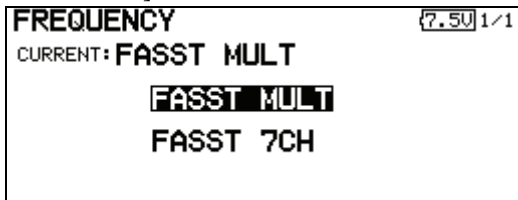
3. Press the EDIT button. The display will return to the confirmation screen.

```
FREQUENCY              7.5U 1/1

SYSTEM    FASST 7CH

          CHANGED. SURE ?
               YES
```
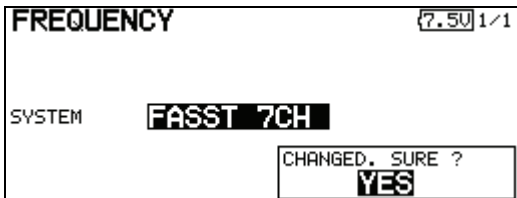
4. A channel relocation screen will appear. If you wish to relocate the channel assignments, select the [YES]. If not, select [NO]. The channel assignments will not be modified.

```
FREQUENCY              7.5U 1/1

CHANNEL RELOCATION ?
[YES] SELECTION SETS THE CHANNEL ORDER
SUITABLE FOR FASST 7CH.

               YES    NO
```

(Information pertaining to the 7 channel mode)
When the 7 channel mode is selected, the following conditions are applicable:
- While the setting items of channels 8 and above may appear in the various menu options (e.g., sub trims, servo reverse, etc.), the only settings which are applicable are those of channels 1-7.
- When using the 7 channel mode, fail safe is only available for channel three (throttle). If/when the fail safe for channel three has been activated, the battery fail safe is also active. Unlike the multi channel mode, the fail safe and the battery fail safe can not be set independently.

Servo connection

Below is a reference chart which has been created to obtain the optimum performance from the FASST system in conjunction with the channel mode and various swash types. It is important to note and adhere to this reference information in order to achieve the maximum performance from the model. As such, please connect the servos to the corresponding channels in the chart below.

CH	Multi channel mode		7 channels mode	
	Except H-4, H4X	H-4,H4X	Except H-4, H4X	H-4,H4X
1	Aileron	Aileron	Aileron	Aileron
2	Elevator	Elevator	Elevator	Elevator
3	Pitch	Pitch	Throttle	Throttle
4	Rudder	Elevator2	Pitch	Pitch
5	Gyro	Rudder	Gyro	Gyro
6	Throttle	Throttle	Rudder	Rudder
7	Governor	Gyro	Governor	Elevator2
8	Governor2	Governor	AUX5	AUX5
9	Needle	Governor2	AUX4	AUX4
10	AUX3	Needle	AUX3	AUX3
11	AUX2	AUX2	AUX2	AUX2
12	AUX1	AUX1	AUX1	AUX1
VC1	AUX1	AUX1	AUX1	AUX1
VC2	AUX1	AUX1	AUX1	AUX1
VC3	AUX1	AUX1	AUX1	AUX1
VC4	AUX1	AUX1	AUX1	AUX1

- It is important to note that these settings differ from that used in the previous G3 receivers. Utilizing the channel assignments from the G3 receivers will not allow you to obtain the ideal performance from your model.
- Please note that the settings in the chart above are the default settings. As such, when the data is reset, the channel assignments above will be utilized.

Automatic channel assignment

When using the TM-14 RF module, the transmitter channel assignment function allows the automatic relocation of the channels (servo output) to maximize performance of the FASST system.

1. Replace the RF module of the transmitter with the TM-14.

2. Turn on the transmitter.
3. Select LINKAGE menu.
4. Select FREQUENCY menu.
5. A band change confirmation message is displayed. Push the EDIT button.

```
FREQUENCY                    (7.4V)1/1
BAND No.
(FREQ. CH)    11 (72.010MHz)
FREQ. BAND    72MHz      AMERICA
/AREA
MODULATION    PCM-G3     MISMATCHED
                         FREQ. BAND
RECEIVER ID   00001001   CHANGE FREQ?
              NO USE
```
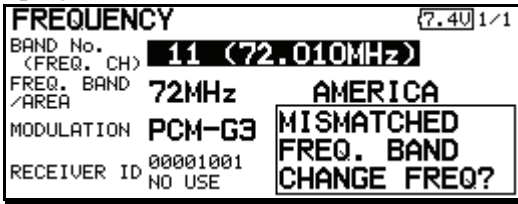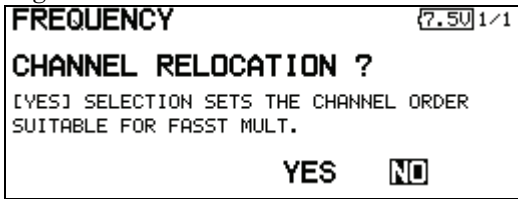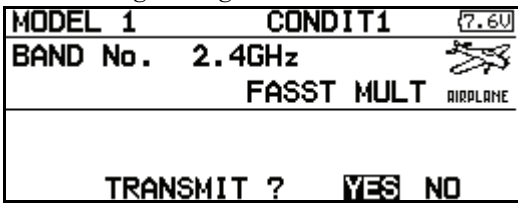
6. A CHANNEL RELOCATION message will appear. If you wish to relocate the channel assignments, select 'YES' and press the EDIT button. If not, select 'NO'. The channel assignments will not be modified.

```
FREQUENCY                    (7.5V)1/1

CHANNEL RELOCATION ?

[YES] SELECTION SETS THE CHANNEL ORDER
SUITABLE FOR FASST MULT.

              YES     NO
```

7. Band setting changes to 2.4GHz.

```
MODEL 1        CONDIT1      (7.6V)
BAND No.   2.4GHz
                FASST MULT  AIRPLANE


TRANSMIT ?     YES  NO
```

8. The channel assignment is changed to suitable assignment of FASST.
9. After the channels have been relocated you must verify that the receiver connections are correct and verify that all of the settings within the transmitter are correct before flying.

Range Check the Radio

It is extremely important to range check your models prior to each flying session. This enables you to ensure that everything is functioning as it should and to obtain maximum enjoyment from your time flying. The TM-14 transmitter module incorporates a system that reduces its power output and allows you to perform such a range check.

1. Turn on the transmitter and activate the 'RANGE CHECK' mode through the transmitter's System menu. Please note: if the RF is activated, the 'RANGE CHECK' mode will not be available to utilize. As such, do NOT activate the RF when the transmitter is turned ON.

2. The LEDs on the rear of the TM-14 module will indicate that a radio frequency link has been established between the transmitter and receiver. This is noted by a solid green LED and a blinking red LED on the TM-14 module. The solid green LED indicates that the radio frequency link has been established. As indicated by the blinking red LED, the radio frequency power has been reduced to allow for the range check.
Note: the transmitter will remain in the RANGE CHECK mode for a maximum of 90 (ninety) seconds. This time limit has been established to ensure that the modeler not inadvertently forget to return to the standard power output when flying his/her model.

3. Walk away from the model while simultaneously operating the controls. Have an assistant stand by the model to confirm that all controls are completely and correctly operational. You should be able to walk approximately 30-50 paces from the model without losing control.

4. If everything operates correctly, return to the model. Set the transmitter in a safe, yet accessible, location so it will be within reach after starting the engine or motor. Be certain the throttle stick is in the low throttle position, then start the engine or motor. Perform another range check with your assistant holding the aircraft with the engine running at various speeds. If the servos jitter or move inadvertently, there may be a problem. We would strongly suggest you do not fly until the source of the difficulty has been determined. Look for loose servo connections or binding pushrods. Also, be certain that the battery has been fully charged.

Antenna of TM-14

1. As with all radio frequency transmissions, the strongest area of signal transmission is from the sides of the TM-14 transmitter module's antenna. As such, the antenna should not be pointed directly at the model. If your flying style creates this situation, please pivot the antenna to correct this situation.

2. Please do not grasp the transmitter's antenna during flight. Doing so may degrade the quality of the RF transmission to the model

TM-14 LED indication

■ When the transmitter is powered up, the LEDs on the rear of the module will begin to glow or blink accordingly. The chart below provides you with an easy reference as to the meaning of the LEDs.

LED Indication

Green	Red	Status
Solid	Solid	Initializing
Blink	Off	RF is off
Alternate Blink		Check nearby RF condition
Solid	Off	RF power on
Solid	Blink	RF power on (Power reduced to perform the range check function)

R6014FS LED Indication

Green	Red	Status
Off	Solid	No signal received
Solid	Off	Signal received, normal operation
Blink	Off	Receiver is receiving signals but the ID is unmatched
Alternate Blink		Unrecoverable error (EEPROM, etc.)

Multiprop channel

The system has been made compatible with the Futaba MPDX-1 Multiprop Decoder. One channel can be expanded to 8 channels by using the MPDX-1 Multiprop Decoder. Up to two MPDX-1 can be used.

■ The multiprop function cannot be used with a FASST modulation scheme.

Multiprop selection

1. Select the Linkage Menu multiprop setting [MULTIPROP] and press the EDIT dial.
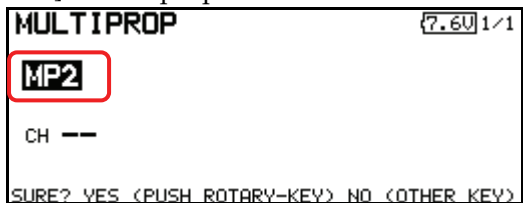2. The MULTIPROP setup screen is displayed.

3. Select [MP1] and press the EDIT dial.
4. Turn the dial and switch the display to [MP1] or [MP2].
   ※ The display blinks.
   [MP1] : Multiprop 1
   [MP2] : Multiprop 2

5. Press the EDIT dial.

Channel setting

1. Select [CH] and press the EDIT dial. Turn the EDIT dial and display the channel to which the MPDX-1 is connected.
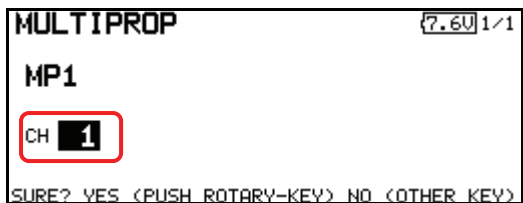
■ To turn off the multiprop function, set [--] at CH.

2. When the activated channel is selected and the EDIT dial is pressed, the multiprop setting contents are displayed.
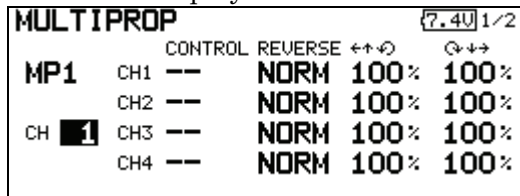
Control setting

1. Select the "CONTROL" row of the multiprop channel whose control you want to set and press the EDIT dial.
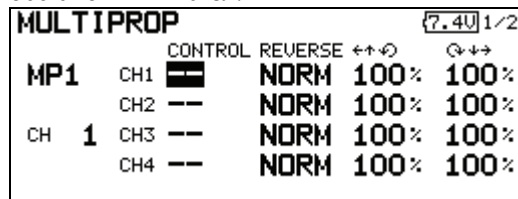
2. A hardware selection screen is displayed. Select the hardware which is to set control and press the EDIT dial.

Servo reverse setting

1. Select the "REVERSE" row of the multiprop channel which is to be reversed and press the EDIT dial.
2. Turn the dial and switch the display to [NORM] or [REV].
   ※ The display blinks.
   [NORM] : Normal mode
   [REV] : Reverse mode
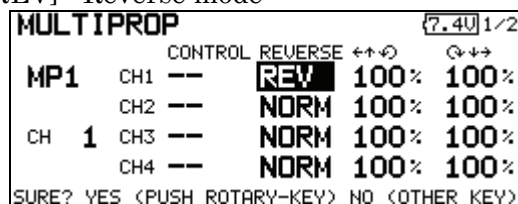
3. Press the EDIT dial.

End Point Setting

1. Select the "←↑" row or "↓→" row of the multiprop channel whose end point is to be set and switch to the data input mode by pressing the EDIT dial.
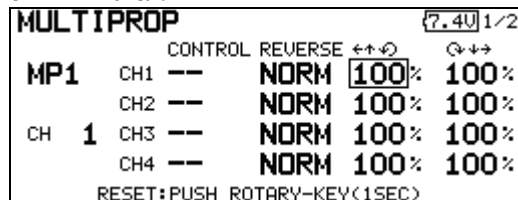
2. Adjust the end point by turning the EDIT dial.
   Initial value : 100%
   Adjustment range : 30 ~ 100%

3. After adjustment, press the EDIT dial.

Throttle limiter

This function limits throttle operation to within a certain range. Control which adjusts the operating range during flight can be set. (Effective only when the model type is helicopter.)

Throttle limiter function ACT/INH

Condition group/single

Mixing ON/OFF switch

Throttle limiter activation position

```
THR CURVE   NORMAL   (7.6U)4/4
+125                THR LIMITER        AFR
+100
+75     ACT/INH GROUP    SWITCH
+50     ON      SINGLE  SF
+25
0       HIGH    LOW     CONTROL
-25     70%     30%     LS
POS +0.0 RATE +50.0
```
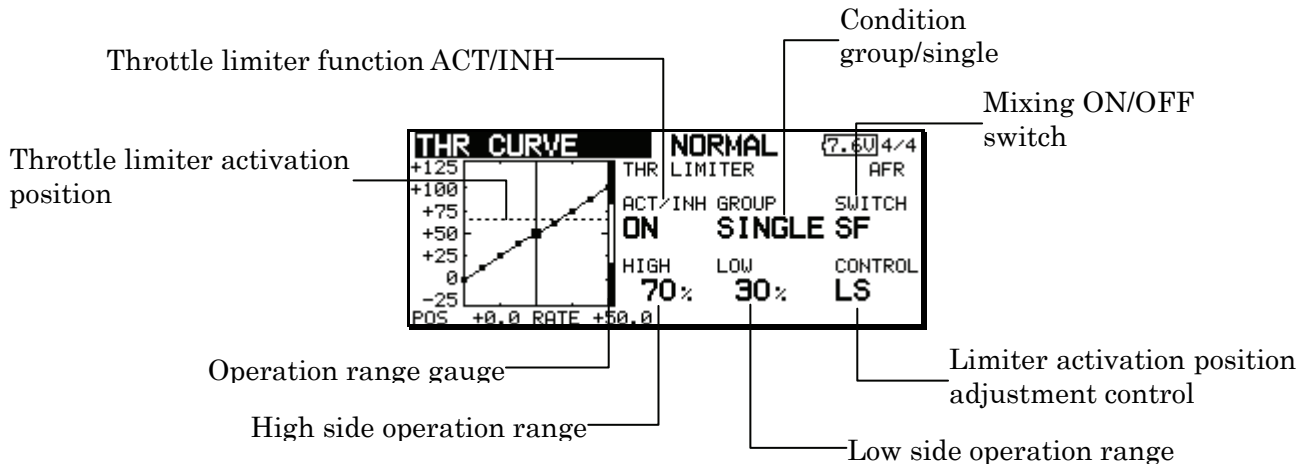
Operation range gauge

High side operation range

Limiter activation position adjustment control

Low side operation range

Setting method

1. Open the THR CURVE setup screen. Move the cursor and display page 4.

● Activate the function.
1. Select "ACT/INH" and press the EDIT dial.

2. Turn the dial and switch the display to [INH] or [ACT].
   ※ The display blinks.
   [INH] : Inhibit
   [ACT] : Activate
3. Press the EDIT dial.

● Group/single mode selection
1. Select "GROUP" and press the EDIT dial.
2. Turn the dial and switch the display to [GROUP] or [SINGLE].
   ※ The display blinks.
   [GROUP] : Condition group mode
   [SINGLE] : Condition single mode
3. Press the EDIT dial.

● ON/OFF switch setting
1. Select "SWITCH" and press the EDIT key.
2. A hardware selection screen is displayed. Select the hardware and press the EDIT dial.

● High side operation range setting
1. Select "HIGH" and press the EDIT dial.
2. Turn the dial and adjust the high side operation range.
   ※ A gauge is displayed at the right-hand side of the graph.
3. Press the EDIT dial.

● Low side operation range setting
1. Select "LOW" and press the EDIT dial.
2. Turn the dial and adjust the low side operation range.
   ※ A gauge is displayed at the right-hand side of the graph.
3. Press the EDIT dial.

● Limiter activation position adjustment control setting
1. Select "CONTROL" and press the EDIT dial.
2. A hardware selection screen is displayed. Select the hardware and press the EDIT dial.
   ※ The throttle limiter activation position is indicated by a dotted line on the graph.

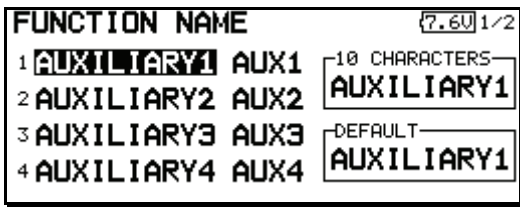■ When the limiter operation range adjustment control is NULL, the throttle limiter function is not activated.
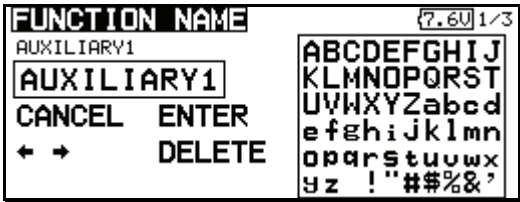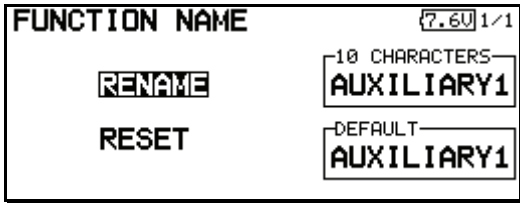
Other modifications

Function name

The name of the spare functions (AUXILIARY1~8) can be changed for the full name (10 characters) or for the abbreviated name (4 characters).
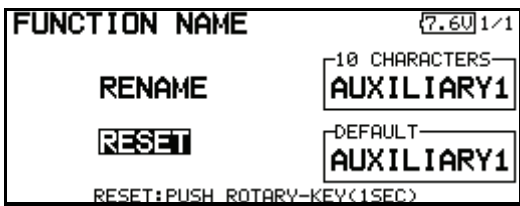
1. Select [FUNCTION NAME] of the Linkage Menu and press the EDIT button.
2. The FUNCTION NAME setup screen is displayed.

```
FUNCTION NAME          (7.6U)1/2
1 AUXILIARY1 AUX1   ┌10 CHARACTERS┐
2 AUXILIARY2 AUX2   │AUXILIARY1  │
3 AUXILIARY3 AUX3   ┌DEFAULT──────┐
4 AUXILIARY4 AUX4   │AUXILIARY1  │
```
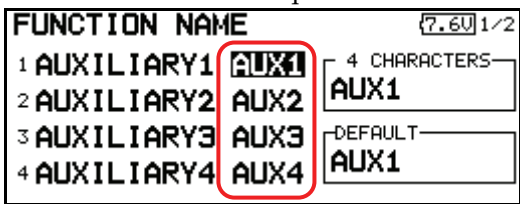
3. When the function whose name is to be change is selected and the EDIT button is pressed, a modification screen is displayed.
4. Select the function to be renamed and select [RENAME] and press the EDIT button. A character input screen is displayed. Input the function name.

```
FUNCTION NAME          (7.6U)1/1
                    ┌10 CHARACTERS┐
     RENAME         │AUXILIARY1  │
                    ┌DEFAULT──────┐
     RESET          │AUXILIARY1  │
```

```
FUNCTION NAME          (7.6U)1/3
AUXILIARY1          ┌ABCDEFGHIJ
┌AUXILIARY1┐       │KLMNOPQRST
│          │       │UVWXYZabcd
CANCEL  ENTER       │efghijklmn
←  →    DELETE      │opqrstuvwx
                    │yz !"#$%&'
```

5. When [RESET] is selected and the EDIT button is held down, the function name is set to the initial state function name.

```
FUNCTION NAME          (7.6U)1/1
                    ┌10 CHARACTERS┐
     RENAME         │AUXILIARY1  │
                    ┌DEFAULT──────┐
     RESET          │AUXILIARY1  │
   RESET:PUSH ROTARY-KEY(1SEC)
```

6. The function name may be displayed in 10 characters or 4 characters, depending on the setup screen. For 4 characters display, input the function name as required.

```
FUNCTION NAME          (7.6U)1/2
1 AUXILIARY1 AUX1   ┌4 CHARACTERS┐
2 AUXILIARY2 AUX2   │AUX1        │
3 AUXILIARY3 AUX3   ┌DEFAULT──────┐
4 AUXILIARY4 AUX4   │AUX1        │
```

Condition selection [COND.SELECT]

The condition switch of the conditions (IDLEUP1, IDLEUP2, IDLEUP3, HOLD) preset in the helicopter mode has been changed to NULL.

Timer

A timer can now be set to maintain its value even when the power is turned off or the model is switched.

1. Open [TIMER] of the Linkage Menu.
2. Select "MEMORY" and turn the EDIT dial and switch the display to [ON] or [OFF].
   ※ The display blinks.
   [ON] : Memory mode. The timer value is held even if the power is turned off or the model is switched.
   [OFF] : The timer is reset by power off and model switching as in the past.
3. When the EDIT button is pressed, the setting is changed.

```
TIMER                  (7.6U)1/1
TIMER1  00:00.0   RESET
        TIME: STOPPED
MODE  UP   ALARM 10:00   MEMORY OFF

RESET SW ──  START SW ──  STOP SW ──
```

Trim display units

Percentage (%) display can be selected at trim.

1. Open [T1-T6 SETTING] of the Linkage Menu.
2. Select "TRIM UNIT" and turn the dial and switch the display to [%] or [--].
   ※ The display blinks.
   [%] : Trim is displayed in % units.
   [--] : Trim is displayed numerically as in the past.

```
T1-T6 SETTING CONDIT1 (7.6U)1/1
  STEP MODE        STEP MODE
T1 4 COMB.   T4 4 COMB.
T2 4 COMB.   T5 4 COMB.    TRIM
                           UNIT
T3 4 COMB.   T6 4 COMB.    %
SURE? YES (PUSH ROTARY-KEY) NO (OTHER KEY)
```

3. When the EDIT button is pressed, the setting is changed.

```
MODEL 1         CONDIT1    (7.6U)
TIMER1  UP  ┌+0%       SYSTEM
 00:00.0   │+0%       LINKAGE
TIMER2  UP  │    AIRPLANE MODEL
 00:00.0   │          17(72.130MHz)
                          PCM-G3
FUTABA CORP.  +0% +0%
15:05:11            RF OFF
```
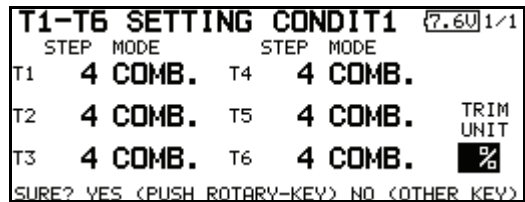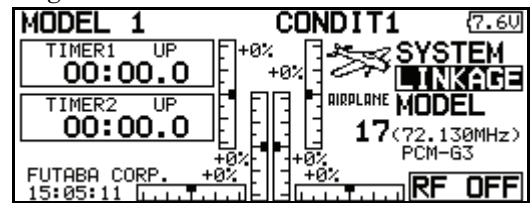
Function channel initialization

PCM1024 mode and PPM mode function channel setting was changed as shown below.

- If you want to see the function channel setting in other modulation modes, please see the manual.

■ Normal and V-tail

CH	1Aileron Airplane	1Aileron Glider	2Aileron Airplane	2Aileron Glider	2Aileron + 1Flap Airplane	2Aileron + 1Flap Glider
1	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron
2	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator
3	Throttle	Motor	Throttle	Motor	Throttle	Motor
4	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder
5	Gear	AUX7	Gear	AUX7	Gear	AUX6
6	Airbrake	Airbrake	Aileron2	Aileron2	Flap	Flap
7	AUX6	AUX6	AUX6	AUX6	Aileron2	Aileron2
8	AUX5	AUX5	AUX5	AUX5	AUX5	AUX5
VC1	AUX1	AUX1	Camber	Camber	Camber	Camber
VC2	AUX1	AUX1	AUX1	Butterfly	AUX1	Butterfly
VC3	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1
VC4	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1

CH	2Aileron + 2Flap Airplane	2Aileron + 2Flap EP Glider	2Aileron + 4Flap Glider	4Aileron + 2Flap Glider
1	Aileron	Aileron	Aileron	Aileron
2	Elevator	Elevator	Elevator	Elevator
3	Throttle	Motor	Rudder	Rudder
4	Rudder	Rudder	Aileron2	Aileron2
5	Gear	AUX5	Flap	Aileron3
6	Aileron2	Aileron2	Flap2	Aileron4
7	Flap	Flap	Flap3	Flap
8	Flap2	Flap2	Flap4	Flap2
VC1	Camber	Camber	Camber	Camber
VC2	AUX1	Butterfly	Butterfly	Butterfly
VC3	AUX1	AUX1	AUX1	AUX1
VC4	AUX1	AUX1	AUX1	AUX1

■ Flying wing

CH	2Aileron Airplane	2Aileron Glider	2Aileron + 1Flap Airplane	2Aileron + 1Flap Glider	2Aileron + 2Flap Airplane	2Aileron + 2Flap Glider	2Aileron + 4Flap Glider	4Aileron + 2Flap Glider
1	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron
2	Rudder2	Rudder2	Rudder2	Rudder2	Rudder2	Rudder2	Aileron2	Aileron2
3	Throttle	Motor	Throttle	Motor	Throttle	Motor	Rudder	Aileron3
4	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder2	Aileron4
5	Gear	AUX7	Gear	AUX6	Gear	AUX6	Flap	Rudder
6	Aileron2	Aileron2	Flap	Flap	Flap	Flap	Flap2	Rudder2
7	AUX6	AUX6	Aileron2	Aileron2	Aileron2	Aileron2	Flap3	Flap
8	AUX5	AUX5	AUX5	AUX5	Flap2	Flap2	Flap4	Flap2
VC1	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator
VC2	Camber	Camber	Camber	Camber	Camber	Camber	Camber	Camber
VC3	AUX1	AUX1	AUX1	Butterfly	AUX1	Butterfly	Butterfly	Butterfly
VC4	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1

■ Ailevator

CH	1Aileron Airplane	1Aileron Glider	2Aileron Airplane	2Aileron Glider	2Aileron + 1Flap Airplane	2Aileron + 1Flap Glider	2Aileron + 2Flap Airplane	2Aileron + 2Flap Glider
1	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron	Aileron
2	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator	Elevator
3	Throttle	Motor	Throttle	Motor	Throttle	Motor	Throttle	Motor
4	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder	Rudder
5	Gear	AUX7	Gear	AUX7	Gear	AUX6	Elevator2	Elevator2
6	Airbrake	Airbrake	Aileron2	Aileron2	Flap	Flap	Aileron2	Aileron2
7	Elevator2	Elevator2	Elevator2	Elevator2	Aileron2	Aileron2	Flap	Flap
8	AUX5	AUX5	AUX5	AUX5	Elevator2	Elevator2	Flap2	Flap2
VC1	AUX1	AUX1	Camber	Camber	Camber	Camber	Camber	Camber
VC2	AUX1	AUX1	AUX1	Butterfly	AUX1	Butterfly	AUX1	Butterfly
VC3	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1
VC4	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1	AUX1

■   Helicopter

CH	H-1,H-2,HE3,HR3,HN3,H-3	H4,H-4X
1	Aileron	Aileron
2	Elevator	Elevator
3	Throttle	Throttle
4	Rudder	Rudder
5	Gyro	Gyro
6	Pitch	Pitch
7	Governor	Governor
8	Needle	Elevator2
VC1	AUX1	AUX1
VC2	AUX1	AUX1
VC3	AUX1	AUX1
VC4	AUX1	AUX1

（Update Modification Contents in the past）

Program Mixing [PROG. MIXES]   [All model types]

An offset mode has been added to the program mixing function. "Offset mode" is a function which allows simultaneous offset control of up to 4 slave functions per circuit.

Setting Methods

Activate the function.

1. Select [PROG.MIXES] at the model menu and call the setup screen by pushing the EDIT button.

```
PROG. MIXES   CONDIT1  7.6V 1/3
      MIXING      MODE      GROUP
  1  INHIBIT   MIXING  GROUP
  2  INHIBIT   MIXING  GROUP
  3  INHIBIT   MIXING  GROUP
  4  INHIBIT   MIXING  GROUP
```

2. Use [MODE] setting to select the program mixing operation mode. [MIXING] is the normal mixing mode and [OFFSET] is the offset mode.

```
PROG. MIXES   CONDIT1  7.6V 1/3
      MIXING      MODE      GROUP
  1  INHIBIT   OFFSET  GROUP
  2  INHIBIT   MIXING  GROUP
  3  INHIBIT   MIXING  GROUP
  4  INHIBIT   MIXING  GROUP
```

3. Move the cursor to [INHIBIT] of the mixing No. set to the offset mode and push the EDIT button. The setup screen is displayed.

*Shows the currently set program mixing No.

Operation mode (normal/timer)

```
PROG. MIX 1   CONDIT1  7.6V 1/5
OFFSET 1/4    MODE  NORM  SPEED  MIX
FUNCTION AIL  FINE TUNING    IN OUT INH
OFFSET        CTRL  --    0  0  SW --
ON   +0.0%                  DELAY
OFF  +0.0%   RATE  +0%    START 0.0
                         STOP  0.0
```

Offset rate
Slave function
Slave No.
Fine tuning VR setting
Delay setting
Servo speed setting

4. Press the S1 button. Page 5/5 is displayed.

```
PROG. MIX 1   CONDIT1  7.6V 5/5
SETTING
STATUS  INH
SWITCH  --
```

Switch selection
Function ON/OFF

5. Move the cursor to the [STATUS] item and switch to the data input mode by pushing the EDIT button.
6. Turn the dial to the left and right until [ACT] blinks, and then push the EDIT button. To deactivate the function, switch to [INH].

ON/OFF switch selection

Move the cursor to the page 5/5 [SWITCH] item, call the switch setup screen by pushing the EDIT button, and then select the switch and ON direction. (For a detailed description of the selection method, see [Switch Selection Method] at the back of the instruction manual.)

Slave No. selection

Setting of the slave No. from 1 to 4 at pages 1/5 ~ 4/5 is displayed. When the S1 button is pushed, the displayed slave No. is switched.

Slave function setting

Move the cursor to the [FUNCTION] item and switch to the data input mode by pushing the EDIT button. Select the function by turning the dial and then push the EDIT button.

Offset rate setting

The function operation offset amount when the mixing switch is ON and OFF can be set independently.

1. Move the cursor to the [ON] or [OFF] item and switch to the data input mode by pushing the EDIT button.

2. Turn the dial to the left and right and set the offset rate when the switch is ON or OFF

Initial setting : 0%
Setting range: -300 ~ +300%

3. After setting, switch to the cursor move mode by pushing the EDIT button.

  *At adjustment, the offset rate is reset to the initial value by
    pushing the EDIT button for 1 second

Fine tuning trim setting

Operation control [CTRL], operation mode [MODE], and rate [RATE] adjustment is possible by [FINE TUNING] item. (For a description of the setting method, refer to [Fine tuning trim setting] at the back of the instruction manual.)

Operation mode setting

The operation mode when the switch was operated is selected. Normal mode [NORM] or timer mode [TIME] can be selected.

[Normal mode]

After the switch is set to ON, mixing is turned ON after the time set by start delay ([START]) has elapsed. Similarly, after the switch was set to OFF, mixing is turned OFF after the time set by stop delay ([STOP]) has elapsed.

[Timer mode]

After the switch was set to ON, mixing is turned ON after the time set by start delay ([START]) has elapsed. Mixing is automatically turned OFF after the time set by stop delay ([STOP]) has elapsed. Examples of use are jet plane and scale model retractable landing gear and cover linked mixing, etc.

Servo speed setting

The speed at function operation can be adjusted. (For a description of the setting method, refer to [Servo speed setting] at the back of the instruction manual.)

Delay setting

Mixing operation at mixing switch ON ([START]) and OFF ([STOP]) can be delayed by [DELAY] item. (When switch is set.)

1. Move the cursor to the [START] or [STOP] item and switch to the data input mode by pushing the EDIT button.

2. Turn the dial left and right and set the mixing operation delay time at switch ON or OFF.

Initial value : 0 sec
Setting range : 0 ~ 35 sec

3. After adjustment, switch to the cursor move mode by pushing the EDIT button.

  *At adjustment, the delay time can be reset to the initial value by
    pushing the EDIT button for 1 second.

Edit lock function

To prevent the data from being changed by erroneous touching of the EDIT dial during flight, a function which temporarily disables the EDIT dial has been added.

How to lock

1. The home screen is displayed.
2. Press the S1 button. "LOCK" is displayed and the EDIT dial is disabled.
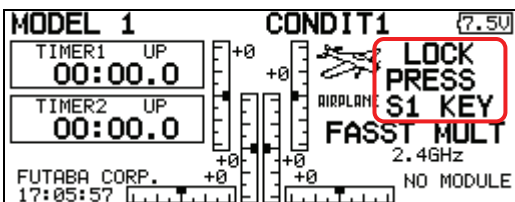
How to unlock

1. Press the S1 button for about 1 second in the EDIT dial locked state. The EDIT dial is enabled again