

# SYLPHIDE E12

## RADIO SETUP INFORMATION



Ultimate Computerize 2.4GHz DSM2 system

**DSX12**  
DIGITAL PROPORTIONAL RADIO CONTROL SYSTEM



**DSX11**

# ☆ Transmitter Setup For The JR DSX12

Prior to commencing this process, please read the instructions for the transmitter.

JR-CCPM plays a critical role in coordinating the simultaneous activation of multiple servos to control the swashplate. Activation of just a single servo would not lead to control of the swashplate - the three swashplate servos must be controlled in a coordinated fashion. The setup of these servos differs from that for other control functions which control just one servo (for example, the rudder).

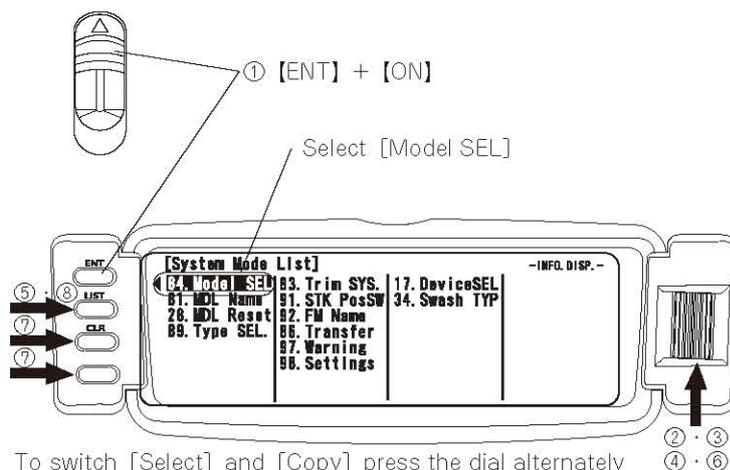
The initial settings given here must be confirmed on the bench, and then fine tuned after test flying the helicopter. Prior to commencing this process, confirm all the trim levers and trim knobs on the transmitter are in their neutral (zero) positions. Also shift all switches to position "0" (switches moved away from the operator).

## 1. Radio Initialization

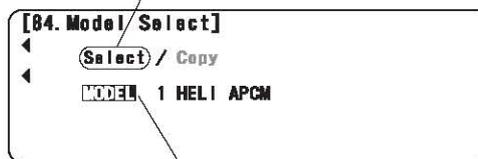
① Press (and hold) the **[ENT]** key located on the lower left of the Transmitter, then turn on the power switch.

([System Mode List], List screen displayed)

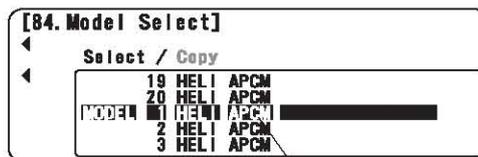
② Turn the dial on the right side of the Transmitter to select [84.Model SEL] and press.



③ Turn the dial to select [Model] and press.

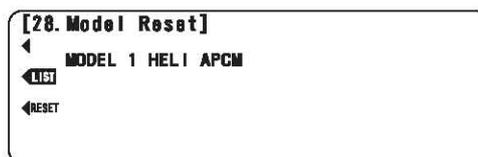


④ Turn the dial to select the model number you wish to reset and press the dial again to select it.

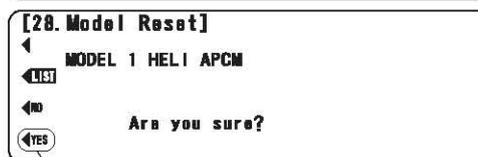


⑤ Use the **[LIST]** key to return to "System Mode List"

⑥ Turn the dial to select [28.MDL Reset] and press.



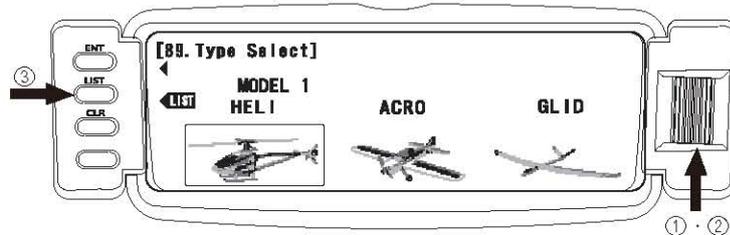
⑦ Press the **[CLR]** key and press "YES" in the YES/NO confirmation screen.



⑧ Press the **[LIST]** key to return to [System Mode List]

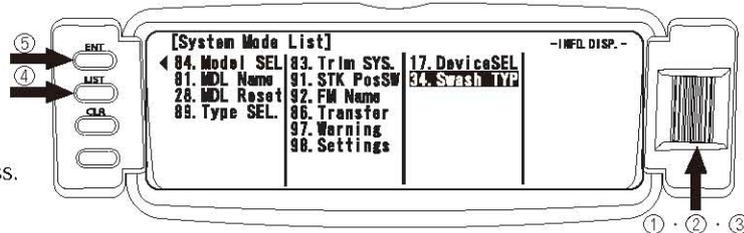
## 2. Selecting the Model Type

- Turn the dial to select [89.Type SEL] and press.
- Confirm this is the model you reset and then turn the dial to select [HELI] and press.
- Press the **[LIST]** key to return to [SYSTEM Mode List]

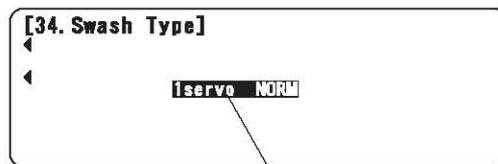


## 3. Selecting the Swash Type

- Turn the dial to select [34.Swash TYPE] and press.
- Turn the dial to select [1 servo NORM] and press.

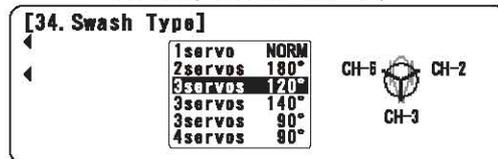


- Turn the dial to select [3servos 120°] and press.



select [1 servo NORM]

- Press the **[LIST]** key to return to [SYSTEM Mode List]



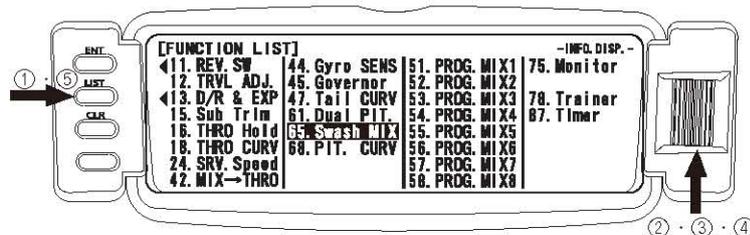
Select the [3servos 120°]

- Press the **[ENT]** key twice to return to the regular screen.

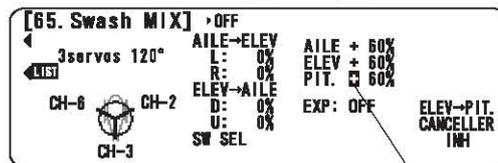


## 4. Setting the Swash Mix

- Press the **[LIST]** key on the regular screen. ("Function List" will be displayed.)
- Turn the dial to select [65.Swash MIX] and press.



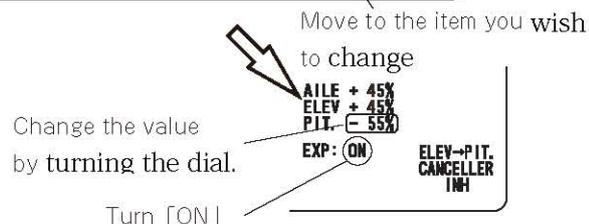
- Confirm the screen says [3 servos 120°] and use the dial to select the item you wish to change.



- Use the "+" and "-" key to input the following numbers for AILE, ELEV and PIT.

(for the SY-E12, change the direction of pitch movement by selecting the [+] beside [PIT.] and press to switch to [-])

- Turn the dial to select [EXP] and press the dial to turn expo [on].



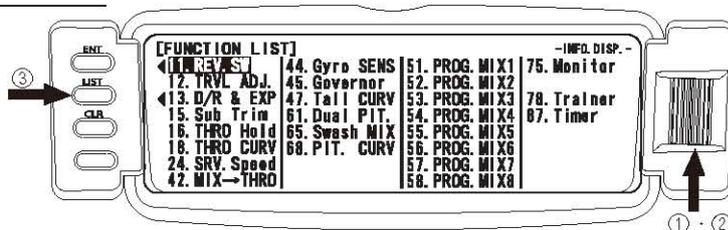
Press the dial to switch between [+ ] and [- ]

- After completing these settings press the **[LIST]** key to return to [Function List]

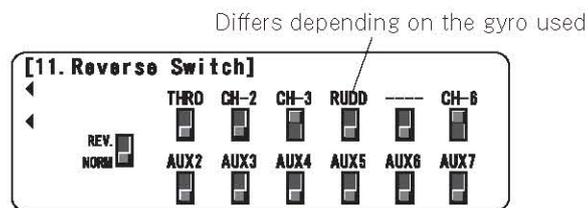
Aileron	Elevator	Pitch
+45	+45	-55

## 5. Setting the Individual Servo Directions (Reverse Switches)

- Turn the dial to select [11.REV. SW] and press.
- Press the dial to set NORM/REV for each channel. (Each time the dial is pressed, NORM or REV are alternately selected.)



- After the setting is completed for each channel, use the [LIST] key to return to the [Function List].

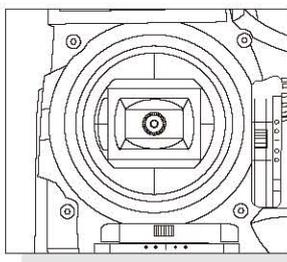
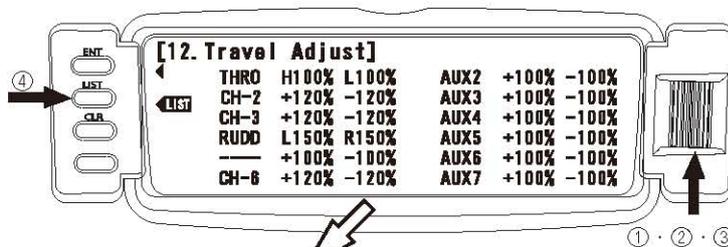


THRO	CH-2	CH-3	RUDD	---	CH-6
Norm	Rev	Rev	-	Norm	Rev

※ Note the Rudder direction will depend on the gyro and rudder servo used. Please check carefully.

## 6. Setting the Travel Adjust Values

- Turn the dial to select [12.TRVL ADJ.] and press.
- Turn the dial to select each item and press. (Select L/R or U/D position by moving the appropriate control in that direction)
- Turn the dial and enter the values shown in the table below and press.



Turn the dial to select each item  
 THRO H100% L100%  
 Item will be selected by pressing the dial  
 THRO H100% L100%

If you put all the sticks to neutral position, then input the Travel Adjust, you'll be able to change H(+)/L(-) at the same time.

- Press the [LIST] key twice to return to regular screen.

THRO	CH-2	CH-3	RUDD	---	CH-6
H 100%	+ 120%	+ 120%	L 150%	+ 100%	+ 120%
L 100%	- 120%	- 120%	R 150%	- 100%	- 120%

※ Use the appropriate control stick to switch between L/R or U/D.

[RUDD] settings may require different values depending on the gyro used.

Note that the [THRO] direction and travel adjust settings will depend on the ESC used.

# ☆ Transmitter Setup For The JR DSX11

JR-CCPM plays a critical role in coordinating the simultaneous activating of multiple servos to control the swashplate. Activation of just a single servo would not lead to control of the swashplate - the three swashplate servos must be controlled in a coordinated fashion. The setup of these servos differs from that for other control functions which control just one servo (for example, the rudder ).

The initial settings given here must be confirmed on the bench, and then fine tuned after test flying the helicopter. Prior to commencing this process, confirm all the trim levers and trim knobs on the transmitter are in their neutral (zero) positions. Also shift all switches to position "0" (switches moved away from the operator).

Please also be familiar with the instructions for the transmitter. The initial settings can be entered into the transmitter without turning power on to the receiver. Please note that fine adjustment will be needed after test flying the helicopter.

## 1. Initial Radio Setup

- Press (and hold) the **[ENT]** key located on the lower left of the Transmitter, then turn on the power switch.

([SYSTEM LIST], List screen displayed)

- Turn the dial on the right side of the Transmitter to select **[MODEL SELECT]** and press the dial.

\* If your radio is new or if you are selecting a model number which has no data in it, No.11 display will be shown automatically.

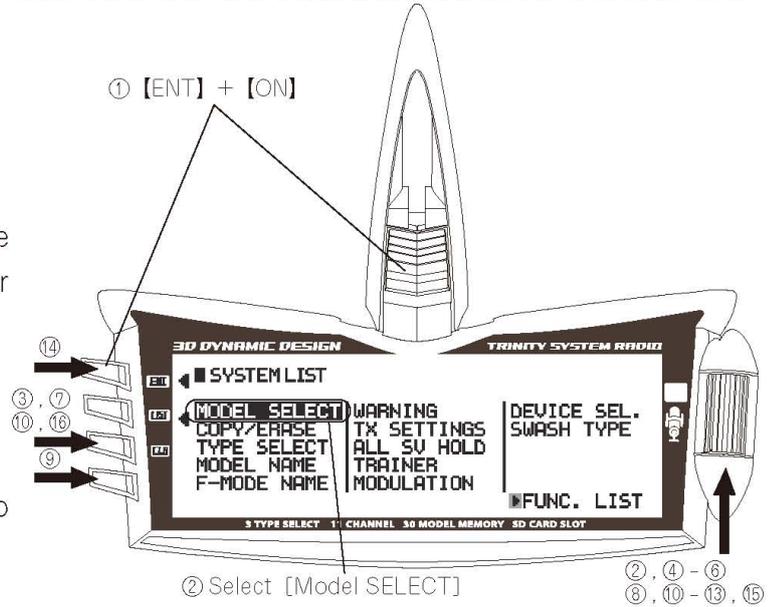
- Turn the dial to select **[YES]** and press the dial.

- Turn the dial to select the model to be reset, and then press.

- Turn the dial to select the **[LIST]** key to return to **[SYSTEM LIST]**.

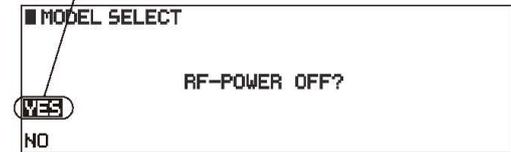
- Turn the dial to select **[COPY/ERASE]** and press the dial.

- Press the **[CLR]** Key.



② Select [Model SELECT]

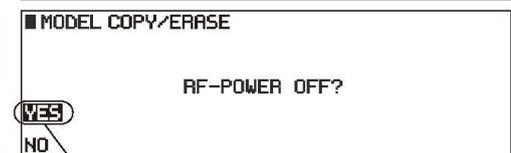
③ Select [YES]



④ Select the model to be reset.

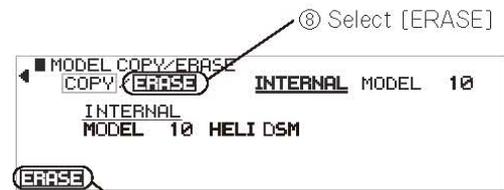


⑥ Select [COPY/ERASE]

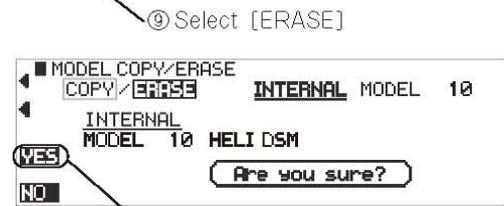


⑦ Select [YES]

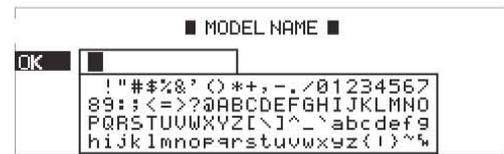
⑧ Confirm the model No. you selected is shown and select [ERASE] and press the dial.



⑨ Press the [FUNCTION] Key.



⑩ Select [HELI] and press the dial key to input the [MODEL NAME]. After you input the model name, press [LIST] key [OK], also press [ENT] key [OK].



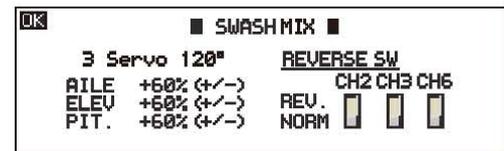
⑪ Using the dial select [Servo 120°] and press it.



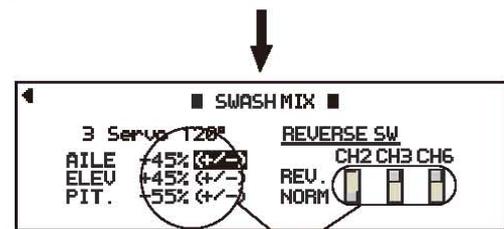
⑫ Input the numbers, +/- and REVERSE the direction of each servo as shown in the figure.

⑫ Select by using the dial and pressing it

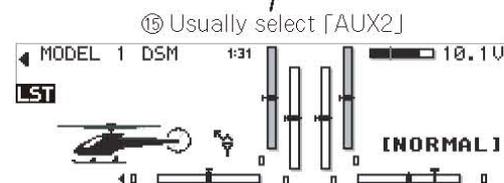
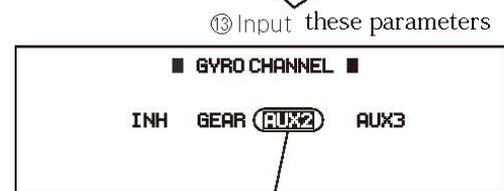
⑬ Press the [ENT] Key.



⑭ Turn the dial to select [AUX2] and press.

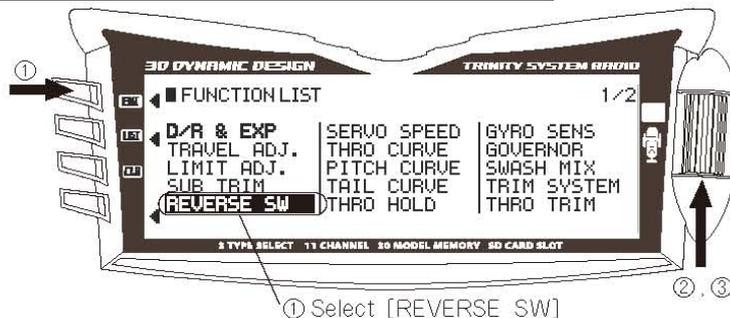


⑮ Press the [ENT] key to return to the regular screen.



## 2. Setting Rudder Servo Direction (REVERSE SWITCHES)

① Switch over to the [FUNCTION LIST] by pressing the [ENT] key, turn the dial and select [REVERSE SW] then press the dial again.



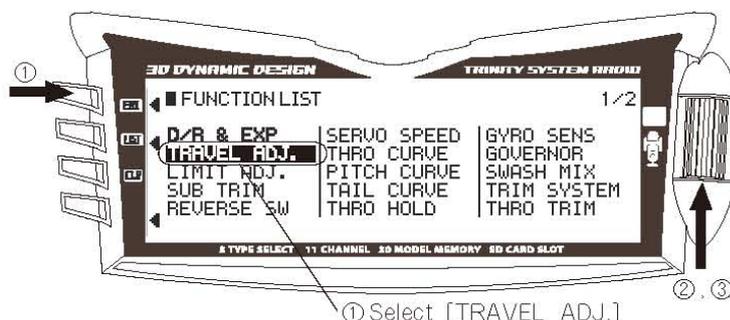
② Turn the dial to reverse [RUDD] as necessary. Return to [FUNCTION LIST] by pressing the [LST] key.



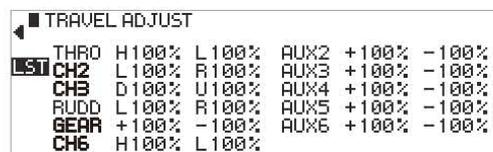
※NOTE the rudder direction will depend on the gyro and rudder servo used. Please check carefully.

## 3. Setting TRAVEL ADJ.Values

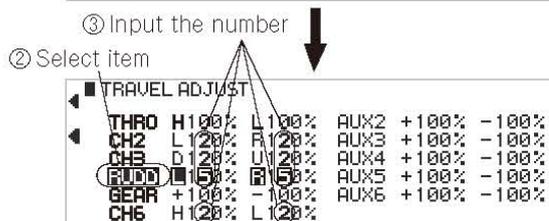
① Turn the dial to select [TRVL ADJ.] and press the dial.



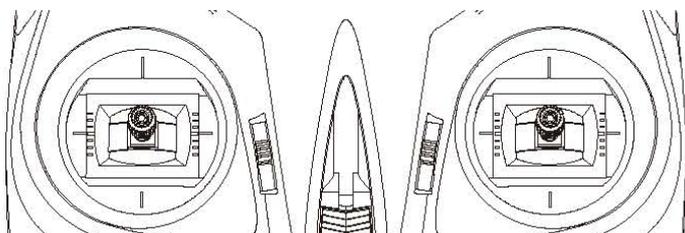
② Turn the dial to select each item and press the dial to change each in turn.



③ Turn the dial to shift to each item and input the number as shown in the figure.



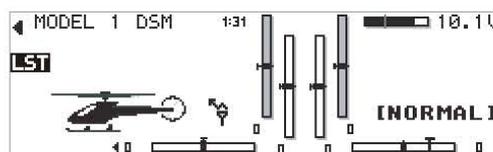
※ [Use the appropriate control stick to switch between H/L, U/D or L/R.



③ Press the [LIST] key to return to regular screen.

Note the [RUDD] may require different values depending on the gyro used.

Note that the [THRO] direction and travel adjust settings will depend on the ESC used.



## Setting for other kinds of Radio set.

※1 If you use a transmitter other than the JR DSX11 or the DSX12, please refer to the manufactures instruction manual.

※2 If using a Futaba transmitter, set the pitch value for Swash Mix about 10% lower than the value in the table.

※3 Please refer to your tail gyro instruction manual for advise on tail rotor setup and initial transmitter settings.

# ☆ Wiring Diagram for JR Radios

Confirm connections between the servos and the receiver as per the figure below.

The lead harnesses for the servos shown in the diagram are color coded for easy distinction.

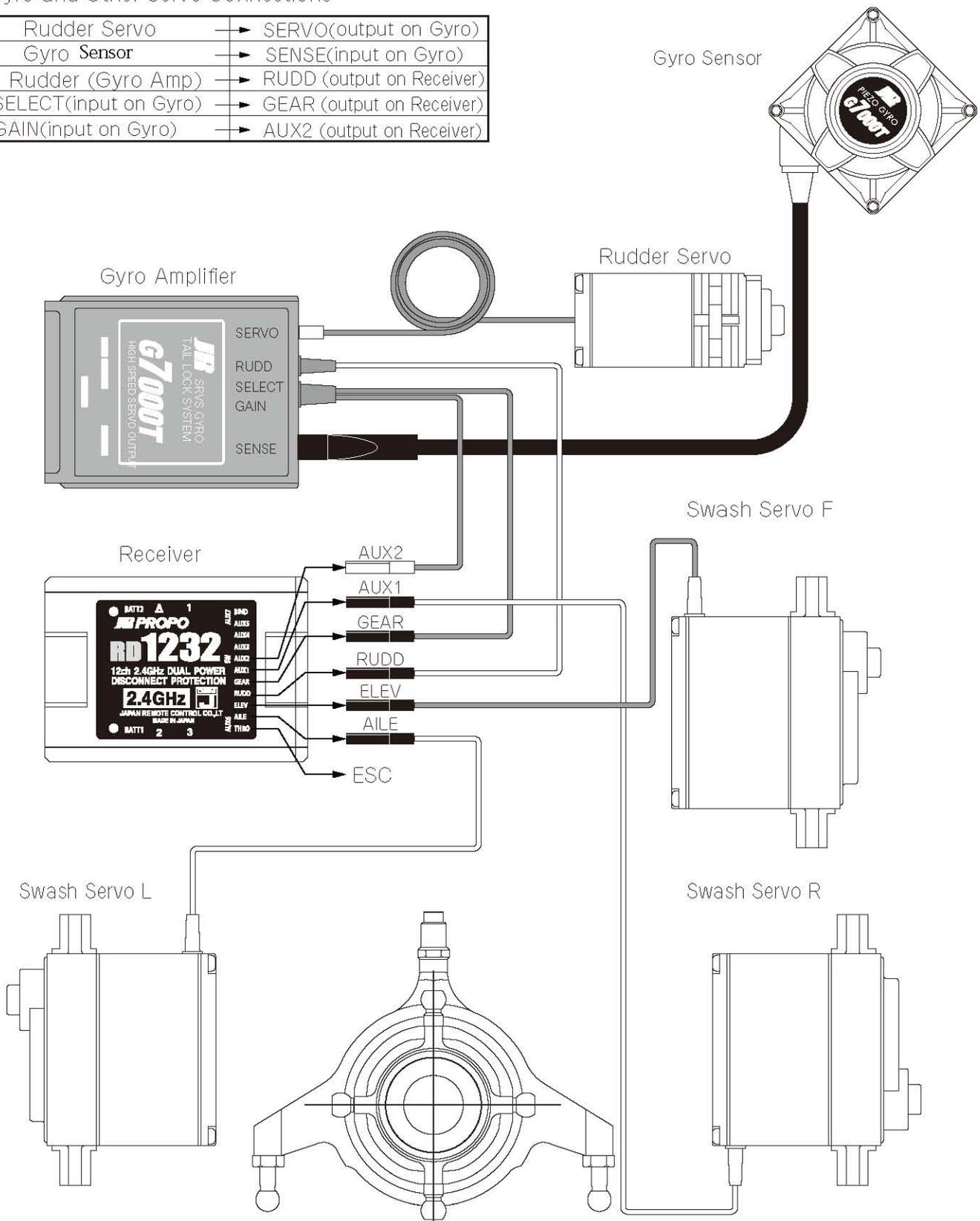
When using other makes of Radio set ,please refer to the instruction manual to confirm correct wiring.

## Servo Connections to the Receiver

Swash Servo F	→	ELEV
Swash Servo R	→	AUX1
Swash Servo L	→	AILE

## Gyro and Other Servo Connections

Rudder Servo	→	SERVO(output on Gyro)
Gyro Sensor	→	SENSE(input on Gyro)
Rudder (Gyro Amp)	→	RUDD (output on Receiver)
SELECT(input on Gyro)	→	GEAR (output on Receiver)
GAIN(input on Gyro)	→	AUX2 (output on Receiver)



# DATA SHEET



MODEL NO.  
MODEL NAME  
MODULATION

Servos and Gyro  
Swash Servos : DS8305  
Rudder Servo : MP80G  
Gyro : **G7000T**

	THRO	CH-2	CH-3	RUDD	GEAR	CH-6	AUX2	AUX3	AUX4	AUX5	AUX6	AUX7
REVERSE SW	REV (NORM)	REV (NORM)	(REV) NORM	REV (NORM)	REV NORM	(REV) NORM	REV NORM	REV NORM	REV NORM	REV NORM	REV NORM	REV NORM
SUB TRIM												
TRAVEL ADJUST	H % L %	H120% L120%	H120% L120%	H150% L150%	H100% L100%	H120% L120%	H100% L100%	H100% L100%	H100% L100%	H100% L100%	H100% L100%	H100% L100%
FAIL SAFE	SLOW											
	↑/←	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec
SERVO SPEED	↑/←	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec
	SW SELECT	ON · NORM · ST-1 · ST-2 · ST-3 · ST-4 · HOLD · GEAR · AX21 · AX22 · RUD1 · RUD2 · SPS0 · SPS1 · SPS3 · STK( )										

Dual-Rate · EXP	POS0	D/R	AILE	ELEV	RUDD	AUTO NORM
			50	50	70	SW Pos0
		EXP	LIN	LIN	60	Pos1
			LIN	LIN	60	Pos2
	POS1	D/R	95	100	70	ST-1
			95	100	70	SW Pos0
		EXP	20	45	70	Pos1
			20	45	70	Pos2
	POS2	D/R	95	80	60	ST-2
			95	80	60	SW Pos0
		EXP	15	55	80	Pos1
			15	55	80	Pos2

SWASH MIX	TYPE	1S · 2S180° · (3S120°) · 3S140° · 3S90° · 4S90°		
	AILE→ELEV	L: %	R: %	
	ELEV→AILE	R: %	U: %	
	SW SELECT	NORM · ST-1 · ST-2 · ST-3 · ST-4 · HOLD		
	GAIN	AILE	+45 %	
		ELEV	+45 %	
	PITCH	-55 %		
EXP	(ON) · OFF			
ELEV→PIT.CACELLER	INH · ( )			

Gyro SENS	AILE D/R	Channel	AUX2	GEAR
	ELEV D/R	TYPE	(NORMAL) · TLOCK	NORMAL · (TLOCK)
	RUDD D/R	Pos0/NORM	N · T 85 %	N · T 150 %
		Pos1/ST-1	N · T 50 %	N · T 150 %
	FMOD SW (AUTO)	Pos2/ST-2	N · T 45 %	N · T 150 %
		ST-3	N · T %	N · T %
	ST-4	N · T %	N · T %	
	Two GYRO	HOLD	N · T 50 %	N · T 150 %
	(DUAL GAIN)	Time-Lag	ON · OFF	ON · OFF

\*Please note that the throttle direction and travel adjust values will depend on the ESC used.

		EXP		L	1	2	3	4	5	6	H	
THRO Curve	NORM	(OFF) ON	IN OUT HOV.THRO	—	※The throttle curve will depend on ESC, motor and flying style required.							—
	ST-1	(OFF) ON	IN OUT HOV.THRO	—								—
	ST-2	(OFF) ON	IN OUT HOV.THRO	—	ON · OFF	ON · OFF	ON · OFF	ON · OFF	ON · OFF	ON · OFF	ON · OFF	—
PITCH Curve	NORM	(OFF) ON	IN OUT HOV.THRO	0 28	14 55	86 70						100 90
	ST-1	(OFF) ON	IN OUT HOV.THRO	0 10	50 55							100 88
	ST-2	(OFF) ON	IN OUT HOV.THRO	0 18								100 84
	HOLD	(OFF) ON	IN OUT HOV.THRO	0 22								100 100

# DATA SHEET

## DSX12

MODEL NO.  
MODEL NAME  
MODULATION

Servos and Gyro  
Swash Servos : DS8305  
Rudder Servo : MP80G  
Gyro : **G770T**

	THRO	CH-2	CH-3	RUDD	GEAR	CH-6	AUX2	AUX3	AUX4	AUX5	AUX6	AUX7
REVERSE SW	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)	REV (NORM)
SUB TRIM												
TRAVEL ADJUST	H % L %	H120% L120%	H120% L120%	H150% L150%	H100% L100%	H120% L120%	H100% L100%	H100% L100%	H100% L100%	H100% L100%	H100% L100%	H100% L100%
FAIL SAFE	SLOW											
	↑/-	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec
SERVO SPEED	↑/-	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec	NORM · sec
	SW SELECT	ON · NORM · ST-1 · ST-2 · ST-3 · ST-4 · HOLD · GEAR · AX21 · AX22 · RUD1 · RUD2 · SPS0 · SPS1 · SPS3 · STK( )										

Dual-Rate · EXP	POS0	D/R	AILE	ELEV	RUDD	AUTO
			50	50	60	NORM
		EXP	50	50	60	SW Pos0
			LIN	LIN	60	Pos1
	POS1	D/R	LIN	LIN	60	Pos2
			95	100	70	Pos3
		EXP	95	100	70	Pos4
			20	45	60	ST-1
	POS2	D/R	20	45	60	SW Pos0
			95	80	60	Pos1
		EXP	15	55	80	Pos2
			15	55	80	Pos3

SWASH MIX	TYPE	1S · 2S180° · <b>3S120°</b> · 3S140° · 3S90° · 4S90°			
	AILE→ELEV	L: %	R: %		
	ELEV→AILE	R: %	U: %		
	SW SELECT	NORM · ST-1 · ST-2 · ST-3 · ST-4 · HOLD			
	GAIN	AILE	+45 %		
		ELEV	+45 %		
	EXP	<input checked="" type="radio"/> · OFF			
ELEV→PIT.CACELLER	INH · ( )				

Gyro SENS	AILE D/R	Channel	AUX2	
	ELEV D/R	TYPE	NORMAL · T.LOCK	NORMAL · T.LOCK
	RUDD D/R	Pos0/NORM	N <input checked="" type="radio"/> 85 %	N · T %
	FMOD SW	Pos1/ST-1	N <input checked="" type="radio"/> 55 %	N · T %
	<b>(AUTO)</b>	Pos2/ST-2	N <input checked="" type="radio"/> 55 %	N · T %
		ST-3	N · T	% N · T %
		ST-4	N · T	% N · T %
	Two GYRO	HOLD	N · T 55 %	N · T %
	DUAL GAIN	Time-Lag	ON · OFF	ON · OFF

\*Please note that the throttle direction and travel adjust values will depend on the ESC used.

	EXP		L	1	2	3	4	5	6	H	
THRO Curve	NORM	<input checked="" type="radio"/> · ON	IN OUT HOV.THRO	—	※The throttle curve will depend on ESC, motor and flying style required.						—
	ST-1	<input checked="" type="radio"/> · ON	IN OUT HOV.THRO	—							—
	ST-2	<input checked="" type="radio"/> · ON	IN OUT HOV.THRO	—	ON · OFF	ON · OFF	ON · OFF	ON · OFF	ON · OFF	ON · OFF	—
PITCH Curve	NORM	<input checked="" type="radio"/> · ON	IN OUT HOV.THRO	0 28	14 55	86 70					100 90
	ST-1	<input checked="" type="radio"/> · ON	IN OUT HOV.THRO	0 10	50 55						100 88
	ST-2	<input checked="" type="radio"/> · ON	IN OUT HOV.THRO	0 18							100 84
	HOLD	<input checked="" type="radio"/> · ON	IN OUT HOV.THRO	0 22							100 100

# DATA SHEET



MODEL NO.  
MODEL NAME  
MODULATION

Servos and Gyro  
Swash Servos : DS8305  
Rudder Servo : MP80G  
Gyro : **G7000T**

	THRO	AILE	ELEV	RUDD	GEAR	PIT.	AUX2	AUX3	AUX4	AUX5	AUX6
REVERSE SW	REV <del>(NORM)</del>	REV <del>(NORM)</del>	<del>(REV)</del> NORM	REV <del>(NORM)</del>	REV NORM	<del>(REV)</del> NORM	REV NORM	REV NORM	REV NORM	REV NORM	REV NORM
SUB TRIM	0										
TRAVEL ADJUST	H % L %	H120% L120%	H120% L120%	H150% L150%	H100% L100%	H120% L120%	H100% L100%	H100% L100%	H100% L100%	H100% L100%	H100% L100%
FAIL SAFE	SLOW										

\*Please note that the throttle direction and travel adjust values will depend on the ESC used.

	THRO	AILE	ELEV	RUDD	HOV.PITCH	HOV.THRO
TRIM STEP	2	2	2	1	4	4

Dual-Rate	EXP	POS0	AILE	ELEV	RUDD
			D/R	50	50
EXP	POS0	D/R	50	50	70
		EXP	LIN	LIN	LIN
POS1	D/R	D/R	95	100	70
		EXP	20	45	70
POS2	D/R	D/R	95	80	60
		EXP	15	55	80
AUTO	HOLD	NORM	0	0	0
		ST-1	1	1	1
		ST-2	2	2	2
		HOLD	1	1	1

SWASH MIX	TYPE	1S · 2S180° · <del>(3S120°)</del> · 3S140° · 3S90° · 4S90°			
	AILE→ELEV	L: %	R: %		
	ELEV→AILE	R: %	U: %		
	SW SELECT	NORM · ST-1 · ST-2 · ST-3 · ST-4 · HOLD			
	GAIN	AILE	+45 %		
		ELEV	+45 %		
PITCH		-55 %			
EXP	INH · <del>(ACT)</del>				
ELEV→PIT.CACELLER	INH · ( )				

GYRO SENS					
TWO GYRO	Channel	AUX2		GEAR	
<del>(DUAL GAIN)</del>	TYPE	<del>(NORMAL) · T.LOCK</del>		<del>(NORMAL) · (T.LOCK)</del>	
AILE D/R	NORM	N · T	85 %	N · T	150 %
ELEV D/R	ST-1(Pos1)	N · T	50 %	N · T	150 %
RUDD D/R	ST-2(Pos2)	N · T	45 %	N · T	150 %
FMOD SW	HOLD	N · T	50 %	N · T	150 %
<del>(AUTO)</del>	DELAY	s			

	EXP		L	1	2	3	H
THRO Curve	NORM	<del>(OFF)</del> ON	IN OUT				
	ST-1	<del>(OFF)</del> ON	IN OUT	*The throttle curve will depend on ESC, motor and flying style required.			
	ST-2	<del>(OFF)</del> ON	IN OUT				
PITCH Curve	NORM	OFF · ON	IN OUT	0 28	15 55	85 70	100 100
	ST-1	OFF · ON	IN OUT	0 10	50 55		100 88
	ST-2	OFF · ON	IN OUT	0 18	50 60		100 84
	HOLD	OFF · ON	IN OUT	0 22			100 100

# DATA SHEET



MODEL NO.  
MODEL NAME  
MODULATION

Servos and Gyro  
Swash Servos : DS8305  
Rudder Servo : MP80G  
Gyro : **G770T**

	THRO	AILE	ELEV	RUDD	GEAR	PIT.	AUX2	AUX3	AUX4	AUX5	AUX6
REVERSE SW	REV	REV	(REV)	REV	REV	(REV)	REV	REV	REV	REV	REV
	(NORM)	(NORM)	NORM	(NORM)	NORM						
SUB TRIM	0										
TRAVEL ADJUST	H % L %	H120% L120%	H120% L120%	H150% L150%	H100% L100%	H120% L120%	H100% L100%	H100% L100%	H100% L100%	H100% L100%	H100% L100%
FAIL SAFE	SLOW										

\*Please note that the throttle direction and travel adjust values will depend on the ESC used.

	THRO	AILE	ELEV	RUDD	HOV.PITCH	HOV.THRO
TRIM STEP	2	2	2	1	4	4

Dual-Rate EXP	POS0	D/R	AILE	ELEV	RUDD	
			50	50	70	
		EXP	50	50	70	
			LIN	LIN	LIN	
	POS1	D/R	LIN	LIN	LIN	
			95	100	70	
		EXP	95	100	70	
			20	45	70	
	POS2	D/R	20	45	70	
			95	80	60	
		EXP	95	80	60	
			15	55	80	
	AUTO	NORM	15	55	80	
			0	0	0	
			ST-1	1	1	1
			ST-2	2	2	2
	HOLD	1	1	1		

SWASH MIX	TYPE	1S · 2S180° · (3S120°) · 3S140° · 3S90° · 4S90°			
	AILE→ELEV	L: %	R: %		
	ELEV→AILE	R: %	U: %		
	SW SELECT	NORM · ST-1 · ST-2 · ST-3 · ST-4 · HOLD			
	GAIN	AILE	+45 %		
		ELEV	+45 %		
PITCH		-55 %			
EXP	INH · (ACT)				
ELEV→PIT.CACELLER	INH · ( )				

GYRO SENS				
TWO GYRO	Channel	AUX2		
DUAL GAIN	TYPE	NORMAL · T.LOCK	NORMAL · (T.LOCK)	
AILE D/R	NORM	N · ⊕	85 %	N · ⊕ %
ELEV D/R	ST-1(Pos1)	N · ⊕	55 %	N · ⊕ %
RUDD D/R	ST-2(Pos2)	N · ⊕	55 %	N · ⊕ %
FMOD SW	HOLD	N · ⊕	55 %	N · ⊕ %
(AUTO)	DELAY	s		

		EXP		L	1	2	3	H
THRO Curve	NORM	(OFF) ON	IN OUT					
	ST-1	(OFF) ON	IN OUT	※The throttle curve will depend on ESC, motor and flying style required.				
	ST-2	(OFF) ON	IN OUT					
PITCH Curve	NORM	OFF · ON	IN OUT	0 28	15 55	85 70		100 100
	ST-1	OFF · ON	IN OUT	0 10	50 55			100 88
	ST-2	OFF · ON	IN OUT	0 18	50 60			100 84
	HOLD	OFF · ON	IN OUT	0 22				100 100