

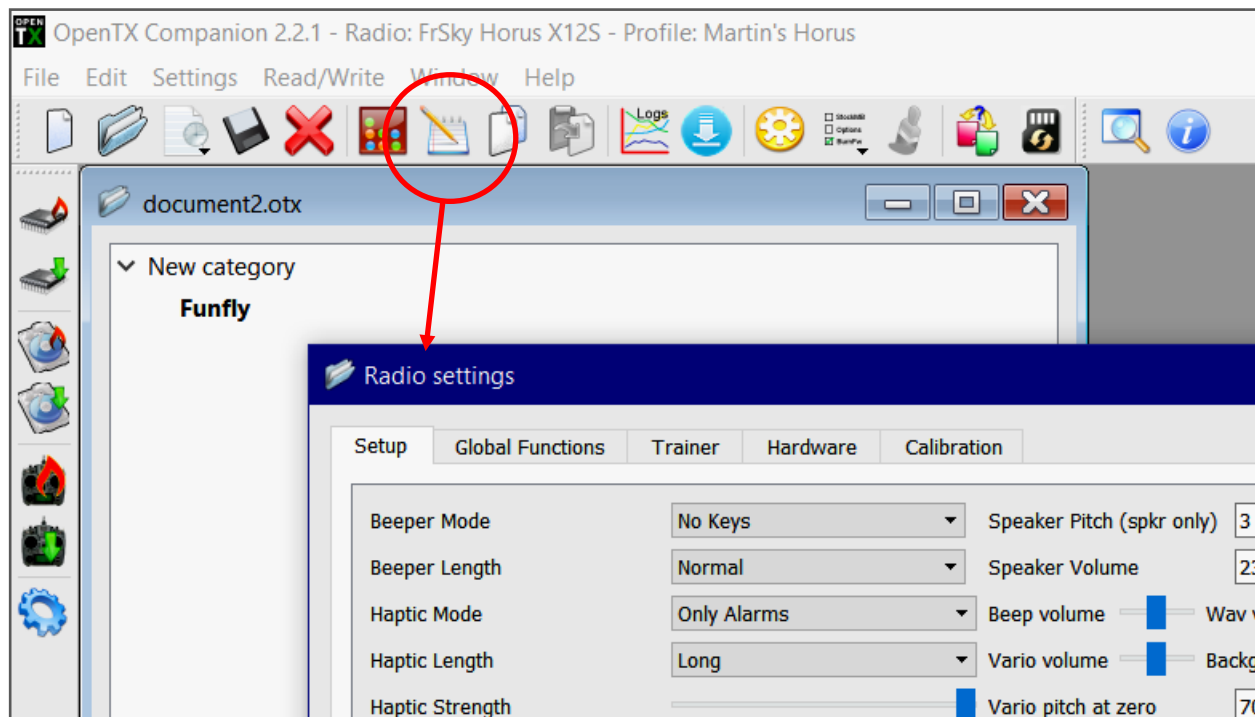
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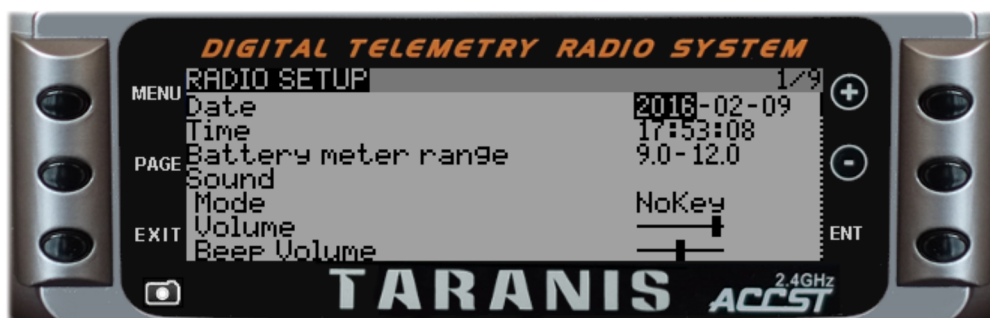
It is the sole responsibility of the user to ensure that the setting up of their transmitter functions as expected on the model.

The Radio Setup Menu

The **Radio Setup** menu can be accessed on the transmitter or from the **Companion** once a model file has been opened. Click on the **Radio Settings** icon shown below.



On the Taranis transmitters, it takes a long press of the **MENU** button to get the **RADIO SETUP**. You can scroll through the screens using short presses of **PAGE** to go forward and long presses to go backwards. **EXIT** will leave the **RADIO SETUP**.



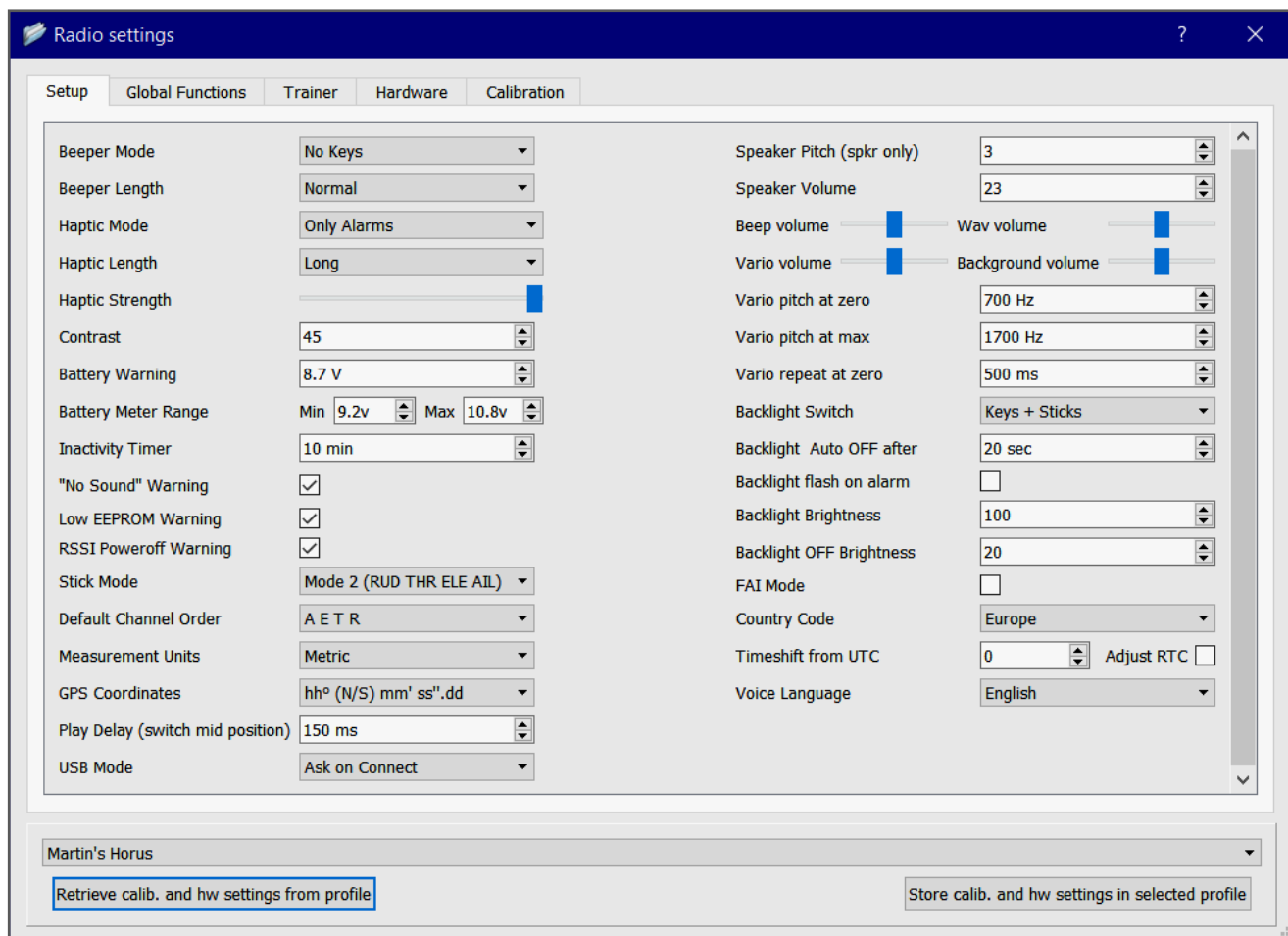
On the Horus, press the **SYS** button to access the radio menu.

The transmitter has to be used to set or alter the date and time, and to calibrate the radio. Screen 2 on the transmitter is for the SD Card, this is also not available on the **Companion**.

Radio Settings: The Setup Screen

On the radio, the setup screen is called **Radio Setup**. On the **OpenTX Companion** it is called simply **Radio Settings**. Apart from the functions already mentioned, the functions on both are the same.

It should be noted that the order of items in this menu is slightly different on the **Companion** to the transmitter.



The drop-down box at the bottom of the screen allows different profiles to be selected, and the hardware settings can be saved to, and retrieved from the profile. Remember the hardware settings contain the calibration data, and if swapping from one radio to another and copying all the models across, the hardware profile can also be accidentally copied.

Radio Settings: The Setup Screen

Function	Options	Notes
Beeper Mode	Quiet Alarms Only No Keys All	No beeps at all. Only alarms (battery, radio off) Beeps but not on normal editing keys All beeps enabled
Beeper Length	X-Short Short Normal Long X-Long	
Haptic Mode	Quiet Alarms Only No Keys All	No vibration Only alarms (battery, radio off) Vibration but not on normal editing keys All vibrations enabled
Haptic length	X-Short Short Normal Long X-Long	The haptic is the radio vibration alert.
Haptic Strength		Alters "feel" of haptic.
Contrast	0 - 45	Alters the contrast of the transmitter screen.
Battery Warning		Check the individual settings for each radio in the appropriate radio section.
Battery meter range		Used to set the low and high ends of the range of the graphical radio (transmitter) battery meter on the main screens. This setting only affects the battery meter display. Set the first number to the voltage where you consider your transmitter battery "empty" the second number is the maximum voltage of your transmitter battery when it is "full".

Radio Settings: The Setup Screen

Function	Options	Notes
Inactivity Timer		Gives a warning if the transmitter has been idle for the defined period of time. Set time to 0 to disable. Does not operate when in Bootloader mode.
No Sound Warning		Tick to enable.
Low EEPROM Warning		Tick to enable a warning when the EEPROM memory is running low.
RSSI Poweroff warning		When enabled, the radio will give a warning if it is still receiving an RSSI reading, which means the model receiver is still powered up.
Stick Mode	Modes 1-4	
Default Channel Order		On most transmitters this is predefined. OpenTX allows the user to select their own order for the sticks. TAER is the default for Spektrum/JR AETR is the default for Futaba/Hitec, AETR is the channel order for the FrSky X6R and X8R stabilised receivers. Other FrSky receivers have no pre-defined order.
Measurement Units	Metric or imperial	The telemetry screen now allows users to select the units for each aspect of each sensor.
GPS Coordinates		DMS displays the coordinates in degrees, minutes, and seconds. NMEA displays the coordinates in degrees and decimal minutes
Play Delay	0 sec to 1 sec in ms	Delays playing wav files associated with the mid position of 3 position switches when switching from one position to another, unless the switch remains in the mid position for longer than the time specified in milliseconds.
USB Mode	Ask on Connect Joystick (HID) USB Mass storage USB serial (CDC)	When the radio is connected to a PC via the USB lead, it will connect in one of the modes given unless this is set to Ask on Connect when a dialogue box will come up when plugged in.

Radio Settings: The Setup Screen

Function	Options	Notes
Speaker Pitch	1 to 20	The higher the pitch the higher the voice will sound.
Speaker Volume	0 to 23	0 is off. This controls the overall volume of the transmitter. It can be overridden by the volume option in Special Functions or a global function.
Beep Volume		Sets the volume of the beep.
Wav Volume		Sets the volume of speech commands stored as WAV files.
Vario Volume		Sets the volume of the variometer.
Background Volume		Sets the volume of the background music.
Vario pitch at zero	300-1100Hz	Adjust to suit own preferences.
Vario pitch at max.	1300 - 2900Hz	Adjust to suit own preferences.
Vario repeat at zero.	200ms to 1 sec	The delay between beeps.
Vario repeat at zero	200ms to 1sec	
Backlight Mode	Off Keys Sticks Keys + Sticks On	The backlight never turns on The backlight turns on any time you press one of the menu buttons The backlight turns on any time you move one of the sticks, or switches, but not the sliders or pots. The backlight turns on any time you press one of the menu buttons or move a stick or switch. The backlight turns on and stays on. The backlight will drain the battery slightly faster.
Backlight Auto off After	5 - 100 sec	How long the backlight stays on.
Backlight On Brightness	5 to 100	
Backlight Off Brightness	5 to 100	
Backlight flash on		Just called Alarm on the transmitter.

Radio Settings: The Setup Screen

Function	Options	Notes
FIA Mode		Disables all telemetry except RSSI and battery voltage (RxBt) to comply with the FAI international rules for competition.
Country Code	America Japan Europe	Sets the radio to be compliant with the regulations in your region.
Timeshift from UTC		UTC = Universal Time Coordinated. This is the highly accurate time stamp sent out by GPS satellites. The time shift is essentially the time zone. For UK this is 0 in winter and 1 in summer.
Adjust RTC		RTC = Real time clock. Ticking this box will update the transmitter clock with the GPS time. (Needs GPS telemetry to be installed in a model.)
Voice language		More languages are gradually being offered.

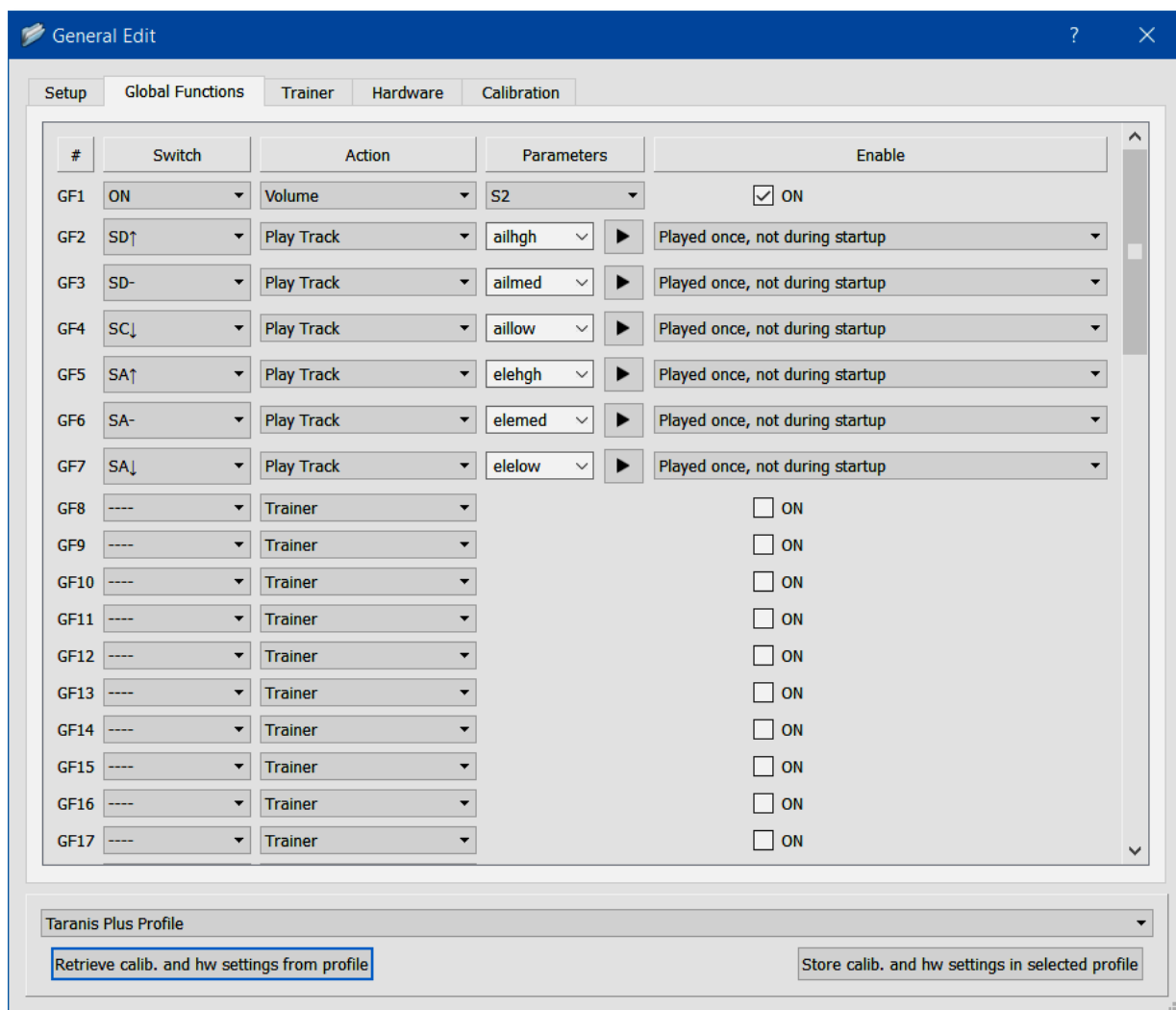
Radio Settings: Global Functions

There are 64 global functions available. The idea of these is to save having to copy the same function into every model. There are some limitations on the availability of certain functions to prevent overriding any model specific functions. These global functions are particularly useful if one starts to standardise what particular switches and settings are required for personal use. These control function preferences can be given global names in the **Hardware** settings of **General Edit**. Examples of use:

- ✪ To have a volume control on **S2** available for all models. (**GF1** above)
- ✪ To have voice alerts for standardised switches, e.g. **SD** for aileron triple rates and **SA** for elevator triple rates.

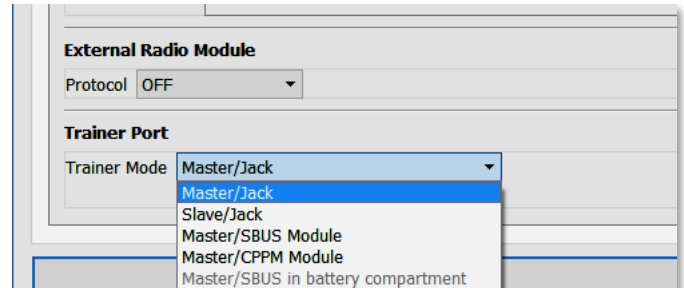
By default, **OpenTX** will play all the programmed voice alerts and messages when switched on. There are times when this is useful, and others when it is not. A particularly useful feature is the command line **Played once, not during startup** which ensures the message is only heard once when the condition is met. If switching across from high rates directly to low rates is met with the medium rates message, then increase the play delay on the **Radio Settings** Window.

More information can be found in the section for **Special Functions** in **Section 5, The Model Menu**.

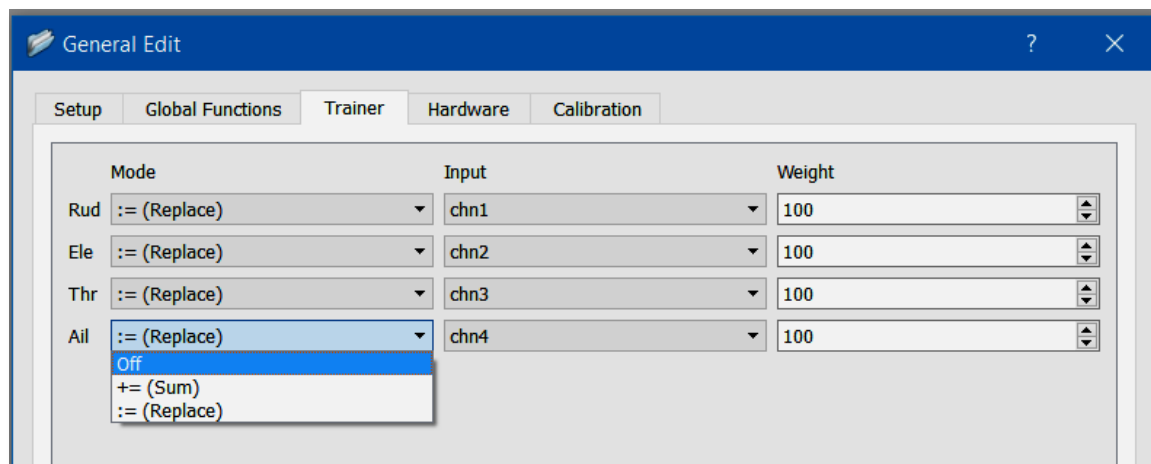


Radio Settings: Trainer

More information on setting up a buddy box system using **OpenTX** is in the **How To ..Part 1** section of this guide. Basically, one transmitter will be designated the **Master**, and one the **Slave**. It will be the **Master** transmitter which will transmit the signal to the receiver, and indeed, the transmitting signal should be switched off for the slave. At the bottom of the **Model Edit Setup Screen**, there is a trainer port option. Here the transmitter can be set to either **Master** or **Slave**. If using a 3.5mm jack lead then set as shown opposite. If Bluetooth trainer is enabled in the **Radio Settings Hardware** section, this option will be available too. Note that it is not possible to select the Bluetooth trainer function from the **Companion**. This has to be done on the transmitter. See **How To .. Part 2.** for details of how to do this.



The **Trainer Screen** of **General Edit** is for the basic setting up of the **Master** transmitter.



The **Trainer Screen** offers three basic options for setting up:

Mode

This gives the options of **Off**, **Sum**, or **Replace** for each of the four joystick inputs.

- **Off** means that function will not be used from the slave transmitter.
- **Sum** (**+=** on the radio screen) adds together the inputs of both master and slave units.
- **Replace** (**:=** on the radio screen) uses the slave transmitter values instead of the master transmitter's values.

Clearly the normal modes will be either **Off** or **Replace**, though to temporarily disable a control the **ON** option in the **Special Functions** is probably a more elegant way of doing this

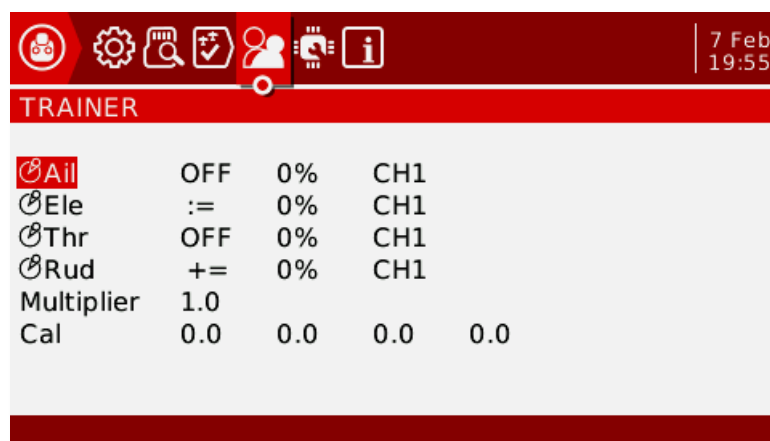
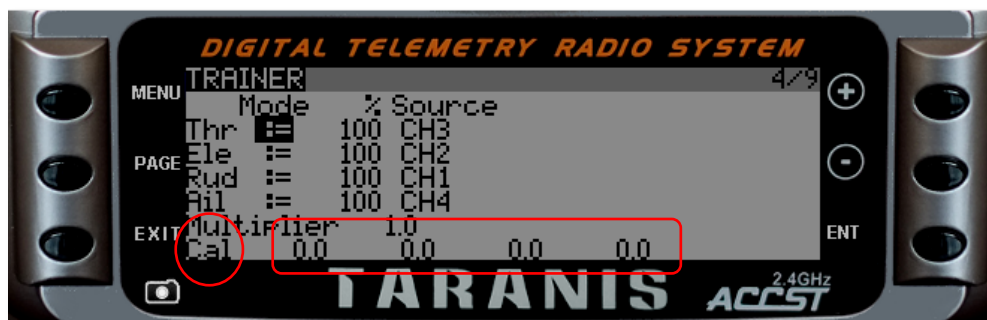
Input

Input allows selection of which of the **Slave** units joysticks maps onto the **Master** unit. This means, say, that a trainer who uses mode 1 on the **Master** transmitter can easily train a student using mode 2. This option is best done on the **Master** transmitter itself with the **Slave** already connected unless one knows the **Slave** joystick order.

Weight

If required the weighting can be reduced. This will reduce the control throws for the student.

It should be noted that any rates or expo set on the **Slave** transmitter will still operate.



Using the **Master** transmitter on the trainer screen above, by moving down to the **Cal** feature, this will centre the **Slave's** joysticks. The throttle must be as near as possible in mid point.

Check the throws of the **Slave** joysticks, these will show as the four number highlighted in the red box. If the throws go higher or lower than 100, then the **Multiplier** will adjust all four throws.

Finally a switch, or switches to enable the **Slave** transmitter will need to be set up in the **Special Functions Screen**.

Always check the functions of the buddy box system on the ground with the model secured before every flying session.

Radio Settings: Hardware

This screen allows the controls to be given more appropriate names where they will be used globally. E.g. if switch **A** is designated as aileron rates for all your models, it could be labelled here. Sadly the name is limited to just 3 characters, so its use is somewhat limited. This screen also caters for those who want to physically alter the switches or pots fitted to the transmitter from those normally supplied with their transmitter. The battery offset is used if the radio's battery voltage differs from the actual battery voltage when switched on.

The screenshot shows the 'General Edit' window with the 'Hardware' tab selected. The window contains the following settings:

Control	Value	Option
Rud		
Ele		
Thr		
Ail		
S1		Pot with detent
S2		Pot with detent
S3		None
LS		Slider with detent
RS		Slider with detent
SA		3 Positions
SB		3 Positions
SC		3 Positions
SD		3 Positions
SE		3 Positions
SF		2 Positions
SG		3 Positions
SH		2 Positions Toggle
Serial Port	OFF	
Battery Offset	0.7v	
PPM 1	0	
PPM 2	0	
PPM 3	0	
PPM 4	0	
PPM Multiplier	1.0	

At the bottom, the 'Taranis Plus Profile' is selected. The 'Retrieve calib. and hw settings from profile' button is highlighted with a blue border. The 'Store calib. and hw settings in selected profile' button is also visible.

Radio Settings: Calibration

This screen is not available on the transmitter and shows the calibration settings if they have been stored from the transmitter. This screenshot shows the calibration readings for a Horus X12S. Other transmitters will have differing numbers of controls.

	Negative span	Mid value	Positive span
Rud	786	996	840
Ele	773	993	833
Thr	797	1011	840
Ail	819	1038	783
S1	1007	1024	1008
6P	9244	5125	9999
S2	1012	1030	1002
L1	1037	1055	977
L2	1169	1189	845
LS	718	1040	701
RS	747	1021	727
JSx	925	1029	974
JSy	1009	1026	861

Martin's Horus

Retrieve calib. and hw settings from profile

Store calib. and hw settings in selected profile