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RDS8000 FHSS

QUICK START GUIDE

FOR AIRCRAFT

INTRODUCTION

The RDS8000 2.4 GHz Full-Range FHSS spread spectrum technology radio is provided for the intermediate sport and competition flyer. Its unique and intuitive Channel Priority Menu (CPM) system sets a standard by which other R/C systems are judged. The RDS8000 program contains both aircraft fixed wing and helicopter menus. This Quick Start Guide only addresses the aircraft program.

We hope that you find this Quick Start Guide helpful in becoming aquainted with your new RDS8000 2.4GHz FHSS radio control system.

TRANSMITTER AND RECEIVER BINDING

Prior to programming your RDS8000 transmitter, you should Bind your receiver to your transmitter so your receiver will only receive commands from your transmitter.

To bind your receiver to your transmitter, move your throttle stick to the low position and turn on your transmitter power switch. The Blue **BIND LED** on the left side of the panel will illuminate. Connect your onboard battery with a switch harness to connect the power to your receiver. While holding down the little **BIND** key on the receiver, turn on the receiver power switch. The **BIND LED** will flash slowly. When it flashes slowly let go of the receiver **BIND** key. While the **BIND LED** on the receiver is flashing slowly, momentarily press the **BIND** key on the transmitter and release it. The **BIND LED** on the receiver will start to flash rapidly and then will light solidly indicating that the binding was successful. Note that unless the **BIND** key on the transmitter is pressed within 10 seconds while the **BIND LED** on the receiver is flashing, the **BIND LED** on the receiver will automatically time out and stop flashing. If this occurs, repeat the above steps.

Once you have performed the binding process you are ready to program your transmitter.

MENUS OVERVIEW

When you initially turn on the transmitter switch you will note that the LCD screen will indicate you are in the **Basic Menu**, which limits the number and type of functions you can select as shown on **page 38** of your RDS8000 manual. When programming your transmitter for your model it is helpful to have this page open to the memos to make it easier for you to see where you want to go in the program. When starting out, some flyers will only need the functions that are in the **Basic Menu** Structure. However, if you desire the additional features that are available in the **Advanced Menu** Structure you can turn **Basic** Off, which will be discussed later.

IMPORTANT AERO switch functions are color coded in RED. HELI switch function are color coded in Blue. White is used for both AERO and HELI.

To start out in **Basic**, turn the transmitter power switch **ON** and press the **END** key. The initial screen will show **AR-1**, which indicates the aircraft type as well as showing the Ni-Cd battery voltage. Press the **CH +** key and the screen will indicate **STW** (Stop Watch).

PRO TIP When the screen shows STW you can move horizontally in the menu and address any of the channels.

The **FUNCTION** arrow keys permit you to move vertically in a channel. Your Radio System Operating Manual addresses how to program the common functions when in the **Basic** Menu such as Servo Reverse (**REV**), Dual Rate (**D/R**), Centering (**CNT**) and End Point Adjust (**EPA**). After programming your first model, and you want to select a second model, use the **CH +** key to scroll across the **CH** (channel) indicator on the screen to "**etc**". Press the **Function** Down key once to access **MSL** (model select) screen. Next press the **INC +/YES** key until the screen reads **AR3**. (Note that half of the models setups are Aero and half are Heli). Press the **END** key and the screen will show that you have selected model number three which is an Aero setup. All setups can be changed to different model Type (**TYP**) as shown in your manual on **page 25**. Since you are an Aero flyer, change all of your models to **AERO**.

IMPORTANT If you inadvertently turn on the transmitter in the Heli mode and receive a message on the Liquid Crystal Display (LCD) that says ID-UP!, position the Landing Gear and the Flap Switch, located on the top of the transmitter, towards you with the Throttle Stick at low throttle. The screen will then indicate OK! Press the END key to return to the menu, and change the Heli model to AERO.

If you are in Basic and you want to change to the **Advanced** Menu Structure, use the **CH +** key to move across the **CH** screen and select "**etc**". Press the **Function** Down key to select **Basic**. Now press the **DEC-/NO** key to turn **BASIC OFF**. Press the **Function** Down key again to select **OPT** (options). Press the **INC +/YES** key to display the various options for the **Advanced** Menu Structure that you can either turn ON or OFF as desired. You can scroll through all of the **Options** using the **Function** Down key. Many flyers prefer to leave all of the **Options** active, e.g., ON. Press the **END** key twice to exit the **Options** menu.

PROGRAMMING SAMPLE

As an example, assume we want to program our RDS8000 for use with a 4-channel type model with Elevator, Aileron, Rudder and Throttle controls. Check to see that all of the switches on the front panel are in the OFF, (e.g., down position). Make sure your control surfaces are as close to neutral as possible using your adjustable quick links. You can then fine-tune them using the Centering (**CNT**) control.

IMPORTANT Do not use excessive values of Centering to correct a large error in control position.

Start with the Elevator channel with the screen indicating **STW**. Use the Down **Function** key to select Servo Reverse (**REV**). The **INC+/YES** or the **DEC-/NO** key can be used to change the direction of throw of the servo. We are not concerned with what the screen indicates, only if we command UP Elevator, the Elevator moves UP.

Next, press the Down **Function** key to select Dual Rate (**D/R**). When the Elevator **D/R** switch located on the far left near the Trainer button is in the **Down** position you are in Dual Rate #1. The default value is 100% which means there is no rate applied. If you move the switch up, the screen will indicate Dual Rate #2. It all depends on the individual flyer as to what switch position he wants for Low Rate. You can select either #1 or #2. Assume you want Low rate with the **D/R** switch in the **UP** position, use the **DEC-/NO** key to reduce the value to something less than 100%.

PRO TIP Some model instruction manuals provide what they recommend for High and Low Dual Rate. If not, then you can guess at approximately 70% as a good starting point. Flying tests will determine the correct value.

Next, use the Down **Function** key to select Exponential (**EXP**). Exponential provides a softening of control and decreases the sensitivity around neutral so you do not over control.

IMPORTANT The D/R switch controls whether you have Expo in position #1 or #2.

Since we want the servo movement soft in the neutral area of the stick movement, input a positive value of approximately 30% as a starting value. Flying tests can be used to determine if you need to decrease or increase the value. If desired you can program Expo for both Low and High rates as determined by the position of the **D/R** switch.

Elevator to Flap (**E>F**) mixing can be used to cause the Flaps to respond to Elevator control inputs if a model has Flaps or Flaperons. The **INC+/YES** key is used to input the desired value. If Flaperons are Active, the Elevator stick will cause the Ailerons to move UP and Down similar to a control line model with coupled Elevator and Flaps. Since we are only programming a four-control type model it is not used in this example.

The remainder of the Channels, Aileron (**AL**), Throttle (**TH**), and Rudder (**RU**), are programmed in the same manner as done for the Elevator (**EL**) channel.

Trim Memory (**TRM**) is available on all four of the flight control channels and on the Flap (**P-F**) channel. (The P indicates Pitch when programming the unit in the Heli mode). You can use the transmitters Digital Trim keys to program trim settings for your model while flying. All settings are automatically stored in Trim Memory for that specific model.

RANGE CHECK MODE FUNCTION

Prior to flying your model you should perform a Range Check. The RDS8000 has a Range Check Mode function, which lowers the transmitter power to check for proper receiver operation at a known minimal distance. To perform the Range Check, position the **Throttle** Stick to the **low** throttle position, press the **BIND** button on the transmitter with a pencil or other sharp object, and turn **ON** the transmitter. The **BIND LED** will blink Steadily. Hold the **BIND** button in for approximately 5 seconds until the **LED** goes out. Then release the **BIND** button. If the **LED** then resumes a steady blinking the transition to the Range Check Mode was successful. Immediately turn **ON** the receiver power and walk 30 paces (approximately 90 feet) and with the help of another flyer, check to see that all controls on the model operate correctly.

IMPORTANT The Range Check function automatically turns off in approximately 3 minutes, and the system is then in Normal operation.

Turning off your transmitter also turns off the Range Check function. Make sure you obtain the minimal range distance. If you do not, repeat the Range Check as per stated on **page 19** of your RDS8000 manual. **Do not fly your model until you meet the minimum standards. Do not try and fly your model while in the Range Check Mode since control will be lost when the model reaches a certain distance.**

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