

# Flugmodul System

für Multiplex Royal EVO und Multiplex 3030

Deutsch

# Air Module System

for Multiplex Royal EVO and Multiplex 3030

English

# Système Module Air

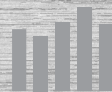
pour Multiplex Royal EVO et Multiplex 3030

Français

# Sistema di modulo aereo

per Multiplex Royal EVO e Multiplex 3030

Italiano



**SPEKTRUM**<sup>TM</sup>

# Air Module System for Multiplex Royal EVO and Multiplex 3030

English

## NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. For up-to-date product literature, visit <http://www.horizonhobby.com> and click on the support tab for this product

### Meaning of Special Language:

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND a little or no possibility of injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

 **WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.**

This is a sophisticated hobby product and NOT a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, Inc. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

 **WARNING AGAINST COUNTERFEIT PRODUCTS**

Thank you for purchasing a genuine Spektrum product. Always purchase from a Horizon Hobby, Inc. authorized dealer to ensure authentic high-quality Spektrum product. Horizon Hobby, Inc. disclaims all support and warranty with regards, but not limited to, compatibility and performance of counterfeit products or products claiming compatibility with DSM or Spektrum.

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Horizon Hobby is neither producer of nor distribution partner for Multiplex radios. We have independently developed our product as an add-on to the Multiplex radios and have tested its compatibility with the Multiplex radios.

## Introduction

Spektrum's Aircraft Module systems offer the ultimate in radio link security. No longer will you have to wait for an open frequency, or struggle with interference caused from noisy motors, ignition systems or other RF noise-generating sources. Spektrum's module systems utilize proprietary DSM2™ second generation Digital Spread Spectrum Modulation technology, providing an impenetrable radio link.

Operating within the ultra high frequency 2.4GHz worldwide ISM band, each module is programmed with its own unique serial code called GUID (Globally Unique Identification code). Once a receiver is programmed to a specific module (called binding), the receiver will only recognize and respond to that module ignoring signals from any other sources.

Spektrum's module systems are compatible with all Spektrum™ DSM2™ and JR™/DSM® receivers (which excludes AR6000).

**Note:** The Module system is not compatible with the AR6000 first generation DSM receivers.

**NOTICE:** When using the Module system with the Spektrum parkflyer receivers, it's imperative that this receiver only be flown in parkflyer-type models. This includes all types of small electric airplanes and mini and micro helicopters. Do not fly the parkflyer receiver in large gas, glow or large electric aircraft as loss of control at extended range due to signal blocking issues can occur.

## Features and Benefits

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- Operates on the 2.4GHz ISM band allowing international use
- No more waiting for an open frequency
- Eliminates the possibility of interference from an unintentional turn-on
- Bulletproof interference rejection of all outside RF sources like cell phones, Wi-Fi systems, other transmitters, etc.
- Impervious to model-generated RF interference (like noisy electric motors, metal-to-metal noise or ignition systems)
- No maintenance or tuning ever required
- Failsafe system drives the throttle to preset position at loss of signal (see failsafe options)

## Specifications

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### DSM2 Air Modules

Frequency - 2.400–2.483GHz

Spectral capacity - 40 Systems

Type - Direct Sequence Spread Spectrum

DSSS coding gain - 18dB

Diversity - Patented MultiLink: Path, Time and Frequency

Module current - 200mA

Servo channel resolution - 1024 with 4X oversampling

## Important Module Information

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- Be sure the transmitter is in PPM modulation. If necessary, refer to the instructions included with your radio system for details on how to program your transmitter to PPM. **Note:** The Spektrum module system will not operate in PCM mode.
- Never power up the module unless the antenna is connected. Doing so can overload the module's electronics causing damage to the module.
- Before operating, the receiver must be bound to the module (see Binding). Binding is the process of teaching the receiver the transmitter's specific GUID (globally unique identifier) code. Binding also sets the failsafe positions. It's also recommended that the system be rebound again after radio setup to establish and confirm the desired failsafe positions.
- Before each flying session, it's imperative that you do a range check (see How to Range Test the Spektrum Module System) to confirm that the system is working properly.
- When using the module system with the parkflyer receiver, it's imperative that this receiver only be flown in parkflyer-type models. This includes all types of small electric airplane and mini and micro helicopters. DO NOT fly the parkflyer receiver in large gas, glow or large electric aircraft as loss of control at extended range due to signal blocking issues can occur.
- The module system features DSM2 technology and is compatible will all DSM2 compatible receivers. The module system is not compatible with the AR6000 DSM first generation receiver.

## Warnings and Safety Precautions

**⚠ WARNING:** An RC aircraft is not a toy! If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, following all instructions included with your radio. Keep loose items that can get entangled in the propeller away from the prop, including loose clothing, or other objects such as pencils and screwdrivers. Especially keep your hands away from the propeller to avoid serious injury.

As the user of this product, you are solely responsible for operating it in a manner that does not endanger yourself and others or result in damage to the product or the property of others.

Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) that you use.

This model is controlled by a radio signal that is subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is necessary to always keep a safe distance in all directions around your model, as this margin will help to avoid collisions or injury.

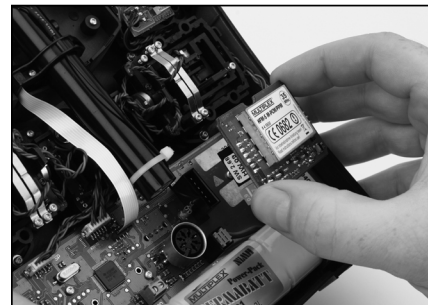
- Always operate your model in an open area away from cars, traffic, or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model out into the street or populated areas for any reason.
- Never operate your model with low transmitter batteries.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) that you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.

## System Installation—Royal EVO

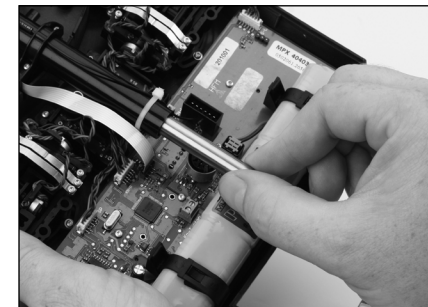
1. Remove backplate.



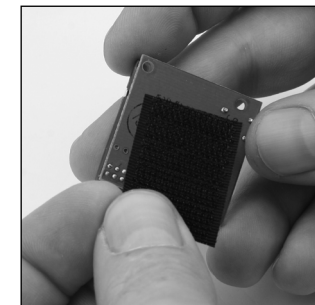
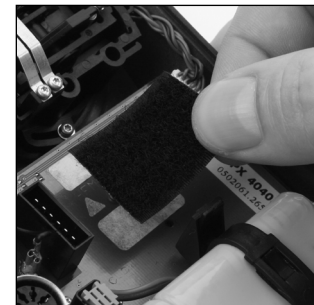
2. Remove existing RF module.



3. Remove legacy antenna.

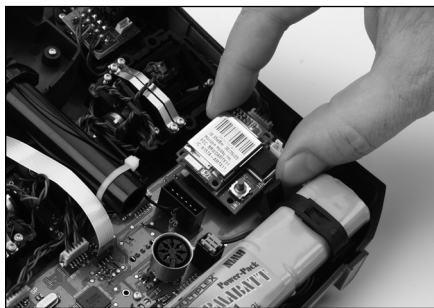


4. Apply hook and loop to back of main board and Spektrum RF Module.

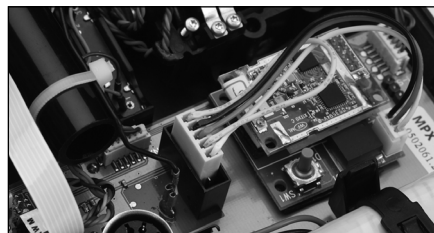


## System Installation—Royal EVO

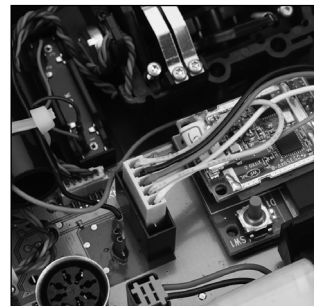
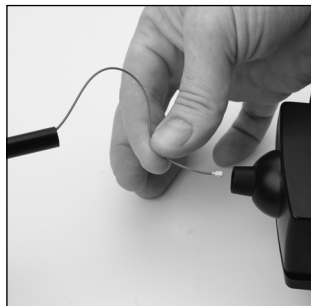
5. Install new Spektrum RF Module board.



6. Plug in wire harness noting polarity. White lead towards top of radio. The space between the connector and the transmitter case back cover is very minimal. Be sure to route the cable flat from the connector down to the module.



7. Feed antenna wire. Connect to module, taking care not to damage connector.



8. Replace back cover.

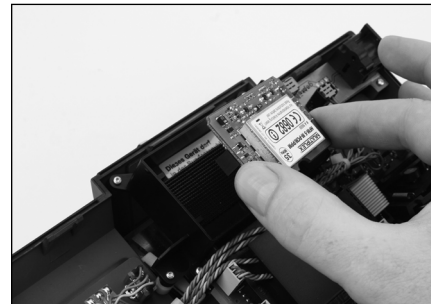


## System Installation—MC3030

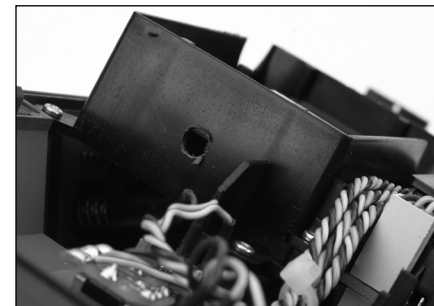
1. Remove backplate.



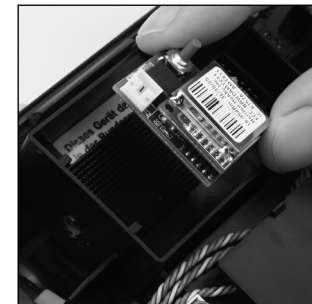
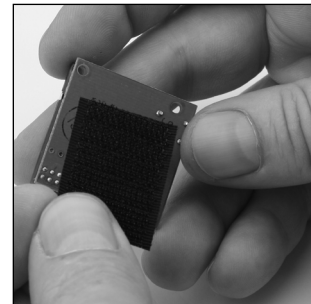
2. Remove existing RF module.



3. Drill 5.00 mm hole

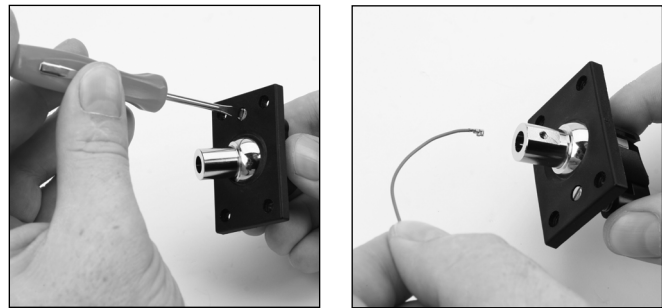
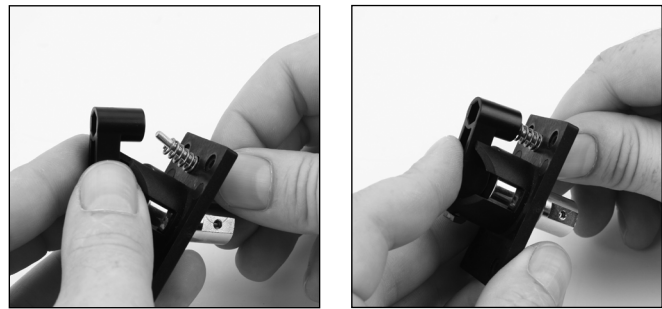
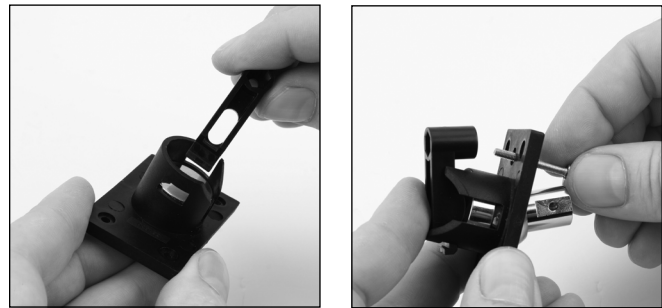
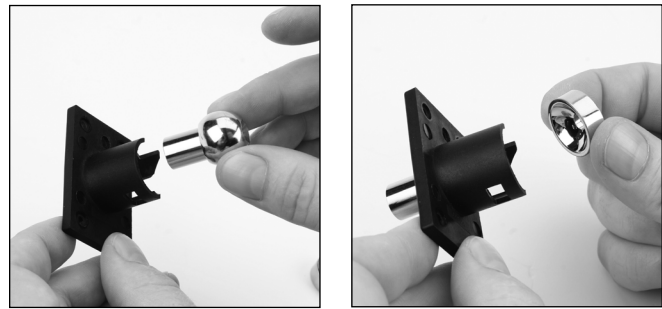


4. Apply hook and loop fastener to new Spektrum RF Module and install.

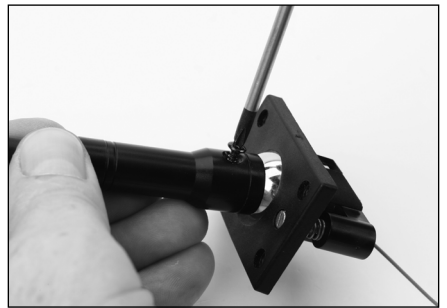
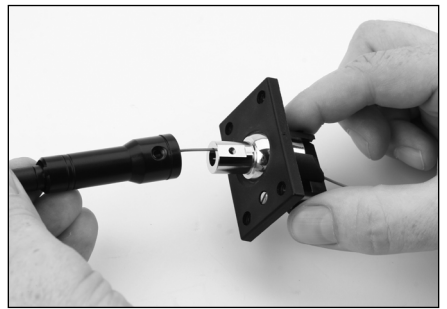


### System Installation—MC3030

5. After removing legacy antenna, replace with 2.4GHz antenna.

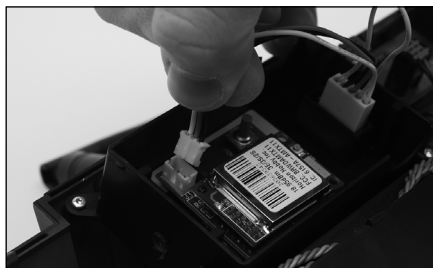


### System Installation—MC3030

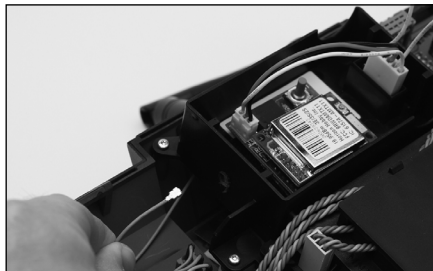


## System Installation—MC3030

6. Connect wire harness noting polarity.

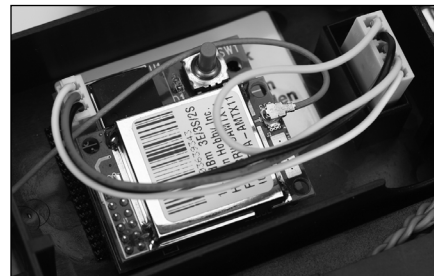


7. Feed antenna wire. Connect to module, taking care not to damage connector.

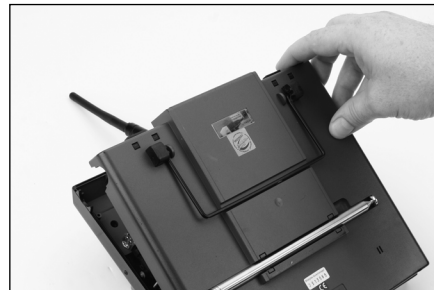


8. Ensure all wires are connected properly. White lead towards bottom of radio. The space between the connector and the transmitter case back

cover is very minimal. Be sure to route the cable flat from the connector down to the module.



9. Replace back.



## Installing the Receiver

The Module system is compatible with all Spektrum DSM2 and JR/DSM receivers.

### PARKFLYER RECEIVERS

- AR6110
- AR6110E
- AR6300
- AR6400
- AR6400L
- AR6400LBL

### FULL RANGE DSM2 RECEIVERS

- AR600
- AR7000\*
- AR7600\*
- AR8000\*
- AR9000\*

### FULL RANGE AND POWERSAFE DSM2 RECEIVERS

- AR7100\*
- AR7100R\*
- AR9100\*
- AR9200\*
- AR12000\*
- AR12100\*

### CARBON FUSELAGE DSM2 RECEIVERS

- AR6255\*
- AR9300\*

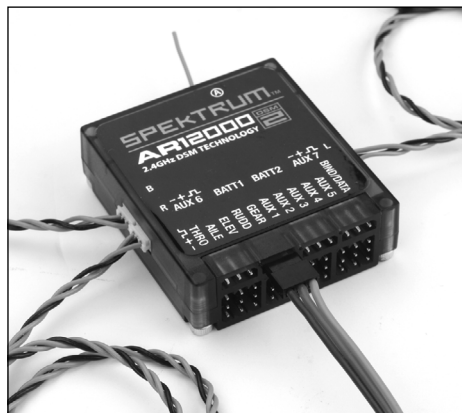
\*An optional Flight Log (SPM9540) RF data recorder is available for these receivers. The Flight Log records RF link flight data and displays this information onscreen, allowing you to evaluate the RF link performance of each individual receiver. See Flight Log—Optional for the AR12000 for more details about the optional Flight Log RF data recorder.



## Installing the Receiver

### Installing the AR12000

The AR12000 incorporates one internal receiver, and three remote receivers offering the security of four simultaneous RF links for the ultimate in multi-path RF security. One internal receiver is located on the main PC board, while a minimum of two remote receivers must be plugged into the antenna ports in order for the system to operate. By locating these receivers in different locations throughout the aircraft, each receiver is exposed to its own RF environment, greatly improving path diversity (the ability of the receiver to see the signal in all conditions).



**Note:** The AR12000 requires that at least two remote receivers be installed.

Install the main receiver using the same method you would use to install a conventional receiver in your aircraft. Typically wrap the main receiver in protective foam and fasten it in place using rubber bands or hook and loop straps. Alternately in electric or turbine-powered models, it's acceptable to use thick double-sided foam tape to fasten the main receiver in place.

Mounting the remote receivers in different locations, from the primary receiver, gives tremendous improvements in path diversity. Essentially each receiver sees a different RF environment and this is the key to maintaining a solid RF link, even in aircraft that have substantial conductive materials, (e.g. turbine engines with metal tail pipes, carbon fiber, tuned pipes, etc.) which can weaken the signal.

Using double-sided foam tape (servo tape), mount the remote receivers keeping the remote antennas at least 2 inches (51mm) away from the primary antenna. Ideally the antennas will be oriented perpendicular to each other, however, we've found this to not be critical. Leads of varying length are available (see table below), and in sophisticated aircraft we've found it best to mount the remote receivers in different parts of the aircraft, keeping the remote antennas as far away as practical from any conductive materials.

#### Remote Receiver Extensions

6-inch (152mm)	SPM9010
9-inch (228mm)	SPM9011
12-inch (305mm)	SPM9012
24-inch (610mm)	SPM9013
36-inch (914mm)	SPM9014



## Installing the Receiver

A typical installation would include the main receiver mounted in the conventional location in the fuselage and the remote antennas in the nose (jets) in the top turtle deck and even in the tail. The optimum location is as far away from any conductive materials as is practical.



## Binding

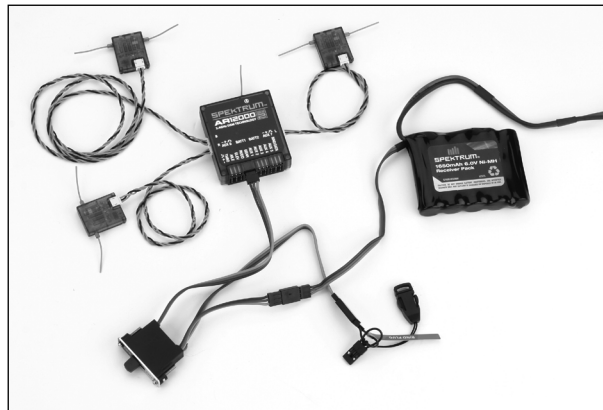
It's necessary to program the receiver to the specific module so that the receiver will only recognize that module, ignoring signals from any other sources. If the receiver is not bound to the module, the system will not operate. During binding the servo's failsafe positions are stored.

The following sequence shows the binding procedure for the AR12000, however, all Spektrum aircraft receivers are bound in the same way.

### How to Bind

The AR12000 receiver must be bound to the module before it will operate. Binding is the process of teaching the receiver the specific code of the transmitter so it will connect to that specific module. Once bound, the receiver will only connect to that module.

1. With the system hooked up as shown, insert the bind plug in the charge plug receptacle.

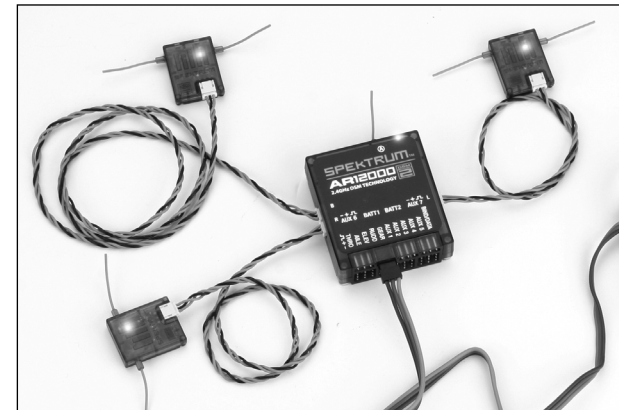


**Note:** When binding using a switch harness, a 3-wire switch harness must be used such as SPM9530.

**Note:** To bind an aircraft with an electronic speed controller that powers the receiver through the throttle channel (BEC), insert the bind plug into the battery port and proceed to Step #2.

## Binding

2. Turn on the receiver switch. Note that the LEDs on all receivers should be flashing, indicating that the receiver is ready to bind.



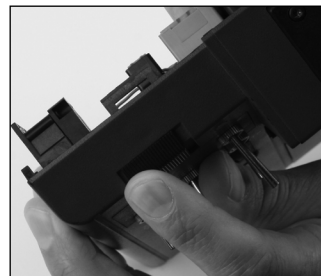
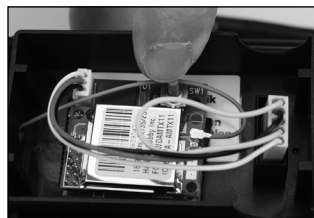
3. Establish the desired failsafe stick positions: normally low throttle and flight controls neutral.



## Binding

- Press and hold the bind button on the module while turning on the power switch. The bind button will flash and within a few seconds the system will connect. The LEDs on the receivers will go solid, indicating the system has connected.

**Note:** You must remove backplate to access the bind/range button.



- Remove the bind plug and store it in a convenient place.
- After you've programmed your model, it's important to rebind the system so the true low throttle and neutral control surface positions are programmed.

- **Before Binding All Servo Outputs Must be Assigned**

In the Servo Menu under Assignment all channels that you wish to use must be assigned before binding. This will place the transmitter in PPM/9, PPM/12 mode etc. If the number of channels being used is ever changed the system must be rebound.

- **+ Positive Shift Must be Selected**

In the Memory menu under Properties, + (plus) must be selected in the Shift column

- **The system Must be in FM/PPM mode**

This occurs automatically when the Spektrum module is plugged in. To confirm press the up or Down arrows to access the Modulation screen. FM/ PPM Should be displayed.

Software Versions Supported:

V1.x

V2.x

## Failsafe Functions

All of Spektrum's aircraft receivers feature a unique SmartSafe™ failsafe system, while the AR12000 features two types of failsafe programming: SmartSafe and Preset Failsafe.

### SmartSafe

SmartSafe is automatically selected during the standard binding procedure and is ideal for electric aircraft as well as most gas- and glow-powered aircraft.

### How SmartSafe Works

#### *When the Receiver is Powered On without a Transmitter Signal*

If you turn on the AR12000 before you turn on the transmitter, SmartSafe prevents the throttle from functioning and drives all other channels to their preset positions.

#### *When there is a Loss of Signal in Flight*

If the receiver loses the transmitter's signal in flight, or any other time after a successful connection has been made, SmartSafe sets the throttle to the position it was in during the binding process. All other channels hold the positions they were in at signal loss.

### Preset Failsafe

Preset Failsafe allows you to set the specific control positions for all channels to go to should you encounter signal loss in flight or at any other time after a successful connection has been made. Preset Failsafe is typically used to prevent "fly aways" in high-performance models by deploying spoilers in sailplanes or putting gas- and glow-powered models into a slight turn at reduced throttle.

### Programming SmartSafe

#### **(All Spektrum Aircraft Receivers)**

During the binding process, the bind plug is left in throughout the process and is removed only after the receiver connects to the transmitter. After the connection is made, confirmed by operating the servos, the bind plug can be removed. The receiver is now programmed for SmartSafe.

### Programming Preset Failsafe

#### **(AR12000, AR12100, AR9300, AR9200, AR9100, AR9000 and AR7100/R SPM Receivers Only)**

During the binding process the bind plug is inserted in the bind port or in the charge jack, then the receiver is powered up. The LEDs in each receiver should blink, indicating that the receiver is in bind mode. **Now before binding the receiver to the transmitter and with the receiver in bind mode, remove the bind plug.** The LEDs will still be blinking. With the control sticks and switches in the desired failsafe positions, bind the transmitter to the receiver by pressing and holding the bind buttons on the back of the transmitter/module and turning on the transmitter. The system should connect in less than 15 seconds. The receiver is now programmed for preset failsafe.

**Note:** Failsafe positions are stored via the stick and switch positions on the transmitter during binding.

## Module Special Instructions

- **Before Binding All Servo Outputs Must be Assigned**

In the Servo Menu under Assignment all channels that you wish to use must be assigned before binding. This will place the transmitter in PPM/9, PPM/12 mode etc. If the number of channels being used is ever changed the system must be rebound.

- **+ Positive Shift Must be Selected**

In the Memory menu under Properties, + (plus) must be selected in the Shift column

- **The system Must be in FM/PPM mode**

This occurs automatically when the Spektrum module is plugged in. To confirm press the up or Down arrows to access the Modulation screen. FM/ PPM Should be displayed.

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V1.x

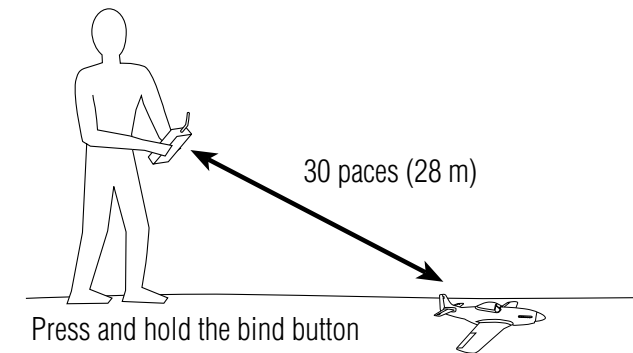
V2.x

## How to Range Test the Spektrum Module System

Before each flying session, and especially with a new model, it's important to perform a range check. The Spektrum Module systems incorporate a range testing system which, when the bind button on the module is pressed and held, reduces the output power, allowing a range check.

### Range Testing the Module System

1. With the system powered and the model resting on the ground secured against movement, stand 30 paces (approx. 28 m) away from the model.
2. Face the model with the transmitter in your normal flying position and depress and hold the bind button inside the transmitter. This causes reduced power output from the transmitter.  
**Note:** The backplate must be removed to access the bind button for range check.
3. You should have total control of the model with the button depressed at 30 paces (28 m).
4. If control issues exist, call Horizon Product Support for further assistance.



## Flight Log—Optional for the AR12000

Spektrum's Flight Log (SPM9540) is compatible with Spektrum AR7000, AR7100, AR7100R, AR7600, AR9000, AR9100, AR9200, AR9300, AR12000 and AR12100 receivers. The Flight Log displays overall RF link performance as well as the individual internal and external receiver link data. Additionally it displays receiver voltage.



### Using the Flight Log

After a flight and before turning off the receiver or transmitter, plug the Flight Log into the Data port of the receiver. The screen will automatically display voltage i.e. 6v2= 6.2 volts

**Note:** When the voltage reaches 4.8 volts or less, the screen will flash indicating low voltage.

Press the button to display the following information:

A - Antenna fades on internal antenna A

B - Antenna fades on internal antenna B

L - Antenna fades on the left external antenna

R - Antenna fades on the right external antenna

F - Frame loss

H - Holds

Antenna fades—represents the loss of a bit of information on that specific antenna. Typically it's normal to have as many as 50 to 100 antenna fades during a flight. If any single antenna experiences over 500 fades in a single flight, the antenna should be repositioned in the aircraft to optimize the RF link.

Frame loss—represents simultaneous antenna fades on all attached receivers. If the RF link is performing optimally, frame losses per flight should be less than 20.

A hold occurs when 45 consecutive frame losses occur. This takes about one second. If a hold occurs during a flight, it's important to reevaluate the system, moving the antennas to different locations and/or checking to be sure the transmitter and receivers are all working correctly.

**Note:** A servo extension can be used to allow the Flight Log to be more conveniently plugged in without having to remove the aircraft's hatch or canopy. On some models, the Flight Log can be plugged in, attached and left on the model using double-sided tape. This is common with helicopters, mounting the Flight Log conveniently to the side frame.

## Warranty and Repair Policy

### What this Warranty Covers

Horizon Hobby, Inc. ("Horizon") warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase.

### What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) attempted service by anyone other than a Horizon Hobby authorized service center, or (v) Products not purchased from an authorized Horizon dealer.

OTHER THAN THE EXPRESS WARRANTY ABOVE, HORIZON MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

### Purchaser's Remedy

Horizon's sole obligation and purchaser's sole and exclusive remedy shall be that Horizon will, at its option, either (i) service, or (ii) replace, any Product determined by Horizon to be defective. Horizon reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Horizon. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.

### Limitation of Liability

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF HORIZON HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.

## Law

These terms are governed by Illinois law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Horizon reserves the right to change or modify this warranty at any time without notice.

## Warranty Services

### Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to [productsupport@horizonhobby.com](mailto:productsupport@horizonhobby.com), or call 877.504.0233 toll free to speak to a Product Support representative. You may also find information on our website at [www.horizonhobby.com](http://www.horizonhobby.com).

### Inspection or Services

If this Product needs to be inspected or serviced, please use the Horizon Online Service Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service Request is available at <http://www.horizonhobby.com> under the Support tab. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

**Notice: Do not ship LiPo batteries to Horizon.**

**If you have any issue with a LiPo battery, please contact the appropriate Horizon Product Support office.**

### Warranty Requirements

**For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date.** Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Horizon.

### Non-Warranty Services

**Should your service not be covered by warranty service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost.** By submitting the item for service you are agreeing to payment of the

service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for service, you are agreeing to Horizon's Terms and Conditions found on our website <http://www.horizonhobby.com/Service/Request/>.

Country of Purchase	Horizon Hobby	Address	Phone Number/Email
United States	Horizon Service Center (Electronics and engines)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233  Online Repair Request visit: <a href="http://www.horizonhobby.com/repairs">www.horizonhobby.com/repairs</a>
	Horizon Product Support (All other products)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233  <a href="mailto:productsupport@horizonhobby.com">productsupport@horizonhobby.com</a>
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS United Kingdom	+44 (0) 1279 641 097  <a href="mailto:sales@horizonhobby.co.uk">sales@horizonhobby.co.uk</a>
Germany	Horizon Technischer Service	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 66  <a href="mailto:service@horizonhobby.de">service@horizonhobby.de</a>
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70  <a href="mailto:infofrance@horizonhobby.com">infofrance@horizonhobby.com</a>

**FCC Information**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

 **CAUTION:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

**Compliance Information for the European Union**

AT	BG	CZ	CY	DE
DK	ES	FI	GR	HU
IE	IT	LT	LU	LV
MT	NL	PL	PT	RO
SE	SI	SK	UK	



**Declaration of Conformity**  
(in accordance with ISO/IEC 17050-1)

No. HH20091009

Product(s): Spektrum DSM2 AIRMOD with AR12000 EVO/3030-Comp

Item Number(s): SPMMS3132

Equipment class: 2

The objects of declaration described above are in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC:

**EN 60950**

**Safety**

**EN 300-328 v1.7.1**

**ERM requirements for wideband transmission systems operating in the 2.4 GHz ISM band**

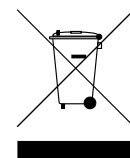
**EN 301 489-1 v.1.6.1**

**General EMC requirements for Radio equipment**

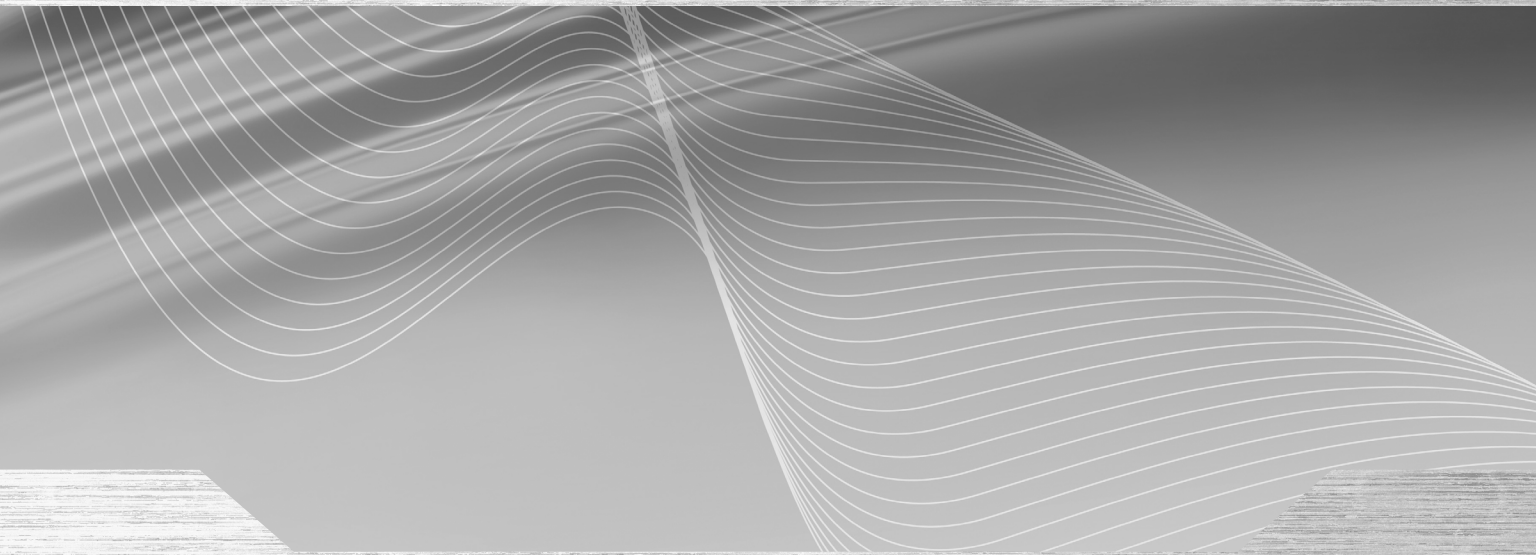
**EN 301 489-17 v.1.2.1**

Signed for and on behalf of:  
Horizon Hobby, Inc.  
Champaign, IL USA  
Oct. 09, 2009

Steven A. Hall  
Vice President  
International Operations and Risk Management  
Horizon Hobby, Inc.

**Instructions for Disposal of WEEE by Users in the European Union**

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.



US patent 7,391,320. Other patents pending.

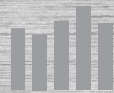
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