SPEKTRUM

DX7se

Special Edition User Guide

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Introduction

Spektrum's DX7se has been optimized to give the lowest possible latency making it ideal for high response rate models like 3D helicopters. While transmitters typically operate using a 22-millisecond frame rate, the DX7se utilizes an 11-millisecond frame rate on the primary control channels (aileron, elevator and pitch in helicopter mode) significantly reducing system latency and dramatically improving the response rate. In addition, the DX7se features 2048 resolution with 2x oversampling on all channels for the ultimate in servo accuracy.

The DX7se has been flown by team pilots Alan Szabo, Bert Kammerer, Marcus Kim and Danny Szabo for nearly a year prior to its release and has already racked up an impressive record including winning the 2007 XFC. While nearly all of the programming functions of the DX7se are identical to the DX7, following are a few things that you need to be aware of.

Digital Servo Only for Primary Controls

To realize the maximum performance potential from your DX7se, high-performance digital servos like JR8717's or JR 8317's are recommended for cyclic control. High-performance digital servos take maximum advantage of the increased response rate and 2048 digital accuracy. In fact some types of non-digital servos will not function properly at the faster 11-millisecond frame rate on the primary controls (aileron, elevator and pitch).

Receiver Compatibility

While the DX7se is compatible with all Spektrum and JR DSM2 receivers, only receivers that are capable of 2048 resolution offer the greatest improvements in response rate and accuracy. Spektrum and JR brand receivers that offer 2048 resolution are listed below.

Spektrum	JR
AR7100	921
AR7100R	922
AR9000	1221
AR9100	1222

Note: All Spektrum DSM2 receivers are compatible with the DX7se, however, 1024 resolution receivers (like the AR7000 and AR6100) operate at 1024 resolution and don't take full advantage of the improved latency and accuracy of the DX7se.

Trainer Function

Because the DX7se operates at the faster 11-millisecond frame rate, the trainer system is no longer compatible with other transmitters. Note that the trainer functions and screen have been removed from the system.

DX7se Setup Tips *by Alan Szabo Jr.*

I've been flying prototypes of the DX7se since early 2007. It's the fastest, most responsive radio system that I've ever flown, allowing me to develop new high response rate maneuvers like the "cracking" maneuvers and help win the 2007 XFC. Following are a few tips that will help you get the most out of your DX7se.

- Use the fastest servos available

While the DX7se has the fastest possible response rate, fast servos are recommended to provide the ultimate in overall response and control. Fast, accurate servos take full advantage of the DX7se's ultra fast system.

- Use Expo to calm response around center during first few flights.

The DX7se has a faster response rate than any radio you've previously flown providing the most connected feel. Adding 10% exponential to the expo value you normally use on cyclic is recommended to calm the response rate during initial flights. As you become more accustomed to the increased response rate, dial down the Expo to your preference.

- Max Pitch = Max Pop

Traditionally maximum pitch settings were adjusted to the point at which the engine wouldn't bog with extended full pitch. This was typically 9 to 10 degrees depending on engine power and setup. The trick to getting maximum pitch response is to program maximum pitch, typically 12 to 13.5 degrees, and then to manage the pitch by only staying in this max pitch range for a few moments and only to get the heli to accelerate or stop aggressively (Pop and Stop). The momentum of the rotor disc is used to aggressively accelerate the helicopter initially at these high pitch ranges, then the pitch is immediately reduced to allow the rotor rpm to recover. Combining this over pitch technique with the ultra fast response rate of the DX7se makes Pop and Stop maneuvers like grass level Tic Toc's much more impressive.

Alan Szabo Jr.

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

No. HH20081025

Product(s):   Spektrum DX7 / DX7SE Transmitter
Item Number(s): SPM2712E, SPM27121E, SPM2722E, SPM27221E, SPM2731E, SPM27311E

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 60950:2001	Safety
EN 300-328 v1.7.1	ERM requirements for wideband transmission systems operating in the 2.4GHz 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
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Steven A. Hall
Vice President
International Operations and Risk Management
Horizon Hobby, Inc.