CHANNEL XPANDER™

DIGITAL CHANNEL FUNCTION EXTENTION SYSTEM

INSTRUCTIONS

INTRODUCTION

Thank you for purchasing the JR Channel Xpander. It is designed for applications, such as scale aircraft and jets where multiple channels are needed to operate all of the desired functions.

The Channel Xpander allows up to four servos to be operated non-proportionally in sequence from a single channel and offers the option of powering the servos connected to it via an auxiliary battery pack or with the common receiver pack. Each servo can independently be adjusted for reverse, end-point and kick-point and standard and digital servos can be used. Please read through these instructions carefully before using the Channel Xpander.

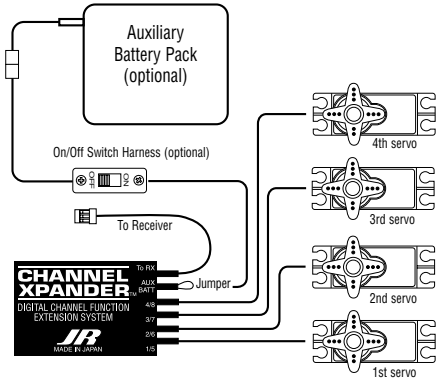
FEATURES

- Allows precise end-point adjustment, reversing and kick-point of up to four servos, non-proportionally from a single channel
- A separate battery can be used to operate the servos connected to the Channel Xpander
- Perfect for adding non-proportional functions: lights, smoke systems, opening canopies, wheel brakes, bombs drop, etc.

SPECIFICATIONS

Size (L x H x W): 1.54" x 0.75" x 0.50"
Weight: 0.32 oz
Current Draw: 8mA
Operating Voltage: 4.8V–6.0V

CONNECTIONS



CONNECTIONS (CONTINUED)

To Receiver:

Connect the appropriate channel of the receiver using the included Male/Male servo lead. Extensions can be used if needed between the receiver and the Channel Xpander.

To Auxiliary Battery:

If you choose to operate the servos connected to the Channel Xpander using the same battery that operates your system (using one common battery), install the included red jumper into the auxiliary battery port. If a separate battery and switch harness is to be used to power the servos, connected to the Channel Xpander connect these to the auxilary battery port.

1/5: Connect the 1st servo to this port
2/6: Connect the 2nd servo to this port
3/7: Connect the 3rd servo to this port
4/8: Connect the 4th servo to this port

Note: The Channel Xpander will not function without the use of either the jumper connector or an auxiliary battery pack.

FUNCTIONS

The various functions of the Channel Xpander are accessible through the rotary dial as follows:

0: All settings remain stored. The INCR and DECR buttons are not active. The Channel Xpander should always be kept in this position for normal operation.

1-4: The servo's kick-point, the point at which the servo moves from one position to the other, is adjusted and stored for each of the four servos by using the transmitter stick position and the INCR or DECR buttons.

5-8: The end-point of each servo can be adjusted. To reverse the servo, simply store the end-point at the opposite position. Using the stick position and the INCR and DECR buttons, the end-points can be independently adjusted.

9: The default setting of the Channel Xpander can be reset by pressing the INCR and DECR buttons simultaneously.

FUNCTIONS (CONTINUED)

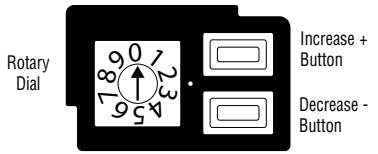
The Rotary dial is coordinated to the servos as follows:

1/5: Port for the 1st servo. Position 1 adjusts the kick-point, while position 5 adjusts the end-point.

2/6: Port for the 2nd servo. Position 2 adjusts the kick-point, while position 6 adjusts the end-point.

3/7: Port for the 3rd servo. Position 3 adjusts the kick-point, while position 7 adjusts the end-point.

4/8: Port for the 4th servo. Position 4 adjusts the kick-point, while position 8 adjusts the end-point.



ACCESSING THE FUNCTIONS

1-4: Storing the Kick-Point

The Channel Xpander comes preprogrammed with the kick-points (the point at which each servo move from one end-point to the other) stored at:

Servo 1- 1.2ms or at approximately 1/5th stick position
Servo 2- 1.4ms or at approximately 2/5^{ths} stick position
Servo 3- 1.6ms or at approximately 3/5^{ths} stick position
Servo 4- 1.8ms or at approximately 4/5^{ths} stick position

To change the kick-point, turn the dial to the desired servo positions 1 through 4.

With the system on, move the transmitter stick to the desired point at which you would like the servo kick point to take place. Press the INCR or DECR buttons to store the new kick position. To test the stored position, moving the transmitter stick above the stored position will cause the servo to transit to one end-point, while moving the stick below that position will cause the servo to transit to the opposite end-point.

ACCESSING THE FUNCTIONS

To reset the kick-point to the factory default settings, turn the dial to 9 and press the INCR and DECR buttons simultaneously while turning on the power.

Note: If desired, more than one servo can be programmed to have the same kick-point .

STORING SETTINGS

To store settings, rotate the dial to the 0 position while the Channel Xpander is turned on. The LED will flash while the settings are being stored and will stop flashing once the Channel Xpander has stored the settings. It is now safe to turn off the Channel Xpander.

MOUNTING

After all adjustment have been made, the Channel Xpander can be mounted to any flat surface using double-sided servo tape or Velcro®. Make sure that all servo leads have have a small amount of slack (not pulled tight), so as to not disconnect from the Channel Xpander during operation.

REPAIR SERVICE INSTRUCTIONS

Warranty Repair
To receive warranty service, you must include a legible photocopy of your original dated sales receipt to verify your proof-of-purchase date. Providing that warranty conditions have been met, your equipment will be repaired without charge.

Normal Non-Warranty Repairs
Should your repair cost exceed 50% of the retail purchase cost, you will be provided with an estimate advising you of your options.

Please advise us of the payment method you prefer to use. Horizon Service Center accepts VISA or MasterCard. Please include your card number and expiration date. Mail your system to:

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822
(217) 355-9511
www.horizonhobby.com

SERVO END-POINT ADJUSTMENT

Each servo's end point is adjustable. To make an adjustment, access the desired servo by turning the dial to the corresponding servo number shown below:

5= servo 1
6=servo 2
7= servo 3
8 = servo 4

With the system on, move the transmitter stick in the desired position that you would like to adjust an end-point. Press the INCR or DECR button to adjust the end-point to the desired position. To adjust the opposite end-point, move the transmitter stick to the opposite position then press the INCR or DECR buttons to adjust that end-point.

Note: To reverse servo directions, simply store the end-point position at opposite sides.

9: Data Reset

To reset the Channel Xpander to the factory default settings, place the rotary dial in the 9 position. While pressing the INCR and DECR buttons simultaneously, turn on the power to the Channel Xpander. All values have now been set to the factory default settings.

OPERATION

The simplest way to operate the Channel Xpander is by using a proportional slider or rotary dial. As the dial is moved from one extreme to the other, each servo will pass through its kick-point and that servo will transit from one end-point to the other. A three-position switch can also be used to trigger two servos. Remember that the kick-points are in sequence.

By using programmable mixes, it's possible to make various functions activate a kick-point. For example, a smoke pump may be set up to be triggered only when the throttle is above 1/4 throttle and the gear switch is on. You could also trigger the landing lights to come on with a switch and the canopy to open with another. The combinations are endless.

WARRANTY COVERAGE

Your new equipment is warranted to the original purchaser against manufacturer defects in material and workmanship for 3 years from the date of purchase. During this period, Horizon Service Center will repair or replace, at our discretion, any component that is found to be factory defective at no cost to the purchaser. This warranty is limited to the original purchaser of the unit and is not transferrable.

This warranty does not apply to any unit which has been improperly installed, mishandled, abused, or damaged in a crash, or to any unit which has been repaired or altered by any unauthorized agencies. Under no circumstances will the buyer be entitled to consequential or incidental damages. This limited warranty gives you specific legal rights; you also have other rights which may vary from state to state. As with all fine electronic equipment, do not subject your unit to extreme temperatures, humidity or moisture. Do not leave it in direct sunlight for long periods of time.