

Thank you for purchasing the very finest in receiver technology. This is no ordinary receiver, so make sure to read through all of these directions and tips to get the most from your new Berg by Castle Creations receiver.

Range Checking:

Start with your transmitter on and its antenna collapsed, and then activate the receiver in the aircraft. Check to see that all channels are working correctly. Start walking backwards and counting your paces. For a passing range check, you should be able to get approximately 30 paces (100ft) away from the plane before seeing indications of a lost/degraded signal*.

**Special Note: The Berg by Castle Creations receivers are tuned for flying above the ground. If the antenna is very close to the ground (e.g. aircraft actually sitting on the ground), you may see a poor range check. If this is the case - Simply have a friend hold the aircraft up off the ground for you, or use a picnic table or similar object to gain a bit of elevation.*

Transmitter Signal Recognition (TSR) process:

When you first turn on the receiver, it 'learns' the characteristics and specific signature of your particular transmitter. After that process is completed (less than a second), the receiver will only listen to your transmitter*. This process gets repeated every time you turn the receiver ON. **If a similar transmitter on the same channel is powered up and is CLOSER to your receiver than your own transmitter is, loss of signal may be experienced.*

True Digital Signal Processing (TDSP):

TDSP is a proprietary process developed by Peter Berg, the originator of digital signal processing within the decoders of R/C receivers. In addition to highly advanced double tuned RF filtering hardware, Berg by Castle Creations receivers incorporate a microprocessor and software to further filter the incoming signal before it's passed on to the servos. The TDSP software looks at the incoming signals, and via its adaptive algorithms, decides which signals are valid and which are not ("glitches"). While most standard receivers simply pass on these invalid signals to the servos (a "glitch"), with TDSP these invalid signals are discarded. Aside from the peace of mind our top of the line receiver technology brings you, you'll also notice a difference in the "feel" of your aircraft. You will absolutely feel more solidly and positively connected to your aircraft!

For warranty, troubleshooting, or application information, please contact us at any of the following:

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Berg

BY

CASTLE CREATIONS

MICROSTAMP 4L FULL RANGE RECEIVER

4 Channels

Programmable Fail Safe

True Digital Signal Processing (TDSP)

Transmitter Signal Recognition (TSR)



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Now Proudly Made in the USA

Power Requirements for Berg by Castle Creations Receivers

The microprocessor in this receiver is keeping track of your transmitter's commands in 'real time' and that may include a significant amount of digital signal processing. The algorithms used by this powerful microprocessor chip start with TSR, and are followed by adaptive TDSP, which applies increasing amounts of filtering when the signal gets weaker, or is being interfered with.

Upon power-up of the receiver, it goes into a "learning cycle" for about one second. During this period, it learns the characteristics of your transmitter including shift polarity, number of channels and frame timing. After this 'boot up' period, it will only listen to your type of transmitter. Booting up your home computer or laptop takes several minutes. Booting up the computer inside your receiver takes only a second or so. Boot up starts every time you first supply power to the receiver.

There are only a few cautions with the use of this receiver. The supply voltage (power) should not be interrupted during the short learning period. Power should not be re-applied for at least 2 seconds after you have removed it. Power should not be interrupted during flight.

Should you break any of these rules, your receiver will not be damaged. But, the receiver will need to be powered up properly, in order to function as intended.

Specifications of the Berg by Castle Creations 4L Receiver

- Number of channels: 4
- Channel outputs: 1-2-3-4
- Filtering: Triple tuned RF circuitry with steep flank 8 pole IF ceramic filter set
- Filtering: TDSP filtering in the microprocessor decoder, with adaptive algorithms based on signal to noise ratio of the received signal
- Sensitivity: about 2.0µV
- Shift polarity: positive or negative (auto-detect)
- Dimensions: 0.6" x 1.35" x 0.35"
- Weight: 4 grams
- HOLD mode: (programmable on or off) all servos are held in position of last known good signal before signal loss
- Fail-Safe mode: (programmable on or off) Upon two seconds of no signal, servos move and hold pre-programmed position until the signal returns

Programming Instructions:

Always start with the transmitter on, and the receiver unpowered. The factory default setting is Fail Safe Mode OFF.

To turn ON Fail Safe Mode:

Put a servo in channel one, and the supplied jumpers into channel 2 and 4. When the receiver is powered up in this configuration, it will activate Fail Safe Mode, and the servo will "wave" at you to confirm it has accepted this command.

To Turn OFF Fail Safe Mode:

Put a servo in channel one, and the supplied jumpers into channel 2 and 3. When the receiver is powered up in this

configuration, it will turn OFF Fail Safe Mode, and the servo will "wave" at you to confirm it has accepted this command.

If Fail Safe Mode is enabled, you MUST then program your desired servo holding positions, in the event Fail Safe Mode is engaged in flight. After the radio system is installed in the plane, and flight trimming is accomplished, follow the simple procedure below:

1. With electric aircraft, remember to REMOVE THE PROP/ ROTOR BLADES before going any further!

2. With the receiver in the aircraft and the aircraft on the bench, turn on the transmitter and receiver, operate the transmitter sticks and set all your servo directions, trim, throws, mixing etc. to those exact positions you would like to have them in should a complete loss of signal occur. Have a buddy hold your transmitter sticks in these positions for you.

3. Keeping the transmitter ON, turn the receiver OFF. Put one jumper on any channel output. (if all channels are being used, you can use a "Y" connector to add a jumper on any channel) Keep holding the desired positions on your transmitter sticks.

4. Turn the receiver ON and count to five, then remove the jumper plug from the receiver. Turn the receiver OFF and then let the transmitter sticks go back to neutral. All done!

To test Fail-Safe operation:

1. Turn transmitter and receiver ON.

2. Check for correct control of all servos on the correct channels, and then put all sticks in a random position and turn transmitter OFF. All servos should stay in their positions for two seconds. If Fail-Safe is activated all servos should move to their previously programmed positions and stay there until a signal comes back. If that doesn't happen, start the above procedure over. Channels 1 and 3 default to 1.0msec pulses when you first turn FS ON, the rest are preset to 1.5msec.

NOTE: *never remove power from the transmitter or the receiver during a programming cycle. Doing so will not damage anything, but you will have to start your entire programming cycle over.*

As soon as the receiver re-establishes accurate contact with the transmitter, the servos will immediately begin responding to the transmitter control inputs

NOTE: *when turning OFF a computer transmitter it may take up to eight seconds for the transmitter to boot up when you turn it back ON, so the control delay may be up to eight seconds.*

SUGGESTION: *NEVER perform this test "in the air" by turning your transmitter OFF and then ON again or this may be your last flight of the day.*

With the complexity of features and the user-programming of this receiver it is a must to perform a standard pre-flight test exercising all channels and verifying that the Fail-Safe mode does exactly what you programmed into the receiver.