

PowerBox Systems

*World Leaders in RC
Power Supply Systems*

Signal Amplifier

Operating Instructions



Order No.: 1110

JR / Futaba

The servos in our models are connected using three-core cables consisting of positive, negative and signal conductors.

Most modellers are aware of the problems which can arise when long servo leads are used, especially with fast, powerful servos. The solution is to fit high-capacity batteries and heavy-duty cables to ensure that adequate current is available for the servos. However, these measures do not have a significant effect on the signal conductor from the receiver to the servo.

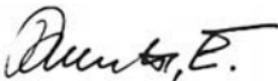
The signal carries the servo control information, and all receivers, no matter what type or make, generate the signal at the output of a small IC. The output power at this IC is normally designed to cope with a single servo and a servo lead up to 2 metres long. If the cable to the servo is too long, or is shared between two or more servos, it is no longer possible to assume that the system will work reliably. The servo electronics can only work properly if the circuit receives accurate signal information, but if the signal is weak the circuit may be unable to analyse the data, with the result that the servo works imprecisely or moves jerkily. Servo jitter or inaccurate trims are usually the effects which the modeller first detects. Sudden servo deflections or "glitches" are often mis-interpreted as "radio interference", although not all servos react in the same way.

Admittedly not all servo jitter can be laid at the door of a weak signal.

Wherever possible, the signal amplifier should always be fitted just where the amplification is needed, i.e. immediately adjacent to the servo, at the end of the long lead. If for any reason this is not possible, the amplifier can be plugged in immediately adjacent to the receiver; the increased power will generally be sufficient to ensure interference-free servo operation.

- suitable for all receiver systems
- suitable for all transmitter systems
- suitable for all servo systems
- increased useful servo life
- reduced current drain due to smooth-running servos
- tested and proven in many large models over several years
- current drain 10 mA
- weight 1.5 grammes

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