Wire AWG for Plugs, Servo, Batteries, Motors and ESC's

Silicone Wire				Plug / Bullet / Pin				Lipo Battery				ESC					Motor			
Wire AWG	Cold Amp.	Warm Amp.	Hot Amp.	Type	Pin Dia.	Max AWG	Max Amp.	Battery mah	Cell "S"	Wire AWG	Batt. Plug	ESC Amps.	Power Plug	Power cable	Motor Plug	Motor cable	Can Dia.	Power Watts	Wire AWG	Plug
				Dupont_DIP_3 JST-SH Servo pin, 2.54mm pitch																
32	0.8	2	4	Servo	Submicro	32	2													
28	1	4	6	Servo	Micro	28	3													
26	1.25	5	7	Servo	Std	26	3													
24	3	7	10	JST		24	8													
22	8	10	13	Servo	H/duty	22	3										22mm	80w		2.5mm
20	10	15	20	2mm Bullet	2mm	20	15	300-800	1s/2s	20	JST	6 to 10	JST		2mm	20				
				2.3mm Bullet	2.3mm	20	15													
18	15	20	25	EC2	2mm	18	20	650-900	3s/4s	18	XT30	20 to 30	XT30	16	3.5mm	18	28mm	300W		3.5mm
													EC3	16		16				
16	20	25	35	XT30	2.5mm	16	30	1000-1800	2s/6s	16	XT60	40	XT60	16	3.5mm	16	35mm	600W	16	3.5mm
				XT30U	2.5mm	16	35											eFlite 10-15	16	3.5mm
14	30	35	55	3.5mm Bullet	3.5mm	14 (12 Max.	40	-2800	2s/6s	14	XT60		EC3	13		16	42mm	1000w		3.5mm
				XT60	3.5mm	14 (12 Max.	60	-3000	2s/6s	12 or 13	EC3		EC3	13	3.5mm	13		eFlite 32-60	14	3.5mm
				EC3	3.5mm	14	60	-4000	2s/6s	12	XT60	50	XT60	12	3.5mm	14				
				Deans		14	60					60	XT60	14	3.5mm	14				
				Dualsky DC3	3,5mm	12	60											eFlite 90-12	13	4mm
12	35	45	75	4mm Bullet	4mm	12	80											1500W	12	4mm
								4400-5000	3s/6s	10	EC5	80	EC3	10	3.5mm	12	50mm	2500W	12	4mm
10	50	60	90	HXT 4mm	4mm	10 or 12	80	3000-4500	3s/6s		HXT 4mmm									
				EC5	4mm	10 or 12	100													
								3000-6000	4s/6s	8	XT90	100	HTX 5.5mm	10	3.5mm	10				
8	65	75	100	XT90	4.5mm	8 or 10	120													
				5mm Bullet	5mm	8						90 to 150	XT90	8	5.5mm	14				
								5000	3s/4s	8	HXT 5.5mm	120	EC3	8	4mm	10				
				5.5mm Bullet	5.5mm	8														
				HXT 5.5mm	5.5mm															
																		eFlite 180		6.5mm
6		100	135	6mm Bullet	6mm		120													
				XT150	6mm		150											eFlite 360		6.5mm
				8mm Bullet	8mm		200													

Wire AWG for Molex Picoblade and JST based Connectors

Silicone Wire				Connector/ Pin					
Wire	Cold Amp.	Warm	Hot Amp.	Type	Common Name Use	Pin Spacing	AWG	Amp	
32	0.8	2	4	JST-SH	Nano or Micro Mini (UMX Micro Planes) (Flight Controller)	1mm	32	0.8	
							30	0.8	
							28	1	
30	0.8	3	5		(Video cable)		26	1.25	
				JST-GH	Locking Housing	1.25mm	32 - 26	1	
28	1	4	6	Molex Picoblade	Futaba Micro (3/4 /6 pin Camera) (Video cable)	1.25mm	24 - 30	1	
							32	0.8	
				Hirose DF-13		1.25mm	26 - 32	1	
26	1.25	5	7	JST-ZH	Micro (Spectrum Satellite)	1.5mm		1	
				JST-PH		2mm		2	
24	3	7	10	Molex 51005/51006		2mm		2	
				JST-RCY	JST (Common Red 2 Pin Power)	2.5mm	22 -26	3	
22	8	10	13				28	1	
				JST-XH	Lipo Balance Plug	2.5mm	22	3	
20	10	15	20	Standard Servo	Standard Futaba and JR Servo pin (Heavy Duty and long extensions use AWG 20)	2.54mm (0.1")	22 -28	3	

JST-SH 1mm Molex PicoBlade 1.25mm JST-ZH 1.5mm JST-XH 2.5mm 2S LiPo Balance Plug
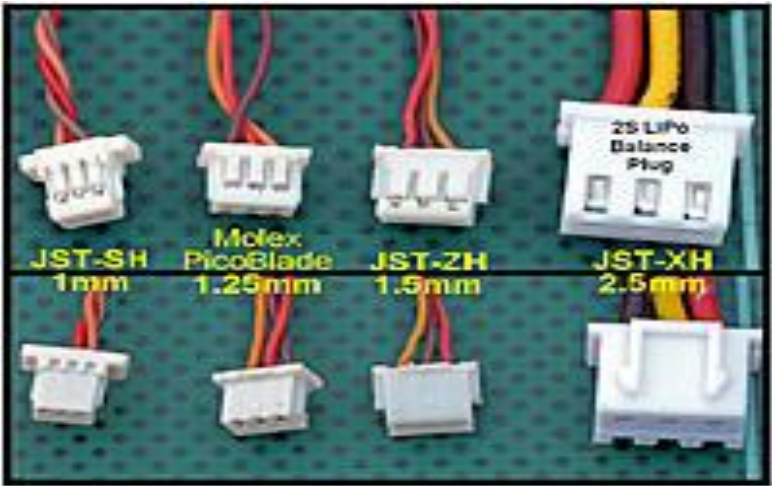
JST-PH and JST-XH standard servo pins

Common Plugs for RC Models

Note - Usually Gender is based on the metal pins not on the housing's.

JST's gender is based on housing.

Standard Bullet Connectors

4.0mm Standard Bullet Connectors

XT Connector's

 XT30 Male Plug   (on ESC   )   XT63 Female Plug (on Battery)

XT60 Male Plug   (on ESC   )   XT60 Female Plug (on Battery)

XT90 Male Plug   (on ESC   )   XT90 Female Plug (on Battery)

Relative Size of XT plugs

Connector XT150 6mm Red

Connector XT150 6mm Black
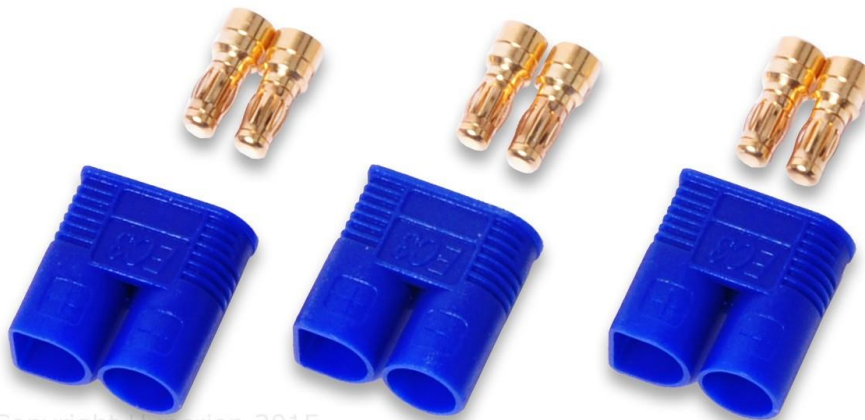
3.5mm Male EC3 Connector (large housing to ESC, charger etc.)

Female EC3 (small housing to battery)
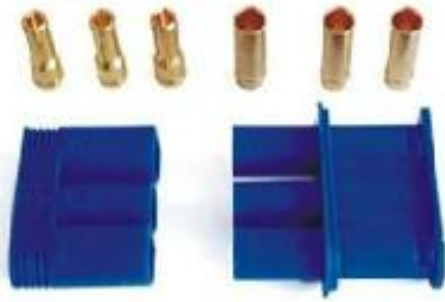
3P EC5 Connector

2P EC5 Connector

EC3 Connector

EC2 Connector

New EC3 Connector

New EC5 Connector

HXT 4mm **(**Be careful with the polarity of these plugs.)

Warning if using multiple batteries in a model ,it is possible to connect two batteries together in a short circuit.

Battery Terminal 4.0mm gold connector

* Positive / Red lead = FEMALE pin inside large size connector tube

* Negative / Black lead = MALE pin inside small size connector tube.

ESC, Charger, Motor , Load etc, 4.0mm gold connector

* Positive / Red lead = MALE pin inside small size connector tube.

* Negative / Black lead = FEMALE pin inside large size connector tube

JST RCY Connector

JST Male housing connector (<u>note</u> gender based on housing not pin)

JST female housing connector   (<u>note</u> gender based on housing not pin)
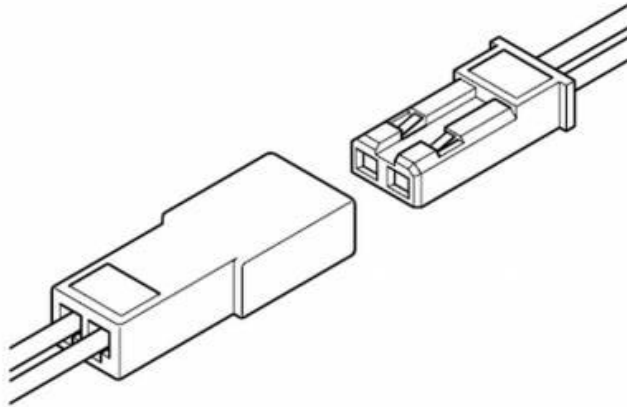
Polarity

Male Housing (female pin) on Battery

Female Housing (male pin) on ESC/Motor etc.
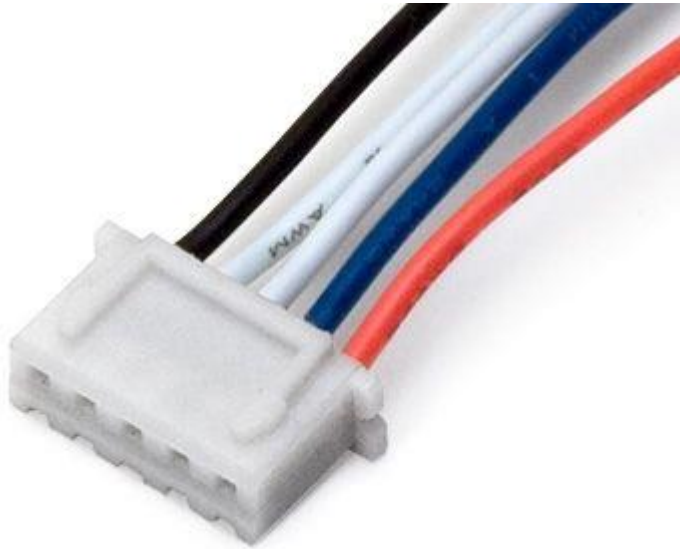
Connector Balance JST-XH 4S

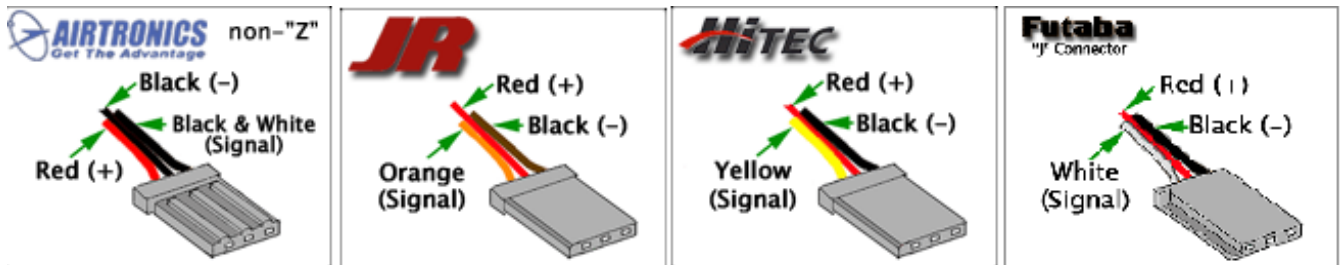**Servo Connector (Futaba)**

Female Housing (with Male pins)   Male Housing (with Female pins)
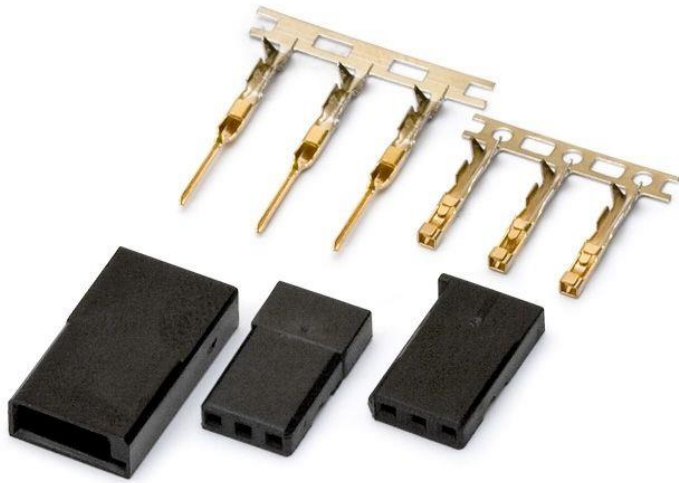
Connector Futaba gold plated pair

Futaba RX Battery Connector

Four Common Servo Wiring codes.