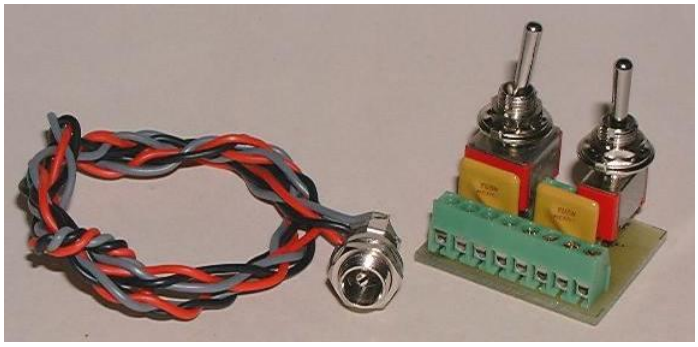
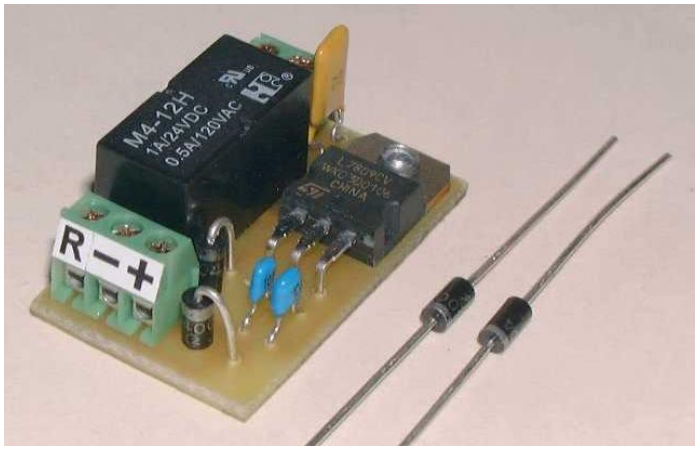
NEAT DOODADS TO ASSIST INSTALLATION.

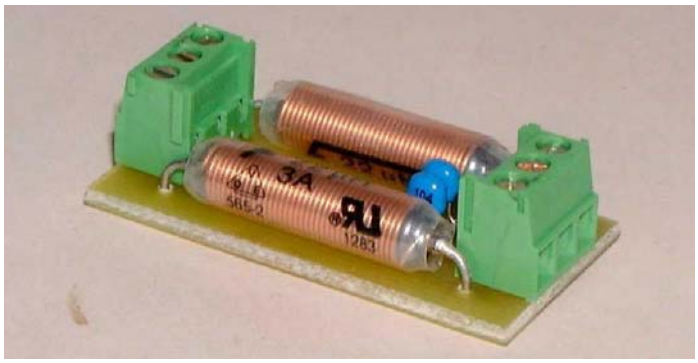
#BIK-U **B**attery **I**nstall **K**it - **U**niversal. Our most popular kit..
The pcb has a DPDT ON-OFF switch, 3 amp Polyswitch® fuse and screw terminals all mounted on a small PCB. 27mm x 20mm x 15mm.
Included is a pre-wired jack for Charge/AUX-BAT.



#BIK-U+VC. 32mm x 16mm x 15mm. Mounted on it are an ON-OFF switch, 2 x 3 amp auto reset Polyswitch® fuses, a volume control for Sierra®/Phoenix® type sound and screw terminals. Incuded is a pre-wired jack for Charge/AUX-BAT.

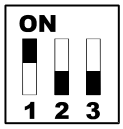
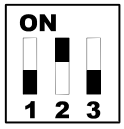
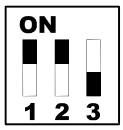
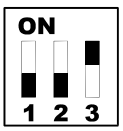
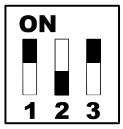
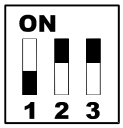


#RELAY-U 37mm x 23mm x 14mm with a 1 amp 12 volt relay designed to reverse the polarity of a fixed voltage using the lighting outputs of an RCS throttle. Includes diodes.
Suitable for 12 volt - 24 volt batteries.
Easy screwdriver installation.
Highly recommended for installations to simplify wiring reversing lights.



#RF-CHK 40mm x 20mm x 10mm with screw terminals, two RF chokes and two .1µf capacitors.
Use one per motor to suppress RF motor "Noise".

The **#SSI-12v3** replaces the regular **SIERRA®** 6 volt battery & provides an optically isolated motor reference It is required to access the "At Idle" effects such as the spent exhaust, stop toot & firemen Fred. 33mm x 25mm x 10mm.

EMP-103 DIP SWITCH SETTING."BC"	ADJUST	BASIC (1)	ELITE (2)	AUTO (3)
 0		RUN	RUN	RUN
 1	Accelerate Brake	(1) 5 Seconds (2) 10 Seconds (3) 20 Seconds	(1) 5 Seconds (2) 10 Seconds (3) 20 seconds	(1) 5 Seconds (2) 10 Seconds (3) 20 Seconds
 2	Whistle Tx #1	(1) Momentary (2) Latch On/Off (3) Off	(1) Momentary (2) Latch On/Off (3) Off	(1) Automatic (2) Off
 3	Bell Tx #2	(1) Auto (A) (2) Auto (B) (3) Off	(1) Momentary (2) Latch On/Off (3) Off	(1) Auto (A) (2) Auto (B) (3) Off
 4	Auxiliary Tx #3	(1) On - up (2) On - down (3) Off	(1) Momentary (2) Latch On/Off (3) Off	(1) On - up (2) On - down (3) Off
 5	Max speed	(1) Full speed (2) 75% speed (3) 50% speed	(1) Full speed (2) 75% speed (3) 50% speed	(1) Full speed (2) 75% speed (3) 50% speed
 6	Dwell time.	Unused	Unused	(1) 10 s (2) 30 s (3) 1 m (4) 2 m (5) 4 m
 7	Select Programme	Lights flash once	Lights flash twice	Lights flash thrice

Please note: The **GREY** background indicates the default settings as supplied.
The (1) symbol always indicates the default setting in each programme.
(1), (2) & (3) also indicate how many flashes the lights make when programming.

Please note: The "BC" refers to the binary code (0-7) positions of the DIP switches.

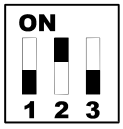
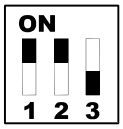
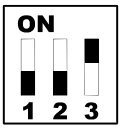
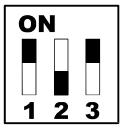
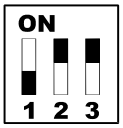
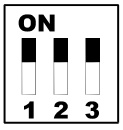
e.g. BC3 is codes # 1 and # 2 both on & # 3 OFF. It is **NOT** DIP switch # 3 ON.
As RCS has always done, the part of switch you move is shown in black.

Please note: When a programme setting is changed it is effective across the three programmes.

e.g. Say you wish to have the automatic whistle in Automatic mode. If you change the mode to ADVANCED R/C the whistle function is automatically set to MOMENTARY and will need to be reprogrammed to ON-OFF operation if that is how you want it.

Please note: Pay special attention when placing magnets for automatic operation.

eg. The reversing magnet, which is set AFTER the stopping magnet, MUST be placed about

EL-102 DIP SWITCH SETTING."BC"	ADJUST	BASIC (1)	ELITE (2)	
 0		RUN	RUN	
 1	Accelerate Brake	(1) 10 Seconds (2) 5 seconds	(1) 10 Seconds (2) 5 seconds	
 2	Whistle Tx #1	(1) Momentary (2) Latch On/Off	(1) Momentary (2) Latch On/Off	
 3	Bell Tx #2	(1) Auto (A) (2) Auto (B) (3) Off	(1) Momentary (2) Latch On/Off	
 4	Auxiliary TX #3	(1) On - up (2) On - down (3) Off	(1) Momentary (2) Latch On/Off	
 5	Max speed	(1) Full speed (2) 75% speed (3) 50% speed	(1) Full speed (2) 75% speed (3) 50% speed	
 6	Operating Mode	Unused	(1) Full cen/off (2) Posi-Change	
 7	Select Programme	Lights flash once	Lights flash twice	

Please note: The GREY background indicates the default settings as supplied.
The (1) symbol always indicates the default setting in each programme.
(1), (2) & (3) also indicate how many flashes the lights make when programming

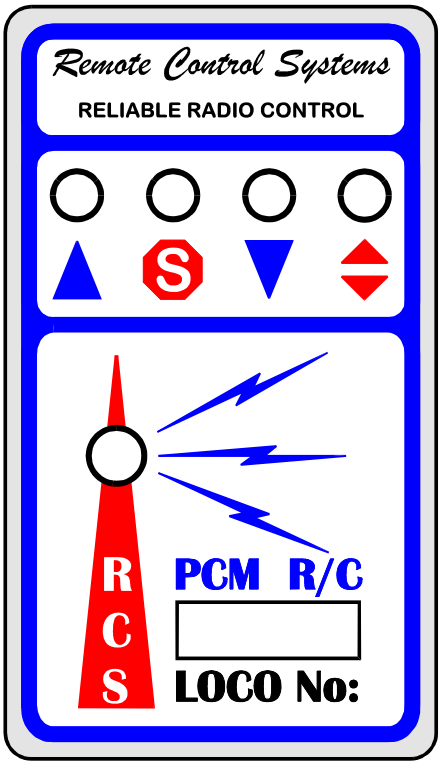
Set the code switches to whichever function you wish to programme then turn power to throttle ON and note how many times the lights flash. If not correct turn power OFF & then ON again until they flash correctly. Once a change has been made the throttle must be switched OFF, the DIP switches returned to BC0 (or a different setting to programme another feature) before turning power ON again..

Please note: The "BC" refers to the binary code (0-7) positions of the DIP switches.

e.g. BC3 is codes # 1 and # 2 both on & # 3 OFF. It is NOT DIP switch # 3 ON.
As RCS has always done, the part of switch you move is shown in black.

Please note: When a programme setting is changed it is effective across the three programmes.

RCS TX-4 HANDPIECE INSTRUCTIONS



HOW TO USE THE TX-4.

PRESS THE RAISED ● FUNCTION BUTTON WHEN USING TX HANDPIECE.

BASIC CENTRE-OFF

- **FORWARD MOTION. Accel/Brake.**
- **QUICK STOP. Auto ramp down.**
- **REARWARD MOTION. Accel/Brake.**
- **WHISTLE FUNCTION Mom or On-Off.**

FULL CENTRE-OFF

- **FORWARD MOTION. Accel/Brake.**
- **QUICK STOP. Auto ramp down.**
- **REARWARD MOTION. Accel/Brake.**
- **QUICK STOP Kaydee® 20% stop.**

POSI-CHANGE (EL-102 only)

- **SPEED UP**
- **STOP (double speed)**
- **SLOW DOWN**
- **CHANGE DIRECTION + KADEE**

PLEASE NOTE: In FULL CENTRE OFF & POSI CHANGE modes the TX-4 has no accessory function on button #4.

INDICATION of TRANSMISSION
TX-4 has an buzzer that sounds when transmitting.
Buzzer tone changes as battery gets flat.

SETTING ADDRESS CODES & LINKING LOCOS.

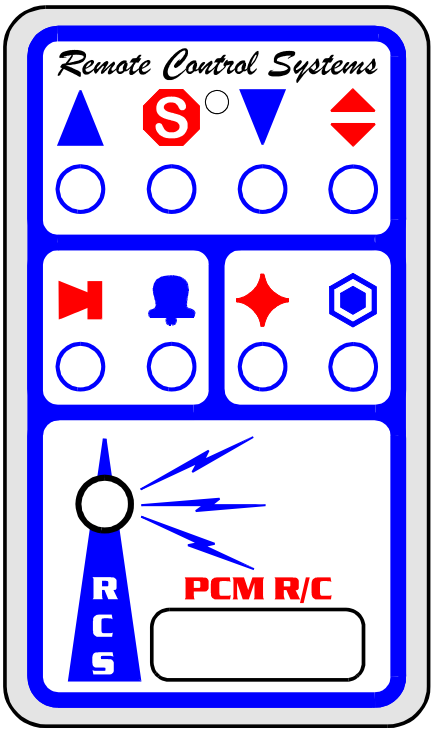
CAUTION!!!!! IT IS MOST IMPORTANT to turn OFF all locos on the same frequency that you DO NOT wish to be Linked. DO NOT reset address codes without checking first.

SETTING CODES. Remove the transmitter handpiece battery cover & set code switches **1 - 8** ON in any combination that suits you. There are 256 discrete combinations available.

EL-102 operating program. Switch ON any loco on the same frequency.
Then turn ON code **# 9** in TX & press the S button.
EMP-103 operating program. Switch ON any loco on the same frequency.
Then turn ON code **# 9** in TX & press the ▲▼ button.
In both programs the lights will flash to indicate acceptance of the code.
Turn loco OFF. Turn TX handpiece code switch **# 9** OFF. Replace battery cover. You are ready to go.

LINKING LOCOS. There is no need to reset the address codes in the TX if you are simply adding another loco with different codes to that particular TX handpiece.
Just repeat the steps above to link extra locos to the TX handpiece.
In either program the newly acquired loco will flash lights to acknowledge code set. Then turn OFF the loco(s) that flashed. Turn all locos back on and you are ready to run.
MU'ing. As long as the locos are performance matched, simply turn on those linked locos you wish to use.
Provided you have them all operating on BASIC or ELITE CENTRE OFF they will respond together.
The locos can be joined together or placed anywhere in the train.

OPERATING THE TX-24 (EL-102 & EMP-103)



BASIC CENTRE OFF

- FORWARD MOTION
- STOP (double speed)
- REARWARD MOTION
- F1 WHISTLE/HORN
- No function
- F2 Automatic only functions
- + F3 Automatic only function
- + No function

FULL CENTRE OFF

- FORWARD MOTION
- STOP (double speed)
- REARWARD MOTION
- KADEE STOP
- F1 WHISTLE/HORN
- F2 BELL
- + F3 AUX
- + LIGHTS ON - OFF

POSI-CHANGE (EL-102 only)

- SPEED UP
- STOP (double speed)
- SLOW DOWN
- CHANGE DIRECTION + KADEE
- F1 WHISTLE/HORN
- F2 BELL
- + F3 AUX
- + LIGHTS ON - OFF

SETTING TX-24 CODES. Remove the TX-24 hand piece battery cover & set code switches **1 - 6** ON in any combination that suits you. There are 64 discrete combinations available. Replace battery cover.
LINKING LOCOS. There is no need to reset the address codes in the TX if you are simply adding another loco with different codes to that particular TX hand piece. Switch ON any same frequency loco. Then press:

+ + **TOGETHER (= 9 + 2). For the EL-102 program**

+ + **TOGETHER (= 9 + 4). For the EMP-103 program**

The newly acquired loco will flash lights to acknowledge code set. Then turn OFF the loco(s) that flashed. **MU'ing.** As long as the locos are performance matched, simply turn on those you wish to use.
Provided you have them all operating on BASIC or ELITE CENTRE OFF they will respond together. The locos can be joined together or placed anywhere in the train.

N.B. & are shift keys only. They will be used separately in future extra accessory controls.