

Autostrada *e*-Cruise

Installation instructions for
LC-70 Land Cruiser 4.5 V8 TDi (With Air-bag).
RF Stalk.

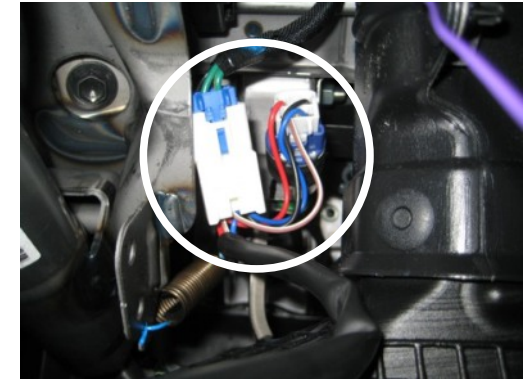
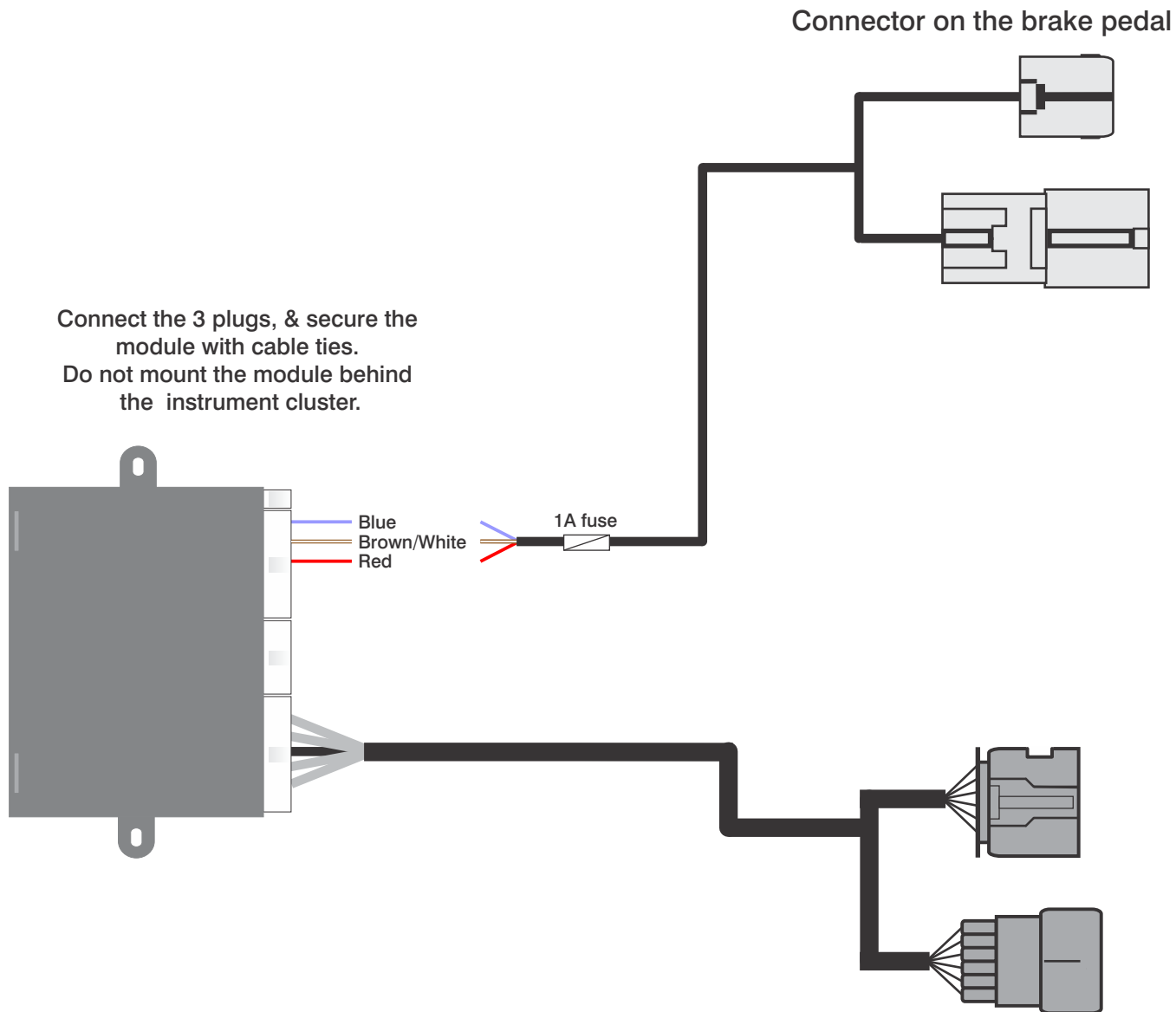


Do not mount the control module
behind the instrument cluster.
VSS wire must be soldered.

Please note the following warnings.

1. This product should only be installed by a suitably qualified installer.
2. In some installations, the drivers SRS air-bag is required to be removed.
This must be done in accordance with the manufacturers instructions.
Air-bags are an explosive device, & failure to adhere to the manufacturers instructions,
could result in injury or death. If you are not familiar with these instructions, DO NOT remove the air-bag.
Seek a professional installer, who is trained in the removal of air-bags.
3. All connections to the vehicle must be done as per these instructions.
Failure to do so, could result in damage to sensitive vehicle electronics, or damage to the control module.

Kit contents: Control module.
Main loom.
Switch loom.
Pedal loom.
Control switch.
Fitting kit.
Fitting instructions.
Operating instructions.

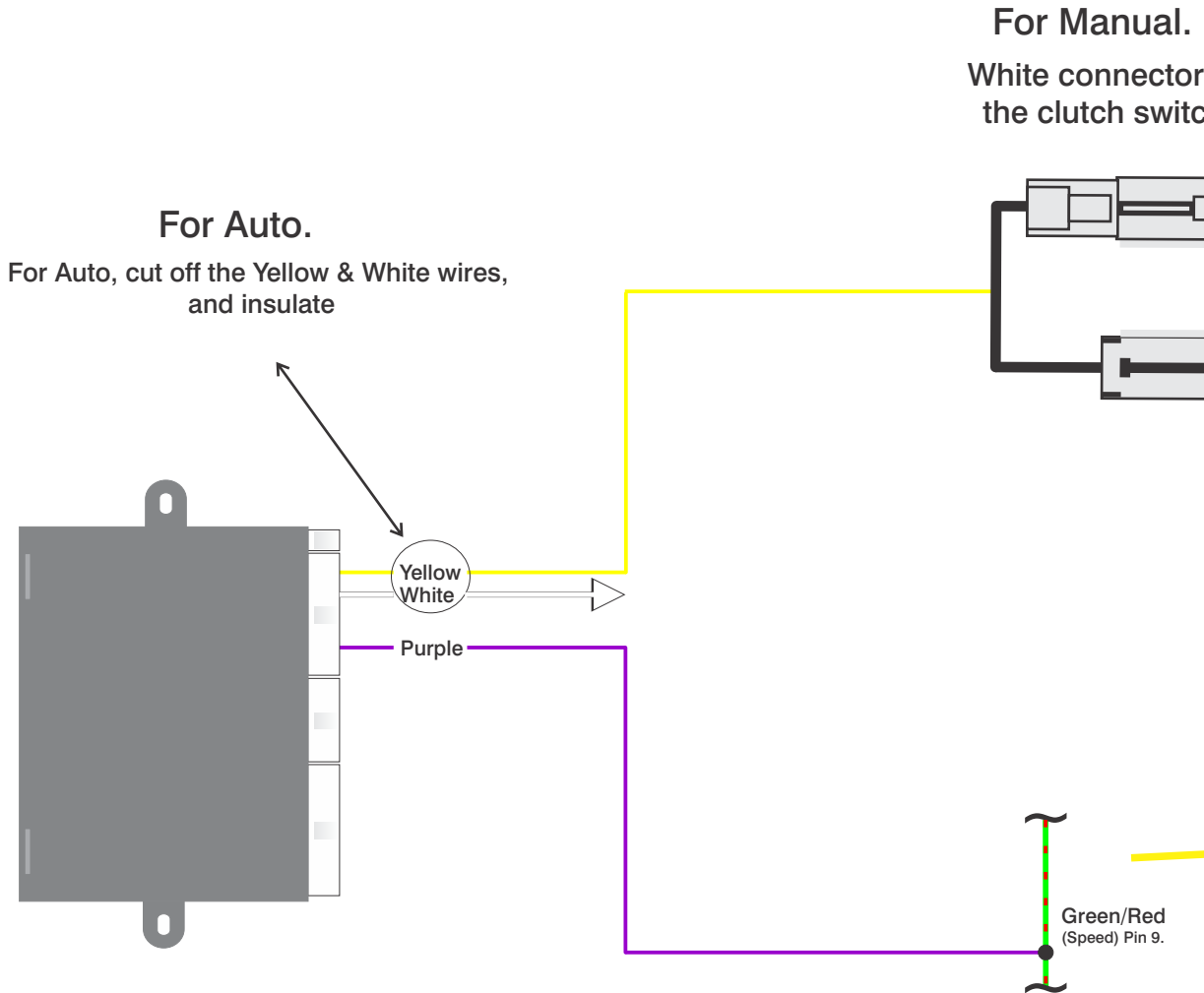


Connect brake T-patch to factory brake switch.

Connector on the accelerator pedal

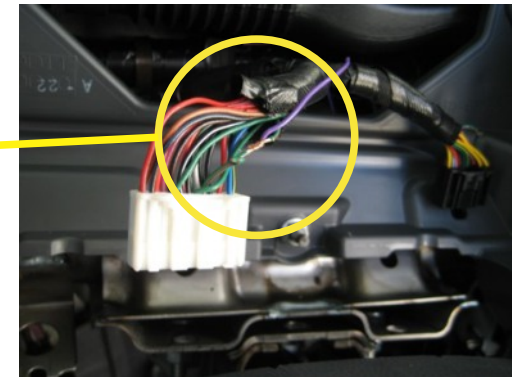


Connect the cruise T-patch pedal harness between the throttle pedal & the vehicles harness.



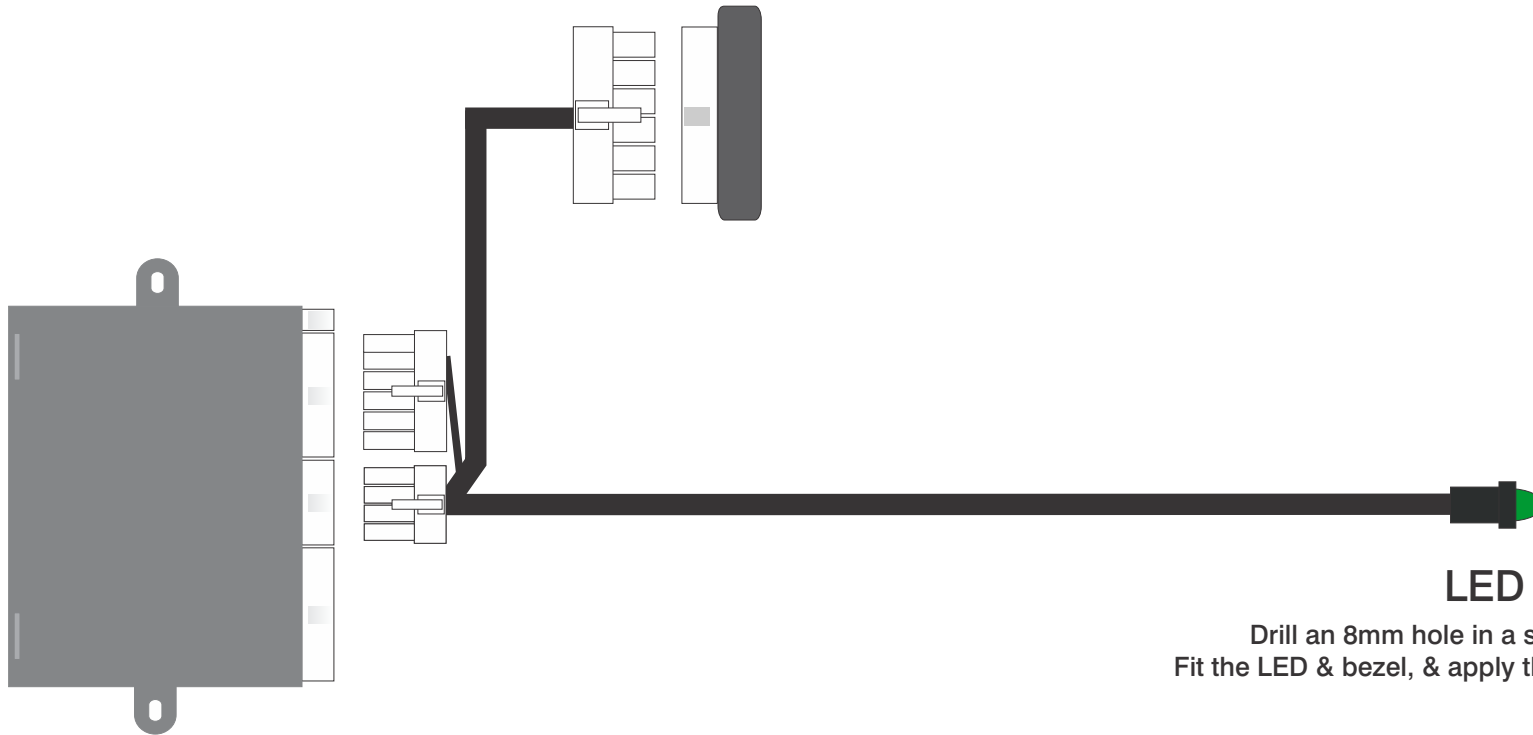
Connect clutch T-patch to factory clutch switch.
NOTE; The Yellow wire should match with the
Pink/Black wire.

White connector behind
the instrument cluster.
(remove the instrument cluster).



Solder the Purple wire to the Green/Red
wire in the White connector plugged in to the
instrument cluster.

Secure the RF receiver with cable-ties.

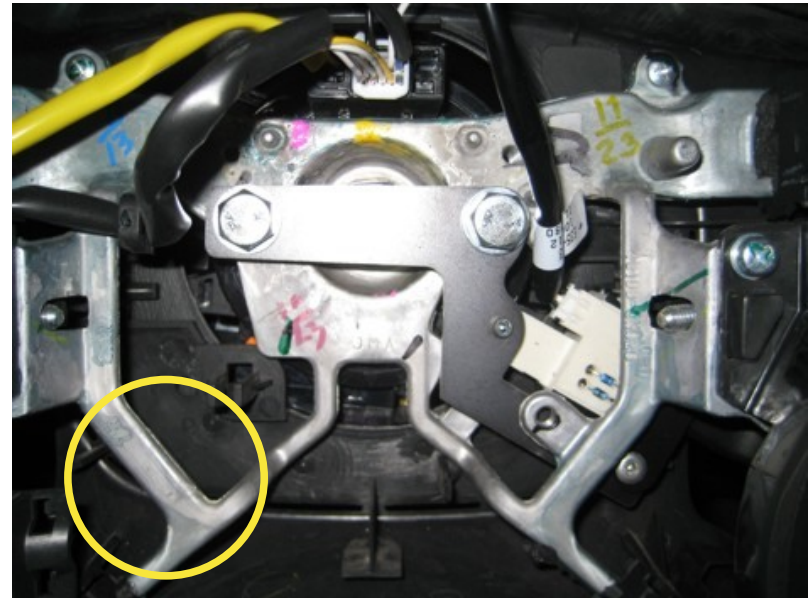


LED

Drill an 8mm hole in a spare switch blank.
Fit the LED & bezel, & apply the Cruise-control sticker.

Switch fitting instructions.

1. Disconnect battery.
2. Remove air-bag. (As per instructions in Toyota workshop manual).
3. Install switch, using bolts & washers provided.
4. Secure the RF dongle to the bracing of the steering wheel.
(In the position circled).
Make sure there is room for the air-bag to be re-fitted.
5. Refit the air-bag. (as per instructions in Toyota workshop manual).
6. Carefully mark & cut out hole in the R/H side cover, to fit over switch, allowing full movement of the switch. (A template is provided).
7. Re-connect battery.
8. Road-test as per instructions in owners manual.



Autostrada E-Cruise-II wire/function description

NOTE: Only use a multi-meter for testing. Using a test-light can damage some circuits.

14 Position Connector A

1. Not used
2. Not used
3. Not used
4. Output circuit 2 to throttle pedal
5. Output circuit 2 to ECU
6. Output circuit 1 to throttle pedal
7. Output circuit 1 to ECU
8. Ground input
9. Not used
10. Not used
11. Not used
12. Not used
13. Not used
14. Not used

Wire Colour

1. Blue/Black
2. Yellow/White
3. Yellow
4. Red/Black (or Red)
5. Yellow/Black (or Yellow)
6. White/Orange (or White)
7. Orange/Green (or Green)
8. Black
9. Red
10. White/Violet or Blue/White
11. Grey/Black
12. Grey/White
13. Not used
14. Not used

12 Position Connector C

1. Clutch +12v input
2. Clutch 0V/Earth input
3. Brake +12V input
4. VSS input
5. Power +12V Ignition input
6. Ground Input/Output
7. LED output (SET)
8. Not used
9. Not used
10. Not used
11. Not used
12. Brake 0V/ Earth switched input

Wire Colour

1. Yellow
2. White
3. Blue
4. Violet
5. Red
6. White
7. Green
8. Not used
9. Not used
10. Not used
11. White/Violet or Blue/White
12. Brown/White

8 Position Connector B

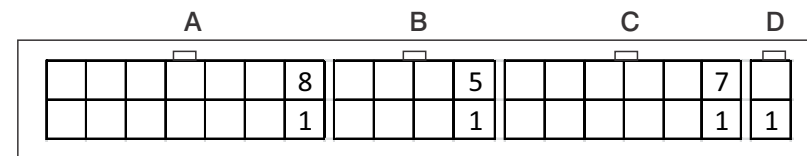
1. Not used
2. Not used
3. On/accl/resume input function
4. Set/dec input function
5. Ground output
6. LED output (ON)
7. Power +12V output
8. Off input function

Wire Colour

1. Not used
2. Not used
3. Black/Violet (SWS) - Blue (LHS)
4. Red/Violet (SWS) - White (LHS)
5. Black (SWS)
6. White/Blue
7. Yellow/Blue (SWS) - Red (LHS)
8. Violet/Green (SWS) - Yellow (LHS)

*SWS - Steering Wheel Switch

*LHS - Lefthand Stalk



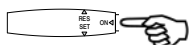
Trouble shooting guide.

Enable Diagnostic mode:

There is a 3 colour service LED surface-mounted on the circuit board next to the programming port on the back of the module. (opposite side from the connectors). To enter Diagnostic Mode, use the following instructions.



Turn on ignition.



Within 2 seconds, press and hold the ON function



Wait until test LED lights up in RED color



Release ON function



Within 2 seconds



Press and hold SET function



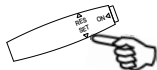
The test LED lights up in ORANGE color



Release SET function



Within 2 seconds



Press RES function



The test LED will flash in all 3 colours, provided that no inputs are activated. (ie; brakes, clutch). Otherwise the test LED will light up red.

Enter test 1 - Brake function.

Activate RES briefly. Test LED will flash orange 1 time.

1. If both brake wires are installed correctly, the test LED will light up green.
2. Hot side of brake is defective = test LED lights up red.
3. Cold side of brake is defective = test LED lights up orange.
4. Both sides of brake defective = test LED flashes all 3 colors.
5. When brake pedal is depressed, the test LED lights up orange.

Enter test 2 - Clutch function.

Activate RES briefly. Test LED will flash orange 2 times.

1. If clutch wires are installed correctly, the test LED lights up green.
2. If clutch is defective, the test LED lights up red.
3. When clutch pedal is depressed, the test LED lights up red.

Enter test 3 - Accelerator pedal function (engine off).

1. Activate RES briefly. Test LED will flash orange 3 times.
2. The test LED will slowly flash red/green.
3. Depressing the accelerator pedal will increase the freq. of the flashing.

Enter test 4 - VSS function (the engine must be running).

Activate RES briefly. Test LED will flash orange 4 times.

1. The test LED should flash green when vehicle is moved.

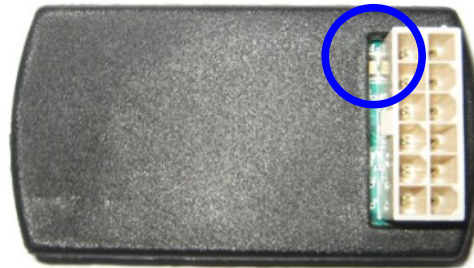
Pairing of the transmitter & receiver

The switch set comes pre-programmed, & should operate after installation.

If for some reason the cruise does not turn ON, try this procedure.

There is a Red surface-mount LED visible through the gap between the connector & the lid of the receiver. (circled in the picture 1. below).

Step 1. Turn the Ignition ON, the LED should flash 2 short flashes. Turn Ignition OFF.
(If there are no flashes, check for power & earth to receiver. Power is Pin 10, Earth is Pin 6).



Picture 1.

Pin 2 of the receiver is the programming trigger. (circled in the picture 2. below).

(The loom to the receiver may have an Orange wire already in Pin 2.

This wire is for pairing. Remove the loose end from the PVC tube & use it for the earth trigger).

Step 2. Use a piece of wire to short Pin 2 to earth, & turn the Ignition ON.

The LED should flash 3 times. (1 long & 2 short flashes).

Remove the piece of wire.



Picture 2.

The receiver should now be in programming mode.

Step 3. Push ON/OFF, the LED should light up while the button is pressed.

Operate all of the functions of the switch.

The LED should light up while any of the buttons are pressed.

Turn the Ignition OFF. The transmitter & receiver should now be paired.

E-Cruise II

“Install change-over relay”.

If the vehicle has LED brake-lights, there will be no Earth signal on the Brown/White wire. The cruise control will think that the brakes have been applied, & will not SET. A relay can be installed to provide the Earth for the cruise to SET, & for the cruise to cancel when the brakes are applied. A 5-Pin change-over relay must be used. This is installed in to the cruise controls Brown/White wire as shown.

