

MX5 Wink Mod



Installation

Please visit www.mx5tech.co.uk for extended instructions including photographs and videos which will significantly aid installation and explain operation.

1. Precautions

- Only to be used on MK1 Mazda MX5 and Eunos cars with popup headlamps. Installation requires cutting and joining cables feeding the popup motors. Installation should only be undertaken by a competent person and no responsibility is accepted for incorrect installation or any damage/faults caused in any way by use of this mod.
- Do not expose to moisture or extremes of temperature. The cables are automotive rated and suitable for use in the engine bay but should be kept clear of moving parts and any engine components which get hot.
- Only use the cables provided. No guarantee can be given for use of alternative cables or control button.

2. Kit Contents

1 x Control box. 1x2m length 4-core automotive cable. 1x2m 2-core control cable terminated in pushbutton. 1x2m red power cable. 1x2m black power cable. 4 x red spade crimps. 4 x red female crimps. 3 cable grommets (Please fit to 3 holes in the control box)

3. Locate Mounting Point for Control Box

The control box can be mounted anywhere in the engine bay but should be adjacent to one or other of the headlamp assemblies. Possible locations include under one of the headlamp assemblies or behind the headlamp assembly. The location should allow the box to be securely fixed using cable ties, screws or similar. Mounting method and location is the choice of the user.

4. Locate Power Supply Points

The Wink Mod requires a ground connection and a 12vdc supply. If you wish the Wink Mod to function with this ignition off, this should be a permanent 12v supply point. If you wish the Wink Mod only to work when the ignition is on, then locate a switched 12v supply. The supply points should be within 2m of the control box.

DISCONNECT THE BATTERY – IMPORTANT!!!

Run the single black cable from your selected ground point to the box, passing it through one of the rubber grommets into terminal 11. Run the single red cable from your 12v location to the control box through the same grommet as the black cable to terminal 12.

5. Install and Connect the Control Switch

The Wink Mod is supplied with a pre-wired control switch connected to 2m of automotive rated cable. Locate a position for the control switch – normally on your dashboard within easy reach of the driver. Drill a 12.7mm (1/2") hole, mount the switch and route the cable back to the control box. Pass the wire through the same grommet at the power cables then connect the red wire to terminal 1 and the black wire to terminal 2. **Note: All wires pass over circuit board into the connector which is why the screw terminals face away from the edge of the board.**

6. Install the Lamp Motor Cables

Locate the plug and socket assembly next to each headlamp. Determine a suitable cable route from each headlamp motor plug to your control box avoiding moving parts and hot engine parts. Cut the 4-core cable into two lengths so that each will reach from the control box to each of these plug and socket assemblies using your preferred cable route. Strip approximately 6cm of the black outer sheathing from each end of the cables and then strip approximately 7-8mm of the coloured sheathing from each inner cable. Connect the cables into the control box passing each through its own grommet. The colours and connections are shown in the table at the end of this document. Loosely route each cable to its associated headlight motor plug/socket. Do not secure the cables too tightly at this point to allow for easier manipulation and connection.

7. Crimp Cable Ends

The Wink Mod kit includes crimp connectors to allow easy connection of the cables. The advantage of these is that the Wink Mod can be removed at any time and the original connections remade without any further soldering etc. However, the wires may be connected using any method including soldering, terminal block etc. If you are using the supplied crimps, use a crimping tool or heavy pliers to crimp spade terminals to the WHITE and RED wires and female crimp terminals to the GREEN and BROWN wires.

8. Prepare Motor Control Cables

The following instructions should be applied to each headlamp. Remove the connector from the body of the car by sliding the whole connector assembly down. Now separate the plug and socket. Locate the part which connects into the motor (rather than the part which connects to the car wiring loom) and locate the RED/YELLOW cable and the WHITE/RED cable. Other cables are Black, Green and Brown and should not be touched.

[Note: On some cars, the RED/YELLOW cable may be RED/GREEN instead. In this case where RED/YELLOW is mentioned in this document, replace with RED/GREEN]

Cut the RED/YELLOW and WHITE/RED cables at their mid-point so that there is enough cable to attach a crimp to each cut end (or join using your selected method). Strip approx. 7-8mm of the sheathing from each of the cut ends.

If using the supplied crimps, attach a SPADE crimp to the RED/YELLOW and WHITE/RED cables on the CONNECTOR side (i.e. the side which goes into the connector and then onto the loom)

If using the supplied crimps, attach a FEMALE crimp to the RED/YELLOW and WHITE/RED cables on the MOTOR side (i.e. the side which goes directly into the headlamp motor.)

9. Join Control Cables

Join the cables from the control box to the cut cables at the headlamp motor connection as follows:

From Control Box	Motor Cable
Brown Wire (Female)	Red/Yellow (Spade) : To connector/loom
Red Wire (Spade)	Red/Yellow (Female) : To Motor
Green Wire (Female)	White/Red (Spade) : To connector/loom
White Wire (Spade)	White/Red (Female) : To Motor

If using the crimps, simply firmly join the appropriate crimps. If using your own connection method, securely join the cables as above and ensure all cables are suitable insulated.

10. Secure Cables, Connectors and Control Box

Reconnect the plug/sockets for the headlamp motors and re-attach the connector to the car body by sliding up into the clip. Securely fix the 4-core cable into place using cable ties or similar. Fit and secure the lid onto the control box and ensure the control box is securely attached to the car body.

11. Full connection list.

Terminal	Cable	4-Core Cable Termination
1	Button Red	
2	Button Black	
3	Headlight 1: Brown	Female Crimp
4	Headlight 1: Red	Spade Crimp
5	Headlight 1: Green	Female Crimp
6	Headlight 1: White	Spade Crimp
7	Headlight 2: Brown	Female Crimp
8	Headlight 2: Red	Spade Crimp
9	Headlight 2: Green	Female Crimp
10	Headlight 2: White	Spade Crimp
11	Ground – Single Black	
12	+12vdc – Single Red	

12. Initial Test

Reconnect the battery. Ensure that the popup headlights work as usual using the standard switch/flash/headlights on etc. If the lights do not popup correctly, disconnect the battery again and double check all your connections particularly the crimp connections, the connections into the control box. Also check that you have firmly re-connected the original plug/socket for each headlamp. If the lights still do not function correctly, disconnect the battery and disconnect the crimps from the 4-core cables and re-connect to their original cables. If, after reconnecting the battery, the lights still don't popup, the crimps are most likely not correctly crimped.

13. Initial Wink Test

Briefly press the pushbutton. One headlamp should wink. Briefly press the button twice. The other headlamp should wink. If neither winks, check the power supply to the control box with a multi-meter to ensure there is a 12v supply. If only one works, check the box wiring and crimps for the one which doesn't wink. If both headlamps wink, proceed to the operation instructions overleaf.

MX5 Wink Mod



Operation

Please visit www.mx5tech.co.uk for extended instructions including photographs and videos which will help explain operation.

IMPORTANT NOTE: THIS WINK MOD MUST NOT BE USED WHILST DRIVING AT NIGHT AS LIGHTS WILL BE OBSCURED. ONLY USE THE MOD AT NIGHT WHEN PARKED IN A SAFE LOCATION.

The Wink Mod has two MODES of operation and 4 variations of wink in each of the modes. The wink operation depends on the currently set mode, the number of presses of the switch and whether you already have the lights popped up.

To select the different wink options, you will press the switch a number of times using either short or long (held) presses.

To ensure correct operation, depress the switch firmly on each press. For multiple presses, you do not need to be ultra-fast. A speed of around ½ second per press should be sufficient. Long presses should be held until the selected function activates.

The following table shows the switch presses required for each operation.

Press Sequence	Mode	Lights	Actions						
Single Press – Single wink default	1								
Two Presses	1								
Three Presses	1								
Four Presses	1								
Single Press – Single down wink default	2								
Two Presses	2								
Three Presses	2								
Four Presses	2								
Single Press – Single down wink default	1								
Two Presses	1								
Three Presses	1								
Four Presses	1								
Single Press – Single wink default	2								
Two Presses	2								
Three Presses	2								
Four Presses	2								
Long Press – Change to Mode 2	1								
Long Press – Change to Mode 2	1								
Long Press – Change to Mode 1	2								
Long Press – Change to Mode 1	2								
Short then Long – Change default to Light 1	N/A								
Short then Long – Change default to Light 1	N/A								
Two short then Long – Change default to Light 2	N/A								
Two short then Long – Change default to Light 2	N/A								