



MOTOR CYCLE, GENERAL PURPOSE, HARLEY - DAVIDSON MT350 TECHNICAL DESCRIPTION

MT350 Accessory Wiring



This is intended as a walk through & Guide only to the Installation of Accessories on a Harley Davidson MT350.

This is a guide only please refer to the relevant manuals for full details or ask professional advice if in doubt.

This is the writer(s) interpretation of the required steps only and does not take any liability for the accuracy of the information supplied in this publication and it is supplied as is.

MT350 ACCESSORY WIRING



Amendment Record

Amendment No.	Amendment	By	Date
DRAFT	N/A	Joth	16 May 2012

Before carrying out the Procedure ensure you have the current amendment.

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General Tools

13 MM Spanner
6 mm Allen Key
Flat Head Screw Driver

Fluids

None

Specialist Tools

Crimping Tool For Red / Blue / Yellow Crimps



Required Parts

2 m 15A Twin Red / Black Cable (Maplin XS72) *



1 x 30A SPDT Auto 12Vdc Relay (Maplin N00AW) *



2 x 15A Fuse Holders (Maplin KU34) *



1x 7.5A and 1 x 1A or 2A Fuse (Spade type) *
7.5A For Heavy Loads 2A for Small Loads / Coil Control



2 x Blue Insulated Crimp Terminals - Eyelets (Maplin JH72P) *
(Terminating onto the Battery)



3 x Yellow Fully Insulated Female Crimp Terminal (Maplin ML83E) *
10-20 x Blue Fully Insulated Female Crimp Terminal (Maplin JH82D) *



1 x Yellow Fully Insulated Male Crimp Terminal (Maplin ML82D) *
10-20 x Blue Fully Insulated Male Crimp Terminal (Maplin JH90X) *



**The parts marked * are the parts that you will need for this procedure.
Other Parts were changed as general maintenance.**

Quantities may vary depending on the type of Accessories you are fitting.

See <http://www.maplin.co.uk> for Parts

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NOTES:

Alternator

Please note the Alternator is capable of supplying 15.8 Amperes 190watts and the maximum lighting loading of a standard bike is 9 Amperes

Head Light Main Beam 40w

Tail Light 5w

Stop Light 21w

Indicator x 2 21w x 2 = 42w

= 108w / 12 = 9 Amperes

**so we have Alternator rating of 15.8A - 9A lighting load = 6.9 Amperes spare
+ Running the Bike
"So we have little to play with"**

The Tutorial is based around connecting the following

Sat Nav / iPod / Communications etc Say 2 Watts

Heated Gloves or Grips 27 Watts

Halogen Spot Lights 2 x 20w each = 40 Watts (If LED minimal)

Fuse Sizes

You will need to calculating the fuse sizes you require to connect the above accessories;

The Formula is $I = P / E$

Where

I = Current in Amperes

P = Power in Watts

E= Energy in Volts

So $I = ((27w + 40w + 2w) / 12v)$
= 5.75 Amperes so a 7.5A Fuse could be fitted.

Note: the Cable Rating > Fuse Rating > Load

Reducing Energy Requirement

You can change the Tail / Stop Light and Indicators to LED's reduce the power consumption. Ensure they comply with the law and the indicator unit will need replacing to a electronic type.

Crimp Lugs on the Positive Battery Side Cables.

All crimp lugs fed from the positive battery side must be Fully insulated female spade terminals so if they come in contact with the frame the insulation on the terminals will prevent short circuits.

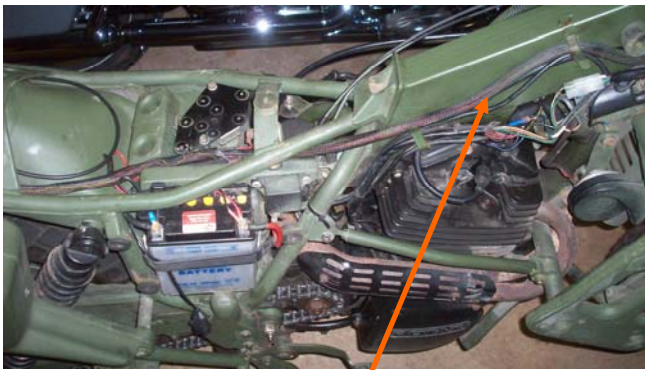
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1. Remove the Seat and Side Panel, then Switch off the fuel tap, disconnect the fuel pipe and remove the petrol tank.



2. Remove the Head Light by removing the 4 screws at the corners of the housing, unplug the lamp connector and store the Head Light Safely.



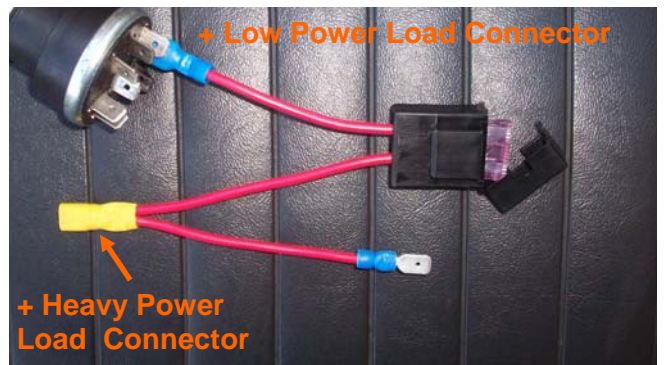
3. Thread the 15A Red / Black Twin Cable through the existing cable conduit/sleeve from the Battery Location in to the head light cowl.



4. You may need to remove the retaining strap at the front side of the frame to ease the cable through.



5. Once the cable is through the head light cowl crimp a blue female spade terminal onto the red core.



6. Crimp a Blue Female crimp on to one of the Fuse Holder cables and a yellow female and blue male crimp on to the other.

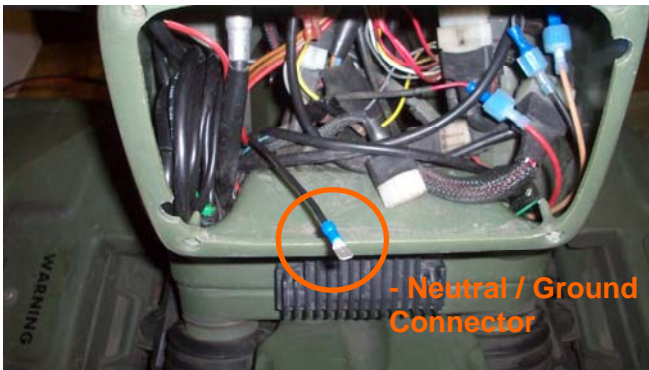


7. Plug the blue male crimp into the female crimp installed in slide 5.



8. Plug the Blue male crimp onto Terminal 7 on the ignition switch.

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- Neutral / Ground Connector

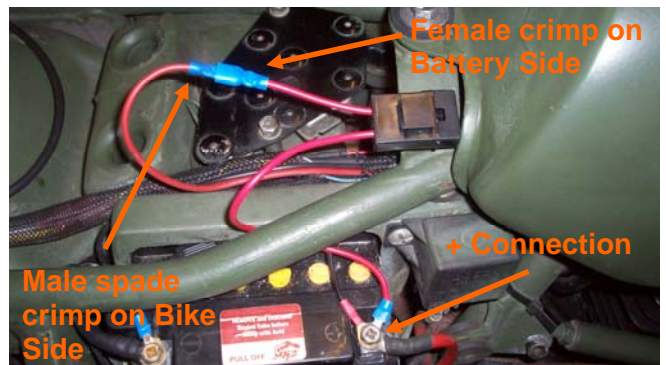
9. Crimp a Spade terminal onto the black core of the twin cable



10. Connect a blue crimp eyelet to the Black core at the battery end and connect to the Negative terminal on the battery.



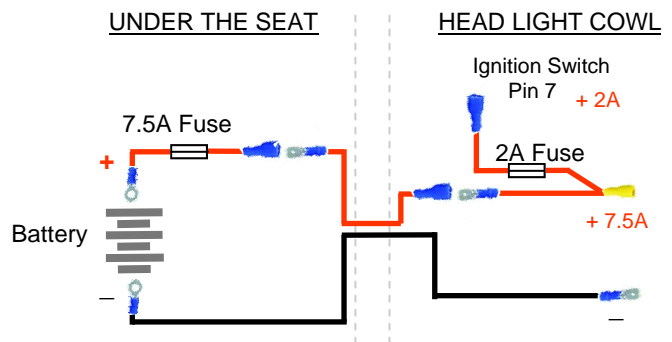
11. Crimp a Female spade terminal and a eyelet onto the 2nd fuse holder cables and insert a 7.5A fuse.



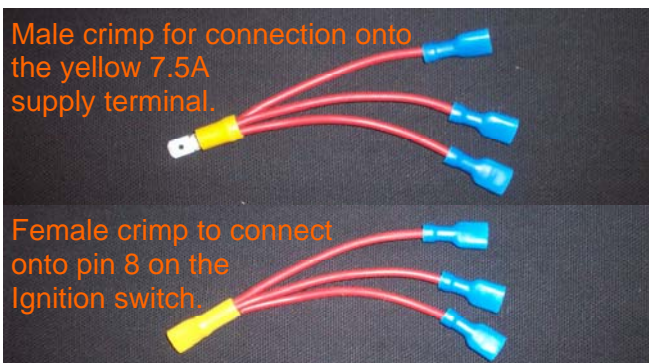
12. Connect a male spade crimp to the red core at the battery, plug in the fuse holder and then connect to the Positive + terminal on the battery.



13. Tidy the wiring so the cores will not get trapped. Refit the Seat, Tank and Side Panel.



14. We now have a 7.5A supply (Positive and Negative) inside the head lamp cowl and a positive supply to the Accessory Switch.



15. To allow multiple connections to the final terminals and accessory switch in the head light cowl you can make splitter cables as above.



16. These splitter cables will allow up to 3 items to be plugged in and makes changes easier in the future. (Plug & Play).

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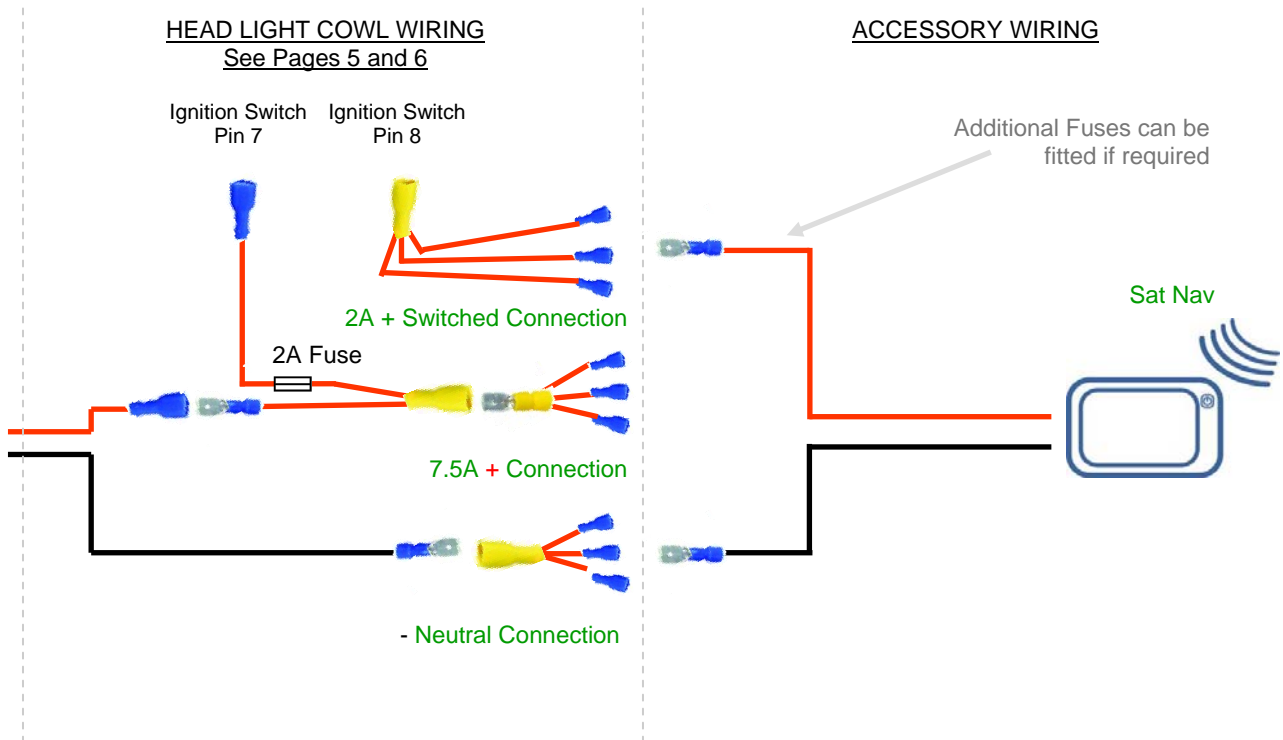
SAT NAV WIRING

Due to the low loading for the Sat Nav Unit it can be connected direct to the Accessory Switch.

When the Accessory switch is not in the "Acc" position the Sat Nav will be off.
When the Accessory switch is in the "Acc" position the Sat Nav will be on.

The Sat Nav "on / off switch" will be used to controlled the Sat Nav Further.

The advantage of controlling the Sat Nav through the "Acc" setting of the Ignition switch is that when you remove the keys from the ignition switch you know that the accessory will be off and will not drain the battery.



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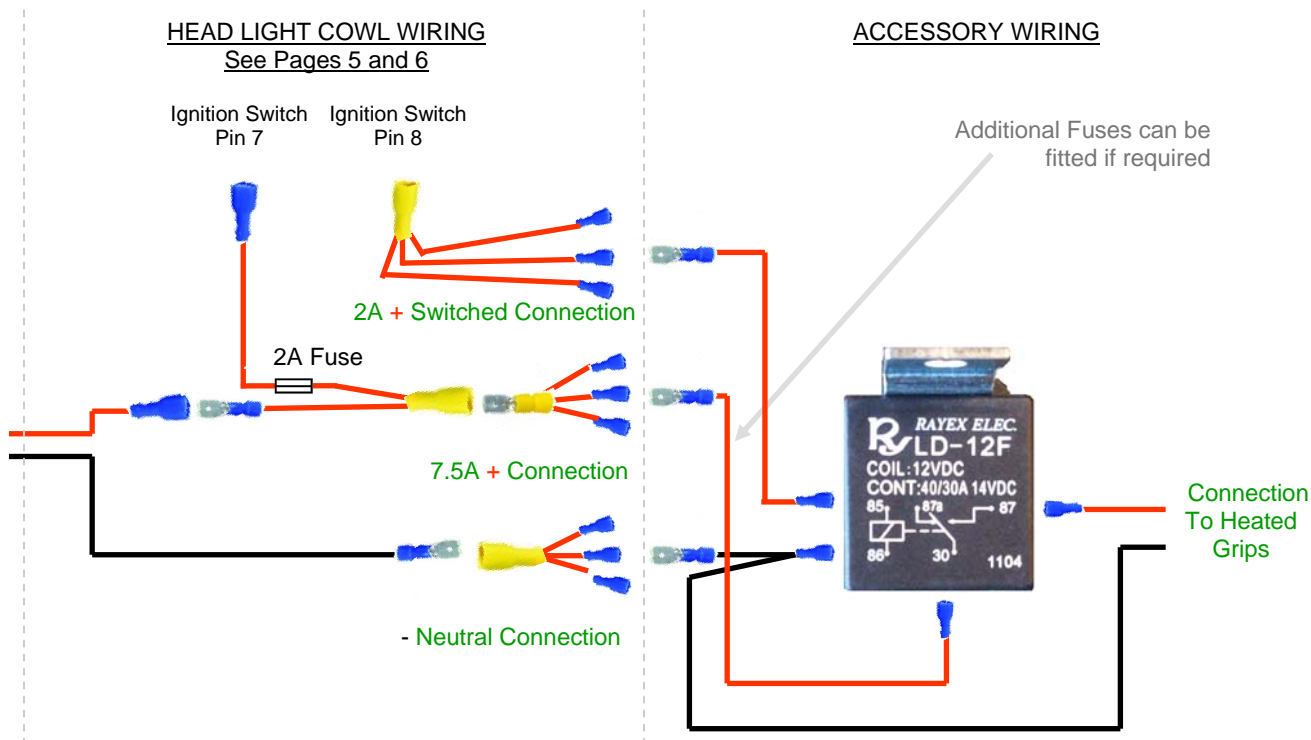
Heated Gloves / Grips

Due to the loading for the heated gloves / Grips a relay will be needed to reduce the current flowing through the Accessory Switch.

When the Accessory switch is not in the "Acc" position the heated gloves / grips will be off.
When the Accessory switch is in the "Acc" position the heated gloves / grips will be on.

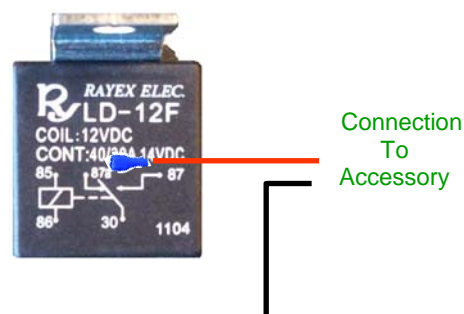
The heated gloves or grips "on / off / temperature switch" will be used to controlled the grips.

The advantage of controlling the heated gloves or Grips through the "Acc" setting is that when you remove the keys from the ignition switch you know that the accessory will be off and will not drain the battery.



If you want a accessory to be on when the bike is off connect the live connection to pin 87A

i.e. Alarm



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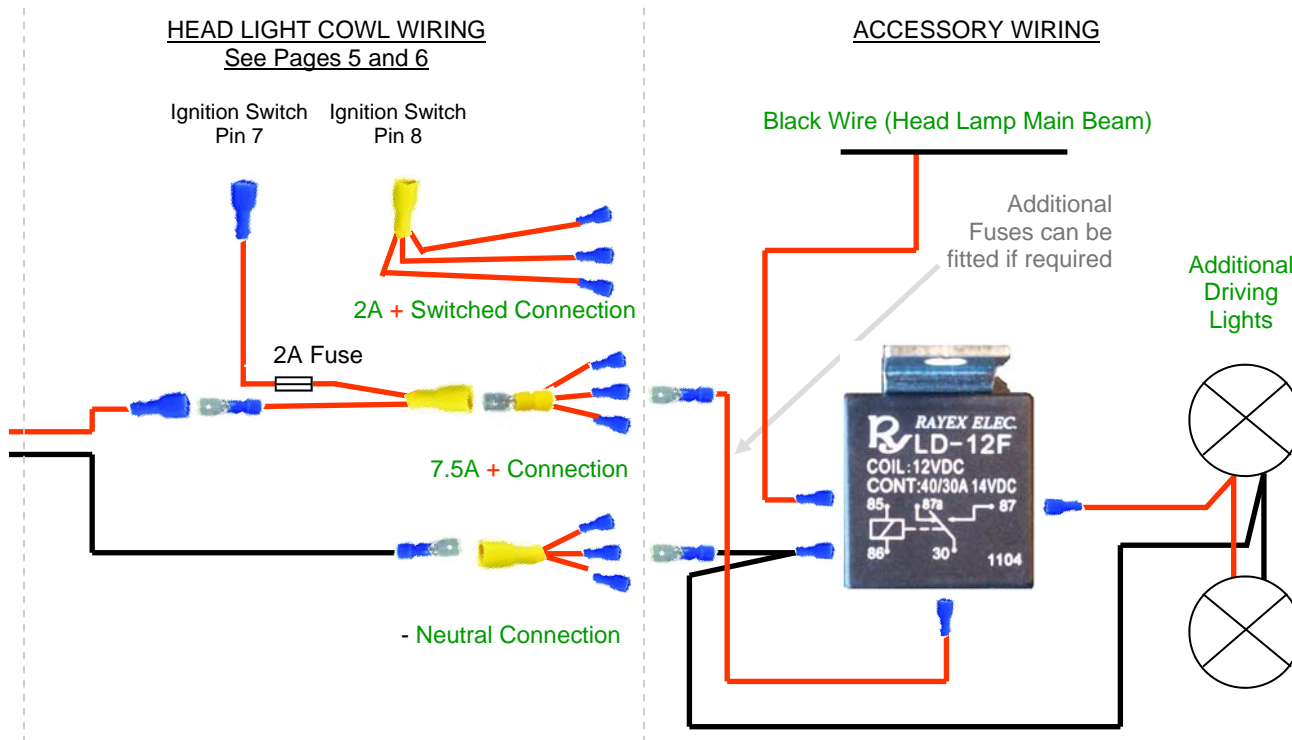
Additional Driving Lights

Due to the loading for the spot lights a relay will be needed to reduce the current flowing through the main beam switch.

When the Head light is dipped the additional driving lights will be off.

When the Head light is switched to main beam the additional driving lights will be on.

The advantage of controlling the additional driving lights through the "Head Light switch" is that when you switch to main beam the lights come on and when switching to dipped lights they go off.





END OF PROCEDURE