

Rex's XT & DT Universal Stripped Down Wiring Loom, SDL1

These wiring diagrams show how to wire DT & XT models that are fitted with Rex's 'RMK' ignition kits or our 12 volt conversions. They can however also be adapted to many systems that use an earthed lighting coil with two wires coming from it. The lighting coil is designed to supply two systems simultaneously, both AC and DC and these diagrams show how this is achieved. Please note we provide these diagrams free of charge for your information only, we do not offer free technical support for them. If you need assistance we can recommend companies who will be able to construct a wiring loom based on these diagrams for you.

Wiring is as essential as the engine, chassis and brakes. It requires considerable knowledge, time & skill to manufacture a reliable system. There is a great deal of detail provided through-out this publication and you should study the whole document fully and in depth to be sure not to miss out on vital information.

Important

1. Please understand that we offer NO technical assistance, whatsoever, for free to download wiring schematics, they are for information only. If you decide to use this information as a reference to build a loom you will also need to rely on your own intuitive to solve any problems that may occur.
2. Although free to download the copyright of this document is owned. If you re-publish this document you must credit "Rex's Speed Shop". Commercial use or reproducing any part of this document is strictly prohibited. Professional builders should credit Rex's or seek written permission. All rights reserved.

3. We recommend using extreme caution when buying parts, while some may look similar many are subtly different internally and simply will not work, or worse damage our equipment. Any warranty on our equipment is invalidated by the use of non specified parts. We can supply all the parts guaranteed to work correctly together to form a reliable electrical system.

4. We accept no liability whatsoever for inaccuracies, omissions, misadventure, accidents or injuries that result from the use of this information. Build quality, wiring standards, manufacturing methods and materials employed are all outside of our control.

Option one is the recommended version for road machines, it offers greater rider safety as front and rear marker lights are powered from the battery when the lights are on, making you more visible to other traffic with the engine idling. This also ensures compliance with lighting regulations where lights must work with the engine off. Note that the head lamp needs the engine running in all these systems. Option two is not to be used on the road. It is a simpler system that only uses the AC power for lights.

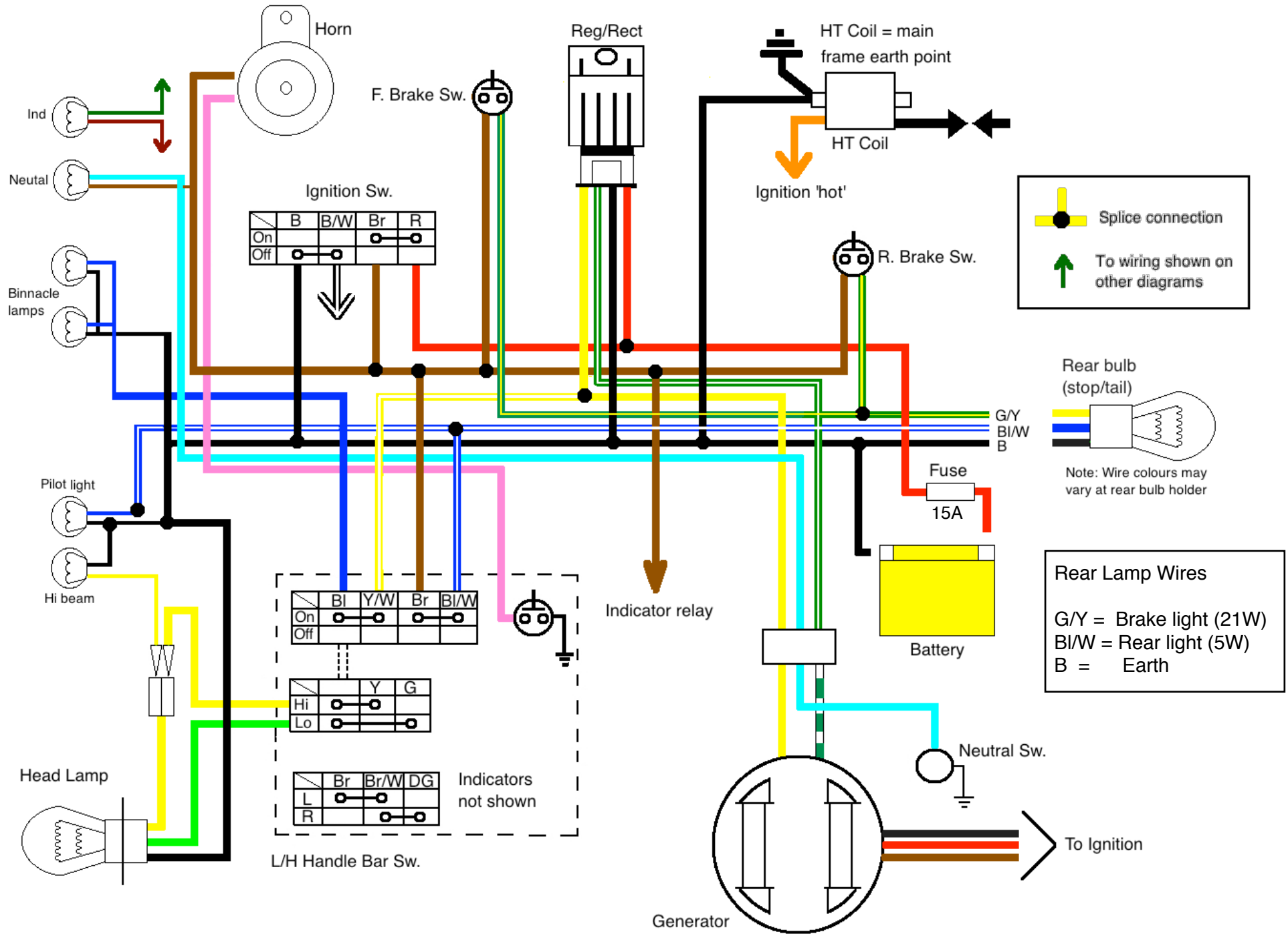
The ignition is totally separate with no connection to the charging so is not shown. Points ignition only needs a single wire to the HT coil & kill switch. Our electronic kits have their own wiring that plugs together in most cases.



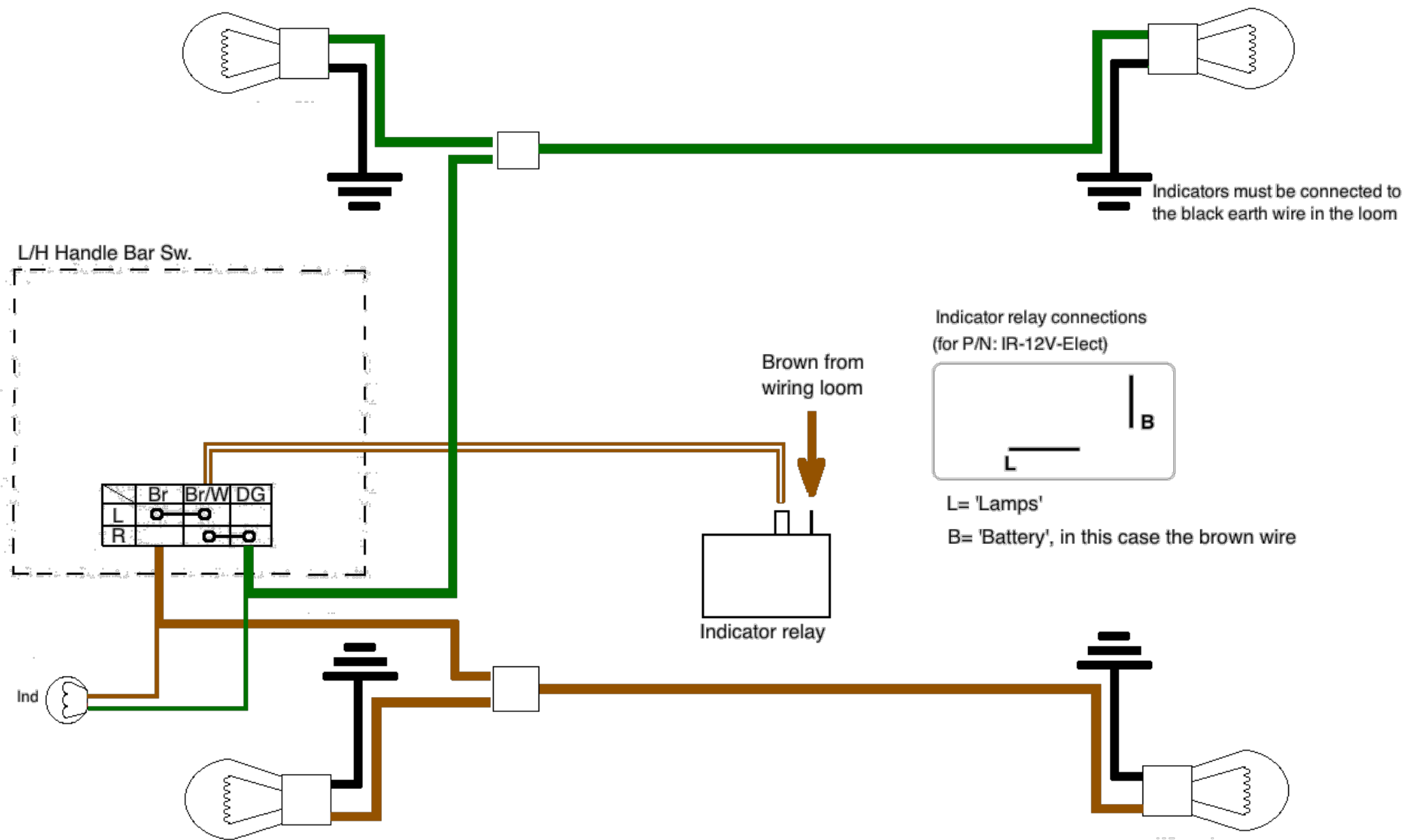
DRG: DT/XT SDL1 Rev 1

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Stripped Down Wiring Loom: Basic - Charging/Lighting for Road machines



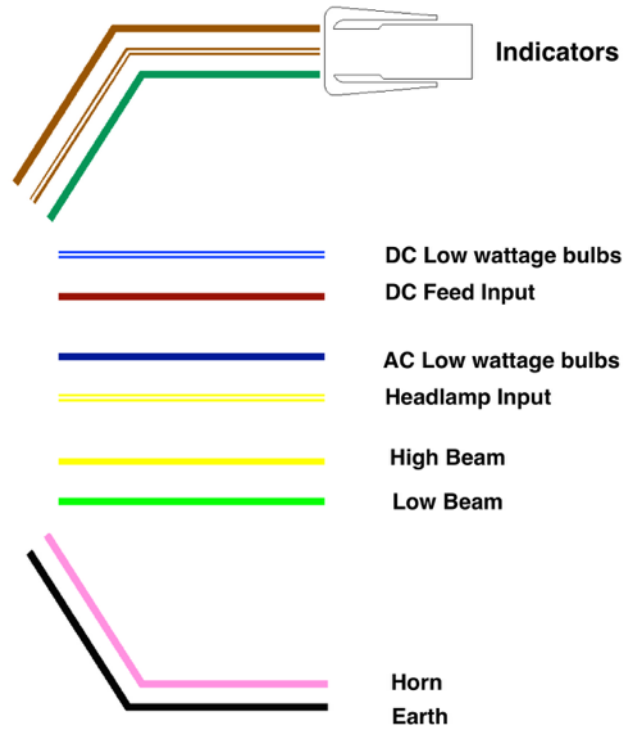
Indicator circuit that can be added to the basic stripped down loom



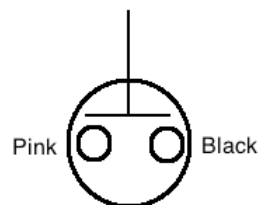
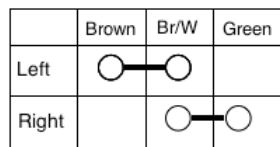
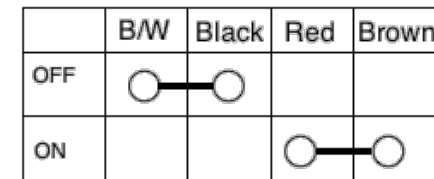
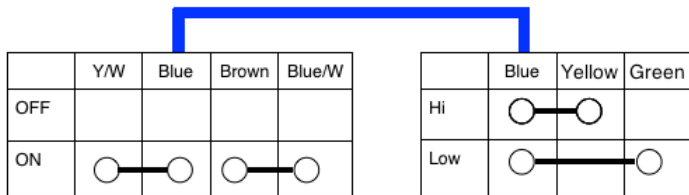
Handle bar switch (P/N HSB-1) & Ignition Sw (P/N IGN-6) wiring details



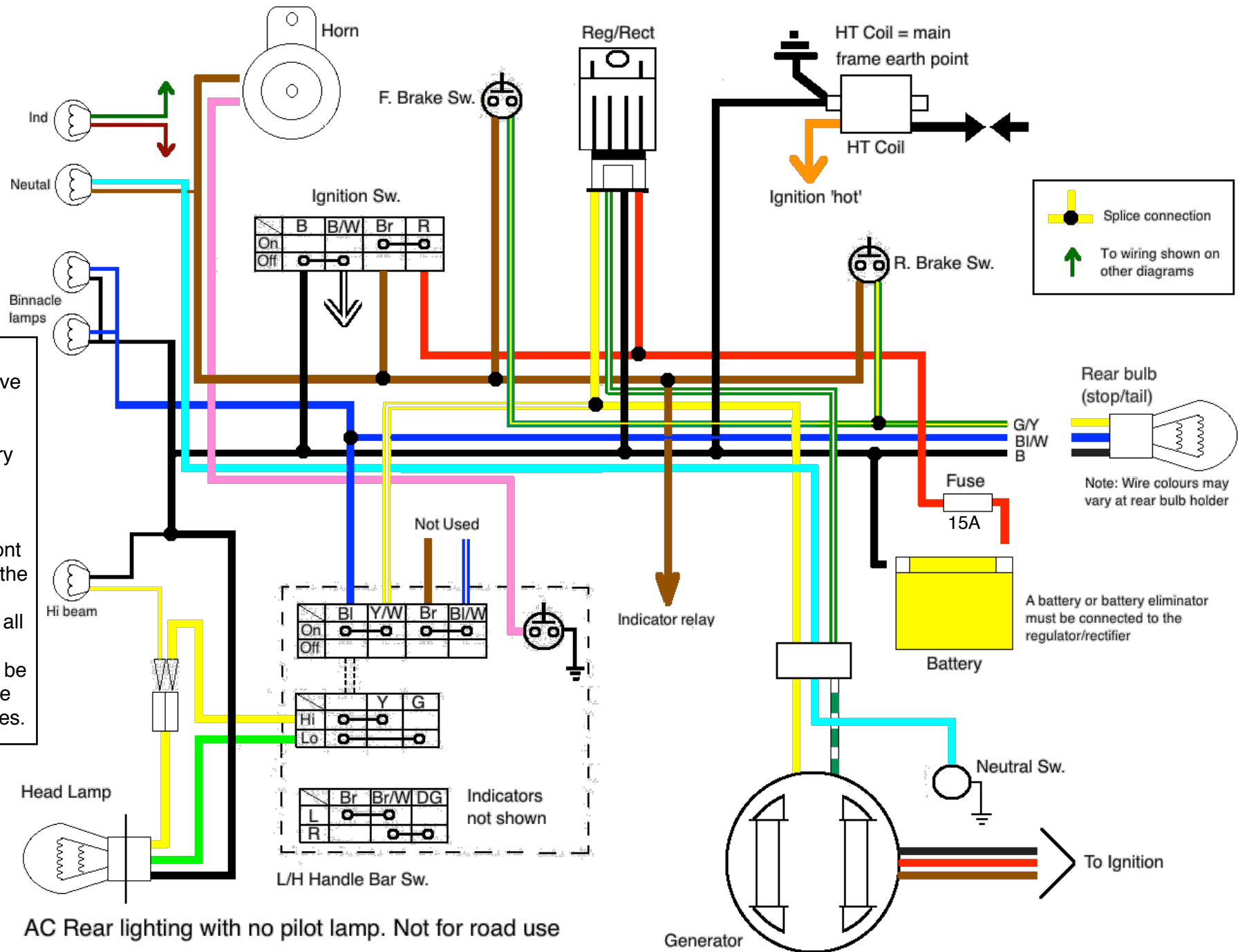
HBS-1



IGN-6



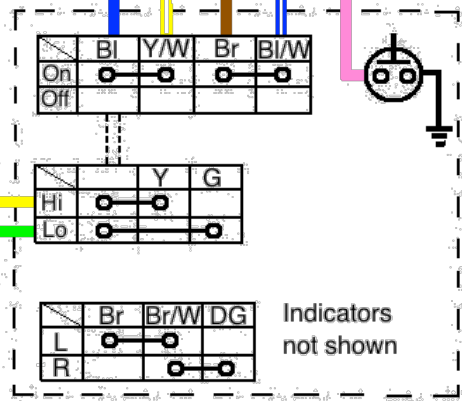
Stripped Down Wiring Loom: AC Only Lighting for competition machines



The regulator must always have the red wire connected to a battery or battery eliminator.

For machines needing only front and rear lights, the DC circuit (red and brown plus all the services connected) can be omitted, the note above still applies.

A battery or battery eliminator must be connected to the regulator/rectifier



L/H Handle Bar Sw.

Wire	Function	Cautions/Warnings/Advice
Black (B)	Earth	As important as 'feed' wires
Black/white	Ignition kill wire	-
Blue (Bl)	Low wattage AC lights	Does not work until engine is running
Blue/white (Bl/W)	Low wattage DC lights	Works when the ignition & light switches selected 'ON'
Brown (Br)	Switched battery power from the ignition switch. Supplies DC powered services when the ignition is in the 'ON' position	NEVER connect the battery to the CDI unit. The CDI with be destroyed if connected to a battery. Caution: Yamaha use red and brown wires between generator and CDI ignition unit - these wires must never be connected to the battery circuit.
Brown/white	Indicator switch feed	Supply to indicator L/R switch, pulses on - off
Dark Brown (DBr)	Indicators - Left	Do not confuse with the brown DC feed
Green (G)	Un-regulated AC (DT Models)	Direct from generator
Green/white (G/W)	Un-regulated AC feed to R/R	Connect either white or green - feeds the regulator/rectifier - (colour depends on model - DT or XT)
Green/yellow (G/Y)	Brake light	-
Dark Green (DG)	Indicators - Right	Do not confuse with generator wires
Light blue (LB)	Neutral light	-
Orange (O)	Ignition 'hot'	Caution 25-300 volts depending on engine speed, never connect to the charging or lighting system.
Red (R)	Battery positive (+Ve)	NEVER connect the battery to the CDI unit. The CDI with be destroyed if connected to a battery. Caution: Yamaha use red and brown wires between generator and CDI ignition unit - these wires must never be connected to the battery circuit.
Pink (P)	Horn	-
White (W)	Un-regulated AC (XT Models)	Direct from generator
Yellow (Y)	Un-regulated AC	Direct feed from generator DT & XT models
Yellow/White (Y/W)	Regulated AC	-

General Notes

1. We supply a pre-plugged wiring loom for the regulator rectifier. This avoids any confusion as to how to connect this part as it is easily damaged by incorrect connection to the battery. Warranty claims will not be entertained where this loom has not been used and regulators are returned with failed rectifiers.

2. Use automotive grade wire of 1.0mm cross sectional conductor area, rated at around 15 amps.

3. When adding terminals at the end of wires, consider if that wire comes live or is it fed with a live. A female terminal which is fully insulated is a safer option where a wire becomes live.

4. A double female bullet socket is an easy way to split a wire to connect two different items.

5. Spliced connections should be made with 'boot lace' in line crimps. Up to 4 wires in one crimp can be used. Where possible insulate with heat shrink or insulating tape.

6. Most DT/XT ignition switches can be adapted to suit this application. The same goes for handle bar switches, however these are considerably more complex. Care is needed to ensure that wires are not connected in un-expected combinations when different switch positions are selected. Make your own thorough checks before applying power!

Recommended Battery Options

Use a sealed AGM lead acid battery. Choose the correct voltage for your system.

Lithium batteries should not be used unless they have 'on board' charging control. Cell balance circuitry is NOT charging control.

MB3U (12V) - Direct replacement for 6N6-3B-1

DT12V-Batt (12V) - Replacement for 6 volt 6N4B-2B or 6N4-2A batteries.

Use original battery if remaining 6 volt.

Bulbs - Choose correct voltage.

Filament bulbs are the recommended type.

Headlamp 45/45W (max)

Rear - 5/21W

Indicator - 18 or 21 watt

Pilot/instrument - 4W

LEDs can be used, however expect problems when using not-recommended options, they are NOT always 'plug & play' options - despite what other vendors may tell you. Most problems are easily fixed. Where problems persist revert to filament bulbs.

We have solutions for LED problems:

- All 4 indicators lighting at once.
- Flickering/not working rear light.
- Use of LED headlamps on AC power.

Description	Part Number	Notes
Horn	HTR12V-B	12 volt
Ignition switch	IGN-6	
Front brake light	BLB-1	Complete bracket assembly with switch.
Regulator rectifier	RR12V-1	12 volt
Wiring loom for regulator	WL-51	
Handle bar switch	HBS-1	
Indicator relay	IR-Elect-12	12 volt (6 volt available)
HT Coil - Points	HTC5	
HT Coil CDi	HTC8	
Fuse holder	FH-1B	
Wiring kit	WLK-2	Selection of wiring products for basic loom construction, includes wires, sleeves & terminals

Using 'boot lace splices' to join wires in side the loom. Crimping is normally sufficient, soldering is not normally required.

