

lammy1

Joined: 19 Dec 2005
Posts: 18
Location: the Netherlands
Posted: Fri Feb 17, 2006 7:37 pm Post subject: How to connect battery

Hello all,

now I am trying to get my Scott ready for registration.
The question for me is can I connect 6 Volt battery directly to the BTH magdyno?

Also what wattage should the bulbs have in my frontlamp and rear lamp?

thanks

Frank
the Netherlands

See my Scott at www.scottin.nl

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Jan Buchwald

Joined: 31 May 2004
Posts: 65
Location: Danmark
Posted: Sat Feb 18, 2006 5:12 pm Post subject:

Hi Frank
Page 5.1.01 in technicalities show a wiring diagram for a circa 1930 model.
Your dynamo should be a "three brush, incorporating a cut out relay.
Dynamo plus should be connected to "Lightning & charging switch +D" (yellow wire) and to the Ammeter, the other side of the ammeter is to be connected to battery +.
I would guess 25w in front and 5w in the back is what you can manege.
Best wishes
Jan B

1956 Birmingham Scott, frame no. S 1060

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lammy1

Joined: 19 Dec 2005
Posts: 18
Location: the Netherlands
Posted: Sun Feb 19, 2006 11:38 am Post subject:

@ Jan

Battery BTH.txt

thank you for your reply.
I don't know if a BTH magdyno has a cut out relay.
The wiring diagram I have from the Technicalities.

Anybody else know more?

greetings

Frank
the Netherlands

See my Scott at www.scottin.nl

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dave bushell

Joined: 09 Jun 2004
Posts: 112
Location: Caterham, Surrey
Posted: Sun Feb 19, 2006 2:58 pm Post subject:

Frank
If the dynamo has a cut-out incorporated, it will be under the cover that
protects the commutator brushes. You can't miss it!
Regards
Dave

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lammy1

Joined: 19 Dec 2005
Posts: 18
Location: the Netherlands
Posted: Tue Feb 21, 2006 5:18 pm Post subject:

to All
or can I run my lights without a battery?
If so that would be great, the battery is always empty when you need it.

greetings

Frank
the netherlands

See my Scott at www.scottin.nl

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efr215

Battery BTH.txt

Joined: 06 Nov 2004
Posts: 80

Posted: Tue Feb 21, 2006 10:52 pm Post subject:

I'd not recommend running without a battery in place as it acts as an energy "sink" and stabilises the voltage in the system.

It is a sad truth that the lead/acid battery is something of a prima donna entity, they do not like standing about, and they are rather adverse to temperature changes, vibration, almost everything really. Indeed it is amazing that they do as well as they do given that they have a pretty rough time of it.

As a lead/acid battery discharges the sulphur in the electrolyte combines with the lead in the plates. When the battery is charged the sulphur re-enters the electrolyte. These sulphate crystals are very small and easily dissolved.

If a battery stands unattended for a period there is a natural tendency to self discharge due to parasitic cells within the batteries plates. Temperature changes and time tend to encourage the sulphate crystals to grow, they then become insoluble in battery strength acid.

The dreaded "sulphated" battery!

There are design and cost considerations in battery manufacture aimed at providing the maximum amps per cubic inch for your pound. Unhappily to get this the plates are largely a compressed powder sponge that changes size with the state of charge and then gets exposed to vibrations that will eventually lead to plate disintegration.

To best look after a battery have it on a maintaining "float" charge in a stable temperature. For a motorcycle battery this will be a few milliamps only. The cells will probably need topping up from time to time unless it is a modern sealed for life type. A new "dry" battery, (no acid), if sealed will keep for years by the way.

Another way to go is to use NiCad cells; they are tough brutes and actually stand better in a discharged state than full. I think they are to be had in fake black rubberised 6V cases these days too.

In the unlikely event the plates in a "dead" or "sulphated" battery are not crumbling a battery may be recovered by emptying the acid, filling with distilled water and charging until the electrolyte reaches a specific gravity of about 1.1. Empty and repeat the process until there is no appreciable rise in S.G. Refill with acid of the correct S.G. and charge. Not recommended for any but the utterly desperate but it does work.

If it's any consolation atomic power stations have batteries so big that every so often they have to take the plates out and saw a foot or so off the bottom of them because they stretch under their own weight!

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lammy1

Joined: 19 Dec 2005
Posts: 18

Location: the Netherlands

Posted: Wed Mar 01, 2006 12:19 pm Post subject:

Battery BTH.txt

@ all

My Scott is through registration.
With a little trick for the electricians it all went smooth.

But I still don't have my BTH connected to the battery.
Inside by BTH is not a cut-out relay.
What can I use instead of the cut-out relay or where can I find one.

greetings

Frank
the Netherlands

See my Scott at www.scottin.nl

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Jan Buchwald

Joined: 31 May 2004
Posts: 65
Location: Danmark
Posted: Wed Mar 01, 2006 2:45 pm Post subject:

I would suggest you modernize it, by leaving out the third brush and add an electronic regulator. I guess you will need the help of someone used to electricians.

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lammy1

Joined: 19 Dec 2005
Posts: 18
Location: the Netherlands
Posted: Wed Mar 01, 2006 4:28 pm Post subject:

@ all

hereby a link to a picture from my BTH with the cover off.

www.scottin.nl/pics/bth001b.jpg

What I can see are two brushes, one connected to the body the other isolated from the body.

For me it just ends here because people talk about three brushes and cut-out relays.

Who can help me?

greetings

Frank
the netherlands

See my Scott at www.scottin.nl

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Jan Buchwald

Joined: 31 May 2004
Posts: 65
Location: Danmark
Posted: wed Mar 01, 2006 6:34 pm Post subject:

You seems to be right, there are no relay to be seen.
Isn't there a connection to a field winding coming out somewhere?
If there is, you can mount a regulator.

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Jan Buchwald

Joined: 31 May 2004
Posts: 65
Location: Danmark
Posted: wed Mar 01, 2006 6:50 pm Post subject:

I don't know if this will help you, but on:
<http://www.bolsover.com/lucas/index.htm> there are some Lucas manuals, and if you
look under Section L2 part a you will find a Lucas dynamo, it is newer, but it
might explain something.

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lammy1

Joined: 19 Dec 2005
Posts: 18
Location: the Netherlands
Posted: Thu Mar 16, 2006 5:50 pm Post subject:

@ all,

Again puzzling about my battery charging problem.
On the BTH as seen in the picture mentioned above the left brush is connected to
the lower
screw witch is isolated from the body.
The right brush is connected to the upper screw an connected to the body.

Battery BTH.txt

So to my thinking the upperscrew is ground an the lower screw is voltage outlet.

So thinking again should it be so simple to put between the BTH and battery a silicon (yes it's a modern one) diode bridge?
Or maybe with some voltage limiter.

I don't know the voltage what is coming off from the BTH.

Maybe my questions are to technical, but maybe the answer can be simple.
For instance: at my scott there is a placed between BTH an battery.

So any help is welcome.

Thanks

Frank
the Netherlands

See my Scott at www.scottin.nl

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Jan Buchwald

Joined: 31 May 2004

Posts: 65

Location: Danmark

Posted: Thu Mar 16, 2006 7:50 pm Post subject:

Are there no sign of a third connection, a field winding?
Normally the dynamo starts making power from the restmagnetism, this power is then lead to the fieldwinding, which becomes more magnetic, and the dynamo makes more power and so on.
Again normally, a regulator makes a connection to the battery when the voltage reaches a bit above 6 volts (the cut out relay) (here you can use your silicon rectifier). When the voltage exceeds 7,5-8 volts, the regulator will lower the voltage to the field winding.

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lammy1

Joined: 19 Dec 2005

Posts: 18

Location: the Netherlands

Posted: Mon Mar 20, 2006 10:22 pm Post subject:

After asking my friend Erik how the battery was connected at his scott there is some clearance.

In his BTH is a small red thing.

Battery BTH.txt

What it was we didn't know, but unfortunately one wire was broken from it.
So now some time for investigation.
It appeared to be a condensator connected from the output screw to the chassis.
The BTH was connected via his headlight switch to the battery.

So to my knowledge/conclusions the BTH charges the battery directly.
The condensator was/is used to eliminate the little sparks coming from the brushes.

Now all I have to do is to wire up my electrics for charging the battery.
One point of warning don't connect your battery directly to the BTH,
because it will run flat very fast as it puts his current through the coils off the BTH.
Use a Diode in series with the BTH current output for preventing this.
Or make sure that your headlight switch disconnect the BTH from the battery when switched off.

Hope this make some clearance in the electrics fog

greetings

Frank
the Netherlands