

Battery modification for a JR DSX9 (2.4 GHz) transmitter.

Ever wondered whether your Tx battery was sufficiently charged when you set out for the field? We've all done it haven't we, put it on charge (with the wall charger or adapter) for a few hours and hoped for the best. Well, this got me thinking how charged up is the battery? have I overcharged it?

I needed more reliable information about what I was doing to enable me to be more fully informed about the state of my Tx battery. The brutal fact is, if this fails then my radio link with my model is broken and I then face grief, possibly a compensation claim or, heaven forbid, a charge of manslaughter. All three are not unknown.

In recent months I have become more and more involved with electric powered gliders and having bought the charger(s), etc, etc, I wondered whether my investment could have a broader base of use. I very quickly realised that I could use an old servo extension lead with a couple of banana connectors to charge/ discharge all my flight batteries (see photo). So my intelligent charger is now the only way that I charge my flight batteries. I can also discharge them using this unit and this will tell me how good the batteries are (I tend to charge them at 0.5Amps and discharge them at 0.7A which enables me to know roughly how long they would last in a model having 4 – 5 servos).



Back to the DSX9. Removing the battery cover and I was greeted with a NiMh battery that was quite



a bit smaller than the compartment it was sitting in. I figured that there would be enough room in there for the battery and a flying lead that I could use to charge it. I unplugged the battery from the circuit board and was dismayed to find a small connector that I didn't have the female version of. Drat! I then contemplated cutting the battery lead so that I could solder in my additional socket; then thought that the solution could be more elegant than brutal.

Incidentally, notice the choice of colours for the battery lead, both of these mean live (positive) to me!

After taking the back of the Tx off (6 screws) I was faced with the view shown in the photo. Did I want to solder directly onto a circuit board? Not if I could avoid it. Ding! The charging socket was there grinning at me. I'll solder my flying lead to this. After all, this is where my charging current usually enters the unit, right? Once again, JR have been really helpful with their choice of colours for the leads that carry the



current from the charging socket. The flying lead was soldered as shown after using my multimeter to verify which lead was the positive (orange) and negative (brown). I soldered my more traditionally coloured wires to the relevant terminal.



I wrapped the flying lead around this plastic post to stop it becoming an American bra (one yank and it's off-yep the old ones are the best!) and put everything back together.



This is how the flying lead exits the unit. Notice the battery connector just in view on the circuit board.



A nice snug fit!

In use I find it much more confidence inspiring to know that my Tx battery is properly charged. When I used the wall adapter, I would consider the battery fully charged if the display on the Tx showed about 11.4 volts. After using the intelligent charger, the display shows 12 volts when it finishes charging so I must have been consistently under charging the battery. I've also set up the charger to discharge this battery at around 0.5A which is higher than the usual drain that a 2.4 GHz Tx will draw from the battery but it will show me the condition of the battery and how long I can expect to use the Tx before charging is necessary.