Project Merlin/Papywizard synthesis by « Mediavets » (Andrew Stephens)

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Because I am going through the process of putting a system together I can answer these questions in English but not French, and can suggest UK-based suppliers of the items needed.

I would like to co-operate in some way to produce in English the information that Claude proposes to put together in French.

I feel it would be best to keep provide it in the Wiki but have no experience of composing Wikis.

The information as all there somewhere in the French and English parts of the forum but it does need to be summarised and put in one place I agree. There is also a lot of obsolete information in the forum dating back to the early days of the project before it became clearer how to do it.
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The goal is to adapt the Merlin/Orion twin axis motorised head for astrotelescopes into a motorised panoramic photography head operating under the control of the Papywizard pano head control software.

In outline you need:

1. Merlin motorised head - also sold under the Orion brand name.
http://www.sherwoods-photo.com/acuter_s … unt_fs.htm
http://www.telescopeplanet.co.uk/ViewPr … N07H000014

2. An RS232-TLL adapter - the easiest to use is the Tronisoft 4201 module because it has an onboard regulator to reduce to the 9-12V from the Merlin battery pack to the 5V need to power the 4201 module and an attached RS232-Bluetooth adapter, and it is inexpensive - and 2 x 220 ohm resistors to add to the cable below - if you order the Tronisoft 4201 the supplier has offered to provide these and a version of the 4201 which has a jumper to enable power out on pin 9 of the RS232 D-sub connector. Tronisoft will post items anywhere in the EU, the USA and Canada.
http://www.tronisoft.com/4201.php

3. A 4-conductor cable with RJ11 jack at one end, part of a telephone extension cable or an ADSL router cable would be fine, the other end to be soldered to the resistors and the connector pins on the Tronisoft 4201.

Together 3 and 4 make up a unit that plugs into the socket where the handset controller supplied with the Merlin/Orion head would normally be connected. This allows the head to be controlled via an RS232 serial interface using the Papywizard software.

4. If you wish to connect between the Papywizard host system and the Merlin head via a Bluetooth wireless connection - which is the only way of connecting if hosting Papywizard on a Nokia 770, N800 or N810 Internet Tablet - you need an RS232-Bluetooth adapter, such as the Tronisoft BTLink module. Papywizard will also run on Windows PCs and you can use a simple serial cable to connect or a pair of Bluetooth-RS232 adapters acting as a wireless serial cable replacement.
http://www.tronisoft.com/2749.php
http://www.tronisoft.com/2750.php

These are the settings to use for the adapter if connecting to a Nokia tablet:
http://www.autopano.net/forum/p31241-20 … -51#p31241

5. A Nokia 770, N800 or N810 Internet tablet, or Windows XP/2K PC, or Linux PC to host the Papywizard software. The 770 is no longer sold but used examples of the 770, and N800, in good condition can often be found on eBay.
http://europe.nokia.com/A4145104
http://www.nseries.com/products/n800/#l=products,n800
http://www.nseries.com/products/n810/#l=products,n810

6. If you have low end Canon DSLR, that uses a wired remote control with a 2.5mm jack, then you can use the shutter release cable supplied with the Merlin/Orion head. If you have a higher end Canon camera or a Nikon camera or other brand of camera that will accept a wired remote control then you need a modified cable. If you have a camera that can only work with IR remote control then you need a special IR shutter release cable device, for which the best supplier is probably Gentles Ltd. - I use GentLED-JUMP for my Nikon D40.
http://www.gentles.ltd.uk/gentled/options.htm

It is easy to install the Papywizard software on Windows PCs - there is a conventional Windows setup program that does it all.

If you follow the instructions to the letter it is straightforward to install the Papywizard software on a Nokia Internet tablet.

The Paywizard software will run without being connected to a Merlin head so you may like to download, install and see what it looks like.
http://trac.gbiloba.org/papywizard/#Download

If you are able to make a few solder joints you can assemble the Tronisoft 4201+resistors+cable which comprise the RS232-TLL adapter. It is not rocket science.
http://www.autopano.net/forum/p30622-20 … -21#p30622

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The issue of adapting the vertical rotator of the Merlin head is more contentious and solutions less clear cut. As it is supplied you cannot position a camera/lens at the correct NPP. If you are shooting partial panos of distant scenes this probably does not matter.
http://www.autopano.net/forum/p30829-20 … -37#p30829

The 'mechanical' modification of the Merlin head to enable positioning of the camera at correct NPP is as yet not at all simple or straightfoward and there is to date little agreement among early adopters as to how to go about that and none of the suggested ways of doing it is thoroughly described or documented. It appears that the replacement of the vertical rotation head/crown is the best solution and it would be useful to have more in-depth information about this, from those who have done it, about the pros and cons and how-to.

If you wish to position the camera/lens at the correct NPP then best solution seems to be to have a replacement rotator made by an engineering company - there is a drawing of a replacement that has proved to be successful - see below. I have not yet done this to my Merlin head but hope to do so when I can find someone to machine the replacement rotator.
http://www.autopano.net/forum/p30835-20 … -43#p30835

Finally, you need to add some opaque black tape under the bubble level so that bright lighting outdoors does not pass through the level and disturb the photo sensors that are used to control the motors that rotate the head. This is obviously not a problem when the Merlin head is used as originally designed as a mount for astrotelescopes.

I don't know if this makes it all any clearer for you?