

Re: Cannot upgrade telescopes

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From: Roger Hamlett (*rogerspamignored_at_ttelmah.demon.co.uk*)

Date: 01/04/05

Date: Tue, 04 Jan 2005 14:11:09 GMT

"RichA" <none@none.com> wrote in message
news:tl5lt01ge0q4m4c9a5opdsvsffb4q6uqri@4ax.com...
> On Tue, 04 Jan 2005 12:13:37 GMT, "Roger Hamlett"
> <rogerspamignored@ttelmah.demon.co.uk> wrote:
>
>>
>> "RichA" <none@none.com> wrote in message
>> news:p1fjt0t79eoglsn843tprlde3v78ptqbqi@4ax.com...
>>> On Mon, 03 Jan 2005 04:05:21 GMT, Chris L Peterson
>>> <clp@alumni.caltech.edu> wrote:
>>>>
>>>> On Sun, 02 Jan 2005 22:18:35 -0500, RichA <none@none.com> wrote:
>>>>>
>>>>> Remember the Meade apo mounts? They didn't come with Goto, but you
>>>>> could add it. It involved installing a few things, a board, add
the
>>>>> hand control.
>>>>>
>>>>> Sure, but the Meade scopes have evolved to the point where there
would
>>>>> be little
>>>>> to be gained by upgrading the electronics- the design is highly
evolved
>>>>> and the
>>>>> firmware upgradable. A better quality scope would require better
>>>>> quality motors
>>>>> and gears- a much more complex upgrade. In any case, adding options
is
>>>>> one
>>>>> thing; upgrading to a different model is something else altogether.
>>>>>
>>>>> If the functionality is all in software, then why can't the older
>>>>> scopes be upgraded to True North Pointing? The physical
>>>>> characteristics of the scopes have not changed.
>>>>> You need to add an electronic compass inside the scope, a level
detector
>>>>> system inside the scope (both major mechanical changes), then have the

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> >input pins to the processor (it doesn't have them spare), then write
> >completely new software (since the processor in the older scope is
> >different from the new one). You could design such an upgrade for
perhaps
> >an initial outlay of \$50000, and sell it (including installation), for
> >perhaps \$2000 (since it would involve a complete motherboard change).

How

> >many do you think would sell?...

> >

> >Best Wishes

> >

>

> Why would it sell for that much when complete additions of goto in the
> old 600 and 700 mounts cost about \$400? Don't forget, they are also
> selling new scopes so that \$50,000 is going into them too.
> As for major mechanical changes, I'll believe they did that when I see
> it. The new LX-90 looks identical (save the red dot finder added)
> to the old one.

> -Rich

Because the 'Goto' additions, did not include the compass, level, and GPS, and was a system already being mass produced, and then being sold for home installation, with the mechanics already machined to take the parts, and the development costs being amortized over the entire production run, not the few being sold as upgrades. I was doubling the likely hardware selling price to cover installation, because this is a _major_ upgrade. You'd have to completely dismantle the scope, remove the base, and arms, re-machine the arms to take the extra components, install these parts, rejig the entire scope. Perhaps 20 hours of labour if you are lucky...

No 'that \$50000', is _not_ going into the new scopes, because the old scopes would need a completely different board and electronics. The alternative would be to fit the new electronics into the old unit, but this then increases the mechanical work (since the board fits completely differently), and add the need to replace both motors and gearboxes. The electronic cost of this approach would be lower, but the work involved would rise, making the total price about the same.

You really have no idea of the cost differences of something being assembled on a production line, against custom work do you?.

As an example, I designed a piece of electronics a few years ago. The first prototype, cost about £250000. The hand built copies, cost about £25000 each. The tooling costs to manufacture the chips, ran to over £2000000. The final unit sold for £8, in 1000 off quantities, with sales in millions of units a year. However, if this unit was to be made for an end market of only 1000 units, the price would have to be about £2500, just to cover the development costs.

Best Wishes