

Re: Remote temp sensing help??

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Jenny3kids@msn.net wrote:

>Hi people,

>

>I live on a small acreage and I have two wells and two pump rooms on
>the property. Winter temps frequently get below freezing so I have to
>keep a small heater in them to prevent pipes freezing overnight.

>

>Currently I use some cheap indoor/outdoor thermometers to monitor the
>temp inside the insulated enclosures but I have to walk to each one to
>check it.

>

>I need some temp senders so I can have a remote station in the house
>and each one can constantly indicate the inside temp so if the heater
>dies I can get down there and fix it. I can have a switch to cycle
>through them manually I do not need a 4-station setup but that would
>be a nice luxury, cost permitting.

>

>There is 110v in all places so batteries are not an issue. Can anyone
>suggest a CHEAP kit I can get? The farthest away sender would be about
>800 feet.

>

>Thanks in advance.

I've had X10 on my list of Things To Try for about 10 years, so I still have no practical know how. But, like JP, I'd have thought that a sound approach too for this spec. Potentially compelling advantage that all the mains wiring is already in place. Has your experience with it really been that bad?

But, excluding that, for reliability and cheapness I think I'd favour the hard-wired approach. The wire itself will be the most expensive outlay. Despite needing to carry only a low current signal, the cable diameter will probably need to be fairly substantial for robustness. (My garden lamp relay box is probably only 100' from the shed-based control circuit, running along a fence behind flower borders, but the original thin wire I used proved inadequate against careless hedge cutting and rose pruning.) The cable would link JF's temperature

detecting circuit to your house LEDs and piezo.

BTW, for further simplicity (and cost reduction), wouldn't it be possible to use just *one* sensor? If the general temperature is close to danger level, then I'd have thought all four sites would be close to their 'risk thresholds' ?

If the distance had been much less I'd have gone for adapting a wireless door-bell. I've used that successfully for several projects. But I suspect a radio-based approach for reliable 800' operation would be rather expensive.

I don't suppose you can *see* all 4 sites from the house? If so (and if other factors like neighbours don't rule it right out) I wonder if it might be possible to use a mains-operated lamp at each of the four sites. If necessary, with an additional appropriately-positioned mirror or two. And, again subject to the neighbour proviso (and your willingness to sleep with a window ajar in winter), maybe a loud but cheap piezo at each location, or shared if some of them are close?

Hmm ... on reflection, and thinking about safely routing all that wire, radio begins to look attractive <g>. I think I'd look at a cheap R/C model kit (plane or helicopter, for the range). Adapting one for simple on/off switching could be fairly simple. Fun too.

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