Re: question about "Network Interface" phone jack

Source: http://sci.tech−archive.net/Archive/sci.electronics.components/2005−07/msg00162.html

- *From*: "Watson A.Name − \"Watt Sun, the Dark Remover\"" <NOSPAM@xxxxxxxxxxxxx>
- *Date*: Tue, 26 Jul 2005 02:01:17 −0700

"Don Bruder" <dakidd@xxxxxxxxx> wrote in message
news:De7Fe.5479$p%3.30741@xxxxxxxxxxxxxxxxxxxx
> In article <2uk9e1dbhjiiku1o9p18m9t1toumqv482v@xxxxxxx>,
> William P. N. Smith wrote:
>
> > "wylbur37" <wylbur37nospam@xxxxxxxxx> wrote:
> > > Network Interface
> > > *Caution
> > > Disconnect plug from this jack during installation and repair
> > > of wiring.
> > > *Testing
> > > Plug working phone directly into this jack. If phone operates,
> > > fault is in wiring. If phone does not operate, call repair
> > > service.
> >
> > This is the telephone network interface (or demark box), which
> > demarcates the place where the phone company's responsibility for
> > phone line problems ends and yours begins. Plugging a known working
> > phone into this jack will help you determine who gets billed for the
> > service call.
> >
> > >When I opened the case, I noticed that the red and green wires
> > >(the only ones that will be actually used by the telephone itself)
> > >are also connected to a little circuit board whose most conspicuous
> > >component is a yellow cylinder−shaped object (about 3/4" long and
> > >about 3/8" diameter) with the following markings ...
> > >
> > > 250V
> > > TI
> > > 0.47 MFD
> > > +/− 10%
> >
> > Could be some cheap surge supressor, but more likely an RF supressor
> > of some kind. Try removing it and see if you get radio stations on
> > your phone. [You may need to remove it if you want DSL, for
> > instance.]
>
> It's a filter that kills 60−cycle AC noise on the line. DC (which is

> what phones use for signalling and sound transmission) is blocked by a
> capacitor, and "forced through" the phone gear. AC, picked up by
> induction from the power lines that phone cables almost always
parallel,
> easily "crosses" the capacitor to ground, where it "vanishes" before
> reaching the phone to be turned into noise.
>
> Remove that circuit board, and you're going to have a dose of AC hum
on
> your line.

Might get RF interference from radio stations, but not hum. Hum is caused by an unbalanced line, which is usually on the telco's side and caused by moisture getting into the cable.

> Depending on the exact details of a particular line, the
> level of the hum may be anything from "nonexistent except to a
sensitive
> meter" to "barely noticable background hum" to "so bad that the line
is
> totally unusable for any purpose". Exact level depends on the physical
> relationship between the phone wires that make up a particular loop
and
> nearby power lines along the entire length of the cable between the
> phone box and switching office. Moving a cable (either power or
> telephone) just an inch one way or the other CAN make a world of
> difference − A "perfect line" can go hideously bad with noise due to
the
> wind blowing and rocking the cable back and forth. Likewise, a bad
line
> might be moved enough in the breeze to become wonderfully noise−free.
It
> all depends on how the two cables intereact with each other
inductively.
>
>
> > There should also be lightning arresters on each line. Modern ones
> > look like little grey boxes bolted to the ground wire.
>
> The ones on my recently replaced demark box look like two little
> screw−in plugs about as big around as a "AA" battery, and about 3/4
inch
> long − "Carbons", the line techs call 'em.
>
> They're what cooked in the lightning storm a couple years back and
took
> me off the phone system for more than a week as the backlogged techs
> made their way to over 8000 area drops that had been similarly blown
> away.
>
> > >Also, when I looked inside the jack itself

> > >(the hole where you would plug the phone into),
> > >I noticed there's some strange−looking gunk inside.
> > >It's clear−colored and has the consistency of rubber cement.
> >
> > It's a waterproofing compound that's inside the incoming cable.
>
> AKA "Icky−pick" to the linemen.
>
> Not even *A LITTLE* likely to be seen in a demarc box, since the lines

> that feed those are almost always what's called "C−wire", while
> icky−pick only exists in trunk bundles with 10+ line pairs inside.
>
> MUCH more likely, what's being seen is "harsh environment sealer" −
> Unlike icky−pick, which is perpetually "gooey", the sealer is a
> "tackless" glob with a consistency not much different than the OP's
> description of rubber cement, and unless horribly contaminated with
> something (what, I don't know...) usually clear or slightly yellowish.
>
> Leave it alone. Its job is to keep the connectors covered when nothing
> is plugged into the socket, protecting them from corrosion and general
> "crud". Plugging a connector into the socket it's in will move it as
> needed to make contact (there's a cavity behind the contacts that it
> gets mushed into), then removing the connector will allow it to "ooze"
> back into position to seal the contacts.
>
> −−
> Don Bruder − dakidd@xxxxxxxxx − New Email policy in effect as of Feb.
21, 2004.
> Short form: I'm trashing EVERY E−mail that doesn't contain a password
in the
> subject unless it comes from a "whitelisted" (pre−approved by me)
address.
> See <http://www.sonic.net/~dakidd/main/contact.html> for full details.

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- ***References***:
  - ♦ ***Re: question about "Network Interface" phone jack***
    - ◊ *From:* William P . N . Smith
  - ♦ ***Re: question about "Network Interface" phone jack***
    - ◊ *From:* Don Bruder

- Prev by Date: ***Re: IC TC5504P***
- Next by Date: ***Re: Good (cheap) flash memory chips?***
- Previous by thread: ***Re: question about "Network Interface" phone jack***
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