Updated Information about ADSL Service and Security Equipment

You may encounter new installations in homes and businesses of a high-speed data service called DSL. This service provides an "always-on" data connection to the internet, using the existing telephone wires already connected to the premises, and is known as ADSL or G.Lite service. There are other DSL services that do not use existing telephone lines, but these should not be going to alarm equipment.

There are two configurations of the installations that are presently being made. These are “Split” and “Splitterless” shown in the diagrams below.

Split Installations

An installation that the local telephone company may put in is a so-called Split Installation shown in Fig. 1. The telephone line comes through the network interface and immediately goes into a “Splitter”. One line from the Splitter goes to all the extension telephones, FAX machines, low speed modems (up to 56k), answering machines, and any other equipment that is or was on your POTS (Plain Old Telephone System) line, without disturbing their wiring or connections. If an alarm system is on the premise and an RJ31X jack is used for the connection, all the above units are connected through the alarm panel’s Extension telephone terminals. The second line from the Splitter goes directly to the ADSL modem. This generally requires a separate wire to be run to the computer location. Telephones and/or other units that normally connect directly to a POTS line must NOT be connected onto the line to the ADSL modem.

Splitterless Installations

Since the Split type of installation requires a visit to the site by a telephone company serviceman, some new installations are being installed and proposed that can be done by the end user. No Splitter is needed in these installations. The ADSL modem is sent to the subscriber along with a number of “micro filters”. This type of installation is shown in the second diagram. The telephone line carrying the signals is not split and therefore the signal is present at all telephone jacks in the home. Therefore, plugging the ADSL modem into an existing telephone jack is all that is needed to connect the PC. However, all other devices connected to telephone jacks MUST have a filter installed ahead of it. The provided filters have a RJ11 male and female section so the subscriber can simply unplug his telephone, plug in the filter, and then plug in the telephone again. If an alarm system is installed with a RJ31X jack, it is ahead of all the equipment.
Summary

In both types of installations described above, the alarm system will properly report to its central station. In the Split installations, the alarm panel never sees the ADSL signal since the splitter filters it out before it ever reaches the panel. The ADSL signal is undisturbed when either the panel seizes the telephone line or the telephone is in use by the subscriber.

In the Splitterless installation described, the ADSL signal is routed through the alarm panel, but when the panel seizes the line to make its call, it breaks the connection between the local ADSL modem and the central office ADSL equipment. Since the central office modem now does not see the signal from the subscriber modem, it stops sending out its signal and the telephone line now is quiet. Any reporting can now be done without the ADSL signal present. The disadvantage to the subscriber is that his ADSL connection is interrupted, and his computer must wait for the alarm report to be completed before the ADSL connection is re-established. The ADSL communication will restore with the modem within about 15 to 30 seconds after the line seize is released by the panel (training time for the modem). If the computer hardware and program setup is proper, the actual ADSL communication to the computer internet connection should also restore automatically. The best setting in Windows can be made via Settings; Control Panel; Internet Options; Connections; and selecting “Always dial my default connection”. (More information will be available soon about how to avoid an interruption of internet service when the control panel is making a call.)

Although the frequency of the ADSL signals are well above the audio band, certain characteristics of devices connected on the POTS line can cause extraneous signals to be generated and they will sound like a “white noise” level, i.e., like “sh-sh-sh-” on the telephone handset. This indicates that either the Splitter or Micro Filters have not been installed properly.

Moving Forward Plan

To insure that there is no interference with the alarm system now or in the future, Test messages should be sent to the central station periodically. If there is more than one POTS line at the premise, the ADSL or G.Lite service should be installed on one line, and the alarm equipment on the second line.

ADEMCO Panels:

In many instances, the ADSL installation (whether it is Split or Splitterless) is completed without a check to ensure that the existing security system is still able to properly communicate with the central station. Whereas we believe that there should be no problem with our panels operating when both the security equipment and the ADSL service have been properly installed (i.e. – panel is properly line seize wired and the ADSL installation is done according to the installation guidelines for the chosen method), we believe the
security dealer must check the system completely after the ADSL installation is complete and ADSL service is made available to the protected premise. Testing should be done to make sure that signals can be received properly at the central station and that downloading, if used, can be performed.

**FBII Panels:**

For FBII panels, only Split Installation or separate phone line should always be used since the ADSL signal will interfere with the AMD (Answering Machine Defeat) circuitry in these panels and cause erroneous operation of the security equipment.