

Why does my fax machine not work on my VoIP phone line?

The short answer

Fax machines don't and won't work over VoIP lines.

Some people have managed to make it work at times. I will explain these steps below.

The longer answer

The longer story is that the two are incompatible.

VoIP takes the sound of someone's voice and digitally compresses it so that it can be transmitted over the internet. It turns the sound wave of your voice into computer language (digital 1s and 0s) and then on the other end turns that computer language back into a sound wave.

Analog fax takes an image of a document and turns that image into computer language (digital 1s and 0s). It is then turned into a sound wave that can be transmitted over an audio connection like a phone line. On the other end, the other fax machine then translates that sound wave back into computer language and back into an image.

The challenge then exists because the way VoIP digitally compresses audio into computer language. VoIP will distort the analog signal (a stream of beeps, the human ear will hear it as loud static) from the sending fax machine so that it cannot be understood by the receiving fax machine. When the receiving fax machine cannot understand the communication or the compression creates an error, then the transmission doesn't go through.

Fixing the problem

- 1)** Reduce the transmission rate (baud rate) of the sending fax machine to the lowest setting possible. Usually this will make the fax transmit at a much slower rate and therefore less compression. However, it also makes the signal less susceptible to distortion (you will see it on your incoming fax as random spots or lines).
- 2)** Turn off ECM (Error Correction Mode). Most newer fax machines have ECM capability, which analyzes the received frames and detects any corrupted data.
- 3)** Purchase an in-line DSL filter (about \$7.00 on amazon)

It's important to note that there are many variables here – the VoIP provider, your internet provider, your fax machine, other systems that you are using on your network – as well as all the same that exist in the environment with each and every other fax machine you do business with is located.

Best options

- 1)** Get a Fax server (we recommend Gold Fax*)
- 2)** Keep an analog phone line from your local phone company exclusively for your fax machine. (this is costly but more reliable)