

Suggested Fax machine settings for VOIP faxing

Canon devices T.38 Compliant and G.711 Protocol

G711 or a Non-Compressed Codec

Make sure that your VoIP fax connection (the line you use for faxing) is set to G711, which is a non-compressed codec. G729 uses compression which will make faxes fail. If your VoIP provider has what may be called a "Bandwidth Saver" setting, then this setting would be a compressed codec. Make sure this setting is not enabled. You may have to talk with tech support for your VoIP service who will verify what type of codec your connection uses and to make sure your connection is set for G711.

Slow the transmission speeds on the fax machine settings. Both the Tx and Rx settings. This is called the BAUD rate of the fax machine. The best and fastest setting should be 9600 bps.

Disable ECM (Error Correction Mode). ECM is usually on by default on most fax machines. This setting needs to be turned off.

Why ECM should be disabled:

Fax machines (also multi-function machines) set ECM as a default to on. This setting causes the receiving fax machine to analyze the received data frames and detect any data that may be corrupted. Any noise, lost packets, or poor signal strength can cause part of the transmission to be lost which then triggers a retransmit signal to be sent until an error free frame is received. This causes retransmits more often over VoIP due to some packet loss, latency or jitter which exist on an Internet connection. These retransmits increase the call duration, quickly adding to the instability of the fax, requiring additional retransmits which then cause a failure with a communication error reported by the receiving fax machine.

Disabling ECM, will result in the receiving fax machine to accept a transmission with some frames that may have bits of information missing, but still resulting in a completed fax, which should be of acceptable quality.

Canon suggests updating to latest Firmware and the following settings

Canon User Tools settings suggestions

Settings/Registration > Login > System Manager ID 7654321 > Function Settings > Send > Fax Settings > ECM TX > OFF

Settings/Registration > Login > System Manager ID 7654321 > Function Settings > Send > Fax Settings > Check Dial Tone Before Sending > OFF

Settings/Registration > Login > System Manager ID 7654321 > Function Settings > Send > Fax Settings > TX Start Speed > 9600

Settings/Registration > Login > System Manager ID 7654321 > Function Settings > Receive/Forward > Fax Settings > ECM RX > OFF

Settings/Registration > Login > System Manager ID 7654321 > Function Settings > Receive/Forward > Fax Settings > RX Start Speed > 9600

Continued on Page 2 service mode settings

Canon Service Mode settings suggestions

Service Mode = Press Settings/Registration > Press 2 & 8 at same time > Press Settings/Registration

Service mode screen select Mode List and then Fax

Clear NCU = Select Clear on the tabs across the top > Highlight NCU > Press OK

Bitswitch settings = Select Sssw tab across the top

Highlight the switch you wish to change and then highlight the 1 or 0 to change to match the following settings, be sure to press okay when you have made the settings to each switch.

Echo: sssw sw03 = 10010110

Retrans: sssw sw04 = 00010000

tx level release: sssw sw17 - 00000011

V.8 & .34 off: sssw sw28 – 00001111

Mode (Menu) Settings = Select Mode (Menu) tab across the top

NL EQ = Press 005 > Press 1 Key > Press OK

Continue = Press 008 > Press 8 key > Press OK (not in all machines)

Reboot Machine