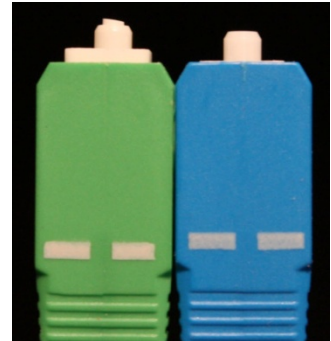


Fiber Optic Tips

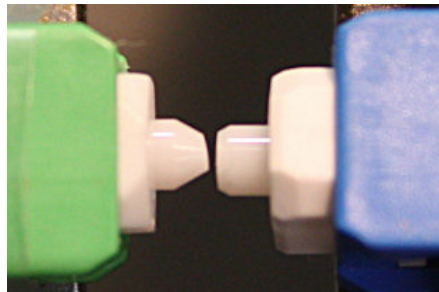
APC vs UPC Optical Connectors

Perhaps the most frequent call we get from distressed customers pertains to APC and UPC or PC connectors. Let's define these terms first. APC stands for *Angle Polished Connector*. It is the green connector in the picture below. Note that the tip of the white ceramic has an angle on it. This angle prevents backreflections which will seriously degrade the performance of any analog fiber optic system, such as [CATV](#) and [Satellite](#). UPC stands for *Ultra-Physical Contact* and PC stands for *Physical Contact*. The blue connector in the picture is a UPC connector. You can see that its end looks flat and at zero angle. In fact it has a slightly curved end face so that the fiber cores make contact first. UPC and PC connectors do NOT have well-controlled back reflection performance.



The phone calls that we get fall into two categories;

1. The customer used blue UPC or PC connectors in their system and they are getting poor results. Be warned... only use UPC to UPC connections in an analog system if you like getting lots of complaints.
2. The customer has tried to mate a green APC connector to a blue UPC connector. This usually causes terrible results and can in fact often destroys both connectors. The picture below shows what such a mating would look like. As can be seen from the photo the fiber cores will not touch. This type of damage is a non-warranty repair.



It's real simple with analog fiber optic links. Go **green** and you'll be a happy camper. Otherwise you will be **blue** when you fire up your system.

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