TV SIGNAL OPTIONS

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SUMMARY

You can watch television with either a real television set or with a virtual television that resides inside your Windows, Mac, or Linux computer. Your real or virtual television set can get television signals from either a cable television provider or over-the-air with an indoor antenna.
TOPICS

- Television Signal Options
- Reception Options
- Past and Future Timeline
- A Television Tuner For Your Computer
TELEVISION SIGNAL OPTIONS

• "ATSC" Over-The-Air
• Formerly, we had "NTSC" Over-The-Air
• "Clear QAM" from cable provider
• "Encrypted QAM" from cable provider
TELEVISION SIGNAL OPTIONS (continued)

- ATSC Over-The-Air ("ATSC" = "Advanced Television Systems Committee")
- Formerly "NTSC" Over-The-Air ("NTSC"="National Television System Committee")
- "Clear QAM" from cable provider ("QAM"="Quadrature Amplitude Modulation")
- "Encrypted QAM" from cable provider
RECEPTION OPTIONS

• ATSC and/or NTSC Over-The-Air into a television set
• ATSC and/or NTSC Over-The-Air into a computer that has a television tuner
• Clear QAM directly into a television set or a computer
• Encrypted QAM into a set-top box
• A/B switches for switching between ATSC, NTSC, clear QAM, and encrypted QAM
OVER-THE-AIR RECEPTION WITH A REAL TV SET:

ATSC over-the-air signals from an antenna

RG 6 coaxial cable
OVER-THE-AIR RECEPTION WITH A VIRTUAL TV SET INSIDE A COMPUTER:

ATSC over-the-air signals from an antenna

TV Tuner for PC or Mac

RG 6 coaxial cable

USB 2 cable or USB 3 cable or PCIe slot
RECEPTION OF SOME CABLE TV PROVIDER'S CLEAR QAM SIGNALS WITH A REAL TV SET:

"Clear QAM" channel signals from some cable TV providers

RG 6 coaxial cable
RECEPTION OF CABLE TV PROVIDER'S ENCRYPTED QAM SIGNALS WITH A REAL TV SET

"Encrypted QAM" channel signals from cable TV provider

"Set-Top Box" or "DTA" from cable TV provider

RG 6 coaxial cable

RG-6 coaxial cable or RGB cable
RECEPTION OF CABLE TV PROVIDER'S ENCRYPTED QAM SIGNALS WITH A VIRTUAL TV SET INSIDE A COMPUTER:

"Set-Top Box" or "DTA" from cable TV provider

"Encrypted QAM" channel signals from cable TV provider

RG 6 coaxial cable

USB 2 cable or USB 3 cable or PCIe slot
TELEVISION SIGNAL OPTIONS (continued)

- Using two A/B coaxial switches and a 2-way coaxial cable splitter, you can switch between the following three signal options:
  ATSC and NTSC Over-The-Air and
  Encrypted QAM signals from the cable provider's "Set-Top Box" and
  Clear QAM signals from the cable provider (if they provide them)
Cable TV channel signals from cable TV provider

A/B coaxial switch: 
"A" = cable provider's set-top box 
"B" = "Clear QAM" from cable provider

"Set-Top Box" or "DTA" from cable TV provider

ATSC signals from antenna
Cable TV channel signals from cable TV provider

2-way coaxial cable splitter

A/B coaxial switch:

"A" = Time Warner Set-top box
"B" = "Clear QAM" from Comcast

ATSC over-the-air signals from antenna

"Set-Top Box" or "Digital Transport Adapter" from cable TV provider

TV Tuner for PC or Mac

USB 2 cable or USB 3 cable or Cat 5/5e/6/6a cable

PC with "WinTV" or "Windows Media Player"
PAST AND FUTURE TIMELINE

• 1941
  Black-and-white over-the-air NTSC television

• 1949
  Black-and-white cable NTSC television

• 1953
  Color NTSC over-the-air television
PAST AND FUTURE TIMELINE

• 2009-06-12
NTSC to ATSC transition for most NTSC television stations, with an exception for "low-powered", "translator", and "Class A" stations which were allowed to continue broadcasting with NTSC signals.
PAST AND FUTURE TIMELINE

• 2015-09-01
NTSC to ATSC transition for all NTSC "low-powered", "translators", and "Class A" television stations. See http://www.fcc.gov/guides/dtv-transition-and-lptv-class-translator-stations
A TELEVISION TUNER FOR YOUR COMPUTER

• "ATSC" means "can receive (digital) ATSC over-the-air television channels".

• "NTSC" means "can receive (analog) NTSC over-the-air television channels".
A TELEVISION TUNER FOR YOUR COMPUTER (continued)

• "Hybrid" means "can receive both ATSC and NTSC over-the-air television channels".

• "QAM" means "can receive unencrypted QAM television channels over a direct connection to a cable company's cable".
REFERENCES

- http://www.mastervideo.com/ntsc_chart.htm
- http://en.wikipedia.org/wiki/Virtual_channel