



Xintekvideo's Digital Co-Channel Filter **Model CF 110** is a state of the art signal processing system that significantly reduces co-channel interference, random noise and other video errors. It is particularly effective in reducing the 10 KHz and 20 KHz co-channel beats and restoring video synchronization even when the co-channel level is so high as to cause loss of vertical and horizontal sync in most television receivers. The Model CF 110 reduces the 10 KHz and 20 KHz co-channel beats by up to 30 dB, and other cochannel noise by up to 9 dB. Under extremely severe cochannel conditions the Model CF 110 replaces the sync pulses with stable and clean sync.

The system takes analog NTSC color video signals and converts them to digital signals. All processing is then performed on the digital signal. Adaptive notch filters are used to suppress the 10 KHz and 20 KHz beats. The video is then analyzed pixel by pixel using multidimensional correlation techniques to differentiate between wanted video and co-channel interference. When the circuits determine that a particular video pixel has noise perturbation or other errors, and the motion circuits determine that such perturbations are not due to motion, the pixel in error is appropriately corrected or the interference is further attenuated. All signal processing is performed on the composite color signal thus avoiding video impairments due to the color decoding and color reencoding process.

Controls are provided to adjust the system's sensitivity to different levels of interference thus permitting optimal performance under all types of conditions. The unit is fully self contained. It takes a baseband 1v pp NTSC color video signal and it outputs the same level processed signal. Hardwired bypass occurs in the event of power loss.

Features:

- **Input:** NTSC color video signal, 1v pp into 75 Ohms Return Loss>40dB
- **Output:** NTSC color video signal, 1v pp into 75 Ohms Return Loss>35dB
- **Frequency Response:** +/- 0.5dB to 4.2MHz, 10Hz and 20 KHz beats suppression >30 dB
- **Suppression of other random interference:** 0 to 9 dB (Level and motion dependent)
- **Non Linearity:** <2%
- **Differential Phase:** <1° plus quantizing effects
- **Differential Gain:** <1% plus quantizing effects
- **K Factor with 2T pulse:** Better than 2%
- **System Delay:** 2 TV lines
- **Power Requirement:** 120v AC, 60 Hz, 20 Watts
- **Operating Temperature:** 32° F to 110° F, ambient
- **Humidity:** 10% to 90% non-condensing
- **Mechanical:** 1RU cabinet: 1.75"H, 19"W, 10"L; 7Lbs