

METHOD FOR TRANSMITTING VSB DIGITAL TV WITH CARRIER
FREQUENCY NEAR CO-CHANNEL NTSC AUDIO CARRIER FREQUENCY

Abstract of the Disclosure

An N-level digitally encoded signal at a symbol rate f_s substantially equal to three times the NTSC color subcarrier frequency, N being a plural integer, modulates a carrier signal of a frequency within a few hundred kilocycles of the NTSC audio carrier, for transmission through a channel subject at times to the presence of a
5 co-channel NTSC analog television signal. The modulation is suppressed-carrier amplitude-modulation generating first and second amplitude-modulation sidebands. Any portion of the amplitude-modulation sidebands extending outside the channel is suppressed in the transmitted signal, thereby making the first amplitude-modulation sideband a vestigial sideband providing an image for only a portion of the second
10 amplitude-modulation sideband closer in frequency to the carrier signal. The amplitude responses of the vestigial sideband and the portion of the second amplitude-modulation sideband closer in frequency to the carrier signal are halved in the transmitted signal compared to the amplitude response of a remaining portion of the second amplitude-modulation sideband further in frequency from the carrier signal. A
15 fixed-amplitude pilot signal of the same frequency as the suppressed carrier is included in the transmitted signal.

(Fig. 1)