

CORRECTED
VERSION*

PCT

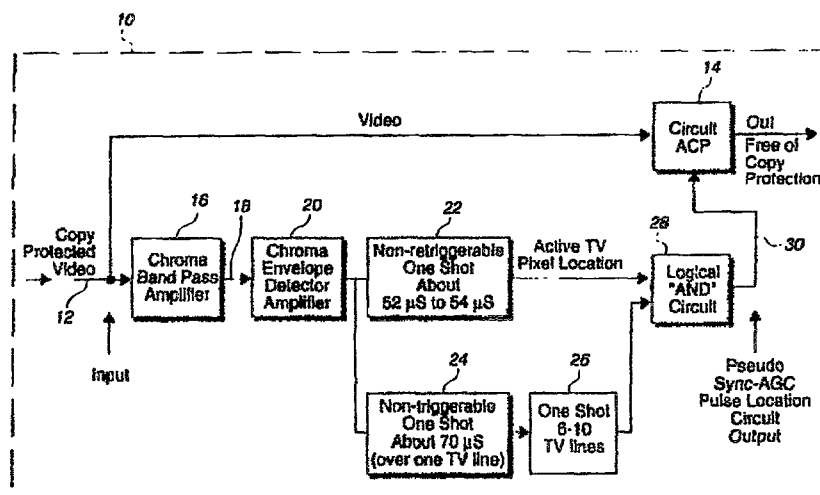
WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : H04N 5/782, 7/167		(11) International Publication Number: WO 97/15142
A1		(43) International Publication Date: 24 April 1997 (24.04.97)
(21) International Application Number: PCT/US96/16783		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).
(22) International Filing Date: 17 October 1996 (17.10.96)		
(30) Priority Data: 60/005,681 17 October 1995 (17.10.95) US		
(71) Applicant: MACROVISION CORPORATION [US/US]; 1341 Orleans Drive, Sunnyvale, CA 94089 (US).		
(72) Inventor: QUAN, Ronald; 10910 Wunderlich Drive, Cupertino, CA 95014 (US).		
(74) Agent: BRILL, Gerow, D.; Macrovision Corporation, 1341 Orleans Drive, Sunnyvale, CA 94089 (US).		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: METHOD AND APPARATUS FOR REMOVING OR DEFEATING EFFECTS OF COPY PROTECTION SIGNALS FROM A VIDEO SIGNAL



(57) Abstract

In a known copy protection process for preventing recording of video signals, pseudo sync and AGC pulses (Fig. 2) are present on predetermined lines within the blanking intervals of the video signal so that any subsequent video tape recording of the video signal shows a picture of very low entertainment quality. This copy protection process is defeated first by determining the location of the video lines containing the copy protection using the color burst signal or chroma in the horizontal blanking interval to determine online detection (Fig. 4). Then some or all of the lines including copy protection signals are modified so as to render the overall video signal recordable. The modification is accomplished in a number of ways, including gain shifting portions of the video signal, level shifting portions of the video signal, bandwidth limiting certain portions of the video signal or replacing certain portions of the video signal with other video elements (Fig. 5).