

METHOD AND APPARATUS FOR IDENTIFYING VIDEO
FIELDS PRODUCED BY FILM SOURCES EMPLOYING
2-2 AND 3-2 PULL DOWN SEQUENCES

Abstract

A binary number is generated representative of net motion during a field interval of an interlaced video signal from which a field to field difference signal is derived having a sign bit and a group of magnitude bits. The magnitude bits are compared with a first threshold to provide a first threshold indicating signal which, with the sign bit, are applied via respective bus lines to each correlator of a group of five correlators. The correlators are addressed using variable modulo addressing to detect patterns representative of 2-2 pull down and 3-2 pull down film originated frames. Logic is provided for detecting when one and only one of the five correlators indicates film detection to verify film mode operation. Error reduction is further enhanced by comparing the field difference signal with a second threshold, higher than the first, to provide a second threshold indicating signal to each correlator via a second bus. Flags are produced for identifying film mode operation and for identifying also which of two adjacent fields are suitable for use in subsequent video processing such as de-interlacing or flicker reduction.

Figure 1