

Abstract of the Disclosure

DIRECT CONVERSION TUNER

5 A direct conversion tuner for tuning either analog or
digital television signals includes a first and second channels, each
having first and second mixers and an intervening filter stage,
coupled between an RF input and an output combining unit. The
first mixers receive respective first local oscillator signals which
have the same frequency but a quadrature phase relationship.
The frequency of the first local oscillator signals is controlled
10 according to the selected channel so that it is located within the
spectrum of the respective RF signal. The second mixers receive
respective second local oscillator signals which have the same
frequency but a quadrature phase relationship. The frequency of
the second local oscillator signal is located above the passband of
15 the filter stages. A digital gain and phase equalization network is
included in one of the channels for adjusting the relative gain and
phase shift of the two channels and is automatically controlled by
a microcomputer in response to signals sampled at respective
points within the first and second channels to reduce the relative
20 gain and phase shift. As a result, near perfect cancellation of
unwanted components occurs in the output combining unit.

Fig 5

This Sheet Has Been Replaced

