LAPORAN PROJEK TAHUN AKHIR

KURSUS DIPLOMA LANJUTAN KEJURUTERAAN LETRONIK

KAJIAN KEJURUTERAAN, ITM, SHAH ALAM.

HOME SATELLITE TV SYSTEM 1

BY

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SYNOPSIS

Home Satellite TV Reception, once a dream is a reality. In the early days of TV, transmissions were strictly local using the standard VHF - frequencies. Later, as networks were formed, there came a need for nationwide video - distribution systems.

By 1980, satellite communications had progressed far enough to allow the use of a single satellite as a relay point, broadcasting to TVRO (TV Receive Only) terminals across the West, especially in the U.S. But the East are slowly catching up with this system especially in Japan. Although TVRO terminals were expensive, the system was adopted quickly because its overall cost was less than that of a ground - link system.

Basically each home satellite is made up of six components :

(a) The antenna

(b) The feed

(c) The low noise amplifier (LNA)

(d) The down converter

(e) The receiver

(f) The Remodulator

Since we are the pioneers for this project, we are only concentrating on the receiver.

The receiver which is the final part of the satellite. Communications link takes the 4 GHz RF from the LNA and transforms it into a standard composite-video and audio.

Receivers can be designed in a variety of ways and ours is just one way of doing it. We are also proud to say that although in our case we did a lot of modification due to inavailability of components from overseas, nevertheless the results that we obtained were very encouraging.

Furthermore, the circuit that we have redesigned proved to be more economical and simple.

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