

This device is combined a DVD Recorder with a Video cassette recorder and operates with an AC commercial power supply.(AC120V, 60Hz)

This device includes TV interface Device, Television Broadcast receiver, and Digital device of product category defined by FCC.

The external connectors are equipped with Front Audio (L/R)/Video Input, Front S-VHS Input, RF input/Output, Rear Audio (L/R)/Video Input, Rear S-VHS Input, Rear Audio(L/R) /Video Output, Component Output, Optical Digital Audio Output .

The circuit is composed by Power Supply Block , VCR Block, and DVD Recorder Block, if divided roughly. The explanation is as follows and the details are referred to Block Diagram.

Power Supply Block:

Use the switching regulator circuit and provide the power supply to each circuit.

VCR Block:

The circuit of this block is composed by Tuner/IF/Modulator, Luminance and Chrominance/Audio/CCD/Head Amp, System/Timer/Servo, HIFI Demodulator, Operation / Display, Motor Drive and so on.

RF Modulator output is output in US 3ch or 4ch and Emission frequency is as

Follows:

Emission Frequency; US 3ch Video carrier: 61.25MHz

Audio carrier: 65.75MHz

US 4ch Video carrier: 67.25MHz

Audio carrier: 71.75MHz

The oscillating frequencies that is used this block are the follows:

14.318MHz-----VCR System Control IC Clock

10MHz----VCR System Control IC Clock

32.768KHz--- VCR System Control IC Clock

3.579545MHz---Luminance and Chrominance IC Clock

DVD Recorder Block:

The circuit of this block is composed by AV Encoder, MPEG, Memory, ATAPI, FPGA, Video Decoder, Audio ADC, Audio DAC and so on.

This block includes a control device for the reading , writing and rewriting of Disc, a signal processing part, Decoder/Encoder parts and a control part.

The oscillating frequencies that is used this block are the follows:

135MHz--- SD-RAM Clock (RAMCLK)

27MHz--- MPEG Master Clock (GCLK)

18.4327MHz--- Audio Master Clock (AMCLK)

3.072MHz---Audio bit Clock (ABCLK)

48kHz---Audio L/R Clock (ALRCLK)

81MHz----Master Clock(MCLK)

32.11MHz---Video Decoder Cloc

27MHz---Video Clock(VIDCLK)