# BLOCK DIAGRAM



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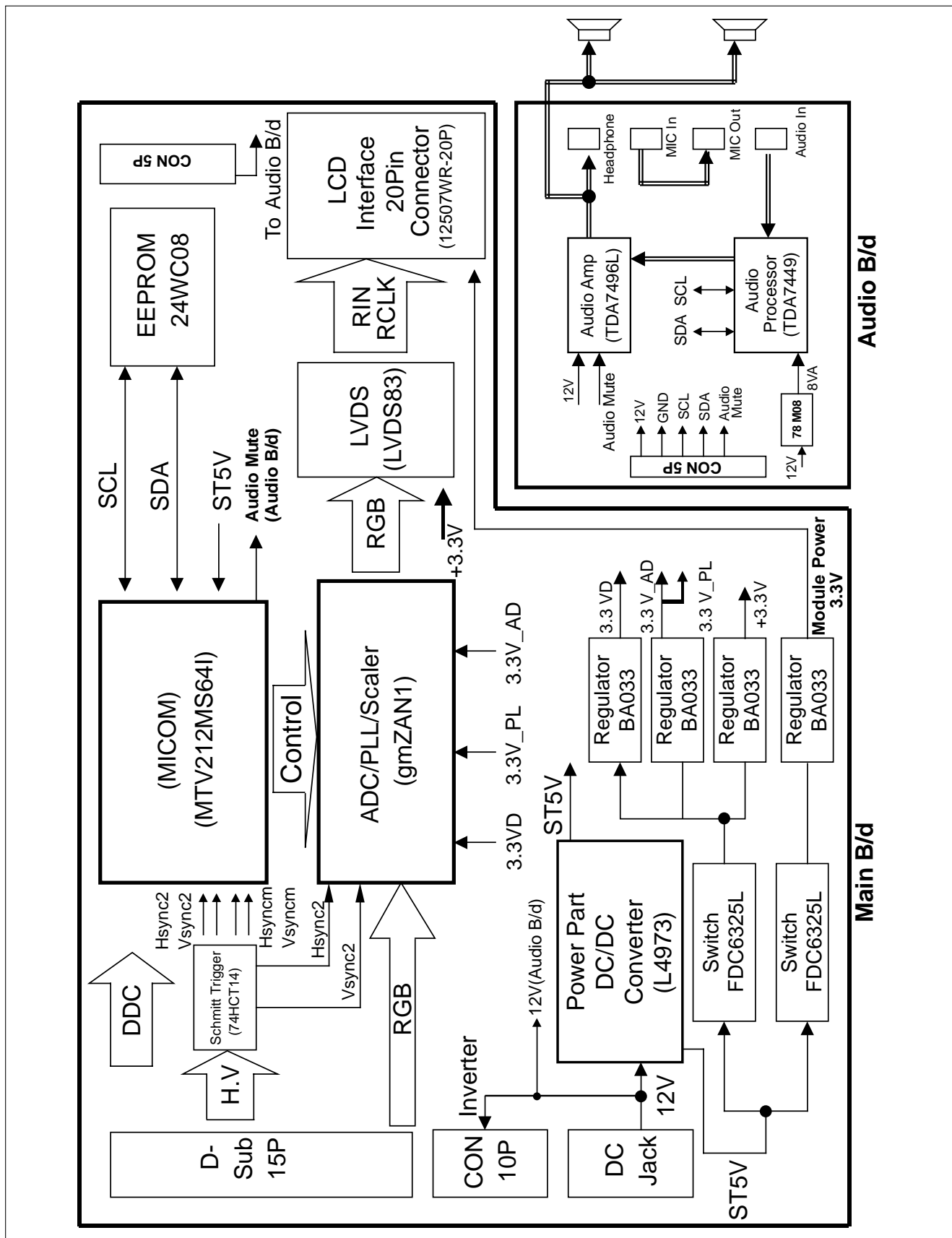
# DESCRIPTION OF BLOCK DIAGRAM

**1. Scaler One chip IC(GMZAN1, U3)**

GMZAN1 (U3) is one chip IC which it supports four internal function blocks of Video Amp, PLL,
A/D converter and Video processor.
Video signal (0.7Vp.p) clamped through C44, 45, 191 with matching IC's proper cut off voltage.
This signal is processed as a proper 8 bit digital signal by U3's amplifying, phase locking, A/D converting,
and scaling operations.
U3 generates Clock, Horizontal and Vertical sync, Data  Enable signals as LCD Panel's input signals.

**2. System Controller (Microprocessor) Circuit.**

1) Microprocessor (U4) distinguishes polarity and frequency by calculating horizontal and vertical sync input
   from signal source.
2) Microprocessor (U4) carries out power control by sending power-down trigger signal to each IC.
3) Microprocessor (U4) communicates with EEPROM (U1), and GMZAN1 (U3)
   through IIC(2 lines) or 6 bit bus line. It makes all devices operated properly.
4) Microprocessor (U4) let User adjust screen by OSD function.

**3. DC/ DC Converter.**

This circuit supplies DC power for each device needing DC voltage of 3.3VD, 3.3V_AD, 3.3V_PL, Module Power 3.3V
and 5VS.
L4973D5.1(U13) , the DC/DC controller IC converts input 12Vdc into 5VS and 3.3Vdc with peripheral circuit
composed of Inductor (L11), condensing components (ZD5, C72), and Regulators(U2, U7, U24,U30).
MODPWR(3.3V) for LCD module power is switched by U12, switching FET, controlled by Microprocessor.
3.3VD, 3.3V_AD, and 3.3V_PL  for GMZAN1 (U3) and 3.3V for LVDS (U9) are switched by U5, switching FET,
controlled by Microprocessor for Power saving.

**4. Display Data Transmitter Part (LVDS).**

This part transmit digital signal from the Scaler to the receiver of module.

**5. Audio Part (TDA7449,TDA7496L)**

In This Circuit, Audio Processor(TDA7449) Which is Controlled by Microprocessor(U4) adjust
volume/treble/bass/balance of Audio signal which come from PC.
The Signal come from TDA7449 is amplified by TDA7496L. The final output signal is output through speaker.