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# Using the MSM7732 CODEC Evaluation Board

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## INTRODUCTION

This manual is described on the MSM7732 evaluation board. This board can also be used to evaluate the Audio CODEC MSM7732 device. The evaluation board incorporate the CODEC , a clock generator for master clock and other clock, level shifters for interfacing CODEC(for 3V to 5V conversion),and a MCU-generator to perform microprocessor functions.

For detail information ,please refer to the MSM7732 Data Sheet.

### 1. The contents of the evaluation board package are:

- MSM7732 evaluation board
- Power-supply cable
- This manual

### 2. The schematic and layout of the board

- The schematic of the board : Figure 3( Page 4)
- The layout of the components and switches on the board : Figure 4(Page 5)

### 3. Information for Using Evaluation Board

#### ■ Power Supply

Supply power to the evaluation board via the attached power cable.

- 3V(IC) : The yellow cable connects to +3V for the MSM7732.
- GND : The black cable connects to GND.
- 3V : The orange cable connects to +3V for the peripheral circuits.
- 5V : The red cable connects to +5V for the peripheral circuits.

#### ■ PDN Switch

This switch is power-down control switch for the MSM7732.

Turning ON : power-down mode

Turning OFF : normal operation mode

#### ■ VFRO-ON Switch

Turning on the switch ,then the receive analog signal appear at the terminal VFRO . The output impedance of terminal VFRO is 600Ω .

■ BNC Terminals AIN1,AIN2

The transmit analog input is selected to input AIN1 or AIN2 terminals by CR1-B1 of the control register.

CR1- B1 : "0"    AIN1 (default)  
           "1"    AIN2

■ BNC Terminal SAO

SAO(15pin) analog output signal of the MSM7732 is output from this terminal. The analog output signal appear at terminal SAO by setting CR4-B5 register is "H".

■ BNC Terminals AOUTN,AOUTP

AOUTN(18pin),AOUTP(19pin) analog output signal of the MSM7732 are output directly from these terminals.

■ MCK,SYNC,BCK

MCK,SYNC and BCLK are available to select external control or clock generator on this board by DSW-CLKON.

DSW-CLKON is:

"L": external control signals can be accessed by user.(outputs of the clock generator are high impedance)

"H": output from the clock generator on this board.

MCK : 2.048MHz

SYNC : 8kHz

BCLK is available to select by DSW-BMODE[2:0]. (see Figure 1)

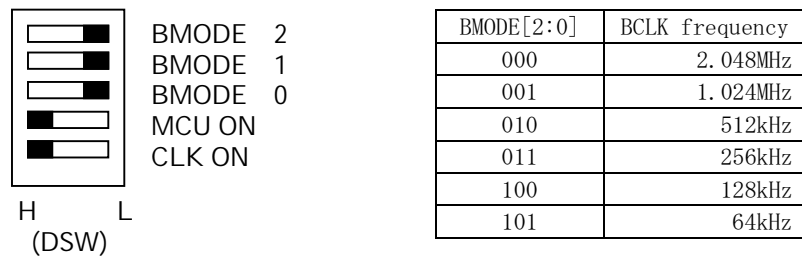


Figure 1. DSW Positions and BCLK frequency

■ Setting Control-Register ( DEN,EXCK,DIO )

To write and read control register of the MSM7732 is available to select external control or MCU-generator on this board. (see Figure 2)

DSW-MCUON is:

“L”: external control signal can be accessed by user.

(DEN,EXCK,DIO pins of MCU-generator are high-impedance.)

“H”: control and output by switches and LED on this board.

- To write to the control-register:
  - 1.Set the switch to the required address and mode selection by setting A0 to A2 to A2 and B0 to B7.
  - 2.Turning on the switch by the push button DATA-IN by setting R/W switch to “L” .
- To read from the control-register:
  - 1.Set the switch to the required address by setting A0 to A2 .
  - 2.Turning on the switch by the push button DATA-IN by setting R/W switch to “H” .
  - 3.Monitor LED.

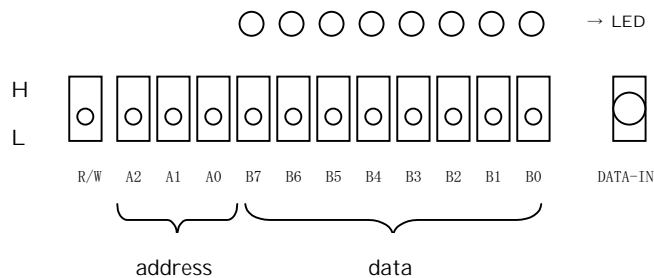


Figure 2. Switches and LED positions

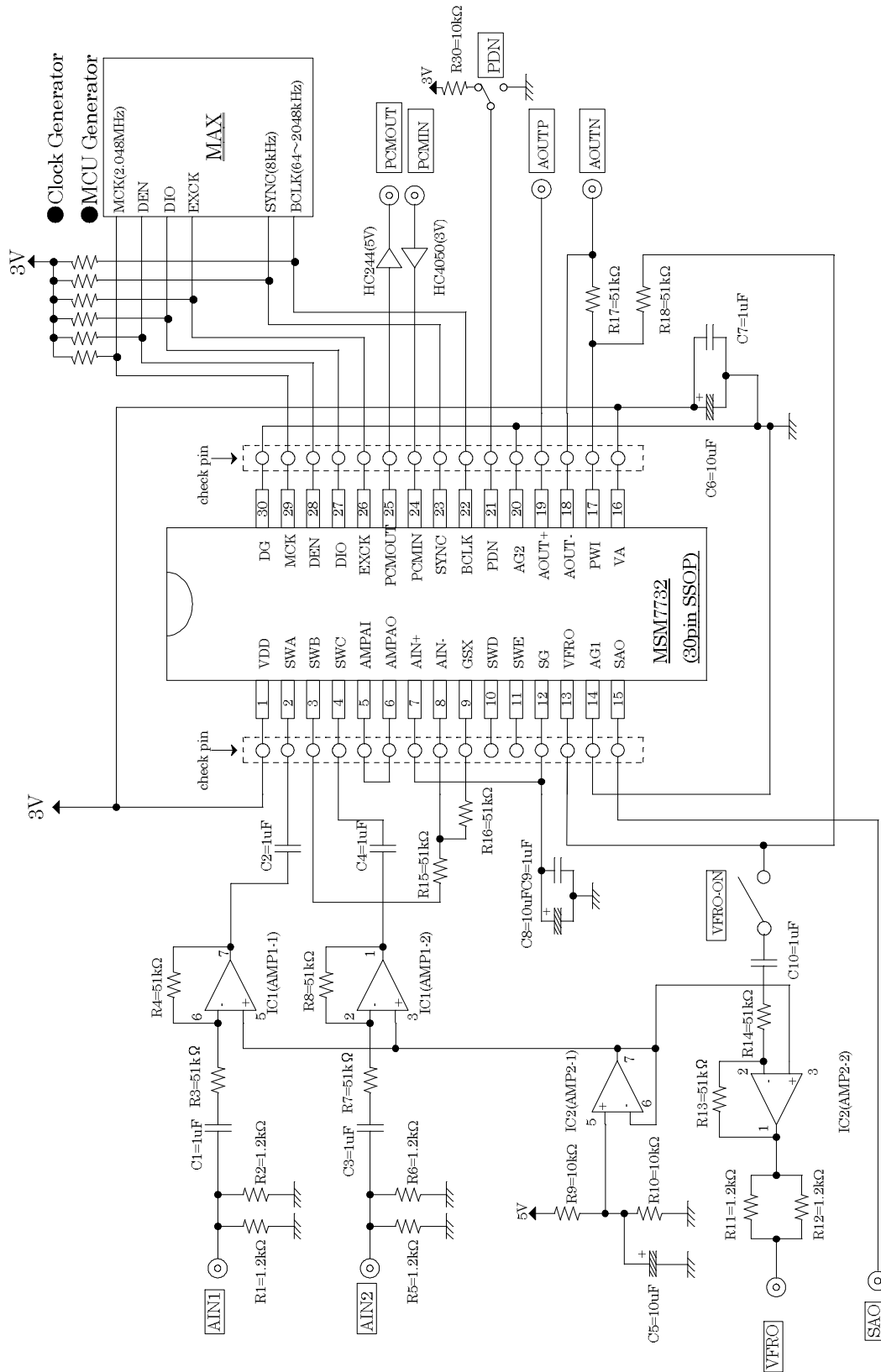
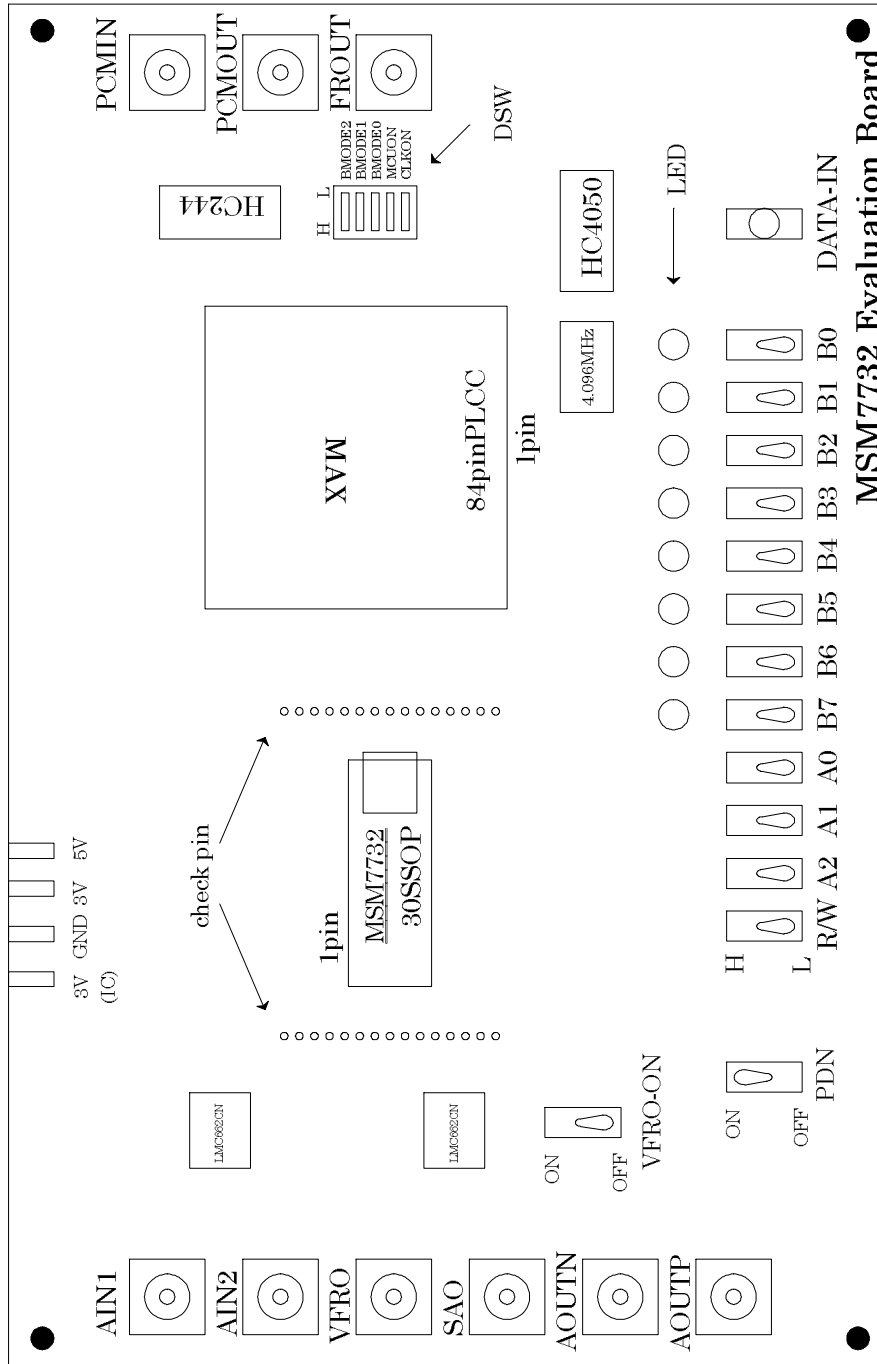


Figure 3. The schematic of the board



MSM7732 Evaluation Board

Figure 4. The layout of the board