Using the MSM7732 CODEC
Evaluation Board

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)

BMODE[2:0]	BCLK frequency
000	2.048MHz
001	1.024MHz
010	512kHz
011	256kHz
100	128kHz
101	64kHz

BMODE 2
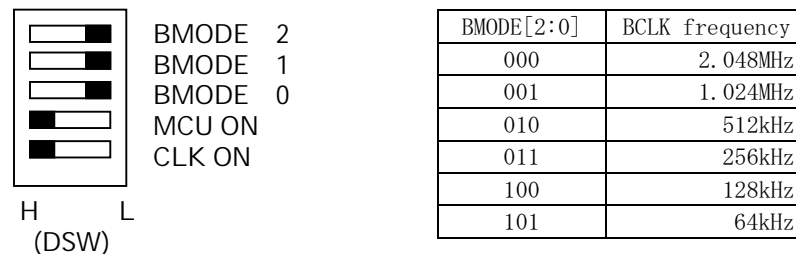BMODE 1
BMODE 0
MCU ON
CLK ON

H   L
(DSW)

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 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" .
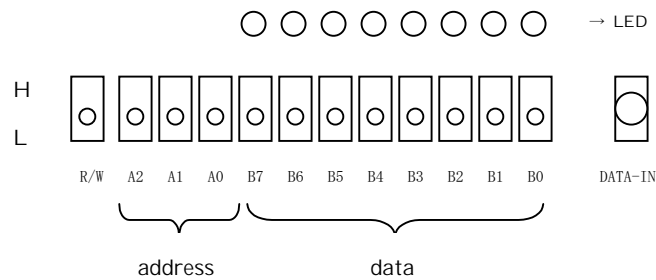
    3.Monitor LED.

Figure 2.   Switches and LED positions
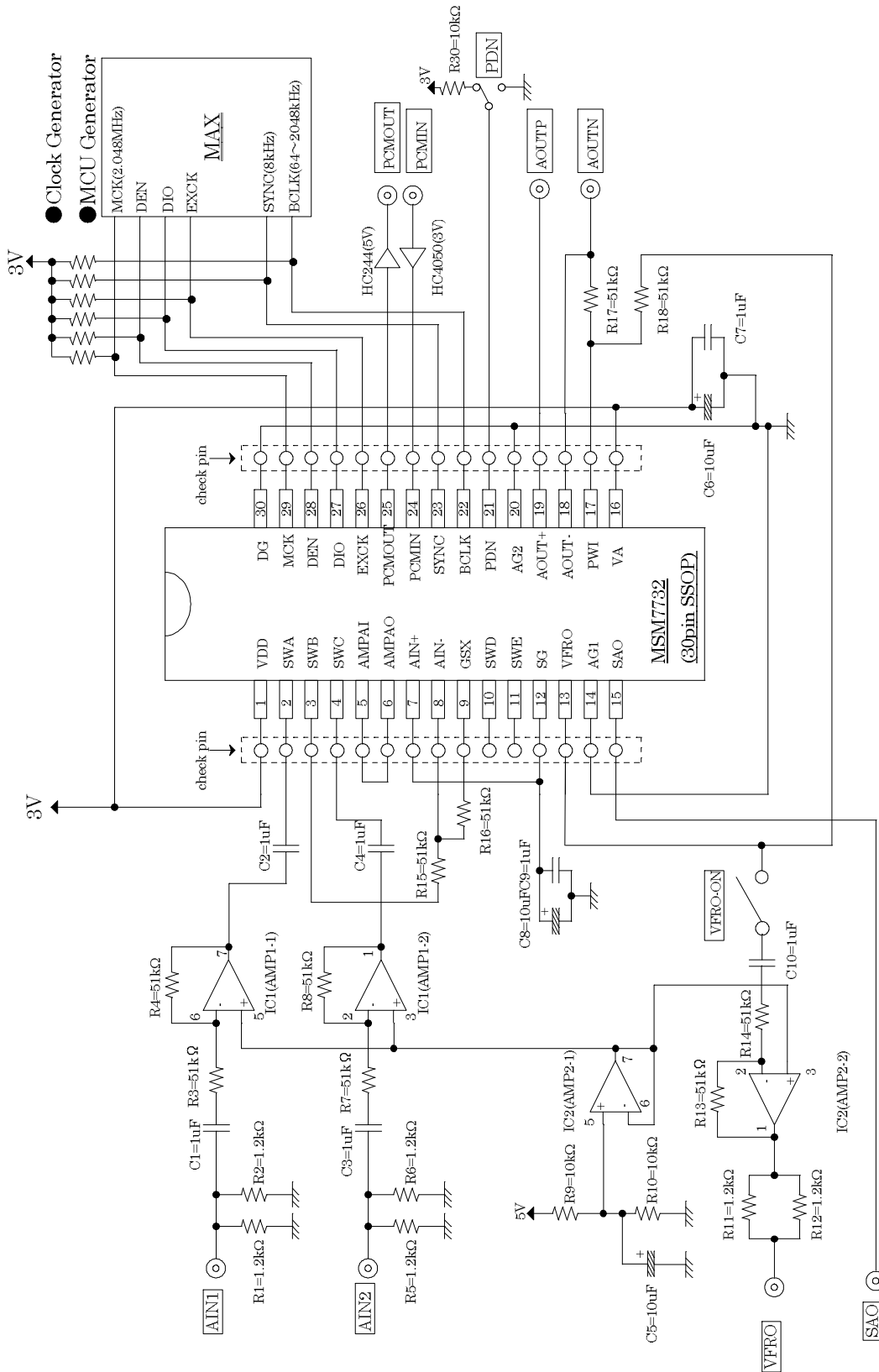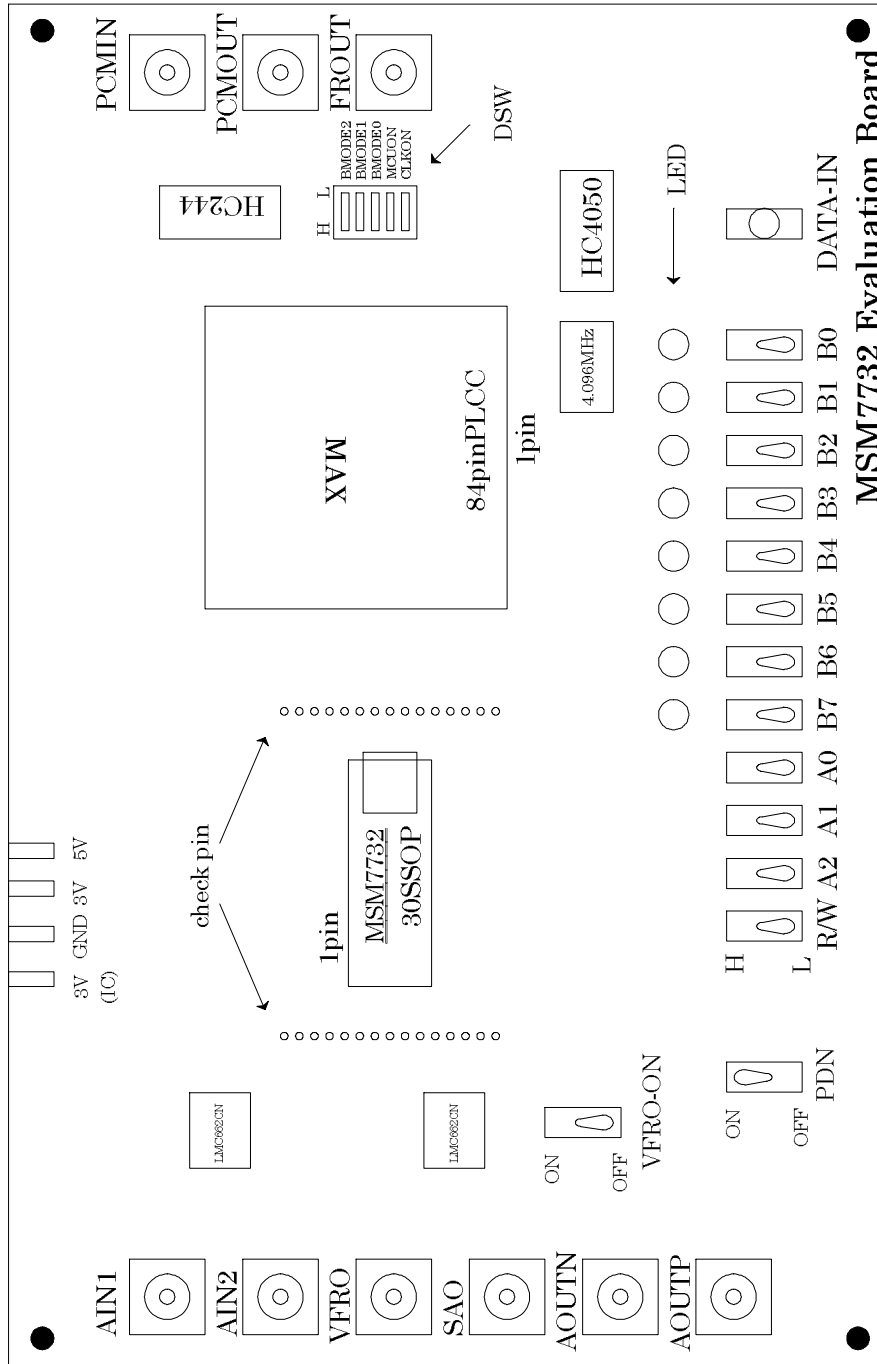
F i g u r e   3 .   T h e   s h e m a t i c   o f   t h e   b o a r d

Figure 4. The layout of the board