

FEATURES

- Usage of the famous ASAHI KASEI 24-Bit DSP with included 20-Bit AD/DA Stereo converter
- Low cost and highest performance DIGITAL Audio Effect sounds
- 20 Bit Delta Sigma 64x Oversampling AD converter (inside DSP)
- 20 Bit Delta Sigma 128x Oversampling DA converter (inside DSP)
- 64x Oversampling ADC Digital Filter (inside DSP)
- 128x Oversampling DAC Digital Filter (inside DSP)
- Sampling Rate : 31.25 KHZ
- Usage of a 1MB SRAM Chip for good quality stereo REVERB and DELAY sounds
- Only a single 5VDC powersupply is necessary
- Complete "Clip LED circuit" on Board (only a LED is necessary)
- Complete Effect "ON / OFF" (Mute) circuit on Board (only a single switch to ground)
- No de-emphasis and pre-emphasis OP-Amp circuits are necessary
- Simple 4 bit binary or gray encoder program select system (Jumper on Board)
- Automatic audio Mute Circuit during program changes
- Real 16 Stereo - Effect presets on Board
- Pin and Board-Size compatibility with ACE32 Board

APPLICATIONS

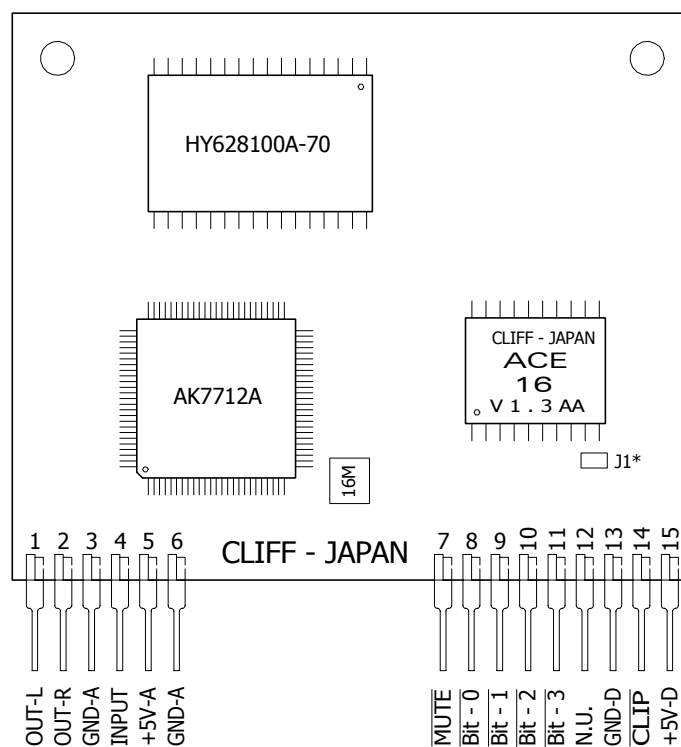
- Guitar and Keyboard Amplifier / Combos
- Audio mixing console / Powered mixing console
- Karaoke systems
- 9.5" or 19" sized stand alone Stereo Effect unit, for Studio / MI / PA usage
- Mono to Stereo converter

Technical Data

AD - DA conversion : 20 Bit
DSP arithmetic : 24 / 34 Bit
S/N (A-weight) : 95dB
Dynamic range : 97dB
Frequency passband : 70 - 16000HZ (-3dB)
Max. Input voltage : 4.0 Vp-p
Input impedance : 200 Kohm
Max. Output voltage : 3.2 Vp-p
Min. Output load res. : 5.0 Kohm
Power supp. current : 125 mA (without Clip LED)

EFFECT CHART

01	Reverb Hall 2	5.0 sec.	07	Delay 50% F.B.	100 ms.	13	Chorus & Reverb	slow / 4.0 sec.
02	Reverb Hall 2	3.0 sec.	08	Delay 50% F.B.	200 ms.	14	Chorus & Reverb	med / 2.0 sec.
03	Reverb Room	2.0 sec.	09	Delay 50% F.B.	350 ms.	15	Flanger & Reverb	slow / 4.0 sec.
04	Reverb Room	1.0 sec.	10	Delay 50% F.B.	500 ms.	16	Flanger & Reverb	med / 2.0 sec.
05	Reverb Plate	3.5 sec.	11	Delay & Reverb	170 ms / 3sec.			
06	Reverb Plate	1.5 sec.	12	Delay & Reverb	300 ms / 6sec.			

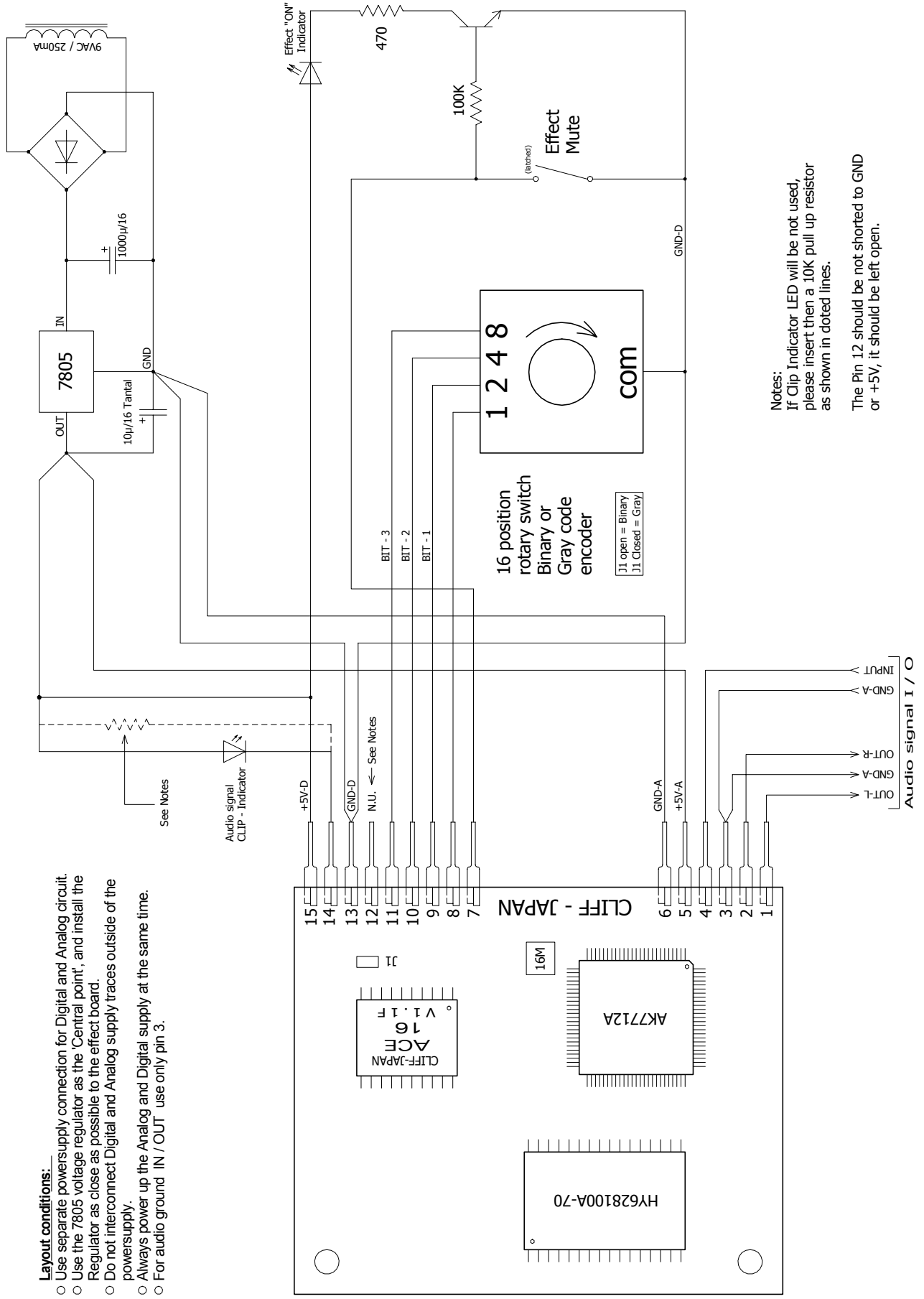


***Note:**
 Jumper J1 select Binary or Gray encoder switch;
 J1 open = Binary encoding
 J1 closed = Gray encoding

Recommended circuit for "ACE 16S" Model

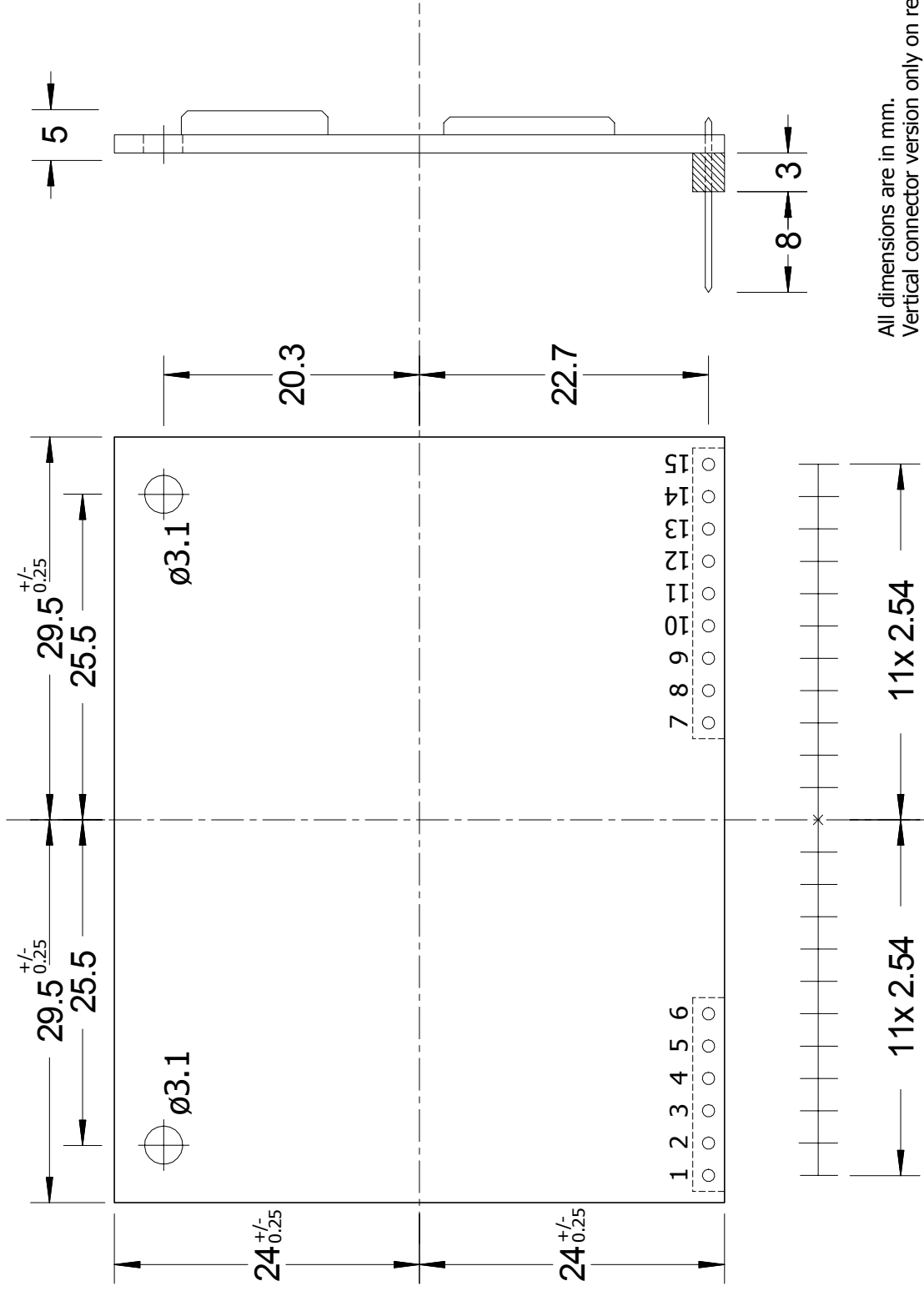
Layout conditions:

- Use separate powersupply connection for Digital and Analog circuit.
- Use the 7805 voltage regulator as the 'Central point', and install the Regulator as close as possible to the effect board.
- Do not interconnect Digital and Analog supply traces outside of the powersupply.
- Always power up the Analog and Digital supply at the same time.
- For audio ground IN / OUT use only pin 3.



Notes:
 If Clip Indicator LED will be not used,
 please insert then a 10K pull up resistor
 as shown in dotted lines.
 The Pin 12 should be not shorted to GND
 or +5V, it should be left open.

ACE 16 module dimensions - horizontal connector type



All dimensions are in mm.
Vertical connector version only on request.