Accutronics DIGITAL SOUND EFFECTOR

Model: BTSE-32FX

1. Overview

The BTSE-32FX Effect board provides 32 different digital audio effects to be used for mixers or other audio applications that require sound enhancement. Equipped with the superb quality digital effects processing engine which it adds that extra punch needed to make audio presentations truly stand out.

2. Specifications

FX Presets	32
Passband Frequency	20hz ~ 20khz
DSP arithmetic	24 bit
S/N (A-weighted)	90 dB
Dynamic Range	90 dB
Sampling Rate	48 khz
Power Supply	DC 5V
Dimensions (w x l)	64 x 35 mm

3. Applications

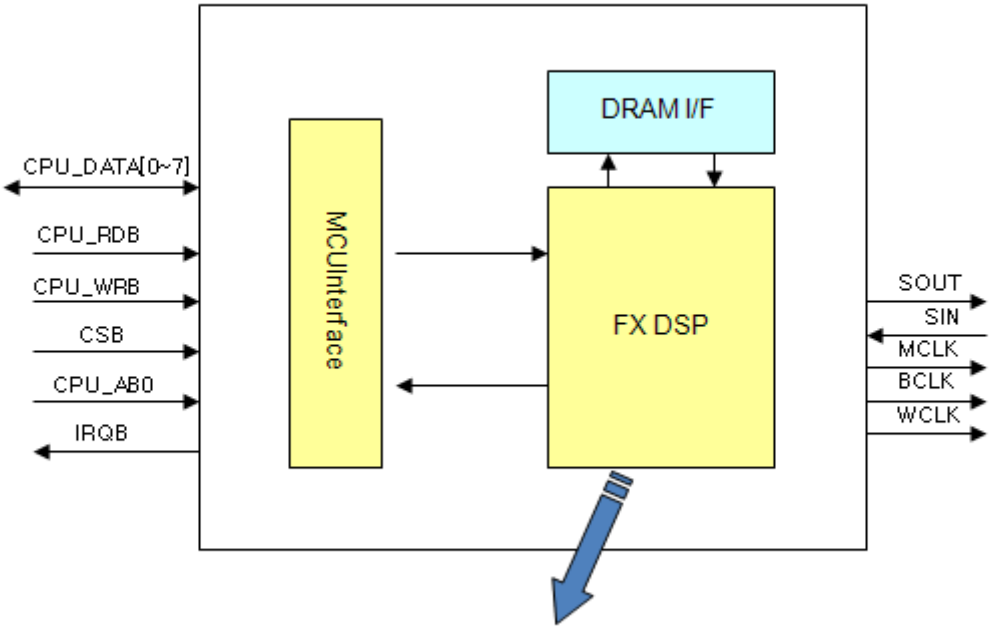
Guitar and keyboard Amplifiers/ Combos

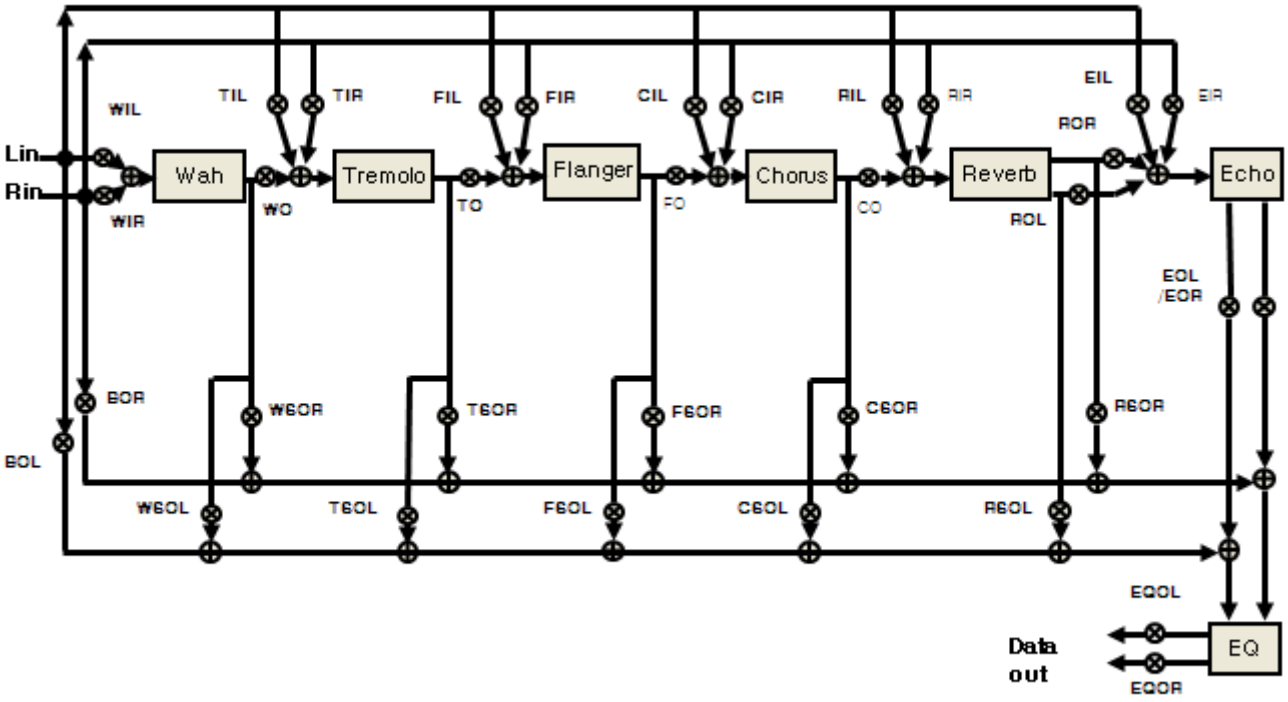
Audio mixing consoles / Powered Mixing Console

Karaoke systems

Stand -alone stereo Effect units for studio and PA usage

4. Block Diagram





5. Effects Program Chart

Reverb			Delay			Chorus		
01	Hall	6.0 sec	14	Delay 50%	400 ms	23	Chorus & Hall slow	4.0 sec
02	Hall	4.5 sec	15	Delay 50%	500 ms	24	Chorus & Delay medium	0.15 sec
03	Hall	3.0 sec	16	Delay 50%	800 ms	25	Chorus & Delay slow	0.3 sec
04	Hall	1.6 sec	17	Voice Doubler	60 ms		**Flanger**	
05	Room	1.6 sec	18	Voice Doubler	120 ms	26	Flanger slow	
06	Room	1.0 sec	19	Chorus slow		27	Flanger medium	
07	Plate	3.0 sec	20	Chorus medium		28	Flanger fast	
08	Plate	1.6 sec	21	Chorus fast				
09	Ambient	1.6 sec	22	Chorus & Hall medium	2.0 sec	29	Gated Reverb	125 ms
10	Delay & Room	1.6 sec				30	Gated Reverb	200 ms
11	Delay 50%	100 ms				31	Reverse Reverb	150 ms
12	Delay 50%	200 ms				32	Reverse Reverb	250 ms
13	Delay 50%	300 ms						

6. Pin Descriptions

Part	Pin	Name	Function
CN1	1	L-Out	Audio Out Left
	2	R-Out	Audio Out Right
	3	AGND	Analog Ground
	4	IN	Auido Input
	5	3.6V	+3.6V Out
	6	AGND	Analog Ground
	7	MUTE	Mute (SW 5 bit)
	8	FND-DATA	FND Data out
CN2	1	DB0	Serial data
	2	DB1	Serial clock
	3	RSTC	Rest
	4	GND	Ground
	5	3.6V	+3.6V Out
CN3	1	SW1	SW 0 bit
	2	SW2	SW 1 bit
	3	SW3	SW 2 bit
	4	SW4	SW 3 bit
	5	BANK	SW 4 bit
	6	DGND	Digtial Ground
	7	FND-CLK	FND clock out
	8	5V	+5V power supply
CN4	1	ISP-CLK	ISP Clock
	2	ISP-SD	Analog Ground
	3	RSTB	Rest
	4	GND	Ground
	5	3.6V	Analog Ground
	6	TEST	Test

※ CN2, CN4 Pin is only used download firmware on MCU, EEPROM
※ Suggestion for control: Binary code switch (BTDS20V-116)

7. Circuit Diagram