

Accutronics DIGITAL SOUND EFFECTOR

Model: BTSE-99FX

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.

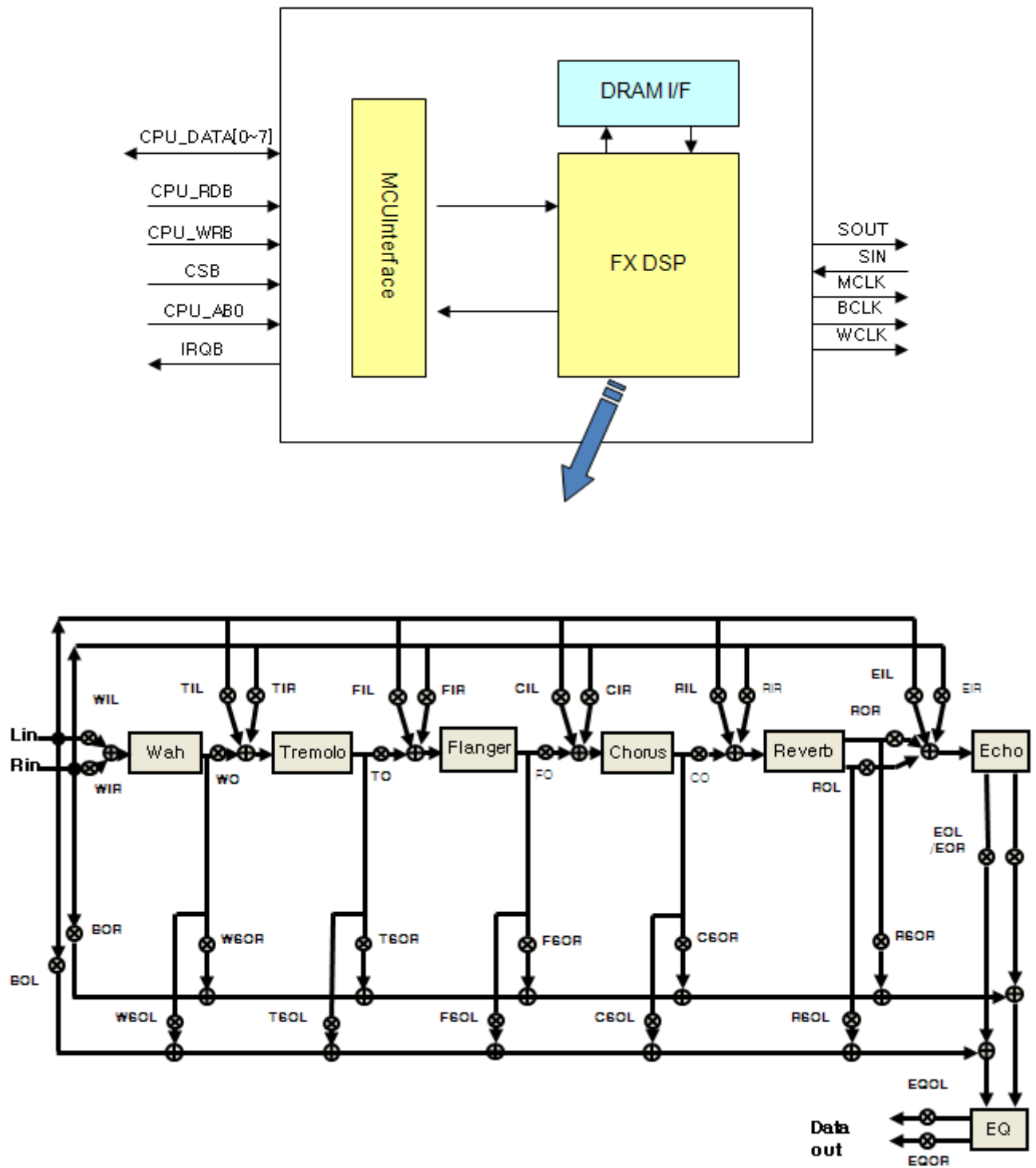
2. Specifications

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)	50 x 49 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	2.0 sec	38	Echo	100 ms +Room	1.0 sec	70	Chours	fast
02	Hall	2.5 sec	39	Echo	150 ms +Room	1.5 sec	71	Chours	fast +Echo 100 ms
03	Hall	3.0 sec	40	Echo	200 ms +Hall	2.0 sec	72	Chours	fast +Room 1.0 sec
04	Hall	4.0 sec	41	Echo	250 ms +Hall	2.5 sec	73	Chours	medium
05	Hall	5.0 sec	42	Echo	300 ms +Hall	3.0 sec	74	Chours	medium +Echo 200 ms
06	Hall	6.0 sec	43	Echo	350 ms +Hall	3.5 sec	75	Chours	medium +Hall 2.0 sec
07	Hall	8.0 sec	44	Echo	400 ms +Hall	4.0 sec	76	Chours	slow
08	Hall	10.0 sec	45	Echo	500 ms +Hall	5.0 sec	77	Chours	slow +Echo 300 ms
09	Room	1.0 sec	46	Voice Doubler	60 ms		78	Chours	slow +Hall 4.0 sec
10	Room	1.5 sec	47	Voice Doubler	80 ms		Flanger		
11	Room	2.0 sec	48	Voice Doubler	100 ms		79	Flanger	fast
12	Room	2.5 sec	49	Voice Double	120 ms		80	Flanger	fast +Echo 100 ms
13	Room	3.0 sec	50	Voice Doubler	140 ms		81	Flanger	fast +Room 1.0 sec
14	Room	4.0 sec	51	Signal Delay	50 ms		82	Flanger	medium
15	Plate	1.0 sec	52	Signal Delay	100 ms		83	Flanger	medium +Echo 200 ms
16	Plate	1.5 sec	53	Signal Delay	150 ms		84	Flanger	medium +Hall 2.0 sec
17	Plate	2.0 sec	54	Signal Delay	200 ms		85	Flanger	slow
18	Plate	2.5 sec	55	Signal Delay	250 ms		86	Flanger	slow +Echo 300 ms
19	Plate	3.0 sec	56	Signal Delay	300 ms		87	Flanger	slow +Hall 4.0 sec
20	Plate	4.0 sec	57	Signal Delay	400 ms		Tremolo		
21	Ambient	0.5 sec	58	Signal Delay	500 ms		88	Tremolo	fast
22	Ambient	0.7 sec	59	Echo	50% +F.B 100 ms		89	Tremolo	fast +Room 1.0 sec
23	Ambient	1.0 sec	60	Echo	50% +F.B 125 ms		90	Tremolo	medium
24	Ambient	1.3 sec	61	Echo	50% +F.B 150 ms		91	Tremolo	medium +Hall 2.0 sec
25	Ambient	1.6 sec	62	Echo	50% +F.B 200 ms		92	Tremolo	slow
26	Gated	75 ms	63	Echo	50% +F.B 250 ms		93	Tremolo	slow +Hall 4.0 sec
27	Gated	100 ms	64	Echo	50% +F.B 300 ms		Wah Wah		
28	Gated	125 ms	65	Echo	50% +F.B 350 ms		94	Wah Wah	fast
29	Gated	150 ms	66	Echo	50% +F.B 400 ms		95	Wah Wah	fast +Room 1.0 sec
30	Gated	200 ms	67	Echo	50% +F.B 500 ms		96	Wah Wah	medium
31	Gated	300 ms	68	Echo	50% +F.B 350 ms		97	Wah Wah	medium +Hall 2.0 sec
32	Reverse	75 ms	69	Echo	50% +F.B 800 ms		98	Wah Wah	slow
33	Reverse	100 ms					99	Wah Wah	slow +Hall 4.0 sec
34	Reverse	125 ms							
35	Reverse	150 ms							
36	Reverse	200 ms							
37	Reverse	300 ms							

6. Pin Descriptions

Part Name/Pin NO	PIN NAME	FUNCTION
J2	PIN 1	VCC + 5V
	PIN 2	AGND
	PIN 3	AUX IN1
	PIN 4	AUX IN2
	PIN 5	AGND
	PIN 6	AUX OUT1
	PIN 7	AUX OUT1
	PIN 8	3.3VREF
	PIN 9	GPIO7/ADC_IN0
	PIN 10	GPIO7/ADC_IN1
	PIN 11	GPIO7/ADC_IN2
	PIN 12	DGND
J1	PIN 1	ISP SCLK
	PIN 2	ISP SDAT
	PIN 3	RESETB
	PIN 4	DGND
	PIN 5	+3.3V
	PIN 6	TEST(VPP)
J3	PIN 1	GPIO5/RXD
	PIN 2	GPIO6/TXD
	PIN 3	GPIO7/ADC_IN3
	PIN 4	GPIO8/ADC_IN4
	PIN 5	GPIO9/ADC_IN5
	PIN 6	DGND

※ J1 Pin is only used download firmware on MCU

※ BTSE99FX had been removed J1 pin

7. Circuit Diagram

