



INTEGRATED CIRCUITS INC.

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VOICE OTP

aP89xx-DBAMP-T

Demo Board

***A*PLUS INTEGRATED CIRCUITS INC.**

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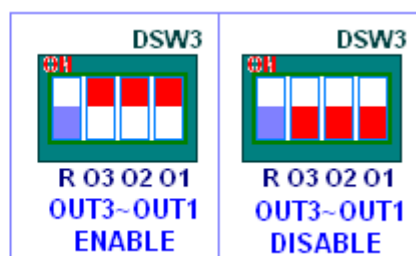
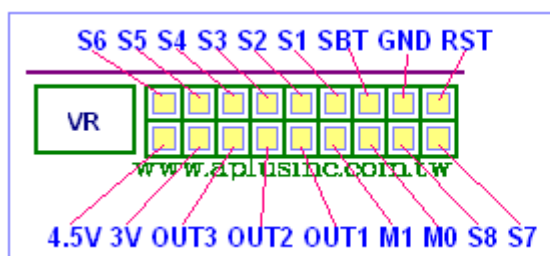
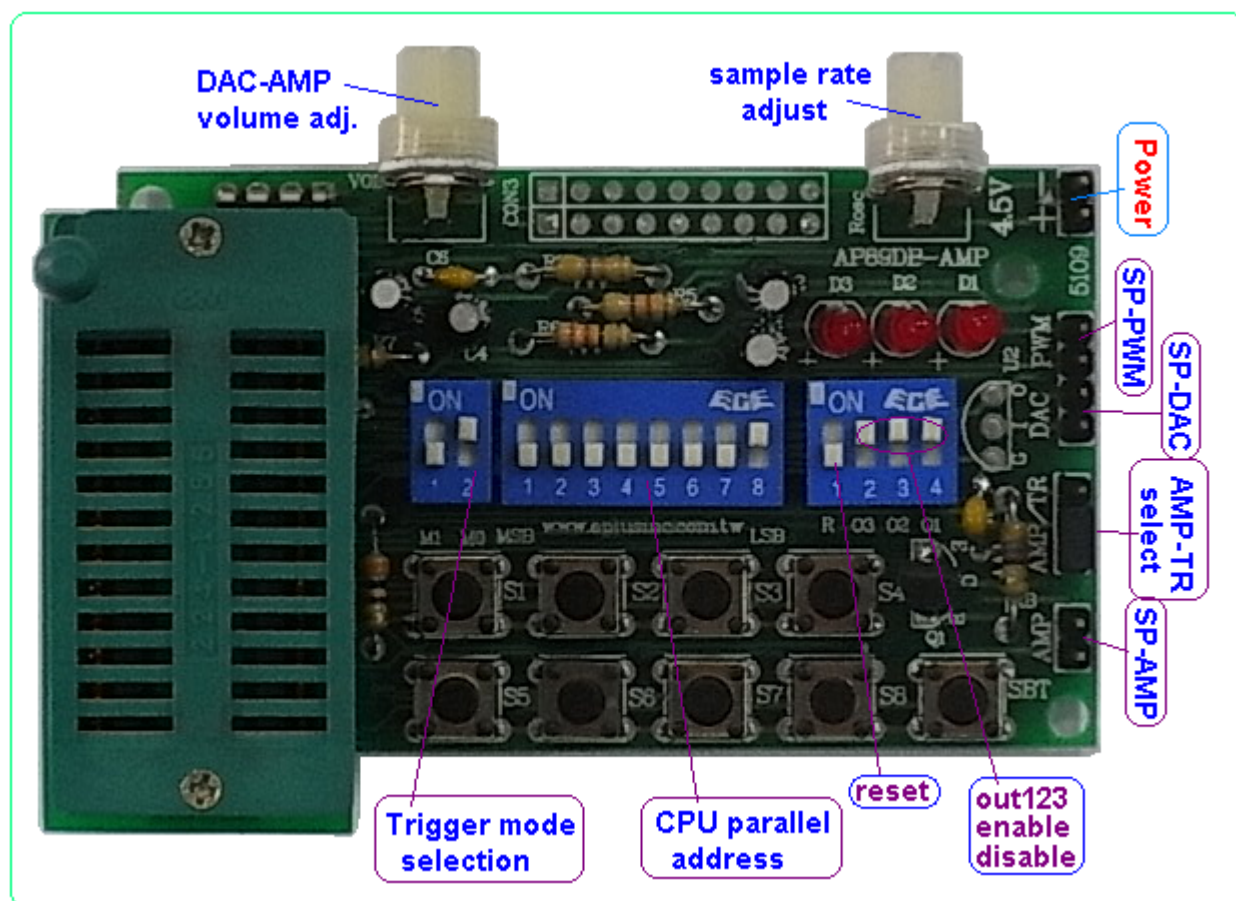
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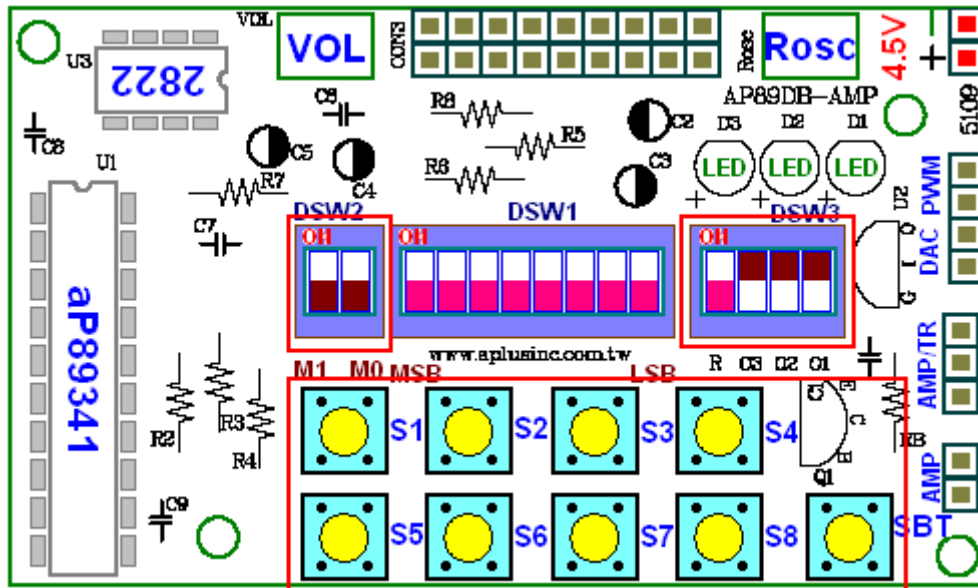
aP89xx-DBAMP-T DEMO BOARD (+ OP-AMP) for aP89341(341") , aP89170(170") , aP89085(85")

- PART NO. : **AP89xx-DBAMP-T**
- PCB NO. : 5109
- PCB SIZE : 76 x 45 mm
- TRIGGER TYPE : M1 & M0 PIN TRIGGER MODE SELECT
 - a. **KEY Trigger** : S8 ~ S1 & SBT , max. 32 sections
 - b. **CPU Parallel Trigger** : address --- S8(MSB),S7,S6,S5,S4,S3,S2,S1(LSB), total max. 254 sections & SBT key voice trigger
 - c. **CPU Serial Trigger** : S1(CS) : Chip enable , S2(DI) : series data input , S3(SCK) : synchronize clock ----- total max. 254 sections



1. KEY TRIGGER : DSW2 = [M0 = 0 , M1 = 0]

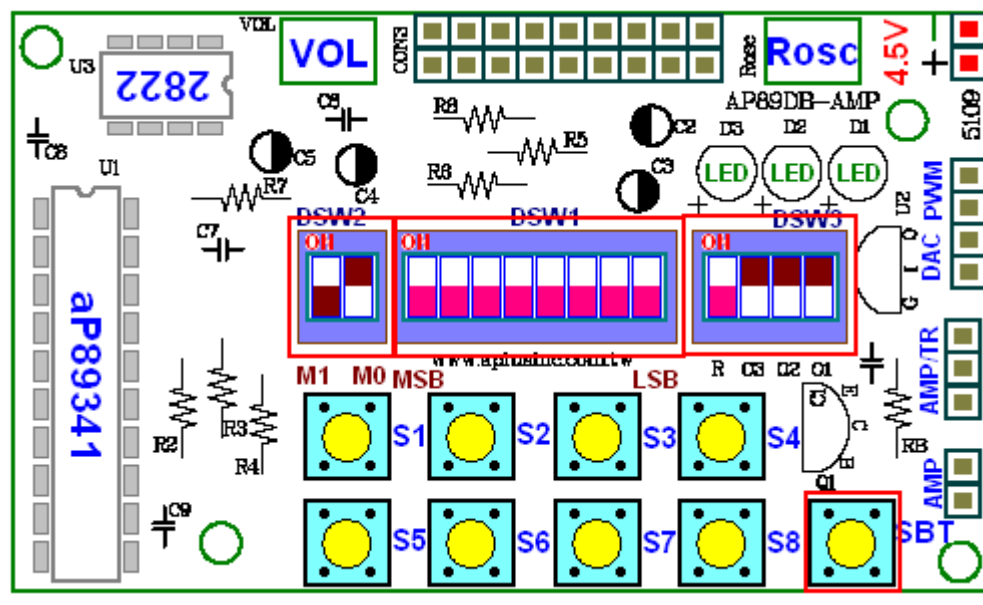
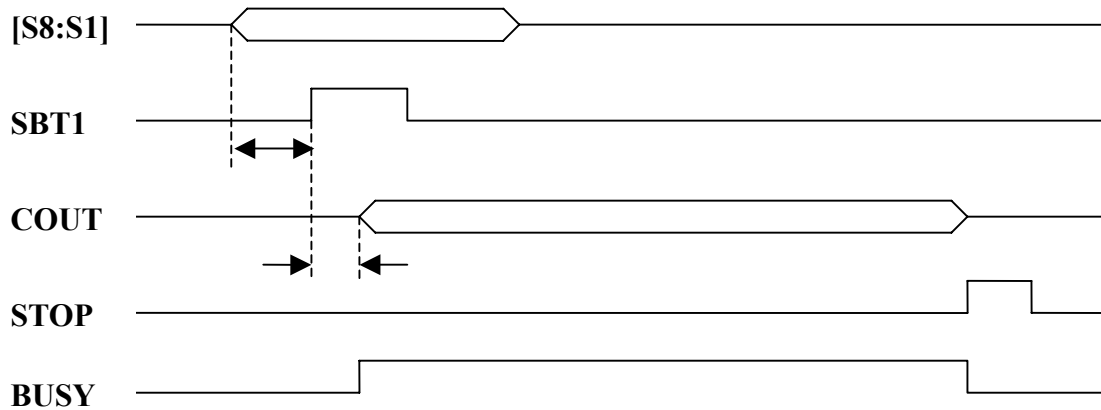
- USE KEY : S1,S2,S3,S4,S5,S6,S7,S8;total max. 32 sections
- SBT KEY : ONE KEY SEQUENTIAL TRIGGER,max. 254 sections
- DSW3(O3-O2-O1) : ENABLE OUT3,OUT2,OUT1



Section	C1	C2	C3	C4	C5	C6	C7	C8
1	HIGH	NC	NC	NC	NC	NC	NC	NC
2	NC	HIGH	NC	NC	NC	NC	NC	NC
3	NC	NC	HIGH	NC	NC	NC	NC	NC
4	NC	NC	NC	HIGH	NC	NC	NC	NC
5	NC	NC	NC	NC	HIGH	NC	NC	NC
6	NC	NC	NC	NC	NC	HIGH	NC	NC
7	NC	NC	NC	NC	NC	NC	HIGH	NC
8	NC	NC	NC	NC	NC	NC	NC	HIGH
9	HIGH	HIGH	NC	NC	NC	NC	NC	NC
10	NC	HIGH	HIGH	NC	NC	NC	NC	NC
11	NC	NC	HIGH	HIGH	NC	NC	NC	NC
12	NC	NC	NC	HIGH	HIGH	NC	NC	NC
13	NC	NC	NC	NC	HIGH	HIGH	NC	NC
14	NC	NC	NC	NC	NC	HIGH	HIGH	NC
15	NC	NC	NC	NC	NC	NC	HIGH	HIGH
16	HIGH	NC	NC	NC	NC	NC	NC	HIGH
17	HIGH	HIGH	HIGH	NC	NC	NC	NC	NC
18	NC	HIGH	HIGH	HIGH	NC	NC	NC	NC
19	NC	NC	HIGH	HIGH	HIGH	NC	NC	NC
20	NC	NC	NC	HIGH	HIGH	HIGH	NC	NC
21	NC	NC	NC	NC	HIGH	HIGH	HIGH	NC
22	NC	NC	NC	NC	NC	HIGH	HIGH	HIGH
23	HIGH	NC	NC	NC	NC	NC	HIGH	HIGH
24	HIGH	HIGH	NC	NC	NC	NC	NC	HIGH
25	HIGH	HIGH	HIGH	HIGH	NC	NC	NC	NC
26	NC	HIGH	HIGH	HIGH	HIGH	NC	NC	NC
27	NC	NC	HIGH	HIGH	HIGH	HIGH	NC	NC
28	NC	NC	NC	HIGH	HIGH	HIGH	HIGH	NC
29	NC	NC	NC	NC	HIGH	HIGH	HIGH	HIGH
30	HIGH	NC	NC	NC	NC	HIGH	HIGH	HIGH
31	HIGH	HIGH	NC	NC	NC	NC	HIGH	HIGH
32	HIGH	HIGH	HIGH	NC	NC	NC	NC	HIGH

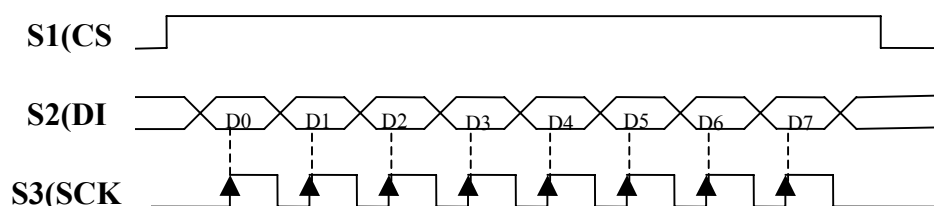
2. CPU Parallel : DSW2 = [M0 = 1 , M1 = 0]

- Address pin : S8(MSB),S7,S6,S5,S4,S3,S2, S1(LSB), total max. 254 sections
- VOICE Trigger pin : SBT



3. CPU Serial : DSW2 = [M0 = 0 , M1 = 1]

- S1(CS) : Chip enable
 S2(DI) : series data input
 S3(SCK) : synchronize clock



Command	D7	D6	D5	D4	D3	D2	D1	D0	Description
PUP1 (C5h)	1	1	0	0	0	1	0	1	Power up the chip with NO ramp-up (suitable
PUP2 (8Dh)	1	0	0	0	1	1	0	1	Power up the chip WITH ramp-up (suitable for
PDN1(E1h)	1	1	1	0	0	0	0	1	Power down the chip with NO ramp-down
PDN2(A9h)	1	0	1	0	1	0	0	1	Power down the chip WITH ramp-down
PLAY (55h)	0	1	0	1	0	1	0	1	Playback the specified Voice Group
	G7	G6	G5	G4	G3	G2	G1	G0	Voice Group address
STATUS (E3h)	1	1	1	0	0	0	1	1	Set output status for OUT2 pin
	0	0	0	1	0	G2	G1	G0	OUT2 = BUSYB (000), 8K (001), 4K, 2K,
PAUSE(39h)	0	0	1	1	1	0	0	1	Pause the playback and hold at current COUT
RESUME(1Dh)	0	0	0	1	1	1	0	1	Resume playback from the previous COUT
PREFETCH (71h)	0	1	1	1	0	0	0	1	Pre-load Voice Group address into buffer for
	G7	G6	G5	G4	G3	G2	G1	G0	Voice Group address

