

◆ Features

- * Full and pure natural harmonic sound effect , maximum at 512 musical notations
- * Built in audio amplifier , do not need transistor on output for sound amplifier
- * Built in 1 LED flash circuit , flash speed follows sound output of melody tempo
- * Built in alone motor driver signal output (MD pin) , not be effect to sound quality during motor is derived
- * 5 kinds different trigger mode by MODE & SL pins :
 - Power on/off control mode
 - One shot non re-trigger mode
 - One shot re-trigger mode
 - On/off switch mode (TG key control sound on or off)
 - Single touch plays all songs mode (one touch TG pin playing all tunes)

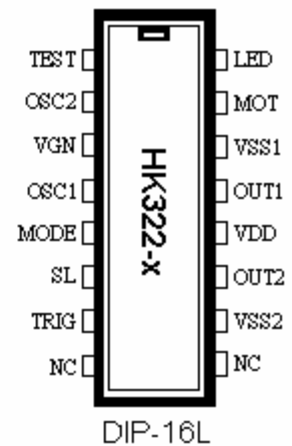
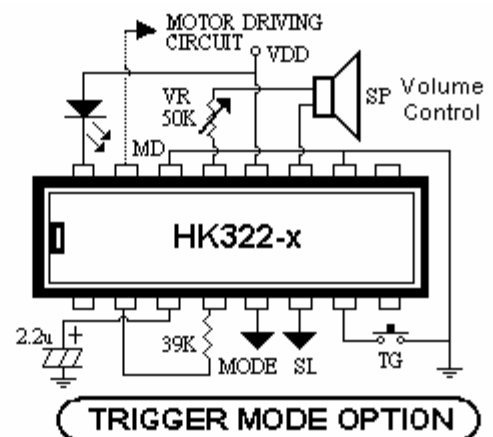
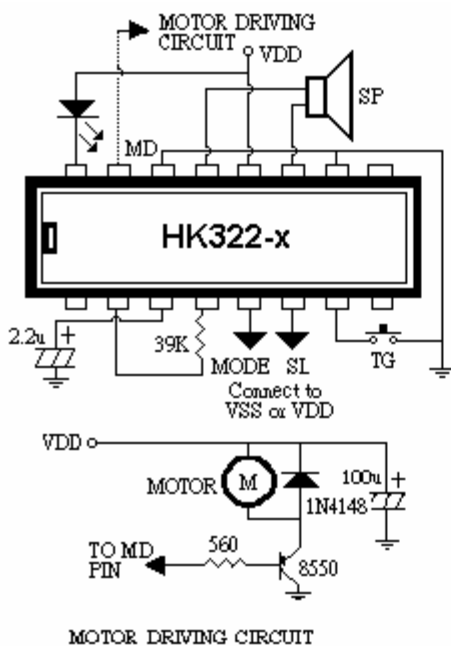
◆ Application

Toys, Clock melody, Key chain, Musical box

◆ Electrical Characteristics

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Remark
Operating voltage	V _{DD}	1.8	3.0	5.2	V	
Operating current	I _{OP}	----	0.1	0.5	mA	
Stand by current	I _{SB}	----	0.4	1	uA	
Oscillator frequency	F _{OSC}	----	500	----	KHz	±30% R _{osc} = 39KΩ
Operating temperature	T _{EMP}	0	25	60	°C	
Driving current	I _O	----	18	----	mA	@ V _{DS} =1V

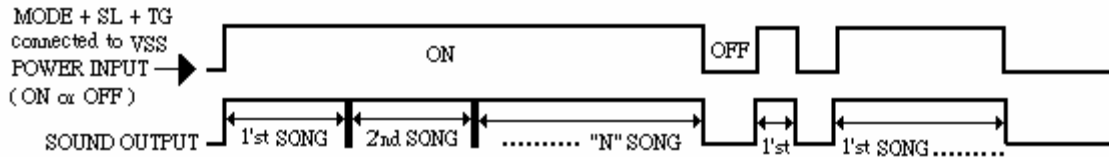
◆ Application circuit



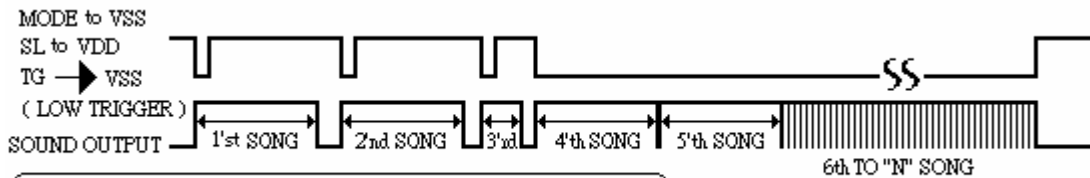
MODE	SL	Trigger Mode
VSS	VSS	POWER ON/OFF (TG = VSS)
VSS	VDD	ONE SHOT RE -TRIGGER (by TG pin touch)
VDD	VSS	ONE SHOT NON RE-TRIGGER (by TG pin touch)
VDD	VDD	ON / OFF SWITCH (by TG pin touch)
VSS	VSS	PLAY ALL SONGS (by TG pin touch)

★ Package Type : DIP-16L

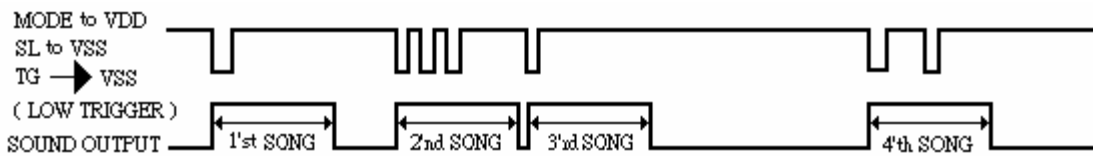
★ Trigger Mode and Timing Chart :



TRIGGER MODE: POWER ON/OFF CONTROL



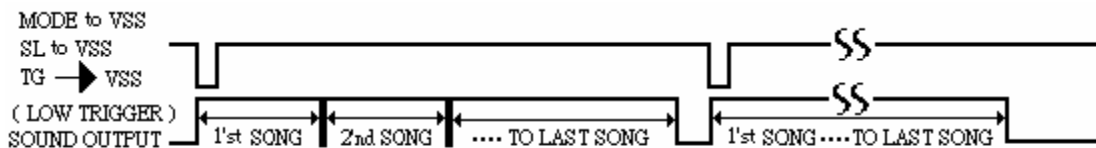
TRIGGER MODE : ONE SHOT RE-TRIGGER



TRIGGER MODE : ONE SHOT NON RE-TRIGGER



TRIGGER MODE : ON/OFF SWITCH



TRIGGER MODE : ONE TOUCH PLAY ALL SONGS

◆ Song list

HK322-1:

1. JINGLE BELLS
2. O CHRISTMAS TREE
3. SILENT NIGHT
4. DECK THE HALLS
5. THE FIRST NOEL
6. JOY TO THE WORLD
7. WE WISH YOU A MERRY CHRISTMAS
8. HARK! THE HERALD ANGELS SING

HK322-2:

1. BRAHM'S LULLABY
2. TWINKLE TWINKLE LITTLE STAR
3. ARE YOU SLEEPING
4. LONDON BRIDGE IS FALLING DOWN
5. THREE BLIND MICE
6. ROCK BYE BABY

HK322-3:

1. EASTER PA RADE
2. PETER COTTON TAIL
3. AMERICAN PATROL

HK322-6:

1. LOVE ME TENDER
2. LET ME CALL YOU SWEETHEART
3. YOU ARE MY SUNSHINE
4. SILVER THREADS AMONG THE GOLD
5. LOVE'S OLD SWEET SONG (BY JAMES LYMAN MOLLOY)
6. I LOVE YOU (BY BEETHOVEN)