EPSON
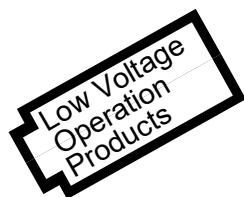
7920 Series

Melody IC

Low Voltage Operation Products

● **Clear Electronic Sound**
● **Usable for Wide-ranged Application**
● **Low Power Dissipation & Supply Voltage**

■ DESCRIPTION

The series 7920 is a CMOS IC which plays prearranged melodies and alarm sounds electronically. Built-in oscillation circuit generates acoustic pulses, then melodies and alarm sounds are formed with only a few external diserete parts including resistor, capacitor, speaker etc. Thus the 7920 can enjoy various applications such as replacement for conventional music box and alarm sound generator.

■ FEATURES

● Melody 1
● Musical interval .... Temperament or pure temperament
● Sound .... 1 series, 2.5 octave
  Compound interval or accompaniment are possible.(One octave interval)
● Tempo .... 16 kinds(Prest to Largo). Two tempos in one piece.
● Note .... Basic note ♩ ♪ ♪ ♪♪ ♪ , and also possible for ♩ ♪ ♩ ♪ ♪
● Rest .... According to note
● Repeat .... Continuous performance of pieces, and repeats(8 times at most)of a piece.
● Beginning .... Always starts at the beginning of piece.
● Input signal .... 1 start signal
● Envelope .... External CR(2 series)
● Volume control .... From external circuit(volume etc.)
● Oscillation .... C, R oscillator (C, R external connection)
● Voltage 1.5V/3.0V
● Package .... DIP-8pin(plastic)/SOP4-8pin(plastic)

■ BLOCK DIAGRAM

■ PIN CONFIGURATION

DIP-8pin/SOP4-8pin
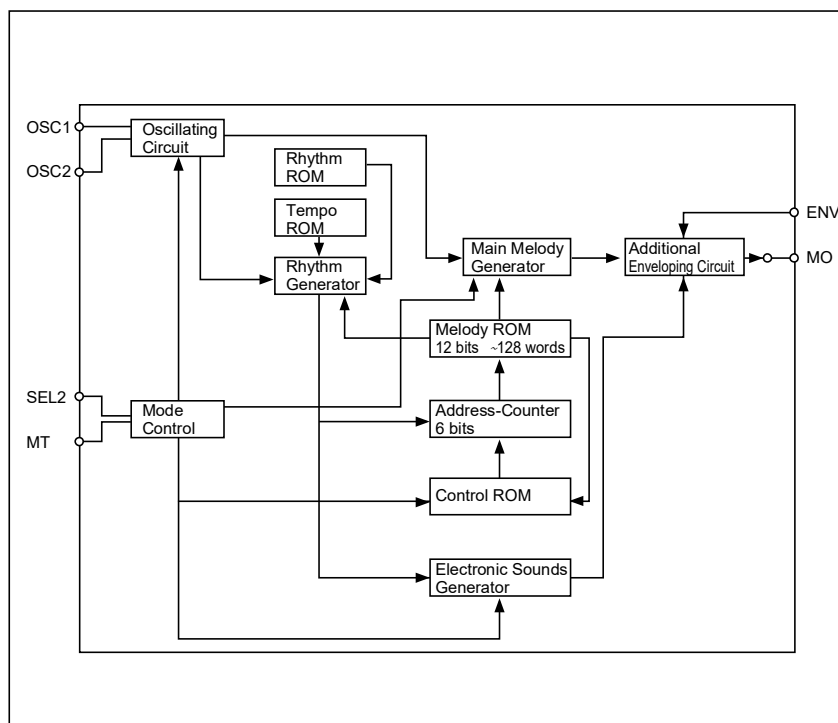
SEIKO EPSON CORPORATION
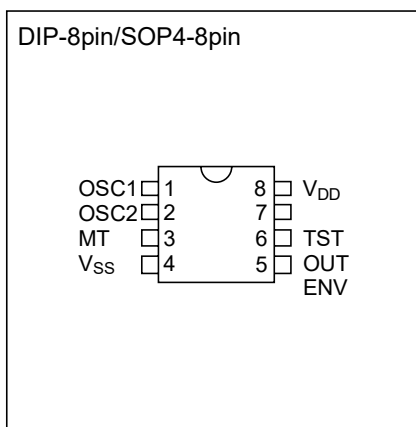
■ PIN DESCRIPTION

Pin Name	Pin No.	Function	Pin Name	Pin No.	Function
OSC1, OSC2	1 2	Connected with resistor Rv regulates the oscillation frequency.	ENV	5	Connected with C, R_1, regulates the time-constant of envelope.
			OUT	6	Connect to pre-amp.
MT	3	Performance starts on setting this terminal Hi.	TST	7	IC test input (Pull-down resistor provided)
V_{SS}	4	V_{SS} (0V)	V_{DD}	8	V_{DD} (+)

■ ABSOLUTE MAXIMUM RATINGS

(V_{SS}=0V)

Rating	Symbol	Value	Unit
Supply voltage	V_{DD}	-0.3 to 5.0	V
Input /Output voltage	$V_{I/O}$	-2.0 to V_{DD}+0.2	V
Operating temperature	T_{opr}	-20 to 65 (V_{DD}=1.5V)	˚C
Storage temperature	T_{stg}	-65 to 150	˚C
Soldering temperature and time	T_{sol}	260˚C, 10s (at lead)	–

■ ELECTRICAL CHARACTERISTICS

(V_{SS}=0V, Ta=25˚C)

| Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply voltage	V_{DD}	-	1.2	1.5	2	V
High level input voltage	V_{IH}	-	V_{DD}-0.1	-	V_{DD}	V
Low level input voltage	V_{IL}	-	V_{SS}	-	V_{SS}+0.1	V
High level input current	I_{IH2}	V_{DD}=1.5V V_{IH}=V_{DD}	1.5	-	15	μA
High level output voltage	V_{OH}	V_{DD}=1.2V R_L=150kΩ ENV=V_{SS}	V_{DD}-0.1	-	V_{DD}	V
Low level output voltage	V_{OL}	V_{DD}=1.2V R_L=150kΩ ENV=V_{SS}	V_{SS}	-	V_{SS}+0.1	V
Fall time of enveloping circuit (10% to 90%)	t_f	V_{DD}=1.5V C_1=4.7μF f_{OSC}=47.52kHz	2.8	-	10	ms
Standby current (Oscillation halting)	I_{DDS}	V_{DD}=1.5V OUT1, OUT2 open (OUT open)	-	0.1	0.3	μA
Average operating current	I_{DDO}	V_{DD}=1.5V, MT=V_{DD} OUT1, OUT2 open (OUT open)	-	30	60	μA

■ OSCILLATION CHARACTERISTICS

(V_{SS}=0V, Ta=25°C)

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Oscillation frequency	f_{osc}	V_{DD}=1.5V	-	47.52	-	kHz
Oscillation self-start voltage	V_{STA}	R_1=120kΩ	1.2	-	-	V
Oscillation stop voltage	V_{STP}	R_1=120kΩ	-	-	1.2	V

■ PACKAGE DIMENSIONS

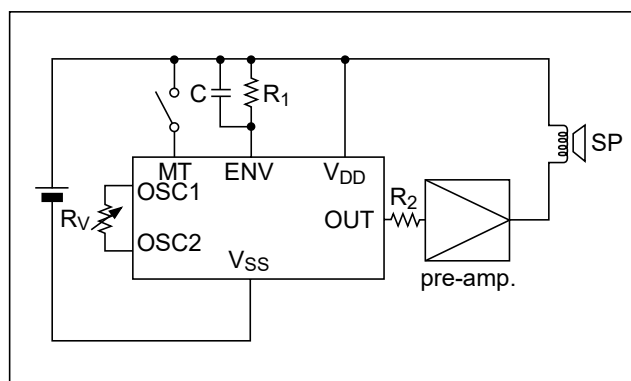
Plastic DIP-8pin
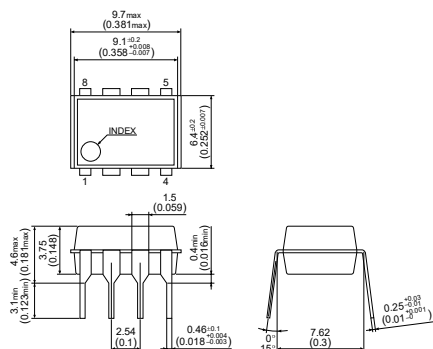
Unit: mm (inch)

Plastic SOP4-8pin
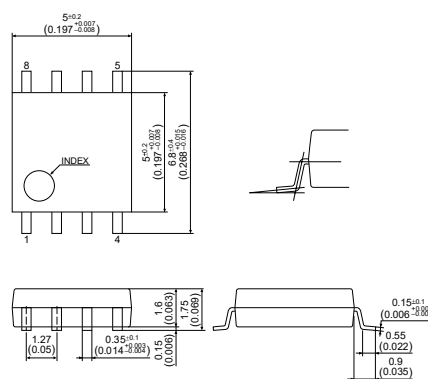
Unit: mm (inch)

■ BASIC EXTERNAL CONNECTION

<Recommendable conditions of discrete parts>

Symbol	Recommendable value	Unit
R_V	1,160 Typ.	kΩ
R_1	120	kΩ
R_2	100 to 300	kΩ
C	4.7	μF

Attention

1. Oscillation frequency(f_{OSC})changes according to variation of R_V but stability of frequency will be worse.

2. We feel melody differently variation of C, R_1.

3. It is possible that fluctuation of oscillation frequency become larger with increase of battery impedance. In that case, connecting condenser between V_{DD} and V_{SS} is desirable.

■ CHARACTERISTICS CURVE
● Oscillation characteristics

kHz

60

3V

1.7V

50

1.5V

1.2V

R_{01}, R_{02}=120kΩ
C=51pF

40

R: Carbon resistor
C: Ceramic condenser

/10 0 10 20 30 40 50 ˚C
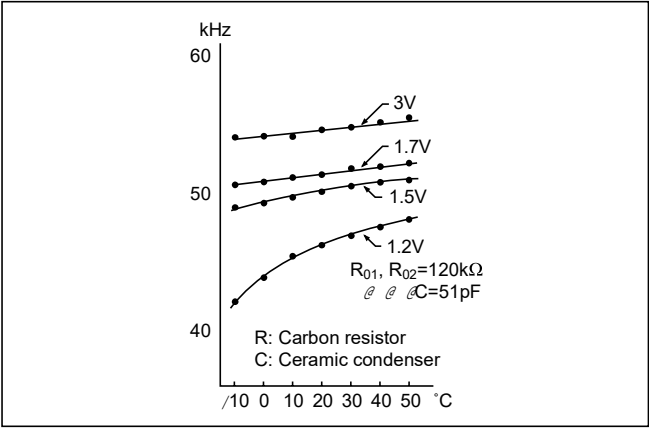
EPSON

Melody ICs

■ Melody ICs

SEIKO EPSON's melody ICs offers wide range of features and melodies to suit all applications. Custom melodies are easily implemented with the buil-in programmable mask ROMs.

Part number		Melodies (notes)	Transducer		Melody selection		Accompaniment	Envelope	Oscillator		Play mode		Abort play	Power supply voltage (V-typ.)			Package	Additional features
			Dynamic speaker	Piezo-buzzer	Binary code	Serial trigger			Internal RC	External clock	Level hold	One-shot		1.5	3.0	5.0		
7910 series #		2 (128)	✓	—	✓	—	✓	✓	✓	—	✓	✓	—	✓	✓	—	DIP-16pin	High-quality tone, alarm and chime / For driving of a dynamic speaker
7920 series		1 (64)	✓	—	—		—	✓	☆		☆		—	☆		—	DIP-8pin/ SOP4-8pin	For driving of a dynamic speaker (External amplifier)
7930 series #		1 (64)	✓	—	—		—	✓	✓	—	✓	✓	—	✓	—	—	DIP-14pin	For driving of a dynamic speaker
SVM# 7940 series	SVM7942	8 (512)	—	✓	—	✓			✓	—	✓	—	—	☆		—	DIP-16pin	Multiple melody type / For driving of a piezo buzzer or an electromagnetic buzzer
	SVM7943										—	✓	✓					
SVM# 7950 series	SVM7955	1 (64)	—	✓	—				✓	—	—	✓	✓	✓	—	—	DIP-16pin	For driving of a piezo buzzer or an electromagnetic buzzer
SVM 7960 series	SVM7960	4 (127)	✓	—	✓	—	✓	✓	—	✓	✓	—	—	☆		☆	DIP-16pin/ SOP1-16pin/ SOP1-24pin*	High-quantity tone / For driving of a dynamic speaker / 1.5V/5V / ◆1: Independent selection of terminals / *SVM7962MBQ only
	SVM7961								—	✓	—	✓						
	SVM7962								✓	—	✓	—						
	SVM7963								✓	—	—	✓						
	SVM7964	3 (127)			◆1				—	✓	✓	—						
	SVM7965								—	✓	—	✓						
	SVM7966								✓	—	✓	—						
	SVM7967								✓	—	—	✓						
SVM# 7970 series	SVM7973	8 (640)	✓	—	✓	—	✓	☆	✓	—	◆3		✓	☆		☆	DIP-18pin	High-quality tone / Multiple melody type / For driving of a dynamic speaker / 1.5V/5V / ◆2: Binary code and serial trigger / ◆3: Set on each melody
	SVM7975	11 (640)			◆2													
SVM# 7990 series	SVM7993	8 (512)	✓	—	—	✓	✓	✓	✓	—	—	✓	✓	✓	—	—	DIP-16pin	Multiple melody type / For driving of a dynamic speaker
SVM# 7900 series	SVM7902	1 (64)	—	✓					✓		✓	—	—	✓	✓	—	DIP-8pin	For driving of a piezo buzzer or an electromagnetic buzzer / ◆4: Mask selection of choices if the oscillation resistor is to be externally installed or built into the IC.
	SVM7903								◆4		—	✓						
SVM# 7800 Series	SVM7800	1 (63)	—	✓					✓	—	✓ ◆5		—	✓		—	DIP-8pin	For driving of a piezo buzzer or an electromagnetic buzzer / ◆5: Choice of level hold or one-shot may be selectable by the terminals
	SVM7802																	
SVM# 7820 Series	SVM7820	1 (63)	—	✓					✓	—	✓ ◆6		—	—	✓ ◆7	—	DIP-8pin	For driving of a piezo buzzer or an electromagnetic buzzer / ◆6: Choice of level-hold or one-shot can be selected by the terminals / ◆7: 3.0V only
SVM# 7850 Series	SVM7853	4 (127)	—	✓	✓	—	✓	✓	✓	—	—	✓	—	—	—	✓	DIP-16pin	High-quantity tone / For driving of a piezo buzzer (External amplifier)
SVM 7860 Series	SVM7860	1 (127)	✓	—	—	—	✓	✓	✓	—	✓	—	—			☆	DIP-8pin	High-quality tone / For driving of a dynamic speaker (External amplifier)
SVM 7500 Series	SVM7500	1 (63)	—	✓					✓	—	◆8		◆9	✓	—		DIP-8pin	◆8: Choice of level-hold or one-shot can be selected by the terminals / ◆9: Availability of forced stop can be selected by the terminals
SVM 7560 Series	SVM7560	2 (128)	✓	—	✓	—	✓	✓	☆		☆		—			✓	SOP3A-8pin	
SVM 7100 Series	SVM7100	16 (495)	—	✓	✓	—	—	—	✓	✓	◆10	—	✓	—	✓	—	SSOP-020pin	◆10: Selectable by the terminal

☆ Mask option.

\#: Standard products only.

■ Music generators

Music generators are high-quality custom melody ICs capable or reproducing preprogrammed music by synthesizing the sounds of several musical and percussion instruments, as well as alarm signals.

| Part number | | Melodies (notes) | Transducer | | Melody selection | | Accompani-ment | Envelope | Oscillator | | Play mode | | Abort play | Power supply voltage (V-typ.) | | | Package | Additional features |
			Dynamic speaker	Piezo-buzzer	Binary code	Serial trigger			Internal RC	External clock	Level hold	One-shot		1.5	3.0	5.0		
SVM 7570 Series	SVM7570M SVM7570C SVM7571C	15 (620)	✓	—	☆		4	☆	☆		✓		✓	—		☆	SOP1-24pin DIP-24pin DIP-16pin*	

☆ : Mask option ✳ : Selectable 8 melodies (max.) in DIP-16pin

■ Voice synthesis ICs

This voice synthesis IC is a standard product. Accordingly, customization is not available.

Part number	Features	Package
SVM9300C0A	• Six-word input lines • Word duration of three to four seconds • 6 selection input terminals • Low-power CMOS technology • Single 5 V supply	DIP-8pin

■ Sound simulators

This sound simulator IC is a standard product. Accordingly, customization is not available.

Sound simulators generate simple, preprogrammed sounds and can be used to drive a buzzer. Please contact your local SEIKO EPSON sales representative for further details.

| Part number | | Melodies (notes) | Transducer | | Melody selection | | Accompani-ment | Envelope | Oscillator | | Play mode | | Abort play | Power supply voltage (V-typ.) | | | Package | Additional features |
			Dynamic speaker	Piezo-buzzer	Binary code	Serial trigger			Internal RC	External clock	Level hold	One-shot		1.5	3.0	5.0		
SVM 4100 Series	SVM4100C	1	—	✓	—	—	—	–	✓	—	✓ ◆11		—		✓	—	DIP-8pin	◆11: Choice of level-hold or one-shot can be selected by the terminals

■ Standard melodies

Part number	Melody	Composer
7910C	Whittington	Swiss Folk Song
7910E	Two Minuets	J. S. Bach
	Dark Eye brows	Russian Folk Song
7910G	Melodia A	J. S. Bach
	Melodia B	Russian Folk Song
7910I	Home on the Range	American Folk Song
	Greensleeves	English Folk Song
7910K	Yurikago no Uta	Shin Kusakawa
	Edo no Komori Uta	Japanese Old Song
7910N	Musunde Hiraite	Jean-Jacques Rousseau
	Cho-cho	Spanish Folk Song
5Å 7910O	Westminster Chimes (two chimes)	J. E. Thirtle
7910Q	Wiegenlied	J. Brahms
	Rock-a-Bye Baby	American Folk Song
7910CE	Nocturne	F. Chopin
	Minuet	J. S. Bach
7910CF	Für Elise	L. v. Beethoven
	A Maiden's Prayer	Badarzewska
7910CG	Romance	Spanish Folk Song
	Petrouchka	Russian Folk Song
❍ 7910CH	Westminster Chimes	J. E. Thirtle
	Ave Maria	F. Schubert
❍ 7910CM	Westminster Chimes (two chimes)	J. E. Thirtle
	Whittington	—
7910CN	Holdilidia	Swiss Folk Song
	Home on the Range	American Folk Song
7910CP	Silent Lakeside	Swiss Folk Song
	Mountain Musician	German Folk Song
7910CQ	Mary Had a Little Lamb	American Folk Song
(3.0V spec.)	Camptown Races	S. C. Foster
7910CR	Die Lorelei	F. Silcher
	Ländler Tanz	W. A. Mozart
7910CS	Amaryllis	French Folk Song
	Symphony No. 40	W. A. Mozart
7910CU	Jingle Bells	J. Pierpont
	Silent Night	F. Gruber
7910CV	Joy to the World	G. F. Händel
	The First Noel	English Folk Song
7910CW	O Tannenbaum	German Folk Song
	Frosty the Snowman	S. Nelson
7910EM	Naval March	Tokichi Setoguchi
7920A	The Cuckoo's Waltz	J. E. Jonasson
7920B	Home Sweet Home	R. Bishop
7920C	Jingle Bells	J. Pierpont
❍ 7920M	Wedding March	F. Mendelssohn
❍ 7920Q	Victory Song	G. F. Händel
❍ 7920AH	Wiegenlied	J. Brahms
7920CH	Let It Be	J. Lennon & P. McCartney
7920CK	Oribia wo Kikinagara	Ami Ozaki
❍ 7920CL	CHIME	—
(3.0V spec.)		
7920CN	It's a Small World	Richard. M. Sherman
7920CP	Over the Rainbow	Harold Arlen
7920CT	The Red Shoes	Chosei Motoi
7920CV*	It's a Small World	Richard M. Sherman
(3.0V spec.)		
7920CY	Dancing Ponpokorin	Tetsuro Oda
(3.0V spec.)		
7920EH	It's a Small World	Richard M. Sherman
❍ 7920EK*	CHIME	—
(3.0V spec.)		
7920EL*	The Cuckoo's Waltz	J. E. Jonasson
7920EM*	Home Sweet Home	R. Bishop
7920EN*	Jingle Bells	J. Pierpont
❍ 7920EP*	Wedding March	F. Mendelssohn
❍ 7920EQ*	Victory Song	G. F. Händel
7920ER*	Wiegenlied	J. Brahms
7920ES*	Let It Be	J. Lennon & P. McCartney
7920ET*	Oribia wo Kikinagara	Ami Ozaki
7920EV*	All My Loving	J. Lennon & P. McCartney
7920EY*	Over the Rainbow	Harold Arlen
7920EA*	The Red Shoes	Chosei Motoi

Part number	Melody	Composer
7930B	Home Sweet Home	R. Bishop
7930C	Holdilidia	Swiss Folk Song
❍ 7930E	Westminster Chimes	J. E. Thirtle
7930GA	Yurikago no Uta	Shin Kusakawa
7930GE	Fur Elise	L. v. Beethoven
7942C0T	Holdilidia	Swiss Folk Song
	Minuet	J. S. Bach
	Greensleeves	English Folk Song
	Symphony No. 40	W. A. Mozart
	Home on the Range	American Folk Song
	Silent Lakeside	Swiss Folk Song
	Mountain Musician	German Folk Song
	Happy Birthday	M. J. Hill
7943C0E	Greensleeves	English Folk Song
	Camptown Races	S. C. Foster
	Für Elise	L. v. Beethoven
	Romance d'Amour	Spanish Folk Song
	O Sole Mio	E. di Capua
	Die Lorelei	F. Silcher
	The Cuckoo's Waltz	J. E. Jonasson
	The Old Folks at Home	S. C. Foster
7962C0A/M0A (5V spec.)	Greensleeves	English Folk Song
	Home on the Range	American Folk Song
	CHIME 3	—
7962C0N/M0N (5V spec.)	Two Minuets	J. S. Bach
	Je Te Veux	Erik Satie
	Shabondama	Shinpei Nakayama
	CHIME 3	—
7962C0P/M0P (5V spec.)	CHIME 2	—
	Nocturne	F. Chopin
	Minuet	J. S. Bach
	CHIME	—
	ALARM	—
❍ 7963C0T/M0T (5V spec.) (END signals)	Greensleeves	English Folk Song
	Home on the Range	American Folk Song
	Westminster Chimes (two chimes)	J. E. Thirtle
	Two Minuets	J. S. Bach
❍ 7963CIF/MIF (5V spec.)	Je Te Veux II	Erik Satie
	Shabondama	Shinpei Nakayama
	CHIME 3	—
	CHIME 2	—
7962CIG/MIG (5V spec.)	Melody Fair	Barry, Robin & Maurice Gibb
	Let It Be	J. Lennon & P. McCartney
	CHIME 1	—
	CHIME 2	—
7962CBR	The Four Seasons	A. Vivaldi
7962CBS	Here Comes the Sun	G. Harrison
7962CBQ/MBQ	Die Lorelei	F. Silcher
	Ländler Tanz	W. A. Mozart
	3.	—
	4.	—
7962CFC/MFC	Nocturne	F. Chopin
	Minuet	J. S. Bach
	CHIME	—
	ALARM	—

Titles with ❍ / marks are for medleys.
All the part numbers without voltage indication are for 1.5V.
*:SOP Package (7920 without * mark are DIPs)

❍One-shot trigger mode   (Cont.)

■ Standard melodies

Part number	Melody	Composer
7962C_{CF}/M_{CF}	Home on the Range Greensleeves CHIME ALARM	American Folk Song English Folk Song — —
7962C_{CG}/M_{CG}	Two Minuets Dark Eyebrows CHIME ALARM	J. S. Bach Russian Folk Song — —
7962C_{EC}/M_{EC}	Melody Fair Let It Be CHIME 1 CHIME 2	Barry, Robin & Maurice Gibb J. Lennon & P. McCartney — —
❍ 7963C_{EE}/M_{EE}	Jingle Bells/Santa Claus is Coming to Town/We Wish You a Merry Christmas (medley) We Wish You a Merry Christmas/It Came Upon a Midnight Clear/Joy to the World (medley) CHIME ALARM	J. Pierpont J. Fred Coots English Folk Song English Folk Song Traditional G. F. Händel — —
❍ 7963C_{EF}	Lullaby Rock-a-Bye Baby CHIME ALARM	Brahms American Folk Song — —
❍ 7963C_{EG}/M_{EG}	Wedding March Happy Birthday CHIME ALARM	Mendelssohn M. J. Hill — —
❍ 7963C_{EH}/M_{EH}	Love Story/Love Me Tender (medley) Easter Parade/Peter Cottontail (medley) CHIME ALARM	F. Lai/Elvis Presley Irving Berlin/Steve Nelson — —
❍ 7963C_{EJ}/M_{EJ}	It's a Small World The Teddy Bears' Picnic CHIME ALARM	Richard M. Sherman John W. Bratton — —
❍ 7963C_{EK}/M_{EK}	Westminster Chimes Whittington CHIME ALARM	J. E. Thirtle — — —
❍ 7963C_{EQ}/M_{EQ}	Doh Mi Soh Doh Mi Soh Mi CHIME ALARM	— — — —
7966C_{CL}/M_{CL}	CHIME 1 CHIME 2 BUZZER	— — —
7966C_{CY}	Heigh-Ho CHIME BUZZER	Frank Churchill — —
❍ 7963C_{EV}/M_{EV}	Silent Lakeside Mountain Musician CHIME ALARM	Swiss Folk Song German Folk Song — —
❍ 7963C_{ET}/M_{ET}	Für Elise A Mainden's Prayer CHIME ALARM	L. v. Beethoven Badarzewska — —

Part number	Melody	Composer
❍ 7973C_{AK}	I Just Called to Say I Love You Melody Fair Let It Be Ob-La-Di, Ob-La-Da Greensleeves Home on the Range	Stevie Wonder Barry, Robin & Maurice Gibb John Lennon & P. McCartney John Lennon English Folk Song American Folk Song
❍ 7975C_{0B} (V type) (END signals)	Ländler Tanz Amaryllis Home on the Range Greensleeves Für Elise A Maiden's Prayer Mountain Musician Holdilidia CHIME ALARM Westminster Chimes	W. A. Mozart French Folk Song American Folk Song English Folk Song L. v. Beethoven Badarzewska German Folk Song Swiss Folk Song — — J. E. Thirtle
❍ 7993C_{0C} ❍ 7993C_{0N}	Greensleeves Camptown Races Für Eliese Romance O Sole Mio Die Lorelei The Cuckoo's waltz Mountain Musician Westminster Chimes A Maiden's Prayer Fur Elise Romance a l'Amour Amaryllis Symphony No. 40 Dark Eyebrows Camptown Races	English Folk Song S. C. Foster L. v. Beethoven Spanish Folk Song E. di Capua F. Silcher J. E. Jonasson German Folk Song J. E. Thirtle Badarzewska L. v. Beethoven Spanish Folk Song French Folk Song W. A. Mozart Russian Folk Song S. C. Foster
7902C_{0A} ❍ 7903C_{0B} ❍ 7903C_{0G} ❍ 7903C_{0J} ❍ 7903C_{0S} (3.0V spec.) ❍ 7903C_{AP}	Christmas medley (Rudolph the Red-Nosed Reindeer/ O. Tannenbaum/Jingle Bells) Happy Birthday Hymne à l'Amour Rock-a-Bye Baby Mountain Musician Music Box Dancer	Johnny Marks German Folk Song J. Pierpont M. J. Hill M. Monnot American Folk Song German Folk Song Frank Mills

Titles with / marks are for medleys.
All the part numbers without voltage indication are for 1.5V.

❍ One-shot trigger mode   (Cont.)

■ Standard melodies

Part number	Melody	Composer
7800DCT	Rock-a-Bye Baby	American Folk Song
7800DCV	If You Love Me	M. Monnot
7800D0C	Lullaby	J. Brahms
7800DEB	Happy Birthday	M. J. Hill
7800DEC	Jingle Bells	J. Pierpont
7802DEJ	My Favorite Things	Richard Rodgers
7800DEN	Old Macdonald Had a Farm	American Folk Song
7800DEP	Twinkle Twinkle Little Star	French Folk Song
7800DER	White Christmas	Irving Berlin
7800DES	Wedding March	R. Wagner
7800DEV	You are My Sunshine	Jimmie H. Davis
7800DEY	Christmas medley	Traditional
7800DFA	Christmas medley	Johnny Marks/J. Fred Coots
7800DFB	O tannenbaum/Silen Night (medley)	German Folk Song/ Franz Gruber
7800DFC	Silver Bells	Jay Livingston
7800DFE	Für Elise	L. v. Beethoven
7800DFL	Mary Had a Little Lamb	American Folk Song
7800DFP	Jesus Loves Me	Traditional
7800DFV	Music Box Dancer	Frank Mills
7800DFY	My Way	Jacques Revaux
7800DGA	Easter Parade/Peter Cottontail	Irving Berli/Steve Nelson
7800DGB	Love Me Tender/Let Me Call You My Sweetheart (medley)	Elvis Presley Leo Friedman
7800DGN	Frosty the Snowman	Steve Nelson
7800DGP	Rudolph the Red-Nosed Reindeer	Johnny Marks
7802CHH	Für Elise	L. v. Beethoven
7802CHJ	Music Box Dander	Frank Mills
7802DEK	March of the Toy Soldiers	Leon Jessel
7820CSG	It's a Small World	Richard M. Sherman
7820CSH	Over the Rainbow	Harold Arlen
○ 7853CPA	Silent Night/Jingle Bells	Franz Gruber/J. Pierpont
○ 7853CPB	Twinkle Twinkle Little Star	French Folk Song
	It's a small world	R. M. Sherman

Part number	Melody	Composer
7860CSB	Nocturne	F. Chopin
7860CSC	Minuet	J. S. Bach
7860CSE	Home on the Range	American Folk Song
7860CSF	Green sleeves	English Folk Song
7860CSG	The Entertainer	American Folk Song
7860CSH	Die Lorelei	F. Silcher
7860CST	Bolero	Maurice Ravel
7860CSS	Koi ha Sinkankaku	Kei Ogura
7860C6J	Memory/Here, there and everywhere	Andrew L. Webber / John Lennon
7860CSK	Für Elise	L. v. Beethoven
7860CSM	Melody Fair	R. Barry & M. Gibb
7860C6C (5.0V spec.)	Promenade (Tableaux d'une Exposition)	Modest P. Musorgskii
7860C6E (5.0V spec.)	Je Te Veux	Erik Satie
7860C6F (5.0V spec.)	The Jewels of the Madonna	W. Ferrari
7860C6G (5.0V spec.)	When I'm Sixty-Four	John Lennon
7860C6H (5.0V spec.)	Minuet	L. Boccherini
7860C6K (5.0V spec.)	The Entertainer	American Folk Song
7860C6L (5.0V spec.)	All My Loving/ Michelle/ Hello Goodbye (medley)	John Lennon John Lennon John Lennon
7860C6M (5.0V spec.)	Yesterday Once More	Richard Carpenter
7860C6N (5.0V spec.)	Flashdance	G. Moroder
7500CAF/MAF	Music Box Dancer	Frank Mills
7500CAQ/MAQ	ALARM	—
7571C5A (5.0V spec.)	Etude op. 10-3 Etude op. 10-5	F. Chopin F. Chopin
7570C5B (5.0V spec.) 7571C5B (8 melody type)	Happy Birthday Ureshii Hinamatsuri Medaka no gakkoh Jingle Bells Donguri Koro-Koro Akatonbo Zohsan Haru ga Kita Sacchan Ai-Ai Ohanashi Yubisan Bun-Bun-Bun Otsukai Arisan Tulip Twinkle Twinkle Little Star	M. J. Hill Kohyoh Kawamura Yoshinao Nakada J. Pierpont Sada Yanada Kohsaku Yamada Ikuma Dan Teiichi Okano Megumi Ohnaka Seiichiroh Uno Akira Yuyama Bohemia Folk Song Ikuma Dan Takeshi Inoue French Folk Song
7571C5N (5V spec.)	Goodbye Song Minuet Symphony No. 40 Für Elise The Entertainer Mary Had a Little Lamb CHIME ALARM	F. Chopin J. S. Bach W. A. Mozart L. v. Beethoven American Folk Song American Folk Song — —

All the part numbers without voltage indication are for 1.5V.

❍ One-shot trigger mode   (Cont.)

■ Standard melodies

Part number	Melody	Composer
7570M5J/ 7571C6G (5.0V)	Runner I Want to Take Care of You Oribia wo Kikinagara September Saturday Lovers Autumn Surf heaven, Ski Heavey Color/White Blend	New Funky Suekichi Yumi Matsutohya Ami Ozaki Mariya Takeuchi Tatsuroh Yamashita Kazumasa Oda Yumi Matsutohya Mariya Takeuchi
7570M5L/ 7571C6H (5.0V)	Happy Birthday Mickey Mouse Club March It's a Small World Forest Bear Cha Cha Cha Toy Who Needs a Kid Like This? Lullaby Rudolph the Red-Nosed Reindeer	M. J. Hill Jimmie Dodd Richard M. Sherman American Folk Song Nobuyoshi Koshibe Takeshi Shibuya F. Schubert Johnny Marks
7570M5P/ 7571C6J (5.0V)	Twinkle Twinkle Little Star Old Macdonald had a Farm One Sunny Day London Bridge is Falling Down Mary Had a Little Lamb Rock-A-Bye Baby Lullaby We Wish You a Merry Christmas	French Folk Song American Folk Song American Folk Song English Folk Song American Folk Song American Folk Song J. Brahms English Folk Song
7570M5Q/ 7571C6K (5.0V)	Ampanman Theme Electric Parade New Year's Day Ureshii Hinamatsuri Carp Run Lonesome Journey Snow Jingle bells	Takashi Miki J. Perrey & G. Kingsley Sanetsura Ue Kohyoh Kawamura Unknown Ordway J. P. Unknown J. Pierpont
7570M5R/ 7571C6L (5.0V)	Spring song Eine Kleine Nachtmusik Little Dog Waltz Husband's happy Desire Spring (The Four Seasons) Greensleeves Minuet Symphony No. 40	F. Mendelssohn W. A. Mozart F. Chopin J. S. Bach A. Vivaldi English Folk Song L. Boccherini W. A. Mozart
7570M5S/ 7571C6M (5.0V)	Wedding March Wedding March Battle Hymn of the Republic America the Beautiful The Star Spangled Banner O Canada Jingle Bells Auld Lang Syne	R. Wagner F. Mendelssohn American Folk Song Traditional J. S. Smith C. Lavallee J. Pierpont Scotch Folk Song
7570M5T/ 7571C6N (5.0V)	Rocky (theme) Star Wars (theme) James Bond (theme) Axel Foley (theme) Batman (theme) Indiana Jones (theme) Superman (theme) Popeye (theme)	Bill Conti John Williams Manty Norman Harold Faltermeier Prince R. Nelso J. Williams J. Williams Lean Flatow
7570MIL/CIL (3.0V)	Twinkle Twinkle Little Star Old Macdonald Had a Farm One Sunny Day London Bridge is Falling down Mary Had a Little Lamb Rock-a-Bye Baby Lullaby We Wish You a Merry Christmas	French Folk Song American Folk Song American Folk Song English Folk Song American Folk Song American Folk Song J. Brahms English Folk Song

Part number	Melody	Composer
7570M5V/ 7571C6P (5.0V)	She Wore a Yellow Ribbon My Darling Clementine The Yellow Rose of Texas Yankee Doodle When the Saints Go Marchin' in Londonderry Air Havah Nagilah Jamaica Farewell	American Folk Song American Folk Song American Folk Song American Folk Song American Folk Song Old Irish Melody Judaic Folk Song Jamaican Folk Song
7570M6B (5.0V)	Au Clair de la Lune Sur Le Pont d'Avignon Die Lorelei Muss I Denn Der Lidenbaum Coming through the Rye Annie Laurie Flow gently, Sweet Afton	French Folk Song French Folk Song F. Silcher German Folk Song F. Schubert Scotch Folk Song L. J. Scott J. E. Spilman
7570M6F (5.0V)	Yellow Submarine Yesterday Penny Lane Let It Be Ob-La-Di, Ob-La-Da Hey Jude All My Loving Here Comes the Sun	J. Lennon J. Lennon J. Lennon J. Lennon & P. McCartney J. Lennon J. Lennon J. Lennon George Harrison
4100CPA 4100CPB 4100CPC 4100CPE	CHIRP 1 CHIRP 2 CRICKET SIREN	— — — —
7100M0J	It's a small world Love me tender Old macdonald had a farm March of the Toy Soldiers Yankee doodle dandy Rudolph the Red-Mosed Reindeer/ Santa Claus is Coming to Town Wedding March The Entertainer Two Minutes Landler Tanz CHIME Mickey Mouse club march	Richard M. Sherman Elvis Presley American Folk Song Leon Jessel American Folk Song Johnny Marks J. Fred Coots R. Wagner American Folk Song J. S. Bach W. A. Mozart — Jimmie Dodd
7560M0A 7560M0B	Je Te Veux Minuet Beauty and the beast A whole new world	E. Statie L. Boccherini A. Menken A. Menken

All the part numbers without voltage indication are for 1.5V.
○ One-shot trigger mode

Melody ICs/Music Generator Development

■ Melody ICs development

Melody ICs are customized by programming the ROM data with the customer's melody. Note, however, that the 7910, 7930, SVM7940, SVM7950, SVM7970, SVM7990, SVM7850, SVM7800, SVM7820 and SVM7900 series are standard products for which customization is not available.

● Custom IC ordering information

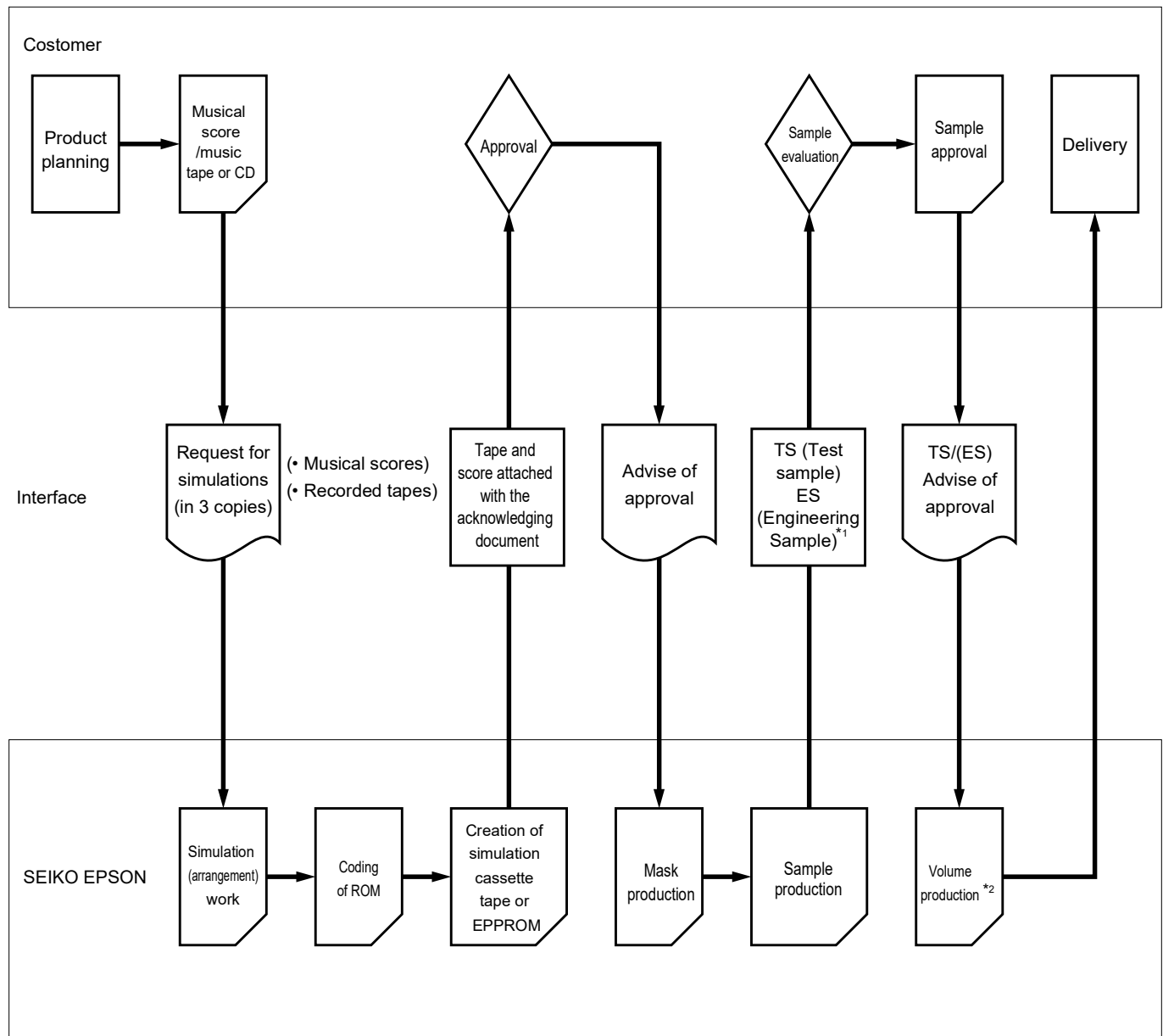|		
Minimum order		30,000 ICs over six months
Medium		Music score or magnetic tape
Delivery schedule	Simulation tape	Ten days after receipt of the medium
	Test samples (5 units of ceramic packages)	Six weeks after approval of the simulation tape
	Volume production	Ten weeks after receipt of the order
Simulation tape		¥30,000 standard; ¥60,000 for the SVM7960 series; ¥120,000 for the SVM7100 series
Mask charge		¥500,000 standard; Test samples are included.
Exclusiveness	Period	Six months from the start of volume delivery, or three months after the delivery of test samples, if no order is placed.
	Applicability	A melody IC is an object of exclusiveness in its original form as defined in the customer's original specification. A melody IC with any amendments in form or function is not considered to be an object of exclusiveness.
Other		• Copyrighting will be handled by SEIKO EPSON • When selling our melody ICs or products using them to countries other than your own, dealing again with copyright matters may exceptionally become necessary depending on the regulations of the country to sell to. • Special options are not included in the mask charge. • Since the delivery schedule is based on that of a standard product, actual delivery dates may vary.

■ Music generator development

Music generators are customized by programming the ROM data with the customer's music arrangement.

● Custom IC ordering information

Minimum order		10,000 ICs over six months
Medium		Music score or magnetic tape
Delivery schedule	Simulation tape	Fourteen days after receipt of the medium, plus two days per extra tune for more than five tunes
	Test samples (5 units of ceramic packages)	Six weeks after approval of the simulation tape
	Volume production	Ten weeks after receipt of the order
Simulation tape		¥120,000 plus ¥5,000 per extra tune for more than five tunes
Mask charge		¥500,000, including test samples
Exclusiveness	Period	Six months from the start of volume delivery, or three months after the delivery of the test samples, if no order is placed.
	Applicability	A music generator is an object of exclusiveness in its original form as defined in the customer's original specification. A music generator with any amendments in form or function is not considered to be an object of exclusiveness.
Other		• Copyrighting will be handled by SEIKO EPSON. • When selling our melody ICs or products using them to countries other than your own, dealing again with copyright matters may exceptionally become necessary depending on the regulations of the country to sell to. • Special options are not included in the mask charge. • Since the delivery schedule is based on that of a standard product, actual delivery dates may vary.

● **Development flow**

Costomer	Product planning → Musical score /music tape or CD → Approval → Sample evaluation → Sample approval → Delivery
Interface	Request for simulations (in 3 copies) (• Musical scores) (• Recorded tapes) / Tape and score attached with the acknowledging document / Advise of approval / TS (Test sample) ES (Engineering Sample)[*1] / TS/(ES) Advise of approval
SEIKO EPSON	Simulation (arrangement) work → Coding of ROM → Creation of simulation cassette tape or EPPROM / Mask production → Sample production / Volume production[*2]

*1 : Engineering samples are provided for the SVM7570.
*2 : Shipping Specifications will be issued, if required.

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SEIKO EPSON CORPORATION

| ELECTRONIC DEVICES MARKETING DIVISION |

Electronic Device Marketing Department
IC Marketing & Engineering Group
421-8, Hino, Hino-shi, Tokyo 191-8501, JAPAN
Phone: +81-(0)42-587-5816   Fax: +81-(0)42-587-5624

ED International Marketing Department I (Europe & U.S.A.)
421-8, Hino, Hino-shi, Tokyo 191-8501, JAPAN
Phone: +81-(0)42-587-5812   Fax: +81-(0)42-587-5564

ED International Marketing Department II (Asia)
421-8, Hino, Hino-shi, Tokyo 191-8501, JAPAN
Phone: +81-(0)42-587-5814   Fax: +81-(0)42-587-5110

Electric Device Information of EPSON WWW server

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