

ARK-90

USER'S MANUAL

61KEYS DIGITAL ELECTRONIC KEYBOARD

Please read this cautions carefully before use

Please read carefully the following notice (but are not limited to the following notice) so as to prevent the possible hurt to yourself or others and possible damages of this instrument and external parts of other equipment.



Using AC-adapter

Use only ARK-90 AC-adapter to power your instrument from AC mains. Other adapter may cause serious damage to your instrument.

Do not open the instrument

Do not open the case of this instrument. Do not try to disassemble any part of it, nor change any interior parts. Should any abnormal function occur in use, please stop it immediately and send it to qualified personnel for maintenance service.

Location

Never leave the instrument in circumstance with excessive dust, vibration, low or high temperature (such as place under the direct sunlight, close to other source of heat, inside the car which under the direct sunlight) to prevent damages of both appearance and internal components of instrument.

Never leave the instrument in an unstable place to avoid falling down and cause the damages. Never place any container with liquid on the instrument to prevent the liquid flow into the instrument.

Maintenance

Clean the exterior with dry and soft cloth. Never use the cloth with paint, coating, organic or chemical solvent to clean the exterior of instrument.

Connections

Turn the master volume to '00' before connecting the power and adjust the volume gradually to the proper volume to prevent the damage of speakers.

Cautions

Never turn the volume to Max. Or the position that heard uncomfortable when you play, to prevent your hearing loss.

Never apply excessive force or place heavy objects on instrument nor apply excessive force to press keyboard, power button and jack.

The instrument must be unpacked by the adults before use to prevent baby or children from choking hazard. Please keep and store or discard the plastic packing.

Properly store or discard after unpacking. The inside small components are not suitable for the children under 3 years old.

This instrument is waterproof and moisture-resistant.



Statement

- Specifications are subject to change without notice.
- Should any description of product function be not specified in detail or some typing error occur, Please forgive us.
- This company retains the right which needs to revise because of the duty and finally interpretation.

It can be only used in this area that their height above sea level is below 2000 meters.

It can be only used in non tropical climate.

The power supply unit of network source should prevent from water-drop or water splash.

Standard

- GB8898-2011 GB17625.1-2012
- GB13837-2012

Display

- LCD Display

Voice

- 300 kinds of voices

Rhythm

- 300 kinds of rhythm

Demo song

- 50 demo songs

Effect control

- Keyboard drum, sustain, vibrato, keyboard split, transpose, fine tuning, beat, pitch bend

Record and program

- Record, play, program

Percussion

- 8 kinds of panel percussion

Accompaniment control

- Start/stop, sync, fill in, tempo

Chord control

- Single finger, fingered chord, chord clear

Intelligent teaching

- Demo one, Demo all, one key teaching, follow teaching

Other control

- Power switch, accomp volume

External jack

- DC9V power, microphone, MP3 playjack, headphone

Diapason

- C2-C7

Intonation

- ≤5 cents

Format

- 1008x431x171 (mm)

Net weight

- 5.4Kg

Power adapter

- DC9V 500mA

Quiescent current

- 120mA

Random accessories

- Adapter, song sheet holder, manual

Appendix IV Trouble Shooting

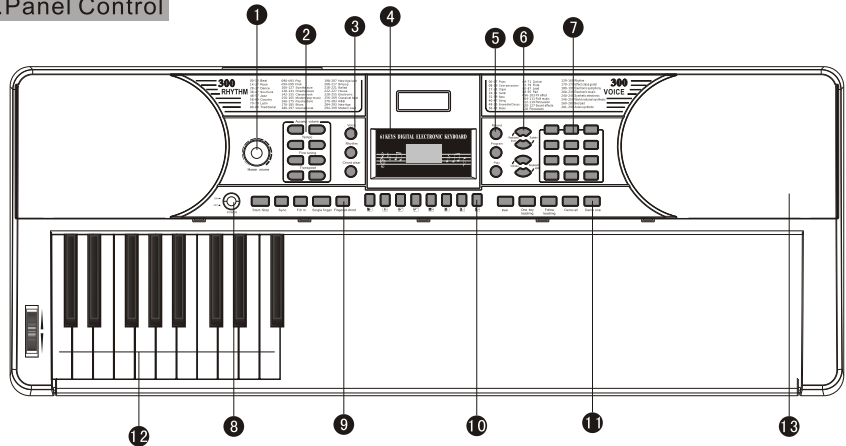
Trouble	Possible reason/eliminating method
Accompanied by noise whenever the power is switched ON or OFF.	This is normal . Please do not worry.
No sound while pressing any key with power switched on	Are the Master Volume control and accompaniment Volume levels turned to the proper position. The internal speaker system is automatically shut off when some equipment is plugged into the headphone jack.
The sound is distorted or intermittent. More seriously, the instrument crashed.	In this case, unqualified DC-adaptor is probably in use or your batteries are probably flat and need replacement.
The note and note quality under the same voice are tiny different	This is normal. Perhaps the note with this tiny difference in note quality is initially adopted.
Sustain produces longer or shorter when used	This is normal. In this case, the best sustain effect for each note is initially set by the producer.
Master Volume and Accompaniment volume is changed	Are the Master control and accompaniment volume turned to proper levels?
The accompaniment key changes while you are playing synchronously.	Perhaps you accidentally pressed a key in the left-hand range. (left 19 keys of keyboard)
No sound, no LCD display when AC-Power adapter is in use	Is there power available in power socket and the AC-adaptor is well plugged into power jack? Is the Power jack in good connection with AC-Power adapter
No sound, no LCD display when the batteries are used.	Are you sure the batteries are properly placed with Anode/cathode or perhaps the batteries are flat.
The pitch of note changes	Is the "Transpose" +/- turned to be '00' position?
The speakers make noise when Mobil phone is used nearby.	The mobil phone nearby should be switched off or placed far from the instrument. Perhaps the mobil phone interfere the instrument and cause the noise.

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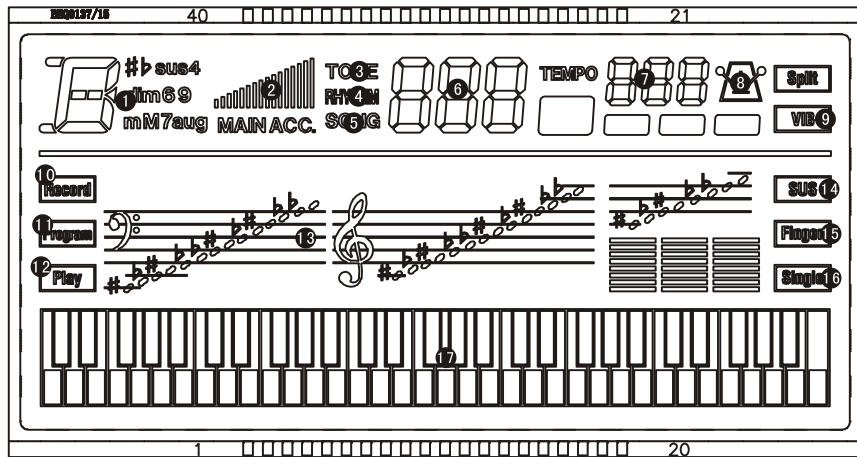
I. Panel Control and External Connections

I. Panel Control



- 1. Master Volume
- 2. Accomp volume /Tempo/
Fine tuning/Transpose
- 3. Voice/Rhythm/Chord Clear
- 4. LCD Display
- 5. Record/Program/Play
- 6. Keyboard drum/Sustain/
Vibrato/Keyboard Split
- 7. Digit Key 1-9/+ -button
- 8. Power Switch
- 9. Start/Stop/Sync/Fill in/single
finger/Fingered chord
- 10. Panel percussion
- 11. Beat/One key teaching/
Follow teaching/Demo
all/ Demo one
- 12. Auto Chord
- 13. Speakers

LCD screen diagram



- 1. Chord display area
- 2. Volume display
- 3. Tone
- 4. Rhythm
- 5. Demo
- 6. Number display area
- 7. Tempo
- 8. Metronome
- 9. Vibrato
- 10. Record
- 11. Program
- 12. Play
- 13. Staff display area
- 14. Sustain display area
- 15. Single chord
- 16. Finger chord
- 17. B/W key display area

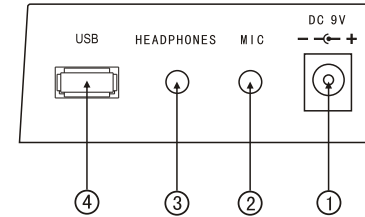
Appendix III Demo Songs

No.	The name of song	No.	The name of song	No.	The name of song
00	London Bridge Is Falling Down	17	Hand in hand	34	Prom queen
01	Fantasy	18	Two hundred and fourteen	35	Ni Mengruoze
02	The twist	19	Fkey	36	Nen blauen Donau
03	Butter fly	20	Mozart Symphonies	37	Hawthorn
04	Paddle a canoe	21	The girl's Prayer	38	Mary had a little lamb
05	Country songs	22	Nocturne	39	Yellow ribbon
06	Rhythm of the rain	23	Another day in paradise	40	Toreador Song
07	Serenade	24	Red River Valley	41	Radetzky march
08	Bluegrass Music	25	Green sleeves	42	Radiant
09	Music moment	26	Mozart Piano Sonatas	43	Long Long Ago
10	Merry Christmas	27	Orange and lemon	44	Katyusha
11	American Patrol	28	Hallelujah	45	Susanna
12	Flower	29	Minuet	46	Little star
13	Pour Elise	30	Handshake	47	I Don't Care
14	Direct seeding	31	Rain	48	Minuet in G major
15	Turkey March	32	Pamela	49	Carman Overture
16	A cradle	33	Bnnie Edgar		

No.	Name of rhythm	No.	Name of rhythm	No.	Name of rhythm	No.	Name of rhythm	No.	Name of rhythm
00	Beat 1	60	Country3	120	India samba1	180	Jump Blues	240	Western Swing
01	Beat 2	61	Country4	121	India samba2	181	New Orleans Blues	241	Alt-Country
02	Beat 3	62	Country waltz1	122	Jazz soul	182	New York Blues	242	Americana
03	Beat 4	63	Country waltz2	123	Country swing1	183	Piano Blues	243	Charanga
04	Beat 5	64	Country5	124	Country swing2	184	Soul Blues	244	Tropical
05	Beat 6	65	Country6	125	Country swing3	185	Urban Blues	245	Ambient
06	Beat 7	66	Country7	126	Pop waltz	186	Afro Beat	246	Punk Metal
07	Beat 8	67	Slow country1	127	Pop classic	187	Afro Pop	247	Experimental Rock
08	Beat 9	68	Slow country2	128	OrientalBeat1	188	Celtic Pop	248	Noise-Rock
09	Beat 10	69	Soul country	129	OrientalBeat2	189	Hawaiian Pop	249	Celtic New Age
10	Beat 11	70	Baiao	130	OrientalBeat3	190	Indian Pop	250	Ethnic Fusion
11	Beat 12	71	Bequine	131	OrientalBeat4	191	European Traditions	251	Techno-Tribal
12	Beat 13	72	Bolero	132	OrientalBeat5	192	World Fusion	252	Experimental
13	Beat 14	73	Bossanoval	133	OrientalBeat6	193	Dou Jin	253	Minimalism
14	Rock 1	74	Lambada	134	OrientalBeat7	194	Shima Uta	254	Traditional Pop
15	Rock 2	75	Mambo	135	OrientalBeat8	195	Enka	255	Noise
16	Cntr Rock	76	Samba	136	OrientalBeat9	196	Japanese Folk Music	256	Classical beat1
17	Country Rock	77	Reggae	137	OrientalBeat10	197	Middle East Pop	257	Classical beat2
18	Dance Rock	78	Rhumba	138	OrientalBeat11	198	Pop baiao	258	Classical beat3
19	Easy Rock	79	Tango	139	OrientalBeat12	199	Pop bequine	259	Classical beat4
20	Glam Rock	80	Habanera	140	OrientalBeat13	200	New Age Latin	260	Classical beat5
21	Hard Rock1	81	March1	141	OrientalBeat14	201	New bossanoval	261	Classical beat6
22	Hard Rock2	82	March2	142	Jazz Rock1	202	Rock lambada	262	Classical beat7
23	Pop Rock	83	Polka1	143	Jazz Rock2	203	Bluse mambo	263	Classical beat8
24	Rock+Roll	84	Polka2	144	Soft Rock	204	Pop samba	264	Classical beat9
25	Rock Beat	85	Polka3	145	Classic Rock	205	Reggae Ballad	265	Classical beat1 0
26	Rock Folk	86	Vallenato	146	Folkrock1	206	Pop Rhumba	266	Classical beat1 1
27	Rocky Pop	87	Waltz1	147	Folkrock2	207	Rock Tango	267	Classical beat1 2
28	Dance 1	88	Waltz2	148	Waltz Rock	208	Britpop1	268	Classical beat1 3
29	Dance 2	89	Waltz3	149	Heavy metal rock1	209	Britpop2	269	Classical beat1 4
30	Dance 3	90	Pop	150	Heavy metal rock2	210	Britpop3	270	Contemporary R&b1
31	Dance 4	91	Love ballad	151	70' Rock	211	Britpop4	271	Contemporary R&b2
32	Dance 5	92	Easy Beat	152	80' Rock	212	Trip Hop1	272	Contemporary R&b3
33	Dance 6	93	Soft Beat	153	Middle Eastern rock	213	Trip Hop2	273	Contemporary R&b4
34	Dance 7	94	Shuffle	154	Traditional Rock	214	Chamber pop	274	Contemporary R&b5
35	Dance 8	95	Cobmo	155	Rock Disco	215	Britpopwaltz1	275	Deep Funk
36	Dance 9	96	Shuffle1	156	Modern dance1	216	Britpopwaltz2	276	Doo Wop
37	Dance 10	97	Shuffle2	157	Modern dance2	217	Britpopwaltz3	277	Left-Field Hip-Hop
38	Soul funk	98	Slow folk	158	Modern dance3	218	Classical ballad1	278	Motown
39	Euro soul	99	Step	159	Modern dance4	219	Classical ballad2	279	Neo-Soul1
40	Funky soul1	100	Euro pop	160	Modern dance5	220	Light Ballad	280	Neo-Soul2
41	Funky soul2	101	Bachata beat1	161	New century1	221	Rhythm Ballad	281	Neo-Soul3
42	Funky soul3	102	Bachata beat2	162	New century2	222	Hard House	282	New Jack Swing
43	Funky soul4	103	Africa bossanova	163	New century3	223	Deep House	283	Urban
44	Funky soul5	104	China dance	164	RockDance1	224	Acid House	284	Contemporary Instrumental
45	Slow soul1	105	Pop beat	165	RockDance2	225	Progressive House	285	Meditation
46	Slow soul2	106	Vienna waltz	166	Psyche delic 1	226	Epic House	286	Neo-Classical1
47	Soul	107	Africa beat	167	Psyche delic 2	227	Trible House	287	Neo-Classical2
48	big band1	108	Africa mambo	168	Soft Rock	228	Big Beat	288	Neo-Classical3
49	big band2	109	Euro march1	169	Post Rock	229	Down tempo	289	New Acoustic
50	blue grass	110	Euro march2	170	Goth Psychedelic	230	Electro1	290	Solo Instrumental
51	jazz samba	111	Euro merengue1	171	Soul Psychedelic1	231	Electro2	291	Space
52	jazz waltz	112	Euro merengue2	172	Soul Psychedelic2	232	Electro3	292	Spiritual
53	Jazz1	113	Middle East dance	173	Soul Psychedelic3	233	House dance	293	Rock New Age
54	Jazz2	114	Africa dance	174	Soul Psychedelic4	234	Idm	294	Ragtime
55	Swing1	115	Pop samba1	175	Soul Psychedelic1	235	Jungle Drum	295	Bebop or Bop
56	Swing2	116	Pop samba2	176	Country Blues	236	Techno	296	Cool jazz
57	Swing3	117	Africa reggae	177	Electric Blues	237	Trance	297	Free jazz
58	Country1	118	Euro rhumba1	178	Folk Blues	238	Trip-Hop	298	Jazz-Rock & Fusion
59	Country2	119	Euro rhumba2	179	Jazz Blues	239	Experimental Electronic	299	Jazz Funk

I. Panel Control and External Connections

External Functions



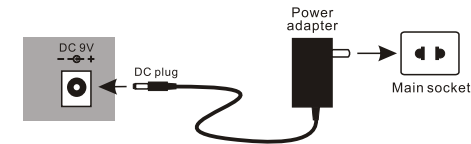
1. DC 9V in jack
2. Microphone
3. Headphone
4. MP3 play jack

II. Before Performance

Power Supply

1. Using AC-DC power adaptor:

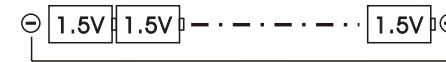
Please use the special power adaptor was equipped with this electronic keyboard or the power adaptor with DC 9V out voltage.500mA out current and cental anode plug. Insert the DC plug of power adaptor into the DC 9V power jack in the rear panel of electronic keyboard, then, insert the other end into Mains socket.(Notice: The input voltage of power adaptor must conform to the voltage of Mains),finally turn on power switch and start performance.



Caution: Disconnect the AC power adaptor when not using your instrument to prevent possible damage due to power connection for extended period of time.

2. Using batteries:(excluded)

Open the battery compartment cover located on the bottom panel of the instrument . Insert eight 1.5V D size LR-20 batteries, being carefully to follow the polarity marking on the cabinet.Replace the compnartment cover, making sure that it locks firmly in place..



Eight batteries altogether

Caution: When the batteries run down,do not use differert type of batteries at the same time.

Never mix old and new batteries. In case electroyte has leaked into the battery compartment, wipe it off completely before installing new batteries. To prevent possible damage due to battery leakage, remove the batteries from the compartment if it is not to be used for an extended period of time.

Rear External Connections

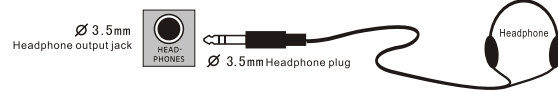
1. Using Microphone

A standard electret microphone (3.5mm) can be plugged into microphone jack .

II. Before Performance

2. Using headphone

A standard pair of headphones can be plugged into Headphone Jack for private practice or late-night playing. The internal speaker system is automatically shut off when a pair of headphones is plugged into the Headphones Jack.



3. MP3 function

MP3 interface: support U disk for playback. Through the interface can play MP3 songs.

Notice: the additional device in above, you need to purchase by yourself, not include by the keyboard, pls understand.

III. Basic Operation

I. Basic playing method

1. Power on

Press Power button to turn the power on, press again to turn off the power after connecting the AC adapter or placing well the batteries.



2. Master Volume

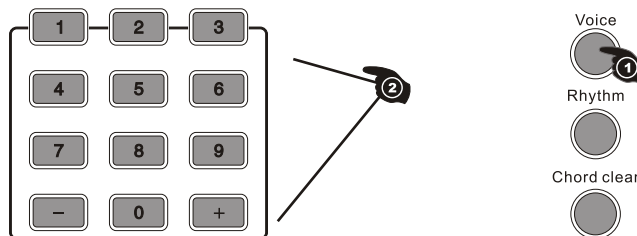
Rotate Master Volume knob clockwise to increase the Master volume and anti-clockwise to decrease the Master volume. Accompaniment volume will be changed accordingly when MasterVolume be adjusted.



Voice

Selecting Voice

This keyboard has 300 different kinds of voices. The default status for the instrument is VOICE. Press VOICE button when the instrument is not in VOICE STATUS. Choose one of 300 Voices -shown on TABLE OF VOICES. Then enter its number by using numeric Voice BUTTON or by pressing +/- buttons in numeric group buttons to increment/decrement the current voice number.



No.	Name of voice	No.	Name of voice	No.	Name of voice	No.	Name of voice	No.	Name of voice
00	Acoustic Grand Piano	60	French Horn	120	Guitar Fret Noise	180	Bright Violin	240	Psychedelic Synth Lead
01	Bright Acoustic Piano	61	Brass Section	121	Breath Noise	181	Stringed violin	241	Vibraphone Synth Lead
02	Electric Grand Piano	62	Synth Brass 1	122	Seashore	182	Trill violin	242	Marimba Synth Lead
03	Honky-tonk Piano	63	Synth Brass 2	123	Bird Tweet	183	Electronic violin	243	Metal FX
04	Rhodes Piano	64	Soprano Sax	124	Telephone Ring	184	Rock violin	244	Electronic FX
05	Chorus Piano	65	Alto Sax	125	Helicopter	185	Rhythm Orchestra	245	Electronic String Ensemble
06	Harpichord	66	Tenor Sax	126	Applause	186	Pizzicato Violin	246	Wind FX
07	Clavichord	67	Baritone Sax	127	Gunshot	187	Pizzicato Ensemble 1	247	Clarinet FX
08	Celesta	68	Oboe	128	Percussion	188	Pizzicato Ensemble 2	248	Organ FX
09	Glockenspiel	69	English Horn	129	Rhythm electric Piano	189	Percussion band	249	Crystal FX
10	Music box	70	Bassoon	130	Baritone Xylophone	190	Baritone Synth Contrabass	250	Synth Shamisen
11	Vibraphone	71	Clarinet	131	Glass instrument	191	Bass Flute	251	Electronic Shamisen
12	Marimba	72	Piccolo	132	Bright Dulcimer	192	Distortion Contrabass	252	Bright Sitar
13	Xylophone	73	Flute	133	Rhythm Grand Piano	193	Contrabass Lead	253	Whistle Accord
14	Tubular Bells	74	Recorder	134	Traditional Piano	194	Violin Lead	254	rhythm Nation
15	Dulcimer	75	Pan Flute	135	Aluminium jean	195	Cello Lead	255	Bright Koto
16	Hammond Organ	76	Bottle Blow	136	Rock Grand Piano	196	Pizzicato rhythm	256	Koto Lead
17	Percussive Organ	77	Shakuhachi	137	Electronic organ	197	high Harp	257	Diplophonia Koto
18	Rock Organ	78	Whistle	138	Psychedelic electronic	198	Harp ensemble	258	Baritone Koto
19	Church Organ	79	Ocarina	139	Water jean	199	Synth Harp	259	Synth Koto
20	Reed Organ	80	Lead 1 (square)	140	Bright Guitar	200	Baritone Trumpet	260	Environmental Lead
21	Accordion	81	Lead 2 (sawtooth)	141	Orchestra piccolo	201	Trumpet ensemble	261	Metal Lead
22	Harmonica	82	Lead 3 (caliope lead)	142	Heavy metal guitar	202	Rhythm Trumpet	262	Orchestra Lead
23	Tango Accordion	83	Lead 4 (chiff lead)	143	Crystal guitar	203	High Trumpet	263	Glockenspiel Lead
24	Acoustic Guitar (nylon)	84	Lead 5 (charang)	144	Queer electric Piano	204	Synth Trumpet	264	Bass Lead
25	Acoustic Guitar (steel)	85	Lead 6 (voice)	145	Bright bass	205	Baritone Trombone	265	Fifths Lead
26	Electric Guitar (jazz)	86	Lead 7 (fifths)	146	Rock Electric Bass	206	Trombone ensemble	266	Wind Lead
27	Electric Guitar (clean)	87	Lead 8 (bass+lead)	147	Rhythm Electric Bass	207	Rhythm Trombone	267	Atmosphere Lead
28	Electric Guitar (muted)	88	Pad 1 (new age)	148	Psychedelic Bass	208	High Trombone	268	Sharp Lead
29	Overdriven Guitar	89	Pad 2 (warm)	149	Heavy metal bass	209	Mediant Trombone	269	Bright Lead
30	Distortion Guitar	90	Pad 3 (polysynth)	150	Magic electronic	210	Synth Trombone	270	East Nation Pad
31	Guitar Harmonics	91	Pad 4 (choir)	151	Bright violin	211	Violin French Horn	271	Atmosphere Pad
32	Acoustic Bass	92	Pad 5 (bowed)	152	Atonic violin	212	French Horn ensemble	272	Clear Pad
33	Electric Bass (finger)	93	Pad 6 (metallic)	153	Heavy bass orchestra	213	Electronic French Horn	273	Electric Piano Pad
34	Electric Bass (pick)	94	Pad 7 (halo)	154	Synth clarinet	214	Synth French Horn	274	Clean Guitar Pad
35	Fretless Bass	95	Pad 8 (sweep)	155	Interactive Lead	215	Psychedelic Synth Brass	275	Western Pad
36	Slap Bass 1	96	FX 1 (rain)	156	For the keyboard	216	Distortion Synth Brass	276	Sci-fi Pad
37	Slap Bass 2	97	FX 2 (soundtrack)	157	Bagpipes	217	Vibraphone Synth Brass	277	Metal Sci-fi Pad
38	Synth Bass 1	98	FX 3 (crystal)	158	Suona	218	Rock Synth Brass	278	Clarinet Pad
39	Synth Bass 2	99	FX 4 (atmosphere)	159	Pipa	219	Synth Muted Trumpet	279	Electronic dance Pad
40	Violin	100	FX 5 (brightness)	160	Church Piano	220	Soprano Sax ensemble	280	Psychedelic electronic
41	Viola	101	FX 6 (goblins)	161	Church electric Piano	221	rhythm Soprano Sax	281	Double Kalimba
42	Cello	102	FX 7 (echoes)	162	Synth Piano	222	Synth Soprano Sax	282	Bright Kalimba
43	Contrabass	103	FX 8 (sci-fi)	163	Baritone Piano	223	National Sax	283	Crystal Kalimba
44	Tremolo Strings	104	Sitar	164	Piano PAD	224	Metal Sax	284	Synth Kalimba
45	Pizzicato Strings	105	Banjo	165	String Piano	225	Baritone Sax ensemble	285	Wind Bagpipe
46	Orchestral Harp	106	Shamisen	166	Metal Piano	226	Crystal Sax	286	high Bagpipe
47	Timpani	107	Koto	167	Light rhythm Piano	227	Soft Baritone Sax	287	Orchestra Bagpipe
48	String Ensemble 1	108	Kalimba	168	electric Piano Pad	228	Synth Baritone Sax	288	Bright Bagpipe
49	String Ensemble 2	109	Bagpipe	169	Classical piano	229	Heavy metal Sax	289	Baritone Bagpipe
50	Synth Strings 1	110	Fiddle	170	Guitar organ	230	Church Oboe	290	Slap Bagpipe
51	Synth Strings 2	111	Shanai	171	An electric guitar	231	Soft Oboe	291	Environmental Shanai
52	Choir Aahs	112	Tinkle Bell	172	synthesis Nylon Guitar	232	Bright Oboe	292	Mediant Shanai
53	Voice Oohs	113	Agogo	173	Synthetic electronic guitar	233	Bright Oboe	293	Baritone Shanai
54	Synth Voice	114	Steel Drums	174	Bright clean Guitar	234	Distortio oboe	294	Synth Shanai
55	Orchestra Hit	115	Woodblock	175	Orchestra Guitar	235	English Horn ensemble	295	high Shanai
56	Trumpet	116	Taiko Drum	176	Psychedelic Guitar	236	Pizzicato English Horn	296	Bright Steel Drums
57	Trombone	117	Melodic Tom	177	Bright organ	237	Diplophonia English Horn	297	Lyric Steel Drums
58	Tuba	118	Synth Drum	178	Pick organ	238	Bright English Horn	298	Orchestra Steel Drums
59	Muted Trumpet	119	Reverse Cymbal	179	Synth accordion	239	Synth English Horn	299	Synth Steel Drums

III. Basic Operation

Recording

1. Press Record button to engage the record mode. Then press any key in keyboard or voice of drums to start recording with Max. 48 while the number being shown on digital display. The recording will be automatically ended while record is full and FUL is shown on digital display. All previous record will be automatically cleared while recording the new one.

2. Press Play button to play the tones you recorded.

3. Press Program button to engage program mode.



Pitch bend

Push up or pull down the pitch bend when you play to turn notes up or down continuously. Release the pitch bend to return the initial standard notes.



Demo all

Press the Demo all even sing every song to play from the first song, and will automatically play all songs. Press again to stop.



Demo one

Press the Demo one to sing songs, and will automatically play next song, then press to stop. Repeated pressing into the next songs.



Teaching function

Press the One key teaching or Follow teaching to enter the teaching function then press the number keys or the +/- button to select different teaching Songs. Press the one key teaching button once again to exit.

One key teaching: No matter you play correctly or not, the song will be automatically played continuously.



Follow teaching: Follow the display to play the note correctly, then play the next note shown automatically on display.

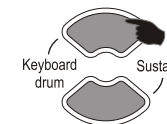


III. Basic Operation

Effect and Control

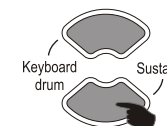
1. Keyboard drum

Press Keyboard drum button, in this case, different Keyboard drum will be played by pressing different key in keyboard. Notes played on keyboard will return to original voice by pressing the Keyboard drum button once again.



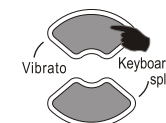
2. Sustain

Press the Sustain button once, the notes played on keyboard will be decayed gradually after lifting your finger from keyboard. Press the Sustain button again to turn the sustain effect off.



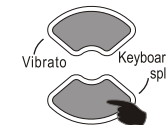
3. Vibrato

Press Vibrato button to turn Vibrato effect on. Then the Vibrato effect will be produced by pressing the black/white keys.



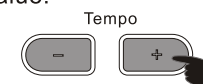
4. Keyboard Split

Press Keyboard Split button to divide keyboard into left-hand keyboard and right-hand keyboard. The left 24 keys will be left-hand keyboard and the rest part of keys will be divided as right-hand keyboard. The voice on right-hand keyboard can be selected by pressing the number on numeric group buttons. The voice on left-hand keyboard is initially set by producer. Press the button once again to turn Split effect off.



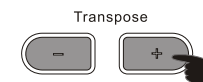
5. Tempo

Press Tempo button + or - to increase or decrease the tempo value for rhythm, metronome and demo song. There are 210 tempo value among the range of tempo value from 30-240 beats per minute. Press + or - buttons simultaneously to return to default status at 120 tempo value.



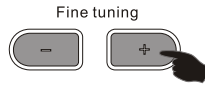
6. Transpose

Press Transpose button + or - to increase or decrease the transpose value up and down +/- 6 levels and shift the pitch of entire keyboard up and down in semitone intervals. Press the +/- buttons simultaneously to return to default status of keyboard tone.



7. Fine tuning

Press the Fine tuning + or - buttons to micro control the tone within the range of 99 levels between the two connecting tones. Keep pressing + or - buttons to increase or decrease the levels continuously. Press the + and - buttons simultaneously to return to the level of initially set level.



8. Beat

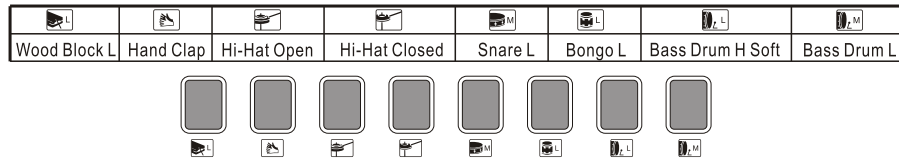
Press the Beat button. The Beat voice be produced. Select the Beat voice from 4 Beat voices which is 1/4, 2/4, 3/4 and 4/4 beats when you play the instrument by pressing the button once more time for different beats.



9. Top Panel Percussion

Select one of the Percussion button in 8 buttons and press it in accordance with the list as follows (total 8 kinds of percussion available for this instrument) to produce the percussion accordingly when you play.

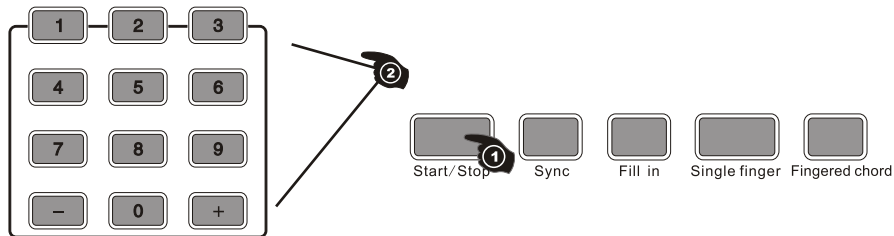
Panel percussion list



Rhythm Accompaniment and its Functions

1. Start /stop

Press Start/stop button to start and select the accompaniment from 0 to 299 in accordance with the appendix by pressing the number buttons in numeric group buttons or by pressing +/- button to select the accompaniment.



2. Sync

Press Sync button to start the Sync effect and press any key of left 19 keys to have Rhythm when you play. In this case, the auto chord will be effect when you play any key in left 19 keys if chord effect is started. Press the Sync button to end the Rhythm effect and start sync effect when rhythm is being played. Press Sync button to end sync effect when sync effect is running.



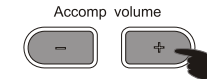
3. Fill in

Press Fill-in button to add a short fill in rhythm variation at any time while the rhythm is playing. Then the normal Rhythm will begin from next measure.



4. Accomp Volume

There are 8 levels of accomp accompaniment volume. The default level of accompaniment volume is 06. Press + or - button to adjust the accompaniment volume while the selected volume being displayed on digital display. Press the + and - button simultaneously to recall the volume to default status.



Auto accompaniment

1. Single Finger

Press Start/Stop button to start the auto accompaniment. Then press Single Finger to start single finger accompaniment. Press any key of left 19 keys of the keyboard to begin Rhythm. Press different key on left keyboard to select different chord. One key you press will always determine the root of the chord you played. Please refer to the following chart of playing C, Minor, Seventh and Minor-seventh Chords in Single finger Mode. Press Start/Stop button again to end the effect.



2. Fingered Chord

Press Start/Stop button to start the auto accompaniment. Then press Fingered accompaniment button to start fingered accompaniment. Press any key of left 19 keys of the keyboard to begin rhythm. Press different key on left keyboard to select different chord. Once you play any chord in auto accompaniment section of keyboard, the chord along with rhythm will be automatically begun to play. Please refer to the following chart of playing chord types. Press Start/Stop button again to end the effect.



3. Chord Clear

Press Chord Clear button to end the auto accompaniment under chord status, the rhythm will be continued to play.

