# Specifications

**- Keyboard**
- 88 keys, velocity sensitive

**- Polyphony**
- 28 voices

**- Sounds**
- 8 selectable via dedicated front-panel buttons (PIANO1, PIANO2, E.PIANO, VIBRAPHONE, HARP/CHORD, ORGAN, STRINGS, CHOIR), 241 Tones + 9 Drums Sets (selectable via MIDI)

**- Digital effects**
- Digital Chorus, Digital Reverb

**- Recorder**
- Records and plays back note and pedal data as well as tempo channel
- 1 song (≤1000 notes)
- ± 50 cents (TUNE knob)

**- Tuning function**
- VOLUME slider (global volume), Pianist VOLUME ▲▼ buttons
- Music Style selection buttons (Ballad, Pop, Si Swing, Swing, BossaN, Rock N' Shuffle, Si Rock, Latin, Si Waltz, Rag Time)
- METRONOME [on/off] button, INTRO/ENDING button, TEMPO/KEY TRANSPOSE ▲▼ buttons, KEY START/STOP button, Recorder REC, PLAY/DEMO buttons, Tone selection buttons (Piano1, Piano2, E.PIano, Vibraphone, Harpsichord, Organ, Strings, Choir), CHORUS, REVERB buttons (Rear panel), TUNE knob

**- Finish**
- Stage-piano look (black)

**- Connectors**
- DC 12V / 1700mA (for ACJ/ASA adaptor), MIDI IN/OUT connectors, Pedal DAMPER & SOFT jacks, INPUT (L/Mono, R) jacks, OUTPUT (L/R) jacks, 2 x PHONES jacks (front side)

**- Speakers**
- 12cm x2

**- Output power**
- 5 W x2

**- Dimensions**
- 1326 (W) x 382 (D) x 114 (H) mm

**- Weight**
- 15 Kg. (without AC-Adaptor)

**- Power consumption**
- 1700mA (DC 9V)

**- Supplied accessories**
- DP-6 footswitch pedal
- Owner's Manual (ESP/DUTCH) EP85/95 (K6018264)
- Owner's Manual (E/DF) EP85/95 (K6018265)
- MIDI Guide (K6018109)
- Music Rest (22186554K1)
- Power Adaptor ACJ 120V (117V) (224486121)
- Power Adaptor ACJ 230V (230V) (2244861101)
- Power Adaptor ACJ 230VE (230VE) (2244851801)
- Power Adaptor ACJ 240VA (240VA) (2244861401)

**- Options**
- Headphones: RH-120, RH-80, RH-20
- Footswitches (pedals): DP-2, DP-6
- KS-9E Keyboard stand

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LOCATION OF CONTROLS

BUTTON GROUP 15x8 (BLACK)
K2478203

BUTTON GROUP 15x8+DIFF (BLACK)
K2478201

BLACK KNOB W / WHITE INDICATOR
22485192

BUTTON GROUP 22x8+DIFF (BLACK)
K2478200

BUTTON GROUP 22x8+DIFF (GREY)
cod. K2478252

BUTTON GROUP 15x8+DIFF (RED)
K2478253

REAR VIEW

POWER SWITCH KNOB N.001-BLACK
22486183
KEYBOARD PARTS LIST
88 KEY TP8 KEYBOARD ASSY

STAND EXPLODED VIEW & PARTS LIST KS-9e

<table>
<thead>
<tr>
<th>No</th>
<th>PARTS NAME</th>
<th>PARTS NUMBER</th>
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<tbody>
<tr>
<td>1</td>
<td>LEFT SIDE FRAME</td>
<td>K1128102</td>
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<tr>
<td>2</td>
<td>RIGHT SIDE FRAME</td>
<td>K1128101</td>
</tr>
<tr>
<td>3</td>
<td>REAR CROSS BAR 1132 MM</td>
<td>K1148107</td>
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<tr>
<td>4</td>
<td>FOOT FOR SIDE FRAME</td>
<td>K2398101</td>
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<tr>
<td>5</td>
<td>KEYBOARD HINGE CHASSIS</td>
<td>K2128113</td>
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<tr>
<td>6</td>
<td>CHASSIS FOR BAR</td>
<td>K2128114</td>
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<tr>
<td>7</td>
<td>HINGES F/HEADPHONES</td>
<td>22325414</td>
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<tr>
<td>8</td>
<td>SCREW M6x40 TC BURNISHED H.15</td>
<td>K2288101</td>
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<td>9</td>
<td>SCREW DRIVER TYPE 2</td>
<td>J2329101</td>
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<td>10</td>
<td>RIGHT POLYST. END-SIDE</td>
<td>K2638134</td>
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<td>11</td>
<td>LEFT POLYST. END-SIDE</td>
<td>K2638135</td>
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<td>12</td>
<td>MIDDLE POLYST. END-SIDE</td>
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<td>POLYETH. ENVELOPE 25x45</td>
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<td>OUTER PACKING KS-9E</td>
<td>K2618129</td>
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<td>15</td>
<td>CARTON PLATE 1440x440 MM</td>
<td>K2668102</td>
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<tr>
<td>16</td>
<td>KS-9E MOUNTING SCHEME</td>
<td>K9018153</td>
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</tbody>
</table>

*CONTACT BOARDS ARE COMPLETE WITH RUBBER CONTACTS*
MAIN PCB ASSY (The Main PCB Assy includes Piano Module)

ASSY 7698801001

NOT MOUNTED COMPONENT IN THE MAIN BOARD

- NOT mounted component
- Jumper
CONTROL PCB ASSY  ASSY 7698802000

CIRCUIT DIAGRAM (CONTROL PCB ASSY)

HEADPHONES PCB ASSY  ASSY 7695902000

CIRCUIT DIAGRAM (HEADPHONES PCB ASSY)
IDENTIFYING THE SOFTWARE VERSION

Press "E Piano 3" while switching ON the instrument.

Soft.Ver.=1.00
Soft.Ver.=1.01
Soft.Ver.=1.02
Soft.Ver.=1.03

The software version will be indicated by the tone leds on the control panel as shown above.
To exit, switch the power off.

TEST MODE

Switch the instrument on while holding down the "Piano 1" button.
In the model EP-85, the "Pop" button led turns on.

The leds of all the tone buttons blink until one the following possible checks is selected.

The TEST MODE includes 9 tests:

1) Piano1  Test Switch =Led
2) Piano 2  Test Pedal (or Audio test if pressed while switching on the instrument).
3) E.Pia.1  Test Keyboard
4) Vib.    Midi
5) Harp.   Ram
6) Organ   W Rom
7) String  Rom Program
8) Choir   Adc
9) Effect  Reverb
           Chorus

To exit, press the "Start" and "Choir" buttons simultaneously.

1) Switch and Led test

Press the "Piano1" button and all leds turn on.

When pressing each single button, you can hear a metronome beat while the corresponding button led lights.
When pressing the buttons without leds, like TEMPO +/- and VOLUME +/-, the beat leds will turn on from left to right depending on the button you’ve pressed.
Once all leds turn off, after checking all the corresponding buttons, the test is completed.
You cannot exit this test mode before completing this check.
To exit press "Start" + "Choir" buttons simultaneously

2) Pedal test

Press "Piano2", connect the "Soft" and "Damper" pedals to the instrument.

When pressing the "Soft" pedal you’ll hear a sound and the first led on the left of the tempo indicator will turn on.
When pressing the "Damper" pedal you’ll hear a sound and the last led on the right of the tempo indicator will turn on.
To exit press "Start" + "Choir" buttons simultaneously

3) Keyboard test

Press the "E Piano" button.

When pressing a key, a sound is generated; the key velocity level is shown by the leds on the control panel, since they turn on in sequence one after another depending on the velocity level, starting from level 1 (the led on the "Piano" button turns on), up to 127, the highest level (the "Choir" led turns on)
To exit press "Start" + "Choir" buttons simultaneously

4) Midi test

Press the "Vibrphone" button.

Shortcircuit the MIDI IN/OUT sockets on the rear panel by using a MIDI CABLE.
- If the "Play" button led lights, it's OK.
- If the "Rec" button led lights, there's an ERROR.
The error cause, is: either a wrong transmission/reception, or that the MIDI CABLE was not connec led correctly.
To exit press "Start" + "Choir" buttons simultaneously

5) Ram test  (IC2 on Piano Module)

Press the "Harpichord" button.

- If the "Play" button led lights, it's OK.
- If the "Rec" button led lights, there's an ERROR.
The error cause, is: something wrong either in the RAM (IC2 on Piano Module), or in the circuit.
To exit press "Start" + "Choir" buttons simultaneously

6) Wave Masked Rom test  (IC7 on Piano Module)

Press the "Organ" button.

- If the "Play" button led lights, it's OK.
- If the "Rec" button led lights, there's an ERROR.
The error cause, is: something wrong either in the WAVE ROM (IC7 on Piano Module), or in the circuit.
To exit press "Start" + "Choir" buttons simultaneously

7) Programmed Masked Rom test  (IC6 on Piano Module)

Press the "Strings" button.

- If the "Play" button led lights, it's OK.
- If the "Rec" button led lights, there's an ERROR.
The error cause, is: something wrong either in the PROGRAMMED ROM (IC6 on Piano Module), or in the circuit.
To exit press "Start" + "Choir" buttons simultaneously

8) Adc test

Press the "Choir" button to enter the Adc test mode (Tune/Volume)
MASTER TUNE TEST

The “Piano1” and “Piano2” buttons blink, press “Piano1” and its led will light while the “Piano2” led turns off.
- When closing the “TUNE” potentiometer towards the “♭” symbol, a falling sound can be heard;
- when opening the “TUNE” potentiometer toward the “♯” symbol, an increasing sound can be heard
Each end position is signalled by a metronome beat.

To exit press “Start” + “Choir” buttons simultaneously

MASTER VOLUME TEST

When moving this potentiometer from “MAX” to “MIN”, the general volume decreases till no sound can be heard.
When moving the potentiometer from “MIN” to “MAX”, the general volume reaches its highest level.

To exit press “Start” + “Choir” buttons simultaneously.

9) Effect test  (IC8 on Piano Module)

Press the “Chorus” button, you’ll hear a sound with the chorus effect.
Press “Reverb”, you’ll heard a bassdrum tone and the metronome beats with reverb effect.

To exit press “Start” + “Choir” buttons simultaneously.

Audio test

Switch the instrument on while keeping the “Piano2” button pressed.
You’ll hear a high frequency sound from the left speaker and a low frequency sound from the right speaker.
To exit, switch the instrument off.

Factory Setup

After finishing the checks, switch the instrument on while keeping the “REC” button pressed.
Both the “REC” and “PLAY” leds blink for a few seconds, this confirms the program has been reset.