

AK5 Pro SE GUIDE/MANUAL

FIRMWARE VERSION 6.6



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TECHNOLOGIES

AK-5 PRO SPECIAL EDITION (SE) WORLD SCALE TUNING SETUP GUIDE

Congratulations on your purchase of the AK-5 PRO SE WORLD SCALE TUNING, a Microtonal keyboard converter device. With the AK-5, you can create authentic Microtonal music right from your keyboard. We've combined all the features you love from the AK-1 and AK-2 Pro with NEW innovations to make the AK-5 SE better and more enjoyable to use. Innovations include class-compliant USB MIDI interface and Breath Controller/Expression Pedal (purchased separately). It works best with the BCK-1 (Kelfar Technologies Breath Controller) available here: <http://kelfar.net/bck-1-breath-controller/>

This easy-to-use world scale tuning keyboard converter is compatible with most major keyboard brands and offers an incredible array of customization options right at your fingertips. Explore the full potential of your music and enhance your performance with both Microtonal music and Breath Expression.

The AK-5 PRO SE World Scale Tuning features:

- New, simple, intuitive design that makes it easy to create scale memory
- New SCALE RECALL feature to save up to 12 user scales and recall them instantly
- Universal MIDI interface to connect with Mac and Windows devices via USB port.
- Dynamic Pitch Bend Articulations
- Breath Controller/Expression Pedal input with up to 9 factory presets Curves (Linear, 5*Exponential, Logarithmic, S -Type, N-Type)
- A lightweight, compact design, making it portable and easy to carry to gigs, concerts, or jam sessions with friends.

And with the new AK-5 PRO SE World Scale Tuning, you have the ability to:

- Connect to TWO synthesizers at once.
- Adjust the pitch of each note in the octave (C/Do to B/Si) to -64 to +63 cents.
- Transpose Two synthesizers at once.
- Relay Control Change (CC) Midi Messages to Two Synthesizers.
- Send Breath Controller/Expressional pedal data to user-predefined 16 midi channels
- Turn off the Breath Controller instantly
- Program the Breath Controller/Expression Pedal functions via the Short-Cuts mode

The AK-5 PRO SE WORLD SCALE TUNING was created from over 20 years of direct, personal experience and feedback from musicians around the world. We listened to your comments, suggestions, tips and feedback, and incorporated them into the redesign of the AK-2. The results? A powerful, simple, and flexible tool to help you create Microtonal music with ease.

Let your imagination soar with the AK-5 SE. Whatever music you dream of creating, the AK-5 SE makes it possible. Create better sounds with ease.

FREE lifetime updates are also provided by Kelfar Technologies on this product. Please be sure to register your purchase on our website at www.kelfar.net. Registration enables us to contact you directly to inform you of updates and upgrades.

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Supported Instruments/Models Firmware 6.6 and up

Korg Pa80, Pa50, Pa60, Pa55Tr, Pa1&2x (Pro), Pa800, Pa3x series, Pa4x series, Pa1000, PA700 series, Pa500, P500 ORT, Pa600, Pa600QT, Triton Classic, Karma, Studio, Extreme, Le, Tr, Micro X, X50, Kronos series (with firmware 2.3 and up), Nautilus, *M3 series, *Oasys, *Trinity, Korg Z1, and Korg Prophecy. *Trinity series works in all modes , and MOSS mode in Universal Mode (with firmware 3.0 and up).

Roland Fantom S, X, G, AX-Synth Shoulder Synthesizer (with firmware 2.6 and up), and models with GS logo, FA-06/ FA-07/ FA-08/, EA-7, Fantom

Yamaha Motif ES/ MO (preset scale only - Arabic 2) and instruments with XG logo, Tyros/Psr series, Motif XS (Voice,Song,Pattern), and Motif XF (Voice,Song,Pattern), Genos, Montage6/ Montage7/ Montage8, PSR SX 900, 700, PSR A5000 Oriental

Ketron VEGA, SD5, SD1, and AUDYA series

Kontakt with a provided script - Kontakt Script (Native Instruments) with Transpose

Kurzweil K2600 and K2000 series

MOOG Sub Phatty and Sub 37

DSI / SEQUENTIAL Prophet X, XL, Prophet 6, 12, Pro 2, Pro3, and OB-6 (Post-Midi Transpose)

MIDI Tuning Standard firmware 3.0 and up

World Scales Support (-64 cents to +64 cents)

Equal Tempered Tuning System

Micro Tuning System via User-Programmable Scales

Turkish (Byselik, Rast, Ussak, Nikirz, Saba, Huazm, Siga, and more)

Byzantine (Modes 1,2,3,4,5,6,7,and 8)

Arabic (Bayati, Rast, Siga, Huseini, Hijaz, amd more)

Persian, Kurdish, and Syrian

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AK-5 PRO SE World Scale Tuning

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Basic Unit Functions

1. **5V USB bus power** (side-USB Mini b)
2. **Midi Out 2** (side-MIDI2) - Secondary Instrument midi connection. (*Standard mode*)
3. **Midi Out 1** (side-MIDI1) - Primary Instrument midi connection. (*Standard mode*)
4. **Midi In** (side-MIDI In) - Enabled for the Universal Mode. (*Universal mode*)
5. **BC/Expression** (side-BC)
6. **Tune/Setup** (front) - Selectable User Scales (**User 00 to User 09**)
7. **Tune/Setup** (front) - Programmable User Scales (**User 01 to User 09**)
8. **Tune/Setup** (front) - **Sort-Cut Mode to setup BC, Curve, and Channel**
9. **Buttons (C-B)** (front) – LED indicators above each denote: Enabled (**LED On**) or Disabled (**LED Off**)
10. **Cancel** (front) - Resets the pitch of each note to 00 Cents

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11. **Cancel/Power** (front) - Power the AK-5 Pro SE Off/On (Standby mode)
12. **DIRECT** (front)
13. **Real-Time BC On/Off** by holding the **DIRECT** for one second (front)
14. **Reset** (front) – Use to return functions to original settings (red)
15. **Transpose** (front) - Transposes in Chromatic steps (**-12 to +12**) via **Plus (+) and Minus (-)** buttons (black)
16. **Adjust** (front) - **Plus (+) and Minus (-)** buttons (black)
17. **Display screen** (front) - (3 digits)

A. Initial Setting and Viewing Instrument Selections on Power-up

Primary Instrument:

1. Brand shown on Table of Key Values below using keys indicated.

LED Display shows **P I**

2. Model shown beneath Brand on table using keys indicated.

LED Display shows **P2**

3. Expression and Breath Controller statuses

LED Display shows **EP** or **OFF** or **BC**

4. Channel Filter **PCH**

5. Buttons C to B (1 to 12ch), (Tune/Setup) (13ch), TR (-) (14ch) RESET (15ch) TR (+) (16ch)

6. The LED Display shows **CCF**

The LED Display shows **CCx** (xx=00 to 19) or **UL** (Master Volume) i.e **CI**

7. Curvature Number (**CLx**) (x=0 to 8)

Secondary Instrument:

1. Brand shown on table using keys indicated.

LED Display shows **S I**

2. Model shown beneath Brand on table using keys indicated.

LED Display shows **S2**

3. Expression and Breath Controller Statuses

LED Display shows **EP** or **OFF** or **BC**

4. Channel Filter **SCH**

- Buttons C to B (1 to 12ch), (Tune/Setup) (13ch), TR (-) (14ch) RESET (15ch) TR (+) (16ch)

5. The LED Display shows **CCF**

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The LED Display shows $\square xx$ ($xx = 00$ to 19) or UL (Master Volume) i.e $\square 11$

6. Curvature Number ($\square \square x$) ($x = 0$ to 9)

7. User Scale

LED Display shows $\square \times$ ($\times = 0-9$)

8. USB ON - OFF (USB ON or OFF)

B. Changing Programming/Selecting the Primary & Secondary Instruments

PRESS and HOLD the CANCEL/POWER.

Then, while holding down the CANCEL/POWER button, PRESS the TUNE/SETUP button.

➤ Primary Instrument

LED Display shows **P 1**

Press CANCEL to skip programming the Primary.

LED Display shows **S 1**

Proceed to programming the Secondary Instrument down below.

The Primary Instrument (MIDI1) will output the initial instrument MIDI DATA retained in memory prior to enter programming mode. Steps 1 to 8 will be skipped.

1. Press appropriate key to select the Brand of the instrument as shown on Table of Key Values below.

LED Display shows **P 2**

2. Press appropriate key to select the specific Model of the instrument.
3. Expression and Breath Controller statuses.

The LED Display shows **EP** or **OFF** or **BC**

Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)
OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
BC Breath Controller is ON for Primary (MIDI1) - TR (+)

4. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows **P CH**

5. Press Cancel to setup the Control Change

The LED Display shows **CC#** (Momentarily)

The LED Display shows **CC** (xx=00 to 127) or **UL** (Master Volume) i.e **UL**
Select the Control Change Number by using the Transpose/Adjust buttons.

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6. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows $\square \sqcup x$ (x= \square to \boxminus)

7. Select the Curve by using the Transpose/Adjust buttons.
8. Press CANCEL to Exit programming the Primary Instrument (MIDI1).

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

➤ Secondary Instrument

1. After programming the Primary Instrument:

LED Display shows $\boxminus \uparrow$

2. Press appropriate key to select the Brand of the instrument.

Press CANCEL to skip programming the Secondary Instrument.

The LED Display shows $\boxminus \boxminus$

The AK-5 Pro SE will reboot without programming the Secondary Instrument and the (MIDI2) port will not output any data. In another word, the MIDI PORT for (MIDI2) has been flittered OFF.

LED Display shows $\boxminus \boxminus$

3. Press appropriate key to select the specific Model of the instrument.
4. Expression and Breath Controller statuses.

The LED Display shows $\boxminus \boxminus$ or $\square \boxminus \boxminus$ or $\boxminus \square$

Use the Transpose buttons to Turn ON/OFF:

$\boxminus \boxminus$ Expression Pedal is ON - TR (-)
 $\square \boxminus \boxminus$ Expression Pedal and Breath Controller are OFF for (MIDI2) - RESET
 $\boxminus \square$ Breath Controller is ON for Secondary (MIDI2) - TR (+)

5. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows $\boxminus \square \boxminus$

6. Press Cancel to setup the Control Change.

The LED Display shows $\square \square \boxminus$ (Momentarily)

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The LED Display shows $\square xx$ ($xx = \square\square$ to $\square\square$) i.e $\square \square$

Select the Control Change Number by using the Transpose/Adjust buttons.

7. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows $\square \square x$ ($x = \square$ to \square)

8. Select the Curve by using the Transpose/Adjust buttons.

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button.

9. Press CANCEL to setup the Dynamic Pitch Bend Articulations (DPBA) FIRMWARE 5.0

10. The LED Display shows i.e $PB \square$ or $PB \square$

11. You can apply a pitch bend setting in one of two ways:

- a. $PB \square$ Mode: Bend the pitch and immediately return to the initial pitch value.

- b. $PB \square$ Mode: Bend the pitch and ramp back to the initial pitch value.

12. Select Mode $PB \square$ or $PB \square$ by using the any of the Transpose buttons (-, Reset, or +)

13. Press Cancel to setup the Pitch Bend increment

14. Adjust the Pitch Bend increment by using the Transpose – or +

15. The Pitch Bend increment uses a scale of 1 to 127, with 1 as the slowest bend duration and 127 as the fastest bend duration.

16. Press CANCEL to setup the USB MIDI PORTS 1&2

17.

The LED Display shows i.e $P \square \square$

Enable/Disable the USB PORTS by using the Transpose/Adjust buttons.

A. (+) Enable/Disable Port 1: \square is OFF, \square is ON

B. (RESET) Enable/Disable Port 2: \square is OFF, \square is ON

Options available:

A. $P \square \square$ PORT 1 is ON. B. $P \square \square$ PORTS 1&2 are ON. C. $P \square \square$ PORT 2 is ON.

D. $P \square \square$ PORTS 1&2 are OFF.

If USB PORTS 1&2 are OFF [$P \square \square$], press CANCEL

The LED Display shows $USB \square \square$ momentarily and exit the USB MODE.

18. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

The LED Display shows $F \square$ (Fully PROGRAMMED)

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Note: After pressing CANCEL the LED will turn RED. After successfully inputting the new settings, the LED will return to GREEN.

After displaying FP the AK-5 Pro reboots indicating successful programming by displaying the initial setting and Viewing Instrument Selections.

C. Short-Cuts Mode

This mode will allow you to disable and enable functions related to Expression Pedal, Breath Controller, and USB interface without the need to reprogramming the AK-5 Pro.

Press and hold the Tune/Setup for 3 seconds

The LED Display shows --- (three dashes)

1. Press the Transpose (+) to setup MIDI CHANNELS

The LED Display shows PCH (Primary Instrument - MIDI1)

- A. Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

After selecting the appropriate MIDI CHANNELS for the Primary Instrument, press CANCEL to select the MIDI CHANNELS for the Secondary Instrument.

The LED Display shows SCH (Secondary Instrument - MIDI2)

- B. Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

Press CANCEL to Exit the MIDI CHANNELS MODE.

Note: After pressing CANCEL the LED will turn RED. After successfully inputting the new settings, the LED will return to GREEN.

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS. If the Expression or Breath controller are OFF then the step will be skipped and the LED Display shows (FnF) for the Primary Instrument, and (SnF) for Secondary Instrument.

2. Press the Transpose RESET to setup the Expression and Breath Controller

- A. Expression and Breath Controller statues (Primary Instrument - MIDI1)

The LED Display shows EP or OFF or BC

Use the Transpose buttons to Turn ON/OFF:

- EP Expression Pedal is ON - TR (-)
- OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
- BC Breath Controller is ON for Primary (MIDI1) - TR (+)

Press CANCEL to setup the Secondary Instrument.

- A. Expression and Breath Controller statues (Secondary Instrument - MIDI2)

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The LED Display shows EP or OFF or BC

Use the Transpose buttons to Turn ON/OFF:

- EP Expression Pedal is ON - TR (-)
- OFF Expression Pedal and Breath Controller are OFF for (MIDI2) - RESET
- BC Breath Controller is ON for Primary (MIDI2) - TR (+)

Press CANCEL to Exit EXPRESSION AND BREATH CONTROLLER MODE.

3. Press the Transpose (-) to setup Curvature and Control Change.

The LED Display shows PC momentarily then CLx ($x=\square$ to E)

Select the Curve by using the Transpose/Adjust buttons.

Press CANCEL to setup the Secondary Instrument Curvature.

The LED Display shows SC momentarily then CLx ($x=\square$ to E)

Press Cancel to setup the Primary Instrument Control Change

The LED Display shows CC

Press CANCEL to setup the Control Change.

The LED Display shows Cxx ($xx=\square\square$ to ! !) or **UL = Master Volume** i.e C ! !

Select the Control Change Number by using the Transpose/Adjust buttons.

Press Cancel to setup the Secondary Instrument Control Change

The LED Display shows CC

Press CANCEL to setup the Control Change.

The LED Display shows Cxx ($xx=\square\square$ to ! !) or **UL = Master Volume** i.e C ! !

Select the Control Change Number by using the Transpose/Adjust buttons.

Press CANCEL to Exit the CURVATURE and CONTROL CHANGE MODE,

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

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4. USB INTERFACE ENABLE / DISABLE PORTS 1 & 2

By Default the AK-5 Pro USB INTERFACE PORT 1 IS ENABLED

Press DIRECT to ENABLE / DISABLE.

The LED Display shows $P \square \uparrow$

Enable/Disable the USB PORTS by using the Transpose/Adjust buttons.

A. (+) Enable/Disable Port 1: \square is OFF, \uparrow is ON

B. (RESET) Enable/Disable Port 2: \square is OFF, \uparrow is ON

Options available:

A. $P \square \uparrow$ PORT 1 is ON. B. $P \uparrow \uparrow$ PORTS 1&2 are ON. C. $P \uparrow \square$ PORT 2 is ON.
D. $P \square \square$ PORTS 1&2 are OFF.

If USB PORTS 1&2 are OFF [$P \square \square$], pressing the DIRECT or CANCEL

The LED Display shows $USB \square \square$ momentarily and exit the USB MODE.

Breath Controller ON/OFF

Press and Hold the Direct for one second to Turn OFF/ON the BC for both the Primary and Secondary.

The LED Display shows $--SC>PBC \square \square / SBC \square \square$ momentarily

Or

The LED Display shows $--SC>PBC \square \square \square / SBC \square \square \square$ momentarily

Note: In order for this operation to work the BC must be turned ON for the Primary or Secondary (MIDI1 or MIDI2.)

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Table of Key Values (supported brands and models)
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	REPEAT									
Triton_Le/Tr		XG: 16CH XG, Transpose		AX-Synth				MTS, Sub Phatty and Sub 37, [SCALE/OCTAVE TUNING 2-BYTE FORM (REAL-TIME)]	MTS / Pro 3	Mode3, 1CH, Mono Pitch Bend
Triton_Extreme/Studio		XG: 16CH GM, Transpose		Roland E-A7 Transpose				MTS, Sub Phatty and Sub 37, [SCALE/OCTAVE TUNING 2-BYTE FORM (NON REAL-TIME)]		Mode 4, 12CH / Pitch Bend
Triton Karma		Tyros/Psr series		Roland FA-06/07/08 Transpose				[SCALE/OCTAVE TUNING DUMP, 1 byte format]/ ASCII NAME = AK Pro Kelfar		Mode 5, 1CH Mono-Legato Pitch Bend
Triton Classic		Motif XF voice song pattern		Fantom				[SCALE/OCTAVE TUNING DUMP, 2 byte format]/ ASCII NAME = AK Pro Kelfar		Mode 6, 2CH Fine Tune
micro X / X50		Motif XS voice song pattern						[SINGLE NOTE TUNING CHANGE (REAL-TIME)]		Mode 7, 12CH Fine Tune
Korg M3		Montage						SINGLE NOTE TUNING CHANGE (REAL-TIME) (BANK)		Mode 8, 1CH Mono-Legato Fine Tune
Korg Z1		Genos						[SINGLE NOTE TUNING CHANGE (REAL-TIME) (BANK)]		
Korg Prophecy		XG NoteShift						MTS / [BULK TUNING DUMP] GM2 Transpose		
Korg Kronos		A5000						MTS / [BULK TUNING DUMP], Prophet X, XL		
Korg Nautilus								MTS / [BULK TUNING DUMP], Prophet 6,Pro 2, and OB-6		

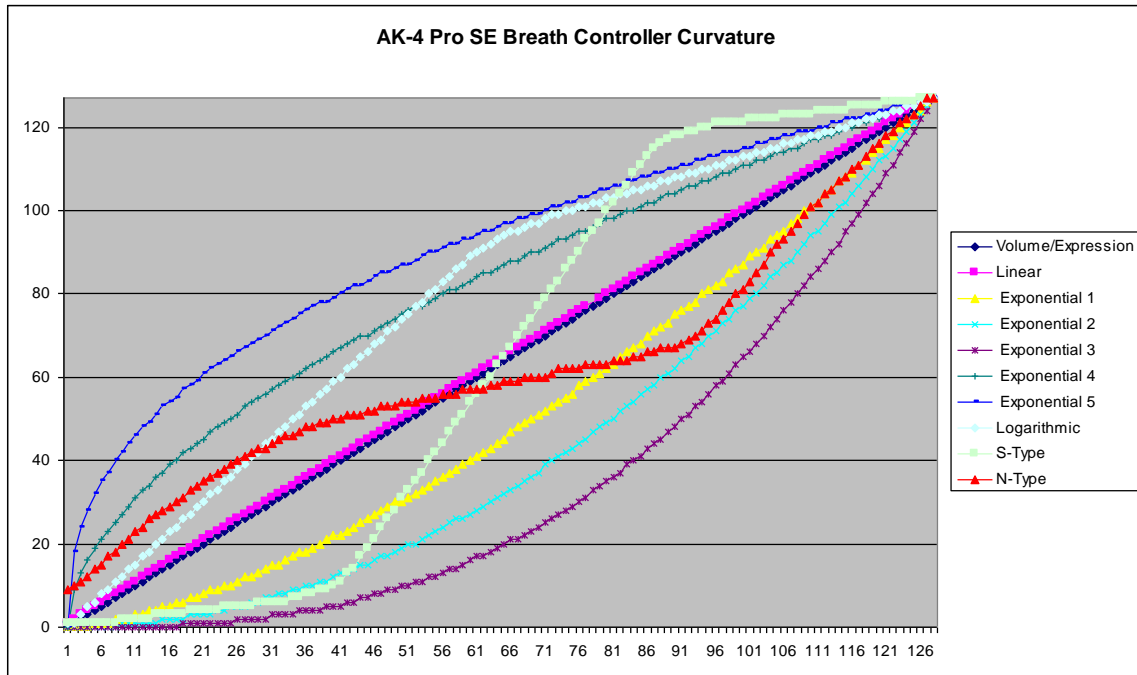
AK-5 Pro Breath Controller Curvature

The AK-5 Pro supports nine curvatures to give you the best dynamic and expressive sounds for your keyboard synthesizer and plug-in VSTi or standalone VSTi performances. Create the best sounds you've ever imagined with the Pro Breath Controller Curvature.

Every curvature has its own dynamic and feel. It depends on your selection of the Curvature; some curvatures have a Slower ATTACK or DECAY, while the others have a faster ATTACK or DECAY. You might need to reprogram your sounds to make them compatible with the breath controller.

It is always best to adjust the ADSR (Attack, Decay, Sustain, Release) and VELOCITY intensity or sensitivity to achieve the best result between your synthesizer and Breath Controller.

Why do you need to adjust the ADSR? Your actual Breath Controller is going to control both the **Volume** and the **ATTACK** portion of your sound. We recommend adjusting the **ATTACK** to 0 and by turning **OFF** the Velocity intensity or sensitivity. (*Refer to your keyboard/ synth Owner's Manual in how to adjust the ADSR or VELOCITY control*). For your own reference, save the edited sound by adding BC at the end of the sound name i.e Accordion BC
The graph below represents the relationship between the input and output breath pressure.



Translation Table:

CU0	==	Linear
CU1	==	Exponential 1
CU2	==	Exponential 2
CU3	==	Exponential 3
CU4	==	Exponential 4
CU5	==	Exponential 5
CU6	==	Logarithmic
CU7	==	S-Type
CU8	==	N-Type

D. Programming Universal Modes 1/ 2 (Polyphonic / Two Tracks)

1. PRESS and HOLD the CANCEL/POWER.
Then, while holding down the CANCEL/POWER button, PRESS the TUNE/SETUP button.

LED Display shows **P 1**

2. Press the key "A#"

LED Display shows **P 2**

3. Select Mode 1 "C" or Mode 2 "C#"
4. Expression and Breath Controller statuses.

The LED Display shows **EP** or **OFF** or **BC**

Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)

OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET

BC Breath Controller is ON for Primary (MIDI1) - TR (+)

5. Press CANCEL/POWER to set up the Incoming Channel

LED Display shows **PC 1** for **Mode 1** and **Mode 2**

6. Press CANCEL/POWER to set up the Incoming Channel
7. Select the Midi-In Channel (1-16) **1** by using the TRANSPOSE/ADJUST (+) and (-) buttons
8. Press Tune/Setup to setup the Output Channel

LED Display shows **PC 0** for **Mode 1** and **Mode 2**

9. Select the Midi-Out Channel (1-16) **2** using the TRANSPOSE/ADJUST (+) and (-) buttons
10. Press Tune/Setup
11. Press Cancel to setup the Control Change

The LED Display shows **CC 1** (Momentarily)

The LED Display shows **CC xx** (xx=00 to 1 99) or **UL** (Master Volume) i.e **CC 1 1**
Select the Control Change Number by using the Transpose/Adjust buttons.

12. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows **CC x** (x=0 to 9)

13. Select the Curve by using the Transpose/Adjust buttons.

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14. Press CANCEL/POWER to Exit programming the Universal Mode (Primary Instrument MIDI1)
15. LED Display shows **S I**
16. Press appropriate key to select the Brand of the instrument.
17. Press CANCEL to skip programming the Secondary Instrument.
18. Setup the USB MIDI PORTS 1&2
19. The LED Display shows i.e **P I**
20. Enable/Disable the USB PORTS by using the Transpose/Adjust buttons.
 - A. (+) Enable/Disable Port 1: **I** is OFF, **I** is ON
 - B. (RESET) Enable/Disable Port 2: **I** is OFF, **I** is ON

Options available:

- A. **P I** PORT 1 is ON. B. **P I I** PORTS 1&2 are ON. C. **P I I** PORT 2 is ON.
 - D. **P I I** PORTS 1&2 are OFF.
- If USB PORTS 1&2 are OFF [**P I I**], press CANCEL
21. The LED Display shows **USB OFF** momentarily and exit the USB MODE.
 22. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

The LED Display shows **FP** (Fully PROGRAMMED)

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

After displaying FP the AK-5 Pro reboots indicating successful programming by displaying the initial setting and Viewing Instrument Selections.

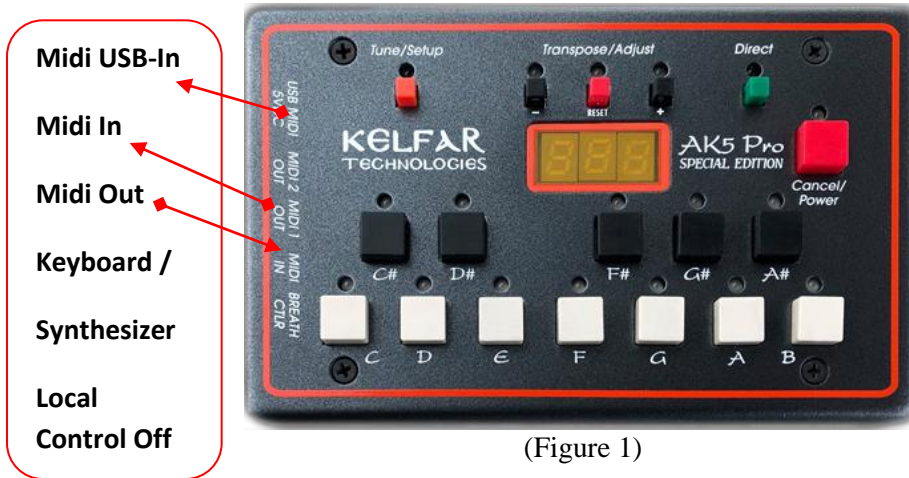
Notes:

1. For Universal Mode 1/2 to work, connect the AK-5 Pro SE MIDI IN/OUT to your multitimbral sequencer/Synthesizer/Keyboard Midi-In and Midi-Out or USB MIDI Out. (see figure 1 and 2)
2. Your keyboard must support **Fine Tuning Midi data** (for Mode 1) or **Pitch Bend Midi Data** (for Mode 2).
3. Set Keyboard to **Local control off**.(see Figure 1)
4. Set Pitch Bend Range to 2 for Mode 2.
5. You may further adjust the pitch of each note in the octave (C to B) to -64/+63 cents by programming your own User Scales 01-09. User 00 is set to -50 cents "fixed."

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Connecting the AK-5 Pro SE to a Keyboard or Synthesizer



(Figure 1)

Connecting the AK-5 Pro SE to a Computer Sequencer using external Keyboard or Controller:



(Figure 2)

E. Programming the Universal Mode 3 / 6 (Monophonic/Single Track)

1. PRESS and HOLD the CANCEL/POWER.
Then, while holding down the CANCEL/POWER button, PRESS the TUNE/SETUP button.

2. LED Display shows **P 1**
3. Press the key "A#".
4. LED Display shows **P 2**
5. Select Mode 3 using the "D" key or Mode 6 using the "F" key
6. Expression and Breath Controller statuses.

The LED Display shows **EP** or **OFF** or **BC**

Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)
OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
BC Breath Controller is ON for Primary (MIDI1) - TR (+)

7. Press CANCEL/POWER to set up the Incoming / Output Channel

LED Display shows **PC 1** for **Mode 3** and **Mode 6**

8. Select the Incoming / Outputting Midi Channel and set to channel **1** by using the TRANSPOSE/ADJUST (+) and (-) buttons.
9. Press Tune/Setup to confirm the *Primary Channel Input*

The LED Display shows **CC1** (Momentarily)

The LED Display shows **CCxx** (xx=**00** to **15**) or **UL** (Master Volume) i.e **CC 11**
Select the Control Change Number by using the Transpose/Adjust buttons.

10. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows **CCx** (x=**0** to **8**)

11. Select the Curve by using the Transpose/Adjust buttons.
12. Press CANCEL/POWER to Exit programming the Universal Mode (Primary Instrument MIDI1)
13. LED Display shows **S 1**
14. Press appropriate key to select the Brand of the instrument.
15. Press CANCEL to skip programming the Secondary Instrument.
16. Setup the USB MIDI PORTS 1&2
17. The LED Display shows i.e **PC 1**
18. Enable/Disable the USB PORTS by using the Transpose/Adjust buttons.

A. (+) Enable/Disable Port 1: **0** is OFF, **1** is ON

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B. (RESET) Enable/Disable Port 2: is OFF, is ON

Options available:

A. PORT 1 is ON. B. PORTS 1&2 are ON. C. PORT 2 is ON.

D. PORTS 1&2 are OFF.

If USB PORTS 1&2 are OFF [, press CANCEL

19. The LED Display shows **USB OFF** momentarily and exit the USB MODE.

20. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

The LED Display shows **FP** (Fully PROGRAMMED)

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

Notes:

1. *For Universal Mode 3 /6 to work, connect the AK-5 Pro SE MIDI IN/OUT to your multitimbral sequencer/Synthesizer/Keyboard Midi-In and Midi-Out. (see Figures 1 and 2 above .)*
2. *Your keyboard must support **Pitch Bend Midi Data** (for Mode 3) or **Fine Tuning Midi Data** (for Mode 6).*
3. *Set Keyboard to **Local control off**. (Figure 1).*
4. *Set **Pitch Bend** range to 2 for Mode 3.*
5. *You may further adjust the pitch of each note in the octave (C to B) to -64/+63 cents by programming your own User Scales 01-09. User 00 is set to -50 cents "fixed."*

F. Programming the Universal Mode 4 / 7 (Polyphonic 12 notes max)

1. PRESS and HOLD the CANCEL/POWER.
Then, while holding down the CANCEL/POWER button, PRESS the TUNE/SETUP button.

2. LED Display shows P 1
3. Press the key "A#".
4. LED Display shows P 2
5. Select Mode 4 using the "D#" key or Mode 7 using the "F#" key
6. Expression and Breath Controller statuses.

The LED Display shows EF or OFF or BC

Use the Transpose buttons to Turn ON/OFF:

EF Expression Pedal is ON - TR (-)
OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
BC Breath Controller is ON for Primary (MIDI1) - TR (+)

7. Press CANCEL/POWER

LED Display shows PCH 13 (momentarily) for **Mode 4** and **Mode 7**

8. Select the Incoming / Outputting Midi Channel and set to channel 1 by using the TRANSPOSE/ADJUST (+) and (-) buttons.
9. Press Tune/Setup to confirm the *Primary Channel Input*

The LED Display shows 111 (Momentarily)

The LED Display shows 1xx (xx=00 to 13) or UL (Master Volume) i.e 1 1
Select the Control Change Number by using the Transpose/Adjust buttons.

10. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows 11x (x=0 to 8)

11. Select the Curve by using the Transpose/Adjust buttons.
12. Press CANCEL/POWER to Exit programming the Universal Mode (Primary Instrument MIDI1)
13. LED Display shows S 1
14. Press appropriate key to select the Brand of the instrument.
15. Press CANCEL to skip programming the Secondary Instrument.
16. Setup the USB MIDI PORTS 1&2
17. The LED Display shows i.e P 1
18. Enable/Disable the USB PORTS by using the Transpose/Adjust buttons.

A. (+) Enable/Disable Port 1: 0 is OFF, 1 is ON

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B. (RESET) Enable/Disable Port 2: is OFF, is ON

Options available:

A. PORT 1 is ON. B. PORTS 1&2 are ON. C. PORT 2 is ON.

D. PORTS 1&2 are OFF.

If USB PORTS 1&2 are OFF [, press CANCEL

19. The LED Display shows **USB OFF** momentarily and exit the USB MODE.

20. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

The LED Display shows **FP** (Fully PROGRAMMED)

Notes:

1. For this Universal Mode 4 to work, connect the AK5 Pro MIDI IN/OUT to your multitimbral sequencer/Synthesizer/Keyboard Midi-In and Midi-Out. (see Figures 1 and 2 above)
2. Set Keyboard to **Channel 1**
3. Your keyboard must support **Pitch Bend Midi Data** (for Mode 4) or **Fine Tuning Midi Data** (for Mode 7).
4. Set Keyboard to **Local control Off**. (See Figure 1 above)
5. Set **Pitch Bend** range to 2 Mode 4.
6. You may further adjust the pitch of each note in the octave (C to B) to -64/+63 cents by programming your own User Scales 01-09. User 00 is set to -50 cents "fixed."

G. Programming the Universal Mode 5 / 8 (Monophonic-Legato/Single Track)

1. PRESS and HOLD the CANCEL/POWER.
Then, while holding down the CANCEL/POWER button, PRESS the TUNE/SETUP button.
2. LED Display shows **P 1**
3. Press the key "A#".
4. LED Display shows **P 2**
5. Select Mode 5 using the "E" key or Mode 8 using the "G" key
6. Expression and Breath Controller statuses.

The LED Display shows **EP** or **OFF** or **BC**

Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)
OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
BC Breath Controller is ON for Primary (MIDI1) - TR (+)

7. Press CANCEL/POWER to set up the Incoming / Output Channel

LED Display shows **PC 1** for **Mode 5** and **Mode 8**

8. Select the Incoming / Outputting Midi Channel and set to channel **1** by using the TRANSPOSE/ADJUST (+) and (-) buttons.
9. Press Tune/Setup to confirm the *Primary Channel Input*

The LED Display shows **CC1** (Momentarily)

The LED Display shows **CCxx** (xx=**00** to **15**) or **UL** (Master Volume) i.e **CC 11**
Select the Control Change Number by using the Transpose/Adjust buttons.

10. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows **CLx** (x=**0** to **8**)

11. Select the Curve by using the Transpose/Adjust buttons.
12. Press CANCEL/POWER to Exit programming the Universal Mode (Primary Instrument MIDI1)
13. LED Display shows **S 1**
14. Press appropriate key to select the Brand of the instrument.
15. Press CANCEL to skip programming the Secondary Instrument.
16. Setup the USB MIDI PORTS 1&2
17. The LED Display shows i.e **PC 1**
18. Enable/Disable the USB PORTS by using the Transpose/Adjust buttons.

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- A. (+) Enable/Disable Port 1: is OFF, is ON
- B. (RESET) Enable/Disable Port 2: is OFF, is ON

Options available:

- A. PORT 1 is ON. B. PORTS 1&2 are ON. C. PORT 2 is ON.
 - D. PORTS 1&2 are OFF.
- If USB PORTS 1&2 are OFF [, press CANCEL

- 19. The LED Display shows **USB OFF** momentarily and exit the USB MODE.
- 20. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

The LED Display shows **FF** (Fully PROGRAMMED)

Notes:

1. For Universal Mode 5/8 to work, connect the AK-5 Pro SE MIDI IN/OUT to your multitimbral sequencer/Synthesizer/Keyboard Midi-In and Midi-Out. (see Figures 1 and 2 above)
2. Your keyboard must support **Pitch Bend Midi Data** (for Mode 5) or **Fine Tuning Midi Data** (for Mode 8).
3. Set Keyboard to **Local control off**. (Figure 1)
4. Set **Pitch Bend** range to 2 for Mode 5.
5. You may further adjust the pitch of each note in the octave (C to B) to -64/+63 cents by programming your own User Scales 01-09. User 00 is set to -50 cents "fixed."

H. Programming User Scales and Scale Recall (Bank 00 to 011)

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The User Scales and Recall Scales have been redesigned to be more user-friendly and logical for stage use. The User Scales now have two options to select from:

1. **Preset Recall Scales:** This allows you to save your predefined notes and link them to each user scale independently. For example, instead of pressing the note LEDs (e.g., E and B) to turn them on, with the current firmware 6.6, you can save the notes and recall them whenever you wish.
2. **User Scales:** This allows you to edit and micro-tune each note chromatically (C to B) without the need to use the AK Editor. You have up to 11 User Scales that you can edit and recall whenever you wish.
3. The **Transpose (RESET)** function lets you switch between **SrS (Preset Recall Scales)** and **Uxx (User Scales)**. This can be useful for quickly accessing different scales settings that you've either preset or customized.

Edit and Save Preset Recall Scales

1. Press **Tune/Setup** once.
2. By default, the AK is set for Preset Recall Scales (firmware 6.6 and up), and the AK displays **SrS**. If not, press **Transpose (RESET)** to toggle to **SrS** mode.
3. Press either **Transpose (-)** or **Transpose (+)** once; the AK displays **ErS** (Edit Recall Scales).
4. Press a preset that you want to edit, e.g., **C**.
5. The AK displays **E00** and the **Tune/Setup** button flashes, indicating you are in edit mode.
6. Select the notes that you wish to recall, e.g., **E** and **B**.
7. To save the recall, press **Tune/Setup**. If you wish to exit without saving, simply press **CANCEL**. The AK will cancel the operation.
8. The AK displays **AUS**, asking which User Scale you want to associate with. The User Scales are predefined by the user.
9. Press a User Scale, e.g., **C# (USER 1)**. The Recall Scale you have created (C) will have User 1 linked to it.
10. The AK displays **SrS**. Select the Preset Recall Scale or press **CANCEL** to exit the recall scales.

Edit and Save User Scales

1. Press **Tune/Setup** once.
2. By default, the AK is set for Preset Recall Scales (firmware 6.6 and up), and the AK displays **SrS**. Press **Transpose (RESET)** to select the User Scales mode.
3. The AK displays **Uxx** (e.g., **U01**).

4. Press either **Transpose (-)** or **Transpose (+)** once; the AK displays **SUS** (Select User Scale).
5. Press, for example, **User 01**, which is **C#**.
6. The AK displays **xx** (i.e., cents value) and the **Tune/Setup** button flashes, indicating you are in edit mode.
7. Adjust the values for each note of the scale from **C** to **B** by selecting each one you desire to tune using the **Transpose (-)** (Negative) or **Transpose (+)** (Positive) value. The maximum value is **+64** or **-64** cents.
8. Press **Tune/Setup** to save the User Scale.
9. The AK displays **SUS** to edit another User Scale or press **CANCEL** to exit.

Recall Preset Scales

This feature enables you to recall preset scales that you have previously saved in memory with a single touch. The note LEDs will illuminate for the notes you have saved. For example, if you have saved the E and B note LEDs, those notes will be recalled and associated with your custom user scales.

1. Press **Tune/Setup**.
2. The AK will display **SrS**. If it does not, press **Transpose (RESET)** to select it. By default, the AK's operation is set to **SrS**.
3. Press any note to recall the **Preset Recall Scales** (single-touch note).
4. The AK will recall the note LEDs and update the scales in real-time. Note: If you keep holding the note, it will display **rxx** (e.g., **r01**). If you release the note, it will recall the preset recall scale for that note.

Recall User Scales

This functionality allows you to recall user scales that you have previously saved. It is similar to the preset recall scales feature, but it specifically recalls user-defined scales and updates the notes that are already active.

1. Press **Tune/Setup**.
2. The AK will display **SrS** or it might already be in User Scale mode. If not, press **Transpose (RESET)** to toggle to User Scale mode.
3. The AK will display **Uxx** (e.g., **U01**).
4. Press a note to select a user scale:
 - C = **U00** (fixed tuning = -50 cents)
 - C# = **U01**
 - D = **U02**
 - D# = **U03**
 - E = **U04**
 - F = **U05**
 - F# = **U06**
 - G = **U07**

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- G# = **U08**
- A = **U09**
- A# = **U10**
- B = **U11**

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Operating the AK-5 Pro

1. Standard Mode

In Standard Mode, the AK-5 Pro sends a particular System Exclusive midi message to a selected instrument/brand. In order for this operation to work, your midi keyboard/synthesizer **Midi In** port should be Enabled and ready to receive System Exclusive midi data. (*Refer to your keyboard/ synth Owner's Manual*).

Note: Your Owner's Manual might use a shortcut name for the System Exclusive, e.g. sysex.

The 12 (C-B) buttons are used to detune a keyboard/synthesizer within the octave. Each time you select a note the LED for that selected note will be lit ON indicating that the SYSEX message has been sent to your synth and the selected note is detuned.



Notes (C-B)

Example:

To convert synthesizer to play the Bayati makam.

1. Press TUNE/SETUP
2. Press C for Default tuning of -50 cents.
3. Press "E" and "B"
4. Both "E & B" RED LEDs are lit ON indicating that the SYSEX message has been sent from AK-5 Pro SE to the synthesizer
5. Your synthesizer is ready to play the Bayati makam.

Note: Pressing CANCEL/POWER will reset your synthesizer detuning to 0 Cents. All selected notes LEDs will be turned Off.

2. Universal Mode

In Universal Mode, the AK-5 Pro sends Pitch Bend midi data to detune your instrument. You may have to adjust the Pitch Bend range to two. (*Refer to your keyboard/ synthesizer Owner's Manual*).

Mode 1 (Fine Tune): Incoming notes will be routed and sent to a selected channel PC or SC.

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Depending on your selection, if no notes are selected then the incoming notes will be sent to the Primary Channel. However, each selected note will be sent to Secondary Channel as programmed by the user. All incoming midi events received by the Primary Channel will be resent to both Primary Channel and Secondary Channel.

Note: Midi Messages (Events) supported: *Running Status * Note On/ Off * Poly Aftertouch * Channel Aftertouch * Control Change * *Program Change * Pitch Bend * System Exclusive * System Common * System Realtime*

Mode 2 (Pitch Bend): Incoming notes will be routed and sent to a selected channel PC or SC.

Depending on your selection, if no notes are selected then the incoming notes will be sent to the Primary Channel. However, each selected note will be sent to Secondary Channel as programmed by the user. (See page 4)

All incoming midi events received by the Primary Channel will be resent to both Primary Channel and Secondary Channel.

Note: Midi Messages (Events) supported: *Running Status * Note On/ Off * Poly Aftertouch * Channel Aftertouch * Control Change * *Program Change * Pitch Bend * System Exclusive * System Common * System Realtime*

Mode 3 (Pitch Bend) / Mode 6 (Fine Tune): In this mode the AK-5 Pro SE operation will be in monophonic.

Mode 4 (Pitch Bend) / Mode 7 (Fine Tune): Each selected note will be routed and sent to its own channel as defined by the AK-5 Pro. In order for this mode to work, your midi keyboard must be operating using Channel One (ch.1). (*Refer to your keyboard/ synth Owner's Manual*)

Notes:

1. *If no notes are selected then the incoming notes will be resent to Channel One.*
2. *Selected notes will be sent to the following channels:2,3,4,5,6,7,8,9,11,12,13,14*

All incoming midi events received by the Primary Channel will be resent to 13 channels.

Note: Midi Messages (Events) supported: *Running Status * Note On/ Off * Poly Aftertouch * Channel Aftertouch * Control Change * *Program Change * Pitch Bend * System Exclusive * System Common * System Realtime*

Mode 5 (Pitch Bend) / Mode 8 (Fine Tune): In this mode the AK-5 Pro SE operation will be in mono-legato.

3. Transposition

To transpose a keyboard/synthesizer in Chromatic Steps: -12 to +12, use the **TRANPOSE/ADJUST (+)** and **(-)** buttons.

The Red button (**RESET**) Resets the value to 00 or press the Red button (**RESET**) again will restore the previously transposed value.

Black (+) = Increment in positive values

Black (-) = Decrement in negative values

The values are displayed on the three digits display.

Note: The transpose feature is defined by your synthesizer and specific to each manufacture. The following midi events are supported: GM2, XG, GS, Ketron, DSI / Sequential, Coarse Tuning. In Universal Mode, Kelfar Technologies Transpose Algorithms[©]

4. Dynamic Pitch Bend Articulations

1. Press Direct to access the (*DPBA*)
2. The Display shows E^4 (Pitch Bend center position)
3. Press Direct to setup the Dynamic Pitch Bend Articulations (*DPBA*) FIRMWARE 5.0
4. The LED Display shows i.e $P^{\#}0$ or $P^{\#}1$
5. You can apply a pitch bend setting in one of two ways:
 6. $P^{\#}0$ Mode: Bend the pitch and immediately return to the initial pitch value.
 7. $P^{\#}1$ Mode: Bend the pitch and ramp back to the initial pitch value.
8. Select Mode $P^{\#}0$ or $P^{\#}1$ by using the any of the Transpose buttons (-, Reset, or +)
9. Press Cancel to setup the Pitch Bend increment
10. Adjust the Pitch Bend increment by using the Transpose – or +
11. The Pitch Bend increment uses a scale of 1 to 127, with 1 as the slowest bend duration and 127 as the fastest bend duration.
12. Press Cancel to Exit *DPBA*
13. The Display shows E^4 (Pitch Bend center position)

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14. Use the buttons E (downward) and G (upward) to achieve real-time dynamics. Don't worry – it memorizes your micro-tonal, Transpose, User Scales, and Breath Controller/Expression Pedal setups prior to entering or exiting the DPBA.
15. Press Cancel to exit the *DPBA*

6. Standby mode

1. Hold the CANCEL/POWER for more than 5 seconds, and the AK-5 Pro will power off.
2. Power-up the AK-5 Pro from standby mode by pressing the CANCEL/POWER again.
3. AK-5 will reboot.

***Korg Triton series ©**

1. Go to Global mode then navigate to MIDI
2. Check the midi filter box for Sysexlusive
3. Write Global into the memory.
4. Change the User Scale for each Program/Combo./Moss to User 00, Scale C and WRITE Program/Combo/Moss.

***Kurzweil ©**

1. Set Sysex ID to 127

***Yamaha XG ©**

1. Consult your Yamaha manual to change the midi setup of the Yamaha keyboard/synth.
2. By default in some Yamaha Keyboards, such as the PSR series, the Midi channels are sent to the Song/Sequencer.
3. On the PSR/Tyros, you will need to make sure that the Midi_In messages are coming to the sounds that you are playing directly on the keyboard (i.e Main=Ch1, =Ch2, etc...)
4. Make sure the systemexclusive is enabled.

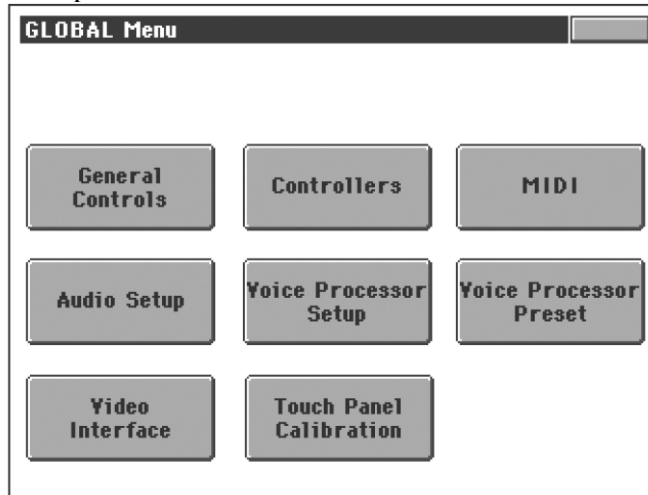
***Roland Fantom X ©**

1. Menu > System > Midi > Receive > Remote keyboard Switch > ON
2. Menu > System > Midi > Receive > Receive Exclusive > ON
3. System Write

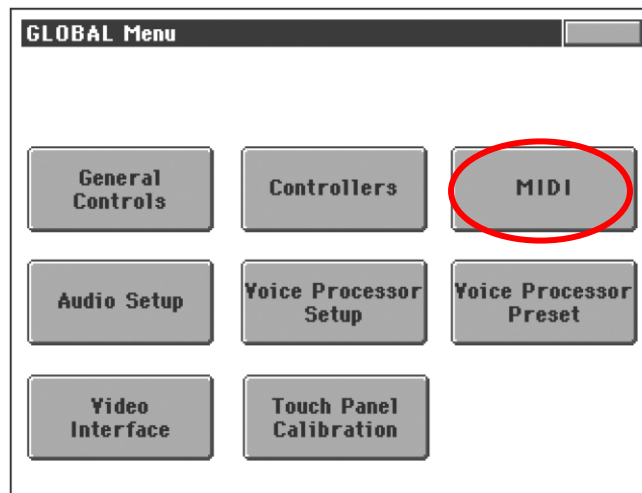
**(Refer to your keyboard/ synth Owner's Manual)*

Korg Pa800/ Pa2x Pro/ Pa3x/PA4x/ PA 1000, PA 700, PA series

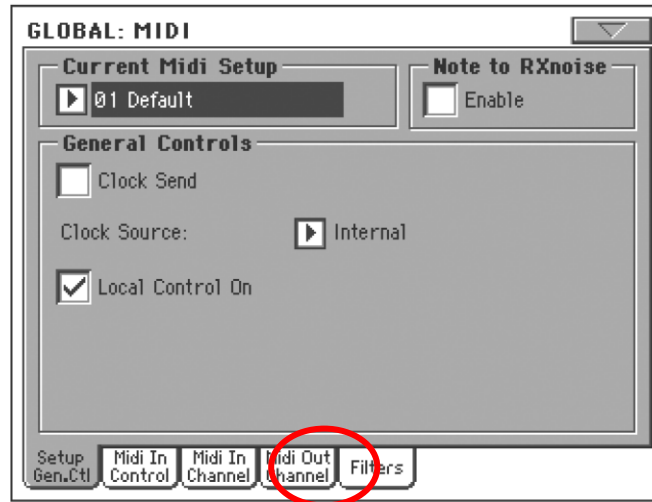
1. Press the MENU button to open the Global Edit Menu



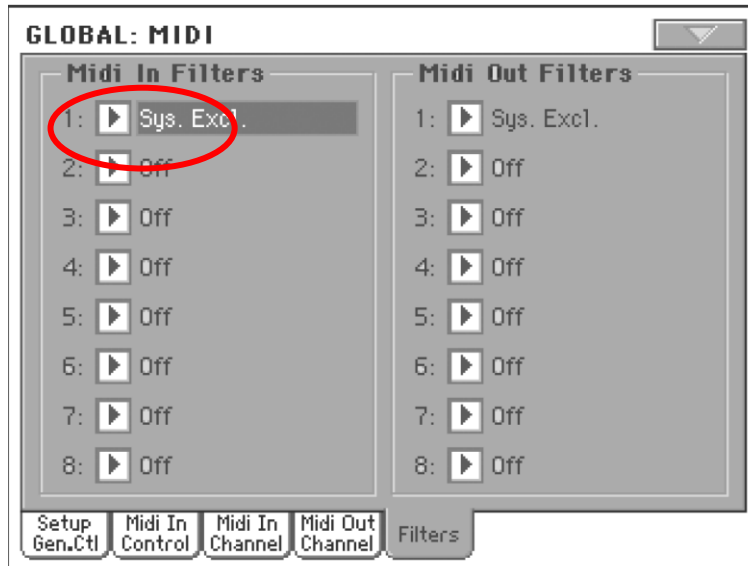
2. Select **Midi**

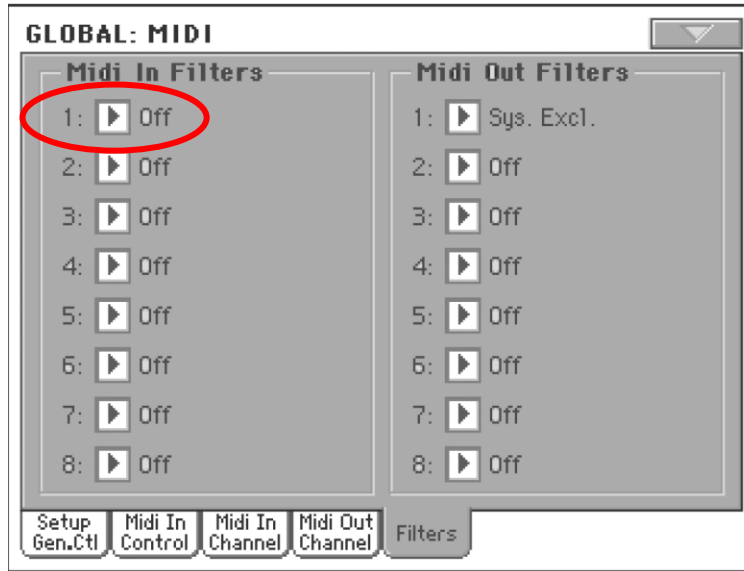


3. Select the **FILTERS** tab

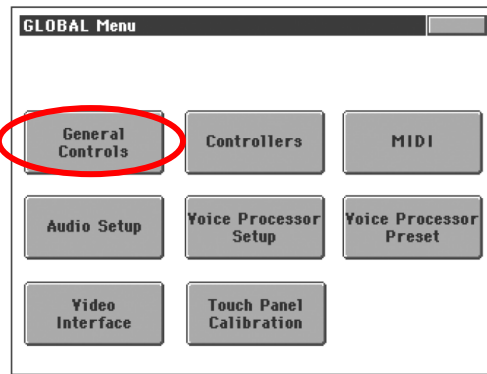


4. By default the Midi In Filter is set to **Sys. Excl.** Change it to **Off**

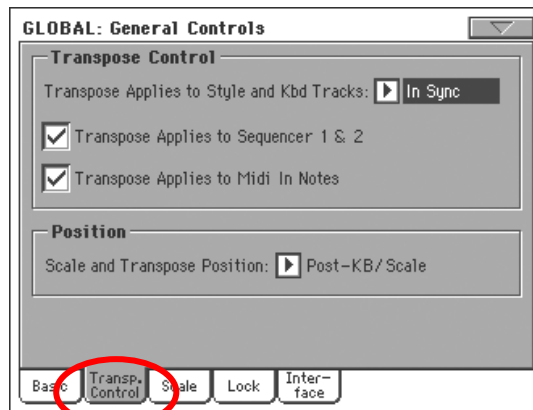




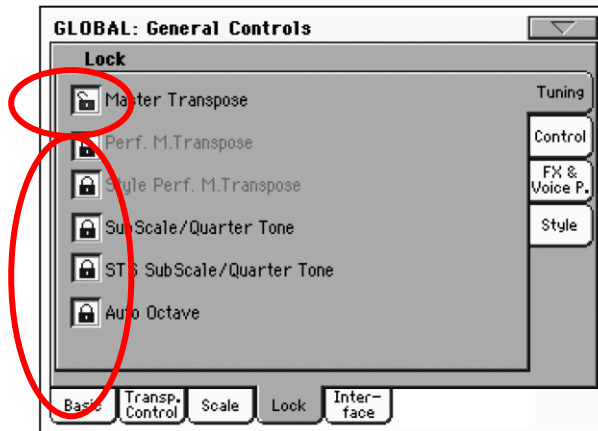
5. Press the MENU button to open the Global edit menu. Select **General Controls**



6. Select the **Transp.Control** tab



7. Select the **Lock** tab. Select **Tuning. Unlock Master Transpose. Lock Perf. M. Transpose, Style Perf. M. Transpose, Subscale/Quarter Tone, STS Subscale/Quarter Tone, and Auto Octave.**



8. Write your settings. Touch the page menu icon to open the menu. Touch a command to select it. Touch anywhere in the display to close the menu without selecting a command.



Programming the AK-5 Pro - Korg PA series

PRESS and **HOLD** the CANCEL/POWER

Then, while holding down the **CANCEL/POWER** button, **PRESS** the **TUNE/SETUP** button

➤ **Primary Instrument**

The Display shows P1

1. Press "C"
2. The Display shows P2
3. Press "C".

4. Expression and Breath Controller statues.

The LED Display shows EP or OFF or BC

Use the Transpose buttons to Turn ON/OFF:

- EP Expression Pedal is ON - TR (-)
- OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
- BC Breath Controller is ON for Primary (MIDI1) - TR (+)

5. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows PCH

6. Press Cancel to setup the Control Change

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The LED Display shows $\square\square\square$

7. Press CANCEL to setup the Control Change.
8. The LED Display shows $\square xx$ ($xx=\square\square$ to $\square\square$) or UL (Master Volume) i.e $\square \square \square$
9. Select the Control Change Number by using the Transpose/Adjust buttons.
10. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.
11. The LED Display shows $\square \square x$ ($x=\square$ to \square)
12. Select the Curve by using the Transpose/Adjust buttons.
13. Press CANCEL to Exit programming the Primary Instrument (MIDI1).

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

10. If you do not want to Program the Secondary instrument then press CANCEL/POWER.

Yamaha Tyros and Psr series

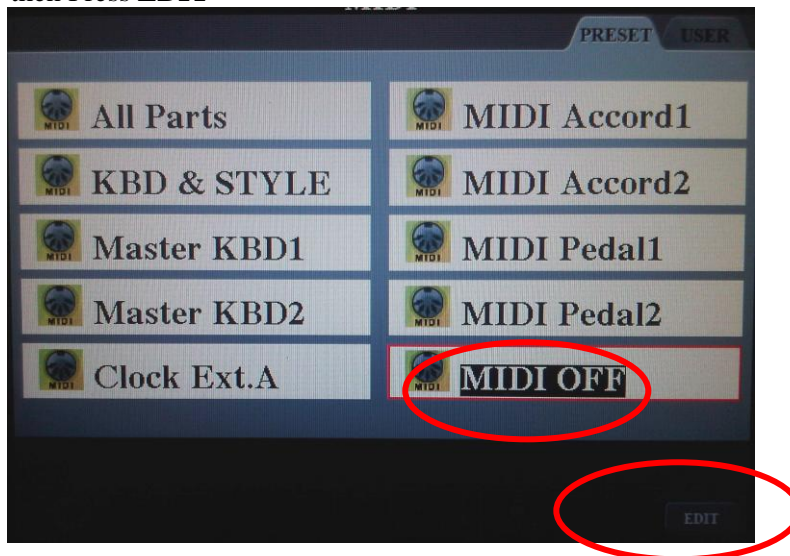
1. Press FUNCTION



2. Select MIDI



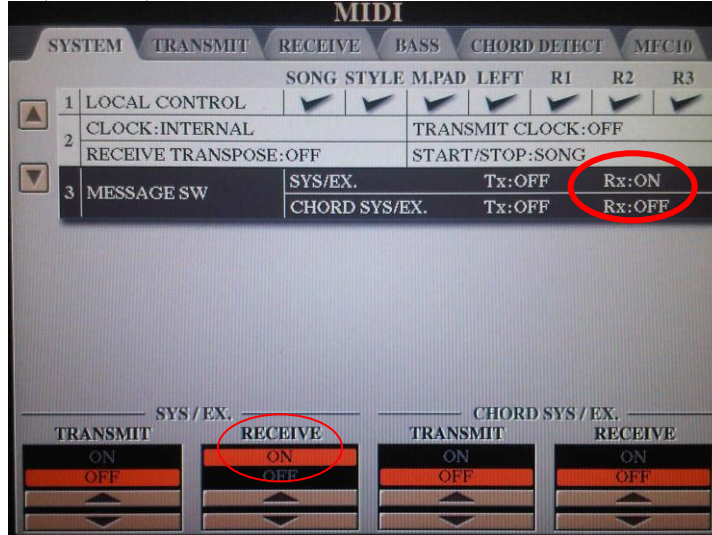
3. Select **MIDI OFF** then Press **EDIT**



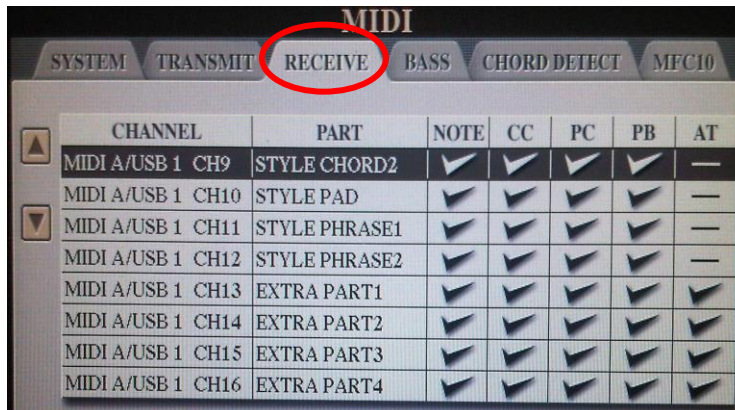
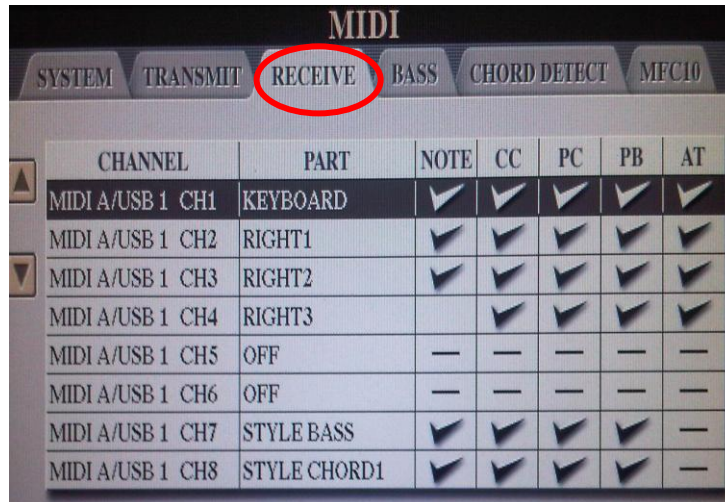
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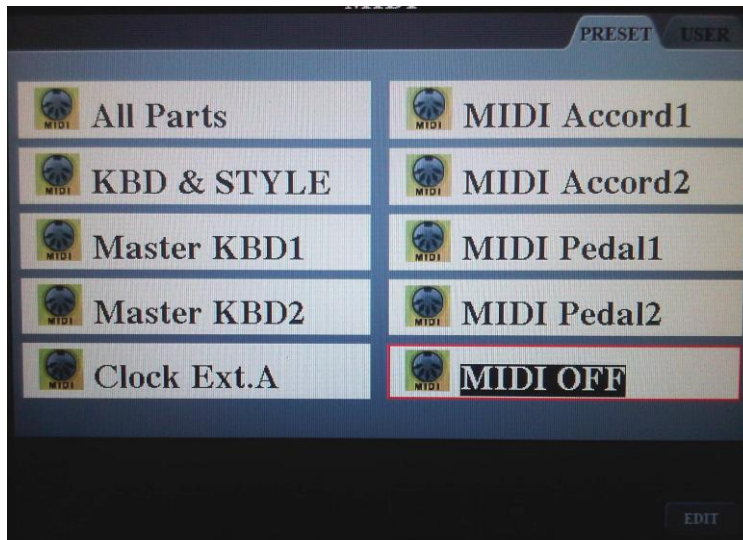
4. Enable RECEIVE Sysex (SYS/EX.) **Rx:ON**



5. Select the **RECEIVE** tab and assign **PART** to the appropriate MIDIA/USB1 CHANNEL



6. Press the **EXIT** button and Select the **USER** tab



7. Give your MIDI setup a name i.e **AK 2_pro** and select **SAVE**. Press the [**EXIT**] button.



Programming the AK-5 Pro - Tyros / PSR series

PRESS and **HOLD** the CANCEL/POWER

Then, while holding down the CANCEL/POWER button, **PRESS** the TUNE/SETUP button.

➤ Primary Instrument

LED Display shows **P 1**

1. Press **D** (Yamaha)

LED Display shows **P 2**

2. Press **A** (Yamaha TYROS / PSR series)

3. Expression and Breath Controller statuses.

The LED Display shows **EP** or **OFF** or **BC**

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Use the Transpose buttons to Turn ON/OFF:

- EP Expression Pedal is ON - TR (-)
- OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
- BC Breath Controller is ON for Primary (MIDI1) - TR (+)

4. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows PCH

5. Press Cancel to setup the Control Change

The LED Display shows CCH

6. Press CANCEL to setup the Control Change.

The LED Display shows Cxx (xx=00 to 19) or UL (Master Volume) i.e C 1 1

Select the Control Change Number by using the Transpose/Adjust buttons.

7. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows Cx (x=0 to 9)

8. Select the Curve by using the Transpose/Adjust buttons.
9. Press CANCEL to Exit programming the Primary Instrument (MIDI1).

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

➤ Secondary Instrument

LED Display shows S 1

1. Press D (Yamaha)

LED Display shows S2

2. Press E (Yamaha TYROS / PSR series)
3. Expression and Breath Controller statues.

The LED Display shows EP or OFF or BC

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Use the Transpose buttons to Turn ON/OFF:

- EP Expression Pedal is ON - TR (-)
- OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
- BC Breath Controller is ON for Secondary (MIDI1) - TR (+)

4. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows SC#

5. Press Cancel to setup the Control Change

The LED Display shows C#

6. Press CANCEL to setup the Control Change.

The LED Display shows Cxx (xx=00 to 19) or UL (Master Volume) i.e C 11

7. Select the Control Change Number by using the Transpose/Adjust buttons.
8. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows Cx (x=0 to 9)

9. Select the Curve by using the Transpose/Adjust buttons.
10. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).
11. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

The LED Display shows FP (Fully PROGRAMMED)

After displaying FP the AK-5 Pro reboots indicating successful programming by displaying the initial setting and Viewing Instrument Selections.

Korg M3 series

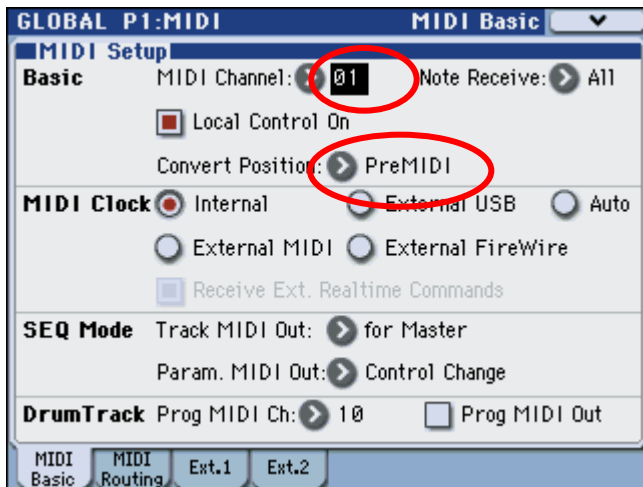
Making your own sound set to work with AK-5 Pro

1. Select a Program that you want to work with the AK-5 Pro
2. Press **PAGE SELECT**
3. **SELECT P2/OSC PITCH**
4. **SELECT OSC1/ Pitch or OSC2/Pitch**
5. **MAKE AMS to Poly After** and the Intensity to **-00.50** (cents) as show below

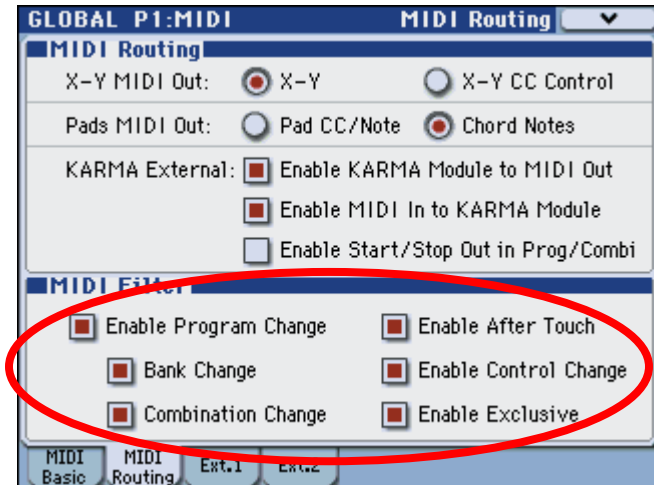


Note: if the program is using two OSC then make sure you set them both to PolyAfter the Intensity for both is = -00.50

6. **SAVE YOUR PROGRAM** or **WRITE IT** (select the down arrow/upper right corner).
7. Select **GLOBAL** to set the **TRANSPOSE** to **PREMIDI**. Midi Channel = 01.
8. Select **MIDI**



9. Select **Midi Routing**
10. Make sure **Midi Filter** is selected for all of them (*as shown in the image below*)



11. Write Global Settings. Select the arrow down >Write Global Setting.

The **Write Global Setting** dialog box will appear.



Programming the AK-5 Pro - Korg M3

PRESS and **HOLD** the CANCEL/POWER

Then, while holding down the **CANCEL/POWER** button, **PRESS** the **TUNE/SETUP** button

➤ **Primary Instrument**

The Display shows P1

1. Press "C"

The Display shows P2

2. Press "G".

3. Expression and Breath Controller statuses.

The LED Display shows EP or OFF or BC

Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)

OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET

BC Breath Controller is ON for Primary (MIDI1) - TR (+)

4. Press CANCEL to Select the MIDI Channel

5. The Display shows the midi channel number PC i.e 0c 1

*Notes: Make sure that the AK-5 Pro's midi channel is the same as the Korg M3's midi channel.
Use the Transpose buttons of the AK-5 Pro to select the appropriate midi channel.*

6. Press Cancel to setup the Control Change

The LED Display shows CC

7. Press CANCEL to setup the Control Change.

The LED Display shows Cx (xx= 00 to 1F) or UL (Master Volume) i.e C 11

Select the Control Change Number by using the Transpose/Adjust buttons.

8. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows Cx (x= 0 to B)

9. Select the Curve by using the Transpose/Adjust buttons.

10. Press CANCEL to Exit programming the Primary Instrument (MIDI1).

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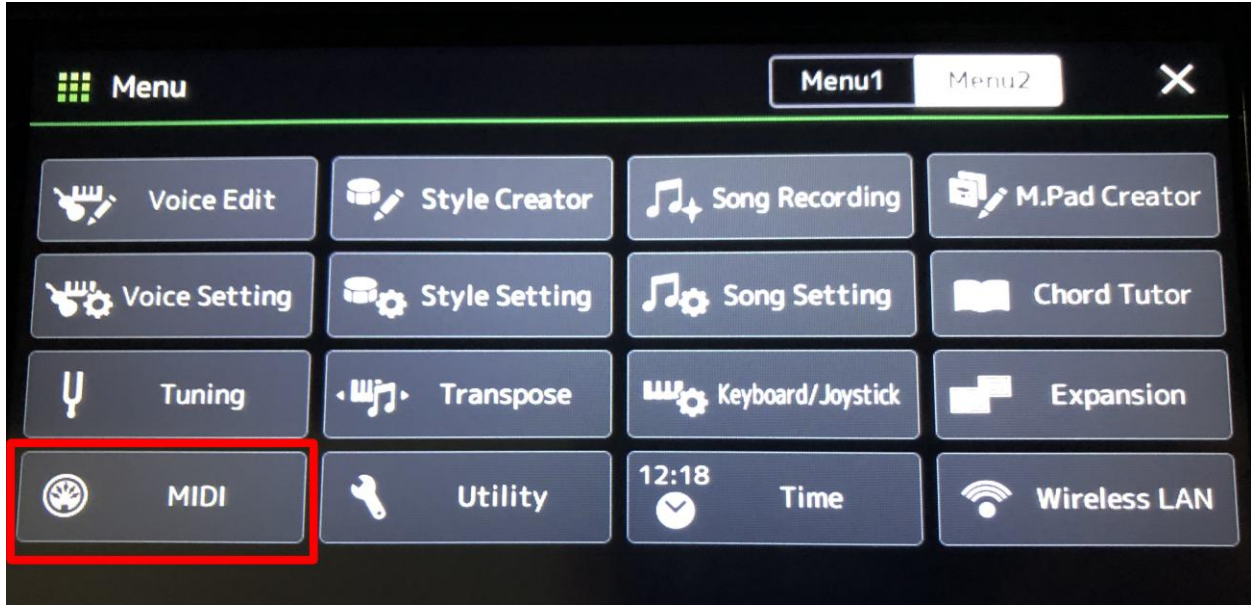
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Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

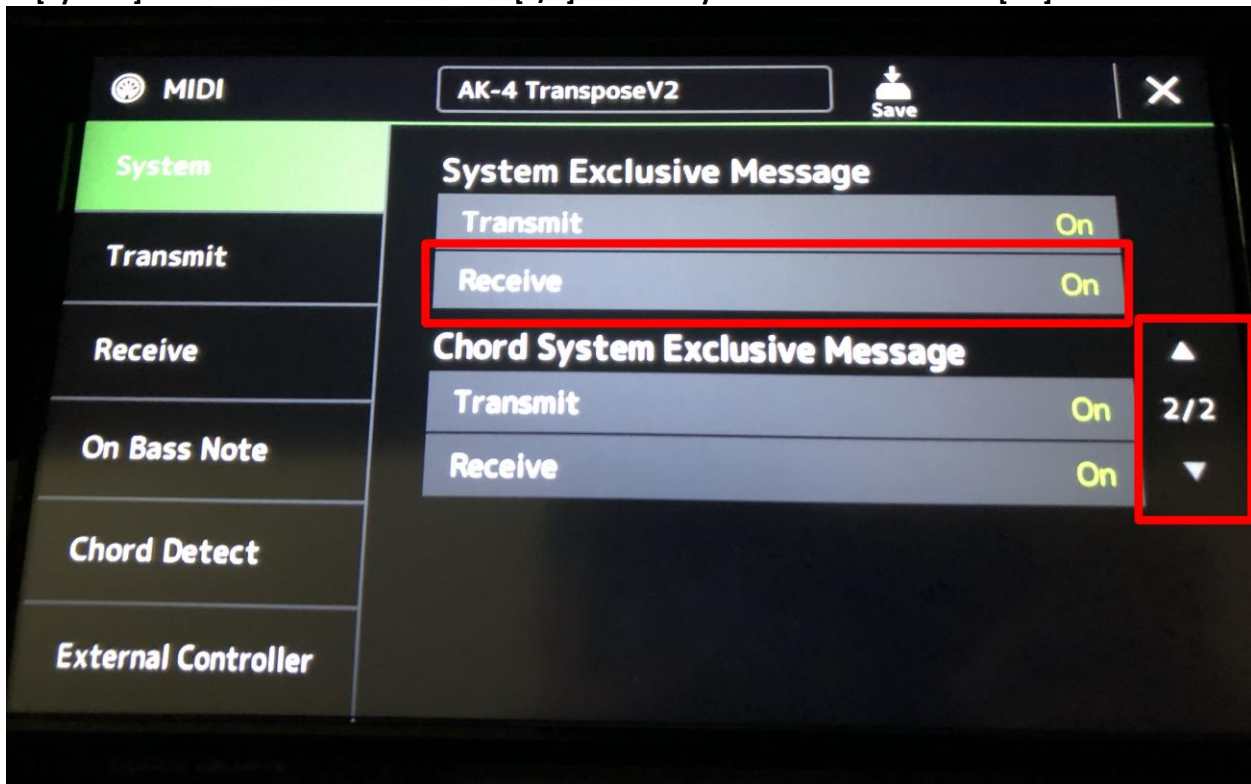
- 11.** If you do not want to Program the Secondary instrument then press CANCEL/POWER.

Programming and Setup Yamaha GENOS AK-5 Pro Version 2.5 and later

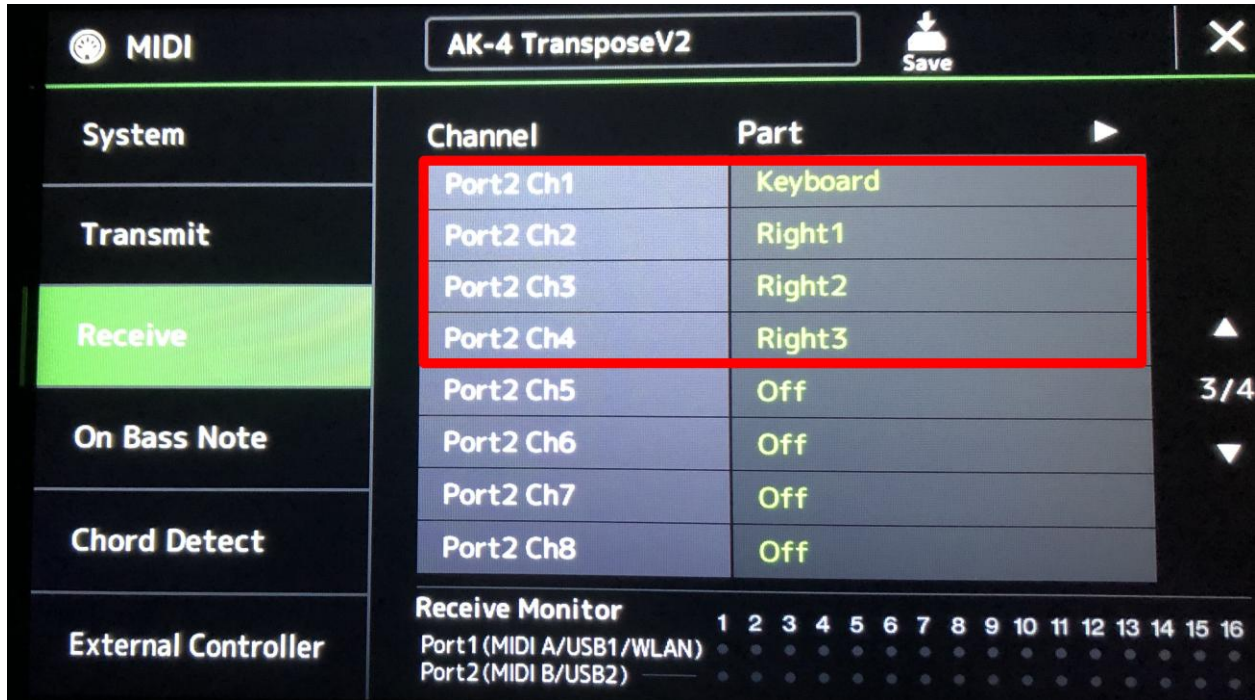
1. Press the [MENU] button to call up the Menu display. Then touch [Menu 2] to move to page 2 on the display, and touch [MIDI].



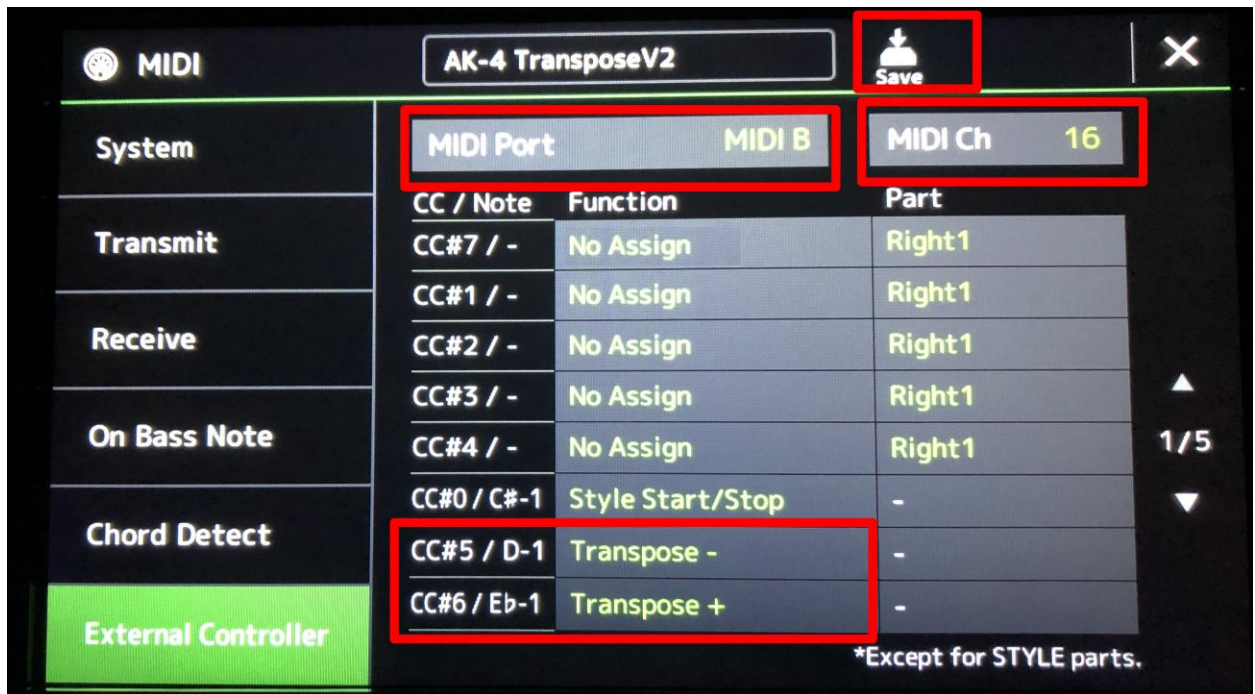
2. [System] and Move the arrow down to [2/2]. Enable System Exclusive Receive [On]



3. Touch [Receive] and setup the appropriate parts for Channels 1,2,3, and 4.



4. Touch [External Controller]. Select Midi Port [MIDI B] and set Midi Ch to [16]. Assign CC#5 to Transpose - and CC#6 to Transpose +



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5. When you've finished editing in each display, touch (Save) to save the MIDI settings as your original MIDI template. Give it a name: AK-5 TransposeV2



Programming the AK-5 Pro and connecting to Yamaha GENOS [MIDI B IN]

PRESS and HOLD the CANCEL/POWER.

Then, while holding down the CANCEL/POWER button, PRESS the TUNE/SETUP button.

➤ Primary Instrument

LED Display shows **P 1**

1. Press **D** (Yamaha)

LED Display shows **P 2**

2. Press **G#** (Yamaha GENOS)
3. Expression and Breath Controller statuses.

The LED Display shows **EP** or **OFF** or **BC**

Use the Transpose buttons to Turn ON/OFF:

- EP** Expression Pedal is ON - TR (-)
- OFF** Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET
- BC** Breath Controller is ON for Primary (MIDI1) - TR (+)

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4. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows **PC11**

5. Press Cancel to setup the Control Change

The LED Display shows **CC11**

6. Press CANCEL to setup the Control Change.

The LED Display shows **CCxx** (xx=00 to 100) or UL (Master Volume) i.e **CC 11**

Select the Control Change Number by using the Transpose/Adjust buttons.

7. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows **CCx** (x=0 to 9)

8. Select the Curve by using the Transpose/Adjust buttons.

9. Press CANCEL to Exit programming the Primary Instrument (MIDI1).

Note: If either the Expression and Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button to program the Secondary Instrument (MIDI2).

➤ Secondary Instrument

LED Display shows **S 1**

1. Press **D** (Yamaha)

LED Display shows **S2**

2. Press **G#** (Yamaha GENOS)

3. Expression and Breath Controller statuses.

The LED Display shows **EP** or **OFF** or **BC**

Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)

OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET

BC Breath Controller is ON for Secondary (MIDI1) - TR (+)

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4. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows SCH

5. Press Cancel to setup the Control Change

The LED Display shows CC

6. Press CANCEL to setup the Control Change.

The LED Display shows CC (xx=00 to 127) or UL (Master Volume) i.e UL

7. Select the Control Change Number by using the Transpose/Adjust buttons.
8. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

The LED Display shows CC (x=0 to 127)

9. Select the Curve by using the Transpose/Adjust buttons.

10. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

11. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

The LED Display shows FP (Fully PROGRAMMED)

After displaying FP the AK-5 Pro reboots indicating successful programming by displaying the initial setting and Viewing Instrument Selections.

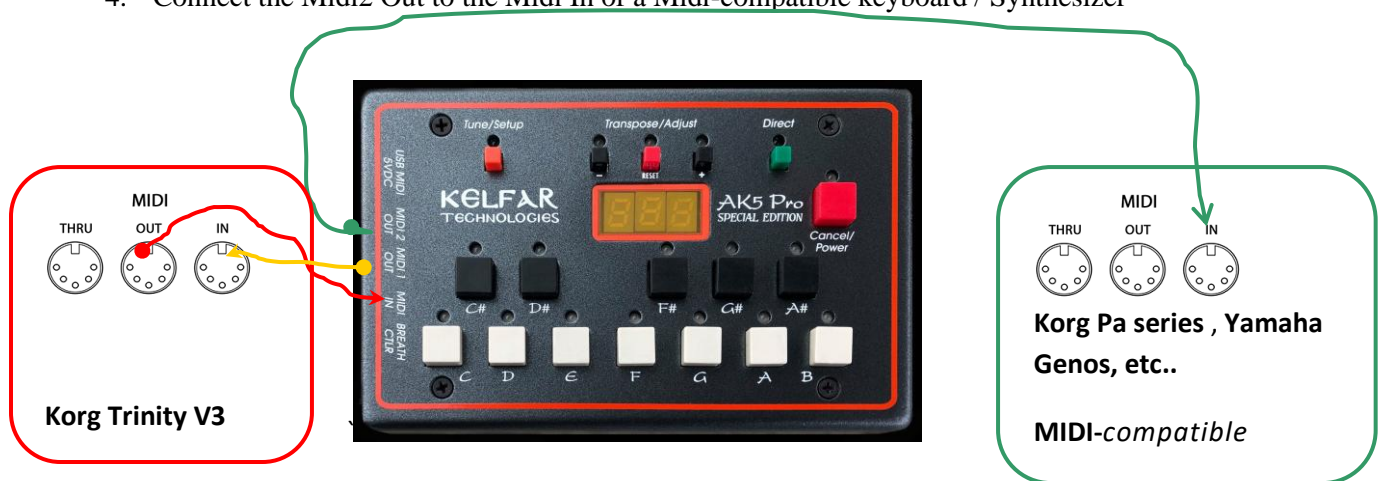
KORG TRINITY V3 FIRMWARE VERSION 3

Korg Trinity V3

Congratulations on your purchase of the AK-5 PRO SE WORLD SCALE TUNING, a Microtonal keyboard converter device. With the AK-5, you can create authentic Microtonal music right from your **KORG TRINITY V3 MUSIC WORKSTATION DRS.**

MAKING THE CONNECTIONS

1. Connect the **Midi1 Out** of the AK-5 Pro SE to **Midi In** Korg Trinity **V3**
2. Connect the **Midi In** of the AK-5 Pro SE to **Midi Out** Korg Trinity **V3**
3. **Local Control Off** (Please follow the instructions bellow to avoid any MIDI FEEDBACK and or stuck notes)
4. Connect the Midi2 Out to the Midi In of a Midi-compatible keyboard / Synthesizer



PROGRAMMING THE UNIVERSAL MODE 5 / (Mono-Legato Micro-Tuning[®])

1. PRESS and HOLD the CANCEL/POWER.
Then, while holding down the CANCEL/POWER button, PRESS the TUNE/SETUP button.
2. LED Display shows **P 1**
3. Press the key "A#".
4. LED Display shows **P 2**
5. Select Mode 5 (*mono-legato*) using the "E" key
6. The LED Display shows **E P** or **OFF** or **BC**

AK-5 Pro SE/VERSION 6.6

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Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)

OFF Expression Pedal and Breath Controller are OFF for (MIDI1) - RESET

BC Breath Controller is ON for Primary (MIDI1) - TR (+)

7. Press CANCEL/POWER to set up the Incoming Channel
8. LED Display shows PC 1 (Primary Channel Input) for **Mode 5**
9. Select the Incoming / Outputting Midi Channel and set to channel 1 by using the TRANSPOSE/ADJUST (+) and (-) buttons.
10. Press Tune/Setup to confirm the *Primary Channel Input*
11. The LED Display shows CCF (Momentarily)
12. The LED Display shows Cxx (xx=00 to 19) or UL (Master Volume) i.e C 1 1
13. Select the Control Change Number by using the Transpose/Adjust buttons.
14. Press CANCEL/POWER to setup the Curvature by using the Transpose/Adjust buttons.
15. The LED Display shows C Lx (x=0 to 9)
16. Select the Curve by using the Transpose/Adjust buttons.
17. Press CANCEL/POWER to Exit programming the Universal Mode (Primary Instrument MIDI1)
18. After programming the Primary Instrument:
 19. LED Display shows S 1
 20. Press appropriate key to select the Brand of the instrument.
21. 21.Press CANCEL to skip programming the Secondary Instrument.
22. Skip to step # 31

The AK-5 Pro SE will reboot without programming the Secondary Instrument and the (MIDI2) port will not output any data. In another word, the MIDI PORT for (MIDI2) has been flittered OFF.

LED Display shows S2

23. Press appropriate key to select the specific Model of the instrument.
24. Expression and Breath Controller statuses.
The LED Display shows EP or OFF or BC

Use the Transpose buttons to Turn ON/OFF:

EP Expression Pedal is ON - TR (-)

OFF Expression Pedal and Breath Controller are OFF for (MIDI2) - RESET

BC Breath Controller is ON for Secondary (MIDI2) - TR (+)

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25. Press CANCEL to Select the MIDI CHANNELS by using the following buttons: (C to B) 1CH to 12CH, Tune/Setup 13CH, TR (-) 14CH, RESET 15CH, TR (+) 16CH.

The LED Display shows 5CH

26. Press Cancel to setup the Control Change.

The LED Display shows CC# (Momentarily)

27. The LED Display shows CC# (xx=00 to 127) i.e CC#

28. Select the Control Change Number by using the Transpose/Adjust buttons.

29. Press CANCEL to setup the Curvature by using the Transpose/Adjust buttons.

- 30.

The LED Display shows C#x (x=0 to 8)

31. Select the Curve by using the Transpose/Adjust buttons.

32. **Note:** If either the Expression or Breath controller are ON then you will be able to select the MIDI CHANNELS, CONTROL CHANGE, and CURVATURE. If the Expression or Breath controller are OFF then the step will be skipped by pressing the CANCEL button.

33. Press CANCEL to setup the USB MIDI PORTS 1&2

34. The LED Display shows i.e P#

35. Enable/Disable the USB PORTS by using the Transpose/Adjust buttons.

A. (+) Enable/Disable Port 1: P# is OFF, P# is ON

B. (RESET) Enable/Disable Port 2: P# is OFF, P# is ON

36. Options available:

C. P# PORT 1 is ON. B. P# PORTS 1&2 are ON. C. P# PORT 2 is ON.

37. D. P# PORTS 1&2 are OFF.

38. If USB PORTS 1&2 are OFF [P#], press CANCEL

39. The LED Display shows USB OFF momentarily and exit the USB MODE.

40. Press CANCEL to Exit programming the Secondary Instrument (MIDI2).

41. The LED Display shows FP (Fully PROGRAMMED)

Note: After pressing CANCEL the LED will turn RED. After successfully inputting the new settings, the LED will return to GREEN.

After displaying FP the AK-5 Pro reboots indicating successful programming by displaying the initial setting and Viewing Instrument Selections.

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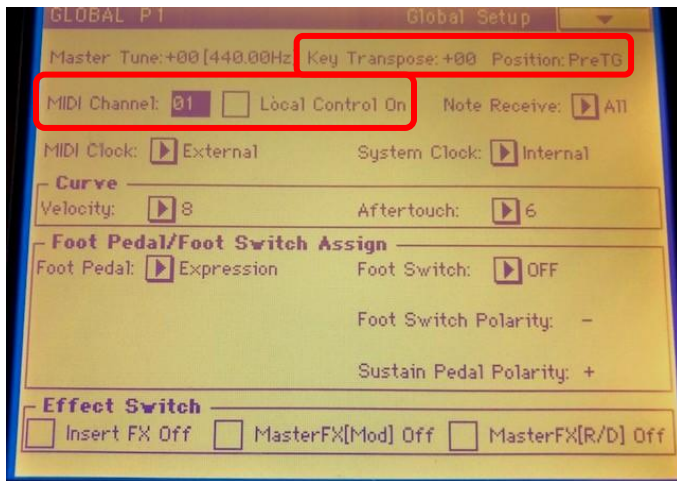
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Follow the steps below to ensure that the AK5 Pro SE operates correctly with Korg Trinity V3.

If some of the sounds are not micro-tuned properly, then it is possible that the Pitch Bend range is not set to 2/-2 or the Jump Bend boxes are unchecked. This guide will assist you in setting up all the correct parameters for individual Programs, all Programs, or Combinations Banks A, B, C, D, and the Programs in Bank M (MOSS).

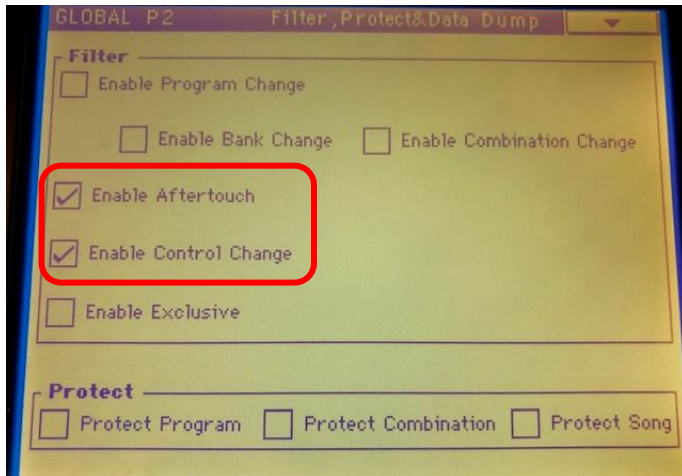
The AK4 Pro SE operation is Mono or Mono Legato in Universal Mode. It is possible, however, to play a maximum of 10 Polyphonic voices in Equal-Temperament scales. To avoid getting out-of-tune notes while playing microtonal in Polyphonic, then it is best adjust your ADSR to lower values for the Decay, Release, or Sustain.

1. Press the **Global** button. Then Press the **Global** button **P1**
 - A. **Key Transpose +00**
 - B. **Position: PreTG**
 - C. **Midi Channel 1**
 - D. **Uncheck the box Local Control On**



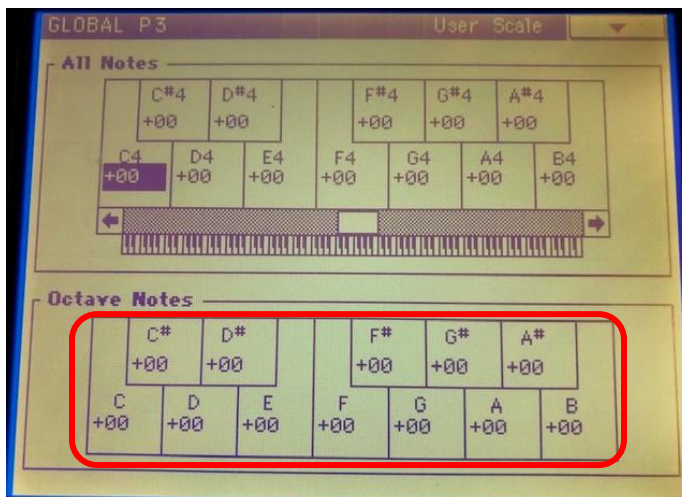
2. Press the **Global** button. Then Press the **Global** button **P2**

- A. **Uncheck the boxes:** (Enable Program Change, Enable Bank Change, Enable Combination Change, Enable Exclusive)
- B. **Check the boxes:** (Enable Aftertouch, Enable Control Change)



3. Initialize **Octave Notes** (User Scale) (C - B) to **+00**

- A. Press the **Global** button and then Press the **Global** button **P3**
- B. Set each note (C to B) to **+00**

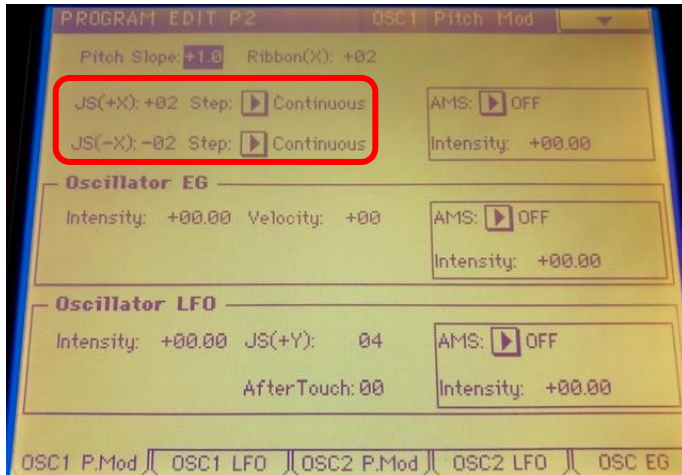


AK-5 Pro SE/VERSION 6.6

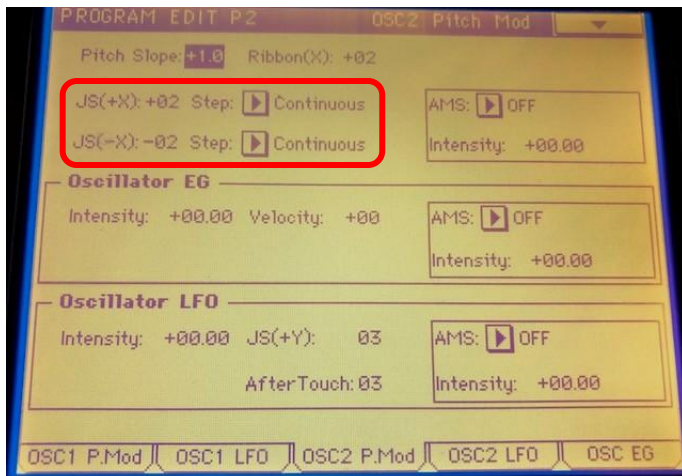
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4. Setting the Pitch Bend range to **2/-2** and the step to **Continuous** for Programs Banks A, B, C, D

- A. Press the Edit Button
- B. Press the Button P2
- C. Touch OSC1 P. Mod
- D. Set the Pitch Bend Range to JS (+X) +2, Step > Continuous
- E. Set the Pitch Bend Range to JS (-X) -2, Step > Continuous

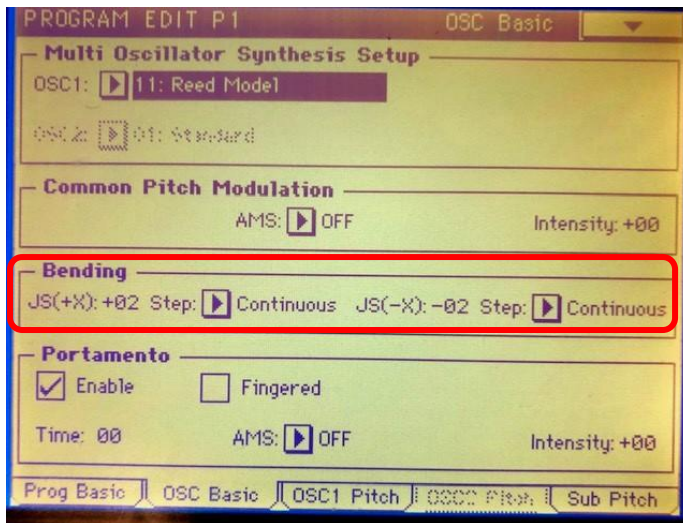


- A. Press the Edit Button
- B. Press the Button P2
- C. Touch OSC2 P. Mod
- D. Set the Pitch Bend Range to JS (+X) +2, Step > Continuous
- E. Set the Pitch Bend Range to JS (-X) -2, Step > Continuous
- F. Write Program "If you turn the power off or select a different program before writing, the data cannot be recovered."



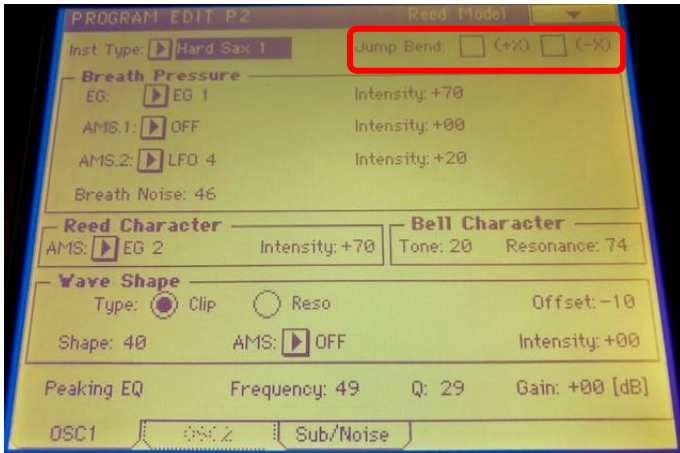
5. Setting the Pitch Bend range to **2/-2** and the step to **Continuous** for Programs **Bank M (MOSS)**

- A. Press the Edit Button
- B. Press the Button P1
- C. Touch OSC Basic
- D. Set the Pitch Bend Range to JS (+X) +2, Step > Continuous
- E. Set the Pitch Bend Range to JS (-X) -2, Step > Continuous
- F. Write Program "If you turn the power off or select a different program before writing, the data cannot be recovered."



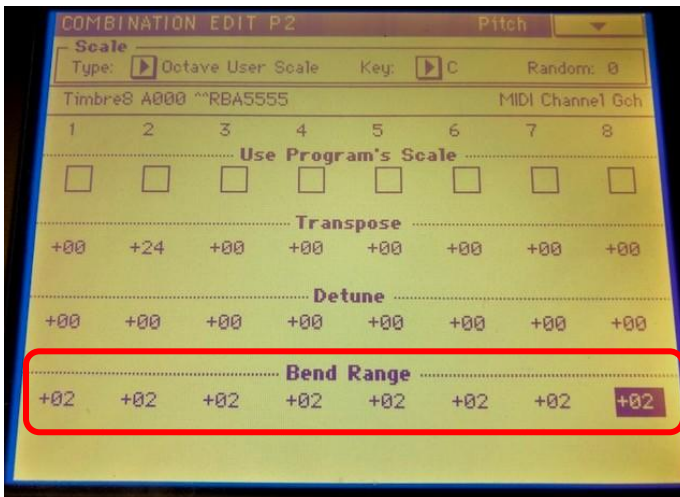
6. For Bank M (Moss) only: Reed and Brass oscillators

- A. Press the Edit Button
- B. Press the Button P2
- C. Touch OSC 1
- D. Uncheck the Jump Bend Boxes (+X) (-X)
- E. Write Program "If you turn the power off or select a different program before writing, the data cannot be recovered."



7. Combinations Banks A, B, C, D

- A. Press the Edit Button
- B. Press the Button P2
- C. Set the Bend Range to +2 for the Track(s) that are needed adjustment
- D. Write Combination "If you turn the power off or select a different combination before writing, the data cannot be recovered."



Important Information

Specifications:

Input:

- (1) Midi Input
- (1) Breath Controller / Expression Pedal (Selectable when programming the AK-5 Pro)

Output:

- (2) Midi Output via USB Interface (software selectable)
- (2) Midi Output via Standard Midi MIDI1&M2 (1/8" to 5-pin din)

Power source:

- 5V USB bus power (USB Mini B)

Dimensions

- 5.5 x 3.4 x .900 in. / 139.7 x 86.36 x 22.9 mm

Weight:

- 0.475lbs / 215g.

Accessories (included)

- (1) USB mini cable (1.2m/4ft)
- (2) 1/8" to 5-pin din (1m/3.2ft and 1.5m/5ft)

Note: Breath Controller and Expression Pedal are NOT included. The AK-5 works best with the BCK-1 (Kelfar Technologies Breath Controller) available here: <http://kelfar.net/bck-1-breath-controller/>

AK-5 Pro SE/VERSION 6.6

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Registration:

Register your AK-5 Pro today: register@kelfar.net

Date of Purchase:

Warranty:

1 year limited warranty by Kelfar Technologies from the date of purchase.

Support:

Email: support@kelfar.net

*Specifications subject to change without notice.

Document last updated: *Saturday, February 08, 2025*