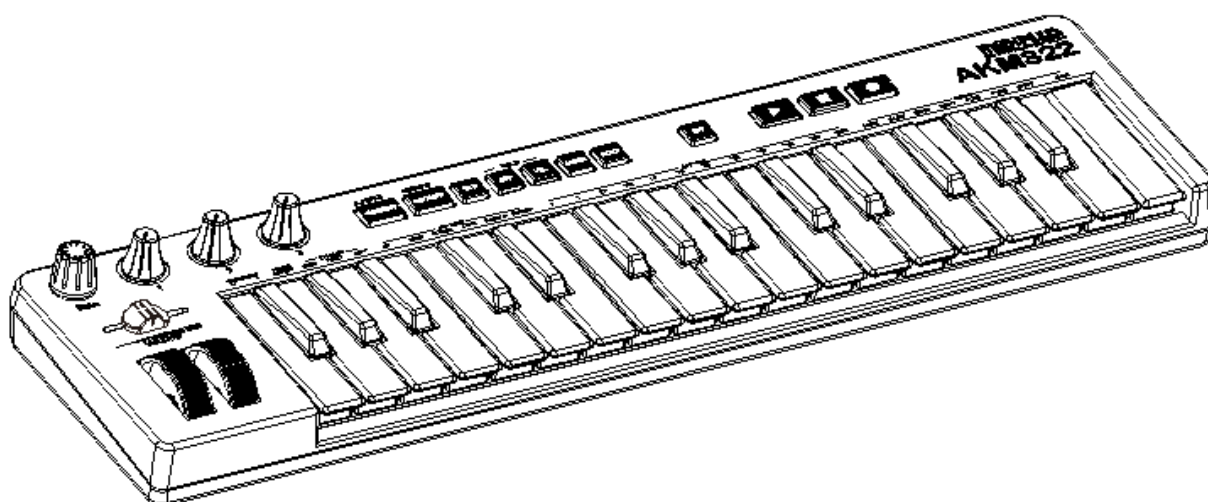
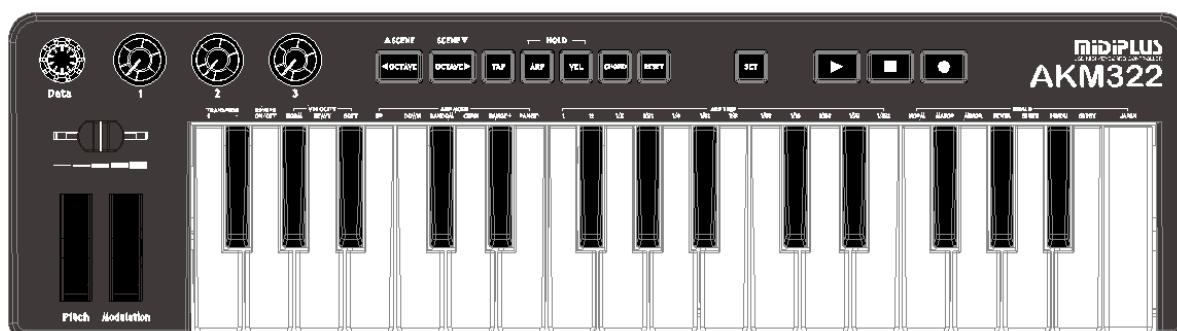


MIDIPLUS

AKM322

Owner's Manual



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(1) Preface

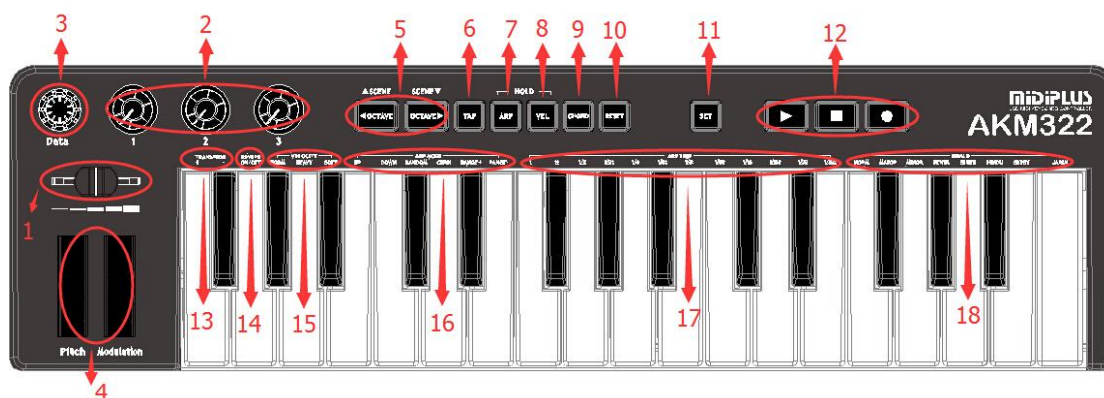
Congratulations on your purchase of MIDIPLUS AKM322. AKM322 is a petite appearance and powerful MIDI keyboard, portable and powerful MIDI function, is a cost-effective products, worth you have. Next to introduce AKM322 function and operating, it set powerful MIDI functions, Includes 32 key miniature keyboard, pitch and modulation wheels, volume clipper potentiometer, Unlimited rotation data regulator, three rotation data potentiometer, octave buttons (Up & Down), powerful arpeggiator, chord mode button, reset button, set button, walk with control buttons: play, stop, record. The keys of composite function, includes transpose Buttons (Up & Down), reverberation function selection, three velocity curve, arpeggiator mode, arpeggiator time, scales mode select; Back board have pedal input jack and USB socket . AKM322 support apple system and the Microsoft Windows XP/7/8 system, do not need to install the USB driver, the system can directly identify the MIDI USB devices.

(2) What's in the Box?

- 1.AKM322 force sensing 32 key keyboard USB MIDI controller.
- 2.A standard manual.
- 3.A standard USB cable.

(3) Panel overview :

3.1 Front panel overview



3.2 Rear panel overview



Function of the serial number	
(1) Volume clipper potentiometer	(11) SET
(2) Rotation data potentiometer	(12) Walk with control buttons (PLAY,STOP,RECORD)
(3) Unlimited rotation data regulator	(13) Transpose+/-
(4) Pitch and Modulation wheels	(14) REVERB(ON/OFF)
(5) Octave buttons(DOWN& UP)	(15) Velocity Curve(NORM/HEAVY/SOFT)
(6) Metronome (TAP)	(16) Arpeggiator mode(ARP MODE)
(7) Arpeggiator (ARP)	(17) Arpeggiator time(ARP TIME)
(8) Velocity(VEL)	(18) Keyboard Scale(SCALE)
(9) CHORD	(19) Pedal switch(SUSTAIN)
(10) RESET	USB 2.0

(4) Functions overview :

4.1 Volume clipper potentiometer

The potentiometer can adjust the MIDI volume, adjust the volume potentiometer will transmit the MIDI messages.

4.2 Rotation data potentiometer:

The potentiometer to send specific controller information, you can use MIDI Editor software editing a CC value

4.3 Unlimited rotation data regulator (Data):

Unlimited rotation data regulator to send specific controller information, you can use MIDI Editor software editing a CC value

4.4 Pitch and Modulation wheel:

Pitch wheel: Transmits MIDI Pitch Bend information to raise or lower the pitch of a note temporarily.

Modulation wheel: This wheel can be used to transmit continuous controller data (CC #1 or Modulation Depth).

4.5 Octave buttons(DOWN& UP):

Octave buttons(DOWN& UP), can be used to enlarge the 0-key to 88-key or more. Everytime to reduce or increase an octave(the default value of 4),

1. To reduce an octave (octave value less than 4)"OCTAVE UP" LED light;
2. To increase an octave (octave is greater than 4)"OCTAVE DOWN"LED light;
3. Octaves Value is 4, "OCTAVE UP" LED and "OCTAVE DOWN"LED will put out. At the same time press "OCTAVE DOWN" & "OCTAVE UP" buttons, the octaves value return to the default value(4)。

4.6 TAP tempo

Edit arpeggio rhythm tempo. After opening the "ARP", "TAP" LED will be flashing, flashing rate associated with the current tempo, the user can repeat press this button ("TAP") adjust the tempo, repeated press rate is proportional to the tempo, the press rate faster, the faster tempo rhythm, LED blink rate faster, the faster the arpeggio sends, conversely the more slowly.

4.7 Arpeggiator(ARP):

Arpeggiator switch, When press the button to open the arpeggios, LED lighting, press the button, once again and arpeggio function will be closed, the LED put out, after the arpeggiator is ON, can be used together with the keyboard. Arpeggio function: If the current press the keyboard of C2, will send C2, C3, C2,C3.....;If the current press D3 keys, will send D3, D4, D3, D4.....

4.8 Velocity(VEL):

When the "ARP" is OFF, press the "VEL", LED lights, will shut down the keyboards velocity sense, the keyboard only sends the strength of the biggest (127). When the "ARP" is ON, press the "VEL", will lock the keys of the current arpeggio effect, until there is a new keys pressed to change.

4.9 CHORD:

press the "CHORD", Chord is ON, LED lights. Press the button again, close the chord function, LED put out. In chord mode, through "the OCTAVE" and "OCTAVE >" button to change different chords, chord types including "Major", "Minor", "Minor 6", "Minor 7", "Augmented", "Major 6", "Major 7", "Suspended", "Diminished".

4.10 RESET:

When the "OCTAVE DOWN" or "OCTAVE DOWN" or "TAP" or "ARP" or "VEL" or "CHORD" is ON, "RESET" button LED lights, If you press "RESET" button again when the LED light, the button will be reset to the default state, shut lights.

4.11 SET:

Composite keyboard mode switch, When press "SET" button, not loosen, LED lights, the composite keyboard mode is ON, then press any keyboards and will make can reuse functions. For example: "SET" is ON, press the keys of the first (Transpose +), can Transpose +1.

Loosen the "SET" button will exit composite keyboard mode.

4.12 Walk with control buttons (PLAY,STOP,RECORD):

PLAY, STOP, RECORD button for MIDI software Play, Stop, record of the function, you can use the edit button MIDI information MIDI Editor software.

4.13 Transpose+/-:

It is possible to transpose up or down by as much as 12 MIDI notes.

4.14 REVERB ON/OFF:

It is open and closed reverberation function.

4.15 VELOCITY Curve (NORM/HEAVY/SOFT):

Choose velocity curve (standard/heavy/light), the user can choose according to personal feel the velocity of the corresponding curve.

4.16 ARP MODE :

When the "ARP" is ON, LED lights.

UP: Up mode, the arpeggiator will play the notes in increasing chromatic order. If a Cmaj chord is played, the pattern would be: C, E, G, C, E, G,

DOWN: Down mode, the arpeggiator will play the notes in decreasing chromatic order. If a Cmaj chord is played, the pattern would be: G, E, C, G, E, C,

RANDOM:RANDOM mode, arpeggiator playing notes random broadcast, not according to the notes in order to play, random play the notes.

CHRN: Order mode, the arpeggiator will play back the notes in the order that they were pressed. If the following notes were pressed and held in this order: C, G, E, B. The output of notes would follow that order and playback: C, G, E, B, C, G, E, B, C, G, E, B.....

RANGE+: Arpeggiator octave+1, since the default value(1) + 1, a maximum of 4. When the arpeggiator octave is 1, arpeggiator sent two notes. Press the "RANGE+", arpeggiator octave+1, the notes add an octave, then sent three arpeggio notes at the same time. For example, the arpeggiator octave is 1, sent C2,C3; The arpeggiator octave is 2, sent C2,C3,C4; The arpeggiator octave is 3, sent C2,C3,C4,C5.....

RANGE- : Arpeggiator octave-1, a minimum of 1. When the arpeggiator octave is 2, arpeggiator sent three notes. Press the "RANGE-", arpeggiator octave-1, the notes reduce an octave, then sent two arpeggio notes at the same time. For example, the arpeggiator octave is 1, sent C2,C3; The arpeggiator octave is 2, sent C2,C3,C4; The arpeggiator octave is 3, sent C2,C3,C4,C5.....

4.17 Arpeggiator time(ARP TIME):

When the "ARP" is ON, ARP TIME---1~1/32t:These keyboards are adjust fixed time for arpeggiator. Arp time: play arpeggiator notes of frequency. Here with the QN said that if

QN is a crotchets, so are defined as follows:

1/4 note = QN

1/4 triplet = (QN)*2/3

1/8 note = (QN/2)

1/8 triplet = (QN/2)*2/3

1/16 note = (QN/4)

1/16 triplet = (QN/4)*2/3

1/32 note = (QN/8)

1/32 triplet = (QN/8)*2/3

4.18 Keyboard Scale (SCALE):

Keyboard Scale, a group of 12 key note the order of keys in C ~ B

Scale	Pitch name:	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
NO.	Note number	1	2	3	4	5	6	7	8	9	10	11	12
001	Major Scale:	C	C	D	D	E	F	F	G	G	A	A	B
004	Minor Scale:	C	C	D	D#	D#	F	F	G	G#	G#	A#	A#
002	Pentatonic Major Scale:	C	C	D	D	E	E	E	G	G	A	A	A
003	Blues Major Scale	C	C	D#	D#	F	F	F#	G	G	A	A	A
026	Hindu Scale:	C	C	D	D	E	F	F	G	G#	G#	A#	A#
024	Gypsy Scale:	C	C#	C#	E	E	F	F	G	G	A	A#	A#
028	Japanese Scale:	C	C#	C#	C#	F	F	F	G	G#	G#	G#	G#

4.19 Pedal switch (SUSTAIN):

Connect the pedal to the pedal jack, if on the pedal, it can make the pedal MIDI value.

4.20 USB 2.0:

There will be a USB jack on the side of the unit. The unit will be a class compliant with both Mac and PC. It will mount as a USB-MIDI device. The unit will be fully powered by USB.

(5) 5.1 Restore factory parameter function

At the same time, press the "SET", "PLAY" "REC" three keys, as shown in the figure below red box button. Panel key lights, flicker phenomenon that success set to restore the factory parameter. If equipment anomalies or MIDI information through the MIDI Editor software, after the modification of the MIDI value at the same time you press the "SET", "PLAY" "REC" three key parameters can restore the factory.



5.2 Minimum System Requirements

If you are using your AKM322 with a computer, the following minimum system requirements need:

Windows	Mac OS
Pentium 3 800MHz or higher	Macintosh G3*800/G4*733MHz or higher
CPU requirement may be higher laptops	CPU requirement may be higher for laptops
256 MB RAM	OS X 10.3.9 with 256MB RAM
Direct X 9.0b or higher	OS X 10.4.2 or greater with 512 MB RAM
Windows XP(SP2) or higher	*G3/G4 accelerator cards are not supported.
Windows 98,Me,NT or 2000 not supported	

(Attention: Window98/ME/NT or 2000 are not supported)

MIDIPLUS suggests that you connect directly to your computer built in USB ports.

(6)AKM322 MIDI Editor Software

AKM322 connect computer, and then open the AKM322 MIDI Editor software, pay attention to the computer have to recognize AKM322 USB devices, AKM322 MIDI Editor software can display the connection status and the firmware version number, such as picture 1. Computers have no recognize AKM322 device or No insert AKM322 equipment, open AKM322 MIDI Editor software will display not connected state: **Disconnect**, such as picture 2, please check.

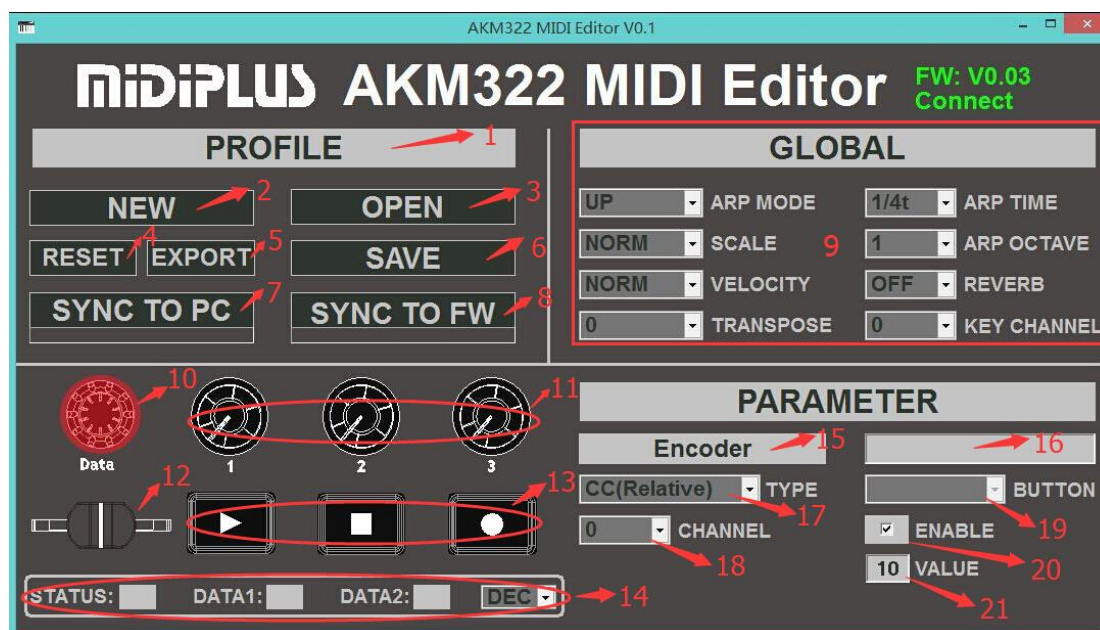
Picture 1: drive connect (display **Connect**, firmware version number: **FW: V0.03**)



Picture 2: drive not connected (display: **Disconnect**)



MIDI Editor software functional description



Function of the serial number	
(1)Filename	(11)Rotating potentiometer(KNOB)
(2)New construction parameters(NEW)	(12)Pusher potentiometer(SLIDER)
(3)Open the construction file(OPEN)	(13)Walk with control buttons
(4)Reset para and sync data(RESET)	(14)Real-time status information
(5)Export construction file(EXPORT)	(15)Function of the alias
(6)Save the parameters(SAVE)	(16)Modify the alias
(7)Sync to computer(SYNC TO PC)	(17)Data type(TYPE)
(8)Sync to the device(SYNC TO FW)	(18)Edit channel(CHANNEL)
(9)The composite function area	(19)Edit button state(BUTTON)
(10)Encoder (DATA)	(20)Enable or disable(ENABLE)
	(21)Data byte(VALUE)

6.1 Filename

Users in the area of autonomous operation function.

6.2 New construction parameters (NEW)

Click "NEW", at the option to restore for the default parameters.

6.3 Open the construction file (OPEN)

Click "OPEN", can open the saved construction file, the file named "***. CUS"

6.4 Reset parameters and synchronize data to the device (RESET)

If AKM322 connected, click the "RESET", the software configuration parameters restore to the factory, and synchronous data to the AKM322;

If AKM322 not connected, click the "RESET", said the wrong window will pop up, remind users to connect AKM322 .

6.5 Export construction file (EXPORT)

Click on the "EXPORT", the user parameter export is saved as a file, in order to backup the user parameter file;

6.6 Save the parameters (SAVE)

Modify the software configuration parameters, click "SAVE" and save the parameters, to open the software will not missing parameters

6.7 Sync to computer (SYNC TO PC)

Click the "SYNC TO the PC," AKM322 configuration parameters will be synchronized to the computer software (AKM322 MIDI EDITOR)

6.8 Synchronized to the device (SYNC TO FW)

Click the "SYNC TO FW," The computer software (AKM322 MIDI EDITOR) configuration parameters will be synchronized to the device (AKM322)

6.9 The composite function area

This area can edit the composite function parameters of the AKM322, the user can click on any options changes; Such as: "ARP MODE" choice (UP/DOWN/RANDOM/CHRN)...

6.10 Encoder (DATA)

Use the mouse to click the Encoder icon, software interface appears translucent red label, indicating the user can change the encoder custom functions, such as status byte: TYPE, data bytes: VALUE, the channel: CHANNEL, can make it or not: ENABLE.

6.11 Rotating potentiometer (KNOB)

Use the mouse to click the Knob icon, software interface appears translucent red label, indicating the user can change the Knob custom functions, such as status byte: TYPE, data bytes: VALUE, the channel: CHANNEL, can make it or not: ENABLE.

6.12 Pusher potentiometer (SLIDER)

Use the mouse to click the Slider icon, software interface appears translucent red label, indicating the user can change the Slider custom functions, such as status byte: TYPE, data bytes: VALUE, the channel: CHANNEL, can make it or not: ENABLE.

6.13 Walk with control buttons (PLAY,STOP, REC)

Use the mouse to click the buttons icon, software interface appears translucent red label, indicating the user can change the button custom functions, such as status byte: TYPE, data bytes: VALUE, the channel: CHANNEL, can make it or not: ENABLE.

6.14 Real-time status information (STATUS,DATA1, DATA2,DEC/HEX)

After connect AKM322, rotate any potentiometer or encoder and press the button have information uploaded to the software, according to the real-time STATUS: STATUS byte (x > 0 x80), DATA1: data bytes (x < 0 x80), DATA2: byte (x < 0 x80), DEC: decimal, HEX: hexadecimal display

6.15 Function of the alias

The area used to display the function of the alias, convenient user to see the alias of the custom function.

6.16 Modify the alias

User can input function on the edit field alias, note the use of the name to function.

6.17 Data type (TYPE)

"TYPE" drop-down box to choose NOTE (0 x90), PC (0 xc0), PITCH BEND (0 xe0-0xfc), AFTER TOUCH (0 xd0), CC (0 xc0);

In the encoder (Data) mode with CC (Relative) and CC (Absolute)

CC(Relative):0xBx (The encoder back to normal mode) ;

CC(Absolute):0xBx, Only the encoder (6.10), velocity bytes will enable the absolute value model, each turn left, velocity bytes will start from 0x40 decreased ; Each turn right , velocity bytes will start from 0x40 began to increase

6.18 Edit channel (CHANNEL)

Click on the "CHANNEL", the user can choose the encoder, potentiometers, buttons on the channel (channel value is 0 ~ 15)

6.19 Edit button state (BUTTON)

This function only to walk with buttons (PLAY, STOP, REC), click on the "BUTTON" select LED state

Toggle: In this mode, the LED is bright when press the button, put out when press the button again

Momentary: In this mode, the LED is bright when press the button, loosen the button is put out

6.20 Enable or disable (ENABLE)

The user can click on the "ENABLE" on the left side of the square, "√" or cancel "√"

"√": Enable the encoder or potentiometers, buttons state information, the AKM322 can send this part of the information or light LED;

Cancel "√": Disable these state

6.21 Data byte (VALUE)

User can click on the "VALUE" on the left side of the square space, fill in 0 ~ 127, such as the currently selected edit encoder, the TYPE select NOTE, VULUE fill in 127, the synchronous data to the AKM322, AKM322 sends a message format for the encoder (state bytes: 0x90, data bytes: 0x7f, velocity bytes: 0 ~ 0x7f)

(7) Download AKM322 MIDI Editor software's web:

Web: <http://www.midiplus.com.tw/MIDIPLUS-Download.htm>