Worlde ORCA PAD16

MIDI Controller User's Manual

Contents

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Packing list:
WORLDE ORCA PAD 16*1
USB cable*1
Quick start*1

1. Introduction

Thank you for purchasing the WORLDE ORCA PAD 16 USB MIDI controller. ORCA PAD16 is a high quality, feature-packed controller which includes all the essentials to start making music. To help you get the most out of your new instrument, please read this manual carefully.

Your ORCA PAD 16 midi controller will not make any sound unless it is connected to a computer or other external MIDI gear. This is because the ORCA PAD 16 sends MIDI data when you play it and does not produce sound on its own. Instead, it is used to control a virtual instrument on your computer or a MIDI sound module to generate sounds.

In order to use the functions of this product, you'll need to make settings in the application you're using. Make settings as described in the owner's manual for your application.

ORCA PAD 16 integrates perfectly with DAWs (such as Ableton Live, Bitwig and so on) for both production and performance.

2. Features

- Three banks of 16 high quality velocity & pressure sensitive performance pads with RGB backlit, for 48 total, can be assigned easily as MIDI notes, program change buttons.

- Three banks of 6 assignable encoders, for 18 total, can be assigned as MIDI CC, aftertouch and etc.

- Function buttons, providing functions like, FULL LEVEL, NOTE REPEAT, PROGRAM SELECT, NOTE REPEAT CONFIGURATION and etc.

- USB interface, adaptable to USB 2.0(FULL SPEED). Power supplied by USB.

- Compatible with Win11/10/8/7/XP/Vista and Mac OSX or greater.

- Drive free and hot-plug supported.

- Perfect integration with DAWs (such as Ableton Live, Bitwig and so on) for both production and performance.

- Edited by the ORCA PAD16 Software Editor which could be downloaded from www.worlde.com.cn.

3. Getting Started

3.1 ORCA PAD 16 Overview

3.1.1 Top Panel Overview

3.1.2 Rear Panel Overview

Control Definitions

1. Trigger pads	**6. [Program Select] button**
2. Encoders	**7. [Note Repeat Configuration] button**
3. [Control Bank/Reset] button	**8. [Note Repeat] button**
4. [Pad Bank] button	**9. [Kensington Lock] button**
5. [Full Level] button	**10. Full Sized USB connector**

3.2 Setup

If you intend to connect your ORCA PAD16 to a computer or mobile devices , please read sections 3.2 to 3.4 first.

3.2.1 Minimum System Requirements

If you are using your ORCA PAD16 with a computer, the following minimum system requirements apply:

Windows	Mac OS
i3 1.2GHz or higher	Macintosh i3*1.2GHz/P4*1.2GHz or higher
(CPU requirement may be higher for laptops)	(CPU requirement may be higher for laptops)
1G RAM	OS X 10.3.9 with 1G RAM,
Direct X 9.0b or higher	OS X 10.4.2 or greater with 1G RAM
Windows XP (SP2) or higher	*G3/G4 accelerator cards are not supported.
(Windows 98, Me, NT or 2000 not supported)	

WORLDE suggests you also check the minimum system requirements for your software, as they may be greater than the above.

USB hubs are not supported. WORLDE suggests that you connect directly to one of your computer's built in USB ports.

3.2.2 Using The ORCA PAD16 With Your Software

When installed, the ORCA PAD16 appears as a simple MIDI device with one input port and one output port. You should select the listed USB MIDI Controller input port as the MIDI input device in your software. Once this is set, your software should be able to receive notes and controller data from the ORCA PAD16.

The port name is defined as WORLDE when connecting to USB port.

It will appear as WORLDE in the Device Manager.

3.3 Connecting with a Computer

ORCA PAD16 is bus-powered, connect it to your computer with a USB cable will have that turned on.

3.4 Connecting with Mobile Devices

3.4.1 iOS

To use your ORCA PAD16 with an iOS device, connect it using Apple's Lightning to USB 3 Camera Adapter.

3.4.2 Android

To use your ORCA PAD16 with an Android device, we suggest using a USB OTG as the USB adapter.

4. Parts and Their Functions

4.1 Trigger pads

ORCA PAD16 has three banks of 16 high quality velocity & pressure sensitive performance pads with RGB backlit, for 48 total, which can be assigned easily as MIDI notes or program change buttons. The pads can be used to trigger drum hits to our software or hardware module. The pads are pressure and velocity sensitive, which makes them very responsive and intuitive to play. With the software editor it's possible to assign the pads and adjust the RGB color of the pads. For example: The pads can be assigned to trigger up to 48 particular MIDI notes (drums, stabs, bass notes, whatever). When the pads assigned to MIDI notes, they will send notes message which work just as 48 keys at this moment. The default is sending the note message on Channel 1. When a pad is assigned to program change, it will send program change message, so it won't produce any sound when pressed in this mode.

When used in conjunction with the Program select button, the pads will recall one of 16 MIDI presets. This is accomplished by holding the Program select button and pressing one of the pads. For example, if you hold the program select button and press Pad 1 the Preset 1 will be recalled.

4.2 Knobs

These encoders transmit control change messages. The 3 banks of 6 encoders (18 for total) can be assigned to control any editable parameter on the selected device. Each encoder can be used to send continuous control data to a desktop audio workstation. There are 135 MIDI controller messages that are used for controlling the MIDI-adjustable parameters in your software(0 to127 is the standard MIDI control parameter, 128 to 134 is the special MIDI control parameter). Examples of these controllable parameters include volume, pan, expression, reverb, chorus and portamento.

The 6 assignable knobs on your ORCA PAD16 is able to send any of the 128 standard MIDI controller messages to control such parameters. Please note that in order for these effects to work, the device you are sending to must be able to receive these messages. A full list of these control messages is given in Appendix A.

For example, you may want to set the Knob 1 to control the channel volume. This is done by assigning controller 7 to the Knob 1. Examples of other popular effects are listed in the table below. (Please consult Appendix A for the full list.)

Effect	Control
Modulation	1
Volume	7
Pan	10
Expression	11
Reverb depth	91
Chorus depth	93

4.3 Control Bank button/Reset button

Control Bank button is used to switch knob banks. There are three banks of knobs which makes it possible to edit up to 18 parameters for the knobs. Click the Control Bank button to select the desired knob bank:Green color for Bank A, Red color for Bank B, Blue color for Bank C. When editing your mappings, make sure you are on the bank you want.

Press this button for 5 seconds to reset the device and the 16 pads will be lighting for a while after reset made.

4. 4 Pad Bank button

Pad Bank button is used to switch pad banks. There are three banks of pads and each bank can address a unique set of 16 sounds giving you access of up to 48 different sounds you can trigger with the pads. Click the Pad Bank button to select the desired pads bank:Green color for Bank A, Red color for Bank B, Blue color for Bank C. When editing your mappings, make sure you are on the bank you want.

4.5 Program Select button

Program select button calls up Preset Mode. You can select and recall different Preset programs in this mode. For example, if you hold the program select button and press Pad 1 the Preset 1 will be recalled. Press and hold this button and then press a pad to select the Prest Program with the same number as the pad. A Preset Program is a pre-mapped layout of pads, which can be useful for specific situations (using a General MIDI drum set or using a specific melodic scale).

Important:

While holding this button, the pads will not send any of their normal MIDI messages.

4.6 Full Level button

When [FULL LEVEL] is activated, the pads always play back at a maximum velocity (127), no matter how hard or soft you hit them.

4.7 Note Repeat Configuration button

Press this button and then press a pad to select its secondary function (printed next to the pad number).

Important: While holding this button, the pads will not send any of their normal MIDI messages.

• Pads 1–8: Press one of these pads to determine Time Division, which determines the rate of the Note Repeat feature: quarter notes (1/4), eighth notes (1/8), 16th notes (1/16), or 32nd notes (1/32). On Pads 5–8, the T indicates a triplet-based time division.

• Pads 9–14: Press one of these pads to select the amount of Swing: Off, 54%, 56%, 58%, 60%, or 62%.

• Pad 15 (Ext Clock): Press this pad to set ORCA PAD16's clock source (external or internal), which will determine the rate of its time-related features. When lit (external), ORCA PAD16 will use your DAW's tempo. When off (internal), MPD218 will use its own tempo, which you can set with Pad 16, which will flash at the current tempo.

• Pad 16 (Tap Tempo): Press this pad at the desired rate to enter a new tempo.

ORCA PAD16 will detect the new tempo after 3 taps. The pad will flash at the current tempo if you hold NR Config and if ORCA PAD16 is using its internal clock.

4.8 Note Repeat button

Press and hold this button while striking a pad to cause the pad to retrigger at a rate based on the current tempo and Time Division settings.

4.9 Full Sized USB connector

Connect the ORCA PAD 16 to your computer with a USB cable via this port. The computer's USB port provides power to your ORCA PAD16. This connection is also used to send and receive MIDI data to and from your computer.

5. Using The ORCA PAD16 With Your DAW

A MIDI sequencer will allow you to record, play back, store and edit MIDI data. Although hardware sequencers exist, we will focus on the more commonly used software sequencers in this manual. Examples of popular DAW are CubaseTM, LogicTM, Ableton Live TM and so on, although there are many different sequencing applications available for your computer. In order to use your ORCA PAD16 with your sequencer, you need to set up the sequencer software so that your ORCA PAD16 can be recognized as your DAW's MIDI input device. You need to choose a MIDI output device that is capable of making sound when MIDI data is sent to it. This may be a soundcard on your computer, a VST instrument or a sound module connected to a MIDI port which is in turn connected to your computer. Please consult your sequencer's user manual for more information on how this is done. In this manual, section 3.2.2 "Using The ORCA PAD16 With Your software" details how your ORCA PAD16 will appear in the device listing of your sequencer.

With your ORCA PAD16 set up to communicate with the sequencer, data will go into the sequencer and will be routed to a virtual synthesizer within the sequencer software or sent to an external sound module via a MIDI output port. The virtual synthesizer or external sound module will turn the MIDI data into audible sounds. You can then record the incoming MIDI data and edit your performance using your sequencer. We will have some more detailed MIDI mapping operations for different DAWs provided separately.

6. Appendices

APPENDIX A- ASSIGNABLE CONTROLLER LIST

CONTROLLER NO.	DEFINITION	INITIAL VALUE	VALUE RANGE
0	Bank Select MSB	0	0-127
1	Modulation MSB	0	0-127
2	Breath MSB	127	0-127
3	Controller	0	0-127
4	Foot Controller MSB	127	0-127
5	Portamento time MSB	0	0-127
6	Data Entry MSB	2	0-127
7	Channel Volume MSB	100	0-127
8	Balance MSB	64	0-127
9	Controller	0	0-127
10	Panpot MSB	64	0-127
11	Expression MSB	127	0-127
12	Effect Control 1 MSB	0	0-127
13	Effect Control 2 MSB	0	0-127
14-31	Controller	0	0-127
32	Bank Select LSB	0	0-127
33	Modulation LSB	0	0-127
34	Breath LSB	127	0-127
35	Controller	0	0-127
36	Foot Controller LSB	127	0-127
37	Portamento time LSB	0	0-127
38	Data Entry LSB	0	0-127
39	Channel Volume LSB	127	0-127

40	Balance LSB	64	0-127
41	Controller	0	0-127
42	Panpot LSB	64	0-127
43	Expression LSB	127	0-127
44-63	Controller	0	0-127
64	Sustain	0	0-127
65	Portamento	0	0-127
66	Sostenuto	0	0-127
67	Soft Pedal	0	0-127
68	Legato FootSwitch	0	0-127
69	Hold 2	0	0-127
70	Sound Controller	64	0-127
71	Resonance	64	0-127
72	Release Time	64	0-127
73	Attack Time	64	0-127
74	Cutoff	64	0-127
75	Decay Time	0	0-127
76	Vibrato Depth	64	0-127
77	Vibrato Depth	64	0-127
78	Vibrato Depth	64	0-127
79	Sound Controller	64	0-127
80-83	Controller	0	0-127
84	Portamento Control	0	0-127
85-90	Controller	0	0-127
91	Reverb	40	0-127
92	Effects	0	0-127
93	Chorus	0	0-127
94	Effects	0	0-127
95	Effects	0	0-127
96	RPN Increment	0	0-127
97	RPN Decrement	0	0-127
98	NRPN LSB	0	0-127
99	NRPN MSB	0	0-127
100	RPN LSB	0	0-127
101	RPN MSB	0	0-127
102-119	Controller	0	0-127
120	All Sound Off	0	0-127
121	Reset All Controllers	0	0-127
122	Local Control	0	0-127
123	All Notes Off	0	0-127
124	OMNI Off	0	0-127

125	OMNI On	0	0-127
126	Mono	0	0-127
127	Poly	0	0-127
128	Pitch Bend Sensitivity（RPN）	2	0-127
129	Channel Fine Tuning（RPN）	64	0-127
130	Channel Coarse Tuning（RPN）	64	0-127
131	Modulation Depth Range（RPN）	64	0-127
132	Vibrato Rate（NRPN）	64	0-127
133	Vibrato Depth（NRPN）	64	0-127
134	Vibrato Delay（NRPN）	64	0-127
135	Filter Cutoff Frequency（NRPN）	64	0-127
136	Filter Resonance（NRPN）	64	0-127
137	EQ Low Gain（NRPN）	64	0-127
138	EQ High Gain（NRPN）	64	0-127
139	EQ Low Frequency（NRPN）	64	0-127
140	EQ High Frequency（NRPN）	64	0-127
141	EG Attack Time（NRPN）	64	0-127
142	EG Decay Time（NRPN）	64	0-127
143	EG Release Time（NRPN）	64	0-127
144	Polyphonic key pressure	100	0-127
145	After touch	100	0-127
146	Pitch Bend	64	0-127
147	Master Volume	100	0-127
148	Start（MTC）	-	-
149	Continue（MTC）	-	-
150	Stop（MTC）	-	-
151	Reset（MTC）	-	-
152	Program	0	0-127
153	Global Channel	0	0-15
154	Octave	0	-3~3
155	Transpose	0	-12~12
156	Tempo	100	20-250
157	Keyboard Curve	0	0-4
158	Pedal A Curve	64	1-127

Appendix B- Toxic or Hazardous Substances and Elements

Part Number, Name and Description	Toxic or Hazardous Substances and Elements					
	Pb	Hg	Cd	Cr(VI))	(PBB)	(PBDE)
PCB	○	○	○	○	○	○
PCBA Welding Spot	○	○	○	○	○	○
Components	○	○	○	○	○	○
Metal Parts	○	○	○	○	○	○
Plastic and Polymeric parts	○	○	○	○	○	○
Paper Accessory	○	○	○	○	○	○
Power Cord	○	○	○	○	○	○
○：Indicates that this toxic or hazardous substance contained in all the homogeneous materials for this part, according to EIP-A, EIP-B, EIP-C is below the limit requirement in SJ/T 11364. ✕：Indicates that this toxic or hazardous substance contained in all the homogeneous materials for this part, according to EIP-A, EIP-B, EIP-C is above the limit requirement in SJ/T 11364. (Enterprises may further provide in this box technical explanation for marking"X"based on their actual conditions.)						

Appendix C-Note Value and The Corresponding Numerical Number

Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.	Note	NO.
C-1	0	F0	17	Bb 1	34	Eb 3	51	G#4	68	C#6	85	F#7	102	B8	119
C#-1	1	F#0	18	B1	35	E3	52	A4	69	D6	86	G7	103	C9	120
D-1	2	G0	19	C2	36	F3	53	Bb 4	70	Eb 6	87	G#7	104	C#9	121
Eb-1	3	G#0	20	C#2	37	F#3	54	B4	71	E 6	88	A7	105	D9	122
E-1	4	A0	21	D2	38	G3	55	C5	72	F6	89	Bb 7	106	Eb 9	123
F-1	5	Bb 0	22	Eb 2	39	G#3	56	C#5	73	F#6	90	B7	107	E9	124
F#-1	6	B0	23	E2	40	A3	57	D5	74	G6	91	C8	108	F9	125
G-1	7	C1	24	F2	41	Bb 3	58	Eb 5	75	G#6	92	C#8	109	F#9	126
G#-1	8	C#1	25	F#2	42	B3	59	E5	76	A6	93	D8	110	G9	127
A-1	9	D1	26	G2	43	C4	60	F5	77	Bb 6	94	Eb 8	111		
Bb-1	10	Eb 1	27	G#2	44	C#4	61	F#5	78	B6	95	E8	112		
B-1	11	E1	28	A2	45	D4	62	G5	79	C7	96	F8	113		
C0	12	F1	29	Bb 2	46	Eb 4	63	G#5	80	C#7	97	F#8	114		
C#0	13	F#1	30	B2	47	E4	64	A5	81	D7	98	G8	115		
D0	14	G1	31	C3	48	F4	65	Bb 5	82	Eb 7	99	G#8	116		
Eb 0	15	G#1	32	C#3	49	F#4	66	B5	83	E7	100	A8	117		
E0	16	A1	33	D3	50	G4	67	C6	84	F7	101	Bb 8	118		

Appendix D- General MIDI Instruments-Program Change Numbers

Piano	Bass	Reed	Synth Effects
0 Acoustic Grand Piano	32 Acoustic Bass	64 Soprano Sax	96 SFX Rain
1 Bright Acoustic Piano	33 Fingered Bass	65 Alto Sax	97 SFX Soundtrack
2 Electric grand Piano	34 Electric Picked Bass	66 Tenor Sax	98 SFX Crystal
3 Honky Tonk Piano	35 Fretless Bass	67 Baritone Sax	99 SFX Atmosphere
4 Electric Piano 1	36 Slap Bass 1	68 Oboe	100 SFX Brightness
5 Electric Piano 2	37 Slap Bass 2	69 English Horn	101 SFX Goblins
6 Harpsichord	38 Syn Bass 1	70 Bassoon	102 SFX Echoes
7 Clavinet	39 Syn Bass 2	71 Clarinet	103 SFX Sci-Fi
Chromatic Percussion	Strings/Orchestra	Pipe	Ethnic
8 Celesta	40 Violin	72 Piccolo	104 Sitar
9 Glockenspiel	41 Viola	73 Flute	105 Banjo
10 Music Box	42 Cello	74 Recorder	106 Shamisen
11 Vibraphone	43 Contrabass	75 Pan Flute	107 Koto
12 Marimba	44 Tremolo Strings	76 Bottle Blow	108 Kalimba
13 Xylophone	45 Pizzicato Strings	77 Shakuhachi	109 Bag Pipe
14 Tubular bells	46 Orchestral Harp	78 Whistle	110 Fiddle
15 Dulcimer	47 Timpani	79 Ocarina	111 Shanai
Organ	Ensemble	Synth Lead	Percussive
16 Drawbar Organ	48 String Ensemble 1	80 Syn Square Wave	112 Tinkle Bell
17 Percussive Organ	49 String Ensemble 2	81 Syn Sawtooth Wave	113 Agogo
18 Rock Organ	50 Syn Strings 1	82 Syn Calliope	114 Steel Drums
19 Church Organ	51 Syn Strings 2	83 Syn Chiff	115 Woodblock
20 Reed Organ	52 Choir Aahs	84 Syn Charang	116 Taiko Drum
21 Accordion	53 Voice Oohs	85 Syn Voice	117 Melodic Tom
22 Harmonica	54 Syn Choir	86 Syn Sawtooth Wave	118 Syn Drum
23 Tango Accordion	55 Orchestral Hit	87 Syn Brass & Lead	119 Reverse Cymbal
Guitar	Brass	Synth Pad	Sound Effects
24 Nylon Acoustic	56 Trumpet	88 New Age Syn Pad	120 Guitar Fret Noise
25 Steel Acoustic	57 Trombone	89 Warm Syn Pad	121 Breath Noise
26 Jazz Electric	58 Tuba	90 Polysynth Syn Pad	122 Seashore
27 Clean Electric	59 Muted Trumpet	91 Choir Syn Pad	123 Bird Tweet
28 Muted Electric	60 French Horn	92 Bowed Syn Pad	124 Telephone Ring
29 Overdrive	61 Brass Section	93 Metal Syn Pad	125 Helicopter
30 Distorted	61 Syn Brass 1	94 Halo Syn Pad	126 Applause
31 Harmonics	62 Syn Brass 2	95 Sweep Syn Pad	127 Gun Shot

Appendix E - General MIDI Drums-Note assignments

MIDI Note	Drum Sound	MIDI Note	Drum Sound	MIDI Note	Drum Sound
35	Acoustic Bass Drum	52	Chinese Cymbal	69	Cabasa
36	Bass Drum 1	53	Ride Bell	70	Maracas
37	Side Stick	54	Tambourine	71	Short Whistle
38	Acoustic Snare	55	Splash Cymbal	72	Long Whistle
39	Hand Clap	56	Cowbell	73	Short Guiro
40	Electric Snare	57	Crash Cymbal 2	74	Long Guiro
41	Low Floor Tom	58	Vibraslap	75	Claves
42	Closed Hi-Hat	59	Ride Cymbal 2	76	Hi Wood Block
43	High Floor Tom	60	Hi Bongo	77	LowWood Block
44	Pedal Hi-Hat	61	Low Bongo	78	Mute Cuica
45	Low Tom	62	Mute Hi Conga	79	Open Cuica
46	Open Hi-Hat	63	Open Hi Conga	80	Mute Triangle
47	Low-Mid Tom	64	Low Conga	81	Open Triangle
48	Hi-Mid Tom	65	High Timbale		
49	Crash Cymbal 1	66	Low Timbale		
50	High Tom	67	High Agogo		
51	Ride Cymbal 1	68	Low Agogo		

7. Specifications

Connectors: USB connector

Power supply: USB bus power mode

Current consumption: 100 mA or less

Dimensions (W x D x H): 7.83 x 7.48 x 1.54 inches / 199x190x39mm

Weight: 21.34 oz /605 g

Included items: USB cable, Quick start

*Specifications and appearance are subject to change without notice.

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