



Arcade Controller
FDF19、FDH19、FDD19、FDE19

关于Varmilo



- Varmilo 音译即为“阿米洛”，取自世界语“Via”，“armilo”，喻意为：为您定制的专属装备，是为满足市场个性化、多样化趋势，而独立推出的全新品牌。
- Varmilo 的产品，在保持优良做工和品质的同时，积极吸取国内外玩家的意见与创意并进行融合提炼，不断创新以追求更为人性化的设计，而一切只为了使您享有更好的使用体验！
- “改善无止境，创新无极限”，我们将一如既往的虚心接受每一位朋友针对 Varmilo 提出不足与建议，只有充分的结合市场需求与客户意见、不断的自我完善，才能制造出更加完美的产品。在这里，诚挚的感谢每一位关注 Varmilo 的朋友、感谢每一位提出不同创意与火花的你们！也期待 Varmilo 的产品能为您带来更棒的体验！

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配件

说明:

- JZA1使用的是高速USB数据线 High-Speed USB
- 常规数据线不支持高速传输,如需此功能,请使用高速USB数据线。



游戏控制器



按键键帽



盲堵键帽



轴



数据线



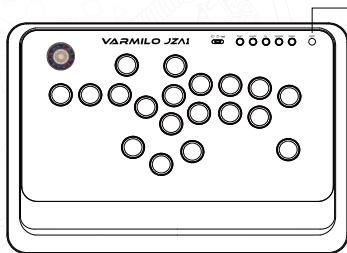
撬棒

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指示灯说明

注意事项:

- 在使用JZA1控制器时,如果按住某一个或者多个按键,再进行通电,此时这几个按键会失去键值,等待20S左右恢复正常键值,此为正常现象

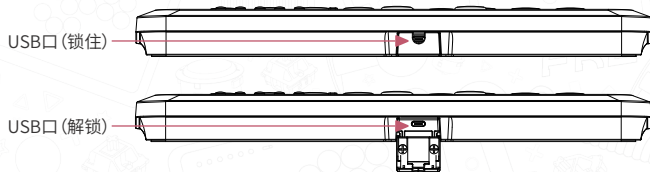


指示灯位于设备右上方

- 游戏控制器异常: 红灯
- 切换模式: 彩色灯光闪烁后亮白灯
- 游戏控制器通电: 白灯
- 游戏控制器断电: 熄灭
- 恢复出厂设置: 红色灯光闪烁三秒后亮白灯
- 设备升级: 长按K22 3S, 升级过程中白灯熄灭, 升级完成后重新亮白灯
- 设置组合键: 绿色灯光闪烁后亮白灯
- 设备切换信号传输模式: 彩色灯光闪烁后亮白灯
- 充电中: 黄灯
- 充满后: 绿灯

USB 接口

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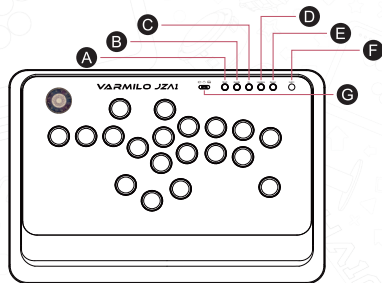
模式切换

键盘模式
(将开关拨到**右边**)

- A Tab
- B Esc
- C Win+G
- D R-mouse
- E Reset
- F Light
- G 模式切换开关

手柄模式
(将开关拨到**左边**)

- Start
- Guide
- Fn (Unused)
- Update
- Reset
- Light
- 模式切换开关



备注

若您需要将JAZ1连接PS5使用, 建议将连接方法设置为“使用USB连接”, 以获得最佳使用体验

设置方法: 在PS5的设置菜单中依次选择设定>周边设备>控制器, 将连接方法由“使用Bluetooth”修改为“使用USB连接”

CV2 功能介绍

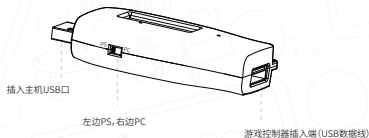
模式说明:

- 无线状态: 不插 USB 线时, CV2 档位都为无线模式, 即左边为 PS 无线模式, 右边为 PC 无线模式
- 有线状态: 当 USB 线插在 CV2 上的 USB 座时, 为有线模式, 左边为 PS 主机有线模式, 右边为 PC 电脑有线模式
- 自动切换: 无线和有线模式不需要拨动 CV2 开关档位, 插上 USB 线时无线自动转换为有线模式, 拔掉后自动转换为无线模式
- 连接限制: 注意, 不拔掉 USB 线, 无线模式无法连接

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整体外观

顺序错误 (如先插 PS 主机、后接档位、后接线) 会导致无法识别或无法正常工作



CV2 有线连接 PS、Switch 主机



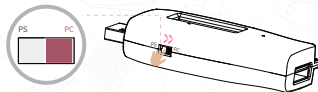
1. 游戏控制器背面中间拨动开关拨到有线档位
2. 游戏控制器正面右上角拨动开关拨到手柄档位
3. 游戏控制器通过有线的方式接入 CV2
4. 最后将 CV2 接入到 PS 主机上
5. 初次配对操作, 按下Guide键, 指示灯绿灯快闪, 等待10s, 指示灯亮白灯, 完成配对
6. 后续回连操作, 接入PS主机, 指示灯闪烁变白灯后, 按下Guide键进入PS

CV2 无线连接 PS、Switch 主机 (无线配对设备距离为30公分内)



1. 游戏控制器背面中间拨动开关拨到无线档位
2. 将 CV2 接入到 PS 主机上
3. 初次配对操作, 按下Guide键, 指示灯绿灯快闪, 等待10s, 指示灯亮白灯, 完成配对
4. 后续回连操作, 接入PS主机, 指示灯闪烁变白灯后, 按下Guide键进入PS

CV2 无线连接PC主机 (无线配对设备距离为30公分内)



1. 游戏控制器背面中间拨动开关拨到无线档位
2. 将 CV2 接入到 PC 主机上
3. 初次配对操作, 按下Guide键, 指示灯绿灯快闪, 等待10s, 指示灯亮白灯, 完成配对
4. 后续回连操作, 接入PC主机, 指示灯闪烁变白灯后, 即可使用

CV2 有线连接PC主机



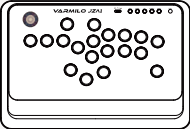
1. 游戏控制器背面中间拨动开关拨到有线档位
2. 游戏控制器通过有线的方式接入 CV2
3. 最后将 CV2 接入到 PC 主机上
4. 初次配对操作, 按下Guide键, 指示灯绿灯快闪, 等待10s, 指示灯亮白灯, 完成配对
5. 后续回连操作, 接入PC主机, 指示灯闪烁变白灯后, 即可使用

型号配置对照表

说明:

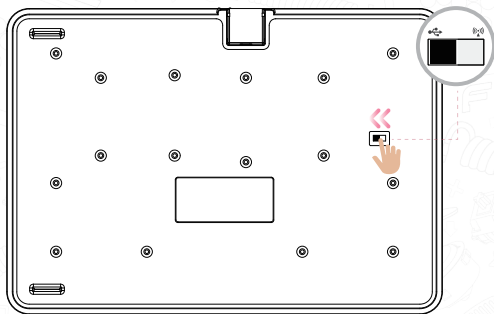
只有FDH19标配附带CV2, 其它型号不附带

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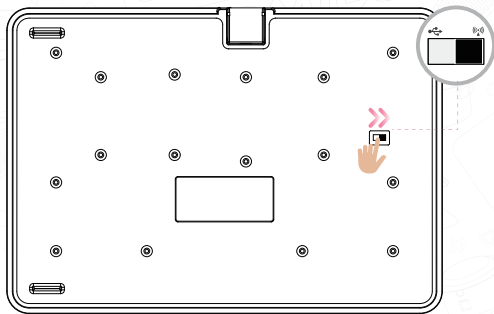
型号	连接方式 & 附件	适配主机
FDD19 - 有线键盘模式: 最高 4 kHz - 有线手柄模式: 最高 4 kHz  → 仅有线 适配: PC、Steamdeck 键盘模式、手柄模式可切换		 PC Steamdeck 有线: 全部型号 (键盘模式+手柄模式) 无线: FDD19 (2.4G)、FDH19 (CV2), 仅手柄模式可用
FDE19 - 有线键盘模式: 最高 4 kHz - 有线手柄模式: 1 kHz  → 仅有线 适配全平台 PC、Steam、PS4、PS5、Switch2、Switch1	有线 USB-C 连接 - FDD19、FDE19、FDH19+ 键盘模式+手柄模式 - 有线键盘模式最高 4kHz - FDD19、FDE19 有线仅接 PC、Steamdeck  有线: 适配 PC、PS、Switch、Steamdeck	PS PS4 PS5 - 有线: FDE19、FDH19 (手柄模式) - CV2无线: FDH19 only (手柄模式) - PS5 连接需注意操作顺序
FDF19 附 2.4G Dangle - 有线键盘模式: 最高 4 kHz - 无线手柄模式: 最高 2 kHz  → 有线 + 2.4G 无线 适配: PC、Steamdeck	2.4G 无线连接 - FDF19 → PC、Steamdeck - FDH19 → 全平台 (CV2连接) - 无线手柄模式: FDF19 2kHz、FDH19 1kHz - 无线键盘模式: FDH19 2kHz  CV2无线: FDH19 (手柄模式)	Switch 2 Switch 1 - 有线: FDE19、FDH19 (手柄模式) - CV2无线: FDH19 only (手柄模式) - 仅手柄模式可用
FDH19 附 CV2 - 有线键盘模式: 4kHz、有线手柄模式: 1kHz - 无线手柄模式: 1kHz、无线键盘模式: 2kHz  → 有线 + CV2 适配: PC、Steam、PS4、PS5、Switch2、Switch1 ※ PS、Switch 需通过 CV2 附件连接 (有线 & 无线均支持) ※ CV2 = 有线和 2.4G 无线, 可切换 ※ 连接 PS5 时注意先接好档位再插 CV2, 再接主机	组合使用说明 有线USB-C连接 - FDD19 + CV2有线USB-C 适配主机: PC、Steamdeck - FDE19 + CV2有线USB-C 适配主机: PC、Steamdeck、PS4、PS5、Switch1、Switch2 - FDH19 + CV2有线USB-C 适配主机: PC、Steamdeck、PS4、PS5、Switch1、Switch2 2.4G无线连接 - FDF19 + CV2无线2.4G - FDH19 + CV2无线2.4G 适配主机: PC、Steamdeck、PS4、PS5、Switch1、Switch2 (仅手柄模式可用)	

有线无线切换 FDF19、FDH19

有线模式



无线模式



FDF19 2.4G (无线) 连接操作

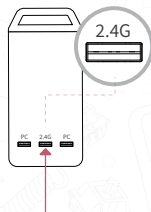
说明:

- 仅 PC 电脑
- 有线 + 2.4G 无线 Windows、Steamdeck 有线支持手柄模式、键盘模式，无线支持手柄模式

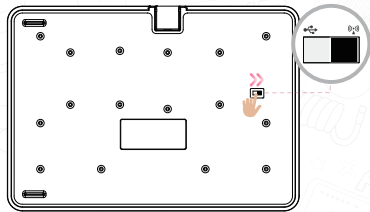
提示:

顺序错误会导致无法识别或无法正常工作,无线配对设备距离为30公分内

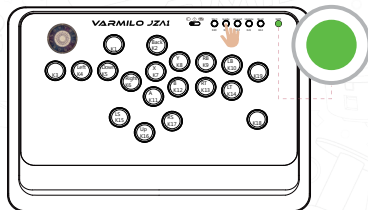
VARMILO
Arrows



步骤1: 电脑主机插入2.4G接收器



步骤2: 背面开关往右拨动到无线模式

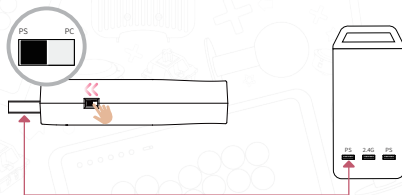


步骤3: 按下 Guide 键, 指示灯绿灯快闪, 等待10s, 指示灯亮白灯, 完成配对

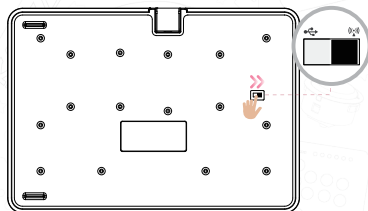
FDH19 CV2 (无线) 连接操作

说明:

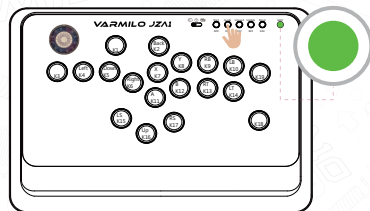
- PC 电脑 + PS 主机
- 有线 + 2.4G 无线 Windows, S4, PS5, Switch2, Switch1
- 有线支持手柄模式、键盘模式, 无线支持手柄模式
- CV2 = 有线和 2.4 G 无线, 可切换



步骤1: CV2往左拨动到PS档(如果连接PC主机,则CV2拨到PC档),接着CV2插入主机,分别闪烁红灯和绿灯



步骤2: 背面开关往右拨动到无线模式



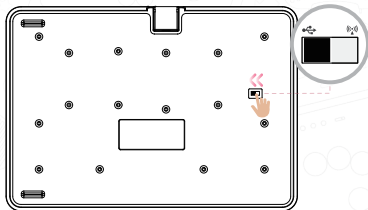
步骤3: 按下 Guide 键, 指示灯绿灯快闪, 等待10s, 指示灯亮白灯, CV2常亮绿灯, 完成配对

FDH19 CV2 (有线) 连接操作

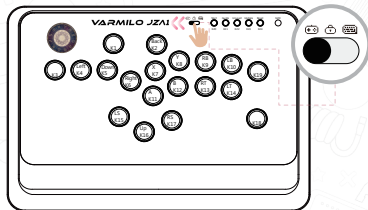
说明:

- PC 电脑 + PS 主机
- 有线 + 2.4G 无线 Windows, S4, PS5, Switch2, Switch1
- 有线支持手柄模式, 键盘模式, 无线支持手柄模式
- CV2 = 有线和 2.4 G 无线, 可切换

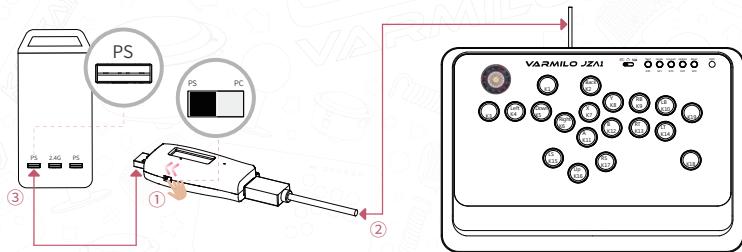
VARMILLO
AREDA



步骤1: 背面开关往左拨动到有线模式



步骤2: 正面开关往左拨动到手柄模式

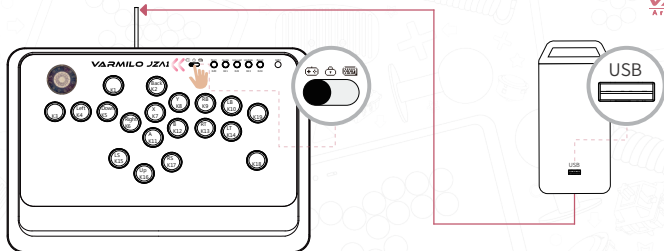


步骤3: ①往左拨到PS模式 ②将游戏控制器通过数据线连接CV2 ③接着将CV2插入PS主机(红灯闪烁, 绿灯快闪) 完成连接后红灯常亮

FDD19 PC有线款 连接操作

说明:

仅 PC 电脑, 仅有线Windows, Steamdeck, 支持手柄模式与键盘模式



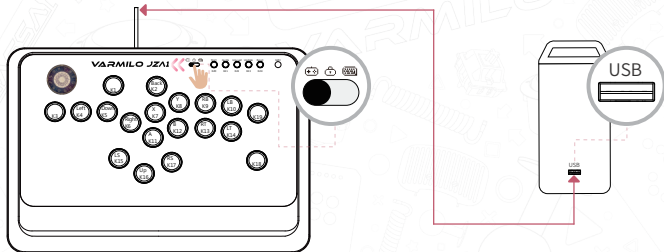
步骤1: 正面开关往左拨动手柄模式

步骤2: 使用数据线连接主机

FDE19 PS有线款 连接操作

说明:

PC 电脑 + PS主机, 仅有线Windows, Steamdeck, PS4
PS5, Switch2, Switch1, 支持手柄模式与键盘模式



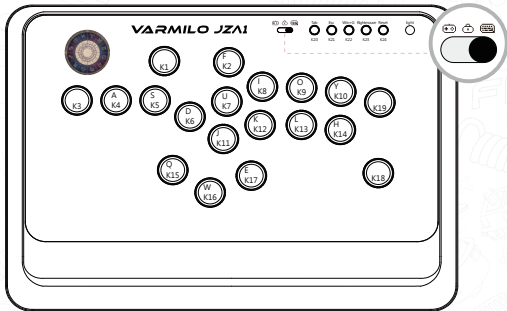
步骤1: 正面开关往左拨动手柄模式

步骤2: 使用数据线连接PS主机

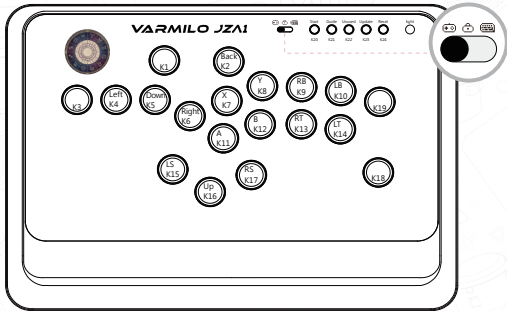
布局 JZΛ1

说明: $F_n = \text{Unused}$

键盘模式



手柄模式



按键更换

开关按键 - 拆卸



步骤1: 准备撬棒工具
(拆换前请将游戏控制器断电)



步骤2: 用撬棒工具沿着游戏控制器背面一整圈撬开面盖



步骤3: 取下面盖及配件,取出键帽即可

开关按键 - 安装



步骤1: ①键帽底部的 L 形状对准轴的 L 槽口 ②装入键帽后用力按压键帽



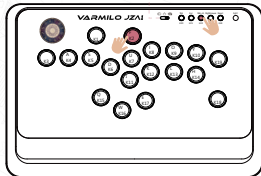
步骤2: 依次装入底图、导光板、面盖、面盖扣位对准槽口,用力按压面盖整圈,听到“咔哒”一声即可

按键灯光调节

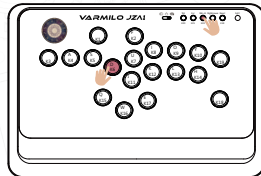
备注

关闭按键灯光:

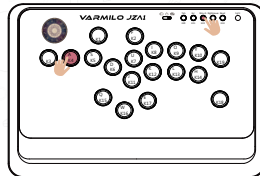
K22+K7



灯效切换: K22+K2



亮度增加: K22+K6



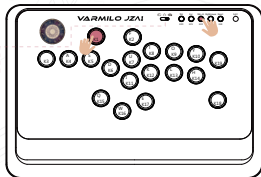
亮度降低: K22+K4

导光板灯光调节

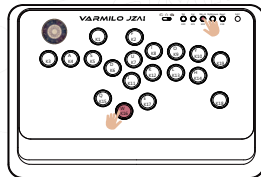
备注

关闭导光板灯:

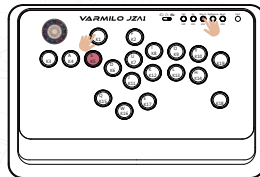
K22+K8



灯效切换: K22+K1



亮度增加: K22+K16



亮度降低: K22+K5

按键灯光说明

名称	适用范围	功能	说明
多彩呼吸	全部按键	灯效	全部按键亮度同步呼吸, 由暗渐亮至最亮、再渐暗, 平滑往复循环, 建议亮度区间 5%↔100%
		颜色	默认白色单色, 网页驱动可选单色, 或开启 7 色轮动, 每完成一次完整呼吸自动切到下一色, 顺序红→蓝→绿→黄→白→紫→粉 循环
		周期	一次完整呼吸, 暗→亮→暗, 约 1-2s, 可调
触发点亮	所有被触发的按键	灯效	未触发时按键背光熄灭, 按下某键时该键立即点亮, 松开立即熄灭, 硬切, 无渐隐、无拖尾
		颜色	每触发颜色固定, 网页驱动可选色, 红/蓝/绿/黄/白/紫/粉或自定义
		周期	随按键即时响应, 无固定周期
常亮	全部按键	灯效	全部按键持续亮起, 无动画
		颜色	全键单一同色; 网页驱动可选色, 红/蓝/绿/黄/白/紫/粉或自定义
		默认	整机出厂默认灯效 = 常亮白色
星星点灯	随机按键	灯效	模拟星光, 任意时刻仅随机点亮 1 颗按键, 保持约 1s 后熄灭, 随即在另一随机位置点亮 1 颗, 如此循环, 同一时刻点亮数恒为 1 颗
		颜色	每颗点亮时在 7 色中随机取色, 红/蓝/绿/黄/白/紫/粉, 网页驱动中可设置单色或 7 色轮动
		周期	每颗点亮约 1s, 采用快速渐亮 / 渐隐以呈现闪烁感, 可调

导光板灯光说明

名称	位置	功能	说明
多彩呼吸	灯带	灯效	整条灯带亮度同步呼吸由暗渐亮至最亮、再渐暗，最暗到重新亮间隔0.5s，平滑反复循环，建议亮度区间 5%↔100%
		颜色	默认白色单色，网页驱动可选单色，或开启 7 色轮动，每完成一次完整呼吸自动切到下一色，顺序 红→蓝→绿→黄→白→紫→粉 循环
		周期	一次完整呼吸约 2s，可调
常亮	灯带	灯效	整条灯带持续亮起，无动画
		颜色	单一同色，默认白色，网页驱动可选色
		默认	随整机出厂默认
波浪	灯带	灯效	7 色形成连续渐变色带，沿灯带由左至右平滑流动，首尾相接循环，色与色之间为渐变过渡，而非整段跳变
		颜色	红→蓝→绿→黄→白→紫→粉 连续渐变循环
		周期	色带流过整条灯带一轮约 2-4s，速度可调
闪烁	灯带	灯效	整条灯带同步点亮为同一随机色，保持约 1s 后熄灭，短暂熄灭后立即换新的随机色再次点亮，循环整体明灭闪烁
		颜色	每次点亮在 7 色中随机取色
		周期	亮约 1s →短暂灭→ 换色再亮，明灭周期约 1s

组合键功能

注:所有组合键都需**长按3秒~**

名称	操作模式	功能	说明	组合键
SOCD	键盘模式设置	固定(↑+↓)	↑+↓被同时按下时候做冲突抵消,无方向键值触发输出	K20+K5
		固定(←+→)	←+→被同时按下时候做冲突抵消,无方向键值触发输出	K20+K6
		固定(某个键位)	表示←+→被按下时候,←键位优先输出	K20+K7
			表示←+→被按下时候,→按键优先输出	K20+K8
			表示↑+↓被按下时候,↑按键优先输出	K20+K9
			表示↑+↓被按下时候,↓按键优先输出	K20+K10
		优先顺序	输出最先按的方向键	K20+K11
		优先顺序	输出最后按的方向键	K20+K12
		关闭设置	设置关闭时固定功能和优先顺序功能失效,同时按下方向键时,都触发输出方向键值	K20+K13
键层切换 (锁定模式)	键盘模式设置	M1(默认)-M5	共有五层键层,每层键层内容可自定义按键,可选择任意一层作为默认层(首层)	K21+K5 (M1) K6 (M2) K7 (M3) K8 (M4) K9 (M5)
按键灯光亮度	键盘模式设置	亮度降低	10档分段调节灯光亮度,1档代表熄灭,10档代表最亮,档位越低代表亮度越小	K22+K4
		亮度增加	10档分段调节灯光亮度,1档代表熄灭,10档代表最亮,档位越高代表亮度越大	K22+K6
导光板灯光亮度	键盘模式设置	亮度降低	10档分段调节灯光亮度,1档代表熄灭,10档代表最亮,档位越低代表亮度越小	K22+K5
		亮度增加	10档分段调节灯光亮度,1档代表熄灭,10档代表最亮,档位越高代表亮度越大	K22+K16
灯效切换	键盘模式设置	下一个	切换灯带灯效,灯效轮转	K22+K1
		下一个	切换灯带等效,等效轮转	K22+K2
无线连接	手柄模式	CV2、2.4g连接	将2.4g Dongle、CV2接入主机, JAZA1设备背面拨到无线模式,长按K21键3s,等到绿灯闪烁之后变成常亮白灯,即连接成功,无线未连接的时候,背光灯熄灭,连接之后灯光重新亮起	K21
灯效切换	键盘模式设置	关闭背光灯	熄灭灯效	K22+K7
		关闭轮廓灯	熄灭灯效	K22+K8

功能对照表

设备按键编码	键盘	手柄	PS4	PS5	Switch
K16	W	Up	D-pad	D-pad	D-pad
K6	D	Right			
K5	S	Left			
K4	A	Down			
K2	F	Back	TouchPad Btn	TouchPad Btn	minus
K7	U	X	□	□	Y
K8	I	Y	△	△	X
K9	O	RB	R1	R1	R
K10	Y	LB	L1	L1	L
K11	J	A	X	X	B
K12	K	B	○	○	A
K13	L	RT	R2	R2	ZR
K14	H	LT	L2	L2	ZL
K15	Q	LS	L3	L3	L3
K17	E	RS	R3	R3	R3
K19	TAB	Start	Options	Options	+
K20	ESC	Guide	PS	PS	HOME
K21	Win+G	Unused			
K22	Rightmouse	Update			
K23	Reset	Reset			
K19+K20	TAB+ESC	Start+Guide	Options+PS	Options+PS	C
K19+K2	TAB+F	Start+Back	Share	Create	Capture

产品参数

外壳材质	ABS
开关按钮材质	PBT、ABS
产品尺寸	341.36mm*241.08mm*33.25mm
产品重量	FDD19≈1.47kg、FDF19≈1.65kg FDE19≈1.48kg、FDH19≈1.66kg
按键行程	1.8mm±0.2mm
按键初始压力	40gf(+10gf-10gf)
按键触底压力	50gf(+10gf-10gf)
触发行程（默认）	0.8mm~1.2mm
断开行程（默认）	0.7mm~0.9mm
关灯功耗、开灯功耗	≤65mA、≤450mA
回报率有线、回报率无线	支持4000Hz、支持2000Hz

Varmilo阿米洛保修服务卡与电子说明书

- 阿米洛全系列产品在出售后,会提供给消费者一年质保服务(配件类为三个月质保服务)。
- 保修期限内以此卡与产品购买日期为依据,请您妥善保存,遗失不予补发。若遗失此卡,您仍可以依购买凭据(发票、小票)与电商购买信息作为保修依据。
- 免费质保服务仅适用于正常使用下非人为所发生的质量问题,若产品因人为因素或不可抗力造成破坏,则无法享受免费质保服务。其中人为因素包括外力损伤(撞击、刮擦等),进液体(水、饮料等),擅自拆解,移除产品本身的序列号或保修贴纸等;不可抗力包含受洪水、受潮、啮齿动物损坏等自然灾害造成的损害。
- 外壳有印制图案的产品款式请避免用酒精擦拭清理,可使用清水或无酒精洗涤用品清洁。
- 网页驱动: <https://fk2.varmilo.com>

维修须知

- 保修期内您可以享受免费质保服务,保修期外阿米洛仍提供付费维修服务。
- 阿米洛产品支持全国联保(仅支持中国大陆地区),您可以联系您购买产品的电商店铺或线下门店进行保修,也可登录阿米洛官方网站 varmilo.com 进行保修。



阿米洛中国官网



产品说明书：
扫描左侧二维码或登录
https://fk2.varmilo.com/Instruction_Manual
在线查看或下载。

About the brand 'Varmilo'



- The pronunciation equivalent of Varmilo in Chinese is 'Varmilo'. Varmilo comes from world language 'Via', armilo. It means the customized unique device. It stands for personality and variety.
- Our products not only have good craftsmanship and stable quality but also are innovative. Our aim is best user experience.
- There is no end in improving our products. Your suggestions will be thanked. We will continue to improve our products for better performance.

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Accessories

Note:

- The JAZ1 comes with a High-Speed USB cable.
- Standard cables don't support high-speed transfer. Use a high-speed USB cable.



Game controller



Keycaps



Blank keycaps



Switches



Cable

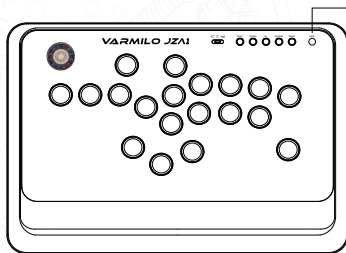


Keycap puller

Indicator Light Description

Notes:

- When using the JZA1 controller, if one or more keys are held down and then the device is powered on, those keys may lose their key input temporarily. This is normal. After approximately 20 seconds, normal key functionality will resume.

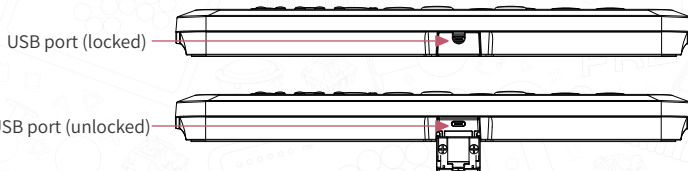


The indicator light is located at the top right of the device.

- Game controller error: Red light
- Mode switching: Colorful light flashes, then steady white light
- Device powered on: White light
- Device powered off: Light off
- Factory reset: Red light flashes for 3 seconds, then steady white light
- Firmware update: Press and hold K22 for 3 seconds. White light turns off during update, then returns to steady white upon completion
- Setting combination keys: Green light flashes, then steady white light
- Switching signal transmission mode: Colorful light flashes, then steady white light
- Charging: Yellow light
- Fully charged: Green light

USB Port

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Arcade



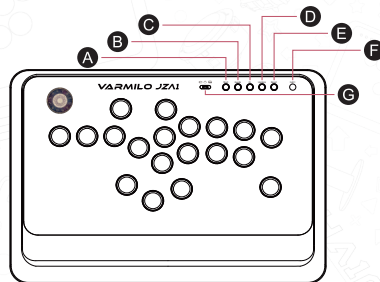
Mode Switching

Keyboard mode
(Slide switch to the right)

- A Tab
- B Esc
- C Win+G
- D R-mouse
- E Reset
- F Light
- G Mode switch

Controller Mode
(Slide switch to the left)

- Start
- Guide
- Fn (Unused)
- Update
- Reset
- Light
- Mode switch



Note

If you need to connect the JAZ1 to a PS5, it is recommended to set the connection method to "Use USB Connection" for the best experience.

Setting method: On the PS5 settings menu, navigate to Settings > Accessories > Controllers, then change the Communication Method from "Use Bluetooth" to "Use USB Connection".

CV2 Feature Introduction

Mode Description:

- **Wireless Mode:** When no USB cable is connected, both positions of CV2 are in wireless mode — left for PS wireless mode, right for PC wireless mode.
- **Wired Mode:** When the USB cable is plugged into the USB port on CV2, it enters wired mode — left for PS console wired mode, right for PC wired mode.
- **Auto Switching:** No need to toggle the CV2 switch between wireless and wired modes. Plugging in the USB cable automatically switches from wireless to wired mode; unplugging it automatically reverts to wireless mode.
- **Connection Restriction:** Note that wireless mode cannot be activated while the USB cable remains connected.

Overall Appearance

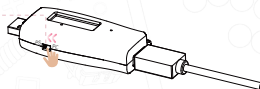
Incorrect sequence (e.g., connecting to PS console first, then toggling the switch, then plugging in the cable) may result in failure to recognize or function properly.

Connecting to PS Console USB Port

Left: PS | Right: PC

Game controller connection end (USB cable)

CV2 Wired Connection to PS / Switch Console



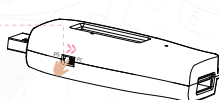
1. Slide the center switch on the back of the game controller to the wired position.
2. Slide the switch on the upper-right front of the game controller to the controller mode.
3. Connect the game controller to CV2 via wired connection.
4. Finally, connect CV2 to the PS console.
5. First-time pairing: Press the Guide button. The indicator light flashes green quickly. Wait 10 seconds until the light turns steady white — pairing complete.
6. Subsequent reconnection: Connect to the PS console. After the indicator light flashes and turns white, press the Guide button to enter PS.

CV2 Wireless Connection to PS / Switch Console (Wireless pairing distance: within 30 cm)



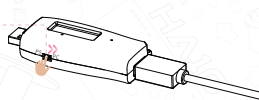
1. Slide the center switch on the back of the game controller to the wireless position.
2. Connect CV2 to the PS console.
3. First-time pairing: Press the Guide button. The indicator light flashes green quickly. Wait 10 seconds until the light turns steady white — pairing complete.
4. Subsequent reconnection: Connect to the PS console. After the indicator light flashes and turns white, press the Guide button to enter PS.

CV2 Wireless Connection to PC (Wireless pairing distance: within 30 cm)



1. Slide the center switch on the back of the game controller to the wireless position.
2. Connect CV2 to the PC.
3. First-time pairing: Press the Guide button. The indicator light flashes green quickly. Wait 10 seconds until the light turns steady white — pairing complete.
4. Subsequent reconnection: Connect to the PC. After the indicator light flashes and turns white, the controller is ready for use.

CV2 Wired Connection to PC

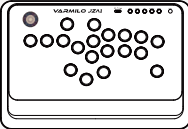


1. Slide the center switch on the back of the game controller to the wired position.
2. Connect the game controller to CV2 via wired connection.
3. Finally, connect CV2 to the PC.
4. First-time pairing: Press the Guide button. The indicator light flashes green quickly. Wait 10 seconds until the light turns steady white — pairing complete.
5. Subsequent reconnection: Connect to the PC. After the indicator light flashes and turns white, the controller is ready for use.

Model Configuration Comparison Table

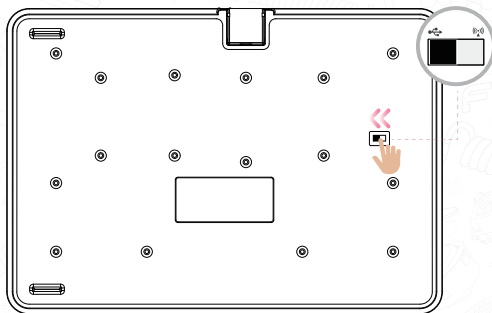
Note:

Only the FDH19 comes standard with CV2. Other models do not include it.

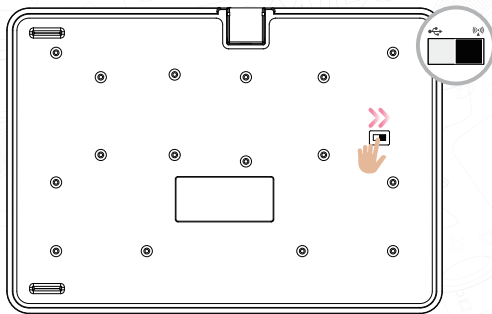
Model	Connection Method & Accessories	Compatible Consoles
FDD19  - Wired keyboard mode up to 4 kHz - Wired controller mode up to 4 kHz → Wired only Compatible with PC, Steamdeck Keyboard mode & controller mode switchable		 PC Steamdeck Wired: all models (keyboard mode + controller mode) Wireless: FDD19 (2.4G), FDH19 (CV2) — controller mode only
FDE19  - Wired keyboard mode up to 4 kHz - Wired controller mode 1 kHz → Wired only Compatible with all platforms PC, Steam, PS4, PS5, Switch2, Switch1	Wired USB-C Connection - FDD19, FDE19, FDH19 + Keyboard mode + Controller mode - Wired keyboard mode up to 4 kHz - FDD19, FDE19 Wired only PC, Steamdeck  Wired: Compatible with PC, PS, Switch, Steamdeck	PS PS4 PS5 - Wired: FDE19, FDH19 (controller mode) - CV2 wireless: FDH19 only (controller mode) - PS5 connection — pay attention to operation sequence
FDH19 Comes with 2.4G dongle  - Wired keyboard mode up to 4 kHz - Wireless controller mode up to 2 kHz → Wired + 2.4G wireless Compatible with PC, Steamdeck	2.4G Wireless Connection - FDH19 → PC, Steamdeck - FDH19 → All platforms (via CV2) - Wireless controller mode: FDD19 2kHz, FDH19 1kHz - Wireless keyboard mode: FDH19 2kHz  CV2 Wireless: FDH19 (controller mode)	Switch 2 Switch 1 - Wired: FDE19, FDH19 (controller mode) - CV2 wireless: FDH19 only (controller mode) - Controller mode only available
FDH19 Comes with CV2  - Wired keyboard mode 4 kHz, wired controller mode 1 kHz - Wireless controller mode 1 kHz, wireless keyboard mode 2 kHz → Wired + CV2 Compatible with: PC, Steam, PS4, PS5, Switch2, Switch1 ⊗ PS, Switch (connect via CV2 accessory; both wired & wireless supported) ⊗ CV2 = wired & 2.4G wireless, switchable ⊗ When connecting to PS5, set the switch position first, then plug in CV2, then connect to the console	Combined Usage Instructions Wired USB-C connection - FDH19 + CV2 Wired USB-C Compatible consoles: PC, Steamdeck FDH19 + CV2 Wired USB-C Compatible consoles: PC, Steamdeck, PS4, PS5, Switch1, Switch2 FDH19 + CV2 Wired USB-C Compatible consoles: PC, Steamdeck, PS4, PS5, Switch1, Switch2 2.4G Wireless Connection - FDH19 + CV2 Wireless 2.4G - FDH19 + CV2 Wireless 2.4G Compatible consoles: PC, Steamdeck, PS4, PS5, Switch1, Switch2 (Controller mode only)	

Wired/wireless switching FDF19、FDH19

Wired mode



Wireless mode



FDF19 2.4G (Wireless) connection operation

Note:

- PC only
- Wired + 2.4G wireless Windows, Steamdeck. Wired supports controller mode and keyboard mode; wireless supports controller mode only.

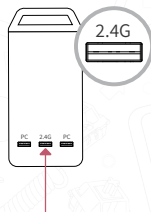
Product Name : Wireless dongle
Model : Wireless dongle
FCC ID:2AF80-WLDL



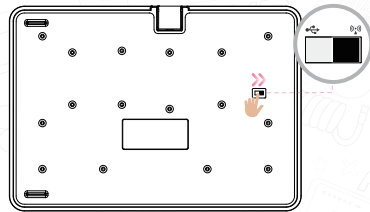
Tips:

Incorrect sequence (e.g., connecting to PS console first, then toggling the switch, then plugging in the cable) may result in failure to recognize or function properly.

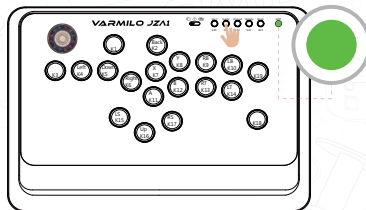
VARMILO
Arcade



Step 1: Insert the 2.4G receiver into the computer.



Step 2: Slide the rear switch to the right to enter wireless mode.



Step 3: Press the Guide button. The indicator light flashes green rapidly. Wait 10 seconds until the light turns steady white — pairing complete.

FDH19 CV2(Wireless) Connection Operation

Note:

- PC computer + PS console
- Wired + 2.4G wireless — Windows, Steamdeck, Steamdeck, PS4, PS5, Switch2, Switch1. Wired supports controller mode and keyboard mode.
- CV2 = wired & 2.4G wireless, switchable

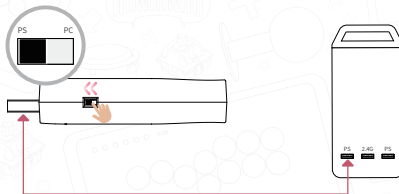
Product Name : CV2
Model : CV2
FCC ID : 2AF8O-CV2



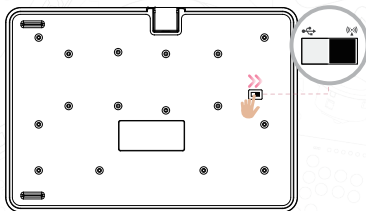
Product Name : Varmilo JZA1 Arcade
Controller
Model : FDF19
FCC ID : 2AF8O-FDF19



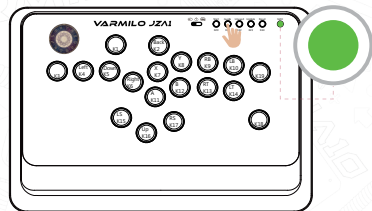
VARMILLO
Arcade



Step 1: Slide CV2 to the left to the PS position (if connecting to a PC, slide CV2 to the PC position). Then insert CV2 into the console. The red and green lights flash alternately.



Step 2: Slide the rear switch to the right to enter wireless mode.



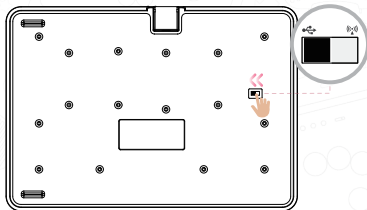
Step 3: Press the Guide button. The indicator light flashes green rapidly. Wait 10 seconds until the light turns steady white, and CV2 shows a steady green light — pairing complete.

FDH19 CV2 (Wired) Connection Operation

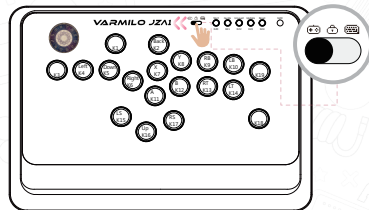
VARMILO
Arrows

Note:

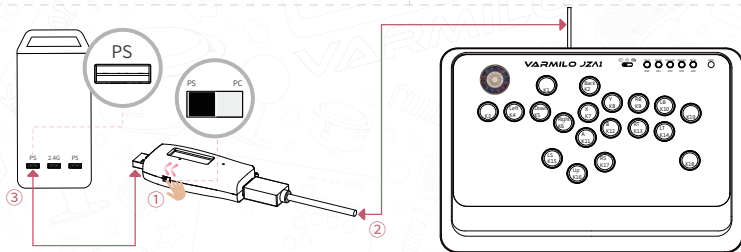
- PC computer + PS console
- Wired + 2.4G wireless — Windows, Steamdeck, Steamdeck, PS4, PS5, Switch2, Switch1. Wired supports controller mode and keyboard mode; wireless supports controller mode only.
- CV2 = wired & 2.4G wireless, switchable



Step 1: Slide the rear switch to the left to enter wired mode.



Step 2: Slide the front switch to the left toenter controller mode.

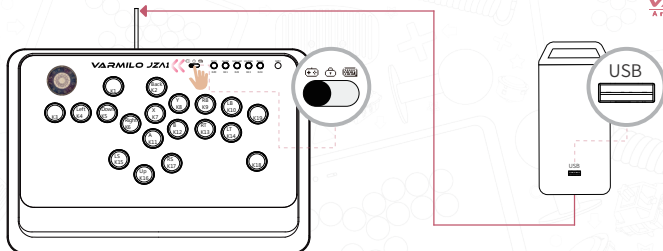


Step 3: ① Slide to the left to PS mode. ② Connect the game controller to CV2 via the data cable. ③ Then insert CV2 into the PS console (red light flashing, green light flashing rapidly). Once connected, the red light stays steady.

FDD19 PC Wired Connection Operation

Note:

PC only, wired only — Windows, Steamdeck. Supports controller mode and keyboard mode.



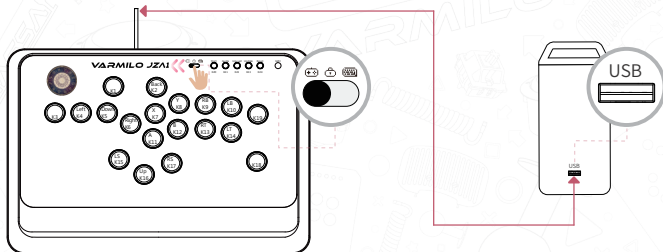
Step 1: Slide the front switch to the left to enter controller mode.

Step 2: Connect to the console using the data cable.

FDE19 PS Wired Connection Operation

Note:

PC computer + PS console, wired only — Windows, Steamdeck, PS4, PS5, Switch2, Switch1. Supports controller mode and keyboard mode.



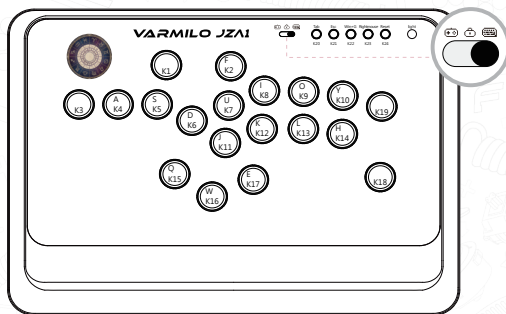
Step 1: Slide the front switch to the left to enter controller mode.

Step 2: Connect to the PS console using the data cable.

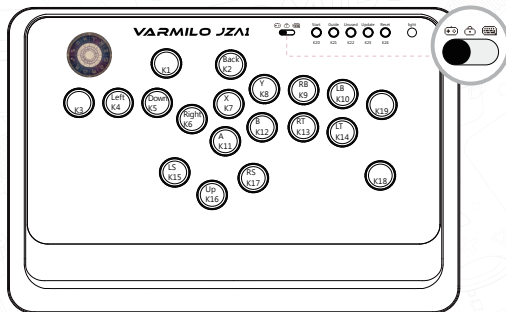
Layout **JZA1**

Note: Fn=Unused

Keyboard mode



Controller mode



Keycap Replacement

Switch Key — Removal



Step 1: Prepare the prying tool (disconnect power to the game controller before removal).



Step 2: Use the prying tool to pry open the top cover along the entire back edge of the game controller.



Step 3: Remove the top cover and accessories, then take out the keycaps.

Switch Key — Installation



Step 1: ① Align the L-shaped groove at the bottom of the keycap with the L-shaped slot on the switch. ② Press firmly on the keycap after installation.



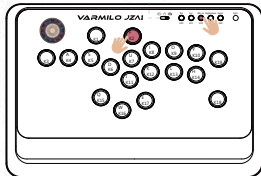
Step 2: Install the base plate, light guide plate, and top cover in order. Align the clips on the top cover with the slots, then press firmly around the entire top cover until you hear a "click" sound.

Key Lighting Adjustment

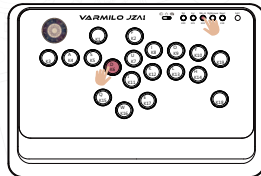


Note

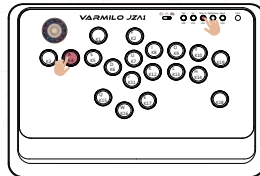
Turn off key lighting:
K22+K7



Switch lighting effects: K22+K2



Increase brightness: K22+K6



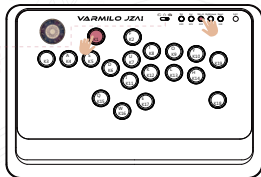
Decrease brightness: K22+K4

Light Guide Plate Adjustment

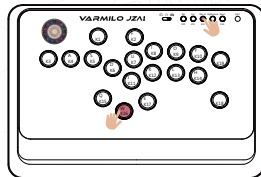


Note

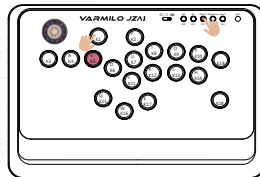
Turn off light guide plate
light:
K22+K8



Switch lighting effects: K22+K1



Increase brightness: K22+K16



Decrease brightness: K22+K5

按键灯光说明

Name	Applicable Scope	Function	Description
Colorful Breathing	All Keys	Lighting Effect	All keys breathe synchronously in brightness, fading from dark to brightest, then fading back to dark, in a smooth repeating cycle. Recommended brightness range: 5% ↔ 100%
		Color	Default is solid white. The web driver allows selection of a single color, or enabling a 7-color cycle. After each complete breath, it automatically switches to the next color in the sequence: Red → Blue → Green → Yellow → White → Purple → Pink (loop).
		Cycle	One complete breath cycle (dark → bright → dark) takes approximately 1-2s, adjustable
Trigger Illumination	All Triggered Keys	Lighting Effect	Backlight turns off when not triggered. When a key is pressed, it lights up immediately and turns off instantly when released (hard cut, no fade).
		Color	Color is fixed per trigger, selectable via web driver: Red/Blue/Green/Yellow/White/Purple/Pink or Custom.
		Cycle	Instant response to key presses, no fixed cycle.
Always On	All Keys	Lighting Effect	All keys remain constantly lit, no animation.
		Color	All keys are a single uniform color; selectable via web driver: Red/Blue/Green/Yellow/White/Purple/Pink or Custom.
		Default	Factory default lighting effect = Always On, White.
Starlight	Function Keys	Lighting Effect	Simulates starlight. At any given moment, only 1 random key is lit. It stays lit for approx. 1s then turns off, followed by another random key lighting up. This loops continuously, keeping the number of lit keys constant at 1.
		Color	When lit, each key randomly selects one color from 7 options: Red/Blue/Green/Yellow/White/Purple/Pink. The web driver can be set to single color or 7-color cycle.
		Cycle	Each key lights for approx. 1s, using rapid fade-in/fade-out to create a flickering effect, adjustable.

Light Guide Plate Lighting Description

Name	Location	Function	Description
Colorful Breathing	Light Strip	Lighting Effect	The entire light strip breathes synchronously in brightness, fading from dark to brightest, then fading back to dark, with a 0.5s interval between darkest and relighting, in a smooth repeating cycle. Recommended brightness range: 5% ↔ 100%.
		Color	Default is solid white. The web driver allows selection of a single color, or enabling a 7-color cycle, automatically switching after each complete breath.
		Cycle	One complete breath cycle takes approximately 2s, adjustable.
Always On	Light Strip	Lighting Effect	The entire light strip remains constantly lit, no animation.
		Color	Single uniform color, default white, color selectable via web driver.
		Default	Follows factory default setting.
Wave	Light Strip	Lighting Effect	Seven colors form a continuous gradient band that flows smoothly from left to right along the light strip, looping seamlessly. Colors transition gradually rather than jumping abruptly.
		Color	Red → Blue → Green → Yellow → White → Purple → Pink, continuous gradient loop.
		Cycle	One full pass of the color band across the light strip takes approximately 2-4s, speed adjustable.
Flashing	Light Strip	Lighting Effect	The entire light strip lights up simultaneously in a single random color, stays lit for approx. 1s, then turns off. After a brief pause, it lights up again in a new random color, repeating continuously.
		Color	Each illumination randomly selects one color from the 7 colors.
		Cycle	Lit for approx. 1s → brief off → new color on, on/off cycle approx. 1s.

Combination Key Functions

Note: All combination keys require a long press of 3 seconds.

Name	Operation Mode	Function	Description	Assembly
SOCO	Keyboard Mode Setting	Fixed (↑ + ↓)	When ↑ and ↓ are pressed simultaneously, conflict cancellation occurs; no directional key value is output.	K20+K5
		Fixed (← + →)	When ← and → are pressed simultaneously, conflict cancellation occurs; no directional key value is output.	K20+K6
		Fixed (specific key)	Indicates that when ← and → are pressed, the ← key has priority output.	K20+K7
			Indicates that when ← and → are pressed, the → key has priority output.	K20+K8
			Indicates that when ↑ and ↓ are pressed, the ↑ key has priority output.	K20+K9
			Indicates that when ↑ and ↓ are pressed, the ↓ key has priority output.	K20+K10
		Priority Order	Output the direction key pressed first.	K20+K11
		Priority Order	Output the direction key pressed last.	K20+K12
		Disable Setting	When the setting is disabled, the fixed function and priority order functions are deactivated. When direction keys are pressed simultaneously, all directional key values are output.	K20+K13
Layer Switching (Lock Mode)	Keyboard Mode Setting	M1 (Default) – M5	There are five layers. Each layer's key assignments can be customized. Any layer can be selected as the default layer (primary layer).	K21+K5 (M1) K6 (M2) K7 (M3) K8 (M4) K9 (M5)
Key Lighting Brightness	Keyboard Mode Setting	Decrease Brightness	10-level stepped brightness adjustment. Level 1 = off, level 10 = brightest. Lower levels indicate lower brightness.	K22+K4
		Increase Brightness	10-level stepped brightness adjustment. Level 1 = off, level 10 = brightest. Higher levels indicate higher brightness.	K22+K6
Light Guide Plate Brightness	Keyboard Mode Setting	Decrease Brightness	10-level stepped brightness adjustment. Level 1 = off, level 10 = brightest. Lower levels indicate lower brightness.	K22+K5
		Increase Brightness	10-level stepped brightness adjustment. Level 1 = off, level 10 = brightest. Higher levels indicate higher brightness.	K22+K16
Lighting Effect Switching	Keyboard Mode Setting	Next	Switch light strip lighting effects, cycling through effects.	K22+K1
		Next	Switch light strip lighting effects, cycling through effects.	K22+K2
Wireless Connection	Controller Mode	CV2, 2.4G Connection	Plug the 2.4G dongle/CV2 into the host. Set the JAZA1 device's rear switch to wireless mode. Long-press the K21 key for 3s. Wait until the green light flashes and then becomes a steady white light — connection successful. When not wirelessly connected, the backlight turns off; after connection, the light turns back on.	K21
Lighting Effect Switching	Keyboard Mode Setting	Turn Off Backlight	Turn off lighting effect.	K22+K7
		Turn Off Outline Light	Turn off lighting effect.	K22+K8

Function Comparison Table

Key Code	Keyboard	Controller	PS4	PS5	Switch
K16	W	Up	D-pad	D-pad	D-pad
K6	D	Right			
K5	S	Left			
K4	A	Down			
K2	F	Back	TouchPad Btn	TouchPad Btn	minus
K7	U	X			Y
K8	I	Y			X
K9	O	RB	R1	R1	R
K10	Y	LB	L1	L1	L
K11	J	A	X	X	B
K12	K	B			A
K13	L	RT	R2	R2	ZR
K14	H	LT	L2	L2	ZL
K15	Q	LS	L3	L3	L3
K17	E	RS	R3	R3	R3
K19	TAB	Start	Options	Options	+
K20	ESC	Guide	PS	PS	HOME
K21	Win+G	Unused			
K22	Rightmouse	Update			
K23	Reset	Reset			
K19+K20	TAB+ESC	Start+Guide	Options+PS	Options+PS	C
K19+K2	TAB+F	Start+Back	Share	Create	Capture

Product Specifications

Housing Material	ABS
Switch Button Material	PBT、ABS
Product Dimensions	341.36mm*241.08mm*33.25mm
Product Weight	FDD19≈1.47kg、FDF19≈1.65kg FDE19≈1.48kg、FDH19≈1.66kg
Key Travel	1.8mm±0.2mm
Initial Actuation Force	40gf(+10gf-10gf)
Bottom-out Force	50gf(+10gf-10gf)
Actuation Travel (Default)	0.8mm~1.2mm
Release Travel (Default)	0.7mm~0.9mm
Power Consumption (Light Off), Power Consumption (Light On)	≤65mA、≤450mA
Polling Rate (Wired), Polling Rate (Wireless)	支持4000Hz、支持2000Hz

Varmilo Warranty service card and electronic manual

- Varmilo After the full series of products are sold, consumers will be provided with a one-year warranty service (with a three-month warranty service for accessories).
- The warranty period is based on this card and the date of purchase. Please keep it properly. If you lose this card, you can still use the purchase voucher (invoice, receipt) and the purchase information of e-commerce as the warranty basis.
- Free warranty service is only applicable to non-human quality problems in normal use. If the product is damaged due to human factors or force majeure, the free warranty service cannot be provided. Human factors include external damage (impact, scraping, etc.), liquid (water, beverage, etc.), unauthorized disassembling, removing the serial number or warranty sticker of the product itself, etc. Force majeure includes the damage caused by flood, dampness, rodent damage and other natural disasters.
- For products with printed patterns on the cases, please avoid wiping with alcohol and use clean water or alcohol-free cleaning products.
- Web driver: <https://fk2.varmilo.com>

Maintenance Instructions

- During the warranty period, you can enjoy the free warranty service. If exceeded free warranty period, Varmilo will still provide paid maintenance service.
- Customers could ask for warranty service from where you purchased the products, or contact support @zhihaihe.cn for further assistance.

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.



Varmilo China Official Website



Product manual :
Scan the QR code on the left or log in
https://fk2.varmilo.com/Instruction_Manual
View or download online.

VARMILO
Arcade

VARMILO JZA1

<https://fk2.varmilo.com>

制造商:深圳市志海和科技有限公司

地 址:深圳市光明区玉塘街道田寮社区第十工业区2栋501

电 话:0755-2648 4009

Manufacturer: Shenzhen Zhihaihe Tech Co., Ltd

Address: 5th Floor, Block 2, 10th Industrial Zone, Tian Liao Community,
Yu Tang Area, Guang Ming District, Shenzhen, China

Telephone:+86-755-2648 4009