



\*The following Servos do not support the programming function, incompatibility for DSP-1.

HBL880 HBL980 HBL990 HBL669 HV777 HV9780 HV9930 HV93i DS9910 DS760 DS760 mid-alu DS8910A+ DS660A+ DS95i







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### **Software Installation**

Download the software and the driver from <u>www.mks-servo.com/DSP-1-Download</u>

Ver.2.0.0.8

DSP SOFTWARE DOWNLOAD

PC Software

L MKS\_DSP\_Programmer\_V2.0.0.8

DSP-1Firmware Update

🗄 DSP-firmware-Update

# **PC System Requirements**

Microsoft Windows 7 and above

2 Microsoft .NET Framework 4.5



# **Connections**



PC connection (USB Micro-B).
 Servo connection (Dupont 2.54).
 Connect the Receiver. It can control the Servo while calibrating.
 Connect the 5V ~ 8.4V Battery with 2 pin connector.
 Connect the 5V ~ 8.4V Battery with 3 pin connector.







# **Connections**



#### Note:

Connect the Receiver to control the Servo while calibrating.





# Programming



Open the software "MKS\_DSP\_Programmer\_V2.0.0.8".

MKS DSP Programmer V2.0.0.8 FW: V4.0.6 — — X Help	🛃 MKS DSP Programmer V2.0.0.8 FW: V4.0.6 — 🗆 X Help	
Open Config Save Config Re-connect	Open Config     Save Config     Re-connect       Pulse Upper:     2200	
	Neutral:         1500         Max. Duty:         95         Image: Compared state           Pulse Lower:         800         Image: Compared state         N         V	
Read Servo	Left Angle: 149  Boost: 270 Right Angle: 142	-2
1	Reversion  Allow Uncont  Uncontrolled Time:  2.0	
	Uncontrolled Pos: 500	
No operation on-going.	Read Config     Write Config     Initilaize       No operation on-going.	ļ

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- 1 Press "Read" to read the setting.
- 2 Modify the parameters.
- 3 Press "Write Config" to start programming.



# **Functions Compatibility**

Ver. 2022.08.26

Standard Functions				
Micro	Mini	Slim	STE	)
HV69	HV747/R	HV6130/H	HBL388	HV1220
HV93	HV737	HBL6625	HBL3850	HV1230
HV6125E	HV9767	HBL6625MINI	HBL380	HV1240
HV6100			HBL850	HV1250
HV6110			HBL860	DS1220
HV75K/N/R			HBL550	DS1230
DS6125E			HBL550L	DS1240
DS6100			HBL550LX	DS1250
DS92A+			HBL599	DS1009
DS93			HBL599SX	DS1210
DS95			HBL599SL	
DS97			HBL575	
DS450			HBL575SL	
DS480			HBL960	
DS75K/N/R			HBL950	
DS65K			HBL665	

Advanced Functions					
Micro	Mini	Slim		STD	
HV70/H		HV6120/H	New	HV777A+	
HS75/H		HV6160	New	HV9930	
HV6150/H					
HV50P					





# **Standard Functions**

Dead Band	The signal value can be allowed to change under the circumstance without affecting the angle of the output / servo arm. *MKS Default = 1μs or 1.2μs
	900 μs 1 μs = 1200 motion quantities 2100 μs 1.2 μs = 1000 motion quantities
Lock	The setting when the servo does not receive the signal: Yes: Keep at the last angular position. No: The motor is released. *MKS Default: No
Max. Duty	The duty cycle of the motor will be limited within this value.

Pulse Lower	Neutral	Pulse Upper		
The minimum angular range will be limited within this command value.	The setting of the neutral position.	The maximum angular range will be limited within this command value.		
Neutral MKS Default 1500µs Pulse Lower MKS Default 900µs				





# **Advanced Functions**

Left Angle	Max. Left angle adjust	
Right Angle	Max. Right angle adjust	
Reversion	Reverse of the PWM command.	
Allow Uncont	The Servo move to the "Uncontrolled Position" when the PWM command is loss.	
Uncontrolled Pos	If the "Allow Uncont" turns on.	
Uncontrolled Time	The Servo will move to the "Uncontrolled Pos" after the "Uncontrolled Time" when the PWM command is loss.	

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# Loading/Saving parameter

This function enables you to save your parameters into the file, which is much convenient to record a batch of servos with same parameters quickly at one time.

MKS DSP Programme	er V2.0.0.8 FW: V4.0.6			×
pen Config Save Confi	q Re-connect			1
Pulse Upper:	2200	Dead Band:	1.0	
Neutral:	1500	Max. Duty:	95	
Pulse Lower:	800	Lock:	N ~	
Left Angle:	149	Boost:	270	
Right Angle:	142			
Reversion			Allow Uncont	
	Uncontr	olled Time:	2.0	
	Uncon	trolled Pos:	500	
Read Config	Write Config		Initilaize	
operation on-going.				

#### Save config

When you complete the servo programming with the setting, please click "Save Config" to open the window, select where to save the parameters, and then click "Save".

#### 2 Open config

Please click "Open Config", select the file, and then click "Open" to read the parameters and change the current setting.

📑 開啟		X
$\leftarrow$ $\rightarrow$ $\checkmark$ $\uparrow$	≪ DSP-1 → Servo parameter	✓ <ul><li>♥</li><li>♥</li><li>●</li><li></li></ul> <li></li> <li>Ø</li>
組合管理 ▼ 新	f增資料夾	III 🕶 🔟 😲
➡ 快速左取	▲ 名稱 ^	修改日期 類型 ^
	DS75K.svo	2019/3/11 下午 0 SVO 楣築 2018/44/27 トケー SVO 提考
Dropbox	DS1220.svo	2018/11/27 <u>上</u> 十 SVO 個新 2018/11/20 下午 SVO 檔新
i OneDrive	DS6100.svo	2018/11/16 下午 SVO 檔賓
💻 本機	HBL380.svo	2018/11/16 下午 SVO 檔算
🔰 3D 物件	HBL550.svo	2018/11/27 上午 SVO 檔案
↓ 下載	HBL550LX.svo	2018/12/7 下午 0 SVO 檔案
▲ 文件	HBL599.svo	2018/10/5 下午 0 SVO 檔題
	HBL6625.svo	2018/11/15 上午 SVO 檔題
	BL6625mini.svo	2019/3/11 下午 0 SVO 檔題
桌面	<ul><li>✓ &lt;</li></ul>	>
	檔案名稱(N): HBL380.svo	✓ Servo files (*.svo) ✓
		開啟(O) 取満



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