UH SERIES

寶獅牌工業用縫紉機 INDUSTRIAL SEWING MACHINE

MODEL

UHD5000S



STEPPING MOTOR TYPE OVERLOCK STITCH SEWING MACHINE

Coltroller Manual

精機機械廠股份有限公司 CHING CHI MACHINE CO., LTD
http://www.kingtexsewing.com.tw

QD222B Series Control Box System Manual V1.0.00

No.104040

⚠safety instructions

1) Before installing or using this product, the user must read this operation manual in detail.
2) This product must be installed or operated by properly trained personnel. All power must be turned off during installation work, remember not to operate with electricity.
3) All instructions labeled with the⚠ symbol must be given special attention and followed in order to avoid unnecessary damage.
(4) For safety reasons, it is prohibited to use an extension cord as a power supply for more than two electrical products.
5) When connecting the power cord, you must make sure that the operating voltage complies with the rated voltage value specified in the identification of this product.
6) Do not operate in a place exposed to direct sunlight, outdoors, or in a place where the room temperature is above 45℃ or below 0℃.
7) Do not operate next to a heater (electric heater), in a place with dew, or in a place with a relative humidity of less than 10% or more than 90%.
8) Do not operate in dusty places, places with corrosive substances or places with volatile gases.
9) Please note that all power cables, signal cables, grounding cables, etc. should be wired without pressure or excessive twisting to ensure safe use.
10) The ground end of the power cord shall be connected to the system ground at the manufacturing plant with an appropriately sized wire and connector, and this connection shall be permanently secured.
11) All rotatable parts shall be protected from exposure by the parts provided.
12) After the installation is completed and the power is turned on for the first time, turn off the thread cutting function and operate the sewing machine at a low speed and check that the direction of rotation is correct and the operation is stable.
13) Turn off all power before performing the following operations:
    1. When plugging or unplugging any connection plugs on the control box to the motor.
    2. When threading the needle.
    3. When lifting the sewing machine head.
    4. When repairing or making any mechanical adjustments.
    5. When the machine is idle and not in use.
14) Repairs or high-level maintenance work can only be performed by trained electro-mechanical technicians.
    All parts for maintenance must be provided and approved by the Company before use.
(15) Please keep away from high frequency electromagnetic wave and radio wave transmitter, etc. to avoid the electromagnetic wave generated from interfering with the servo drive unit and causing malfunction.
16) Do not knock or strike the product and the devices with inappropriate objects.

warranty period

The warranty of this product is limited to one year from the date of purchase or two years from the month of shipment from the factory.

Warranty

This product will be repaired and operated by the customer without charge during the warranty period, provided that the product is used under normal conditions and there is no human error in its operation.

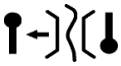
However, the following conditions will be charged for repairs during the warranty period:

1. Improper use includes misconnecting the high-voltage power supply, moving the product to other uses, disassembling, repairing, changing, or using the product not according to the specifications, entering water and oil, and inserting foreign objects into the product.
2. Damage caused by fire, earthquake, lightning, wind, flood, salt erosion, humidity, abnormal voltage, and other acts of God or improper location.
3. Damage caused by the customer dropping the product after purchase, or by the customer's own transportation (or consigning the transportation company).

* This product in the production and testing of the best efforts and strict control to achieve high quality and high stability standards, but the external electromagnetic or electrostatic interference or unstable power supply may still affect or damage this product, so the grounding system of the operation place must be really good, and we recommend that the user to install fail-safe devices (such as leakage protector).

1. Key display and operating instructions

name (of a thing)	keystrokes	clearly indicate
Mode Selection Key		If clicked, switch between fully manual, free stitch, semi-automatic and fully automatic modes in turn. If long pressed, enter the sewing mode setting screen.
presser foot key		If clicked, toggles automatic presser foot lift off, forward lift, backward lift, and forward and backward lift in sequence. If long pressed, enter the presser foot setting interface.
suction key		If clicked, toggles suction off, front suction on, rear suction on, front and rear suction on in sequence. If long pressed, enter the suction setting interface.
Model Display	Hori-zontal knife	Displays the model currently in use.
indicator light		The sensor displays green when it senses fabric.
		The display is grayed out when the sensor is not sensing fabric.
Tangent Count Display		Displays the tangent meter value. If double clicked, the count is cleared to zero.

LED brightness		If clicked, the LED brightness can be adjusted.
Sewing speed display		Displays the sewing speed of the current mode. If clicked, the parameters can be adjusted.
out-of-arms position		If clicked, switches the stopping position of the machine needle after sewing (upper stopping position/lower stopping position). If long pressed, enter the needle position setting interface.
truncation key		If clicked, toggles clipping line off, front clipping line on, rear clipping line on, and front and rear clipping lines on in sequence. If long pressed, enter the cord cutting setting interface.
release button (Valid for side suction models and backstitch models, not for cross cut models)		If clicked, toggles Loose Wire Off, Front Loose Wire On, Rear Loose Wire On, and Front and Rear Loose Wire On in sequence. If you press and hold, enter the loose wire setting interface.
inductor key		If clicked, set to display or not display the sensor's real-time sensing value, threshold and intensity. If long pressed, enter the sensor parameter setting interface.
Fabric Selection Key	Cloth Identification	If clicked, switches to the fabric selection screen. If long press, enter the fabric recognition interface, according to the prompts click on the type of fabric to be recognized to enter the automatic debugging sensor sensitivity interface, wait for the fabric to be recognized automatically, after the recognition is completed, the interface will show the fabric recognition success. If the fabric recognition fails, please press the retry button to retry.
setup key		If clicked, enter the parameter setting interface. If you double-click it, you will enter the advanced password input interface, enter the correct password (initial password: 0000) and click the confirmation button, then you will enter the advanced setting interface.
add a key (on a piano or computer keyboard)		If clicked, increase the parameter. If long pressed, the parameter is continuously increased.
decimator		If clicked, reduce the parameter. If long pressed, the parameter is continuously reduced.
lock screen button		If tapped, toggle lock screen, unlock.

2. User parameter setting interface

Click the Setup button to enter the user parameter setting interface, the parameter setting interface catalog is as follows.

No.	set up
1	Speed Setting

2	Needle position setting
3	Cord Cutting Setup
4	Presser foot setting
5	Inspiration settings
6	Loose line setup
7	Sensor Settings
8	Sewing mode setting
9	Other settings
10	Supported Settings
11	Mop Wheel Setup
12	Security settings

No.	demonstrate	realm	startin g value	Description and Remarks
2.1 Speed settings				
2101	Maximum speed	200-7000	5500	Maximum speed during sewing
2102	Starting speed	200-7000	5200	With wire-cutting function: Speed setting at the start of the front sensor trigger and at the end of the rear sensor signal (before wire-cutting)
2.2 Needle position setting				
2201	out-of-arms position	0-1	0	0: upper stop stitch 1: Lower stop stitch
2202	Needle stopping position after thread cutting	0-1	1	0: Lower stop stitch 1: Top Stop Stitch
2203	Starting the machine to find the upper needle position	0-1	1	0: Closed 1: Open
2.3 Cord Cutting Setup				
2301	Automatic wire cutting	0-3	1	0: Closed 1: Front cut (cuts the wire when the intermediate sensor receives a signal) 2: Rear cut (cut the wire at the end of the signal received by the rear sensor) 3: Front and back shears
2302	Number of stitches in front thread delay (stitches)	0-50	3	The smaller the value the earlier the advance and the longer the wire head is reserved (medium sensor trigger)
2303	Number of stitches in the back shear delay (stitches)	0-50	3	The smaller the value the earlier the advance and the shorter the ending thread (post-sensor trigger)
2304	Wire cut time (milliseconds)	10-990	25	The longer the time, the stronger the wire cut
2305	Wire Cutting Speed Switch	0-3	0	0: Closed 1: Front opening 2: Rear opening 3: Front and rear opening

2306	Rear Pedal Cord Cutting Switch	0-7	1	0: All off; 1: Fully manual opening only; 2: Semi-automatic, free sewing open; 3: Fully automatic opening only; 4: Fully manual, semi-automatic, free sewing open; 5: Semi-automatic, free stitch, fully automatic opening; 6: Fully manual, fully automatic opening; 7: Fully open
2307	Number of times the back pedal cuts the line	0-1	0	0: Step back only 1 time to cut thread after sewing is completed; 1: Cut the threads every time you step after the sewing is done. (for use with P-61)
2.4 Presser foot setting				
2401	Automatic presser foot lift	0-3	0	0: Closed 1: Front lift (when front sensor receives signal) 2: Rear lift (at end of rear sensor signal) 3: Lift front and back
2402	presser foot in the seam	0-1	0	(valid in fully manual/semi-automatic mode) 0: Closed 1: On (automatically lifts the presser foot when parking)
2403	Lift and press the foot after cutting the line	0-1	0	0: Closed 1: Open
2404	half-reverse stomp and press-up kick (diving)	0-2	0	0: Half reverse pedal & reverse pedal lift 1: No lifting 2: Backpedal Lift
2405	Forward lift presser foot hold time (milliseconds)	50-2000	200	(in fully/semi-automatic mode) Holding time after the automatic lifting of the presser foot before the trigger, the larger the value, the longer the holding time.
2406	Rear lift presser foot activation time (milliseconds)	0-2000	120	After the automatic lifting of the presser foot start time, the smaller the value the faster the response
2407	Presser foot full force time (milliseconds)	10-990	100	The higher the value, the higher the presser foot is lifted (note: not too high)
2408	Presser foot force cycle signal (%)	10-90	25	Periodic power-saving output during presser foot action to avoid electromagnet getting hot
2409	Presser foot lowering time (seconds)	10-990	100	Action time of presser foot release timing
2410	Presser foot protection time (sec)	1-120	5	Stopping midway to lift the presser foot, stopping to lift the presser foot automatically after cutting the line, and forcing to close the presser foot after holding it for a certain period of time after back-pedaling and lifting it.

2411	Pressing foot full force	10-100	70	The higher the number, the stronger the full force of the presser foot.
2.5 Suction Setting				
2501	auto-inspiration	0-3	1	0: Closed 1: Front shear inhalation 2: Rear shear suction 3: Front and rear shear suction
2502	Forward suction shut-off delay (needle)	0-2000	100	
2503	Post-aspiration shut-off delay (ms)	100-5000	200	The smaller the value, the faster it closes. (200 default for crosscut models, 1 default for side stitch models, 500 default for backstitch models)
2504	manual aspiration	0-2	1	0: No suction 1: Back suction 2: Front and back suction
2505	low-pressure mode	0-1	0	0: Normal mode 1: Low pressure mode
2506	suction synchronization	0-2000	200	Fabric edge suction air synchronization time (effective when P-16 is set to "1")
2507	Continuous cloth feeding and suction	0-2	2	0: No inhalation 1: Long inhalation 2: Synchronized inhalation
2508	Intermittent inspiratory suction time (×100ms)	0-600	20	The bigger the number, the longer the time.
2509	Intermittent inspiratory stopping time (×100ms)	0-600	0	0: Inhalation shut-off time before non-intermittent inhalation (valid when P-46 is set to "1")
2510	Type of suction drum	0-2	0	0: with brush 1: Brushless 2: Air valve
2511	Pre-aspiration opening timing (needle)	0-50	5	(Valid for side suction models, backstitch models)
2512	Number of stitches opened by forward suction (stitches)	0-50	15	(Valid for side suction models, backstitch models)
2513	Rear suction air opening timing (needle)	0-50	1	(Valid for side suction models, backstitch models)
2.6 Loose Thread Setting (valid for side suction models and backward sewing models, not valid for cross cut models)				
2601	Automatic wire release switch	0--3	2	0: Closed 1: Front Loose Thread 2: Rear Loose Threads 3: Front and rear loose wires (Valid for side suction models and backstitch models, not for cross cut models)
2602	Number of stitches held in front loose thread (stitches)	0-50	3	The larger the value, the longer the hold time (Valid for side suction models and backstitch models, not for cross cut models)

2603	Front Loose Thread Opening Timing (Needle)	0-50	3	The smaller the value, the earlier the advance, and the longer the wire is reserved (mid-sensor trigger). (valid for side suction models)
2604	Timing for opening the back loose thread (needle)	0-50	8	(Valid for side suction models and backstitch models, not for cross cut models)
2605	Loose wire time (milliseconds)	100-5000	300	(valid for side suction models)
2.7 Sensor Settings				
2701	Sensor Parameter Setting			
	Front Launch Tube Strength (%)	0-100	80	Adjustment of front tube strength
	Medium launch tube strength (%)	0-100	80	Adjusting the intensity of the center tube
	Post-launch tube strength (%)	0-100	80	Adjusted tube strength
	Front Sensor Sensitivity	0-900	300	Setting of the fabric strength of the front sensor to suit different fabrics.
	Intermediate sensor sensitivity	0-900	315	To adapt the transmittance strength of the sensor to different fabric settings.
	Rear Sensor Sensitivity	0-900	375	To adapt to the strength of the sensor's fabric permeability after setting for different fabrics.
2702	Front Sensor Response Time (ms)	0-990	50	Front Sensor Trigger Time (smaller values result in faster response, larger values result in slower response)
2703	Post sensor response time (ms)	0-3000	0	This item can be adjusted in the case of sewing mesh fabric to achieve the desired effect.
2704	Rear Sensor Switch	0-1	1	0: Closed; 1: Turn on; When rear sensing is turned off, rear sensing is based on the default value of item P-28.
2705	Thin material transmittance	1-800	30	The smaller the number, the stronger the sensitivity, and the larger the number, the weaker the sensitivity.
2706	General Material Transmittance	1-800	150	The smaller the number, the stronger the sensitivity, and the larger the number, the weaker the sensitivity.
2707	Mesh material transmittance	1-800	50	The smaller the number, the stronger the sensitivity, and the larger the number, the weaker the sensitivity.
2708	Number of stitches for special material detection (stitches)	0-50	0	The larger the mesh, the larger the number of stitches that need to be detected.
2.8 Sewing pattern setting				
2801	activation mode	0-1	0	(valid in fully automatic mode) 0: Automatic mode 1: Foot-controlled mode (front sensor + foot pedal front step start)
2802	automatic mode	0-1	0	(when P-06 is on)

				0: Automatic (for use with P-04) 1: Semi-automatic (foot-controlled mode)
2803	auto-sensing	0-1	1	0: off (full manual mode on) 1: On (realizes automatic/semi-automatic mode, used in conjunction with item P-05)
2804	Free Sewing Patterns	0-1	0	0: off (front sensor off, foot pedal direct start) 1: On (open front sensor, sensor signal + foot pedal activation)
2805	continuous sewing	0-1	0	0: Closed 1: Front tread continuous seam
2806	Constant speed shear line	0-1	0	0: Off (speed of P-03 item not performed until line cutting is completed) 1: Constant shear line speed (the speed of the front and rear shear lines is fixed to the speed of item P-03)
2.9 Other settings				
2901	Number of pins between two sensors (pins)	1-600	100	Cycle period parameter: continuous operation only after the sensor receives the signal after one cycle, otherwise one cycle stops
2902	Number of stopping delay stitches (stitches)	1-99	1	Automatic stop a few stitches after the cloth passes through the sensor (valid for the rear shear off state)
2.10 Auxiliary settings				
21001	multilingualism	0-1	0	0: Chinese 1: English
21002	voice volume	0-5	0	
21003	Voice Announcement Options	0-3	0	0: Closed 1: Boot language only 2: Key tone only 3: Open
21004	Pricing model selection	0-1	0	0: Incremental 1: Decrease in order
21005	Priced number of wire cuts	0-50	1	
21006	Display Board Backlight Brightness	0-10	10	
21007	Lock screen time (s)	0-10	1	
21008	Restore Factory Settings			
2.11 Mop Wheel Setup				
21101	Automatic Fabric Pulling	0-1	0	
2.12 Security protection settings				
21201	Sewing table protection	0-1	1	0: Closed 1: Open
21202	Presser foot protection	0-1	1	0: Closed 1: Open

21203	Needle bar shroud protection	0-1	0	0: Closed 1: Open

3. Advanced Parameter Setting Interface

Double-click the Setup button to enter the advanced password input interface, enter the correct password (initial password: 0000) and click the Confirm button to enter the advanced setup interface.

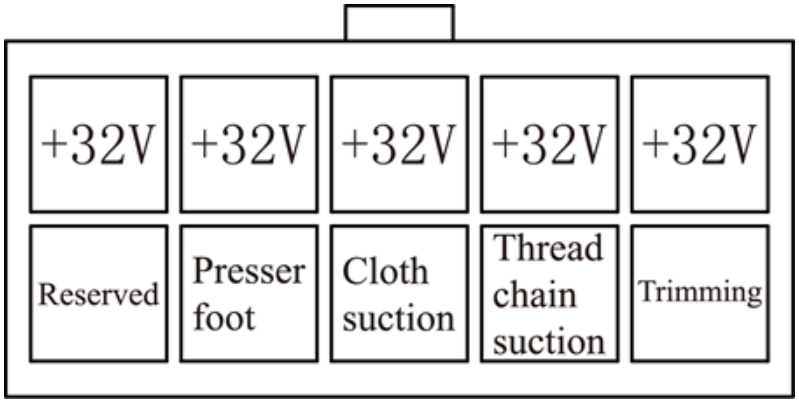
No.	set up
1	Model Settings
2	Other settings
3	Speed Control Setting
4	Status Setting
5	Spindle motor setting
6	Run-in test setup
7	Sensor special settings

No.	demonstrate	realm	startin g value	Description and Remarks	parame ters
3.1 Model Setup					
3101	Model Selection	1-3	1	1: Yokozuna 2: Side suction 3: Reverse Backstitch	
3102	Electric/Pneumatic	0-1	0	0: Motorized 1: Pneumatic	
3103	User Models				
3.2 Other settings					
3201	Password Setting		0000		
3202	Voice chip selection				
3203	Startup language selection		0	0: Closed	
3.3 Speed control settings					
3301	speed limit	200-7000	6000		
3302	Acceleration curve adjustment	1-100	32		
3.4 Status settings					
3401	Electronic control version number			master program	
				panel program	
				driver	
3402	Pedal AD			Displays the current AD value of the pedal	
3403	Real-time RPM			Displays the current speed of the motor	
3404	angle of orientation				

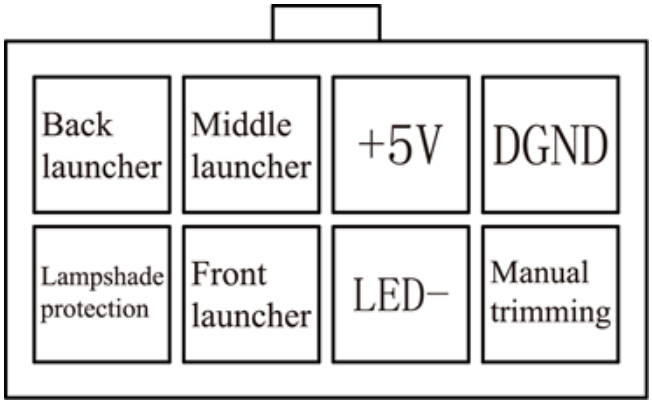
3405	Busbar voltage AD value			
3.5 Spindle motor setting				
3501	Upper Positioning Adjustment	0-24	0	
3502	Downward Positioning Adjustment	0-24	14	
3503	Manual setting of positioning angle	0-24		Adjust the upper needle position/lower positioning, the displayed value will change with the change of handwheel position, press "S" key to save the current position (value) as upper needle position/lower positioning.
3504	Zero angle setting			
3.6 Run-in test setup				
3601	test speed	200-7000	5000	
3602	Test operating time (×100ms)	0-250	20	
3603	Test stop time (×100ms)	0-250	20	
3604	Test A: Continuous operation	0-1	0	0: Closed 1: Open
3605	Test B: Containing Functional Runs	0-1	0	0: Closed 1: Open
3606	Test C: Start-Stop Operation	0-1	0	0: Closed 1: Open
3.7 Sensor Special Test Setup				
3701	Poor front sensor recognition signal	0-50	10	Setting of the fabric strength of the front sensor to suit different fabrics.
3702	Poor mid-sensor recognition signal	0-50	10	To adapt the transmittance strength of the sensor to different fabric settings.
3703	Poor rear sensor recognition signal	0-50	10	To adapt to the strength of the sensor's fabric permeability after setting for different fabrics.

4. Port Schematic

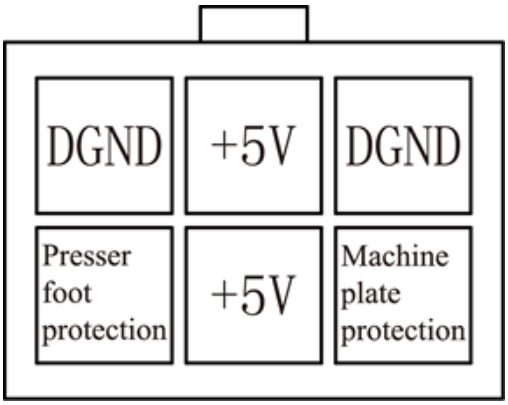
10P Port Correspondence Table



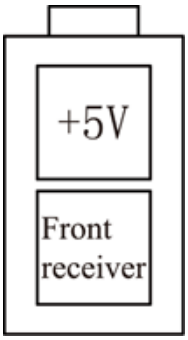
8P Port Correspondence Table



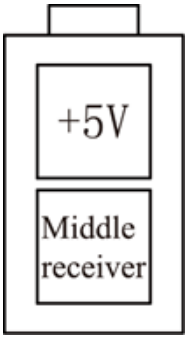
6P Port Correspondence Table



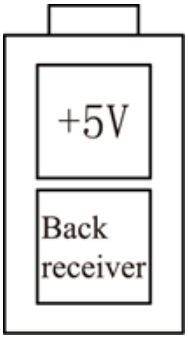
2P port S1 correspondence table (blue)



2P Port S2 Correspondence Table (Red)



2P port S3 correspondence table (yellow)





NTD7001
4-Needle, 6-Thread Flat-Seamer,
Feed-Off-The-Arm Machine



MT4506P-064
6-Needle Double Chain Stitch Machine



UHU9304/TR025
Automatic chain cutter device direct-drive
cylinder bed top feed overlock fitted with
labor-saving rib folder



CXM2085-0-356M
Attaching Pre-Closed Flat Knit Elastic Band
Onto Waists Of Tubular Goods
(With Right Knife, Rear Puller & Chips Suction Pipe)

精機機械廠股份有限公司
CHING CHI MACHINE CO., LTD.

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