TECHNICAL BULLETIN

Positioning

[Issue No.] T12-0008-A **[Page]** 1/15
[Title] Compliance of A1SD75M□ /AD75M□ to MR-J2S-□B
[Date of Issue] June '00(Ver. A: August :2010)
[Relevant Models] A1SD75M1, A1SD75M2, A1SD75M3, AD75M1, AD75M2, AD75M3

Thank you for your continued patronage of the Mitsubishi general-purpose PLC MELSEC-A Series.

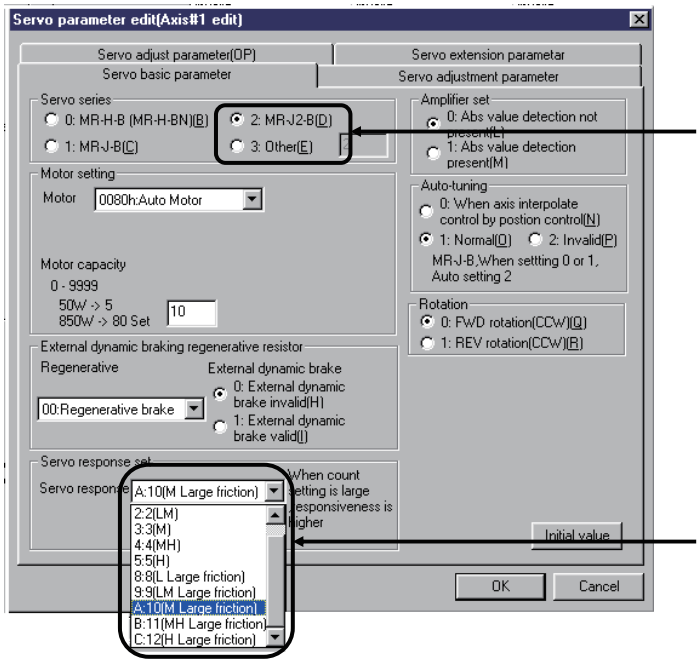
The methods of setting the servo parameters for using the SSCNET compatible Mitsubishi general-purpose AC servo amplifier MELSERVO-J2-Super Series (MR-J2S-□B type servo amplifier), released in February 2000, with the A1SD75M□ /AD75M□ are described in this bulletin.
The following matters are described in this Technical Bulletin.

1. Parameters having different specifications for MR-J2S-□B and MR-J2-□B
2. Parameters added or having expanded setting range with MR-J2S-□B
3. List of buffer memories for the A1SD75M□ /AD75M□ servo parameters
4. Methods of setting A1SD75M□ /AD75M□ servo parameters (MR-J2S-□B value)
5. Restrictions for using peripheral devices
6. Precautions for replacing a MR-J2S-□B-compatible controller by a programmable controller CPU

Whereas

[Details]

The MR-J2S-□B is a high-performance, high-function general-purpose servo amplifier based on the MR-J2-□B.
When controlling the MR-J2S-□B with the A1SD75M□ /AD75M□, the various parameters are set as the MR-J2-□B.
The servo parameters can be set from a peripheral device such as a software package (i.e., SW0D5C-AD75P-E), or from a sequence program.
With the peripheral device, the servo parameters can be set within the setting range equivalent to the MR-J2-□B, but even if the setting values are the same, there are some parameters having different specifications for the MR-J2S-□B and MR-J2-□B. (Refer to the following pages for details.)
The Servo Basic Parameter Setting screen for the peripheral device (SW0D5C-AD75P-E) is shown below.



When MR-J2-B is selected, the following items will be fixed:
Motor capacity : 1
Feedback : 0 (16384 pulse)

The specifications differ for the MR-J2S-□B.
(Example) When "A (M Large Friction)" is selected, this will be "A (a rough value of Machine Resonance Frequency 105HZ)" for the MR-J2S-□B.

MITSUBISHI ELECTRIC CORPORATION
HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN
NAGOYA WORKS : 1-14, YADA-MINAMI 5-CHOME, HIGASHI-KU, NAGOYA, JAPAN

[Title] Compliance of A1SD75M□ /AD75M□ to MR-J2S-□B

[Date of Issue] June '00(Ver. A: August :2010)

[Relevant Models] A1SD75M1, A1SD75M2, A1SD75M3, AD75M1, AD75M2, AD75M3

Some MR-J2S-□B servo parameters have been newly added or have an expanded setting range as an improvement over the MR-J2-□B.
Values that have an expanded setting range and the newly added servo parameters must be set from the sequence program. Only the parameters equivalent to MR-J2-□B can be set with the peripheral device, so refer to the following pages to set the servo parameters with the peripheral device.

When controlling the MR-J2S-□B with the A1SD75M□ /AD75M□, set the servo parameter feedback and the "number of pulses per revolution" in the positioning basic parameters as shown below.

Resolution of encoder in use	Servo parameter feedback	Positioning basic parameter "pulses per revolution"
131072 pulse	0: 16384 pulse	16384 pulse
16384 pulse	0: 16384 pulse	16384 pulse
8192 pulse	1: 8192 pulse	8192 pulse

The positioning basic parameters "travel per revolution" and "unit multiplier" set the travel amount when the motor actually rotates once.

Refer to the Servo Amplifier Instruction Manual for details on the MR-J2S-□B servo parameters.

[Title] Compliance of A1SD75M□ /AD75M□ to MR-J2S-□B

[Date of Issue] June '00(Ver. A: August :2010)

[Relevant Models] A1SD75M1, A1SD75M2, A1SD75M3, AD75M1, AD75M2, AD75M3

1. Parameters having different specifications for MR-J2S-□B and MR-J2-□B

For the servo parameters shown below, interchange the values given in the A1SD75M□ /AD75M□ User's Manual and the values displayed on the peripheral device with the specifications for the MR-J2S-□B.

Parameter No.	Item	Servo amplifier				PLC system		
		MR-J2-□B *1		MR-J2S-□B *1		Sequence program	Peripheral device *2	Default *4
		Setting value	Default	Setting value	Default			
9	Servo response set (The responsiveness will increase as the value is increased. The frequency given for the MR-J2S-□B is a rough value of the machine resonance.)	1 to 5: Standard mode	1	1: 15Hz	5	△	△	1
				2: 20Hz				
				3: 25Hz				
				4: 30Hz				
				5: 35Hz				
		8 to C: Friction load mode		8: 70Hz				
				9: 85Hz				
				A: 105Hz				
				B: 130Hz				
				C: 160Hz				
		—	—	6: 45Hz		○	×	
				7: 55Hz				
				D: 200Hz				
				E: 240Hz				
				F: 300Hz				
18	MR-J2-□B: Notch filter MR-J2S-□B: Machine resonance suppression filter *3 (Notch filter)	0: Not used	0	0: Invalid	0	△	△	0
		1: 1125Hz		1: 4500Hz				
		2: 563Hz		2: 2250Hz				
		3: 375Hz		3: 1500Hz				
		4: 282Hz		4: 1125Hz				
		5: 225Hz		5: 900Hz				
		6: 188Hz		6: 750Hz				
		7: 161Hz		7: 642.9Hz				
		—	—	8 to 31FH		○	×	
20	In-position range (pulse) MR-J2-□B: Input pulse unit MR-J2S-□B: Parameter No. 6 feedback pulse unit	0 to 50000	100	0 to 50000	100	△	△	100
24	Option function 2 — Selected motor less operation	0: Invalid	0	0: Invalid	0	○	○	0
		1: Valid		1: Valid				
	Option function 2 — Slight vibration suppression control selection *5	0: Invalid		0: Invalid		×	×	
		1: Valid		1: Valid				
31	Excess error alarm	1 to 1000kpulse	80kpulse	0.1 to 100.0rev	8.0rev	○	△	80kpulse

○ : Setting possible, × : Setting not possible, △ : Setting possible but specifications differ

*1: Refer to the Servo Amplifier Instruction Manual for details on the parameters.

*2: The peripheral device refers to a personal computer which the SW1IVD-AD75P-E or SW0D5C-AD75P-E type software package is installed and AD75TU.

*3: The machine resonance suppression filter is set with the "notch frequency" and "notch depth". When 0 to 7 is designated with the sequence program or peripheral device, the notch depth will be "−40dB".

*4: The default values for the A1SD75M□ /AD75M□ and peripheral device are given.

*5: Even if "slight vibration suppression control selection" is set with the A1SD75M□ /AD75M□, it will not function with the MR-J2S-□B.

2. Parameters added or having expanded setting range with MR-J2S-□B

Parameter No.	Item	Servo amplifier				PLC system		
		MR-J2-□B *1		MR-J2S-□B *1		Sequence program	Peripheral device *2	Default *4
		Setting value	Default	Setting value	Default			
6	Feedback *3 0: 16384pulse 1: 8192pulse 6: 32768pulse 7: 131072pulse 255: Follows motor resolution pulses	0	0	0	0	○	× *5	0
		1		1				
		—	—	6		×	×	
				7				
				255				
8	Auto tuning 0: Interpolation mode 1: Auto tuning mode 1 2: Manual mode 2 3: Auto tuning mode 2 4: Manual mode 1	0	1	0	1	○	○	1
		1		1				
		2		2				
		—	—	3		○	×	
				4				
12	Load inertia ratio	0.0 to 100.0	7.0	0.0 to 100.0	7.0	○	○	3.0
		—	—	100.1 to 300.0		○	×	
13	Position loop gain 1 (rad/s)	4 to 1000	70	4 to 1000	35	○	○	70
		—	—	1001 to 2000		○	×	
14	Speed loop gain 1 (rad/s)	20 to 5000	1200	20 to 5000	177	○	○	1200
		—	—	5001 to 8000		○	×	
15	Position loop gain 2 (rad/s)	1 to 500	25	1 to 500	35	○	○	25
		—	—	501 to 1000		○	×	
16	Speed loop gain 2 (rad/s)	20 to 8000	600	20 to 8000	817	○	○	600
		—	—	8001 to 20000		○	×	
22	Analog monitor output (Common for Ch1, Ch2) 0: Motor speed (±8V/maximum speed) 1: Torque (±8V/maximum torque) 2: Motor speed (+8V/maximum speed) 3: Torque (+8V/maximum torque) 4: Current command output (±8V/maximum current command output) 5: Command pulse frequency (±8V/maximum speed) 6: Droop pulse value (±10V/128pulse) 7: Droop pulse value (±10V/2048pulse) 8: Droop pulse value (±10V/8192pulse) 9: Droop pulse value (±10V/32768pulse) A: Droop pulse value (±10V/131072pulse)	0 to A	Ch1: 0 Ch2: 1	0 to A	Ch1: 0 Ch2: 1	○	○	Ch1: 0 Ch2: 1
	B: Bus voltage (+8V/400V)	—	—	B		○	×	
25	Low-pass filter, adaptive vibration suppression control	—		0 to 1210H	0	○	×	—
33	Option function 6 Serial baudrate selection Serial communication response delay time Encoder output pulse phase setting selection *6	—		0 to 113H	0	○ × ×	×	—
37	For manufacturer setting	—		0010H ,0012H	0010	×*8	×*8	—
38	Encoder output pulse *7	—		0 to 65535	4000	×	×	—

○ : Setting possible, × : Setting not possible

*1: Refer to the Servo Amplifier Instruction Manual for details on the parameters.
*2: The peripheral device refers to a personal computer which the SW1IVD-AD75P-E or SW0D5C-AD75P-E type software package is installed and AD75TU.
*3: With the MR-J2S-□B, when using a motor having an 8192-pulse encoder resolution, set "1 (8192 pulse)", and when using a 16384-pulse/131072-pulse motor, set "0 (16384 pulse). The operation will not be guaranteed if a value other than 0 or 1 is set.
*4: The default values for the A1SD75M□ /AD75M□ and peripheral device are given.
*5: The feedback is fixed to "0 (16384 pulse)".
When using a motor having an 8192-pulse encoder resolution, set "1 (8192 pulse)" with the sequence program.
*6: Even if "encoder output pulse phase setting selection" is set with the A1SD75M□ /AD75M□, it will not function with the MR-J2S-□B.
*7: Even if the "encoder output pulse" is set with the A1SD75M□ /AD75M□, it will not function with the MR-J2S-□B.
*8: The parameter can be set only with the servo configuration software (MRZJW3-SETUP161E).
For details, refer to the Instruction Manual for the servo configuration software.

3. List of the buffer memories for the A1SD75M□ /AD75M□ servo parameters

The list of the buffer memories for the A1SD75M□ /AD75M□ servo parameters corresponding to MR-J2S-□B is shown below.

MR-J2S-□B Parameter No.	A1SD75M□ /AD75M□ Servo parameter	Item	Buffer memory address			Differences with MR-J2-□B
			Axis 1	Axis 2	Axis 3	
—	Servo basic parameter	Servo series	100	250	400	—
1		Amplifier set	101	251	401	—
2		Regenerative brake	102	252	402	—
—		Motor type	103	253	403	—
—		Motor capacity	104	254	404	—
—		Motor speed*	105	255	405	—
6		Feedback	106	256	406	Setting value has been added
7		Rotation	107	257	407	—
8		Auto tuning	108	258	408	Setting value has been added
9		Servo response set	109	259	409	The specifications differ
12	Servo adjustment parameter	Load inertia ratio	112	262	412	The setting range has been expanded
13		Position loop gain 1	113	263	413	The setting range has been expanded
14		Speed loop gain 1	114	264	414	The setting range has been expanded
15		Position loop gain 2	115	265	415	The setting range has been expanded
16		Speed loop gain 2	116	266	416	The setting range has been expanded
17		Speed integral compensation	117	267	417	—
18		Machine resonance suppression filter	118	268	418	The specifications differ
19		Feed forward gain	119	269	419	—
20		In position range	120	270	420	The specifications differ
21		Solenoid brake out	121	271	421	—
22		Analog monitor output	122	272	422	Setting value has been added
23		Option function 1	123	273	423	—
24		Option function 2	124	274	424	—
25		Low-pass filter, adaptive vibration suppression control	125	275	425	Newly added with MR-J2S-□B
27	Servo expansion parameter	Monitor out 1 offset	127	277	427	—
28		Monitor out 2 offset	128	278	428	—
30		Zero speed	130	280	430	—
31		Excess error alarm	131	281	431	The specifications differ
32		Option function 5	132	282	432	—
33		Option function 6	133	283	433	Newly added with MR-J2S-□B
34		PI-PID position droop	134	284	434	—
36		Speed differential compensation	136	286	436	—
38		Encoder output pulse (use not possible)	138	288	438	Newly added with MR-J2S-□B (Use not possible with A1SD75M□ /AD75M□)

*: The settings are not required for the MR-J2-□B or MR-J2S-□B.

4. Methods of setting A1SD75M□ /AD75M□ servo parameters (MR-J2S-□B value)

The A1SD75M□ /AD75M□ servo parameters can be set with the following two methods.

- Setting with only sequence program
- Setting with both peripheral device and sequence program

(1) Setting with only sequence program

The sequence program for setting the servo parameters with the ACPU is described in this section. (The program shows the case for mounting the A1SD75M□ /AD75M□ in slot No. 0 of the basic base unit and setting axis 1.)

- **Setting data**

Set the following devices according to the system being used.

Device name	Device	Application		Stored value	Details of stored value (D0 to D31)
Special relay	M9038	ON for only 1 scan after RUN		—	—
Data registers	D0	Servo basic parameter	Servo series	2	Servo amplifier series MR-J2-□B
	D1		Amplifier set	0	No absolute position detection
	D2		Regenerative brake	0000H	No external dynamic brake selection No external regenerative option
	D3		Motor type	0080H	Auto Motor
	D4		Motor capacity	10	100W
	D5		Motor speed	1	(Setting not required for MR-J2S-□B)
	D6		Feedback	0	Feedback 16384 pulse
	D7		Rotation	0	Forward run when positioning address increments
	D8		Auto tuning	1	Auto tuning mode 1
	D9		Servo response set	0005H	Servo response 5 (a rough value of machine resonance: 35Hz)
	D10	Servo adjustment parameter	Load inertia ratio	70	Load inertia ratio 7.0
	D11		Position loop gain 1	35	Position loop gain 35rad/s
	D12		Speed loop gain 1	177	Speed loop gain 177rad/s
	D13		Position loop gain 2	35	Position loop gain 35rad/s
	D14		Speed loop gain 2	817	Speed loop gain 817rad/s
	D15		Speed integral compensation	20	Speed integral compensation 20ms
	D16		Machine resonance suppression filter	0000H	Deep notch depth (−40dB) Notch filter frequency invalid
	D17		Feed forward gain	0	Feed forward gain 0%
	D18		In-position range	100	In-position range 100 pulse
	D19		Solenoid brake out	100	Solenoid brake out 100ms
	D20		Analog monitor output	0001H	Ch1: Motor speed (±8V/Maximum speed) Ch2: Torque (±8V/Maximum torque)
	D21		Option function 1	0000H	Amplifier EMG selection: Valid Serial encoder cable selection: 2-wire type
	D22		Option function 2	0000H	Slight vibration suppression control selection: Invalid Motor less operation: Invalid
	D23		Low-pass filter, adaptive vibration suppression control	0000H	Low-pass filter selection : Automatic adjustment Adaptive vibration suppression control : Invalid Adaptive vibration suppression control sensitivity : Normal
	D24	Servo expansion parameter	Monitor out 1 offset	0	Monitor output 1 offset value 0mV
	D25		Monitor out 2 offset	0	Monitor output 2 offset value 0mV
	D26		Zero speed	50	Zero speed 50r/min
	D27		Excess error alarm	80	Excess error alarm 8.0rev
	D28		Option function 5	0000H	PI-PID switching: Invalid

[Title] Compliance of A1SD75M□ /AD75M□ to MR-J2S-□B
[Date of Issue] June '00(Ver. A: August :2010)
[Relevant Models] A1SD75M1, A1SD75M2, A1SD75M3, AD75M1, AD75M2, AD75M3

Device name	Device	Application		Stored value	Details of stored value (D0 to D31)
Data registers	D29	Servo expansion parameter	Option function 6	0000H	Serial baudrate selection: 9600bps Serial communication response delay time: Invalid Encoder output pulse phase setting selection: Invalid
	D30		PI-PID position droop	0	PI-PID position droop invalid
	D31		Speed differential compensation	980	Speed differential compensation 980

• Sequence program

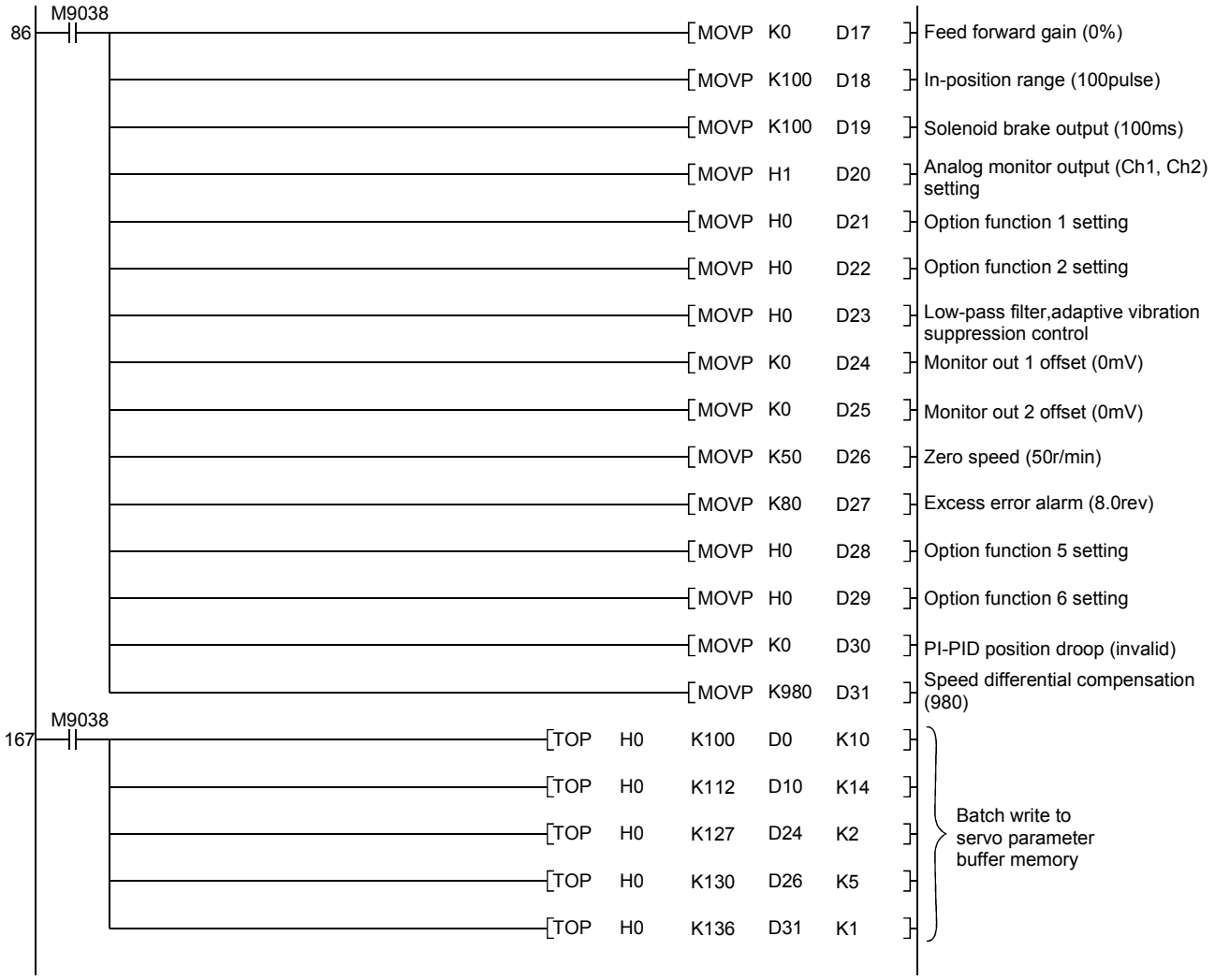
```
*
*  A1SD75M/AD75M servo parameter (axis 1) setting program (ACPU)
*
   M9038
0 ─┤├─┬[MOVP  K2    D0  ]  Servo series (MR-J2-B)
     ├[MOVP  K0    D1  ]  Amplifier set
     │                    (no absolute position detection)
     ├[MOVP  H0    D2  ]  Regenerative brake
     │                    (no selection)
     ├[MOVP  H80   D3  ]  Motor type (Auto Motor)
     ├[MOVP  K10   D4  ]  Motor capacity (100W)
     ├[MOVP  K1    D5  ]  Motor speed (dummy)
     ├[MOVP  K0    D6  ]  Feedback (0:16384pulse)
     ├[MOVP  K0    D7  ]  Rotation (forward run)
     ├[MOVP  K1    D8  ]  Auto tuning (mode 1)
     ├[MOVP  H5    D9  ]  Servo response set
     │                    (responsiveness 5)
     ├[MOVP  K70   D10 ]  Load inertia ratio (7.0)
     ├[MOVP  K35   D11 ]  Position loop gain 1 (35rad/s)
     ├[MOVP  K177  D12 ]  Speed loop gain 1 (177rad/s)
     ├[MOVP  K35   D13 ]  Position loop gain 2 (35rad/s)
     ├[MOVP  K817  D14 ]  Speed loop gain 2 (817rad/s)
     ├[MOVP  K20   D15 ]  Speed integral compensation
     │                    (20ms)
     └[MOVP  H0    D16 ]  Machine resonance
                          suppression filter (-40dB)
```

* When using the QCPU (Q mode)/QnACPU, change M9038 to SM402.

[Title] Compliance of A1SD75M□ /AD75M□ to MR-J2S-□B

[Date of Issue] June '00(Ver. A: August :2010)

[Relevant Models] A1SD75M1, A1SD75M2, A1SD75M3, AD75M1, AD75M2, AD75M3



* When using the QCPU (Q mode)/QnACPU, change M9038 to SM402.

(2) Methods of setting using both peripheral device and sequence program

(a) Setting procedures

When using both the peripheral device and sequence program, set the servo parameters with steps 1 to 4 shown below.

1) After turning the A1SD75M□ /AD75M□ power ON, set the servo parameters equivalent to the MR-J2-□B. (The PLC CPU remains stopped.)
2) Run the PLC CPU and set the parameters added or changed with the MR-J2S-□B ("1. Parameters having different specifications for MR-J2S-□B and MR-J2-□B", "2. Parameters added or having expanded setting range with MR-J2S-□B") from the sequence program.
3) Write into the A1SD75M□ /AD75M□ flash ROM from the peripheral device.
4) Turn both the A1SD75M□ /AD75M□ and MR-J2S-□B power OFF and ON.

(b) Precautions

- With the peripheral device, select the MR-J2-□B and set the servo parameters.
- For servo parameters having the same specifications or different specifications but same setting value as the MR-J2-□B, the values set by the peripheral device can be used.
  For servo parameters having the same setting value but different specifications, the MR-J2S-□B specifications will be applied.
- The servo parameters having an expanded setting range or newly added to the MR-J2S-□B can be set with the sequence program. Write the servo parameters, set with the sequence program, into the A1SD75M□ / AD75M□ flash ROM. When the A1SD75M□ /AD75M□ and servo amplifier power is turned ON, the flash ROM servo parameters will be written from the A1SD75M□ /AD75M□ to the servo amplifier.
- After setting with the peripheral device, the servo parameters set by the sequence program and written into the flash ROM can be read by the peripheral device again and saved on a hard disk (HD) or floppy disk (FD). (Save in a file separate from the file containing the servo parameters set by the peripheral device.) The servo parameters read from the HD/FD can be written into the A1SD75M□ /AD75M□ with no changes.
- After setting with the peripheral devices, the servo parameters set for the MR-J2S-□B with the sequence program cannot be revised or changed with the peripheral device. ("Out of Range" will occur with the peripheral device, and editing of the servo parameters cannot be completed.) With the peripheral device, correct the servo parameter file set with the peripheral device, then read into the A1SD75M□ /AD75M□ and set with the sequence program again.)

The sequence program for setting the servo parameters with the ACPU is described in this section. (The program shows the case for mounting the A1SD75M□ /AD75M□ in slot No. 0 of the basic base unit and setting axis 1.)

- Setting data
  Set the following devices according to the system being used.

Device name	Device	Application		Stored value	Details of stored value (D6 to D31)
Special relay	M9038	ON for only 1 scan after RUN		—	—
Data registers	D6	Servo basic parameter	Feedback	0	Feedback 16384 pulse
	D8		Auto tuning	1	Auto tuning mode 1
	D9		Servo response set	0005H	Servo response 5 (a rough value of machine resonance: 35Hz)
	D10	Servo adjustment parameter	Load inertia ratio	70	Load inertia ratio 7.0
	D11		Position loop gain 1	35	Position loop gain 35rad/s
	D12		Speed loop gain 1	177	Speed loop gain 177rad/s
	D13		Position loop gain 2	35	Position loop gain 35rad/s
	D14		Speed loop gain 2	817	Speed loop gain 817rad/s
	D16		Machine resonance suppression filter	0000H	Deep notch depth (−40dB) Notch filter frequency invalid
	D18		In-position range	100	In-position range 100 pulse
	D20	Servo adjustment parameter	Analog monitor output	0001H	Ch1: Motor speed (±8V/Maximum speed) Ch2: Torque (±8V/Maximum torque)
	D23		Low-pass filter, adaptive vibration suppression control	0000H	Low-pass filter selection : Automatic adjustment Adaptive vibration suppression control : Invalid Adaptive vibration suppression control sensitivity: Normal
	D29	Servo expansion parameter	Option function 6	0000H	Serial baudrate selection: 9600bps Serial communication response delay time: Invalid Encoder output pulse phase setting selection: Invalid

[Title] Compliance of A1SD75M□ /AD75M□ to MR-J2S-□B

[Date of Issue] June '00(Ver. A: August :2010)

[Relevant Models] A1SD75M1, A1SD75M2, A1SD75M3, AD75M1, AD75M2, AD75M3

• **Sequence program**

```
*
*  A1SD75M/AD75M servo parameter (axis 1) setting program (ACPU)
*  (Setting using peripheral device)
*
   M9038
0  ─┤├─┬[MOVP  K0     D6  ]  Feedback (0: 16384pulse)
       ├[MOVP  K1     D8  ]  Auto tuning (mode 1)
       ├[MOVP  H5     D9  ]  Servo response set (responsiveness 5)
       ├[MOVP  K70    D10 ]  Load inertia ratio (7.0)
       ├[MOVP  K35    D11 ]  Position loop gain 1 (35rad/s)
       ├[MOVP  K177   D12 ]  Speed loop gain 1 (177rad/s)
       ├[MOVP  K35    D13 ]  Position loop gain 2 (35rad/s)
       ├[MOVP  K817   D14 ]  Speed loop gain 2 (817rad/s)
       ├[MOVP  H0     D16 ]  Machine resonance suppression filter (-40dB)
       ├[MOVP  K100   D18 ]  In-position range (100pulse)
       ├[MOVP  H1     D20 ]  Analog monitor output (Ch1, Ch2) setting
       ├[MOVP  H0     D23 ]  Low-pass filter,adaptive vibration suppression control
       └[MOVP  H0     D29 ]  Option function 6 setting
   M9038
71 ─┤├─┬[TOP  H0  K106  D6  K1 ]
       ├[TOP  H0  K108  D8  K2 ]
       ├[TOP  H0  K112  D10 K5 ]
       ├[TOP  H0  K118  D16 K1 ]  Batch write to servo parameter buffer memory
       ├[TOP  H0  K120  D18 K1 ]
       ├[TOP  H0  K122  D20 K1 ]
       ├[TOP  H0  K125  D23 K1 ]
       └[TOP  H0  K133  D29 K1 ]
```

* When using the QCPU (Q mode)/QnACPU, change M9038 to SM402.

5. Restrictions for using peripheral devices

The restrictions that apply when using the peripheral device (SW1IVD-AD75P-E, SW0D5C-AD75P-E, AD75TU) are given below.

Item	Details
Screen (View, dialog *1)	The parameters added or changed with the MR-J2S-□B are not compatible.
AD75M Servo starting up *2	Initialize servo parameter: The parameters added or changed with the MR-J2S-□B are not initialized. (Refer to "4. Methods of setting A1SD75M□ /AD75M□ servo parameters (MR-J2S-□B value)" and handle the parameters added or changed with the MR-J2S-□B using the sequence program.) Servo model name check: The parameters added or changed with the MR-J2S-□B will not function.
Servo parameter	The servo parameters cannot be edited. (Refer to "4. Methods of setting A1SD75M□ /AD75M□ servo parameters (MR-J2S-□B value)", and edit using the sequence program.) [Display of SW0D5C-AD75P-E read values on View screen after setting values added to MR-J2S-□B with sequence program.] Feedback : "No setting". Auto tuning : "Out of Range (reading value <HEX>)" Servo response set : "Out of Range (reading value <HEX>)" Load inertia ratio : Buffer memory data is displayed. Position loop gain 1 : Buffer memory data is displayed. Speed loop gain 1 : Buffer memory data is displayed. Position loop gain 2 : Buffer memory data is displayed. Speed loop gain 2 : Buffer memory data is displayed. Notch filter : "Out of Range (reading value <HEX>)" Monitor out 1 select : "Out of Range (reading value <HEX>)" Monitor out 2 select : "Out of Range (reading value <HEX>)" In this case, if the read value is within the setting range given in "1. Parameters having different specifications for MR-J2S-□B and MR-J2-□B" or "2. Parameters with expanded setting range or newly added to MR-J2S-□B", the correct value will be set. As the following servo parameters have been newly added with the MR-J2S-□B, they cannot be read or displayed. Monitor the buffer memory value using the GPP function software package. [Servo parameters that cannot be read or displayed] Low-pass filter, adaptive vibration suppression control, Option function 6
Servo monitor	Parameter/error monitor: This is not compatible with the parameters added to or changed with the MR-J2S-□B. Even if a "Servo Parameter error occurrence" is judged, if the value is within the setting range given in "1. Parameters having different specifications for MR-J2S-□B and MR-J2-□B" or "2. Parameters added or having expanded setting range with MR-J2S-□B", the correct value will be set.
Adjustment of the position loop gain	The value with expanded range for the MR-J2S-□B cannot be set for the "position loop gain 1". Adjust the gain with the following method. [Adjustment method] (1) Using the servo configuration software (MRZJW3-SETUP121E) *3, adjust the position loop gain 1, and after adjusting set the value with the sequence program. (Refer to "4. Methods of setting A1SD75M□ /AD75M□ servo parameters" for details on the sequence program.) (2) Select auto tuning (mode 1 or mode 2) for the servo basic parameter "auto tuning", and carry out auto tuning to automatically adjust the position loop gain 1.
Register servo name *2	Servo series : Select "MR-J2-B". Motor type : Select "128 (80H) Auto Motor"

*1: Indicates the case for the SW0D5C-AD75P-E.
*2: This is not mounted on the AD75TU.
*3: Refer to the Servo Amplifier Instruction Manual for details.

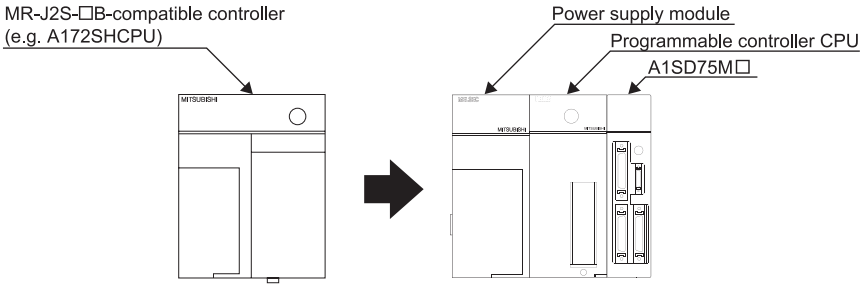
6. Precautions for replacing a MR-J2S-□B-compatible controller by a programmable controller CPU

After connecting the MR-J2S-□B that was connected to a MR-J2S-□B -compatible controller (e.g. A172SHCPU) to the A1SD75M□ /AD75M□, change the MR-J2S-□B setting with the servo configuration software (MRZJW3-SETUP161E).

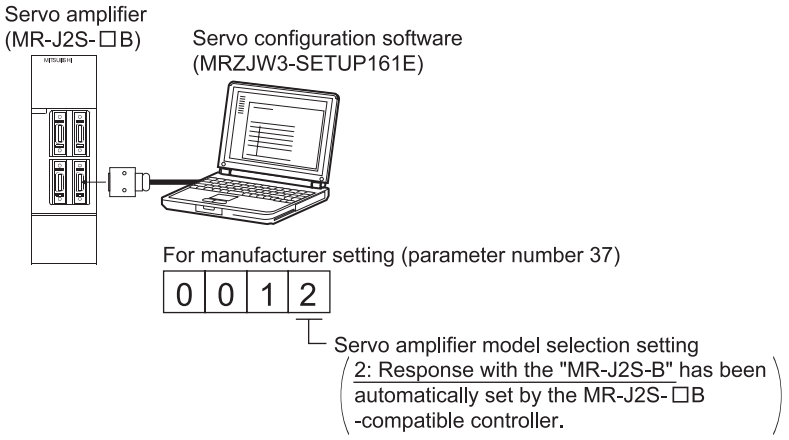
(1) Replacement procedure

Follow the steps 1) to 4).

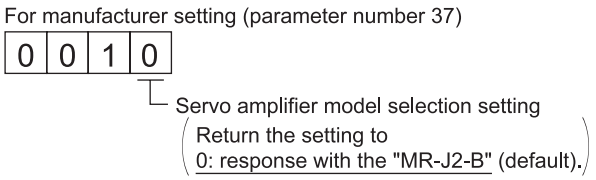
1) Change the system.



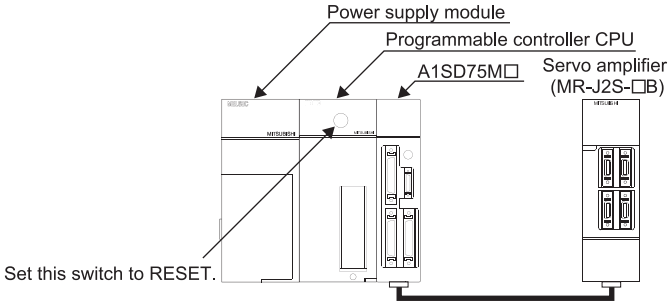
2) Monitor the "for manufacturer setting" parameter of the MR-J2S-□B (parameter number 37) with the servo configuration software (MRZJW3-SETUP161E).



3) Return the servo amplifier model selection setting to the default, response with the "MR-J2-B" (parameter number 37: □□□0).



4) Connect the A1SD75M□ /AD75M□ to the MR-J2S-□B and then reset the programmable controller CPU.



For how to change the MR-J2S-□B servo parameter, refer to the Instruction Manual for the servo configuration software.

Revision history

Version	Print Date	Revision
-	June 2000	First edition
A	August 2010	• The "for manufacturer setting" parameter (parameter number 37) is added to "2. Parameters added or having expanded setting range with MR-J2S-□B". • "6. Precautions for replacing a MR-J2S-□B-compatible controller by a programmable controller CPU" is added.