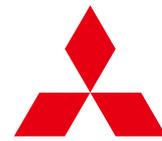




for a greener tomorrow



**MITSUBISHI  
ELECTRIC**

*Changes for the Better*

FACTORY AUTOMATION

**e-Factory**

# GOT2000 Series

## Drive Control Interactive Solutions

# GOT *Drive*



MITSUBISHI GRAPHIC OPERATION TERMINAL

# GOT2000

MITSUBISHI SERVO AMPLIFIERS & MOTORS

# x MELSERVO-J4

Advanced drive control connectivity  
provides additional value to your system

MITSUBISHI GRAPHIC OPERATION TERMINAL

**GOT2000**

MITSUBISHI SERVO AMPLIFIERS & MOTORS

**× MELSERVO-J4**

## Designed to suit your application and improve maintenance

- How can I adjust and check connected devices without using a PC?

Due to security reasons, it is not allowed to bring a PC to customers' sites.



- How can I adjust parameters quickly?

It takes time to start up and adjust machines.



- How can I quickly solve the problem at the worksite?

It takes time and cost to visit the worksite every time an alarm occurs.





# GOT *Drive*

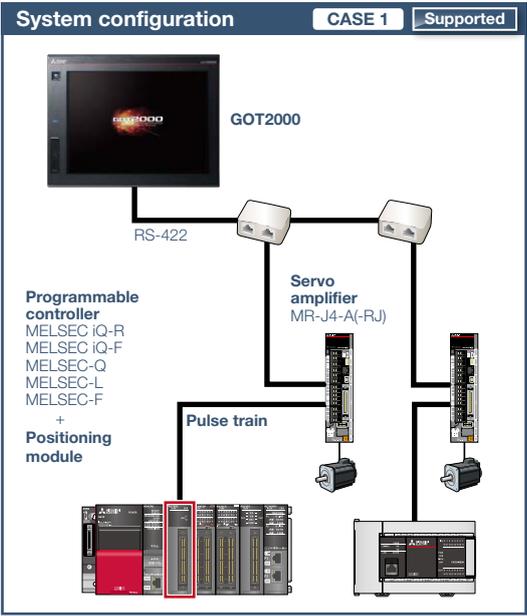
The GOT2000 provides advanced functionality and improves connectivity with Mitsubishi servo systems. It provides some functions of MR Configurator2 (supporting MR-J4).

The new GOT Drive enhanced functionality is designed to eliminate need for additional hardware, software and suits customers' applications to speed up system startup, improve maintenance and troubleshooting.

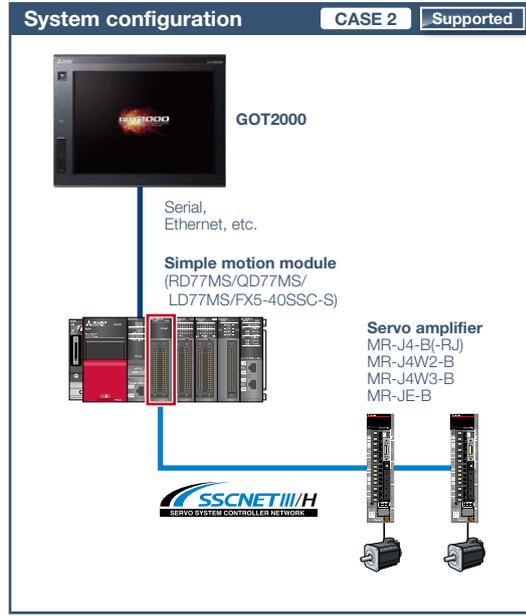


GOT2000 Series  
Drive Control  
Interactive Solutions  
Movie

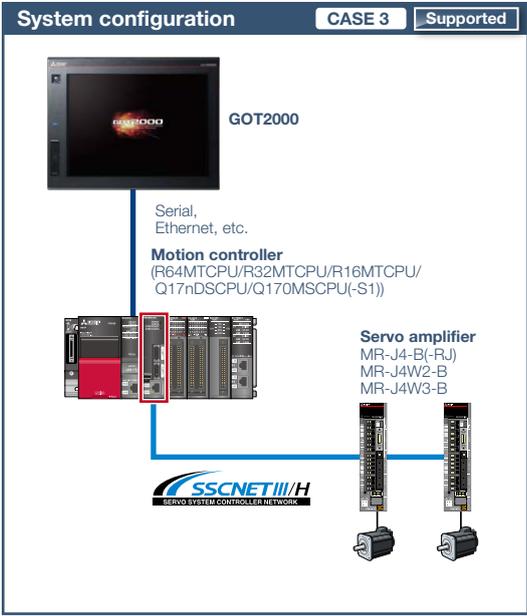
# GOT and servo system configurations



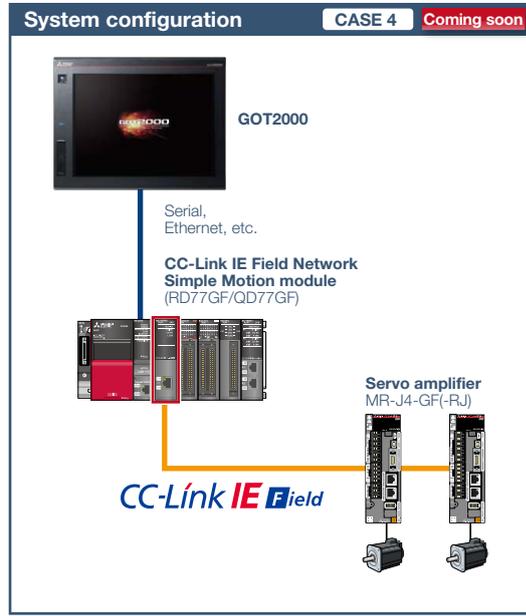
- System configuration features**
- Command interface: pulse train
  - Control mode: positioning control
  - Program: sequence program (ladder)
  - Max. number of control axes: 1/2/4/8 axes



- System configuration features**
- Command interface: SSCNET III/H
  - Control mode: positioning control, synchronous control, speed control, torque control, tightening & press-fit control, cam control
  - Program: sequence program (ladder)
  - Max. number of control axes: 2/4/8/16 axes



- System configuration features**
- Command interface: SSCNET III/H
  - Control mode: positioning control, synchronous control, speed control, torque control, tightening & press-fit control, cam control
  - Program: motion program (SFC)
  - Max. number of control axes: 16/32/64 axes



- System configuration features**
- Command interface: CC-Link IE Field Network
  - Control mode: positioning control, synchronous control, speed control, torque control, cam control
  - Program: sequence program (ladder)
  - Max. number of control axes: 4/8/16 axes

## Drive control interactive functions, supported models, and GT Works3 versions

Supported drive control interactive functions and required versions of screen design software differ depending on the system configuration. Please refer to the following list.

○: Supported △: Partially supported ▲: Coming soon ×: Not supported at this moment —: Not applicable

Function name			Page	GOT supported models			Supported system configuration						Supported system configuration					
				GT21	GT25	GT23	GT21	CASE 1		CASE 2/CASE 3		CASE 4		CASE 1		CASE 2		
								MR-J4-A(-RJ)	Dedicated screen #2	MR-J4-B(-RJ) MR-J4W2-B MR-J4W3-B	Sample screen #1	Dedicated screen #2	MR-J4-GF(-RJ)	Sample screen #1	Dedicated screen #2	MR-JE-A	Sample screen #1	Dedicated screen #2
Drive control interactive functions	Maintenance	Drive recorder function	P.6	○	○	×	×	—	—	○ (Ver.1.155M or later)	○ NEW (Ver.1.155M or later)	×	×	—	—	×	▲	
		Machine diagnosis function	P.7	○	○	○	○	○ (Ver.1.126G or later)	×	○ (Ver.1.155M or later)	×	▲	×	×	×	×	○ (Ver.1.150G or later)	×
		Servo amplifier life diagnosis function	P.8	○	○	○	○	○ (Ver.1.126G or later)	×	○ (Ver.1.155M or later)	×	▲	×	×	×	×	○ (Ver.1.150G or later)	×
		Alarm display function	P.10	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	×	○ (Ver.1.150G or later)	×
	Adjustment	One-touch tuning function	P.8	○	○	○	○	○ (Ver.1.126G or later)	×	○ (Ver.1.155M or later)	×	▲	×	×	×	×	○ (Ver.1.150G or later)	×
		Tuning function	P.9	○	○	○	○	○ (Ver.1.126G or later)	×	○ (Ver.1.155M or later)	×	▲	×	×	×	×	○ (Ver.1.150G or later)	×
	Startup, adjustment	Servo amplifier monitor function	P.12	○	○	×	×	—	○ (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	—	—	—	—	—	×	—	—	—
		Intelligent module monitor function #4	P.12	○	○	×	×	—	○ #3 (Ver.1.100E or later)	—	○ (Ver.1.100E or later)	—	▲	—	×	—	—	×
		R motion monitor function #4	P.13	○	○	×	×	—	—	—	○ (B: Ver.1.117X or later B-RL: Ver.1.134Q or later)	—	—	—	—	—	—	—
		Q motion monitor function #4	P.13	○	○	×	×	—	—	—	○ (B: Ver.1.100E or later B-RL: Ver.1.134Q or later)	—	—	—	—	—	—	—
	Test operation	JOG operation	P.14	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Positioning operation	P.14	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
	Monitor	Output signal (DO) forced output	P.14	○	○	○	○	○ (Ver.1.126G or later)	△ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Operation monitor	P.15	○	○	○	○	○ (Ver.1.126G or later)	△ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Power monitor	P.9	○	○	○	○	○ (Ver.1.126G or later)	×	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Input/output monitor	P.15	○	○	○	○	○ (Ver.1.126G or later)	△ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
	Parameter setting	Basic setting parameters	P.16	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Gain/Filter parameters	P.16	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Extension setting parameters	P.16	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Extension setting 2 parameters	P.16	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		Extension setting 3 parameters	P.16	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
		I/O setting parameters	P.17	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.100E or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.150G or later)	×	
	Point table	P.17	○	○	○	○	○ (Ver.1.126G or later)	○ #5 (A: Ver.1.126G or later A-RL: Ver.1.134Q or later)	○ (Ver.1.155M or later)	×	▲	×	×	×	○ (Ver.1.126G or later)	×		
	GOT functions	FA transparent function #4	P.10	○	○	○	○	—	—	—	○ (Ver.1.100E or later)	—	×	—	—	—	×	
		Backup/Restoration function	P.11	○	○	○	×	—	—	—	—	○ #6 MR-J4-GF only (Ver.1.151H or later)	—	—	—	—	—	
		System launcher function #4	P.11	○	○	○	×	—	○ (Ver.1.126G or later)	—	○ (Ver.1.126G or later)	—	×	—	○ (Ver.1.126G or later)	—	○ (Ver.1.126G or later)	

\*1 The sample screen is the screen data that is included with GT Works3. The version in ( ) indicates the version of GT Works3 that was used to create the sample screen. GT21 is not supported. (As of June 2016)

\*2 The dedicated screen is the screen that is provided as the extended function of GOT. The version in ( ) indicates the version of GT Works3 that supports the dedicated screen.

\*3 The function can be used by connecting GOT and programmable controller.

\*4 The supported version of GT Works3 differs depending on the type of connected device (CPU, intelligent function module).

\*5 Parameters of the function can be monitored by using the servo amplifier monitor function in the dedicated screen.

\*6 Usable when the GOT and the programmable controller are connected via Ethernet, and the programmable controller and the servo amplifier are connected via the CC-Link IE Field Network.

**NEW** J4-B Only!

## Drive recorder function

Samples available

End user

OEM

Easy startup

Trouble-shooting

### Check servo amplifier alarm information on the GOT

GT27

GT25

GT23

GT21

#### Challenges



In case of a system failure, is there a simple and quick way to check the problem cause?

#### Solutions

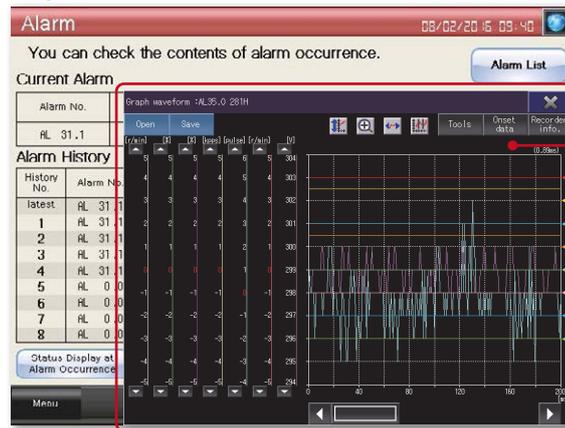
B

B-RJ

WB

Servo alarm data such as motor current and position command can be read from the servo amplifier and displayed in a waveform or a list format. Easily check the servo data on GOT without using a personal computer.

#### Graph waveform screen



Display the graph waveform data that was collected at the occurrence of a servo alarm in a window screen.

**Point!**

GOT can be used to display the screen equivalent to the drive recorder of MR Configurator2.

### Retrieve servo amplifier data using GOT and analyze it on your computer

GT27

GT25

GT23

GT21

#### Challenges



In case of a system failure, is there a simple and quick way to retrieve the servo data and analyze the problem cause?

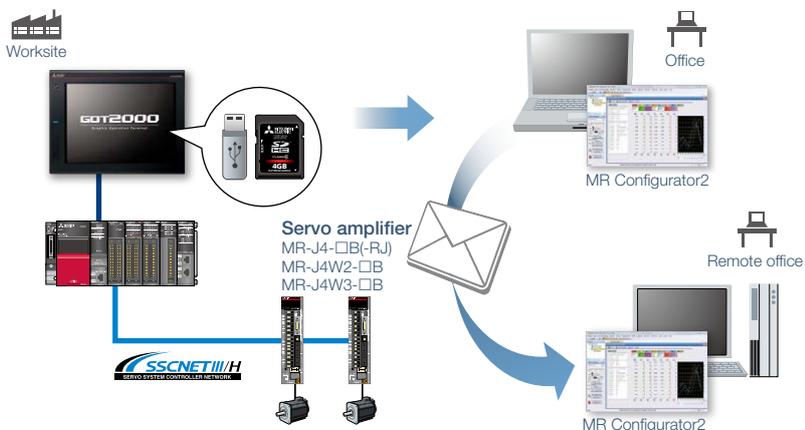
#### Solutions

B

B-RJ

WB

GOT reads the data which is saved in a servo amplifier and stores it in GOT's SD memory card or USB memory. After obtaining the servo data from GOT, you can send it to an office in a remote location and quickly solve the problem.



**Point!**

Save files of the graph waveform data and the list at the alarm occurrence to an SD memory card or USB memory on the GOT and analyze it on a personal computer.

J4 Only!

## Machine diagnosis function

Samples available

End user

Preventive maintenance

Predict machine deterioration and improve system preventive maintenance without a need for personal computer

GT27

GT25

GT23

GT21

Challenges

Solutions

B

B-RJ

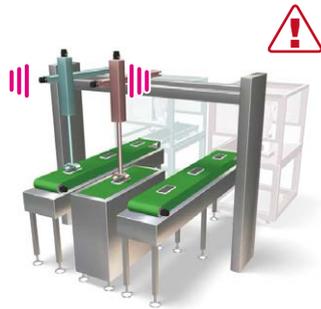
WB

A

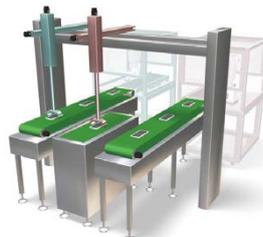
A-RJ

JE-B

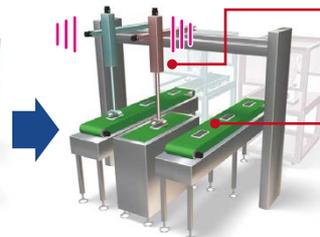
GOT can display estimated values (machine friction, torque vibration, etc.) that are collected by the machine diagnosis function of the servo amplifier. The difference between the initial value (at the startup) and the current value can be used to predict deterioration of the machine.



How can I predict deterioration of a machine if it has excessive load and is frequently accelerated?



Machine before operation

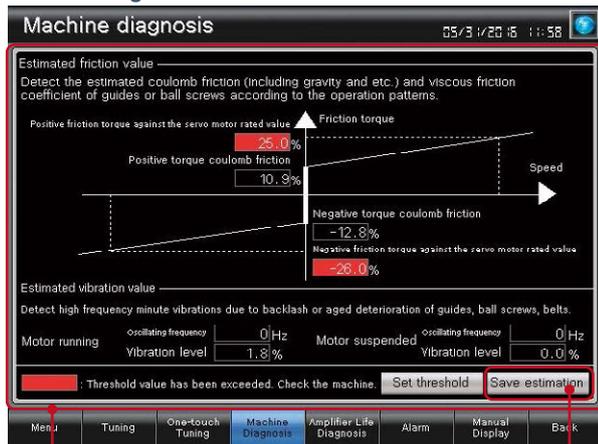


Vibration increased after starting operation

Guide deterioration?

Belt loosened?

### Machine diagnosis screen



Displays the estimated value upon completion of the machine diagnosis. When any of the estimation values exceed the threshold values that are set on the GOT, the numerical value display area turns red.

### Descriptions of items on the machine diagnosis screen

Item	Description
<b>Estimated friction value</b>	Detect the estimated coulomb friction (including gravity and etc.) and viscous friction coefficient of guides or ball screws according to the operation patterns.
<b>Friction torque at rated speed (%)</b>	Friction in operation at the rated speed. The value indicates the ratio (%) against the rated torque. The value increases as the machine deteriorates.
<b>Coulomb friction (%)</b>	Regardless of the motor speed, a constant value is applied to friction. When an object begins to move, the torque must be greater than or equal to the coulomb friction torque. The value indicates the ratio (%) against the rated torque. The value increases as the machine deteriorates.
<b>Vibration estimation</b>	The vibration estimation function observes the torque vibration and estimates the vibration level and the vibration frequency of high-frequency micro vibrations. This function allows checking of the increase of vibration level and the change in the vibration frequency that are caused by deterioration of a guide, a ball screw, a belt, etc. due to age.
<b>Oscillation frequency (Hz)</b>	Frequency of torque vibration when a machine vibrates during operation or it is not operating. The value indicates the frequency when the machine oscillates due to a cause such as deterioration of the machine due to age.
<b>Vibration level (%)</b>	Torque amplitude when a machine vibrates during operation or it is not operating. The value indicates the ratio (%) against the rated torque. The value increases as the machine oscillation increases due to a cause such as deterioration of the machine due to age.

Save estimation values to a file and compare the values to check the deterioration of the machine.

### Friction estimation in the machine diagnosis function

In order to estimate the friction by using the machine diagnosis function, the machine must be operated at high speed as well as at low speed for at least 150 seconds. Operation at high speed is the range that the motor speed absolute value is greater than or equal to the value of parameter PF31; operation at low speed is the range that the motor speed absolute value is less than the value of parameter PF31. (See Figure 1)

In the case of the operation pattern shown in the Figure 1, if for the forward direction friction estimation (a)+(c) is more than 150 seconds and (b) is also more than 150 seconds, a friction estimation result can be obtained.

In the system that the operation speed does not exceed the value of parameter PF31, friction estimation can be performed by changing the value of parameter PF31. When the value of parameter PF31 is zero, the value half of the rated speed is the threshold value at high/low speed operation.

As stated above, friction estimation requires acceleration and deceleration of machine operation speed. When performing speed control or torque control, the speed is always kept constant so that friction estimation may not be performed.

\* For the details of the machine diagnosis function, please refer to MR Configurator2 Help.

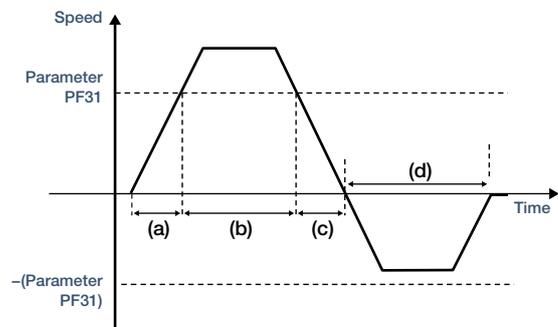


Figure 1. Servo amplifier operation speed

Point!

Without a personal computer, GOT can be used to predict the deterioration of the machine.

J4 Only!

## Servo amplifier life diagnosis function

Samples available

End user

Visualization

Preventive maintenance

Supports preventative maintenance functions of servo amplifiers

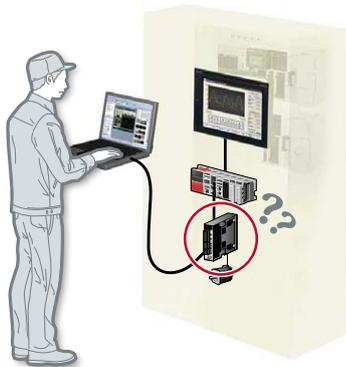
GT27

GT25

GT23

GT21

Challenges



Can I check the life of capacitors and relays of servo amplifiers?

Solutions

B

B-RJ

WB

A

A-RJ

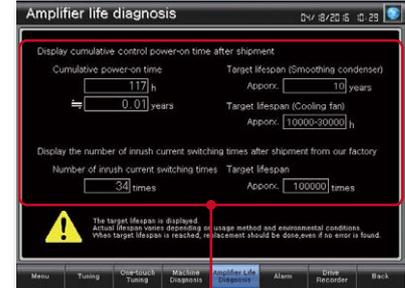
JE-B

Check cumulative operation time, on/off counts of inrush relay on GOT. In addition, replacement timing of servo amplifier components (capacitor, relay) can be displayed on the GOT.



Periodic check

### Servo amplifier life diagnosis screen



Check the smoothing capacitor energization time or the inrush relay on/off times at a glance

Point!

By using with the GOT alarm function, you can notify the replacement timing of servo amplifier components to on-site workers.

\* For replacement of servo amplifier components, please contact your local sales office.

J4 Only!

## One-touch tuning function

Samples available

OEM

Easy startup

Easily adjust servos without a personal computer

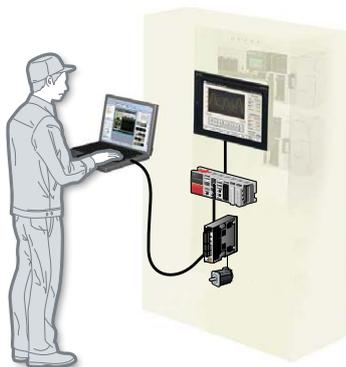
GT27

GT25

GT23

GT21

Challenges



How can I check the status of servo amplifiers without a personal computer?

Solutions

B

B-RJ

WB

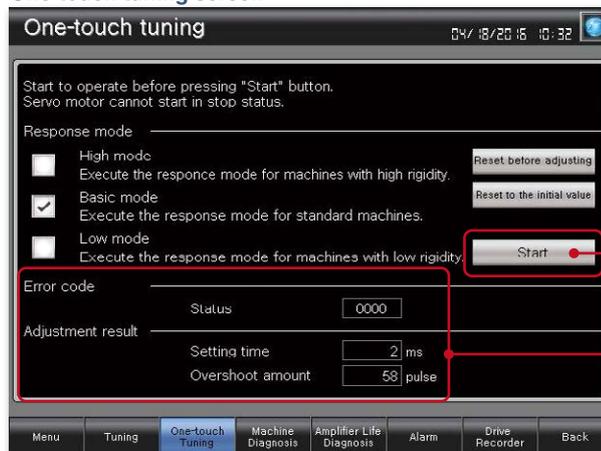
A

A-RJ

JE-B

Just a single touch on the switch on the GOT screen. You can check adjustment results such as settling time and overshoot amount.

### One-touch tuning screen



Just a single touch on the switch

Adjustment results are shown

Point!

Perform one-touch tuning on GOT and efficiently adjust the servo amplifier without a personal computer.

J4 Only!

## Tuning function

Samples available

OEM

Easy startup

Perform fine tuning of gain/filter parameters

GT27

GT25

GT23

GT21

### Challenges



It's difficult to determine an optimum gain when setting up the device. It's bothersome to connect a personal computer every time I adjust a gain.

### Solutions

B

B-RJ

WB

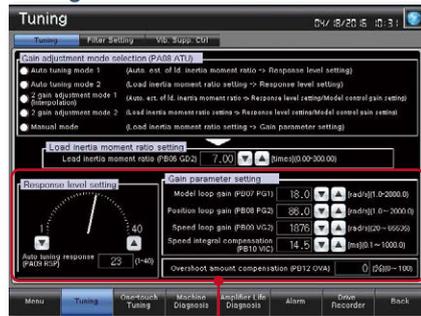
A

A-RJ

JE-B

After one-touch tuning, to obtain higher performance, you can perform fine tuning of gain parameters, machine resonance suppression filter, and vibration suppression control parameters in the tuning screen.

#### Tuning screen



Perform fine tuning of gain parameters, tuning response, and overshoot amount.

#### Filter setting screen



#### Vibration suppression control setting screen



Point!

Adjust gains on GOT and efficiently setup the system while performing other tasks in parallel.

J4 Only!

## Power monitor

Samples available

End user

Visualization

Display power consumption and total power consumption on the GOT

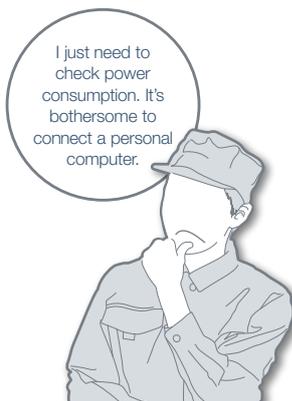
GT27

GT25

GT23

GT21

### Challenges



To manage specific consumption and observe demand, power consumption should be checked easily.

### Solutions

B

B-RJ

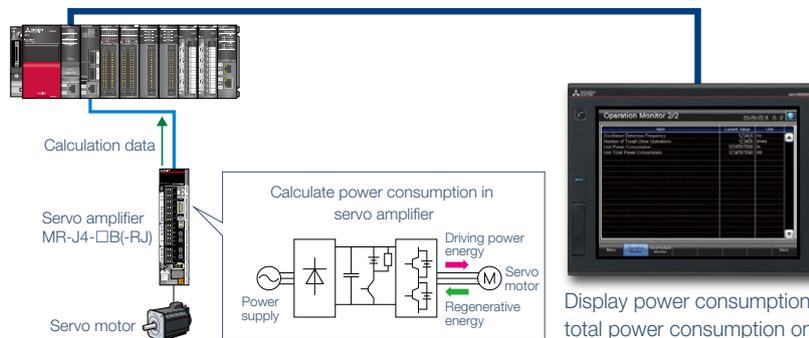
WB

A

A-RJ

JE-B

Use GOT and monitor the power information in a servo amplifier.



Display power consumption and total power consumption on HMI

Point!

GOT can be used to check (visualize) power consumption and total power consumption without using measuring equipment such as a power meter or a personal computer.

## Alarm display function

Samples available

End user

OEM

Troubleshooting

Check alarm documentation stored on the GOT

GT27

GT25

GT23

GT21

### Challenges



How can I easily identify the problem cause when an alarm occurs on a servo amplifier?

### Solutions

B

B-RJ

WB

A

A-RJ

JE-B

Without opening a cabinet, current alarms, alarm history, and the detail information can be checked on GOT. Use the document display function\* to display the servo amplifier user's manual and quickly check troubleshooting procedures on the GOT.

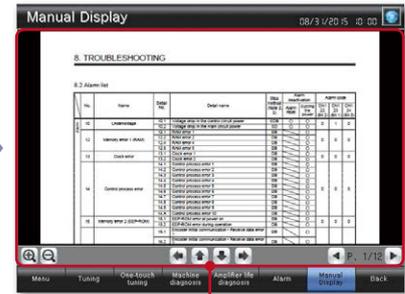
\* Not supported by GT23, GT21.

#### Alarm display



Touch here to display the detail information

#### Document display \* Not supported by GT23, GT21.



Check the details of the alarm

### Point!

Check alarms of a servo amplifier on the on-site GOT and quickly solve the problem.

## FA transparent function

End user

OEM

Easy startup

Support system startup and adjustment

GT27

GT25

GT23

GT21

### Challenges



Is it possible to debug programs without opening the cabinet?

### Solutions

B

B-RJ

WB

By connecting a personal computer to a GOT, you can use the GOT as a transparent gateway to enable programming, startup, and adjustment of industrial devices with the following software applications: MELSOFT MR Configurator2, MELSOFT MT Works2, MELSOFT GX Works3, MELSOFT GX Works2, MELSOFT GX Configurator-QP. Users do not have to bother with opening the cabinet or changing cable connections.

\* On GT27/GT25 white models, GT25 open frame models, GT23 and GT21 models, use the interface on the rear face (USB device, Mini-B) to use the FA transparent function.



### Point!

Use the front USB interface on the GOT to connect to devices without opening the electrical cabinet.

J4 Only!

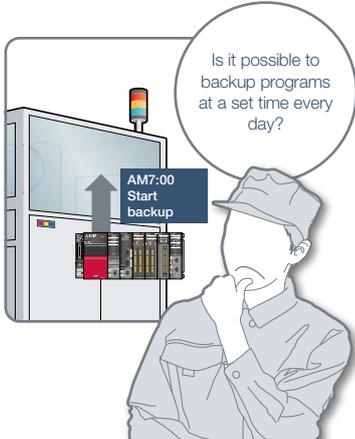
## Backup/Restoration function

End user   OEM   Preventive maintenance   Troubleshooting

### Easily backup parameters

GT27   GT25   GT23   GT21

#### Challenges



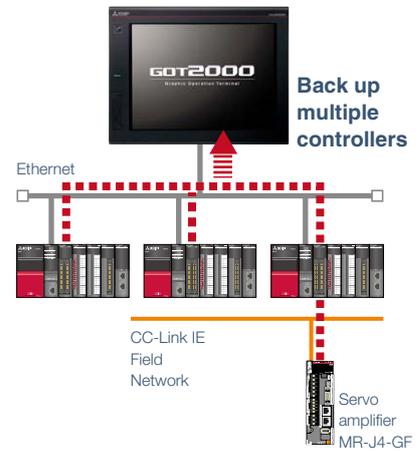
How can I backup parameters of servo amplifiers periodically?

#### Solutions

GF

Backup or restore the parameters of a servo amplifier to or from the GOT's SD memory card or USB memory. You can specify a trigger device, a day of the week, and time for automatic backup.

The function makes it easier to backup data at the end of the day, before the weekend, or before the holiday. You can perform batch operation to restore the data to the servo amplifier.



Point!

Improve production efficiency by using the GOT to manage product changeovers and maintenance recovery procedures.

## System launcher function

End user   OEM   Maintenance   Troubleshooting

### Easily check the module status of a controller system

GT27   GT25   GT23   GT21

#### Challenges



Can I check the module status without using a personal computer every time I debug the module?

#### Solutions

B   B-RJ   WB   A   A-RJ   JE-B   JE-A

A graphical configuration diagram indicates module statuses of motion controller systems (Q Series) and programmable controller systems (MELSEC-Q Series, L Series). When you touch a module image, the extended function list is shown and you can carry out maintenance work efficiently.

Icons show the module status. You can check the module with an error at a glance.

Point!

After checking the error information of modules, just touch a module image and you can start extended functions that are available to the module. This function reduces the time for troubleshooting.

## Servo amplifier monitor function

Samples available

End user

OEM

Easy startup

Trouble-shooting

Support startup, adjustment of servo systems

GT27

GT25

GT23

GT21

### Challenges



How can I check the status of servo amplifier easily?

### Solutions

A

A-RJ

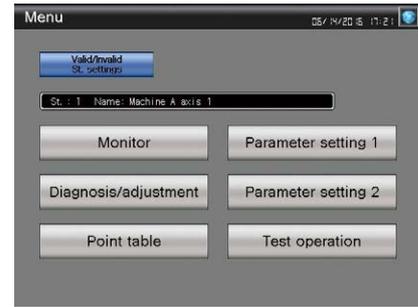
In a system which outputs pulse trains, the GOT can be connected to a servo amplifier in a serial connection to perform the following operations: set up, monitoring, alarm display, diagnosis, parameter setting, and test operations.

#### Dedicated screens

MR-J4-A Servo amp. Monitor		T 091		Menu	End
Cumulative feedback pulses	-1061092 pulse	Within one-revolution position	4096399 pulse		
Servo motor speed	0 r/min	RES counter	-627 rev		
Droop pulses	1 pulse	Load to motor inertia ratio	7.00 times		
Cumulative command pulses	0 pulse	Bus voltage	310 V		
Command pulse frequency	0 kbps	Encoder internal temperature	58 °C		
Analog speed command voltage	-0.05 V	Setting time	2 ms		
Analog torque command voltage	0.00 V	Oscillation detection frequency	0 Hz		
Regenerative load ratio	0 %	Tough drive times	0 times		
Effective load ratio	0 %	Unit power consumption	10 W		
Peak load ratio	0 %	Unit total power consumption	10 W		
Instantaneous torque	0 %				

Without creating screens, parameters can be monitored and written from dedicated screens.

#### Sample screens (VGA)



Various sample screens such as monitoring, parameter settings, test operations are available and they are all customizable.

### Point!

Various monitoring functions, changes to the parameter settings, and test operations can be performed on the servo amplifier connected to the GOT.

## Intelligent module monitor function

End user

OEM

Easy startup

Trouble-shooting

Support debug of positioning systems

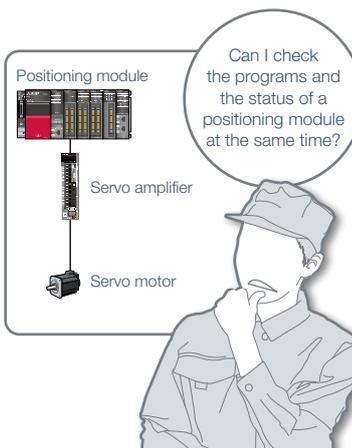
GT27

GT25

GT23

GT21

### Challenges



How can I debug positioning systems efficiently?

### Solutions

B

B-RJ

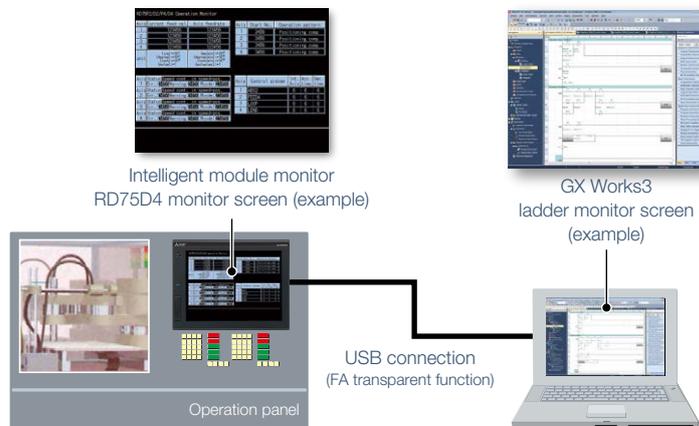
WB

A

A-RJ

You can debug positioning systems efficiently by displaying the data such as the status, parameters, and the I/O information of positioning module axes on GOT while monitoring positioning sequence programs on a personal computer simultaneously.

\* For the details of supported devices and connection types, please refer to an appropriate manual.



### Point!

Check the sequence programs and the status of a positioning module at the same time.

## R motion monitor function/ Q motion monitor function

End user    OEM    Easy startup    Troubleshooting

### Support startup, adjustment of motion controllers

GT27    GT25    GT23    GT21

#### Challenges



Can I check and change servo parameters of a motion controller easily?

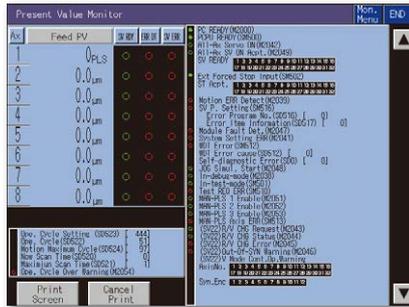
#### Solutions

B    B-RJ    WB

In a dedicated screen on GOT, it is possible to monitor and set parameters of motion controllers that are mounted on the same base unit.

\* For the details of supported devices and connection types, please refer to an appropriate manual.

#### R motion monitor screen



#### <Supported models>

- R32MTCPU/R16MTCPU
- Q173DSCPU/Q172DSCPU
- Q170MPCPU(-S1)
- Q170MPCPU
- Q173DCPU(-S1)/Q172DCPU(-S1)
- Q173HCPU/Q172HCPU
- Q173CPU(N)/Q172CPU(N)

- \* Motion controller OS (MELSEC iQ-R Series) should be SV22.
- \* Motion controller OS (MELSEC-Q Series) should be SV13 or SV22.
- Supported contents of the Q motion monitor function vary depending on the CPU model.

#### Point!

Monitor and change servo parameters of a motion controller on GOT.

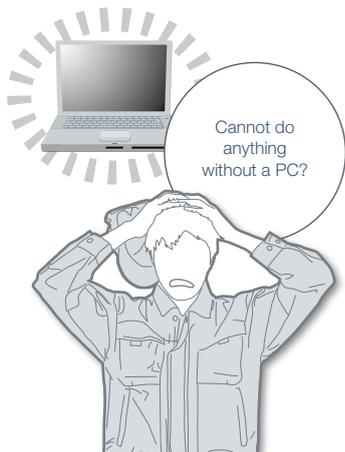
## Motion SFC monitor function

End user    OEM    Easy startup    Troubleshooting

### Check motion SFC programs without a personal computer

GT27    GT25    GT23    GT21

#### Challenges



How can I check motion SFC programs without a personal computer?

#### Solutions

B    B-RJ    WB

GOT can monitor motion SFC programs in the motion controller CPU (Q series) and display them in the SFC diagram format. Viewing the program batch monitor or active step list enables you to check the complete status at a glance.

#### Program tabs

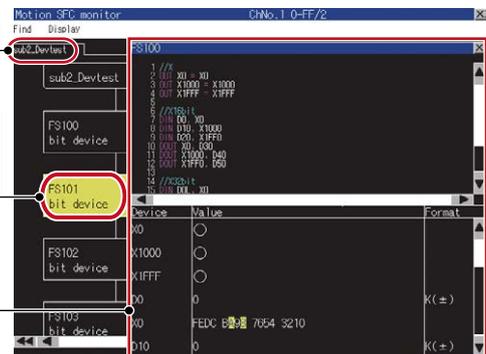
Touch a tab to display the program.

#### Step/transition

The active step is highlighted. Touch the step to display the detail program window. The SFC diagram scrolls automatically along with the progress of active steps.

#### Detail program window

Displays the program and the present value of the calculation control step/transition.



#### Point!

Easily troubleshoot programs on GOT without a personal computer.

## Test operation

Sample screens

### Use GOT to test the operation and check status of the servo amplifier without a personal computer.

GT27

GT25

GT23

GT21

\* Sample screens are not supported by GT21. Parameter values can be monitored using objects such as numerical displays and lamps.

B

B-RJ

WB

A

A-RJ

JE-B



\* The screen image is the connection sample screen of MR-J4-B.

#### JOG operation screen

GOT can be used to send a command to perform test operation (JOG operation) without sending the command from an external controller.

Check the [Start JOG operation] checkbox to switch to the JOG operation mode.

Set the motor speed and the acceleration/deceleration time constant and start JOG operation.

The motor rotates while the forward or the reverse switch is touched.



\* The screen image is the connection sample screen of MR-J4-B.

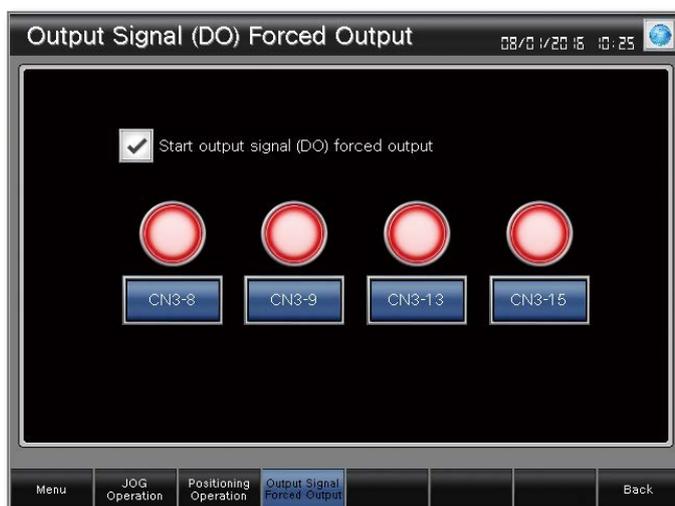
#### Positioning operation screen

GOT can be used to send a command to perform test operation (positioning operation) without sending the command from an external controller.

Check the [Start positioning operation] checkbox to switch to the positioning operation mode.

Set the motor speed, the acceleration/deceleration time constant, and the travel distance and start positioning operation.

The positioning operation starts when the forward or the reverse switch is touched.



\* The screen image is the connection sample screen of MR-J4-B.

#### Output signal (DO) forced output screen

The screen can be used to forcibly turn on/off the output signals of a servo amplifier.

Check the [Start output signal (DO) forced output] checkbox to switch to the output signal (DO) forced output mode.

Perform the forced output of a signal by touching the corresponding switch. The lamp is lighted while the signal is output.

## Monitor

Sample screens

The screens can be used to display the status of the servo amplifier in operation and the I/O signals.

GT27 GT25 GT23 GT21

\* Sample screens are not supported by GT21. Parameter values can be monitored using objects such as numerical displays and lamps.

B B-RJ WB A A-RJ JE-B

**Operation Monitor 1/2** 05/27/2016 11:40

Item	Current Value	Unit
Cumulative Feedback Pulses	1234567890	pulse
Servo Motor Speed	123456	r/min
Droop Pulses	1234567890	pulse
Cumulative Command Pulses	1234567890	pulse
Command Pulse Frequency	123456	kpulse/s
Regenerative Load Ratio	123456	%
Effective Load Ratio	123456	%
Peak Load Ratio	123456	%
Instantaneous Torque	123456	%
Within One-revolution Position	1234567890	pulse
ABS Counter	123456	rev
Load to Motor Inertia Ratio	1234.00	Multiplier
Bus Voltage	123456	V
Load side encoder cumulative F/B pulse	1234567890	pulse
Load side encoder information 1	1234567890	pulse
Load side encoder information 2	123456	rev
Servo motor thermistor temperature	123456	°C
Encoder Inside Temperature	123456	°C
Settling Time	123456	ms

Menu Operation Monitor Input/output Monitor Back

### Operation monitor screen 1/2

The screen can be used to display and check the status of the servo amplifier in operation.

\* The screen image is the connection sample screen of MR-J4-B.

**Operation Monitor 2/2** 05/26/2016 15:12

Item	Current Value	Unit
Oscillation Detection Frequency	123456	Hz
Number of Tough Drive Operations	123456	times
Unit Power Consumption	1234567890	W
Unit Total Power Consumption	1234567890	Wh

Menu Operation Monitor Input/output Monitor Back

### Operation monitor screen 2/2 (Power monitor)

The screen can be used to display and check the status (power consumption, total power consumption, etc.) of the servo amplifier in operation.

\* The screen image is the connection sample screen of MR-J4-B.

**Input/output Monitor** 08/01/2016 10:27

Input Signal		Output Signal	
<input type="checkbox"/> CN3-2	<input type="checkbox"/> CN3-19	<input type="checkbox"/> CN3-13	<input type="checkbox"/> CN3-09
<input type="checkbox"/> CN3-12	<input type="checkbox"/> CN3-20	<input type="checkbox"/> CN3-15	<input type="checkbox"/> CN3-08
Input Device Status		Output Device Status	
<input type="checkbox"/> CSON	<input type="checkbox"/> EMG	<input type="checkbox"/> RD	<input type="checkbox"/> BWING
<input type="checkbox"/> LSP	<input type="checkbox"/> EM2/1	<input type="checkbox"/> SA	<input type="checkbox"/> ALM2
<input type="checkbox"/> LSN	<input type="checkbox"/> CRDY	<input type="checkbox"/> ZSP	<input type="checkbox"/> RDY
<input type="checkbox"/> PC	<input type="checkbox"/> CDP	<input type="checkbox"/> TLC	<input type="checkbox"/> STO
<input type="checkbox"/> RES	<input type="checkbox"/> CLD	<input type="checkbox"/> YLC	<input type="checkbox"/> SMPD
<input type="checkbox"/> CSY1	<input type="checkbox"/> URGNT	<input type="checkbox"/> INP	<input type="checkbox"/> CDPS
<input type="checkbox"/> CSY2	<input type="checkbox"/> FLS	<input type="checkbox"/> WNG	<input type="checkbox"/> CLDS
<input type="checkbox"/> CTL1	<input type="checkbox"/> RLS	<input type="checkbox"/> ALM	<input type="checkbox"/> ABSV
<input type="checkbox"/> CTL2	<input type="checkbox"/> DOG	<input type="checkbox"/> OP	<input type="checkbox"/> IPF
<input type="checkbox"/> ST1		<input type="checkbox"/> MBR	<input type="checkbox"/> SPC
<input type="checkbox"/> ST2		<input type="checkbox"/> DB	<input type="checkbox"/> MTRR
			<input type="checkbox"/> SSV1
			<input type="checkbox"/> SSV2
			<input type="checkbox"/> STL1
			<input type="checkbox"/> STL2
			<input type="checkbox"/> ZPASS
			<input type="checkbox"/> SFLS
			<input type="checkbox"/> SRLS
			<input type="checkbox"/> SDOG
			<input type="checkbox"/> SSV3

Menu Operation Monitor Input/output Monitor Back

### Input/output monitor screen

The screen can be used to display and check the status of the servo amplifier input/output signals.

It is also useful for checking the status of the I/O signals with just the servo amplifier before connecting to a system.

\* The screen image is the connection sample screen of MR-J4-B.

\* The sample screens are updated as necessary so that the image in this page may not be the same as the latest screen in the sample screen data. For the latest sample screen data, please contact your local sales office.

# Parameter setting

Sample screens

The screens can be used to display and set the values of various parameters in the servo amplifier.

**GT27** **GT25** **GT23** **GT21**

\* Sample screens are not supported by GT21. Parameter values can be monitored using objects such as numerical displays and lamps.

**B** **B-RJ** **WB** **A** **A-RJ** **JE-B**

**Basic Setting Parameters (ROM) 1/2** 05/26/2016 15:08

No.	Symbol	Name	Set Value	Unit
PA01	**STY	Operation mode	1234	h
PA02	**REG	Regenerative option	1234	h
PA03	**ABS	Absolute position detection system	1234	h
PA04	*AOP1	Function selection A-1	1234	h
PA08	ATU	Auto tuning mode	1234	h
PA09	RSP	Auto tuning response	12345678	
PA10	INP	In-position range	12345678	pulse
PA14	*POL	Rotation direction selection	12345678	
PA15	*ENR	Encoder output pulse	12345678	pulse/rev
PA16	*ENR2	Encoder output pulse 2	12345678	
PA17	**MSR	Servo motor series setting	1234	h
PA18	**MTY	Servo motor type setting	1234	h
PA19	*BLK	Parameter block	1234	h
PA20	*TDS	Tough drive setting	1234	h
PA21	*AOP3	Function selection A-3	1234	h
PA22	**PCS	Position control structure selection	1234	h
PA23	DRAT	Drive recorder arbitrary alarm trigger setting	1234	h
PA24	AOP4	Function selection A-4	1234	h

For any parameter preceded by \* set the parameter value, switch power off once after setting, and then switch it on again or perform the controller reset and it will be valid.  
For any parameter preceded by \*\* set the parameter value, switch power off once after setting, and then switch it on again and it will be valid.

To RAM

Menu Basic Setting (ROM) Gain/Filter (ROM) Extension Setting 1 (ROM) I/O Setting (ROM) Extension Setting 2 (ROM) Extension Setting 3 (ROM) Linear servo /DD motor Setting(ROM)

\* The screen image is the connection sample screen of MR-J4-B.

## Basic setting parameters screen

Display and set the values of the following parameters in the servo amplifier.

- Basic setting parameters ((Pr. PA\_ \_ ))  
\* The screen with the same contents is also available for RAM.

**Gain/Filter Parameters (ROM) 1/3** 05/27/2016 11:42

No.	Symbol	Name	Set Value	Unit
PB01	FILT	Adaptive tuning mode (Adaptive filter II)	1234	h
PB02	VRF1	Vib. supp. ctrl. tuning mode (Adv. vib. supp. ctrl. II)	1234	h
PB03	TFBGN	Torque feedback loop gain	12345678	rad/s
PB04	FFC	Feed forward gain	12345678	%
PB06	GD2	Load inertia moment ratio	12345.00	Multiplier
PB07	PG1	Model loop gain	123456.0	rad/s
PB08	PG2	Position loop gain	123456.0	rad/s
PB09	VG2	Speed loop gain	12345678	rad/s
PB10	VIC	Speed integral compensation	123456.0	ms
PB11	VDC	Speed differential compensation	12345678	
PB12	OVA	Overshoot amount compensation	12345678	%
PB13	NH1	Machine resonance suppression filter 1	12345678	Hz
PB14	NH01	Notch shape selection 1	1234	h
PB15	NH2	Machine resonance suppression filter 2	12345678	Hz
PB16	NH02	Notch shape selection 2	1234	h
PB17	NHF	Shaft resonance control filter	1234	h
PB18	LPF	Low-pass filter setting	12345678	rad/s
PB19	VRF11	Vib. supp. ctrl. 1 - Vibration frequency	123456.0	Hz

For any parameter preceded by \* set the parameter value, switch power off once after setting, and then switch it on again or perform the controller reset and it will be valid.  
For any parameter preceded by \*\* set the parameter value, switch power off once after setting, and then switch it on again and it will be valid.

To RAM

Menu Basic Setting (ROM) Gain/Filter (ROM) Extension Setting 1 (ROM) I/O Setting (ROM) Extension Setting 2 (ROM) Extension Setting 3 (ROM) Linear servo /DD motor Setting(ROM)

\* The screen image is the connection sample screen of MR-J4-B.

## Gain/filter parameters screen

Display and set the values of the following parameters in the servo amplifier.

- Gain/filter setting parameters ((Pr. PB\_ \_ ))  
\* The screen with the same contents is also available for RAM.

**Extension Setting 1 Parameters (ROM) 1/2** 05/26/2016 15:07

No.	Symbol	Name	Set Value	Unit
PC01	ERZ	Error excessive alarm level	12345678	rev
PC02	MBR	Electromagnetic brake sequence output	12345678	ms
PC03	*ENRS	Encoder output pulse selection	1234	h
PC04	**COP1	Function selection C-1	1234	h
PC05	**COP2	Function selection C-2	1234	h
PC06	*COP3	Function selection C-3	1234	h
PC07	ZSP	Zero speed	12345678	r/min
PC08	OSL	Overspeed alarm detection level	12345678	r/min
PC09	MOD1	Analog monitor 1 output	1234	h
PC10	MOD2	Analog monitor 2 output	1234	h
PC11	MO1	Analog monitor 1 offset	12345678	mV
PC12	MO2	Analog monitor 2 offset	12345678	mV
PC13	MOSDL	Analog monitor - F/B pos. output standard data - Low	12345678	pulse
PC14	MOSDH	Analog monitor - F/B pos. output standard data - High	12345678	10000pulse
PC17	**COP4	Function selection C-4	1234	h
PC18	*COP5	Function selection C-5	1234	h
PC20	*COP7	Function selection C-7	1234	h
PC21	*BPS	Alarm history clear	1234	h

For any parameter preceded by \* set the parameter value, switch power off once after setting, and then switch it on again or perform the controller reset and it will be valid.  
For any parameter preceded by \*\* set the parameter value, switch power off once after setting, and then switch it on again and it will be valid.

To RAM

Menu Basic Setting (ROM) Gain/Filter (ROM) Extension Setting 1 (ROM) I/O Setting (ROM) Extension Setting 2 (ROM) Extension Setting 3 (ROM) Linear servo /DD motor Setting(ROM)

\* The screen image is the connection sample screen of MR-J4-B.

## Extension setting parameters screen

Display and set the values of the following parameters in the servo amplifier.

\* The screen with the same contents is also available for RAM.

- Extension setting parameters ((Pr. PC\_ \_ ))
- Extension setting 2 parameters ((Pr. PE\_ \_ ))
- Extension setting 3 parameters ((Pr. PF\_ \_ ))

\* The sample screens are updated as necessary so that the image in this page may not be the same as the latest screen in the sample screen data. For the latest sample screen data, please contact your local sales office.

## Parameter setting/Point table

Sample screens

The screens can be used to display and set the values of various parameters in the servo amplifier.

GT27 GT25 GT23 GT21

\* Sample screens are not supported by GT21. Parameter values can be monitored using objects such as numerical displays and lamps.

B B-RJ WB A A-RJ JE-B

**I/O Setting Parameters (ROM)** 05/26/2016 15:12

No.	Symbol	Name	Set Value	Unit
PD02	*DJA2	Input signal automatic on selection 2	1234	h
PD07	*DO1	Output device selection 1	1234	h
PD08	*DO2	Output device selection 2	1234	h
PD09	*DO3	Output device selection 3	1234	h
PD11	*DIF	Input filter setting	1234	h
PD12	*DOP1	Function selection D-1	1234	h
PD13	*DOP2	Function selection D-2	1234	h
PD14	*DOP3	Function selection D-3	1234	h
PD15	*DCS	Driver communication setting	1234	h
PD16	*MD1	Driver comm. - Master set - Transm. data sel. 1	1234	h
PD17	*MD2	Driver comm. - Master set - Transm. data sel. 2	1234	h
PD20	*SLA1	Driver comm. - Slave set - Master ax. No. sel. 1	12345678	
PD30	TLS	Master/slave opr. - Slave side torque cmd. Coefficient	12345678	%
PD31	VLC	Master/slave opr. - Slave side spd. limit coefficient	12345678	%
PD32	VLL	Master/slave opr. - Slave side spd. limit adj. value	12345678	r/min

For any parameter preceded by \* set the parameter value, switch power off once after setting, and then switch it on again, or perform the controller reset and it will be valid.  
For any parameter preceded by \*\* set the parameter value, switch power off once after setting, and then switch it on again, and it will be valid.

To RAM

Menu Basic Setting (ROM) Gain/Filter (ROM) Extension Setting 1 (ROM) **I/O Setting (ROM)** Extension Setting 2 (ROM) Extension Setting 3 (ROM) Linear servo /DD motor Setting(ROM)

\* The screen image is the connection sample screen of MR-J4-B.

### I/O setting parameters screen

Display and set the values of the following parameters in the servo amplifier.

- I/O setting parameters ([Pr. PD\_ \_])
  - \* The screen with the same contents is also available for RAM.

**Linear servo motor/DD motor setting (ROM)** 05/26/2016 15:06

No.	Symbol	Name	Set Value	Unit
PL01	**LIT1	Linear servo motor/DD motor function selection 1	1234	h
PL02	**LIM	Linear encoder resolution - Numerator	12345678	µm
PL03	**LID	Linear encoder resolution - Denominator	12345678	µm
PL04	*LIT2	Linear servo motor/DD motor function selection 2	1234	h
PL06	LB1	Position deviation error detection level	12345678	mm
PL06	LB2	Speed deviation error detection level	12345678	mm
PL07	LB3	Torque/thrust deviation error detection level	12345678	%
PL08	*LIT3	Linear servo motor/DD motor function selection 3	1234	h
PL09	LPWM	Magnetic pole detection voltage level	12345678	%
PL17	LTSTS	Mag. pole detn. - Min. pos. detn. meth. -Func. sel.	1234	h
PL18	IDLV	Mag. pole detn. - Minute pos. detn. -Ident. sig. amp.	12345678	%

For any parameter preceded by \* set the parameter value, switch power off once after setting, and then switch it on again, or perform the controller reset and it will be valid.  
For any parameter preceded by \*\* set the parameter value, switch power off once after setting, and then switch it on again, and it will be valid.

To RAM

Menu Basic Setting (ROM) Gain/Filter (ROM) Extension Setting 1 (ROM) I/O Setting (ROM) Extension Setting 2 (ROM) Extension Setting 3 (ROM) **Linear servo /DD motor Setting(ROM)**

\* The screen image is the connection sample screen of MR-J4-B.

### Linear servo/DD motor setting screen

Display and set the values of the following parameters in the servo amplifier.

- Linear servo/DD motor setting parameters ([Pr. PL\_ \_])
  - \* The screen with the same contents is also available for RAM.

**Point table** 05/01/2016 09:54

St. : 0 Name:

	Target position	Rotation speed	Acceleration time constant	Deceleration constant	Dwell time	Sub function	M code
	mm	r/min	ms	ms	ms		
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456
123	123456	123456	123456	123456	123456	123456	123456

Menu Monitor Diagnosis /adjustment **Point table** Parameter Setting 1 Parameter Setting 2 Test Operation Back

\* The screen image is the connection sample screen of MR-J4-A-RJ.

### Point table screen (MR-J4-A-RJ only)

Display and set the values in the point table of a servo amplifier (MR-J4-A-RJ).

\* The sample screens are updated as necessary so that the image in this page may not be the same as the latest screen in the sample screen data. For the latest sample screen data, please contact your local sales office.

## Samples screens

Easy to use sample screens of various interactive functions

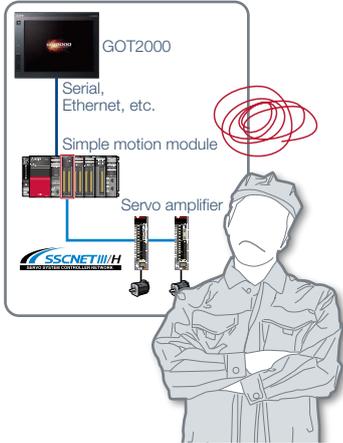
GT27

GT25

GT23

GT21

### Challenges



It's good to have interaction functions but it's still hard to design setting screens from scratch...

### Solutions

B

B-RJ

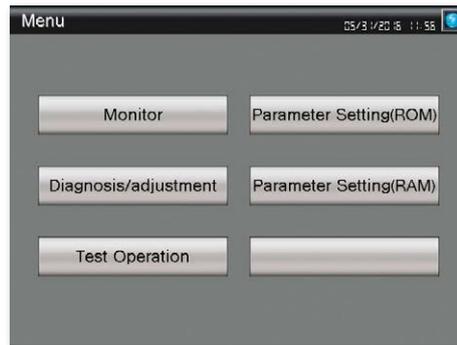
WB

A

A-RJ

JE-B

Sample screens are available for connection between GOT2000 and servo amplifiers. You can change parameters, monitor the servo amplifiers, and perform test operations. Sample screens are included with GT Works3. For the details, please contact your local sales office.



[Screen specifications]

GOT type: GT27\*\*~V (640 × 480)

\* Change the GOT type depending on your needs.

[Supported functions]

- One-touch tuning function
- Tuning function
- Power monitor function
- Machine diagnosis function etc.

[Compatible language]

English, Japanese, Chinese (Simplified)

### Using sample screens

In the GT Works3 menu, select [Project] → [New] → [Utilize Data].

Select "Sample Project" as the Target on the Utilize Data screen

↓

Enter "J4" as a keyword and click [Search]

↓

In the search result, select a file name and click [OK]

Mitsubishi Servo Amplifier MELSERVO-J Series MR-J4-B

Sample Screen Manual

In the sample screen manual, check the details of settings and functions

### How to read marks

**B** MR-J4-B

**B-RJ** MR-J4-B-RJ

**WB** MR-J4W2-B/MR-J4W3-B

**GF** MR-J4-GF

**GF-RJ** MR-J4-GF-RJ

**A** MR-J4-A

**A-RJ** MR-J4-A-RJ

**JE-B** MR-JE-B

**JE-A** MR-JE-A

## Global FA centers



### China Mainland

#### Shanghai FA Center

**Mitsubishi Electric Automation (China) Ltd.**  
10F, Mitsubishi Electric Automation Center, No.1386 Hongqiao Road, Changning District, Shanghai, China  
Tel: +86-21-2322-3030 / Fax: +86-21-2322-3000(9611#)

#### Beijing FA Center

**Mitsubishi Electric Automation (China) Ltd. Beijing Branch**  
Unit 901, 9F, Office Tower 1, Henderson Centre, 18 Jianguomennei Avenue, Dongcheng District, Beijing, China  
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#### Tianjin FA Center

**Mitsubishi Electric Automation (China) Ltd. Tianjin Branch**  
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#### Guangzhou FA Center

**Mitsubishi Electric Automation (China) Ltd. Guangzhou Branch**  
Room 1609, North Tower, The Hub Center, No.1068, Xingang East Road, Haizhu District, Guangzhou, China  
Tel: +86-20-8923-6730 / Fax: +86-20-8923-6715

### Taiwan

#### Taipei FA Center

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## GOT2000 lineup

The GOT2000 inherits all the features of our popular GOT1000 series, and introduces a more refined and advanced function set. The powerful and flexible lineup includes GOTs with various features and communication options to tackle any application you may encounter.

Concept movie



Lineup



## GT27 model

Advanced model with multi-touch gesture functions

Ethernet	CC-Link
RS-232	Bus
RS-422/485	MELSECNET
CC-Link IE Controller	
CC-Link IE Field*	

\* The CC-Link IE Field Network communication unit and GOT set is also available.

15 inch **XGA**



GT2715-XTBA  
GT2715-XTBD  
Resolution: 1024 x 768  
Display color: 65536 colors

12.1 inch **SVGA**



GT2712-STBA  
GT2712-STBD  
GT2712-STWA [White model]  
GT2712-STWD [White model]  
Resolution: 800 x 600  
Display color: 65536 colors

## GT25 model

High performance, cost efficient, mid-range model

Ethernet	CC-Link
RS-232	Bus
RS-422/485	MELSECNET
CC-Link IE Controller	
CC-Link IE Field*	

\* The CC-Link IE Field Network communication unit and GOT set is also available.

12.1 inch **SVGA**



GT2512-STBA  
GT2512-STBD  
Resolution: 800 x 600  
Display color: 65536 colors

NEW



GT2512F-STNA [Open frame model]  
GT2512F-STND [Open frame model]  
Resolution: 800 x 600  
Display color: 65536 colors

## GT23 model

Unchallenged cost performance

Ethernet
RS-232
RS-422/485

10.4 inch **VGA**



GT2310-VTBA  
GT2310-VTBD  
Resolution: 640 x 480  
Display color: 65536 colors

8.4 inch **VGA**



GT2308-VTBA  
GT2308-VTBD  
Resolution: 640 x 480  
Display color: 65536 colors



Compliant with safety standards including UL Standards, maritime certifications, and radio laws.

For inquiries relating to the status of conforming to various standards and laws (CE, ATEX [to be obtained soon], UL/cUL, Class I Division 2, EAC, KC, KCs [to be obtained soon], and maritime certifications [ABS/BV/DNV GL/LR/NK/RINA]), please contact your local sales office.

The release date varies depending on the product and your region. For details, please contact your local sales office.

Multi-touch gesture   Multimedia\*   Video/RGB\*   Sound output   External I/O

\* Not supported by 5.7 inch model.

**10.4 inch** SVGA VGA



GT2710-STBA  
GT2710-STBD  
Resolution: 800 × 600  
Display color: 65536 colors

GT2710-VTBA  
GT2710-VTBD  
GT2710-VTWA [White model]  
GT2710-VTWD [White model]  
Resolution: 640 × 480  
Display color: 65536 colors

**8.4 inch** SVGA VGA



GT2708-STBA  
GT2708-STBD  
Resolution: 800 × 600  
Display color: 65536 colors

GT2708-VTBA  
GT2708-VTBD  
Resolution: 640 × 480  
Display color: 65536 colors

**5.7 inch** VGA



GT2705-VTBD  
Resolution: 640 × 480  
Display color: 65536 colors

Sound output   External I/O

**10.4 inch** VGA



GT2510-VTBA  
GT2510-VTBD  
GT2510-VTWA [White model]  
GT2510-VTWD [White model]  
Resolution: 640 × 480  
Display color: 65536 colors

**NEW**



GT2510F-VTNA [Open frame model]  
GT2510F-VTND [Open frame model]  
Resolution: 640 × 480  
Display color: 65536 colors

**8.4 inch** VGA



GT2508-VTBA  
GT2508-VTBD  
GT2508-VTWA [White model]  
GT2508-VTWD [White model]  
Resolution: 640 × 480  
Display color: 65536 colors

**NEW**



GT2508F-VTNA [Open frame model]  
GT2508F-VTND [Open frame model]  
Resolution: 640 × 480  
Display color: 65536 colors

## GT21 model Compact models with basic functions

Ethernet

**4.3 inch Wide**

**3.8 inch**

RS-232



GT2104-RTBD  
[Ethernet, RS-232, RS-422/485]  
Resolution: 480 × 272  
Display color: 65536 colors

RS-422/485



GT2103-PMBD [Ethernet, RS-422/485]  
GT2103-PMBDS [RS-232, RS-422/485]  
GT2103-PMBDS2 [RS-232 × 2 channels]  
GT2103-PMBLS [RS-422] 5 V DC type  
Resolution: 320 × 128  
Display color: Monochrome (black/white)  
32 shade grayscale  
Backlight: 5-color LED  
(white, green, pink, orange, red)

## SoftGOT

GOT2000 compatible HMI software  
**GT SoftGOT2000 Version 1**

GT SoftGOT2000 is an HMI software that allows GOT2000 functions to operate on a personal computer or panel computer. Various industrial devices can be connected and monitored.

Resolution: 640 to 1920 × 480 to 1200  
Display color: 65536 colors  
\* A separate license key must be mounted during use.



USB port  
license key

**GOT2000**



**GOT2000**

**Graphic Operation Terminal**

Designed to meet your industrial automation needs

The Mitsubishi Electric Graphic Operation Terminal GOT2000 Series continues to impress with solutions that fulfill all demands

The GOT2000 boasts advanced functionality, acts as a seamless gateway to other industrial automation devices, all while increasing productivity and efficiency. The high quality display is designed to optimize operator control and monitoring of device and line statuses. If you are looking for an intuitive operation terminal, the new tablet-like operability and the higher functionality of operation terminal makes the GOT2000 the ideal choice. Incorporate the GOT2000 to bring forth flexibility, productivity, and quality on a global scale.



For the details, please refer to the Mitsubishi Graphic Operation Terminal GOT2000 Series Catalog (L(NA)08270ENG).

**MELSERVO-J4**



MITSUBISHI SERVO AMPLIFIERS & MOTORS

**MELSERVO-J4**

Man, machine and environment in perfect harmony  
MELSERVO-J4 – trusted technology makes an evolutionary leap forward

Introducing the MELSERVO-J4 series. Offering more than just improved performance, these servos are designed to drive the industries of tomorrow. Backed by Mitsubishi leadership in all-digital technology, MELSERVO has become one of the most globally respected names in factory automation. And now – with the safety, ease of use, and energy-efficient design of the new MELSERVO-J4 series – man, machine and environment can at last work together in perfect harmony.



For the details, please refer to the Mitsubishi Servo Amplifiers & Motors MELSERVO-J4 Catalog (L(NA)03058).

## Related products

Mitsubishi Electric offers a wide variety of industrial devices to meet your needs.



### The MELSEC Series takes control to the next level

MELSEC Series PLCs always meet your system demands and more, with something to offer for any prospective control system.

Enhanced solutions are realized by a wide lineup of PLCs and network systems.



### A diverse product range helps make you the right product choice

Day by day, in heavy industrial use, our frequency inverters prove their high levels of cost-effectiveness, reliability, functionality, and flexibility.



### Armed for productivity Industrial robots MELFA

MITSUBISHI MELFA industrial robot fits for cell manufacturing with high speed and high precision performance and combining intelligent technology. It has easy connectivity with Mitsubishi's PLCs and FA equipments.

All product and company names used herein are either trademarks or registered trademarks of their respective owners.

The actual color may differ slightly from the pictures in this catalog.  
The actual display may differ from what are shown on GOT screen images.

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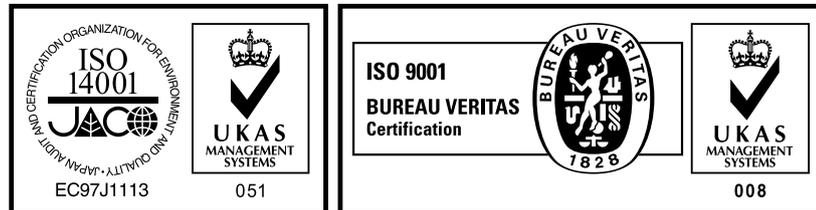
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