



Barcode Reader Option Kit
Installation and Setup Manual

Tissue-Tek[®] Glas[™] g2 Glass Coverslipper

6500 Glas g2-A1, 115VAC
6501 Glas g2-J0, 100VAC
6502 Glas g2-E2, 230VAC

Sakura Seiki Co., Ltd.
Sakura Finetek Japan Co., Ltd.
A10-IF-006(ENG)-02
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1. Introduction

This manual applies to the Tissue-Tek® Glas™ g2 Glass Coverslipper which does not have the barcode reading capabilities as an option and would require retrofitting of the instrument to install a barcode reader. Applicable serial numbers of the instruments are as follows:

A1: 6500 0051 to 0230

J0: 6501 0051 to 0264

E2: 6502 0051 to 0239

The manual provides explanations in regards to how to install the Microscan Co. Barcode Reader (Quadrus MINI Velocity) into the instrument and to configure the barcode reader (to be referred as the reader from here on) to read barcodes. * “BCR” is part of a part name.

The instrument has a lot of moving components and sections where parts are spaced close together. Therefore, high assembly accuracy is required. It is required to effectively use this manual along with the service manual and to fully understand the instrument prior to installing the reader.

Precautions:

- Prepare a USB cable that is to be connected from the instrument to the PC.
- The installation is to be performed by a service technician who has received service training for the Glas™ g2 instrument.
- For safety reasons, remove the power cable from the instrument when commencing work, unless you are configuring the settings for the reader.
- Do not look directly into the LED light of the reader.
- When using a glass slide or cover glass, use caution and avoid injury from broken glass.
- Xylene is used as a penetrating agent. Because xylene is known to be harmful to the human body, it is recommended to wear protective masks, gloves, etc.
- Be careful of damage or fire ignitions caused by static electricity.
- Some photographs and illustrations in the manual slightly differ from actual objects.

2. Work Description

The content for the work to be performed is as follows.

- Installation of new BCR relay board
- Installation of new USB port
- Replacement of solenoid valve mounting plate
- Replacement of cable bearer mounting plate
- Installation of barcode reader
- Replacement of control board
- Replacement of BCR relay cable and new DC24V cable wiring associated with BCR trigger signal cable
- Configuration and verification of barcode reader
- Replacement of rear panel and left front interior panel

3. Option Kit (M : Glas-540)

Refer to the “Option Kit Parts List” and verify that there are no missing parts.

- ※ The reader (FIS-6300-3114G) is not included in this kit.
- ※ The control program is already installed in the control board. Regarding the control program software version, refer to article “(11)-1, Verification of the control program software version”.

4. Required tools

The following tools are required for the installation to be performed.

No.	Name	Model/Size
1	Nippers	
2	Waste Cloth	
3	Phillips Screwdriver	ISO No.2
4	Spanner (wrench)	Nominal Size 18 mm

5. Parts required for the Reader

- 1 x USB Cable
It is recommended to use a cable that is less than 3m in length with both ends of the connector using Type A connectors.
- 1 x Windows based PC (OS: Windows 2000/Windows XP or later)
A PC the customer will use to connect to the instrument is recommended.
- 1 x ESP Multi-language (ESP: Easy Setup Program)
Reader Configuration Software
- 1 x Barcode Reader User's Manual
- About 20 glass slides with barcode printed
Refer to article "(12) Setup of Barcode Reader" regarding the types of barcode symbologies that can be used.

※ Please download the ESP and barcode reader user's manual from the following website.
<http://www.microscan.com/en-us/serviceandsupport/downloadcenter.aspx#Software>

6. Work Procedure

(1) Checking the configuration settings and software version of the control program

Turn on the instrument prior to commencing work. Write down the software version of the current instrument control program along with the configuration contents listed below.

Counter, system counter, operation parameters (program name, coverslipping speed, dispense amount), CG pick-up angle, whether program lock is enabled or disabled and whether CG buzzer is enabled or disabled when the CG quantity is low.

(2) Removal of exterior panels

Refer to the service manual and remove the exterior panels listed below.

No.	Part Name	Service Manual Reference	Reassembly Required after removal
1	Left Side Panel	6-5-20-1	Yes
2	Control Box Cover	6-5-20-3	Yes
3	Rear Panel	6-5-20-4	No

(3) Removal of interior panels

Refer to the service manual and remove the interior panels listed below.

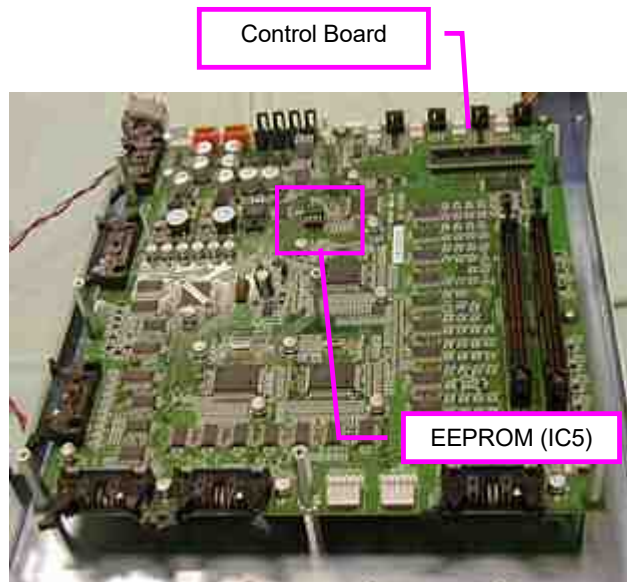
No	Part Name	Service Manual Reference	Reassembly Required after removal
1	Interior Panel, Right Front	6-5-13-2	Yes
2	Interior Panel, Left Front	6-5-13-1	No

(4) Replacement of Control Board

Replace the control board with referring to Paragraph 6-5-15-2 in the service manual. Do not connect the connector CN2 after replacing the control board at this point.

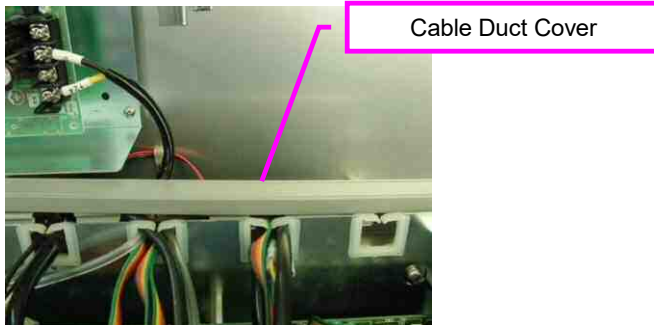
Important

After the control board is replaced, the offset value in the settings will also change. Therefore, it is required to remove the EEPROM (IC5) from the old control board and install it onto the new control board.



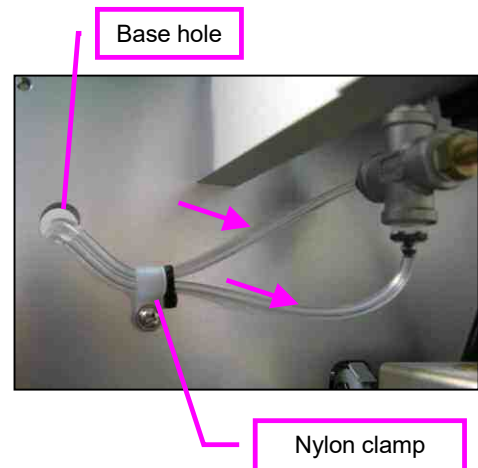
(5) Installation of BCR Relay Board and Replacement of DC24V Cable

1. Remove the cable duct cover.



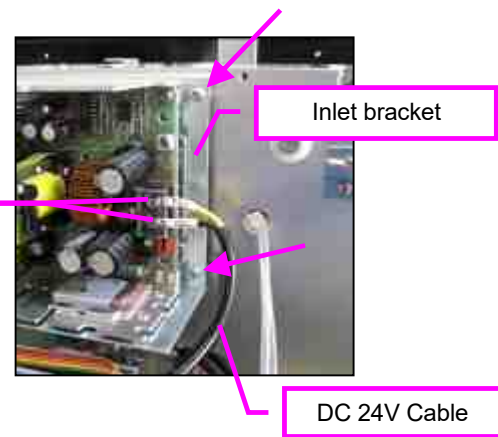
2. For convenience of installing the relay board mounting plate, remove the CG absorption tubes, indicated by the two arrows, from the joints at this point. Also, remove the nylon clamp and tuck the CG absorption tubes through the base hole toward the back of the instrument.

※ Put a mark on either one of the two tubes and joints so you will not mistake which tube is placed in which joint later during assembly.



3. Remove the two ring terminals from the switching power supply block. If a connector is plugged into the connector CN2, remove it from CN2 and remove the DC24V cable.

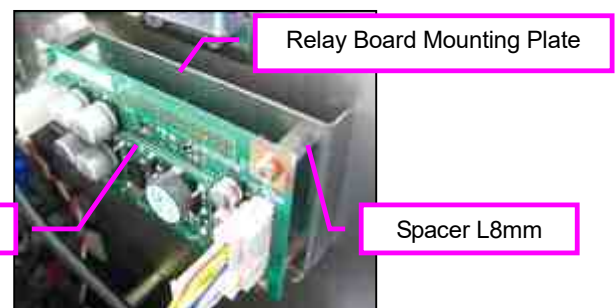
Ring terminals to be removed



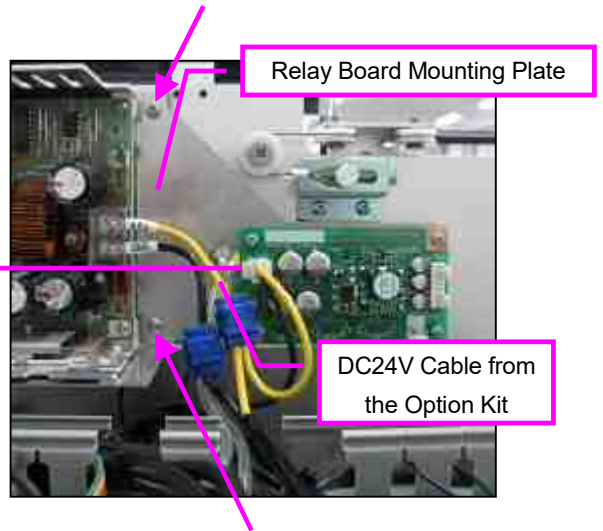
4. Remove the two screws, indicated by the arrows, that hold the inlet bracket in place.
Screw: Sems A, M4×6, 2 pcs.

5. Place four spacers (L8mm) between the relay board mounting plate and the BCR relay board, then install the BCR relay board.
Screw : Sems A M3×6 4 pcs.

BCR Relay Board



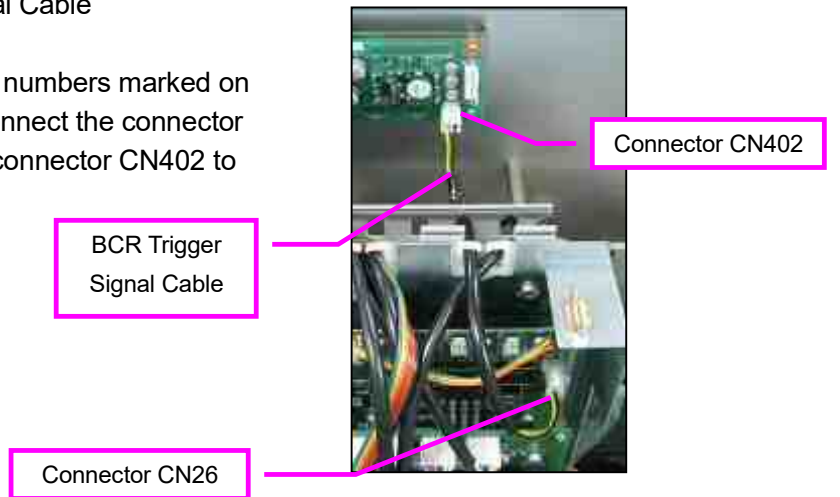
6. Attach the relay board mounting plate to the inlet mounting plate using the screws that were removed in step 4. The mounting locations are indicated by the two arrows in the photo to the right.



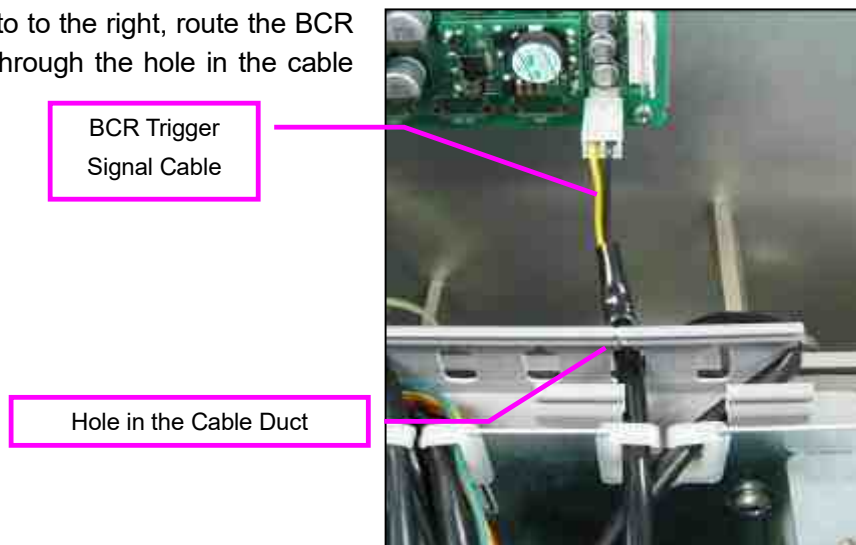
7. Following step 3 in reverse, attach the DC24V cable from the option kit. The connector CN401 from the new DC24V cable is to be connected to CN401 located on the BCR relay board.

(6) New wiring of BCR Trigger Signal Cable

1. In accordance to the connector numbers marked on the BCR trigger signal cable, connect the connector CN26 to the control board and connector CN402 to the BCR relay board.

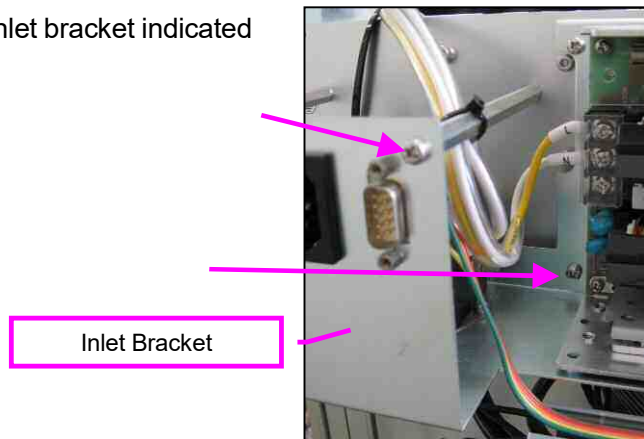


2. As shown in the photo to the right, route the BCR trigger signal cable through the hole in the cable duct.

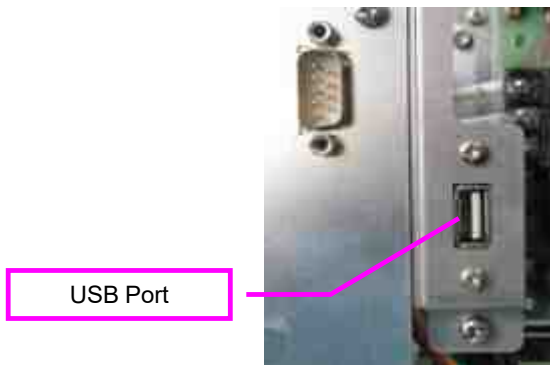


(7) Installation of USB Port

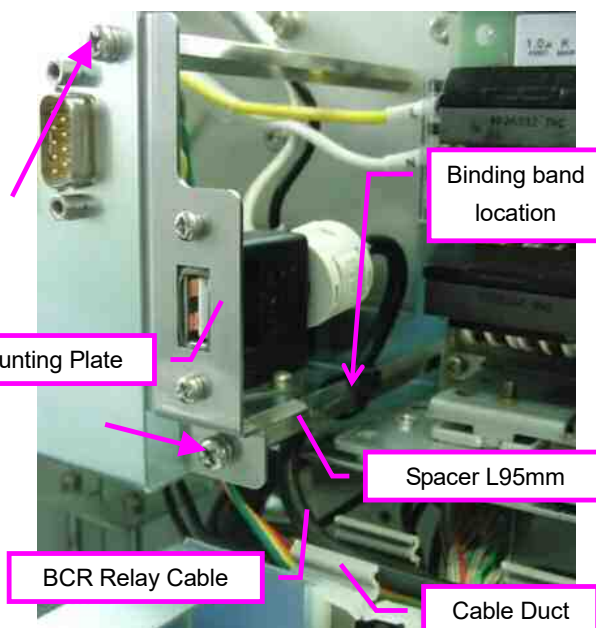
1. Remove the two screws that hold the inlet bracket indicated by the arrows in the photo to the right.
Screws: Sems A, M4×6, 2 pcs.



2. Screw the USB port from the BCR relay cable to the USB port mounting plate. Orientation of the USB port is to be as shown in the photo below.
Screws: Truss head, with thread lock adhesive, M3x6, 2 pcs.
Screw Torque: 0.6N·m



3. Attach the spacer L95mm to a position of the screw indicated by the bottom arrow in the photo in step 1. Align the spacer with a mounting hole at the bottom of the USB port mounting plate. Using the two screws removed in step 1, install the USB port mounting plate to the inlet bracket. The two screw locations are as indicated by the arrows in the photo to the right.



4. After routing the BCR relay cable, as indicated in the photo to the right, loosely bind the BCR relay cable to the spacer using a binding band. In addition, the BCR relay cable is to be housed within the cable duct.

(8) Replacement of Solenoid Mounting Plate and Connection of Receptacle

1. Remove the solenoid mounting plate along with the solenoid valve.

Screws: Sems A, M4×8, 4 pcs.

※ The solenoid mounting plate that was removed is no longer required.

Solenoid Mounting Plate



Solenoid valve

2. Place the BCR relay cable connector into the receptacle mounting hole of the solenoid mounting plate so that the groove of the female receptacle faces the right side of the instrument.



Female Receptacle

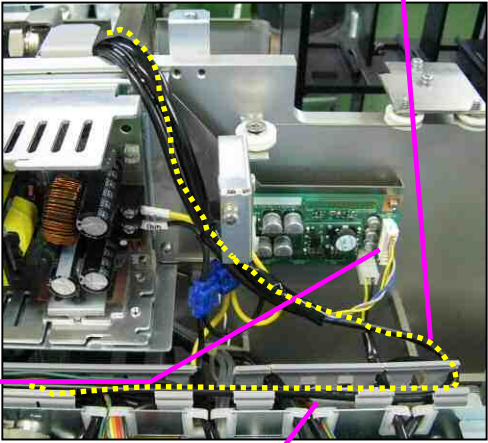
Groove of the receptacle

The receptacle mounting hole on the Solenoid Mounting Plate



3. Bring the solenoid mounting plate with the attached BCR relay cable to the mounting position of the plate (see step 5 for reference). Route the BCR relay cable as displayed with the yellow dotted lines and inside the cable duct. Connector CN405 from the BCR relay cable is to be connected to connector CN405 on the BCR relay board.

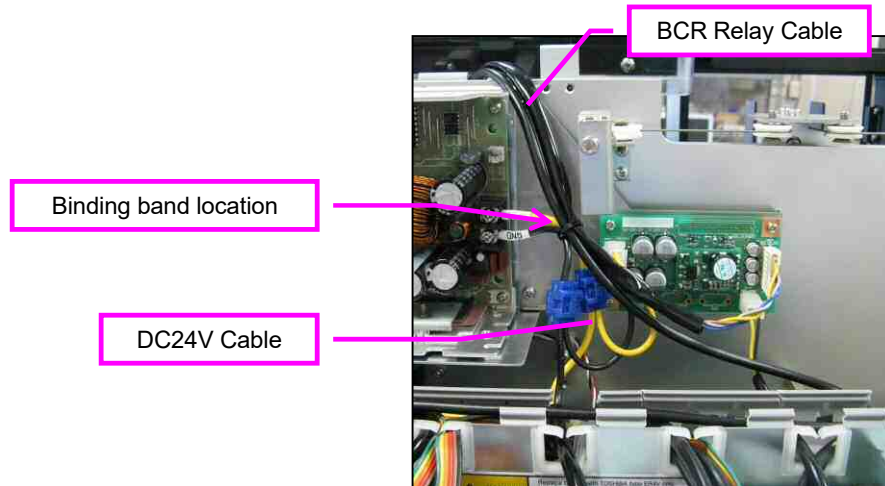
BCR Relay Cable



Connector CN405

Cable Duct

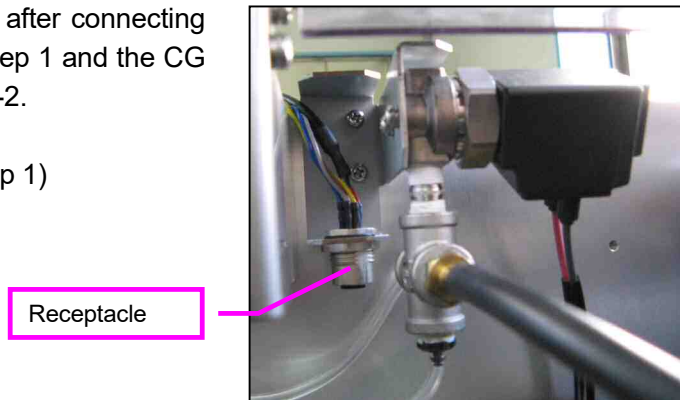
- Loosely bind the BCR relay cable and the DC24V cable using a binding band.



- Install the solenoid mounting plate after connecting the solenoid valve removed from step 1 and the CG suction tube removed from step (5)-2.

Screws: Sems A, M4x8, 4 pcs.

(The screws removed from step 1)



- Tighten the two binding bands that are loosely holding the BCR relay cable in step (7)-4 and step 4 and cut the excess length of the binding bands using nippers.

- Place the cable duct cover back in place.

(9) Replacement of Cable Bearer Mounting Plate (2)

1. Remove the two screws shown in the photo to the right.

Then remove the drying fan mounting plate.

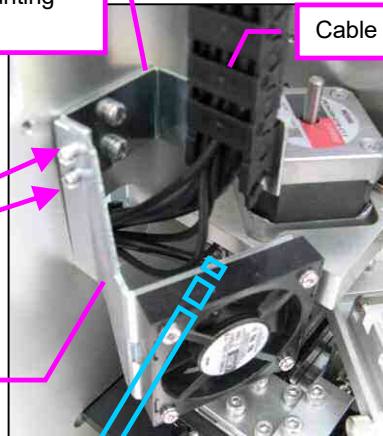
Screws: Sems A, M3×6, 2 pcs.

Removal Location

Cable Bearer Mounting Plate (2)

Cable Bearer

Drying Fan Mounting Plate

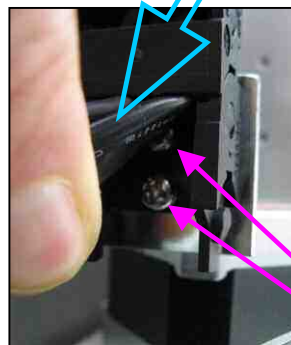


2. Remove the two screws that hold the cable bearer in place.

Screws: Sems A, M3×6, 2 pcs.

(Hidden under the cable)

Removal Position



3. Remove the cable bearer mounting plate (2) and install the new cable bearer mounting plate (2) supplied with the option kit.

Screws: Sems A, M4×6, 2 pcs.

Screws used to secure the cable bearer mounting plate (2)

Cable Bearer Mounting Plate (2) supplied with the Option Kit.



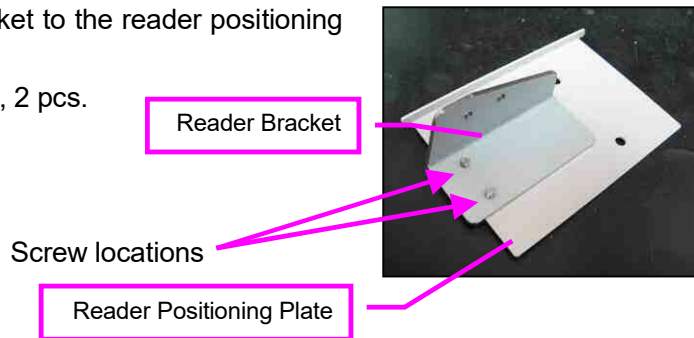
4. Assemble the drying fan mounting plate along with the cable bearer removed from steps 1 and 2 to the new cable bearer mounting plate (2) supplied with the option kit.

Screws: Sems A, M3×6, 4 pcs.

(10) Installation of Barcode Reader

1. Assemble the reader bracket to the reader positioning plate.

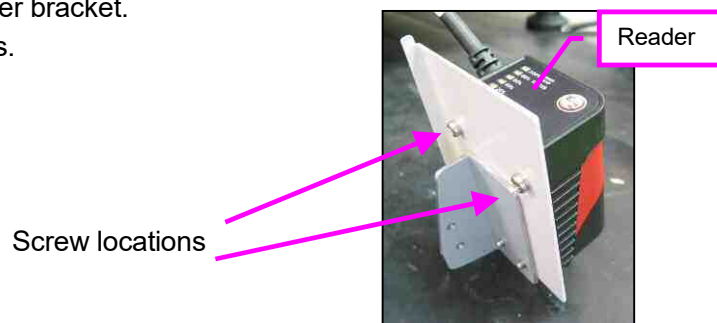
Screws: Sems A, M3×6, 2 pcs.



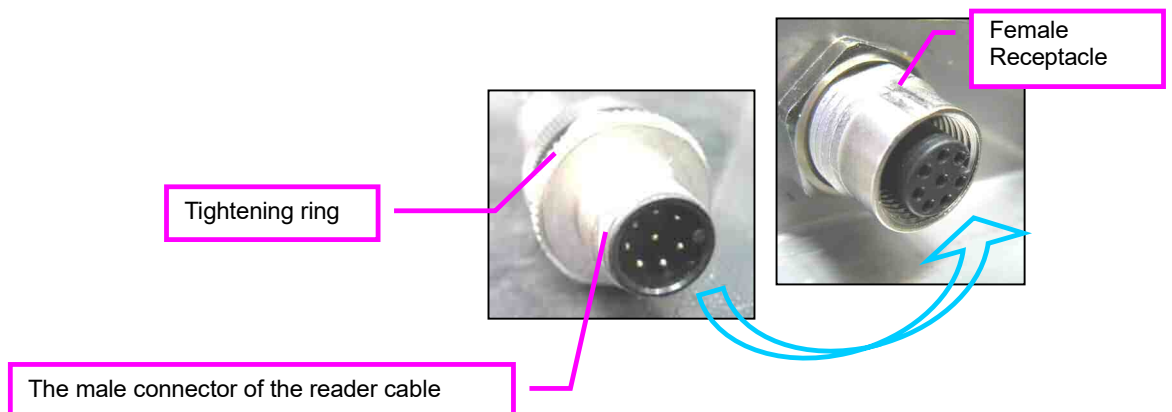
2. Assemble the reader to the reader bracket.

Screws: Sems A, M3×6, 2 pcs.

Screw Torque: 0.6N·m



3. Insert the connector from the reader cable to the receptacle on the instrument. Align the key in the male connector of the reader cable with the groove of the female receptacle and connect them together. Tighten the connector by turning the tightening ring of the connector.

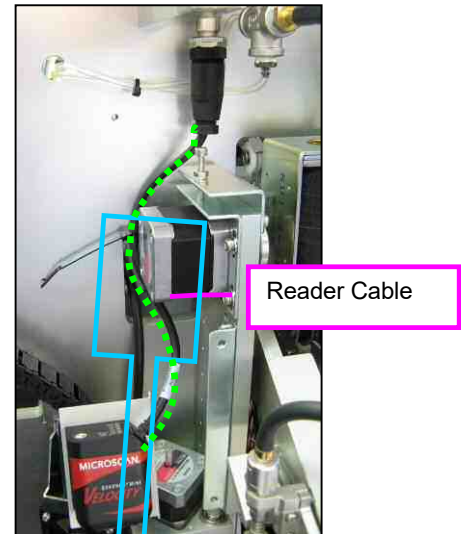
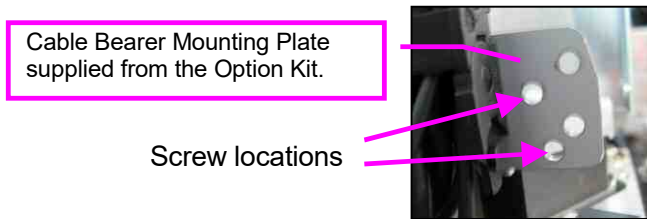


4. Assemble the reader positioning plate to the cable bearer mounting plate (2) so that the reader cable is routed as indicated with the dotted lines in the photo to the right.

Screw locations are shown in the photo below with arrows.

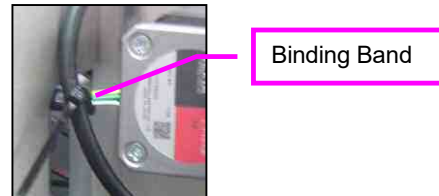
Screws: Sems A, M3×6, 2 pcs.

- ※ Make sure the cable is not touching the motor.



5. Bundle the reader cable together with the Z-CG arm motor cable using a binding band. Cut the excess length of the binding band using nippers.

- ※ Move the cables from side to side and up and down by hand to make sure that the cables do not interfere with the cable bearer.
- ※ Loosely attach the left front interior panel, supplied with the option kit, to the instrument. Verify that there is no interference between the panel and the reader.



- ※ Starting from article (11), the work is conducted with the instrument power ON. Make sure that there is no problem with screws and wires/cables that have been modified up to this point.

(11) Work related to Change of Control Program on the Instrument

1. Verification of the control program software

Turn on the instrument and verify that the control program software is as follows:

Main : N94-901-00 or later

Sub1 : N94-911-00 or later

Sub2 : N94-921-00 or later

Sub3 : N94-931-00 or later

2. Work to be conducted if the control program is subject to change

Since the control program software version is subject to change, additional work is to be required as indicated in the table below. The work is different depending on the previous software version installed. Refer to the following table:

Previous Main CPU version *	Work to be conducted for the Control Program
N94-900-00	Perform Work #1 and then Work #2
N94-900-01	Perform Work #1 and then Work #2
N94-900-02	Perform Work #1 and then Work #2
N94-900-03	Perform Work #1 and then Work #2
N94-900-04	Perform Work #1 and then Work #2
N94-900-05	Perform Work #1 and then Work #2
N94-900-06	Perform Work #1
N94-900-07	Perform Work #1
N94-900-08	Perform Work #3

* "Previous Main CPU version" refers to the software version written down in article (1).

Contents of Work #1

- a. Start the instrument in "Service Mode".
- b. If memory error (EC31) appears on the display screen, press the "Exit" key. If memory error (EC31) does not appear, go to step "d."
- c. The EEPROM initialization screen will appear. Press the "Exit" key. Use due caution, as pressing the "Enter" key will initiate the EEPROM data.
- d. The main menu will appear in the service mode. Select "1. Setup".
- e. Select "11. Mounting medium". Confirm that the setting is "ON" and press the "Enter" key. If the setting is not "ON", change the setting to "ON" and press the "Enter" key.
- f. Select "12. Volume". Confirm that the setting is set to "1. 30 → 120" and press the "Enter" key. If it is a different setting, change the setting to "1. 30 → 120" and press the "Enter" key.
- g. Select "13. Barcode reader". Set the settings to "Use" and "0.1s". Then press the "Enter" key.

Contents of Work #2

- a. Conduct the offset clear mode operation as shown on paragraph 7-2-9-2 in the service manual.
- b. Conduct the slide position adjustment as shown on paragraph 7-2-9-1 in the service manual.
 - ※ There is no need to conduct the slide position adjustment if there is no problem with slide retrieval.
- c. Conduct the nozzle alignment according to paragraph 7-1-1 in the service manual. Change the speed setting on all CG sizes to "low".
- d. Conduct the reset of the backup data according to paragraph 7-7-10. Select option "2. Log" to initiate the data.

Contents of Work #3

- a. Start the instrument in "Service Mode".
 - b. If memory error (EC31) appears on the display screen, press the "Exit" key. If memory error (EC31) does not appear, go to step "d."
 - c. The EEPROM initialization screen will appear. Press the "Exit" key. Use due caution, as pressing the "Enter" key will initiate the EEPROM data.
 - d. The main menu will appear in the service mode. Select "1. Setup".
 - e. Select "13. Barcode reader". Set the settings to "Use" and "0.1s". Then press the "Enter" key.
3. Verification of the Configuration Settings
- Compare the program contents (program name, coverslipping speed, dispense amount), CG pick-up angle, whether program lock is enabled or disabled and whether CG buzzer is enabled or disabled when the CG quantity is low, that have been recorded in article (1) in **6. Work Procedure**. If there are any discrepancies, change the configuration setting to what was recorded earlier.
- ※ If the language display needs to be changed, change the language display prior to verifying the configuration settings. If this is not done in order, it would be required to reconfirm the configuration settings again.

(12) Setup of Barcode Reader

※ Remove the new left front interior panel and right front interior panel as there is the possibility that the mounting angle of the reader may need to be adjusted.

1. Installing the barcode reader setup software “ESP” to the PC

Install the ESP software downloaded from Microscan’s company website to the PC that is to be connected to the Glas g2 instrument.

2. Connecting the instrument and the PC

a. Connect one end of the USB cable into the USB port located on the back of the instrument and the other end of the cable into the USB port on the PC.

b. Start up the PC.

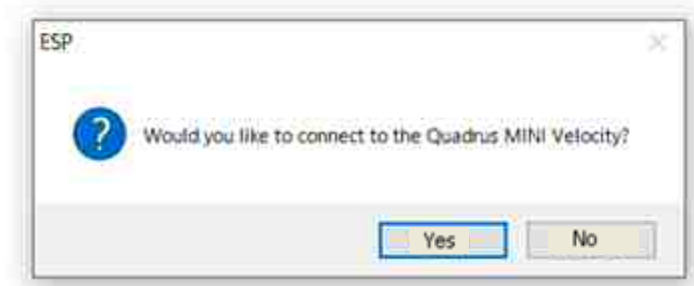
c. When the instrument is turned ON, the PC will automatically recognize the reader.

* Power to the instrument must be turned ON last. If the USB cable is connected to the PC when the instrument is already ON, the reader is not automatically recognized by the PC. Redo the procedure if you make a mistake in the order for which you start up the instrument.

d. Start up the ESP. When the following screen is displayed, select the “Quadrus MINI Velocity” and click “OK”.



- e. When the following screen is displayed, click “Yes”.



- f. When you select “USB” as a connection protocol, the “Select Device” field will be displayed. Click “Connect” to establish the connection. If the “Select Device” field is not displayed, the barcode reader has not been recognized. Turn off the instrument, verify that the USB cable is properly connected and then turn on the instrument again.

※ Displayed in the “Select Device” field is the number specific to each barcode reader.

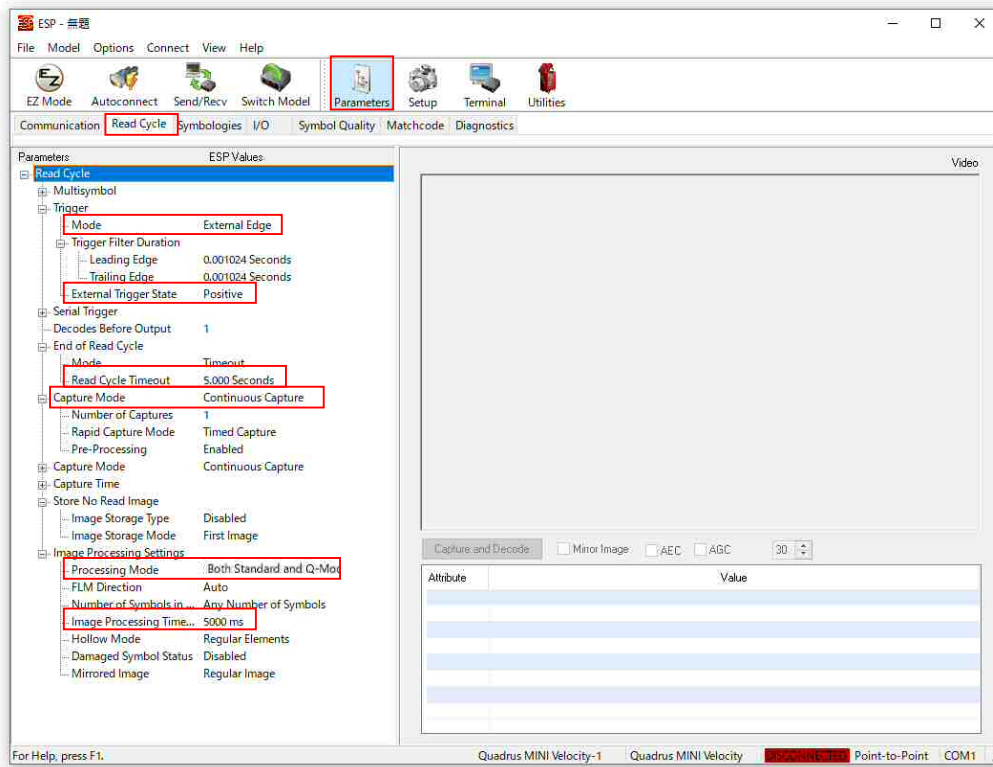


3. Initialization

- a. Click on [App Mode] → [Send/Recv] → [Default all ESP Settings] in order. The value of each ESP system setting will be initialized.
- b. Click on [Send/Recv] → [Save to Reader] → [Send and save] in order. The initialization of the ESP and reader is complete.

4. Setting the read cycle

- a. Click on [Parameters] → [Read Cycle].
- b. When the following screen is displayed, check the parameters listed below and modify as needed to match with the reading conditions of the Glas g2. Select and pull down each setting item to configure the settings as listed below.



Parameters and set values to be configured:

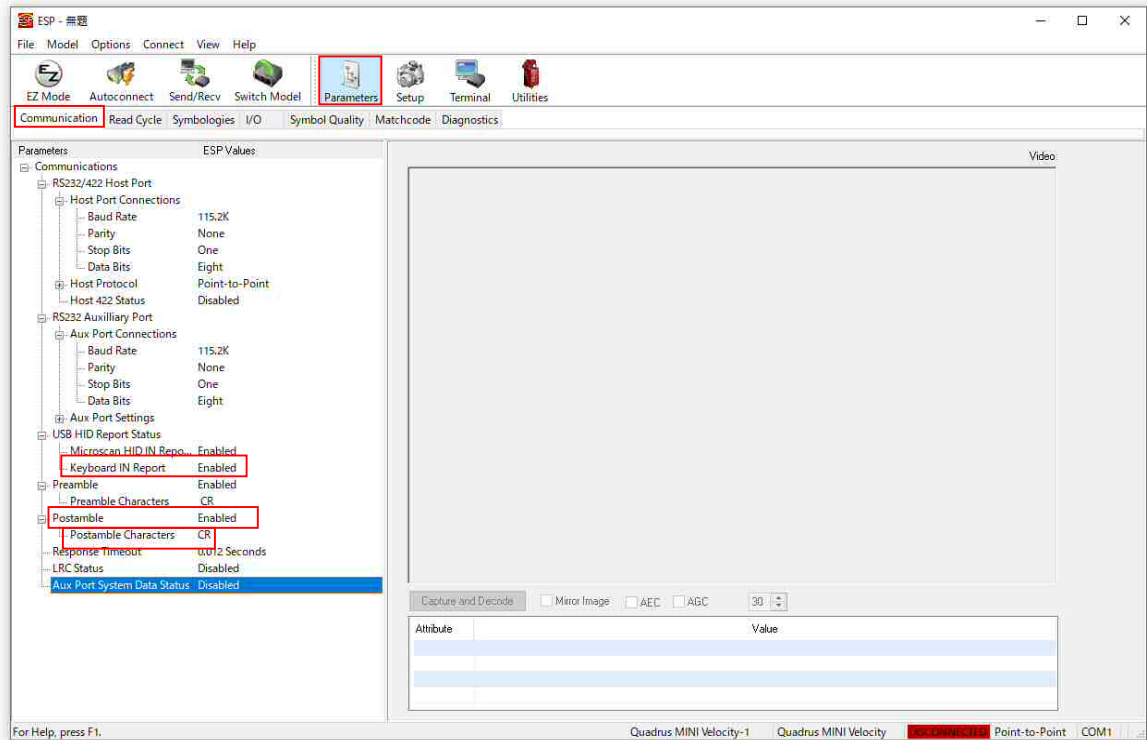
Parameters	ESP Values
Trigger • Mode	External Edge
Trigger • External Trigger State	Positive
End of Read Cycle • Read Cycle Timeout	5.000 Seconds
Image Processing Settings • Processing Mode	Both Standard and Q-Mode
Image Processing Settings • Image Processing Timeout	Both Standard and Q-Mode
Image Processing Timeout	5000ms (this represents 5 seconds)

* Note that the unit used in the Read Cycle Timeout is in seconds, while those used in the Image Processing Timeout are in milliseconds. However, the default value of the Read Cycle Timeout is displayed as “2.000Second”. Be careful, as double-clicking the input box will change the value to “2.000”.

- c. Then, click on [Send/Recv] → [Save to Reader] → [Send and save]. The reader LED will start to flash. Once the data is stored in the reader, the blinking LED on the reader will turn off.

5. Setting the display of scanned data

- a. Click on [Parameters] → [Communications].
- b. When the following screen is displayed, check the parameters indicated below and modify as needed to match with the reading conditions of the Glas g2. Select and pull down each setting item to configure the settings as listed below.



Parameters and set values to be configured:

Parameters	ESP Values
USB HID Report Status · Keyboard IN Report	Enabled
Postamble	Enabled

These settings are for displaying scanned barcode data in applications such as Excel or Notepad (Keyboard Interface)

Parameters	ESP Values
Postamble · Postamble Character	CR

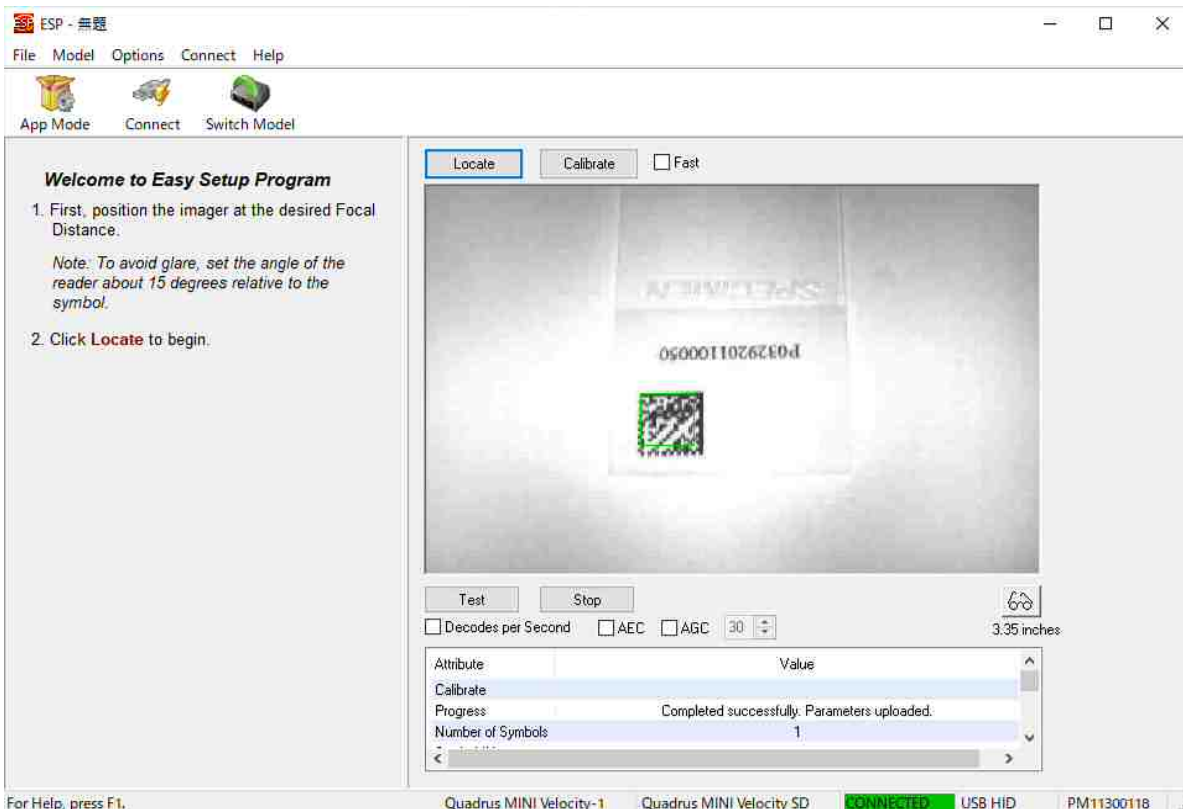
This setting is for starting a new line and inputting data in Excel, etc. without semicolons.

- c. Then, click on [Send/Recv] → [Save to Reader] → [Send and save].

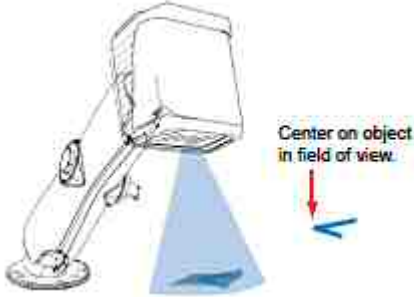
6. Validation and calibration of the barcode reader

- a. Start the Glas g2 in service mode.
- b. Go to the Barcode Reader screen from the main menu screen. Enable the reader to “Use” (For details, refer to 7-1-13 in the service manual). Select the following items in order; “1. Setting mode” → “13. Barcode reader”.
- c. From the main menu screen, go to the “Adjust reader” screen. Select the following items in order; “4. Motion check” → “2. Various motions” → “8. Adjust reader”.
- d. Using the reader adjustment function (for details refer to paragraph 7-4-2-8 in the service manual), transfer the slide glass that is used for calibration to the read position. In this adjustment, the following slides should be used. If customer is using multiple types of symbologies, select the one that represents the most commonly used symbology.
 - For customers which the barcode location can be specified to one position:
Use a slide with a barcode printed in the predetermined location. The barcode sample is to use the same type and size as the one used by the customer.
 - For customers which the barcode location cannot be specified to one location:
Use a slide with a barcode printed in the center of the frosted area. The barcode sample is to use the same type and size as the one used by the customer.
- * If there are multiple barcodes printed on a single glass slide, refer to the barcode reader user’s manual and configure the read cycle so that multiple barcodes can be read.
- e. Click on [EZ Mode]. And then click on [Locate]. A blue LED light will be projected from the reader and the PC screen will display the barcode area of the glass slide as shown in the image below.

* If the following screen is not displayed, repeat step “e” because the calibration failed.



- f. Confirm that the “V” pattern of the blue LED light (the pattern indicated by the red arrow in the figure below) is roughly around the center of the frosted area of the slide. Click on [Calibrate]. Calibration will commence and the message “Calibrated successfully” will be displayed after a successful calibration. The calibration operation is complete at this stage. Click [Close].



- ※ In the barcode reader user’s manual, it states that the “V” pattern from the blue LED light is to be directed at the center of the barcode. However, in this system setup, the LED light is to be adjusted so that it is to be centered on the frosted area of the slide. Adjustments can be made provided that the LED light is directed closer towards the barcode.

Image of the blue LED light pattern as it would appear

- ※ If the “V” pattern from the LED light is not near the center of the frosted area of the slide, perform the following steps.
- Conduct calibration and a read confirmation with the current mounting position of the reader. If the scan is successful, an adjustment to the mounting position is not required.
 - If the scan is unsuccessful, adjust the mounting position of the reader within the extent possible and move the “V” pattern as close as possible to the center of the frosted area. However, this method does not apply if the “V” pattern from the LED light diverges away from the barcode symbol by adjusting the mounting position.
 - ※ Adjustment method: Adjust by loosening the two screws that affix the reader positioning plate to the cable bearer mounting plate (2). Refer to article (10) Installation of Barcode Reader, step 4 for details.

To check if the reads are successful, run [Utility] from the ESP. It is desirable to have a read rate equal to or faster than 10 decodes/sec and a read accuracy between 90% and 100%.

- g. Click on [App Mode] → [Send/Recv] → [Save to Reader] → [Send and save].
- h. Click on [File] from the toolbar and save the file using a simple file name (ex: ESP-Glas). The next time you start the ESP, click on this file.
- i. Next, place a barcode-printed glass slide used by the customer to the barcode reading position. And then click on [Terminal] from the ESP.
- j. Press the right arrow key [>] on the instrument to initiate the barcode read. If the barcode read is successful, the contents of the barcode will be displayed on the terminal screen. If the read is NOT successful, a “NOREAD” message will be displayed.
- k. When the barcode is successfully read, click on [Utility] from the ESP. Verify that the read rate is equal to or faster than 10 decodes/sec and the read accuracy is between 90% and 100%.

- ※ If a problem occurs such as that the calibration failed or that the calibration is all right but the read is not successful, refer to the barcode reader user's manual to cope with the problem. It is desirable that the read rate and read accuracy are as described above. However, this does not apply if the barcode on the customer's slide is read successfully in "9. Reading confirmation in exhibition mode".

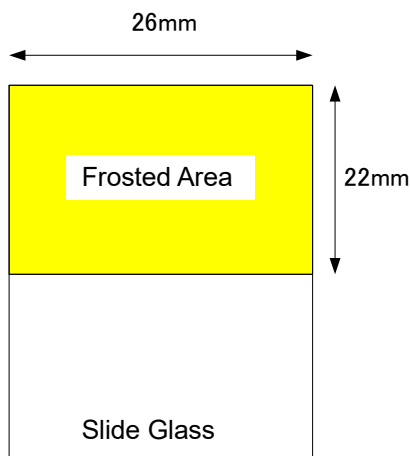
7. Configuring the different types of Barcode Symbologies

Barcode symbologies used during calibration will automatically become read-enabled. Therefore, when dealing with only one type of barcode symbology, you will not be required to configure the symbology setting. When using multiple symbologies, click on [App Mode] → [Parameters] → [Symbologies] to enable the appropriate symbologies. Then click on [Send/Recv] → [Save to Reader] → [Send and save].

- * Enable only the symbologies that are used, as the more symbologies are enabled the lower the read performance rate may become.
- * The types of barcode symbologies that can be read
 - Linear (1D) barcodes
Code39, Code128/EAN128, BC412, Interleaved 2of 5, Code93, Codabar, UPC/EAN, Postal Symbologies, GS1 DataBar (RSS)
 - 2D barcodes
Data Matrix (ECC0-200), Aztec Code, QR Code, Micro QR Code, PDF417, Micro PDF417
 - Composite symbols
The combination of 1-D Barcodes (EAN-128, UPC-A, EAN-13, EAN-8, UPC-E, GS1 DataBar (RSS)) and 2-D Barcodes (DF417, MicroPDF417)

8. Barcode positioning and print quality

The effective range of the barcode read is 26mm in the horizontal direction of the glass slide and 22mm in the vertical direction from the end surface of the frosted area. The barcode is to be of good quality print with no smudges. In addition, the barcode color and background color are to be in high contrast to each other (for example, a black barcode on a white background). If the frosted area is only a little transparent, even when a barcode is directly printed there, the barcode will not be read.



9. Reading confirmation in exhibition mode

Prepare about 20 barcode-printed glass slides using the type of glass slides the customer is using or the equivalent to it. Start the instrument in service mode. Select the exhibition mode. Select [Terminal] from the ESP. Ensure that all the barcodes from the slide glasses are successfully read during the coverslipping operation. If there are any slides that cannot be successfully read, refer to the barcode reader user's manual for assistance.

※ Configuration of the waiting time

If a read failure occurs during the operation in exhibition mode, try changing the following setting. Start the instrument in service mode. From the main menu select "1. setting mode" and from the setup menu select "13. barcode reader" to display the following screen. Increase the "wait time".

<Barcode reader>
 1.use
 2.wait time: 0.1s
 [ENTER] to save

However, since the recommended value of 0.1 second is determined from the processing speed, coverslipping quality and the barcode reading performance, you should change the setting only if the reading performance is improved. If the wait time is increased for no reason, it will slow the processing speed, reduce the amount of solvent that sticks to the slides, and lead to a lower coverslipping quality. If the coverslipping quality decreases, take the slide retrieval speed, coverslipping speed, mounting medium dispense volume, etc. into consideration so that optimal coverslipping can be performed.

Precaution for use of ESP

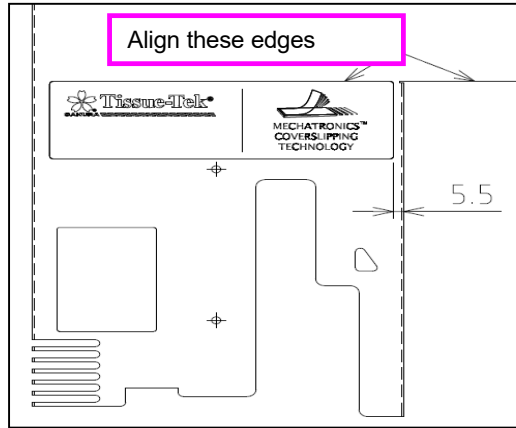
Be sure to save changes to the reader anytime you make changes using the ESP. For instance, if you perform the calibration without saving the changes to the reader after you have made changes to the settings, the settings prior to the calibration will automatically be read from the barcode reader and override the setting changes made.

(13) Label placement

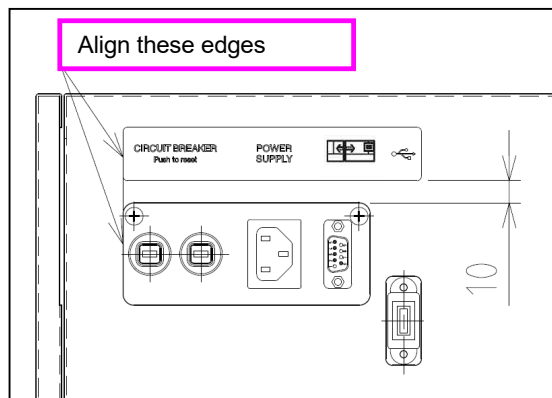
※Precaution for label placement

- Wipe away dirt and dust from the surface where the label will be affixed.
- Avoid catching air bubbles under the label.

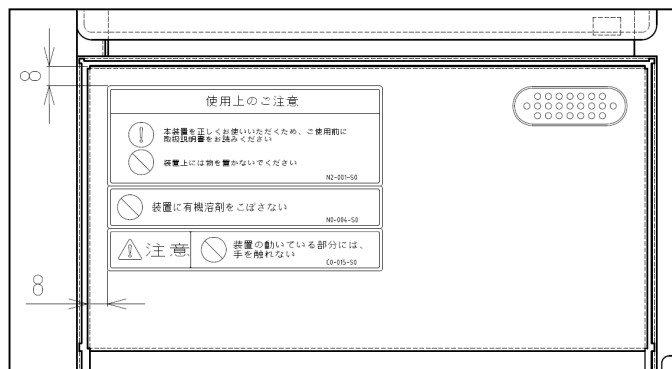
a. Affix the interior label onto the left front interior panel as shown below.



b. Affix the interface label to a place on the rear panel as shown below.



c. Affix the three caution labels to the exhaust filter door as shown below (only for instruments for Japan)



(14) Interior assembly

Attach the following panels to the instrument in the reverse order in which they were removed.

No.	Part Name	Service Manual Reference
1	Interior Panel, Right Front	6-5-13-2
2	Interior Panel, Left Front, supplied with the Option Kit	6-5-13-1

(15) Exterior assembly

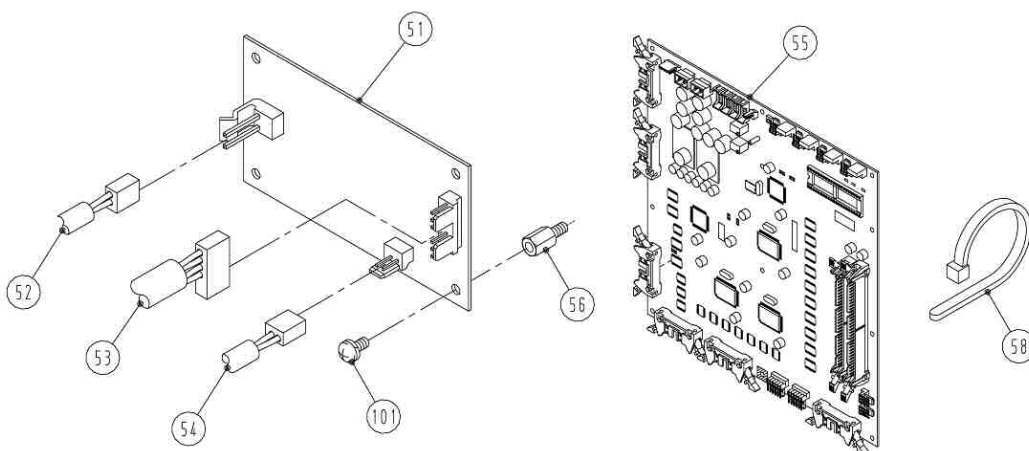
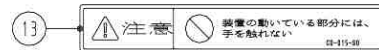
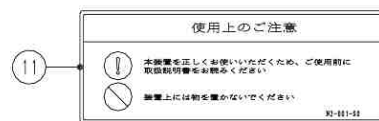
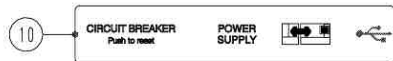
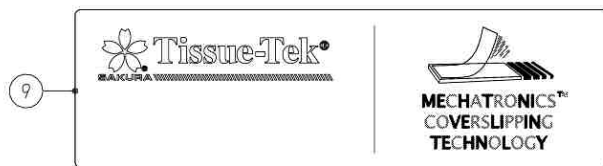
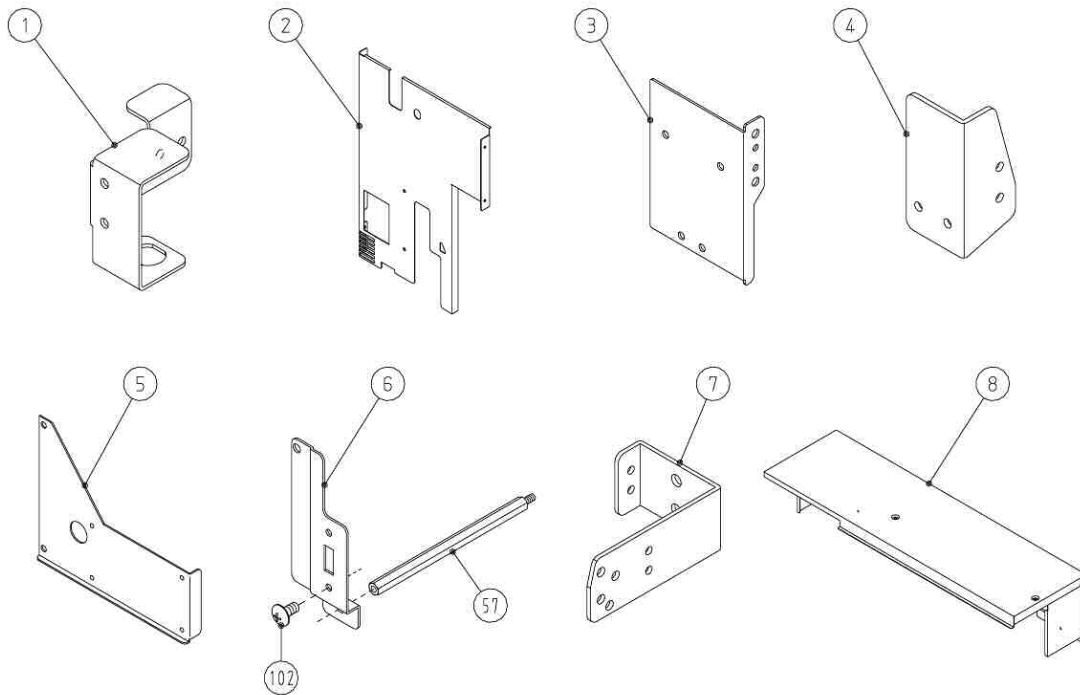
Attach the following panels to the instrument in the reverse order in which they were removed.

No.	Part Name	Service Manual Reference
1	Left Side Panel	6-5-20-1
2	Rear Panel, supplied with the Option Kit	6-5-20-4
3	Control Box Cover	6-5-20-3

(16) Final confirmation during normal operation

Lastly, operate the instrument in normal operation mode and conduct operation checks along with barcode read verifications. Use the glass slides used during the read test in exhibition mode. Select [Terminal] from the ESP.

List of Parts in Barcode Reader Option Kit



Barcode Reader Option Kit

List of Parts in Barcode Reader Option Kit

No.	Part Code	Part Name	Model	Q'ty	Class	Material	Applicable S/N			Change	IECN #	Remarks			
							A1 6500	E2 6502	J0 6501						
1	N94-563-00	Solenoid valve mounting plate		1		Fe	0051 ~ 0230	0051 ~ 0239	0051 ~ 0264						
2	N94-577-00	Left front interior panel		1		Fe									
3	N94-578-00	Barcode reader bracket		1		Fe									
4	N94-579-00	Barcode reader positioning plate		1		Fe									
5	N94-595-00	Relay board mounting plate		1		Fe									
6	N94-596-01	USB port mounting plate		1		Fe									
7	N94-653-00	Cable bearer mounting plate (2)		1		Fe									
8	N94-750-00	Rear panel		1		Fe									
9	N94-762-01	Interior label		1											
10	N94-765-00	Interface label		1											
11	H06-304-00	Label	N2-001-S0	1											
12	N78-770-00	Label	C0-015-S0	1											
13	N78-785-00	Label	N0-004-S0	1											
51	F5231900	BCR relay board	E:BCR-01	1											
52	F5232500	DC24V Cable, BCR	E:Glas-41	1											
53	F5232100	BCR relay cable	E:Glas-43	1											
54	F5232000	BCR trigger signal cable	E:Glas-42	1											
55	F5260900	Control board	E:Glas-01	1	B										
56	A4070678	Spacer, L8mm	BSF-308E	4											
57	A4070742	Spacer, L95mm	BSF-495E	1											
58	A4091217	Binding band	SKB-1MC	3											
101	B6282002	Screw, Cross-recessed Pan Head / Sems A	M3x6	12	N/A	SUS									
				10		SUS									
102	B6282016	Screw, Cross-recessed Pan Head / Sems A	M3x10	2	N/A	SUS					1301				
	B6252015	Screw, Cross-recessed Truss Head	M3x6, w/thread lock adhesive	2		SUS					(15771)				