

Ver 3. 0. 1

Concentrated temperature management & telecommunication system for soldering irons

USB version

Instruction manual

Preparation in September 2008 The 3rd edition JAPAN BONKOTE CO., LTD.



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What is QSS-3000?

QSS-3000 is an innovative quality control system for manual soldering in the electric

component industry that monitors and records soldering work temperature by using

a computer. QSS-3000 monitors the whole process of the manual soldering operation,

which prevents defective soldering with the data that is based on scientific evidence.

This in-process quality control system enables the company to save a lot of cost

in quality control activities while improving the soldering process.

[Features]

- LA(Load Application temperature control)-type soldering irons are connected to a PC and each soldering work temperature data is monitored, collected and saved by the PC.
- It is designed to control 95 LA(Load Application temperature control)-type soldering irons at a maximum with 4 repeaters. (One repeater is required every 30 controllers)
- The Alarm function is activated when the iron tip temperature exceeds the maximum temperature range or falls below the minimum range. And the time and the temperature of the alarm activation is saved in the hard disk.
- Saved temperature data can be compiled and indicated in graph and printed by MS Excel. (CSV file)
- Control each controller's temperature setting, PID parameters, auto-tuning setting, etc. from one PC.

Usage chivit of like	
Communication	USB Serial Port Choose from COM1~COM8
port	
Data Throughput	19200bps
OS	Windows98/Me/NT4.0/2000/XP
	Intel PentiumⅢ compatible (800MHz or more)
CPU	*Please note that correct operation is not guaranteed when
	using other processor.
PC RAM	The memory capacity that the OS guarantee.
Display	1024×768 256 colors or more Screen font(small)
resolution	

*Need to use CDROM drive only when installing the software.

Configuration and Connection

QSS-3000 System Configuration

• So	ldering	iron	Patriot	M50	series
------	---------	------	---------	-----	--------

Controller	M50
Soldering iron	TBseries

• Software **QSS**-3000 (Version3.0.0)

Software	1 CD-ROM	(Ver3. 0. 0)
Instruction manual	1 сору	

• Other equipment

Name	Model No.	Company	Details
Conversion Unit	USB-485	System Sacom	With a USB cable
		Corp.	
			• RJ45→RJ11
MJ conversion			•Modular jack
cable			conversion
			•Cross over cable
Ronastor	One repeater is needed at 30		
Nepealei	controllers each.		
05*	Windows98 / Me / NT4. 0 / 2000	Microsoft Corp	
	∕XP		
Communication	Phone cable		•RJ11Modularjack
cable*	(6 conductor 2 pole)		 Straight though
Odd T C II			cable
Modular connector*	HC-T50-W	Victor Corp.	
PC*	PC/AT	compatible	
Printer*	Compatib	le with Windows	

*:available to use your own.





Note for connecting QSS-3000

*Please use straight though cable for communication cable.

Modular jack

Modular jack



Connect 2pin to 2pin Connect 3pin to 3pin

* Be sure each pin from each modular jack corresponds with one another.

Configuring QSS-3000 Units

1

Installing USB-485 Conversion unit driver

Please install USB Device driver of USB-485I Conversion unit on your PC or laptop.

2 Connect MJ Conversion cable (RJ45) and USB cable to Conversion unit



(RJ45 cable)

3 Connect USB cable to PC

4

Connect USB cable to USB port of the PC. Then, set up communication port. (Refer P. 9 ~P. 1 1)

Connect M50 controller to Conversion unit with communication cable.



Conversion unit

5 Tur	n on M50 controlle	r. Se	t the ID number of e	each controller.
1	Operation mode	Inpu	ut type setting mode	Operation mode
P∨ display	• • •	→		Press both ∇ key and ρ key at the same time for 3 sec
S∨ display	v	-		↓ Input type setting mode
2	Instru	ument	number setting mode	Press & key 4 times
P∨ display		→	<u>∧ · ■ ·</u>	Instrument number setting mode
S Vdisplay [•	↓ Input the number on SV display by using △ or ▽key
3		_	Operation mode	Proce o koy 6 times
P∨display	. ■ .		• • •	Back to operation mode
S∨display	•] >	••••	
* The settin	g range of the ins	trume	ent number is from O	to 94.

* <u>Be sure to start instrument numbers from 0 (zero), otherwise monitoring software</u>

will not start. (Indication of the PC will be Ch. 1, for the instrument number <u>"0"</u>)

st For the next purchase, please make sure to set the instrument number that starts

in serial order from the last number of the previous purchase.



Installing QSS-3000 Software

Setting port speed and preparation for installation

- · Disconnect all software, screen saver, virus checker and system agent.
- Check the PC clock and adjust the time if it doesn't show correct time in order to activate QSS-3000 correctly.
- Check the display resolution. It requires to be in 1024 × 768 pixel mode or more.

Setting port speed

- ① Right-click the "My Computer" Icon.
- 2 Select properties from the context menu.
- ③ In the System Dialogue, select the Device manager Tab.
- * If the communication port is not displayed, change the setting on your PC.



④ Right-click USB Serial Port.



- (5) Click [Properties]
- (6) Select the Port Settings tab. In the bits per second field, set 19200 bps.

Communications Port (COM1) Properties	? 🗙
General Port Settings Driver Resources	
Bits per second: 19200	
Data bits: 8	*
Parity: None	~
Stop bits: 1	~
Flow control: None	~
Advanced Restore D	efaults
ОК	Cancel

⑦ Click Advanced.

Communications Port (COM1) Prope	erties	? 🗙
General Port Settings Driver Resource	es	
Bits per second:	19200	×
Data bits:	8	~
Parity:	None	~
Stop bits:	1	~
Flow control:	None	~
	vanced Restre De	efaults
	ОК	Cancel

(8) Select COM Port Number from COM1 \sim COM8 to activate QSS-3000.

Advanced Settings for COM1	? 🔀
✓ Use FIFO buffers (requires 16550 compatible UART) Select lower settings to correct connection problems. Select higher settings for faster performance.	OK Cancel
Receive Buffer: Low (1)	Defaults
Transmit Buffer: Low (1)	
COM Port Number: COM2	J

Installing QSS-3000 software

 Insert the QSS-3000 CD in the CD-ROM drive on the PC.
 Select CD-ROM drive from Explorer or open it from the "My Computer".
 Glick Win2000 folder if you are using Windows NT4.0/2000/XP. Click WIN98 folder if you are using Windows98.

🖌 🄁 Co

4 Click QSS-3000 V300

☆ The instruction below is based on Win2000.

If you are using Win98 or Me, some of the displays will not the same.



process.

The installer will guide you	u through the st	eps required to	install QSS-3	000_V300 on	your
computer.					
Click "Next" to continue.					
WARNING THE SHORE			·		Č.,
Unauthorized duplication	or distribution o	f this program, i	or any portion	of it, may resu	reaties. It in severe
civil or criminal panalties	and will be pros	ecuted to the r	maximum exte	nt possible und	der the law

6	🗌 Click [Next
	Caution!	Do not change the folder.

Only"C:\ProgramFiles\JAPANBONKOTE\QSS-3000_V300\Provide vate QSS-3000.

elect Insta	allation Folder		
The installer will in	install QSS-3000_V300 in the follow	ving folder.	
f o install in this fo	older, click "Next". To install to a di trowse".	fferent new or existing fo	lder, enter one
Scient of clicity D			
Eolder: C	¥Program Files¥JAPAN BONKC	TE¥QSS-3000_V30(<u>B</u> rowse
Eolder: C /ou can install th	¥Program Files¥JAPAN BONKC ne software on the following dri <u>v</u> es:	TE¥QSS-3000_V30(<u>B</u> rowse Disk Siz
Folder: C: You can install th Volume C:	¥Program Files¥JAPAN BONKC ne software on the following dri⊻es:	TE¥QSS-3000_V30(<u>B</u> rowse Disk Siz 27G
Folder: C: You can install th Volume C: D:	*¥Program Files¥JAPAN BONKC ne software on the following dri <u>v</u> es:	TE¥QSS-3000_V30(Browse Disk Siz 27G 27G
Eolder: C: You can install th Volume C: D: C	¥Program Files¥JAPAN BONKC ne software on the following drives:	TE¥QSS-3000_V30(<u>B</u> rowse Disk Siz 27G 27G ≥



8 QSS-3000_V300 is being installed.

🛱 QSS-3000_V300	
Installing QSS-3000_V300	
QSS-3000_V300 is being installed.	
<u>Cancel</u>) <u>N</u> ext
9 Click <u>Close</u> to exit.	
j∰ QSS-3000_V300	
nstallation Complete	
Constallation Complete QSS-3000_V300 As been successfully installed.	
Click "Close" to exit.	

 \ast If an error message occurs after the installation, please reactivate the PC.

How to uninstall QSS-3000 ? 1 [Start]→[Control panel]→ click [Add and Remove Programs] 2 Select "QSS-3000_V300" from [Currently installed programs] Click Remove

🐻 Add or R	emove Programs			
5	Currently installed programs:	Sort by: Name		*
Change or	😹 Adaptec Easy CD Creator 4	Size	5.59MB	^
Programs	🍠 Microsoft Office 2000 Personal	Size	152.00MB	
	🛃 NEC PICTY700 Printer (削除専用)	Size	0.81MB	
<u> 1</u>	🗾 Q55-3000_¥300	Size	<u>17.18MB</u>	
Add <u>N</u> ew Programs	Click here for support information.	Used	<u>rarely</u>	
6	To change this program or remove it from your computer, click Change or Remove.	Last Used On Change	7/27/2006 Remove	
Add/Remove	🔀 Windows XP Application Compatibility Update[Q319580]			Ξ
<u>W</u> indows Components	🔀 Windows XP Hotfix (SP1) [See Q309521 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q311889 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q311967 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q313450 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q314147 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q314862 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q315000 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q315403 for more information]			
	🔀 Windows XP Hotfix (SP1) [See Q317277 for more information]			
	1115- James VD 11-66: / CD13 [Care 2021/20 familiary information]			
			Cl <u>o</u> se	
3	Click Yes			
Add or R	emove Programs 🛛 🕅			
2	Are you sure you want to remove QSS-3000_V300 from your computer?			

• Temperature data and QSS-3000 setting file are still remain after uninstall the

program. To delete all data and files, delete "QSS-3000 folder" manually.

No

Yes

Basic operation

To Start QSS-3000

1 [Start] \rightarrow [All Programs] \rightarrow [JAPAN BONKOTE] \rightarrow "QSS-3000_V300"

 \ast When QSS-3000 starts, the menu, the "Highest number of instrument for

logging" and "Key Code registration" windows will appear.

«Menu» window



«Highest number of instrument for logging» window



2 Key Code registration

To register a key code, input the key code written on the CD case and press [OK].



* Please register the key code within the 20 days trial period.

If the 20 days trial period has expired, this product cannot be used unless a key code is registered.

QSS-3000_V300
You cannot use the software due to expiration of the trial period.

- During the trial period, this product can be used without a key code.
 By pressing [OK], the monitoring software starts.
 Once the key code is entered, the key code registration window will not appear again when it starts.
- Muring the trial period, the key code can also be registered from the menu bar after starting.



- 3 Set "Highest number of instrument for logging"
- * The "highest number of instrument" is the number of controllers that can be monitored by QSS-3000 software.

волкоте	
Lood Applieation Man	aual solderitag
Solidaring transcenter	the management system -3000
BONKOTE	
Highest number of instrument for logging	OK PAN BONKOTE CO.,LTD.
Wait for a moment.	JAPAN BONKOTE CO., LTD.

<u>*The instrument number starts from "O"</u>ex. To connect 10 controllers, set more than 9.

- Channels excluded from settings on the "Highest number of instrument for logging" window will not appear. (They are registered as disconnected channels.)
 - The monitoring system corresponds to the switching the power ON/OFF within the number of controllers that are set on the "Highest number of instrument for setting".

4 Communication port selection

After the key code registration, the "Communication condition setting display" appears. Select the port that has been set at the "Advanced settings for COM

1"	window	(refer	Ρ.	10)	and	click	ОК	
----	--------	--------	----	-----	-----	-------	----	--

Communication condition setting display				
Communication port selection				
COM1 👤				
T It starts up with the demonstration screen.				
OK Shut down				

This is the end of the initial setting

• After the key code is registered, just input the highest number of the instrument

to start the software.

• The inputted number of the instrument is saved and appears when the next time the software starts.

The demonstration screen can be activated by checking "It starts up with the

demonstration screen".

Communication condition setting display						
Communication port selection						
🔽 İt starts up	To itstarts up with the demonstration screen.					
OK Shut down						

Basic operations of each function.

★ 20-channel display★

PV(Process value), SV(Setting value) and alarm status for 20 channels are indicated on one screen. However, the channels excluded from settings on the "Highest number of instrument for logging" window do not appear.

<mark>И</mark> ВОЛКОТЕ				
File(F) Setting(S) User(U) Help(H)				
20 Channel display 1 Channel display	Setting display	Chart display	Logging display	All channels
1 to 20 21 to 40 41 to 60 61 to 80 81 to 95				
PV 67 SV 350 deg.C	AT A1 A2 SB			
Ch02 PV 25 SV 350 deg.C	AT A1 A2 SB			
Ch03 Power to the instrument is currently d	isconnected.			
Ch04 Power to the instrument is currently d	isconnected.			
Ch05 PV 45 SV 350 deg.C	AT A1 A2 SB			
OK Logging standby Chart standby				
	,			> .::

• The figure above shows that the software is monitoring 5 controllers (the instrument number is set as 0 to 4), which are set at the "Highest number of instrument for logging" window as "4".

PARTS INDICATION

ΡV	Process value	SV	Setting value
ΑT	Auto-turning setting	A 2	Low temperature limit alarm
A 1	High temperature limit alarm	SB	Sensor break

• For the channels to which power is not connected, the message "Power to the instrument is currently disconnected." will appear.

When the power to the controller is connected, this message will automatically disappear.

[Tabs for switching channels]

The channels are displayed ranging from 1 to 95 by switching tabs.

Each tab is divided into sets of 20 channels.

* The instrument number allocated to the controller determines each channel.

<u>e.g. (Indication of the PC will be "ChO1" for the instrument number "O".</u> Please refer P.7

TABS	Indicated Data
1 to 20:	Data of the instruments numbered 0 to 19 are indicated.
21 to 40:	Data of the instruments numbered 20 to 39 are indicated.
41 to 60:	Data of the instruments numbered 40 to 59 are indicated.
61 to 80:	Data of the instruments numbered 60 to 79 are indicated.
81 to 95:	Data of the instruments numbered 80 to 94 are indicated.

[To change the channel name]

The channel names are user changeable by selecting the [Setting(S)] \rightarrow [Channel name(C)] Refer to P. 37 for details.

- ★1 channel display★This window indicates all reading setting items for one channel.
 - \cdot Only SV(Setting Value) can be changed on this window. By clicking the pencil mark

и волкоте		
File(F) Setting(S) User(U) Help(H)		
20 Channel display 1 Channel display Se	tting display Chart display Logo	jing display All channels 🔼
Channel name selection. Ch02 -	High limit alarm → High limit alarm setting	50 deg.C
SV -200 to 1000 deg	High limit alarm delayed timer setting	0 Sec
35	Low limit alarm setting Low limit alarm delayed timer setting	-50 deg.C 0 Sec
Output manipulated variable information		
Control 0.1 AT/ART action	Other Informations Set value lock selection Main proportional band setting Integral time setting Derivative time setting Anti-reset windup setting SV high limit setting	Unlock 88 deg.C 38 Sec 8 Sec 18 % 500 deg.C
	Sensor correction value setting	0.0 deg.C
	Speed setting	4.0 times
	Auto-power-down temperature span setting Auto-power-down time setting	5 deg.C
	Auto-power-down temperature setting	200 deg.C
	Auto-power-off time setting	30 Min
OK Logging standby Chart standby		// 💌 >

button, the Set value change display appears.

Input a new value with the on-screen numerical keyboard or PC keyboard and click [ok].

📕 Set value change display					
Current set value 350 Setting range -200 to 1000					
	7	8	9		
	4	5	6		
	1	2	3		
	0	+/-	CE	Cancel	

- To select a channel, select the channel name from the drop-down list box. (However, the channels excluded from settings on the "Highest number of instrument for logging" window do not appear.)
- If the channel name has been changed at the "Channel name" window, the registered name will be indicated. (Refer P. 37)
- For the channel to which power is not connected, the message "Power to the instrument is currently disconnected" will appear. When the power to the controller is connected, this message will automatically disappear.

BONKOTE				
File(F) Setting(S) User(U) Help(H)				
20 Channel display 1 Channel display	Setting display	Chart display	Logging display	All channels
Channel name selection. Ch02	•			
Power t	o the instrument i	is currently disco	onnected.	
,				
OK Logging standby Chart standby				/// 🗸
< (≥;

\star Setting display \star

Set values of each item can be changed and individual modes can be selected.

BONKOTE	×
File(F) Setting(S) User(U) Help(H)	
20 Channel display 1 Channel display Setting display Chart display Logging display All channels	<u>^</u>
The channel selection • 1 to 20 C 21 to 40 C 41 to 60 C 61 to 80 C 81 to 95	
Main set value	
Main set value	
Ch01 350 J	
Ch02 350 J	
Ch03 Power off	
Ch04 Power off	
Ch05 350 J	
OK Logging standby Chart standby	~
	1.11

• This window indicates the data in blocks of 20 channels.

(However, the channels excluded from settings on the "Highest number of instrument for logging" window do not appear. And for the channels to which power is not connected, the message "Power to the instrument is currently disconnected" will appear. When the power to the controllers connected, this message will automatically disappear.)
To change set values, press the Setting button of the channel (pencil mark button). Then Numeric value setting display or Setting item selection display will appear.

• To change the set value of any item, select the item from the drop-down list box.

Main set value		
Main set val	ue	
Ch01	350 🔋	

«The list of the drop-down list box»

MENU	Function	Default value
Main set value	Set main value	
Auto-tuning setting	Change AT ON/OFF status	
Main proportional band setting	Adjust proportional band (P setting)	3°88
Integral time setting	Adjust integral time(I setting)	3 8 sec.
Derivative time setting	Adjust derivative time (D setting)	8 sec.
High limit alarm (alarm1) setting	Set high limit of soldering temperature range	5 0°C
Low limit alarm (alarm2) setting	Set low limit of soldering temperature range	−50°C
Set value lock selection	Set value lock setting for protection of error operation	unlock
SV high limit setting	Set high limit of Set value	500°C
Sensor correction value setting	When measurement value comes an error, set the correction value.	0
High limit alarm delayed timer setting	Set the timer for high limit alarm (alarm 1)	0
Low limit alarm delayed timer setting	Set the timer for low limit alarm (alarm 2)	0
Input type selection	Select the appropriate type from the display	
Anti-reset windup setting	Control integral action (PV accords with SV)	18%
Speed setting	Adjust recovery speed to SV(set temperature)	4.0
Auto-Power-Down temperature span setting	Set the temperature span to activate the "Auto–Power–Down" function	5°C
Auto-Power-Down time setting	Set the length of time to activate the "Auto-Power-Down" function. If the temperature of the iron tip has not changed within the set span (ex. 5°C) for the set length of time (ex. 30min.), the "Auto-Power-Down" is automatically activated.	3 Omin.
Auto-Power-Down temperature setting	Set the target value of the "Auto-Power-Down".	200°C
Auto-Power-Off temperature span setting	Set the temperature span to activate the "Auto-Power-Off" function.	5℃
Auto-Power-Off time setting	Set the length of time to activate the "Auto-Power-Off" function. If the temperature of the iron tip has not changed within the "Auto-Power-Off temperature span" (ex. 200°C) for the "Auto-Power-Off time" (ex. 30min.) while the soldering iron is in the "Auto-Power-Down" state, the soldering iron is switched off automatically.	3 Omin.

% Please refer to the M50 Instruction Manual for details in using each function.

★ Chart display★



• PV and SV of the currently connected units are indicated under the chart display.

« Chart display Usage »

1	X axis setting	1 Select the time range from "Short" or "Long"
		<pre>② Set the recording cycle (1-60sec.) e.g.) "Short" × 1sec. = 600sec. (10min. plotting) The chart for 8hr./day is… "Short" × 48sec. = 28800sec. = 480min. = 8hr.</pre>
2	Y axis setting	1 Set the "High" and "Low" temperature by using
		$\Delta abla$ or "Set value change display".
		(Adjusted by 10 degree intervals)
		② Select the "Division" from 2 to 10 equal intervals.

Select channels / item(SV or PV) / chart color to be plotted on chart. * PV and SV for up to 95 points can be plotted on chart. (Channels excluded from settings on the "Highest number of instrument for logging" window, do not appear.)

* The chart color can be changed.

Click "Select channels and items to …" button. (at the bottom of Chart display)
Select channels and items to be plotted on chart. Click this button.

Then.	the	chart	plotting	selection	disp	av	will	appear
						~ ,		

The channel selection to plot a chart	
1 to 40 41 + 00 01 + 05	
	1
DV short selection	
Ch01	
Ch02	
Ch03	
Ch04	
Ch05	
SV chart selection	
Ch04	
Ch05	
	1
Select a channel number for changing the recording color, then click this button.	Selection completed

② Select a channel by clicking the channel number you want to plot.



 \times If you want to change the chart color go to (3). If not, go to (4).

③ To change the chart color, click "Select a channel number for…" button.

Then, select the color from "Color" window. ? × Color Basic colors: Custom colors: Г Define Custom Colors >> 0K Cancel

Select a channel number for changing the recording color, then click this button.

(4) After select the color, click the [OK] button.

Start plotting 4

(1)Click [Start] to start plotting. (2)Click [Stop] to stop the plotting.

(The chart currently indicated will be cleared when the next plotting starts.)

* During the plotting, the message "Power to the instrument is currently disconnected." will appear for the channels to which powers are not connected. When power to the controllers are connected, the message will automatically disappear.

« Chart auto-start when starting the monitoring software »

- If the monitoring software is closed while chart is plotting: Chart plotting initiates automatically under the same conditions as the previous session upon software closure when the next time the software starts.
- · If the monitoring software is closed while chart plotting is stopped: Chart plotting is stopped the next time the software starts.

★ Logging display ★

Time and save file name for logging can be set on this window.

- * The channels excluded from settings on the "Highest number of instrument for logging" window, do not appear.
- * During the logging, the message "Power to the instrument is currently disconnected" will appear for the channel to which power is not connected. When the power to the controllers are connected, the message will automatically disappear.

BONKOTE				
File(F) Setting(S) User(U) Help(H)				
20 Channel display 1 Channel display	Setting display	Chart display	Logging display	All channels
Data logging conditions	PV of th	ie checked channel name	e will be saved in the f	ile.
I♥ Ch01 I♥ Ch02 I♥ Ch03 I♥ Ch04 I♥ Ch05				
Data logging time 10 sec	•			
File name for saving data logging.	Continue to save da	ta	Browse.	
				Start Stop
OK Logging standby Chart run				// 🛩

- PV data of the designated channel can be saved in a file.
- The saved data can be read on spreadsheet applications like Microsoft Excel.



or a file name for saving data can be entered manually.

« Logging display Usage »

1	Logging cha	nnel and t	ime setting				
S	elect the P	V value logg	ging channel	and data lo	gging time o	out of ((1-10sec. /
30	Osec./1min./	′5min./10min	./15min./30mi	n. /1hr.)			
*	If the data	logging tim	e is 1-9sec .	the follow	ing messages	s will ap	opear.
	1sec . "Log	ging is imp	ossible becau	use logging	point excee	eded 11 p	oints."
	2sec. \rightarrow "	Logging is i	mpossible bec	ause loggin	g points exc	eeded 21	points."
	8sec. \rightarrow "	Logging is i	mpossible bec	ause loggin	g points exc	eeded 81	points."
	9sec. \rightarrow "	Logging is i	mpossible bec	ause loggin	g points exc	eeded 91	points."
2	Select the	data save	destination				
1)Click	Browse	→Select a f	ile name for	saving data	a logging. –	→Click	Open
	Open					?	X
	Look in:	C Logging		•	⊨ 🗈 💣 🎟∙		
	Ò	3]2006_7_28_12 3]2006_7_28_13	2_3_55 3_10_35				
	My Recent Documents	™] 2006_7_28_13	3_10_53				
	Desktop						
	My Documents						
	My Computer						
		File name:	2006_7_28_17_9_;	29	•	Open	
	My Network Places	Files of type:	×.csv	ly	•	Cancel	
							-114

*The original file name is based on the date and the time that the logging has been done. It can be changed manually. ② Click Start to start data logging. The data is saved into the file simultaneously.

To change the channel for logging, click the [Stop] button and select other

channels.

BONKOTE					
File(F) Setting(S) User(U) Help(H)					
20 Channel display 1 Channel display	Setting display	Chart display	Logging display	All channels	^
Data logging conditions	PV of th	ne checked channel name	e will be saved in the f	ile.	
✓ Ch01 ✓ Ch02 ✓ Ch03 ✓ Ch03 ✓ Ch04					
₩ Ch05					_
Data logging time 10 sec 💽					
File name for saving data logging. C:#Program Files#JAPAN BONKOTE¥OSS-3000_	Continue to save da V300¥Logging¥2006_7_28	ta _12_3_55.csv	Browse		
				Start Stop	
OK Logging standby Chart run					// ¥

«Notes for logging»

[Data save destination setting]

Be sure to designate a file name for saving the logging data before start logging.

If the file name has not been designated, following message will appear.

QSS-3000_V300 🛛 🔀
Designate a new file name.
ОК

[Continue to save data] function

When this function is checked, the file name of the save destination will be designated with the same name as previously used, and the data will be saved continuously in the same file.

M ВОЛКОТЕ		
File(F) Setting(S) User(U) Help(H)		
20 Channel display 1 Channel display Setting display Chart display I	Logging display	All channels
Data logging conditions PV of the checked channel name will b	be saved in the file.	
I Speaker-1 I Speaker-2 I TV 1		
I ↓ 1 ∨ 2 I ⊂ Ch05 I ⊂ Ch06		
I▼ Ch07 I▼ Ch08		
Data logging time 🔰 sec 💌		
File name for saving data logging. Image: Continue to save data C: #Program Files#JAPAN BONKOTE#QSS-3000_V300#Loss in save data	Browse.	
	SI	tart Stop
Logging standby Chart standby		// 🐱

[Logging-Auto-Start function]

When the monitoring software is restart, logging begins automatically under the same conditions as when the software was closed if the logging was not stopped at the last time the software was closed.

- * However, if the monitoring software is closed while logging is cancelled, the Logging-Auto-Start will not activate the next time the software starts.
- ★ If the "Continue to save data" function is checked and logging has been activated when the software is closed…

When the software starts again, the Logging-Auto-Start function is activated and logging begins automatically.

The file name of the save destination is designated with the same name as previously used, and the data is saved continuously in the same file.

★ If the "Continue to save data" function is not checked and logging has been activated when the software is closed…

When the software starts again, the Logging-Auto-Start function is activated and following message will appear.

The file currently indicated will be overwritten. Is this		
	OK?	
Yes No		
Yes →The file currently indicated will be ov	/erwri	it

No.

with the new logging data.

★All channels display★

1	BONKOTE				
File(F) Setting(S) User(U) Help(H)				
	20 Channel display 1 Channel display Setting displa	iγ [Chart display	Logging display	All channels
	Main set value	350			
☑	Main proportional band setting	88			
	Integral time setting	38			
	Derivative time setting	8			
☑	Anti-reset windup setting	18			
	High limit alarm setting	50			
☑	Low limit alarm setting	-50			
☑	SV high limit setting	500			
☑	Sensor correction value setting	0.0			
	High limit alarm delayed timer setting	0			
	Low limit alarm delayed timer setting	0			
	Speed setting	4.0			
	Auto-power-down temperature span setting	5			
	Auto-power-down time setting	30			
	Auto-power-down temperature setting	200			
	Auto-power-off temperature span setting	5		Save Load	
	Auto-power-off time setting	30			-
	Set value lock selection	Unlock	Tr	ansmit	
	Lossing standhy Chart standhy				
<					.::

- The data on the "All channels display" can be transmitted to all channels and the previous data of all channels will be replaced.
- The data on the "All channels display" can be saved or loaded.

★All channels display usage★

① Select the setting functions and check the left-side checkbox



2 Click the setting function key that you checked. Then, "Setting item selection"

🗾 Setting item selection	Set value change display
Setting item selection Set value lock selection C Unlock C Lock 1 C Lock 2 C Lock 3	Set value 5 Current set value 5 Setting range 1 to 100 7 8 9 4 5 6 1 2 3 0 +/- CE
OK Cancel	

window or "set value change display" window will appear.

③ When the setting is completed, click [Save].

The data is saved in "Set data" of C:\BONKOTE\Program Files\QSS-3000_V300

The data on the "All channels display" can be transmitted to all channels.
 *However, the functions that have not been checked are not being transmitted.
 *The channels that have been performed Auto-turning are also not available for data transmission.

QSS-3000_V300
Setting value cannot be transmitted since AT is performing. Transmit the setting value after cancelling AT .
ОК

(5) Data can be loaded from a file you select and transmitted to the All channels window.

	Funct	ion					
+	Chann	el name registration★					
	1 Select[Setting(S)] \rightarrow [Channel name (C)] and click.						
		Channel name display will appear.					
	2	Enter a channel name (ex. products name / operator's name) within	12				
		characters. And click OK					
	🗾 Chan	nel Name	X				
	Instrume	nt number					
	Instrume No.00	nt number Speaker-1					
	Instrume No.00 No.01	nt number Speaker-1 Speaker-2					
	Instrume No.00 No.01 No.02	nt number Speaker-1 Speaker-2 TV 1					
	Instrume No.00 No.01 No.02 No.03	nt number Speaker-1 Speaker-2 TV 1 TV 2					
	Instrume No.00 No.01 No.02 No.03 No.04 No.05	nt number Speaker-1 Speaker-2 TV 1 TV 2 Ch05 Ch06					
	Instrume No.00 No.01 No.02 No.03 No.04 No.05 No.06	nt number Speaker-1 Speaker-2 TV 1 TV 2 Ch05 Ch06 Ch07					
	Instrume No.00 No.01 No.02 No.03 No.04 No.05 No.06 No.07	nt number Speaker-1 Speaker-2 TV 1 TV 2 Ch05 Ch06 Ch07 Ch08					
	Instrume No.00 No.01 No.02 No.03 No.04 No.05 No.06 No.07 No.08	nt number Speaker-1 Speaker-2 TV 1 TV 2 Ch05 Ch06 Ch07 Ch08 Ch09					
	Instrume No.00 No.01 No.02 No.03 No.04 No.05 No.06 No.07 No.08 No.09	nt number Speaker-1 Speaker-2 TV 1 TV 2 Ch05 Ch06 Ch07 Ch08 Ch09 Ch10					
	Instrume No.00 No.01 No.02 No.03 No.04 No.05 No.06 No.07 No.08 No.09	Speaker-1 Speaker-2 TV 1 TV 2 Ch05 Ch06 Ch07 Ch08 Ch09 Ch10					

 $\ensuremath{\ast}$ The channel name registered here is used for indications on the monitoring software

and in the list boxes for selection.

BONKOTE								
File(F) Setting(S) User(U) Help(H)								
20 Channel disp	lay 1 Channel display	Setting display	Chart display	Logging display	All channels			
_ The channel sele	ection							
I to 20	C 21 to 40 C 41 to 60	C 61 to 80 C 81	to 95					
Main set value		•						
-Main set va	alue							
Speaker-1	330 📕							
Speaker-2	Power off							
TV 1	Power off							
TV 2	Power off							
Ch05	Power off							
Ch06	Power off							

★ Analysis mode★

• PV data of the selected channels (max.5 channels) is saved every 0.3 seconds, and is plotted on chart.

1 Select [User (U)] \rightarrow [Analysis mode Selection (K)] and click.

🗾 BOI	NKO	DTE			
File(F)	Se	tting(S)	User(U)	Help(H)	
20 CI	nan	nel disp	Analy:	sis mode Selection(K)	
			Set value Save/Load(G)		
1 to :	20	21 to 4	Alarm	history(A)	

2

Analysis mode display will appear.

📕 Analysis mode						×
File(F) Analysis mode 9	Selection(K)					
400 deg.C 200						X axis 30 Sec 60 Sec 120 Sec 180 Sec Y axis High 400 ÷ Low 0 ÷ Division 4 ÷
0 0 *****	5	10	15	20	25	Standby 7/28/2006 30 Sec
T to 40 41 to 80 8 □ Speaker-1 □ Speaker-2 □ TV 1 □ TV 2 □ Ch05 □ Ch06 □ Ch07	Г Сн08 Г Сн09 Г Сн09 Г Сн10					
File name for saving d.	ata logging.			Browse.	Start	Stop

* Be sure to cancel the logging or chart function before going to the analysis mode. Otherwise, it is unable to elect the analysis mode.

« Analysis mode Usage »

Save mode / Load mode function

Analysis mode includes Save mode (Current PV data can be saved) and Load mode (Past PV

data can be indicated).

When Analysis mode window is indicated, the software is running in Save mode automatically.

To change the mode, Select[Analysis mode Selection(K)] \rightarrow [Load] or [Save]

🗾 Analysis mode				
File(F)	Analysis mode S	ielection(K)		
400	Save(S)			
400 deq.	Load(L)			
Ű				

[Save mode] Current PV data can be saved

- 1 X axis Select a chart plotting time from 30sec./60sec./120sec./180sec.
- 2 | Yaxis Select high and low temperature range with $\Delta(up)$ and $\nabla(down)$ keys.

(Y-axis can be divided from 2 to 10 equal intervals.)

3 Select channels (Max. 5channels) to be analysis and check the checkboxes.

	1 to 40 41	to 80 81 to	95					
	Ch01 Ch02 Ch03 Ch04	ļ	Ch08 Ch09 Ch10					
4 Selec	t the data	a save des	stinatio	n				
Click	Browse	→Select	a file	name for	saving dat	a logging	\rightarrow	Open
				1		· 0"	- -	

*The files in which the logging data is saved are stored in "Logging 2" folder as the initial setting.

5 Click [Start] \rightarrow Data logging and plotting of the chart start simultaneously.

[Load mode] Past PV data can be indicated 1 To change the mode from [Save] to [Load], select [Analysis mode 🖌 Analysis mode $selection(K)] \rightarrow [Load]$ File(F) Analysis mode Selection(K) Save(S) 40 Load(L) deg. \rightarrow Select a file name of the past data \rightarrow Browse.. Click Open 2 3 Click Load Stop

The selected data will be indicated on the chart display.

* To examine more detail of the data, adjust X axis and Y axis.

X axis ① Select a shorter time scale than the time it was saved. ex) Saved(60sec.)→Select 30sec.

2 And use scroll key to examine the data.



Y axis

Adjust high and low temperature to the range appropriate for the analysis.

\star Printing function \star



Click the blank space on the top of the chart. 1

Select $[File(F)] \rightarrow [Printer selection(S)]$ and click. 2

📕 Analysis mode					
File(F)	File(F) Analysis mode Selection(K)				
Printer Selection(S)					
Print					
End(E)					

The printer selection display will appear \rightarrow Set the currently selected printer

Printer Selection		
Printer name		
Brother HL-5040 series		-
	ок	Cancel

3 Select [File(F)] \rightarrow [Print(P)] and click.

Analysis mode data can be printed.

★Set value SAVE/LOAD function★

[**Per channel**] Setting data can be saved to one file per each channel. In addition, it can be loaded from saved files to each channel.

Data transmission between channels is also possible.

Select [User (U)] \rightarrow [Set value SAVE/LOAD(G)] \rightarrow [Channel(C)] and click.

🗾 ВОНКО	TE			
File(F) Sett	ting(S)	User(U)	Help(H)	
20 Channel disp		Analysis mode Selection(K)		Setting display
		Set va	ilue Save/Load(G) 🔷 🕨	Channel(C)
1 to 20	21 to 4	Alarm	history(A)	All channels(A)

The figure below is an example of the data transmission.

ex) the setting information of Ch1(Speaker-1) is transmitted to Ch2(Speaker-2)

🗾 Set value Save / Load (Channel)			
Channel name Speaker-1 💌 💻	Data transmission	Channel name Speaker-2	•
	Reading from and s	saving to the file	Exit

[All channels] The setting data on the "All channels display" can be saved or loaded.



★ Alarm history ★ Select [User(U)]→[Alarm history(A)]→click.

🗾 BOI	NKOTE			
File(F)	Setting(S)	User(U)	Help(H)	
20 CI	nannel disp	Analy:	sis mode Selection(K)	
		Set va	alue Save/Load(G)	۲
1 to 3	20 21 to 4	Alarm	history(A)	

• While monitoring controllers, if **Alarm 1, Alarm 2** or **over/under scare** (Sensor burnout alarm) has occurred, or if they have been restored, the relevant unit name, date and time are indicated.

2	📶 Alarm h	istory				
					Erase	Exit
	Date	Time	Channel	Contents		
	2006/8/4	11:18:16 AM	Ch01	Alarm 1 was turned on.		
	2006/8/4	11:18:16 AM	Ch01	Sensor burnout alarm was turned on.		
	2006/8/4	11:18:27 AM	Ch01	Alarm 1 was turned off.		
	2006/8/4	11:18:27 AM	Ch01	Sensor burnout alarm was turned off.		
		1				

Erase

(The data currently displayed can be erased)

(The "Alarm history" display can be closed)

《Example》

Exit

Alarm 1 The temperature of the iron tip exceeds the range of the high limit alarm setting.

Alarm 2 The temperature of the iron tip exceeds the range of the low limit of alarm setting.

• While collecting the data on the display, the same data is saved in the history folder

with "txt" extension simultaneously.

• The file name is automatically determined by the date and time upon starting the monitoring software. (e.g. His_2003_5_12_12_3.txt)

Look in:	🗁 History	•	⇔ 🗈 💣 💷•
My Recent Documents	His_2006_7_28_10_19 His_2006_7_28_10_33 His_2006_7_28_10_54 His_2006_7_28_10_55	His_2006_7_31_16_20 His_2006_8_1_9_24 His_2006_8_2_8_59 His_2006_8_2_11_37	E His_2006_8_4_10_19 His_2006_8_4_10_47

\star Help function \star

« Help Topics » Click $[Help(H)] \rightarrow [Help(M)]$

Z BONKOTE	
File(F) Setting(S) User(U)	Help(H)
20 Channel display	Help(M)
	Version information(V)
1 to 20 21 to 40 41 to	Key code(P)



« Version information » Click [Help(H)] \rightarrow [Version information(V)]



« Key Code registration » Click [Help(H)] \rightarrow [Key code(P)]

To register a key code, input the key code written on the CD case and Press [OK].

Key Code registration	
Enter a Key Code. Trial period lasts for 20 days.	ОК
	Cancel
Enter a key code here from the key board.	

To create your own opening display

1 Create the display with DPI setting 495×343 (W×H), File name "open.bmp"

2 Copy the "open bmp" file to the folder that the software is installed.

Default display

BONKOTE	волкоте
Load Application Manual soldaring	一〇〇井 古全社
Soldering iron contenting menegement system QSS-3000	
BONKOTE® Version 1.0	
Copyright(C) 2003-2004 JAPAN BONKOTE CO.,LTD. しばらくお待ちください 日本ボンコート株式会社	しばらくお待ちください 日本ボンコート株式会社



- Whenever the software is started, a [history] file is made in the History folder simultaneously.
- The saved data can be read on Notepad or Spreadsheet applications like Microsoft Excel.
 - Logging The data saved at the "Logging display" are stored in this folder. Logging2 The data saved at the "Analysis mode" are stored in this folder. Setdata The data saved at the "All channels display" are stored in this folder.
- * <u>Be sure not to change those folder names.</u>

Appendix

a. Note for the "Highest number of instrument" setting

- * To connect the controller more than the number of the "Highest number of instrument" setting, close and restart the software, then enter a new number on the "Highest number of instrument for logging" window, otherwise the software does not recognize the additional controllers.
- * If the set number is 9 and 4 controllers are connected, 6 more controllers can be connected during the operation without changing the setting.

b. Specifications

Soldering iron unit

Model No.	TB-118	TB-120J	TB-140JA	TB-140JB	TB-240	TB-150	TB-155JA	TB-155JB
Output	18W	20W	40W	40W	40W	50W	55W	55W
Input voltage	100V	100V	100V	100V	220V	100V	100V	100V
Iron tip	BN5	BJ5	BJ5	BJ6	BN7 BN10	BN7 BN10	BJ7	BJ8

Model No.	TB-255JA	TB-255JB	TB-165	TB-265	TB-195JA	TB-295JB	TB-1100	TB-2100
Output	55W	55W	65W	65W	95W	95W	100W	100W
Input voltage	220V	220V	100V	220V	100V	220V	100V	220V
Iron tip	BJ7	BJ8	BNP10	BNP10	BJ11	BJ11	BN12	BN12

Soldering iron

Heater	Alumina ceramic
Leak voltage	Under2(mV) Initial value
Grounding	$\operatorname{Under}^2(\Omega)$ Initial value
resistance	
Code	EP rubber code : 1.3m

Conversion unit

Model No.	USB-485I		
Data Throughput	19200bps		
Number of connectable controller	Max.95 (Needs 1 repeater per 30)		
Max. length of communication capability	1. 2km		
Voltage	AC adapter DC9V 450mA		
Dimensions	58 (W) ×19 (H) ×83 (D)		
Waight	Approx. 160g (Conversion unit)		
	Approx. 310g (AC adapter)		

Controller

Model No.	M50			
Voltage	100~240V			
Power consumption	Less than 10VA			
Fuse	3A			
Dimensions	97 (W) × 73 (H) × 130 (D)			
Weight	Approx. 800g			
Control method	PID			
Indicator LEDs	PV:LED (red)、SV:LED (green)			
Communication	Based on RS-485 () Max. Data Throughput : 19200bps			

Software

Model No.	Qss-3000 Version 3.0.0			
OS	Windows98/Me/NT4.0/2000/XP			
	Intel PentiumIII compatible (800MHz or more)			
CPU	*Please note that correct operation is not guaranteed			
	when using other processor.			
PC RAM	The memory capacity that the OS guarantee.			
Display resolution	1024×768 256 colors or more Screen font(small)			

c. Troubleshooting

[Can' t communicate with soldering controller]

• Be sure the instrument number is set correctly.

• Be sure the conversion unit is connected correctly.

(Use straight through cable for PC communication cable)

- Be sure the conversion unit is plugged in.
- Be sure the communication cables are connected securely.
- Be sire the communication port is set appropriately.

[For other communication errors]

- Be sure the modular jack is connected correctly.
- Be sure power is on to the controller.
- Be sure the communication cables are connected securely.

d. Customer support

Please contact our dealer or our service division to learn more about our products and services.



"World Class Soldering / Desoldering Systems"

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