Bluetooth Serial Bridge

FB100AS Bridge User Guide

Version 1.0





SECORE .

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Revision History

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1.0	06-05-2010	- Write a draft

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1 What is Bluetooth?

1.1 Features of Bluetooth

- Objectives of Bluetooth : To Realize Wireless Communication for Short Distance with Low Power Consumption, High Reliability, and Low Cost.
- Frequency in Use: To Use ISM(Industrial, Scientific, Medical) Band which does not require any permission to use.
 - 2.400 2.4835 GHz, 79 channels
 - 2.465 2.4835 GHz, 23 channels (in France)
- Transmission Rate : 1Mbps ~ 3Mbps
- Transmission Output : 1mW (10m, Class2), 100mW (100m Class1)
- Network Configuration : Configured with Master and Slave relation. A Bluetooth unit shall allow simultaneous connections up to 7 devices (in case of ACL).
- Reliability : To Guarantee stable wireless communication even under severe noisy environment through adopting the technique of FHSS (Frequency Hopping Spread Spectrum).

1.2 Operation of Bluetooth



<Feature 1-1 Bluetooth Operation>

- Bluetooth operates based on the connection between "Master" and "Slave".
- Masters are simply supposed to do "Inquiry" and "Page". Slaves are supposed to do "Inquiry Scan" and "Page Scan".
- If a Master finds a Slave and so "inquiry" is successful, a Slave responds to the Master with its information.
- Interconnection between the Master and the Slave is achieved only if the information from the Slave is corresponded with the Master, and the Slave sends data to the Master.

2 Product Introduction

FB100AS Bridge is a bridge communication product for Bluetooth RS232 devices.

Main Features of FB100AS Bridge

- 1. Supports Bluetooth Specification 2.0
- 2. Bridge expansion of wireless communication network for any product supporting Bluetooth SPP
- 3. Simple setting of FB100AS Bridge by using DIP switches
- 4. Seamless connection to Bluetooth PDA, Bluetooth USB Dongle and etc.
- 5. Allows user to choose a power supplying method (D-Sub 9 pin Connector, USB Connector)
- 6. Supports function for easy Bluetooth firmware update
- 7. Reliable data transmission and reception

※ First time buyer of FB100AS Bridge is recommended to read contents of this manual carefully before using the product.

3 PRODUCT COMPONENTS

3.1 Basic Components of FB100AS Bridge

MODEL	PICTURE	Q'TY (EA)
FB100AS Bridge (RS-232 Serial Bridge)	FB 100AS CO	1
FCA004DA (4dBi Dipole Antenna)		1
FCA100UC (USB Power Cable)		1
CD (Operation Manual and Test Program)		1
FCA001PO (Bracket) (Option)		1
FCA180SC (RS232 Serial Cable) (Option)		1
FCA001BR (DC Power Adapter - 5V) (Option)		1

<Table 3-1 Basic Components of FB100AS Bridge>

※ If you find any of above components is defective, or not included in the package, please contact the seller you purchased.

4 Product Appearance



<Figure 4-1 Details and Dimension of FB100AS>

5 Interface

5.1 FB100AS Bridge Interface



<Figure 5-1 D-SUB 9 Pin Connector>

		EUNITION	INPUT/OUTPUT
PIN NO.	NAME OF SIGNAL	FONTION	DIRECTION
1	-	-	-
2	ТХ	Transfer Data Data output	Output
3	RX	Received Data Data Input	Input
4	-	-	-
5	GND	Ground	
6	-	-	-
7	-	-	-
8	-	-	-
9	VCC	Power (DC 4 ~ 12V)	Input

<Table 5-1 Features of D-SUB 9 Signals>

% The power can be supplied through pin number 9.

6 Features of Dip Switch



<Figure 6-1 FB100AS Bridge Dip Switch View>

6.1 Left DIP Switch

SW	FEATURES	ON	OFF	BASIC SET
1	Selectable Power Supply	ON KHS42	0 N KHS42	ON
		D-SUB Power Supply or USB Power Supply	USB Power Supply	
2	None	-	-	OFF
3	None	-	-	OFF
4	Environment Setting (PC Configuration Select)	PC Configuration Mode	Operation Mode	OFF

<Table 6-1 Features of Left DIP Switch>

Note :

If you push a Reset Switch when a Dip Switch is turned ON in a PC Configuration Mode, the products return to the status of FATORY RESET.

6.2 Right Dip Switch

sw	FEATURES	ON	OFF	BASIC SET
1	None	-	-	OFF
2	Operation Mode	ON K 1842 8 9 1 2 3 4	ON K-1542 ON 89 12	OFF
		OP_MODE1	OP_MODE0	
3	Connection Mode		22 23 23 24 24 20 20 20 20 20 20 20 20 20 20 20 20 20	OFF
		CNT_MODE1	CNT_MODE0	
4	Remote Control	ON KHS ON KHS 8 9 1 2 3 4	ON KHS 2 8 9 1 2 3 4	OFF
		Remote Control Mode	Normal Mode	

<Table 6-2 Features of Right DIP Switch>

7 Power Indicator LED / Status LED



<Figure 7-1 Appearance of FB100AS>

FB100AS has a red Power LED and green and red Status LED. Please, refer to the following description.

LED 구분	State	Description
Power Indicator LED (Power LED)	Power Input	The Red Light Turns on
	Connecting to Bluetooth	Green LED is Flickering
Status Indicator LED (Status LED)	Connected to Bluetooth	Green LED turned on
()	PC Configuration	Red LED is Flickering

<Table 7-1 Operation Check by LED Status>

Note :

If you a Reset Switch when a red Status LED flickers in a PC configuration Mode, the products return to the status of FACTORY RESET.

8 Performance of Product

No.	F	Part	Specification
1	Bluetooth Spec.		Bluetooth Specification 2.0 Support
2	Communication dis	stance	100 M
3	Frequency Range		2.4 GHz ISM Band
4	Sensitivity		-83dBm (Typical)
5	Transmit Power		11 dBm(Typical)
6	Size		66 x 31 mm
7	Support Bluetooth	Profile	SPP (Serial Port Profile)
8	Input Power		4 ~ 12V
9	Current Consumpti	on	100 mA (Max)
10	Tarrasa anatura	Operating	-20°C ~ 50°C
10	lemperature	Limit Operating	-30°C ~ 80°C
11	Antenna		4 dBi
12	Interface		9 pin D-SUB Female (RS232)

<Table 8-1 Performance of FB100AS Bridge>

9 Current Consumption

STATUS		Current Consumption (mA)		
		MIN	MIN	MIN
Standby		24	30	27
Inquiry scan & page scan (Slave)	24	66	46
Page scan (Slave)		24	33	28
Inquiry (Master)		77	86	82
Slave		39	45	43
Connected	Master	27	33	29
Data transmission	Slave	51	57	54
Data transmission	Master	48	57	52
Data maantian	Slave	48	54	50
	Master	45	54	49
Data transmission (recention	Slave	51	57	54
Data transmission / reception	Master	51	60	55

<Table 9-1 Current Consumption of FB100AS Bridge>

TEST CONDITIONS

Baud rate : 9600 bps, Input Voltage : DC 5V

The power consumption is subject to change depending on the transmission rate and volume of data.

10 Initial Set Value of Products

The product has the initial Set Value as shown on the <Table 10-1>. Please be sure to identify the initial Set Value, before you begin to use.

ТҮРЕ	Set Values
Authentication	Enable
Encryption	Enable
Uart (baud rate-data bit-parity bit-stop bit)	9600-8-N-1
Pin code	BTWIN
Local Name	BT-bridge
Target Master BD Address	00000000000
Target Slave BD Address	00000000000
Flow Control	Enable
Remote Control ID	Admin
Remote Control PW	BTWIN

<Table 10-1 Initial Set Values of FB100AS Bridge>

Note :

Please refer to 12 PC Configuration for details on changing the setting.

11 How To Connect The FB100AS Bridge?

What is the operating mode? An underlying premise for Bluetooth communication is that if a device on one end has a MASTER role, another device on the other end has to have a SLAVE role.

Operation modes enables user to select the role of a desired Bluetooth device to be connected to the FB100AS Bridge.

* The explanation below shows how to connect FB100AS (Serial Adapter) devices developed by Firmtech to the FB100AS Bridge (Serial Bridge). All products in the explanation are assumed to be in the initial setting (factory default setting).

If you want to make a connection to a product from other companies, please refer to the product manual from the company.

11.1 Operation MODE 0

In the Operation MODE 0, connections to FB100AS Bridge can be made when the role of one connecting Bluetooth device (FB100AS) is set as MASTER and the role of the other Bluetooth device is set as SLAVE.

11.1.1 Connecting One FB100AS Bridge with Two FB100AS devices



< Figure 11-1 Connection type in the Operation MODE 0>

- (1) Set the PIN Code of one Bluetooth device (FB100AS) to be connected to the FB100AS Bridge as "BTWIN".
- (2) Set all FUNCTION SWITCHES of the FB100AS Bridge to Default ("OFF").
- (3) Turn on the power of the FB100AS device whose ROLE is set as MASTER.
- (4) Turn on the power supply of the FB100AS Bridge.
- (5) When the connection is made to the MASTER FB100AS while the green LED on the FB100AS Bridge blinks, the green LED on the FB100AS is on. (The LED of the FB100AS Bridge still blinks.)
- (6) Turn on the power of the FB100AS device whose ROLE is set as SLAVE.

(7) The blinking green LED on the FB100AS Bridge is changed to 'ON' state after the connection is made to the SLAVE FB100AS. (Connection completed)

11.1.2 Connecting More Than Two FB100AS Bridges with Two FB100AS devices

* Please note that the **First Target** in the below explanation refers to the device connected to the Bridge device and the Second Target refers to the secondarily connected device that is also finally connected to the Bridge device.



< Figure 11-2 Process of connection to multiple FB100AS Bridges>

- (1) Set the PIN Code of one Bluetooth device (FB100AS) to be connected to the FB100AS Bridge as "BTWIN".
- (2) First, turn on the power of the FB100AS Bridge 1.
- (3) Turn on the power of the FB100AS device whose ROLE is set as MASTER.
- (4) When connection is made between the FB100AS Bridge ① and the FB100AS(First Target) whose power is on in the step (2) (The status display LED on the FB100AS is ON), turn on the power of the FB100AS Bridge ②.
- (5) When connection is made between the Second Target of FB100AS Bridge ① and the First Target of FB100AS Bridge ②, the green LED on the FB100AS Bridge ① is on. (And the green LED on the FB100AS Bridge ② blinks).
- (6) When connection to the First Target of FB100AS Bridge ② is made, turn on the power of the FB100AS Bridge ③.
- (7) When connection is made between the Second Target of FB100AS Bridge ② and the First Target of FB100AS Bridge ③ is completed, the green LED on the FB100AS Bridge ② is on. (And the green LED on the FB100AS Bridge ③ blinks).

- (8) When the connection to the First Target of FB100AS Bridge ③ is made, turn on the power of the FB100AS (Second) device whose ROLE is set as SLAVE.
- (9) When the green LED of the FB100AS Bridge ③ is changed to "ON" state from blinking, it means all connections are made.
- (10) Now you can start data communication between the FB100AS (MASTER) and the FB100AS (SLAVE).

11.2 Operation Mode 1

In the Operation MODE 1, connection can be made when the ROLE of both Bluetooth devices (FB100AS) to be connected to the FB100AS Bridge is set as SLAVE, but in this MODE, you can not connect to the multiple FB00AS Bridges. The MODE1 has an advantage in that it operates more stably and has a shorter connection time. However, the remote control mode is not supported in this mode.



< Figure 11-3 Connection type in the Operation MODE 1>

- (1) Set the PIN Code of one Bluetooth device (FB100AS) to be connected to the FB100AS Bridge as "BTWIN".
- (2) Turn on the power of the two FB100AS devices.
- (3) Turn on the power of the FB100AS Bridge.
- (4) When connection is made to the FB100AS Bridge, the green LED on it is on.
- (5) The power supply order is needed only for the first time connection. From the next time, each device keeps trying connection to the previous connected device until it is made regardless of the order of power supply.

NOTE : If any connection among connected devices to the Bridge is off, a Soft Reset is made to the Bridge and it tries connections from the first.

12 How To Use the GUI Program?

You can easily set up or change parameters of the FB100AS by using the FB100AS Bridge GUI Program provided by us and control the FB100AS Bridge remotely by using the FB100AS (Serial Adapter) connected to the FB100AS Bridge.

12.1 User Environment Setup (PC Configuration) Using BTConfig Tool

- (1) Connect the FB100AS Bridge to a PC (DTE).
- (2) Set the FB100AS Bridge to PC Configuration Mode and turn on the power (Left DIP Switch #4 should be ON).
- (3) When you run the installed the FB100AS Bridge GUI program, you will see a screen as below.



- < Figure 12-1 Initial screen of the Configuration Tool Program >
- (4) On the Main Program Screen, click on the SERIAL OPEN button (or follow Menu : Connect SERIAL PORT OPEN) to see the Serial Setup Screen as below.



< Figure 12-2 Screen for serial connection >

(5) Set the serial setting of the FB100AS Bridge as below and click on the OPEN button.

Part	Baud Rate	Data Bit	Parity Bit	Stop Bit
Setting	9600 bps	8 bit	None	1

<Table 12-1 Basic serial setting values of the Bridge >

SERIAL P	ORT (RS	232)
COM PORT	COMI	
BAUDRATE	9600	
PARITY BIT	None	
DATA BIT	8 (FIXE	D)
STOP BIT	1	
OPEN	CAN	CEL

- < Figure 12-4 Serial connection in the Configuration Tool >
- (6) After the SERIAL PORT OPEN is clicked, the SERIAL CLOSE button and the LOCAL button are activated. Then, click on the LOCAL button.

(When you make a connection using the LOCAL button, you may ignore the DEFINE USED FB900AS button.)

During the connection using the LOCAL button, if no response is received within a preset time after the command is sent to the FB100AS, the following error message is displayed to show that the connection has not been made.

ERR	DR	
	ME OVER	
Ch	sck Last work and Try Again	
-		
	OK	

< Figure 12-5 LOCAL No response error message display during the LOCAL connection >

(7) When the LOCAL connection is made successfully, you can see the Parameter Window and command buttons for reading, setup, initialization and etc. (**READ, WRITE, INIT, LOAD, SAVE**) are activated.

SERIAL CLOSE		READ	WRITE	INIT	LOAD	SAVE	EXT
FB900AS		- 1st TAR	GET	- Ĥ	2nd TA	RGET	-
Local 8D Name							
Local BD Address		BLUETOC	TH DEV	CELIST -			
Pin Code		1 INSE	NT SELECT	D ADOR.	to Se	T SELECTED	COR.
Authentication			. 56	ARCH BLUET	DOTH DEVI	CES	-
Encryption		Device	Addr.	Device Na	me	CoD	
Operation Mode		-					-
Connection Mode	•						
Flow Control							
Remote ID							
Remote Password							
Firmware Version							

< Figure 12-6 Window for user set up and reading of the FB100AS Bridge parameters after the Serial Connection is made.>

(8) First, you can read and check the parameters of the FB100AS Bridge by pressing the READ button.

rstern Define	Device <u>C</u> onn	Hect Action	Help	0			
SERIAL CLOSE	LOCAL REMO	READ	WRITE	INIT	LOAD	SAVE	EUT
F8900A5		Ist TAR	ær —	1	- 2nd TA	RGET	
Local BD Name	F8900A5 v2.0	MASTER	0000000	00000	SLAVE	0000000	00000
Local BD Address	001181823E48	BLUETOC	TH DEVI	CELIST -			
Pin Code	1111	1 IN 10	NT MELECTR	D ADOR.	10 M	T SELECTED	NOOR.
Authentication	DISABLE 💌		50	ARCH BLUET	TOOTH DEVI	CES	
Encryption	DISABLE .	Device	Addr. (Device Na	me	CoD	
Operation Mode	MODE 0						
Connection Mode	MODE 0 .						
Filow Control	OISABLE 💌						
Remote ID	admin						
Remote Password	STWIN						
Permission Version	2.0.0						

< Figure 12-7 Reading parameters of FB100AS Bridge>

You can check the progress of the READ operation on the Progress Bar located at the bottom of the program screen. If there is no response or an error occurs, an error message like below pops up.

RROR	
TIME OVER	
Data was not received in time Check Last work and Try Again	

< Figure 12-8 Error message screen for no response to the READ operation of FB100AS Bridge

parameters>

(9) You can set up parameter values of the FB100AS Bridge changed or currently set by pressing the **WRITE** button.

The green colored areas show parameters that can be changed. If there is no parameter value or the input Target Address value has less than twelve digits, an error message is displayed.

ystem	Define (Device	Connect	Action	n Hel	D			THE R.
SERIAL HAIRES	SERIAL	TOCAL	REMOTE	READ	WRITE	INIT	LOAD	SAVE	EUT
F8900	AS		11	Ist TAR	GET	1	- 2nd TA	RGET	_
Loca	I ED Name	FB900AS	5 v2.0	MASTER	0011B1	823648	SLAVE	0018940	18360
Local B	D Address	0011818	23E4B	BLUETOC	THDEV	ICE LIST -			
	Pin Code	1111		1 INSE	NT MELECT	TD ADDR.	1 IN 10	T SELECTED	NODR.
Aut	entication	DISABLE			2 SI	ARCH BLUET	OOTH DEVI	ces	
	Encryption	DISABLE	•	Device	Addr.	Device Na	ne	CoD	
Opera	tion Mode	MODE 0							
Connec	tion Mode	MODE 0	•	-					
R	ow Control	ENABLE							
	Remote ID	admin		-					
Remote	Password	STWIN							
Fernerg	re Version	2.0.0							

< Figure 12-9 Setup of FB100AS Bridge parameters >

You can check the progress of the WRITE operation on the Progress Bar located at the bottom of the program screen.

WRITE ERROR
There is a portion which is not input for writing sta Green Portion must be filled Especially, Target Address must be 12 Bytes
OK

< Figure 12-10 Error message for wrong set value>

This error message appears when there's an unfilled data or the input Target Address has less than twelve digits.

RROR	
TARGET ADDRESS ERROR	
Target address must be HEXA Number There is wrong number in Target Address Check First and Second Target Address	
ОК	

< Figure 12-11 Error message showing the Target Address value is not a HEXA number> This error message appears when the input Target Address value is not a HEXA number.

ERROR	
TIME OVER Data was not received in time Check Last work and Try Again	
ОК	

< Figure 12-12 Error message showing that there is no response received.>

The above error message appears when there is no response in a certain preset time during when the setup data is written to the FB100AS Bridge.

(10) You can save the FB100AS Bridge's parameters displayed on the screen or set up again using the

WRITE button after re-loading them by pressing the **LOAD / SAVE** buttons. (Saved file extension name : *.900)

This function is convenient since user does not need to write down set parameters but can save them in files for easy management.

		Folder C Rockup	u 🖓 • 🗷 🔥 🖬
resource Device Cont stem Deline Device Conr Serial Serial Cose	ect Action Belo READ WRITE INIT LOAD SAVE DOT	File name : Files type : FBS00AS Config File(* 500)	· Cance
FB900AS	15t TARGET 2nd TARGET MASTER 001181823648 34.446 001894018360		
FB900AS Local BD Name FB900AS v2.0 Local ED Address 001181823E48 Pin Code 1111	191:7ARGET 2017ARGET MASTER: 001181822646 Suff: 001994018360 BULGTOTH DEVELOTE MORE. TO SUFFY RULETER MORE. TO SUFFY RULETER MORE.		
EB900A5 Local ED Name FB900A5 v2.0 Local ED Address 001101823C48 Pin Code 1111 Authentication 01548LE • Encryption 01548LE •	INTERNOOTISUESCHOOL INTERNOOT	Lond Set	up File
B900AS F850AS v2.0 Locid Do Name F850AS v2.0 Locid Do Adress SOLINIECKHI Anthenolation DISARLE • Encryption CISARLE • Contraction DISARLE • OperationMode MODE 0 Interaction DISARLE • Provident MODE 0 Interaction StarLE • Resolution StarLE • Resolution StarLE •	INTER COLLECTOR NUMER COLLECTOR RUNNER COLLECT	Fader Setup Fader 100 Bookup Heriti 200	up kilo: V Q * 🖄 🏕 🗄
BOOLS F8900AS v2.0 Looid Di Name F8900AS v2.0 Di Callandia F8900AS v2.0 Pic Callandia GILINESCRAIR Pic Callandia GILINESCRAIR Pic Callandia GILINESCRAIR Operation Model MODELIN Pic Cantral Skallel • Pice Cantral Skallel • Remote ID salamin mimote Parsurod EffWMA	INTERNOOTBIESCHOOL BACTER OOTBIESCHOOL BLUETOOTH DEVICE LIST RUUT STATUESCHOOL RUUT S	Lond Set	up File V 🖉 • 🗷 🛧 🗄

< Figure 12-13 Saving and loading of set parameters>

- (11) You can initialize the product to the Factory Setting by pressing the **INIT** button.
 - When user opts to initialize the product after seeing the Factory Initialization Alert message, then the GUI program will return to the initial screen as the "AF&F" command is sent to the FB100AS Bridge.

WRITE INIT LOAD SAVE EX
ET 2nd TARGET
SELECTED ADDR.
y Configuration?
CANCEL
/ •

< Figure 12-14 Factory Initialization of the FB100AS Bridge>

(12) As the FB100AS Bridge operates in the MASTER mode, you can search nearby SLAVE devices and enter address values of found devices as Target Address values. First, search nearby SLAVE devices by clicking the SEARCH BLUETOOTH DEVICES. After the search is done, you can enter address values of found devices as Target Address values by using the two buttons (INSERT SELECTED ADDR. TO FIRST TARGET/ INSERT SELECTED ADDR. SECOND TARGET).

🏇 FB900AS Bluetooth Bridge	onfiguration Tool Yer 1.0.0 🛞	
<u>System</u> <u>D</u> efine Device	onnect <u>A</u> ction <u>H</u> elp	
SERIAL OPEN SERIAL LOCAL	READ WRITE INIT LOAD SAVE EXIT	
FB900AS	1st TARGET 2nd TARGET	
Local BD Name FB900AS v	0 MASTER 00025800A7A7 SLAVE 00000000000 .	
Local BD Address 0011B1B2	BLUETOOTH DEVICE LIST	ue the
Pin Code 1111	INSERT SELECTED ADDR. INSERT SELECTED ADDR. Second Target.	
Authentication DISABLE	SEARCH BLUETOOTH DEVICES	
Encryption DISABLE	Device Addr. Device Name CoD SEARCH Button for nearby	
Operation Mode MODE 0	O000F09C1BA1 Anycall 320204 SLAVE devices	
Connection Mode MODE 0	O01D255E4F79 SCH-W290(88* 5A0204 0011B1A1E544 FB151v3.0.1 1F00 ► SLAVE Device List found	
Flow Control DISABLE	▼ 00025B00A7A7 FB755v1.1.1 1F00	
Remote ID admin	0018AF843F0E Anycall 100204 001D255AF38A SPH-W2700(58 5A0204	
Remote Password BTWIN	0017C302406F Ever Bluetoo 400204	
Firmware Version 2.0.0		
	। 100% ♀≢ 4:26:33	

(Note : You can WRITE the address after the setup of the FB100AS Bridge TARGET.)

< Figure 12-15 Searching nearby SLAVE devices>

12.2 Remote Control Using the GUI Program

This mode is used for user convenience when it is hard to move the FB100AS Bridge after installation or when you want to replace a connected Bluetooth device or when you lost it.

To use the Remote Control function, you have to set the **RIGHT FUNCTION SWITCH #4** to "ON" before installing the FB100AS Bridge.

There is around ten seconds of more time lag in average needed for a remote connection than for a normal connection.

You can control the FB100AS Bridge on the GUI program remotely using the FB100AS after the Remote Control Mode (Right DIP Switch #4 ON) is set.

(1) First, set the PIN Code of the Bluetooth device (First Target – Role : Master) to be connected to the FB100AS Bridge as "BTWIN" and enter the address value of the FB100AS Bridge as the connecting address.

(The existing First and Second Target devices have to be powered off. – This power-off setting is assumed in consideration of a product malfunction or other reasons. If they are powered on, the connection is made to the First Target device.)

After the above setup is done, turn off the power of the First Target device and proceed to the next step.

The power of the First Target will be turned on after opening of the SERIAL PORT.

(2) Run the GUI program and open the FB100AS Bridge List Window by clicking the DEFINE USED FB900AS button (or select Define Device on the Menu) before you click on the SERIAL OPEN button.

System	Define	Device	<u>C</u> onnect	Action	USED FB900AS LIS	π	INSERT
\bigcirc	0	9.00	9		REMOTE INDEX	ADDRESS	
SERIAL	SERIAL	Incas	DEMOTE	-			EDIT
OPEN	CLOSE	LUCAL	REMOTE	REAL			DELETE
		the local division of	1111				
DEFIN	E USED FB	900AS		-			LOAD
DEFIN	E USED FB	900AS		•			LOAD
DEFIN	E USED FB	900A5		,			LOAD

< Figure 12-16 FB100AS Bridge device definition>

(3) Open the FB100AS Bridge Adding Window by clicking the INSERT button on the LIST window, enter the FB100AS Bridge's address value to be connected and add it by clicking the INSERT button. (You have to know the LOCAL address of the FB100AS Bridge in advance.)

SED F8900AS	20 3	
USED FB900AS LIST	INSERT	
REMOTE INDEX ADDRESS		- 11 · · · · · · · · · · · · · · · · · ·
	EDIT	DEFINE FB900A5
	DELETE	
		FB900AS ADDRESS INPUT
	1	001181823548
	LOAD	001101023240
	SAVE	
TOTAL 0 ENABLE 0	APPLY / CLOSE	INSERT 3 CANCEL

< Figure 12-17 Adding devices on the FB100AS Bridge List>

(4) After checking that the FB100AS Bridge is added on the FB100AS Bridge List Window, press the APPLY/CLOSE button to close the window, then you will see the device is added to the Main Program Window.

SED FB900AS	1	
USED FB900AS LIST	INSERT	
✓ 1 001181823E48	103	Confirming of the added FB100AS
	DELETE	
	1040	
COUNT	SAVE	
TOTAL TOTAL ENABLE	APPLY / CLOSE	
SERIAL OPEN CLOSE LOCAL DEFINE USED FB900AS	REMOTE	WRITE INIT LOA
		$\mathbf{\dot{\mathbf{Y}}}$

< Figure 12-18 Confirming the addition of the FB100AS Bridge device on the list>

(5) Open the set serial parameters of the **First Target Device (ex.FB100AS)** by pressing the SERIAL OPEN button in the Main Program Window.

System	<u>D</u> efine	Device	Connect	Action	<u>ł H</u> elp	COM PORT	IRT (RS:	232)
•	0	25	25	-	and a	BAUDRATE	9600	
OPEN	CLOSE	LOCAL	REMOTE	READ	WRITE U	PARITY BIT	None	•
DEFIN	E USED FR	2A0090			01	STOP BIT	8 (FIXE	•
						OPEN	CAN	CEL

< Figure 12-19 SERIAL connection>

(6) When you turn on the power of the First Target device, the INDEX and the address value of the FB100AS Bridge device that can be connected are displayed after connection is made to the FB100AS Bridge, then color of the INDEX number display area is changed to green and the REMOTE button becomes activated.

When you press the REMOTE button at this time, the REMOTE Login Window pops up.





If no ID or password is not entered or wrong ID or password is entered within about one minute after the Login Window pops up, the Login Window will be closed automatically and you have to start login again.

The FB100AS Bridge is restarted at this time as well.

(7) Enter "admin" and "BTWIN" (basic setting of FB100AS Bridge) for ID and password and click the LOGIN button. (If ID and password have been changed arbitrarily, you have to enter the changed one for login.)

Remote Login)
REMOTE ID admin PASSWORD BTWIN	After entering ID and password, click on the LOGIN button.
	<u></u>
Remote Login	
REMOTE ID admin	If only the entered ID is accepted, the ID space becomes inactivated
PASSWORD admin	Re-enter the password and click on the LOGIN button.
	J

- < Figure 12-21 Remote Control Login Window>
- (8) Once you are successful in the Remote Login, you can set up or change the setting of the FB100AS Bridge in the same way as in the LOCAL operation.

READ the setting first before you change it and press the WRITE button.

ystern	Define De	rvice	Connect	Action	ĿΗ	elp			
GERIAL S	ERIAL	OCAL	REMOTE	READ	WRIT	E INIT	LOAD	SAVE	EXIT
- FB900A	\s		- 11	1st PAR	_{JET} 2	1	C 2nd T/	ARGET	-
Local	BD Name								
Local 8D	Address			BLUETOO	TH DEV	ICE LIST			
8	Pin Code				RT SELEC	TED ADDR.		ERT SELECTED	ADDR.
Authe	entication				12 s	EARCH BLUE	TOOTH DE	ICES	
E	ncryption			Device	Addr.	Device Na	me	CoD	
Operat	ion Mode		-	10-000000					
Connect	ion Mode		•						
Flow	w Control								
R	emote ID								
Remote P	Password								
Firmwar	e Version								

< Figure 12-22 Reading and setup of FB100AS Bridge parameters remotely>

***** You have to press the SERIAL CLOSE button or the EXIT button after completing the setup change to see the FB100AS Bridge re-starts and operates under the changed setting.

12.2 GUI Menu Map



< Figure 12-23 GUI program menus>

The above MENU is activated or inactivated according to the current status of the FB100AS Bridge GUI program.

12.4 GUI Buttons



12.5 Saving and Reading of the GUI Settings

- Saving and reading of the FB100AS Bridge settings - File extension name : *.900

18900AS Bluetooth Bridge Confi	guration Tool Ver 1:0.0 😿	iff teat01 900 if teat02 900
tem Define Device Conn AL SEBIAL LOCAL REMO	ect Action Help	File name Files type: FII:00045 Config File(*:900)
F8900AS Local BD Name F8900AS v2.0 Local BD Address 001181829E48	Lst TARGET 2nd TARGE MASTER 00025800A7A7 SLAVE 00000000000	Save Setup Information
Pin Code 1111 Authentication DESABLE •		Folder Dackup
Encryption DISABLE Operation Mode MODE 0 Connection Mode MODE 0	Device Addr. Device Name Cot 0000F09C18A1 Anycal 320204 001D255E4F79 SOH-W290(88* SA0204 001181A1E544 P0151v3.0.1 If00	
Remote ID admin emote Password BTWIN	001225008/W/ P875971.1.1 [P00 00184/P98706 Anyod 100204 00102554/58A 5PH-W2700(58 546204 0017/5302406/F Ever 8kstoo 400204	File name Files type FID:0045 Contig File(* 900) Files type FID:0045 Contig File(* 900) Files type FID:0045 Contig File(* 900) Files type Fi

<Figure 12-25 Saving and reading of the FB100AS Bridge settings>

- Saving and opening FB100AS Bridge list - File extension name : *.flst

LAL CLOSS BOCAL	CANOTE BEAS WATTE THEY LOAD		+	
EFINE USED FEPODAS	03			
	USED FR9DDAS		File name	Ope
	USED F0900AS LIST	INSERT	Film type : Finitech Device List File (*	fat) · Card
	V 1 001181823E4B	EDET		
FB900A		DELETE	Sevel	Device List
Configura			Folder 🛅 Backup	• O • 2 4 1
Version 1/0.0		1040	and 1. See	
		SAVE		
	TOTAL ENABLE	APPLY / CLOSE		
	<u>U</u>	[Lawrence and and a law of the l	◆	
	100%	오章 4:39:24 🖉		
	100%	2# 4:39:24	File name :	Sav

<그림 12-26 Saving and reading of the FB100AS Bridge List>

12.6 TX / RX Message Viewer

You can see messages sent and received by clicking [Help] - [Rx/Tx Message Show] on the MENU.

1

FE900AS Eluctooth Bridge Configuration Tool Ver. L.D.0	×	RX2 TENESSAUS. CLOSE MESSAGE DIX
ystem Define Device Connect Action Help		TEPESSAR - CLAR
🕞 😔 🖉 🖷 🥌 🚽 🗛 🖓 🖌 Rx/Tx Message Show	0	
PEN CLOSE LOCAL REMOTE READ WE About	EXIT	
SEFINE USED FB900AS		
		RUNESAR CLIAN
1		
EDAGALC		
F DYUUAS Bluetooth Bridge		
F D900AS Bluetooth Bridge		About
Configuration Program		About X
Configuration Program		About 8 F6900AS BLUE TOOTH BRIDGE CONFIGURATION TOOL
Configuration Program		About F6900AS BLUE TOOTH BRIDGE CONFIGURATION TOOL Version 1.0.0
Configuration Program		About FB900AS BLUETOOTH BRIDGE CONFIGURATION TOOL Version 1.0.0 COPYRUGHT Firmtech Co., 1bd http://www.firmtech.co.dc
Configuration Program	-	About FB900AS BLUETOOTH BRIDGE CONFIGURATION TOOL Version 1.0.0 COPYRIGHT Firmtech Co., Ltd http://www.firmtech.co.kt TEL + 102-21-719-4012 FAX + 402-31-719-4024

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<Figure 12-27 Message Viewer for sent/received messages and checking of the program version>

13 Approval Information 13.1 KCC

13.2 FCC compliance Information – FB100AS

This device complies with part 15 of FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference received.
- 2. This device must accept any interference received.

Including interference that may cause undesired operation.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this Equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the Federal Communication Commission(FCC) rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and , if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures. Reorient or relocate the receiving antenna. Increase the separation between the equipment and the receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected Consult the dealer or an experienced radio/television technician for help.

A separation between the user's the antenna be at least 20cm and a prohibition that it can not Be co-located with other transmitter.

To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product.

13.3 CE – FB100AS

Hereby, FIRMTECH Co., Ltd, declares that this FB100AS is in compliance with the essential

requirements and other relevant provisions of directive 1999/5/EC.

13.4 TELEC – FB100AS

13.5 SIG