

Product Specification of a Pen-based tablet driver for Windows 3.1

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					TITLE	
					Product Specification of a Pen-based tablet driver for Windows 3.1	
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				APPR.		1 / 9

Contents

1.	Scope.....	3
2.	Overview	3
3.	Configuration.....	4
4.	Basic Specifications	4
5.	Operations of a Pen-Based Tablet Driver.....	6
6.	Precautions to Follow when Operating the Pen-Based Tablet Driver	6
7.	Procedures for Setting up a Pen-Based Tablet Driver	6
8.	Correction Program (Utility)	6
8.1	Configuration of the Correction Program	7
8.2	Correction Screen (with EEPROM).....	7
8.3	Drawing Test Screen	9
9.	Other.....	9

					TITLE	
					Product Specification of a Pen-based tablet driver for Windows 3.1	
					DRAW. NO.	CUST
					Tech Bes N-25241	
EDIT	DATE	DESIG.	CHECK	DESCRIPTION	Fujitsu Takamisawa Component Limited	SHEET
DESIG.			CHECK		APPR.	2 / 9

Product Specification of a Pen-based tablet driver for Windows 3.1

1. Scope

This specification applies to the pen-based tablet driver that is a Windows 3.1 device driver (standard) provided by Fujitsu Takamisawa Component Limited.

[Product drawing number]

②

Name	Drawing number	Edition number
Windows 3.1 pen-based tablet driver	NS01B-0559-0501	4th edition

[File configuration]

File name	Function
Fidmour.drv	Pen-based tablet driver
Fidmouse.ini	Establishment file
calwinr.exe	Correction program

[Type]

Item	Type
EEPROM	Unused
Interface	Serial

2. Overview

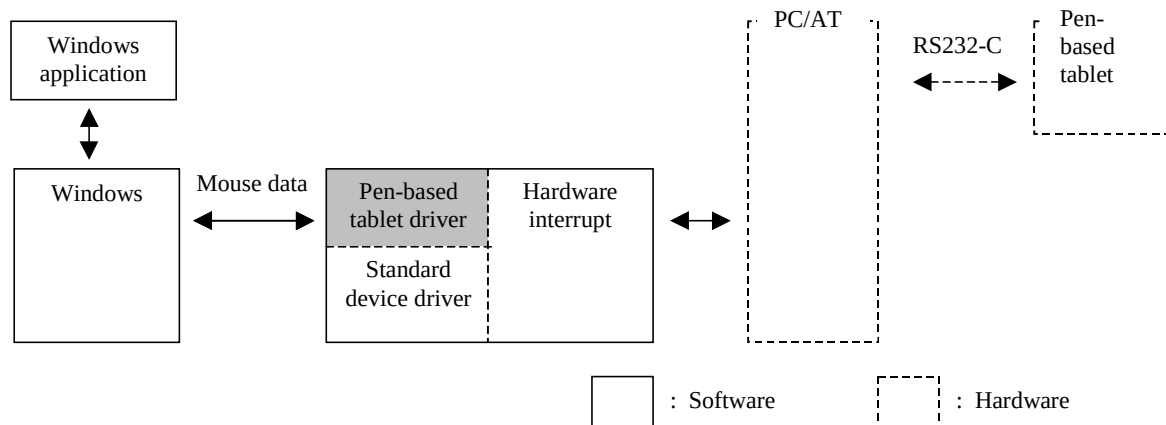
This product is a pen-based tablet driver that is a Windows 3.1 *1), *2) mouse emulation driver that replaces the existing mouse driver and permits operations equivalent to those with a mouse *3), and which is provided by Fujitsu Takamisawa Component Limited.

This product notifies the system of the input coordinate data received via RS-232-C with the absolute coordinate, and the system converts the absolute coordinate into a data item equivalent to the mouse, after which it notifies the application of the converted data. Consequently, the application operates by recognizing the data of the pen-based tablet as mouse data.

This product also permits the use of a mouse and the combined use of a pen-based tablet and mouse for input.

The shaded area in the block diagram below indicates this product.

					TITLE	
					Product Specification of a Pen-based tablet driver for Windows 3.1	
02	000628	Kiribayashi		Edition number is changed. (2->4)	DRAW. NO.	CUST
					Tech Bes N-25241	
EDIT	DATE	DESIG.	CHECK	DESCRIPTION	Fujitsu Takamisawa	SHEET
DESIG.			CHECK		Component Limited	3 / 9



Notes

- *1 Only IBM-PC/AT and compatible machines can be used as hardware.
- *2 Not compatible with DOS applications in Windows
- *3 Only the left button can be used.

3. Configuration

The pen-based tablet driver consists of a system interface for control of initialization, enabling, disabling and other driver tasks from the system, an interrupt handler for receiving pen-input data, generating coordinate data and button data before notifying the system, as well as an application interface for issuing commands to the pen-based input controller from the application.

The application interface is only used for the correction program to enable use of the correction function of the pen-based tablet.

This product also includes a correction program for correcting the pen-based tablet (utility).

4. Basic Specifications

- (1) RS-232-C Format: 8 bits plus 1 stop bit, without parity (fixed)
- (2) RS-232-C communication speed: 9600 bps (fixed)
- (3) Hardware interrupt: optional

*Set up connective port of the pen-based tablet driver.

②

<Specifications of Establishment file>

Establishment file Name: Fidmouse.ini

File form: text

Section Name: [FIDMOUSE]

Entry Name: IRQNO (IRQ number)

IOADR (I/O address)

a) Set up way of IRQ number

					TITLE		
					Product Specification of a Pen-based tablet driver for Windows 3.1		
02	000629	Kiribayashi		Basic specifications is changed.	DRAW. NO. CUST		
					Tech Bes N-25241		
EDIT	DATE	DESIG.	CHECK	DESCRIPTION		Fujitsu Takamisawa	
DESIG.			CHECK		APPR.		SHEET
						Component Limited	4 / 9

IRQO = IRQ number (IRQ number = 1 ~ 15)

b) Set up way of I/O address

IOAIR = I/O address (I/O address = 0x0 ~ 0xFFFF)

Ex) When the pen-based tablet driver connect with IRQ3 and I/O address, Establishment file(Fidmouse.ini) is mention below is made at system directory.

[FIDMOUSE]

IRQNO=3

IOAIR=0x2f8

					TITLE	
					Product Specification of a Pen-based tablet driver for Windows 3.1	
02	000629	Kiribayashi		Basic specifications is changed.	DRAW. NO.	CUST
					Tech Bes N-25241	
EDIT	DATE	DESIG.	CHECK	DESCRIPTION	Fujitsu Takamisawa	
DESIG.			CHECK		Component Limited	SHEET
				APPR.		5 / 9

5. Operations of a Pen-Based Tablet Driver

(1) Initialize ②

When Windows is started, a pen-based tablet driver is loaded by the system and initialization is carried out. At this time, a pen-based tablet driver read Establishment file (Fidmouse.ini) and set up operations condition, and then a pen-based tablet driver sends out the reset command to the set RS-232-C port and searches for connections of the pen-based tablet, depending on whether an acknowledge response exists.

When the connections are confirmed, the set rate command is subsequently sent out and the interval of coordinate data is set at 25 ms.

(2) Enable

Once initialization is complete, the system gives the pen-based tablet driver an enable instruction. At this time, the reset command/set rate command is sent out again. Once it has been sent out, enable the reception interrupt of the pen-based tablet and enable pen-based operations. The coordinate data and the button data received by interrupt are called back by the mouse event process within the system and the system uses a mouse event message to notify the application of mouse-related events.

(3) Disable

After exiting from Windows, the system gives the pen-based tablet driver a disable instruction. This pen-based tablet driver then disables the reception interrupt with a pen-based tablet, to disable pen-based operations.

6. Precautions to Follow when Operating the Pen-Based Tablet Driver

As described in 5., the pen-based tablet driver sends out the reset command (FFh+80h) to RS-232-C port is set up Establishment file to check the connections of the pen-based tablet at initialization and enabling. The power supply of the pen-based tablet needs to be turned on before Windows is started up since connections are checked with the reset command.

7. Procedures for Setting up a Pen-Based Tablet Driver

- 1 Copy the pen-based tablet driver to the system directory of Windows.
- 2 Copy Establishment file to the Windows directory.
- 3 Change the designation for the system.ini file of Windows from the mouse driver to the pen-based tablet driver.

Ex) When EEPROM is used

- 1 Copy Fidmour.drv to c:\windows\system.
- 2 Copy Fidmouse.ini to c:\windows.
- 3 Change MOUSE.DRV= MOUSE.DRV (designation of mouse driver) to MOUSE.DRV= Fidmour.drv for the system.ini file of c:\windows.

8. Correction Program (Utility)

Corrections are made so that the position in which the pen-based tablet is pressed can be in agreement with the position of the display. When setting up or replacing a pen-based tablet, always be sure to make corrections.

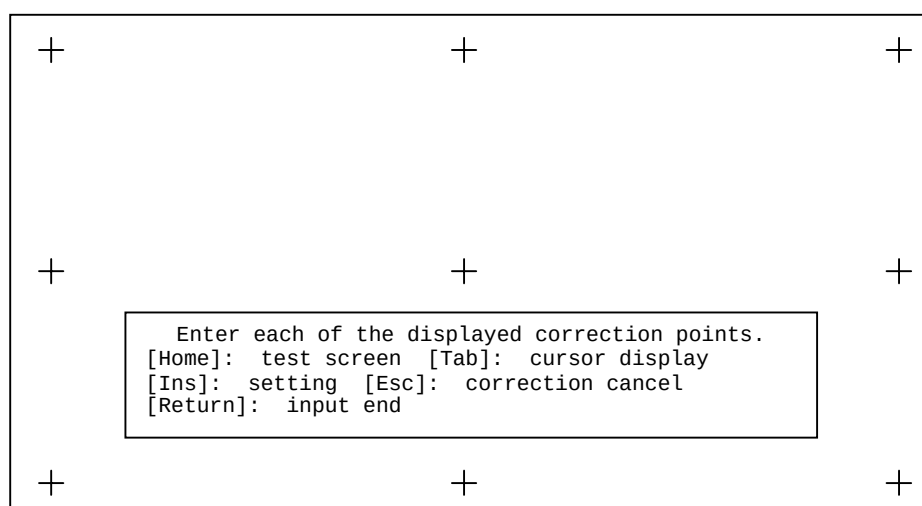
					TITLE	
					Product Specification of a Pen-based tablet driver for Windows 3.1	
					DRAW. NO.	CUST
					Tech Bes N-25241	
EDIT	DATE	DESIG.	CHECK	DESCRIPTION	Fujitsu Takamisawa	SHEET
02-000629		Kimayashi		The explanation of initialization is changed.	Component Limited	6 / 9
DESIG.			CHECK		APPR.	

8.1 Configuration of the Correction Program

The correction program consists of a correction screen for performing correction operations and a drawing test screen for visually checking that the position in which the pen-based tablet is pressed is in agreement with the display position after correction.

8.2 Correction Screen (with EEPROM)

- 1 Execute the correction program (calwinr.exe) using, for example, the file manager.
- 2 The correction screen is displayed (nine plus marks + are displayed).
(Open the dialog box with the Ins key to set, for example, the panel size and number of correction points)
- 3 Press +. If the pressed point is a correctable point, the color of the + changes from black to red, and vice versa.
- 4 Press all nine + (in any order) and press the Return key.
- 5 When corrections are completed normally, go to the drawing test screen.



<Correction screen>

Key input of Correction screen

[Home]: test screen Cancel correction and go to the drawing test screen.

[Esc]: correction cancel..... Cancel correction and exit the correction program.

[Tab]: display of a cursor..... Turn the cursor display on the screen on and off

[Ins]: setting..... Set parameters for correction.

[Return]: input end Create correction data.

* When the pen-based tablet uses EEPROM, the correction data and the correction points will be stored in EEPROM. In the initial correction, all correction points must be input. From the second correction onward, partial input is permitted.

					TITLE		
					Product Specification of a Pen-based tablet driver for Windows 3.1		
					DRAW. NO. CUST		
					Tech Bes N-25241		
EDIT	DATE	DESIG.	CHECK	DESCRIPTION		Fujitsu Takamisawa	
DESIG.			CHECK		APPR.	Component Limited	SHEET 7 / 9

The correction parameters setting dialog box

The Ins key opens the dialog box in the figure below.

● indicates a default value when the correction program is activated.

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Setting of correction parameters

Panel size

☐ 12.1 inches

☐ 11.3 inches

☒ 10.4 inches

☐ 8.4 inches

Leader

☒ Right (A)

☐ Top (B)

☐ Left (C)

☐ Bottom (D)

Number of correction points

☒ 9 corrections

☐ 20 corrections

OK

Cancel

1) Use the Tab key to move between parameter groups.

2) After clicking "OK," redo the inputting correction points from the beginning.

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3) Set the "Panel size" to 12.1 inches if you use larger panel than 12.1 inches.

					TITLE	
					Product Specification of a Pen-based tablet driver for Windows 3.1	
					DRAW. NO.	CUST
					Tech Bes N-25241	
02-000629	Kiribayashi			Correction program is changed.		
EDIT	DATE	DESIG.	CHECK	DESCRIPTION		
DESIG.			CHECK		APPR.	
					Fujitsu Takamisawa Component Limited	SHEET 8 / 9

8.3 Drawing Test Screen

The drawing test screen is a test screen that permits freehand drawing using a pen-based tablet. The correction result can be judged by visual inspection of the agreement between the position at which the pen-based tablet is pressed and the display position. When the correction data is updated by input using the [Home] key or [Return] key on the correction screen, go to the drawing test screen.

[Home]: correction screen [Tab]: cursor display [Delete]: screen deletion [Return]: exit	

<Drawing test screen>

Inputs using keys on the drawing test screen

[Home]: correction screenGo to the correction screen

[Tab]: cursor displayTurn the cursor display on the screen on and off

[Delete]: deletion of the screenDelete the screen. The key guidance section goes up and down.

[Return]: exitExit from the correction program.

9. Other

Any unclear points regarding matters not covered by this specification shall be resolved through mutual consultation.

					TITLE	
					Product Specification of a Pen-based tablet driver for Windows 3.1	
					DRAW. NO.	CUST
					Tech Bes N-25241	
EDIT	DATE	DESIG.	CHECK	DESCRIPTION		Fujitsu Takamisawa
DESIG.			CHECK		APPR.	Component Limited
						SHEET
						9 / 9