Device Driver for the OS/2 Operating System (6075)

Installation Reference Card
Hostess Series
Hostess *550* Series
Hostess/*MC* Series
Hostess *550*/*MC* Series

Scope

Use this reference card to install the device driver and the controller. This device driver supports up to four Hostess, Hostess/*MC*, Hostess *550*, or Hostess *550*/*MC* Series controllers.

To use this device driver, you must have an OS/2 operating system and an ISA/EISA or PS/2-based machine.

The following is an installation overview for the Hostess and Hostess *550* Series controllers.

1. Install the device driver, and edit the **CONFIG.SYS** file.

2. Configure and install the controller.

3. Configure and attach the interface, if applicable. Refer to your *Interface Reference Card*.

The following is an installation overview for the Hostess/*MC* and Hostess *550*/*MC* Series controllers.

1. Install the controller.

2. Configure the controller, using the diskette that contains the ADF files.

3. Install the device driver, and edit the **CONFIG.SYS** file.

4. Configure and attach the interface, if applicable. Refer to your *Interface Reference Card*.

Notes: *For support or troubleshooting information, see the documentation that came with your controller.*

If you are installing a Hostess MC *or Hostess* 550/MC*, use the Controller Installation section first.*

Device Driver Features

The device driver is functionally compatible with the IBM **COM01.SYS** or **COM02.SYS** device drivers. It has the following features:

- Software interfacing to the device driver can be written in any programming language supported by the OS/2 operating system
- Fully interrupt driven
- Supports programs in both real and protected modes
- Supports FIFO mode on 16550 UARTs
- Processes multiple operations accessing a single port

Installing the Device Driver

Use the following steps to install the device driver:

1. Insert the device driver diskette.
2. Copy the **HOSTDRV.SYS** file to your root directory, or to another directory specified in the **DEVICE** statement of the **CONFIG.SYS** file.
3. Edit the **CONFIG.SYS** file (in your root directory), by adding a **DEVICE** statement with the following format:

   DEVICE=*path* *HOSTDRV.SYS param1 param2 param3 param4 param5 param6*

   If the **HOSTDRV.SYS** file is located in the root directory, a path is not needed. The parameters are separated by a space, and must be listed in the order shown (refer to the Parameter Definitions table).
4. Reboot the system to initialize **CONFIG.SYS**.

Parameter Descriptions

The default parameters in the sample **CONFIG.SYS** file include the following:

- 9,600 baud rate
- No parity
- One (1) stop bit
- Eight (8) bits in character
- FIFO mode (if the 16550 option is specified in the **CONFIG.SYS** file)

The communication parameters can be changed by using **IOCTL**, **DosDevIOCTL** (with the proper function call). The device driver supports all **IOCTL** functions from the Serial-Device Control category.

In category 1, function **41h** (**ASYNC_SETBAUDRATE**), the device driver is able to set the following baud rates: 110, 150, 300, 600, 1,200, 1,800, 2,000, 2,400, 3,600, 4,800, 7,200, 9,600, 19,200, 38,400, and 57,600.

Parameters remain set until another **IOCTL** changes them, or until the system is reset.

Parameter Definitions

Parameter	Description
param1 (device name)	Specifies the device name, which cannot exceed eight characters (including the port number). The device name must not conflict with any other file or device. Once installed, the port names become: *name1-name4* (ports 1-4) *name5-name8* (ports 5-8) *name9-name16* (ports 9-16) For device drivers with versions later than 1.04.3, when *COM* is used as the device name, use the following guidelines: • AT systems-begin numbering with a 3, not a 1 (*COM3*) • Micro Channel systems-begin numbering with a 4, not a 1 (*COM4*) This retains *COM1* and *COM2* on AT systems and *COM1-COM3* on Micro Channel systems.
param2 (bus type)	**1** = ISA bus (PC/AT, PS/2 Model 30, or PS/ValuePoint) **2** = Micro Channel bus (PS/2 Models 50, 55, 60, 80, 90, or 95 and compatibles)
param3 (UART type)	**1** = 8250/16450 UART **2** = 16550 UART with FIFO buffers (16 bytes)

Parameter Definitions

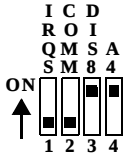
Parameter	Description
param4 (number of ports)	**2** = 2-port controller **4** = 4-port controller **8** = 8-port controller **16** = 16-port controller
param5 (base I/O address)	Each serial port occupies a contiguous block of eight I/O addresses: 2-port = 16 contiguous I/O addresses 4-port = 32 contiguous I/O addresses 8-port = 64 contiguous I/O addresses 16-port = 128 contiguous I/O addresses These addresses must not conflict with other devices. The allowable hexadecimal numbers include: 0 - 1FF0H (2-port) 0 - 1FE0H (4-port) 0 - 1FC0H (8-port) 0 - 7F80H (16-port)
param6 (IRQ)	See one of the following tables for the available IRQs. The device driver can handle shared IRQs in a PS/2 system.

Use the appropriate tables in the following sections to configure the Hostess and Hostess *550* Series controllers. For additional address settings, refer to the documentation that came with your controller.

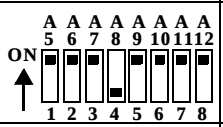
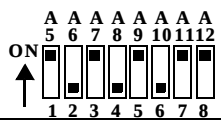
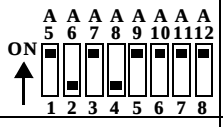
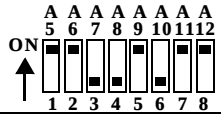
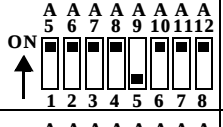
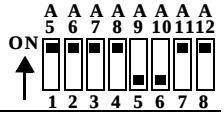
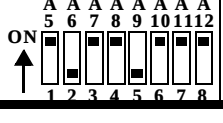
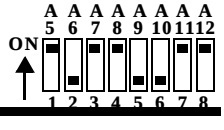
Configuring 2-Port Controllers

Configure the Hostess and Hostess *550* 2-port controllers by setting the base address with the MODE SELECT and ADDRESS switch blocks. You also need to set the interrupt vector with the INTERRUPT switch block.

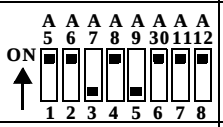
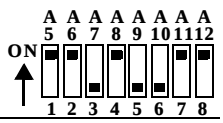
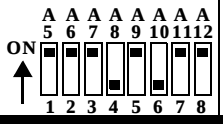
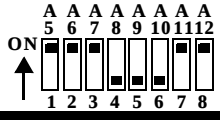
For all of the available base addresses, the MODE SELECT switch block must be set as follows:



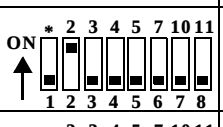
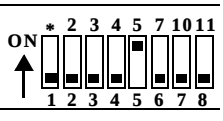
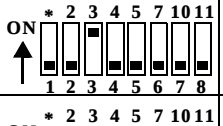
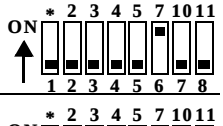
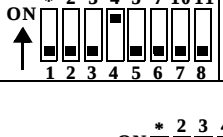
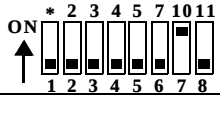
Address Settings for 2-Port Controllers

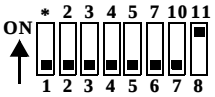
Address	ADDRESS	Address	ADDRESS
100h		540h	
140h		580h	
200h		600h	
240h		640h	

Address Settings for 2-Port Controllers (Continued)

Address	ADDRESS	Address	ADDRESS
280h		680h	
500h		700h	

IRQ Settings for 2-Port Controllers

IRQ	INTERRUPT	IRQ	INTERRUPT
2		5	
3		7	
4		10	

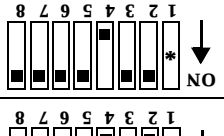
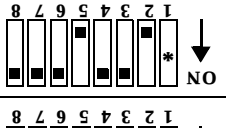
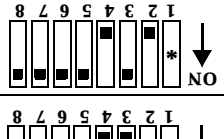
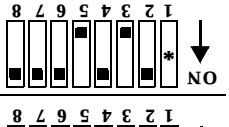
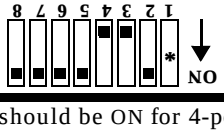
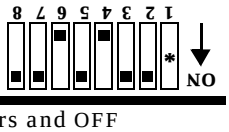


***** Mask Enable

Configuring 4/8-Port 100-Pin Controllers

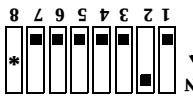
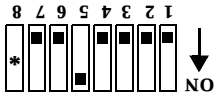
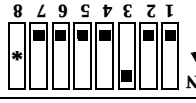
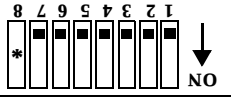
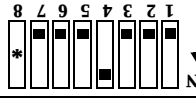
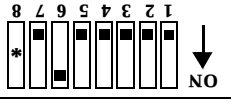
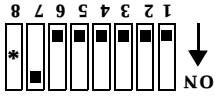
Configure the Hostess and Hostess *550* 4 and 8-port controllers by setting the base address (labeled ADDRESS or SW1) and the interrupt vector (labeled INTERRUPT or SW2) switches for each board.

Address Settings for 4/8-Port 100-Pin Controllers

Address	ADDRESS/SW1	Address	ADDRESS/SW1
100h		240h	
140h		280h	
180h		500h	

***** Switch 1 should be ON for 4-port controllers and OFF for 8-port controllers.

IRQ Settings for 4/8-Port 100-Pin Controllers

IRQ	INTERRUPT/SW2	IRQ	INTERRUPT/SW2
2		5	
3		7**	
4		10	
11			

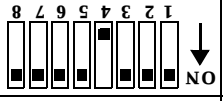
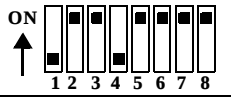
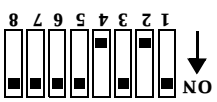
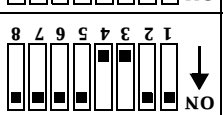
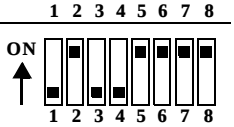
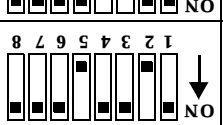
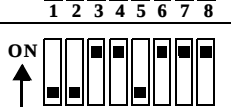
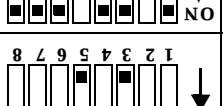
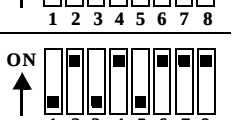
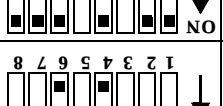
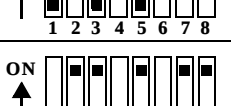
***** Switch 8 should be ON for 4-port controllers and OFF for 8-port controllers.

****** You must also move the jumper on JP2 to pins 2 and 3 (see the *Hardware Reference Card* for pin locations). Interrupt 7 is only available on models whose switch is labeled INTERRUPT.

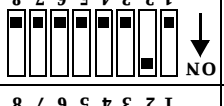
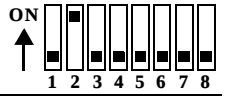
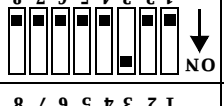
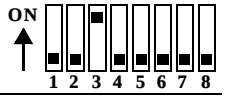
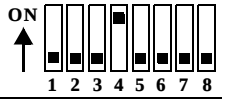
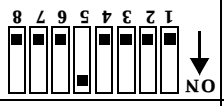
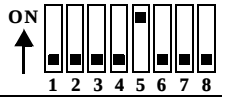
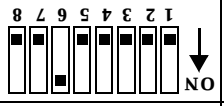
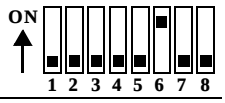
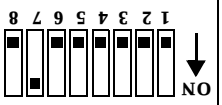
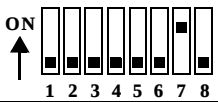
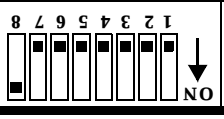
Configuring 4/8-Port RJ Controllers

Configure 4 or 8-port controllers by setting the base address (labeled S1 or ADDRESS SELECT) and the interrupt vector (labeled S2 or IRQ SELECT) switches for each board.

Address Settings for 4/8-Port RJ Controllers

Address	4-Port S1	Address	ADDRESS SELECT
100h		100h	
140h		140h	
180h		180h	
240h		240h	
280h		280h	
500h		500h	

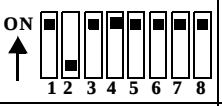
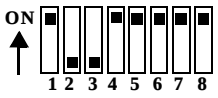
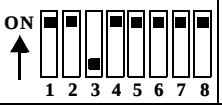
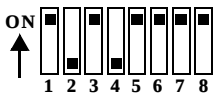
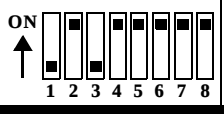
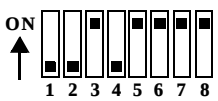
IRQ Settings for 4/8-Port RJ Controllers

4-Port IRQ	S2	8-Port IRQ	IRQ SELECT
2		2	
3		3	
4		4	
5		5	
10		7	
11		10	
12		11	

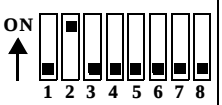
Configuring 16-Port Controllers

Configure 16-port controllers by setting the base address (labeled S1) and the interrupt vector (labeled S2) switches for each board.

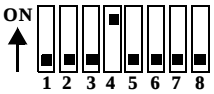
Address Settings for 16-Port Controllers

Address	S1	Address	S1
100h		300h	
200h		500h	
280h		580h	

IRQ Settings for 16-Port Controllers

IRQ	S2	IRQ	S2
2		5	
3		10	

IRQ Settings for 16-Port Controllers

IRQ	S2	IRQ	S2
4		11	
12			

Controller Installation

Use the following steps to install the controller.

Warning: *Static electricity may damage the controller. When touching the controller, wear a grounding strap. Hold the controller only by its edges or the mounting bracket.*

1. Turn the power switch for the system unit to the OFF position.
2. Remove the system unit cover.
3. Select a slot to install the controller.
4. Remove the expansion slot cover.
5. Insert the controller in the expansion slot, making sure that it is properly seated.
6. Attach the controller to the chassis with the expansion slot screw. Repeat steps 3 through 5 for each controller.
7. Replace the cover on the system unit.

Configuring Controllers Using ADF Files

Use this section to configure a Hostess/*MC* or Hostess *550*/*MC* controller, which must be done each time you do any of the following:

- Add a controller
- Move a controller to a different expansion slot
- Remove a controller from the system

With a copy of the Reference Diskette containing the ADF files, use the following steps to configure the controller:

1. Copy the Comtrol ADF files onto your copy of the Reference Diskette.
2. Insert your copy of the Reference Diskette into drive A.
3. Boot the system.
4. Press **ENTER** at the IBM logo.
5. Press **PgDn** at the **Adapter Configuration Error** screen.
6. Enter **n** when the system asks to automatically configure the system.
7. Enter **3** to set configuration.
8. Enter **2** to change configuration.
9. Select the address (non-conflicting), interrupt (non-conflicting), and mask enable settings.
10. Press **F10** to save the configuration.
11. Press **ENTER**, **ESC**, **ESC**, **ENTER** to restart the system.
12. Remove the Reference Diskette.

Once the controller is configured, install the device driver.

Verifying Installation

After the device driver, controller, and interface (if applicable) are installed, use the following steps to verify installation.

1. Attach the loopback plug to the port that you want to test.
2. Enter **OS2TERM** at the system prompt.

   This program is included on the device driver diskette.
3. At the prompt, enter the name of the port to test.

   This is the device name defined in the **DEVICE** statement of the **CONFIG.SYS** file.
4. Type at least 16 characters, which should appear on the screen.

   If characters do not appear, try the following:
   - Check the controller switch settings, if applicable.
   - Verify the parameters specified in the **DEVICE** statement.
   - Check the configuration for the Hostess/*MC* or Hostess *550*/*MC*, using the IBM Reference Diskette with the proper ADF file.
   - Reboot the system.

Repeat steps 1-4 for each port that you want to test.

Note: *To write a custom application, review the sample programs included on the device driver diskette.*

Contacting Comtrol

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For software updates, contact the Comtrol BBS at:

(612) 631-8310 *28.8 Kbps (V.FC) 8 bits and no parity*

Comtrol Europe:

FAX: 44 (0) 1***** 869-323-211 BBS: 44 (0) 1***** 869-243-687

Phone: 44 (0) 1***** 869-323-220

***** *Use of a "1" is dependent on the telephone carrier until April, 1995.*

Comtrol has a staff of hardware and software engineers, and technicians available to help you.

First Edition, November 8, 1994

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