2. Set switch 5 on the PC system configuration switch box to the ON position and switch 6 to the OFF position if you are connecting the CHAUFFEUR HT to an EGA, CGA, or 400 line 25 KHZ monitor. This same switch setting applies if you are connecting the CHAUFFEUR HT to a monochrome monitor and plan to use color/graphics software in a color simulation mode. If you plan to connect the CHAUFFEUR HT to a monochrome monitor and use Hercules software, set switches 5 and 6 to the OFF position. (See Figure 4.)


Figure 4 — PC System Configuration Switch Settings
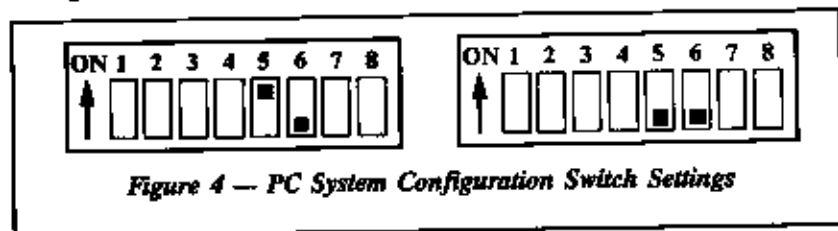
3. If you are installing the CHAUFFEUR HT into an IBM PC AT, you need to set the monitor type switch. This switch is located between the power supply and the expansion area. (See Figure 5.) Slide the switch toward the front of the system unit for an EGA, CGA, or 400 line Khz monitor. This same setting applies if you are connecting the CHAUFFEUR HT to a monochrome monitor and plan to use color/graphics software in a color simulation mode. Slide the switch toward the back of the system unit if you plan to connect the CHAUFFEUR HT to a monochrome monitor and use Hercules software.

Figure 5 — IBM PC AT Monitor Type Switch
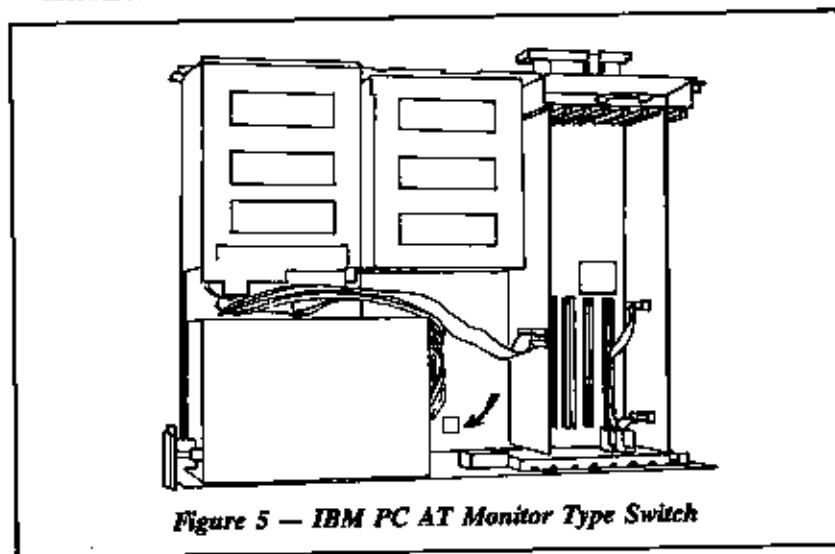
Chauffeur HT Switch Settings

The switch box on the CHAUFFEUR HT is a ten-bit switch. Switches 1-5 determine display support. Switches 6 and 7 control the operation of the parallel port. Switch 8 controls the size of the display memory. Switches 9 and 10 control the operation of the optional serial port. There are also six jumpers on the CHAUFFEUR HT. Locate the switch box and jumpers on the CHAUFFEUR HT. (See Figure 6.)


Figure 6 — Chauffeur HT Diagram
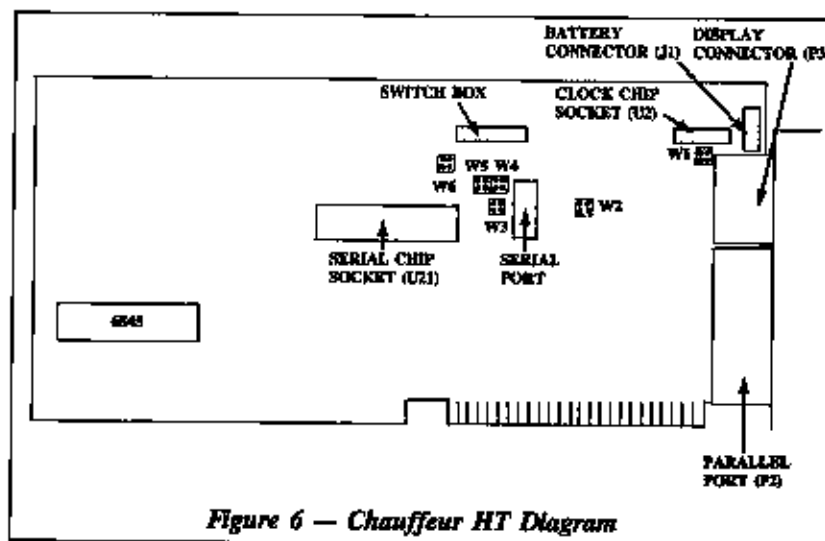
Display Support

NOTE: The following switch settings apply if the CHAUFFEUR HT is the ONLY video board in your system. If you have another video board in your system, please refer to the Switch Summary of this manual for further switch setting instructions.
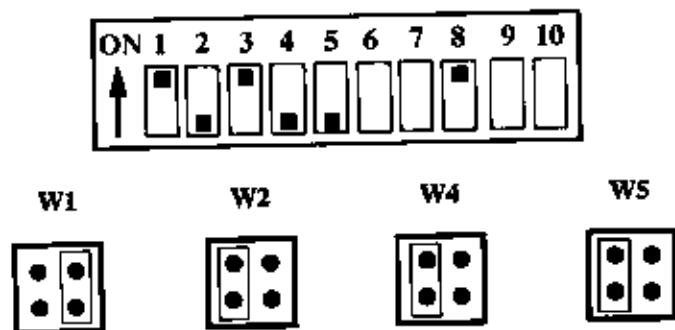
Monochrome Monitor

If you plan to connect the CHAUFFEUR HT to a monochrome monitor, set switches 1-5 and jumpers W1, W2, W4 and W5 as shown below:
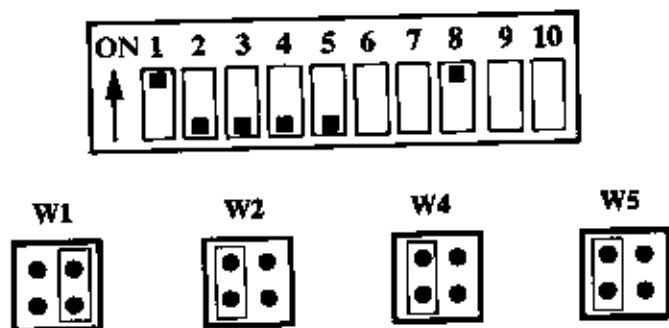
The above switch and jumper settings will result in the following:
a) This format will produce a graphics display that is compatible with the IBM monochrome monitor.
b) The CHAUFFEUR HT will respond as a color/graphics adapter and a monochrome/graphics adapter.

RGB Color Monitor

If you plan to connect your CHAUFFEUR HT to an RGB color monitor, set switches 1-5 and jumpers W1, W2, W4 and W5 as shown below:

The above switch and jumper settings will result in the following:

a) This format will produce a graphics display that is compatible with the IBM RGB color monitor.
b) The CHAUFFEUR HT will respond as a color/graphics and monochrome/graphics adapter.

400 Line 25 Khz Monitor

If you plan to connect your CHAUFFEUR HT to a 400 line 25Khz monitor, set switches 1-5 and jumpers W1, W2, W4 and W5 as shown below:

The above switch and jumper settings will result in the following:

a) This format will produce 400 line graphics that are compatible with 25Khz monitors.
b) The CHAUFFEUR HT will respond as a color/graphics adapter and monochrome/graphics adapter.

MONITOR TYPE	W4 SETTING	W5 SETTING
Taxan*		
Dyneer 140HI		
Mitsubishi AT-1341s		

MONITOR TYPE	W4 SETTING	W5 SETTING
Tatung CM 1370		
Roland CD240		
NEC Multi Sync		

*If you plan to connect the CHAUFFEUR HT to one of Taxan's 400 line monitors, switch one on the CHAUFFEUR HT should be in the OFF position.

EGA Monitor

If you plan to connect the CHAUFFEUR HT to an enhanced color monitor, set switches 1-5 and jumpers W1, W2, W4 and W5 as shown below:
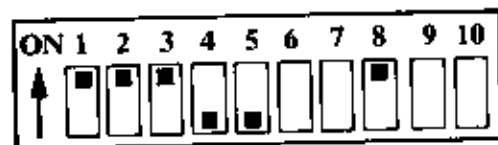
The above switch setting will result in the following:
a) The format will produce a graphics display that is compatible with an IBM RGB color monitor.
b) The CHAUFFEUR HT will respond as a color/graphics adapter and a monochrome/graphics adapter.

Parallel Port

An IBM System may contain up to three parallel ports. Every time the system is powered up or reset it will automatically look for parallel ports at three different I/O addresses in a specific sequence. The first port it finds will be designated LPT1:; the second LPT2:; the third LPT3:.

NOTE: If you have two ports in the same system with the same I/O address, the printer will not function properly.

The parallel port on the CHAUFFEUR HT will be your primary printer port. It will be designated LPT1: at the first I/O address. Switches 6 and 7 on the CHAUFFEUR HT should be set to the ON position. The parallel port can be set to be LPT2:, LPT3: or disabled. The following table summarizes the parallel port switch settings.

|	
LPT1:	
LPT2:	
LPT3:	
PARALLEL PORT DISABLED	

Display Memory

Switch 8 controls the video display memory buffer size. If switch 8 is in the ON position, the CHAUFFEUR HT controls the video buffer size according to how much memory the current video display mode requires. This setting assures compatibility with all programs compatible with the IBM Color/Graphics adapter. If switch 8 is in the OFF position, the video display buffer is always 64K. Note: Some Hercules mode programs (such as HBASIC) require the 64K memory buffer. If you are connecting

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the CHAUFFEUR HT to a monochrome, RGB or EGA monitor, set switch 8 to the ON position. If you are connecting the CHAUFFEUR HT to a 400-line 25Khz monitor, set switch 8 to the OFF position. Refer to the following chart.
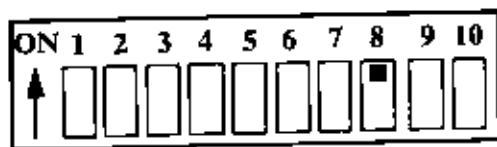
AUTOMATIC DISPLAY MEMORY SIZE SELECTION
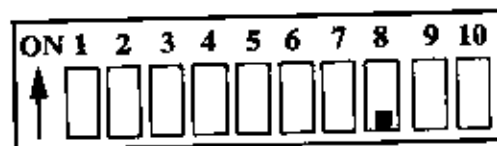
64K

Optional Serial Port

The CHAUFFEUR HT asynchronous serial communication port is functionally identical to an IBM Asynchronous Serial Communication Adapter. (Exception — the CHAUFFEUR HT does not support the 20mA current loop.) To use the serial port as COM1:, COM2:, COM3: or not at all, set the switches 9 and 10 and jumper W3 on the CHAUFFEUR HT as follows:

CHAUFFEUR HT RESPONDS AS	SWITCH SETTINGS	JUMPER W3 SETTING
COM1:		
COM2:		
COM3:		
SERIAL PORT OFF		

+5/Ring Indicator Jumper

A jumper (W6) is provided on the CHAUFFEUR HT to replace the ring indicator signal with +5 volts. This can provide power for a serial driven mouse. Refer to the following diagram.

RING INDICATOR SIGNAL SETTING   **+5 VOLTS SETTING***

*This jumper setting will cause the CHAUFFEUR HT to fail the IBM diagnostic serial port test.

SECTION 4
SWITCH SUMMARY

1		Display Format - See Notes Below
2&3	Off Off	Chauffeur HT connected to a monochrome monitor
	On Off	Chauffeur HT connected to a 400 line 25 Khz monitor
	Off On	Chauffeur HT connected to an RGB color monitor
	On On	Chauffeur HT connected to an enhanced graphics display
4&5	Off Off	Chauffeur HT responds as monochrome and color graphics adapter
	Off On	Chauffeur HT responds as color graphics adapter only
	On Off	Chauffeur HT responds as monochrome graphics adapter only
6&7	On On	Parallel Port - Monochrome (&H3BC)
	On Off	Parallel Port - Non-Offset (&H378)
	Off On	Parallel Port - Offset (&H278)
	Off Off	Parallel Port & Clock Disabled
8	Off	64K of Display Memory always available
	On	Display Memory limited to 16K until the board is programmed into a video mode that requires more than 16K.
9&10	On On	Serial Port responds as COM1:
	On Off	Serial Port responds as COM2:
	Off On	Serial Port responds as COM3:
	Off Off	Serial Port Off

Notes on Switch Settings

Switch 1 - Chauffeur HT connected to a monochrome monitor

If the CHAUFFEUR HT is connected to a monochrome monitor, switch 1 gives you the option of 300 or 400 line graphics. If switch 1 is in the

ON position, the CHAUFFEUR HT will produce 300 line graphics. This format will produce a graphics display that is compatible with the IBM Monochrome monitor. If switch 1 is in the OFF position, the CHAUFFEUR HT will produce 400 line graphics. This format will produce a graphics display that is taller than the text display. The 400-line format has a slower vertical scan rate than the 300-line format. A slower vertical scan rate can cause flickering and vertical rolling on some monochrome monitors.

Switch 1 - Chauffeur HT connected to a color monitor

If the CHAUFFEUR HT is connected to a color monitor, the display format will be the same when switch 1 is in the ON or OFF position.

Switch 1 - Chauffeur HT connected to a 400-line 25 Khz monitor

If switch 1 is in the ON position, the horizontal scan rate will be 26.4 Khz and the vertical scan rate will be on 60 Hz. If switch 1 is in the OFF position, the horizontal scan rate will be 24.5 Khz and the vertical scan rate will be 56.4 Hz. This slower scan rate is compatible with the Taxan high resolution color monitors.

Switch 1 - Chauffeur HT connected to an enhanced graphics monitor

If switch 1 is in the ON position, the CHAUFFEUR HT will produce monochrome quality text (8x14) and double scan 300 line graphics. If switch 1 is in the OFF position, the CHAUFFEUR HT will produce text and graphics compatible with the IBM color/graphics adapter in color mode. In monochrome mode, the CHAUFFEUR HT will produce monochrome quality text (8x14).

Switches 4 & 5

If the CHAUFFEUR HT is the only video board in the system and switches 4 and 5 are in the OFF position, the board will respond as a monochrome and color/graphics adapter. You can use DOS commands to switch between monochrome and color modes.

a) After the DOS prompt, type "MODE MONO". The CHAUFFEUR HT will respond as a monochrome adapter.

b) After the DOS prompt, type "MODE CO80". The CHAUFFEUR HT will respond as a color/graphics adapter.

NOTE: BASIC and several other programs require the system to be in color mode if graphics screens are to be used.

Switch 8

Switch 8 controls the video display memory buffer size. If switch 8 is in the ON position, the CHAUFFEUR HT controls the video buffer size according to how much memory the current video display mode requires. This setting assures compatibility with all programs compatible with the IBM Color/Graphics adapter. If switch 8 is in the OFF position, the video display buffer is always 64K. Note: Some Hercules mode programs (such as HBASIC) and programs with drivers for the STB Super Res 400 video board require the 64K memory buffer.

SECTION 5
JUMPER SUMMARY

Jumper W1

The position of jumper W1 indicates what type of monitor is connected to the CHAUFFEUR HT. Refer to the following diagram.

MONOCHROME,
CGA
400 LINE
MONITORS

EGA
MONITOR

Jumper W2

The position of W2 indicates what type of shades will be displayed on your monochrome monitor. The CHAUFFEUR HT has a gray scaler feature which converts the color information into a weighted gray scale. The 16 colors available on the IBM Color monitor will be displayed as increasingly brighter shades on your monochrome monitor. This shading effect has different results on each type of monitor. Jumper W2 comes preset from STB. If this jumper setting does not produce satisfactory results, try the alternate jumper setting. Refer to the following diagram.

FACTORY SETTING   ALTERNATE SETTING

Jumper W3

W3 is the serial interrupt jumper. If you set up the serial port on the CHAUFFEUR HT to be COM2:, the interrupt jumper should be changed from INT4 to INT3. Refer to the following diagram.

COM1:
INTERRUPT 4

COM2:
INTERRUPT 3

Jumpers W4 and W5

Jumpers W4 and W5 indicate the vertical and horizontal sync polarity of your monitor. Refer to the following diagram.

MONITOR TYPE	W4 SETTING	W5 SETTING
Monochrome, CGA or EGA Monitor		
Taxan*		
Dyneer 140HI		
Mitsubishi AT-1341s		
Tatung CM 1370		
Roland CD240		
NEC Multi Sync		

*If you plan to connect the CHAUFFEUR HT to one of Taxan's 400 line monitors, switch one on the CHAUFFEUR HT should be in the OFF position.

Jumper W6

Jumper W6 is provided on the CHAUFFEUR HT to replace the ring indicator signal with +5 volts. This can provide power for a serial drive mouse. Refer to the following diagram.

RING INDICATOR SIGNAL SETTING

+5 VOLTS SETTING*

*This jumper setting will cause the CHAUFFEUR HT to fail the IBM diagnostic serial port test.