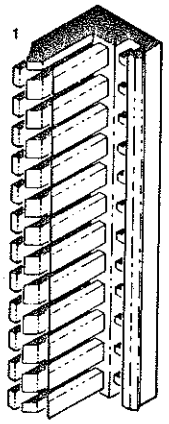
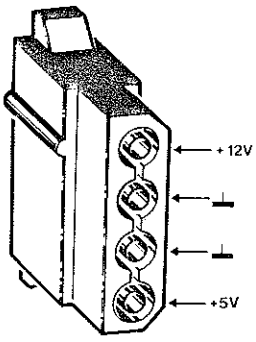
# Power

12-pin PSU connector on motherboard

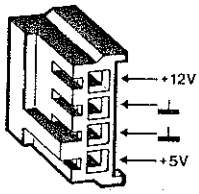


1 POWER GOOD (orange)
2 N.C.
3 + 12 V (yellow)
4 - 12 V (blue)
5 GND (black)
6 GND (black)
7 GND (black)
8 GND (black)
9 - 5 V (white)
10 + 5 V (red)
11 + 5 V (red)
12 + 5 V (red)

5¼" - DRIVE

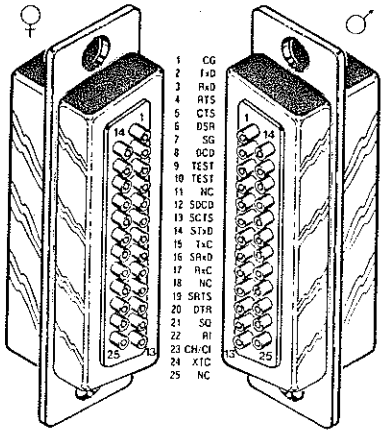



3½" - DRIVE

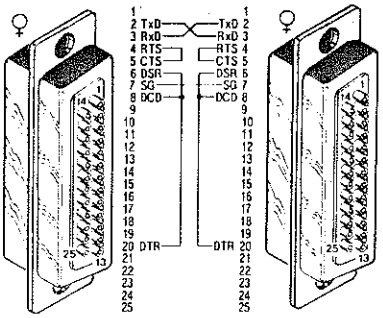



# RS-232

25 pin sub-D DCE



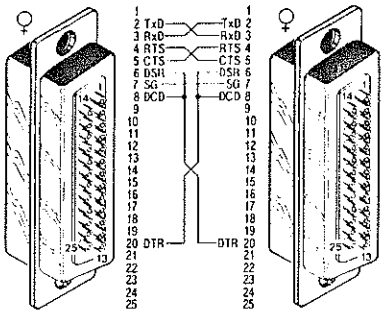

25 pin sub-D DTE



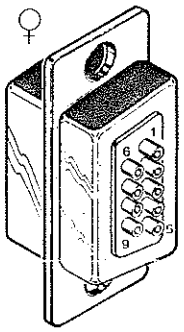
3 wire connection DTE DTE



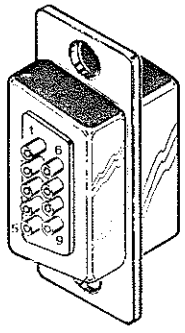

full connection DTE DTE



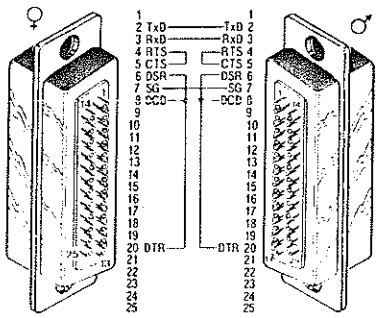

9 pin sub-D DCE

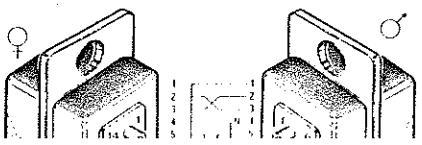



9 pin sub-D DTE

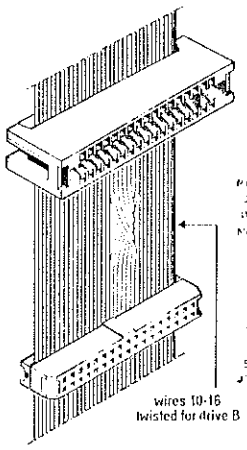


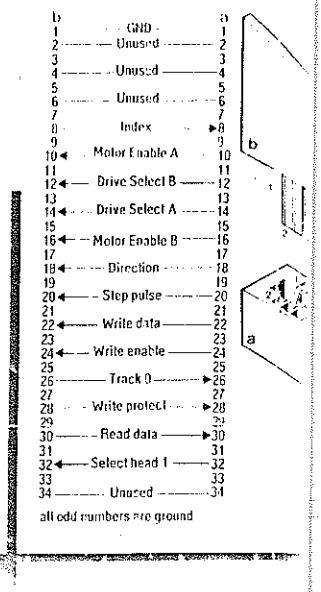
3 wire DTE-DCE link



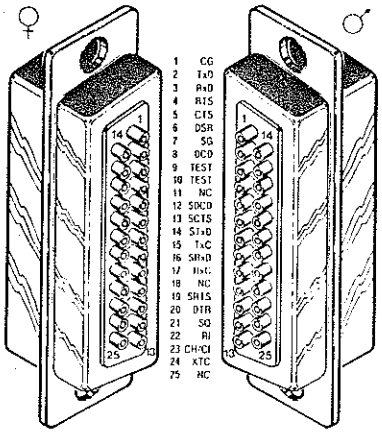
# Flopp



# RS-232

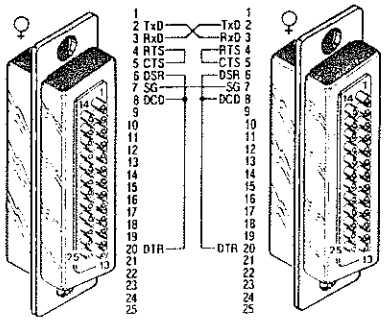
25-pin sub-D DCE



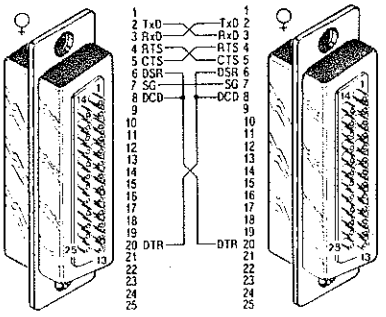

25-pin sub-D DTE



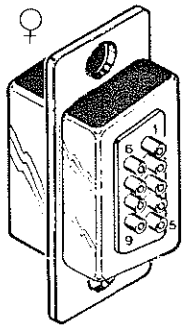
3-wire connection DTE-DTE



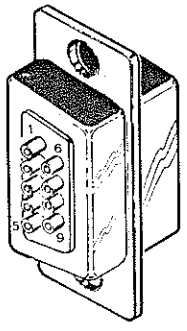

full connection DTE-DTE



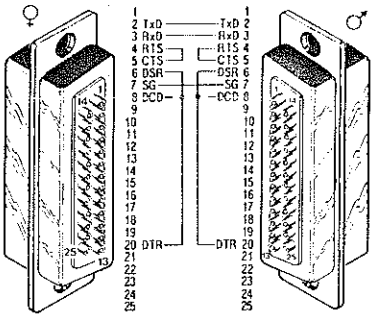

9-pin sub-D DCE



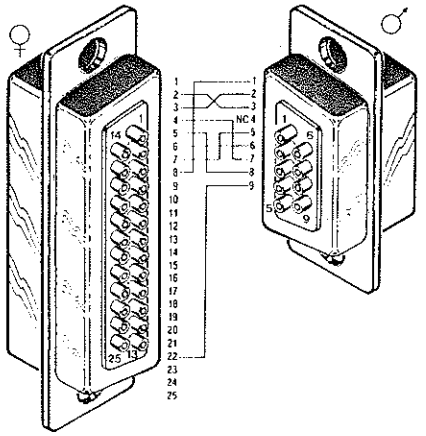

9-pin sub-D DTE



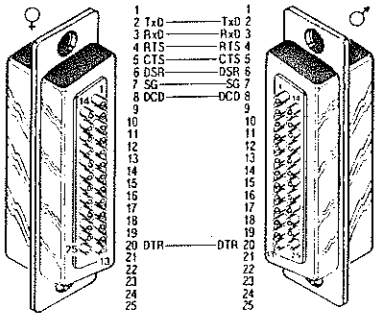
3-wire DTE-DCE-Sub

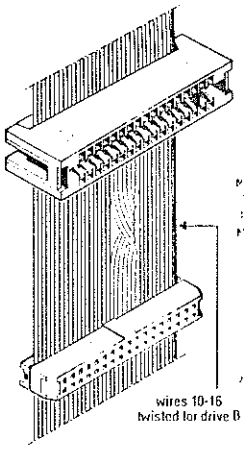


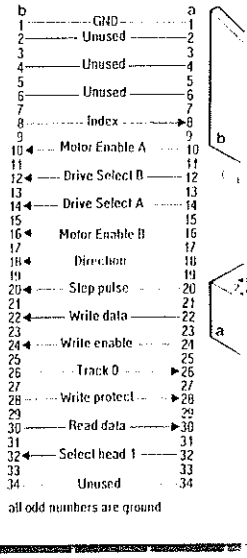

25-/9-pin adapter cable



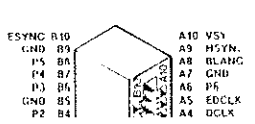

full connection DTE-DCE

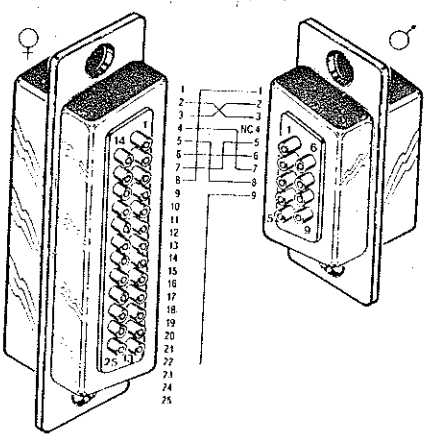


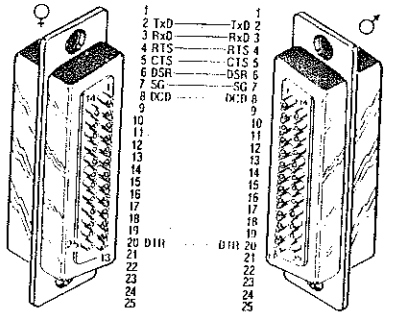



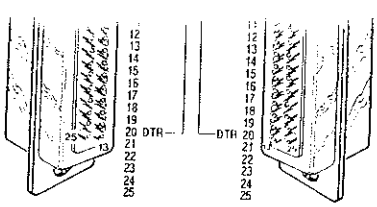



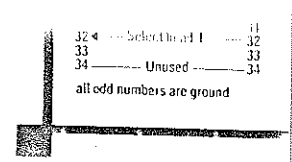

# Miscellaneous



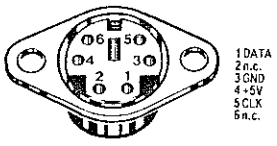


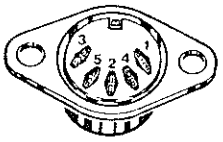


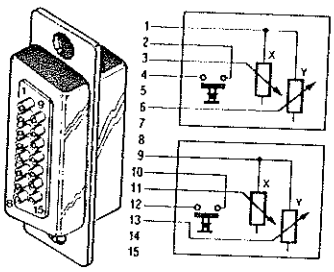



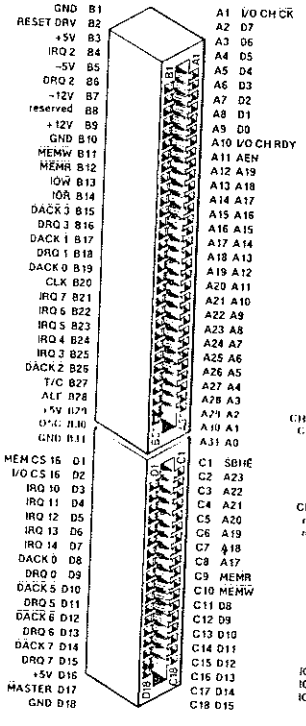



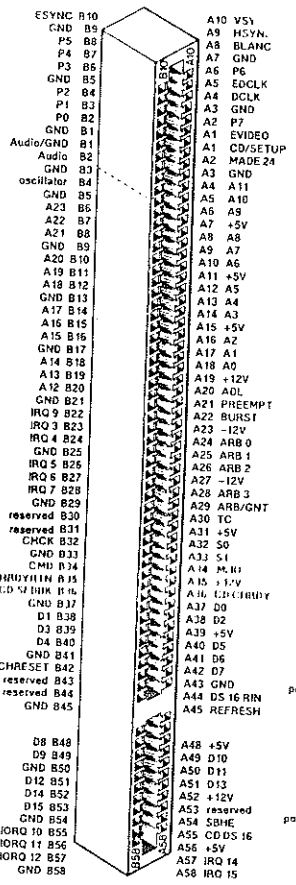

# Miscellaneous

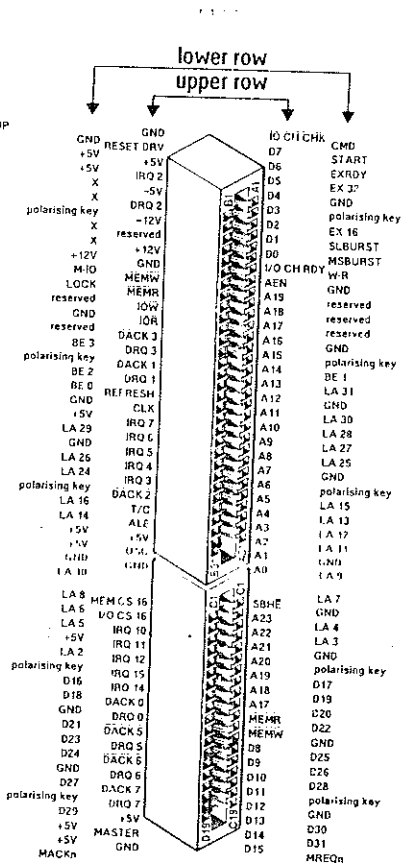




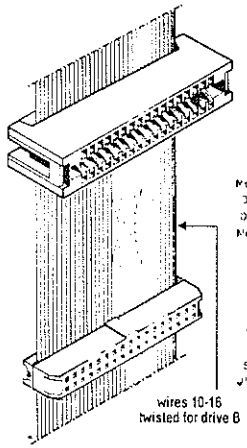



# Floppy disk / Hard disk

## Floppy disk

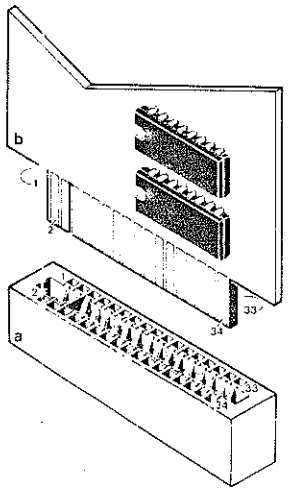
### Shugart interface AT and AT



| | | | |
|---|---|---|---|
| Unused | 2 | 1 | Gnd |
| Unused | 4 | 3 | Gnd |
| Unused | 6 | 5 | Gnd |
| Index | 8 | 7 | Gnd |
| Motor Enable A | 10 | 9 | Gnd |
| Drive Select B | 12 | 11 | Gnd |
| Drive Select A | 14 | 13 | Gnd |
| Motor Enable B | 16 | 15 | Gnd |
| Direction | 18 | 17 | Gnd |
| Step pulse | 20 | 19 | Gnd |
| Write data | 22 | 21 | Gnd |
| Write enable | 24 | 23 | Gnd |
| Track 0 | 26 | 25 | Gnd |
| Write protect | 28 | 27 | Gnd |
| Read data | 30 | 29 | Gnd |
| Select head 1 | 32 | 31 | Gnd |
| Unused | 34 | 33 | Gnd |

wires 10-16 twisted for drive B

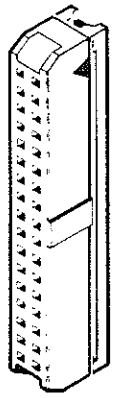
| b | | a |
|---|---|---|
| 1 | GND | 1 |
| 2 | Unused | 2 |
| 3 | Unused | 3 |
| 4 | Unused | 4 |
| 5 | Unused | 5 |
| 6 | Unused | 6 |
| 7 | Index | 7 |
| 8 | Motor Enable A | 8 |
| 9 | | 9 |
| 10 | Drive Select B | 10 |
| 11 | | 11 |
| 12 | Drive Select A | 12 |
| 13 | | 13 |
| 14 | Motor Enable B | 14 |
| 15 | | 15 |
| 16 | Direction | 16 |
| 17 | | 17 |
| 18 | Step pulse | 18 |
| 19 | | 19 |
| 20 | Write data | 20 |
| 21 | | 21 |
| 22 | Write enable | 22 |
| 23 | | 23 |
| 24 | Track 0 | 24 |
| 25 | | 25 |
| 26 | Write protect | 26 |
| 27 | | 27 |
| 28 | Read data | 28 |
| 29 | | 29 |
| 30 | Select head 1 | 30 |
| 31 | | 31 |
| 32 | Unused | 32 |
| 33 | | 33 |
| 34 | Unused | 34 |



all odd numbers are ground

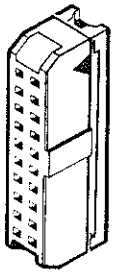
## Hard disk ST506 interface

### Drive control



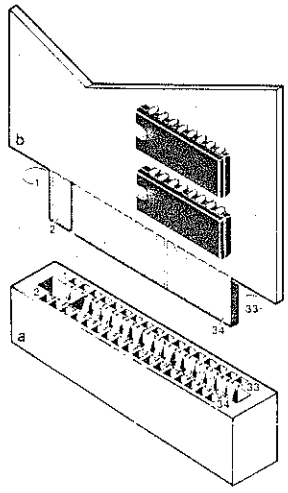
| | | | |
|---|---|---|---|
| Reduced Write Current | 2 | 1 | Gnd |
| Head Select 2 | 4 | 3 | Gnd |
| Write Gate | 6 | 5 | Gnd |
| Seek Complete | 8 | 7 | Gnd |
| Track 0 | 10 | 9 | Gnd |
| Write Fault | 12 | 11 | Gnd |
| Head Select 0 | 14 | 13 | Gnd |
| ESDI Sector | 16 | 15 | Gnd |
| Head Select 1 | 18 | 17 | Gnd |
| Index | 20 | 19 | Gnd |
| Ready | 22 | 21 | Gnd |
| Step | 24 | 23 | Gnd |
| Drive Select 1 | 26 | 25 | Gnd |
| Drive Select 2 | 28 | 27 | Gnd |
| No Connection | 30 | 29 | Gnd |
| No Connection | 32 | 31 | Gnd |
| Direction in | 34 | 33 | Gnd |

### Drive data



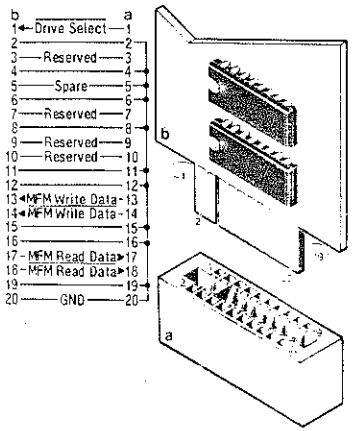
| | | | |
|---|---|---|---|
| No Connection | 2 | 1 | Drive Selected |
| Address Mark | 4 | 3 | Command Completed |
| Gnd | 6 | 5 | No Connection |
| -Write Clock | 8 | 7 | +Write Clock |
| +Reference Clock | 10 | 9 | No Connection |
| Gnd | 12 | 11 | -Reference Clock |
| -Write Data | 14 | 13 | +Write Data |
| Gnd | 16 | 15 | Gnd |
| -Read Data | 18 | 17 | +Read Data |
| No Connection | 20 | 19 | Gnd |

| b | | a |
|---|---|---|
| 1 | GND | 1 |
| 2 | Reduced Write Current | 2 |
| 3 | | 3 |
| 4 | Head select 2 | 4 |
| 5 | | 5 |
| 6 | Write Gate | 6 |
| 7 | | 7 |
| 8 | Seek Complete | 8 |
| 9 | | 9 |
| 10 | Track 0 | 10 |
| 11 | | 11 |
| 12 | Write Fault | 12 |
| 13 | | 13 |
| 14 | Head Select 0 | 14 |
| 15 | | 15 |
| 16 | ESDI sector | 16 |
| 17 | | 17 |
| 18 | Head Select 1 | 18 |
| 19 | | 19 |
| 20 | Index | 20 |
| 21 | | 21 |
| 22 | Ready | 22 |
| 23 | | 23 |
| 24 | Step | 24 |
| 25 | | 25 |
| 26 | Drive Select 1 | 26 |
| 27 | | 27 |
| 28 | Drive Select 2 | 28 |
| 29 | | 29 |
| 30 | Drive Select 3 | 30 |
| 31 | | 31 |
| 32 | Drive Select 4 | 32 |
| 33 | | 33 |
| 34 | Direction in | 34 |

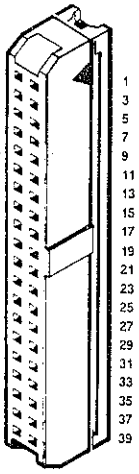


all odd numbers are ground

| b | | a |
|---|---|---|
| 1 | Drive Select | 1 |
| 2 | | 2 |
| 3 | Reserved | 3 |
| 4 | | 4 |
| 5 | Spare | 5 |
| 6 | | 6 |
| 7 | Reserved | 7 |
| 8 | | 8 |
| 9 | Reserved | 9 |
| 10 | Reserved | 10 |
| 11 | | 11 |
| 12 | | 12 |
| 13 | MFM Write Data | 13 |
| 14 | MFM Write Data | 14 |
| 15 | | 15 |
| 16 | | 16 |
| 17 | MFM Read Data | 17 |
| 18 | MFM Read Data | 18 |
| 19 | | 19 |
| 20 | GND | 20 |

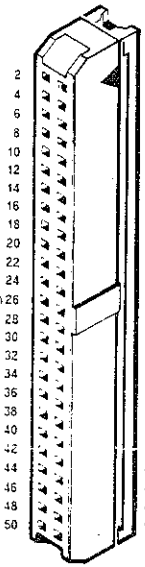


## Hard disk IDE interface

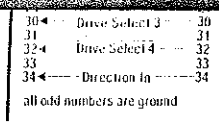


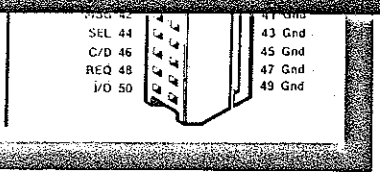
| | | | |
|---|---|---|---|
| GND | 2 | 1 | Reset |
| DD 8 | 4 | 3 | DD 7 |
| DD 9 | 6 | 5 | DD 6 |
| DD 10 | 8 | 7 | DD 5 |
| DD 11 | 10 | 9 | DD 4 |
| DD 12 | 12 | 11 | DD 3 |
| DD 13 | 14 | 13 | DD 2 |
| DD 14 | 16 | 15 | DD 1 |
| DD 15 | 18 | 17 | DD 0 |
| Keypin | 20 | 19 | GND |
| GND | 22 | 21 | DMARQ |
| GND | 24 | 23 | DIOW |
| GND | 26 | 25 | DIOR |
| SPSYNC | 28 | 27 | IORDY |
| GND | 30 | 29 | DMACK |
| IOCS16 | 32 | 31 | INTRQ |
| PDIAG | 34 | 33 | DA 1 |
| DA 2 | 36 | 35 | DA0 |
| CS3FX | 38 | 37 | CS1FX |
| GND | 40 | 39 | DASP |

## Hard disk SCSI interface



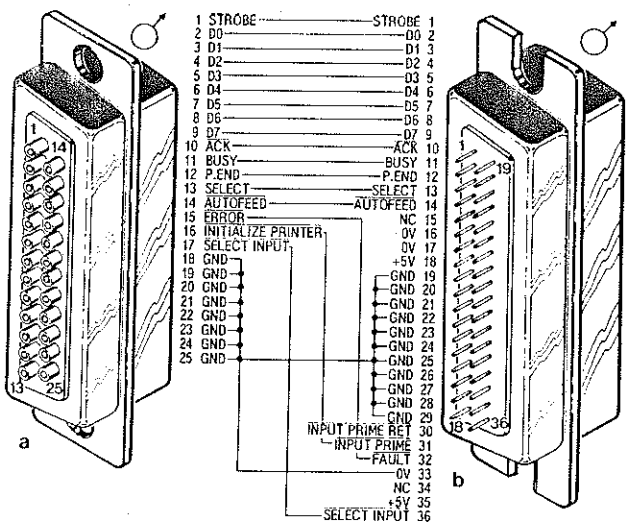
| | | | |
|---|---|---|---|
| DB0 | 2 | 1 | Gnd |
| DB1 | 4 | 3 | Gnd |
| DB2 | 6 | 5 | Gnd |
| DB3 | 8 | 7 | Gnd |
| DB4 | 10 | 9 | Gnd |
| DB5 | 12 | 11 | Gnd |
| DB6 | 14 | 13 | Gnd |
| DB7 | 16 | 15 | Gnd |
| DBP | 18 | 17 | Gnd |
| Gnd | 20 | 19 | Gnd |
| Gnd | 22 | 21 | Gnd |
| Gnd | 24 | 23 | Gnd |
| n.c.(TERMPWR) | 26 | 25 | n.c. |
| Gnd | 28 | 27 | Gnd |
| Gnd | 30 | 29 | Gnd |
| ATN | 32 | 31 | Gnd |
| Gnd | 34 | 33 | Gnd |
| BSY | 36 | 35 | Gnd |
| ACK | 38 | 37 | Gnd |
| RST | 40 | 39 | Gnd |
| MSG | 42 | 41 | Gnd |
| SEL | 44 | 43 | Gnd |
| C/D | 46 | 45 | Gnd |
| REQ | 48 | 47 | Gnd |
| I/O | 50 | 49 | Gnd |



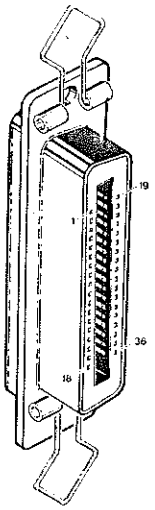




# Centronics

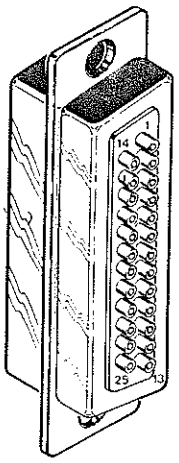
Centronics printer cable connections




Centronics socket

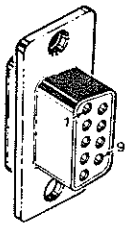


25 pin SUB D plug

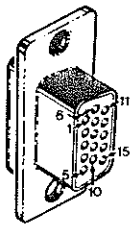


# Video

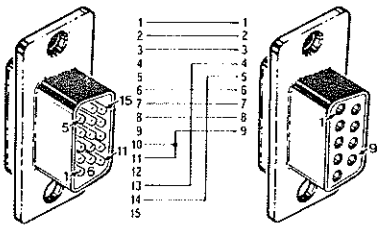
(1) 9 pin SUB D



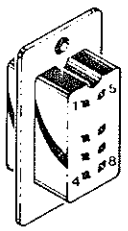
(2) 15 pin SUB D



15/9 pin connection



(3) 9 pin



| | MDA (1) (Hercules) | CGA (1) dig. RGBI | EGA (3) dig. RGBI | NEC (1) dig. RGBI | VGA (2) an. RGB |
|---|---|---|---|---|---|
| 1 | ground | ground | ground | intensity | R - out |
| 2 | ground | ground | R' | R | G - out |
| 3 | n.c. | R | R | G | B - out |
| 4 | n.c. | G | G | B | mon. ID bit 2 |
| 5 | n.c. | B | B | ground | ground |
| 6 | intensity | intensity | G' | ground | R - return |
| 7 | video | n.c. | B' | h - sync (+) | G - return |
| 8 | h - sync (+) | h - sync (+) | h - sync (+) | v - sync (-) | B - return |
| 9 | v - sync (-) | v - sync (-) | v - sync (-) | | (no pin) |
| 10 | | | | | sync - return |
| 11 | | | | | mon. ID bit 0 |
| 12 | | | | | mon. ID bit 1 |
| 13 | | | | | h - sync |
| 14 | | | | | v - sync |
| 15 | | | | | reserved |