

Classnet Quattro

Installation Guide



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1. What is the Classnet Quattro system?

The Classnet Quattro system from Minicom gives a teacher control over every student's monitor, mouse, and keyboard. Up to four student positions connect to each Classnet Quattro.

The Classnet Quattro Audio has audio and intercom capabilities in addition to all the regular Classnet functions.

2. Classnet Quattro features

- Increased picture quality
- Fewer hardware units and cables needed
- Easy installation, support, and maintenance
- Up to 63 computers. Increased to 99 when combined with Classnet 3.15 Student units plus a special TCU 100 unit

3. The system components

The Classnet Quattro system consists of the following:

- A Teacher Control unit (TCU) plus a Teacher Interface unit (TIU) or Teacher Control software or AristoClass software
- A Classnet Quattro for every 4 students
- Cabling

4. Classnet Quattro configuration

Figure 1 illustrates the basic Classnet Quattro configuration.

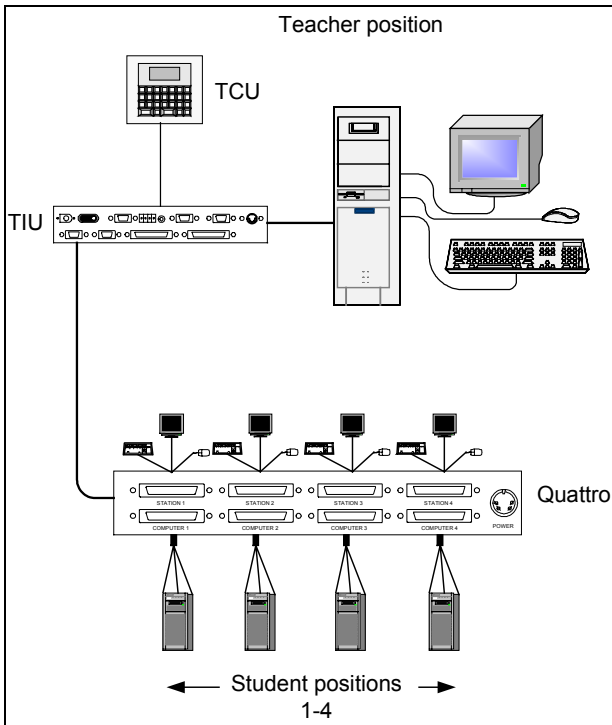


Figure 1 The Quattro configuration

5. The Line Multiplier

The standard classroom consists of one long bus. The Line Multiplier divides a large classroom into 4 or more branches, producing better video performance.

6. The Line Booster

The Line Booster amplifies video signals. Used when video signals are degraded due to long System cables.

Minicom's technical support staff can provide any further information you require about the Line Multiplier or Line Booster.

7. Pre-installation guidelines

- Prepare sufficient electrical wall sockets. Each outlet should have the same phase and a common ground.
- Allow extra System cabling for inside the plastic duct installed around walls and doorframes.
- Place cables away from fluorescent lights, air conditioners, and machines that generate electrical noise.
- Use Line Boosters or Line Multipliers where necessary.
- Attach each Quattro firmly to the desk. Or use brackets to attach it to the desk's underside.
- All computers must be either AT or PS/2 type. You cannot have both types in the same system.
- All mice, keyboard and monitors must be the same type.

Immediately prior to the installation: Ensure that all computers are in working order. Switch them all off, and disconnect all cables and power cords.

8. The Classnet Quattro unit

Figure 2 illustrates the Quattro front panel.

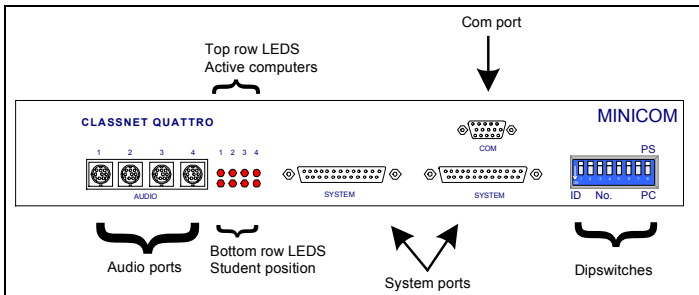


Figure 2 Quattro front panel

The Active computers LEDs indicate working computers.

The Student position LEDs indicate a Student position functioning as part of the Classnet system.

Figure 3 illustrates the rear panel of the **Quattro**.

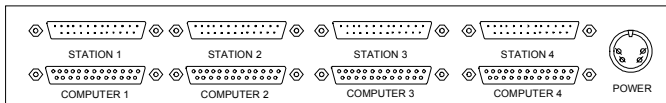


Figure 3 Quattro rear panel

9. Giving the Quattros ID numbers

Each Quattro must have a unique ID number. This number determines the ID number of the first and consequent student positions connected to that Quattro.

When less than 4 student positions connect to a Quattro, the ID number of the next Quattro will still be the ID number of its first connected student position. In Figure 4 example A, the first Quattro has ID number 1 so the student positions are 1-3. The second Quattro has ID number 4 so the student positions are 4-5, and so on.

Note! The student positions connected to each Quattro are automatically numbered in sequence. However the Quattros themselves do NOT have to be in sequence. In example B, the first Quattro has ID number 5. The second Quattro has ID number 8. The third Quattro has ID number 1.

10. Mixed environment

When the class contains other Classnet units such as the 3.15 or the Board Version, then the ID numbers are set as in Figure 5.

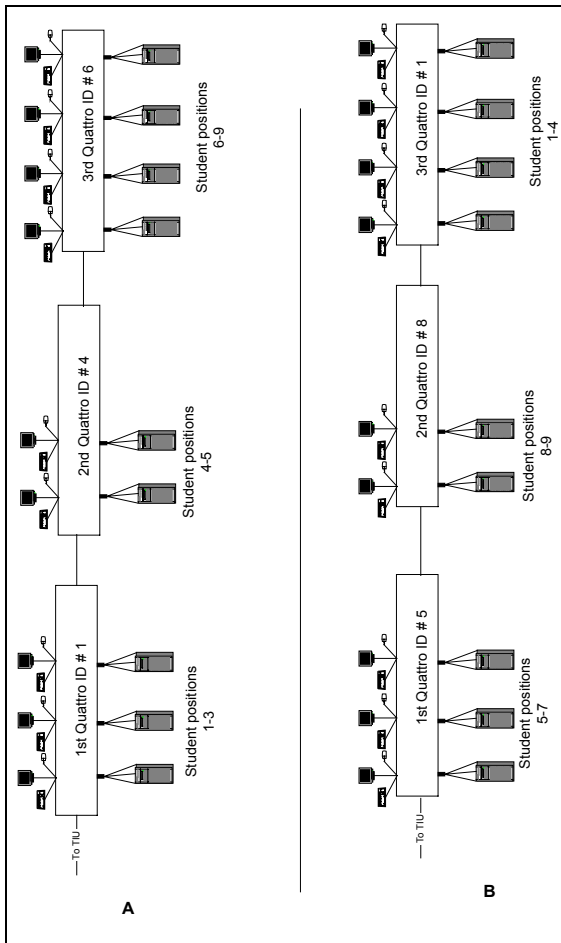


Figure 4 The Quattro ID numbers

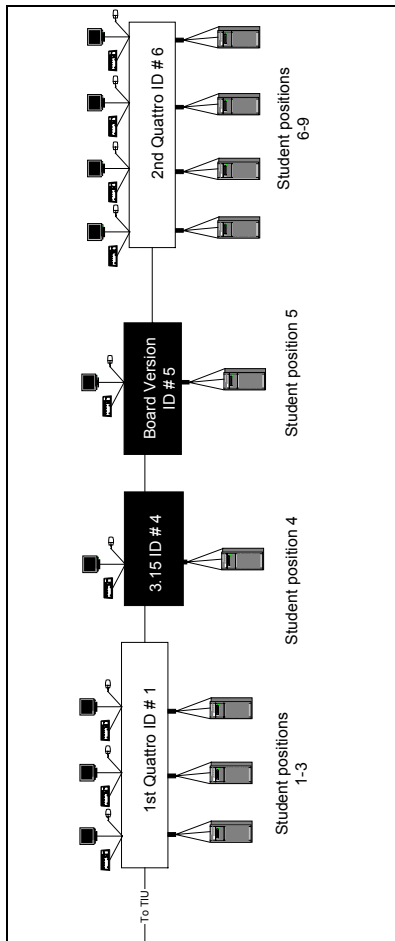


Figure 5 Mixed environment

11. Setting the ID number with dipswitches

Set the Quattro's ID number using dipswitches 1 to 6 on the front panel. See Figure 6.

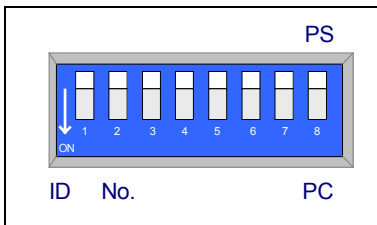


Figure 6 The dipswitches

The ID numbers are set using the binary number system.

OFF = 0, **ON** = 1.

See the binary table on page 10.

Assign unique ID numbers to each Quattro unit.

Warning! Check that student ID numbers are not duplicated.

Dipswitch 7

Set dipswitch 7 of all units to **OFF**.

Dipswitch 8

For PS type computers set dipswitch 8 to **OFF**.

For AT type computers set dipswitch 8 to **ON**.

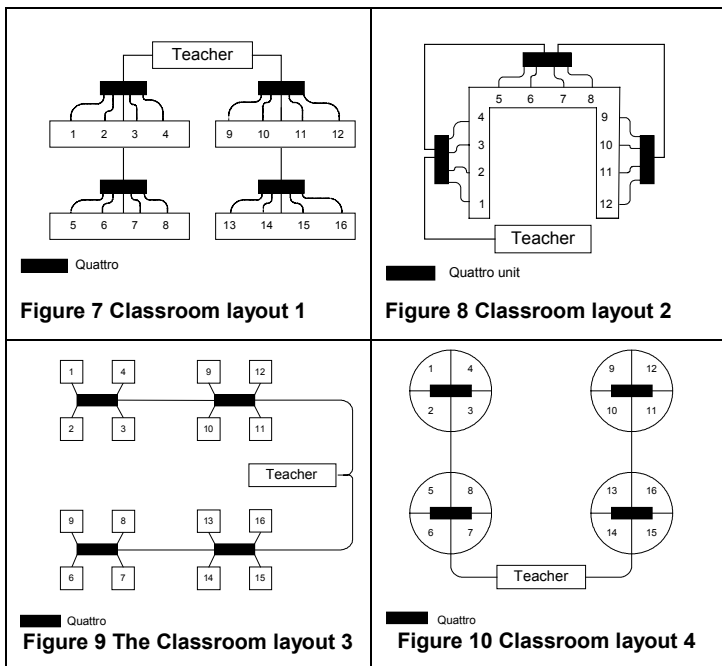
In the table below - *61 is the Projector unit default number.

| ID Number | Dipswitches | | | | | |
|-----------|-------------|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 1 | 0 | 0 | 0 | 0 |
| 3 | 1 | 1 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 1 | 0 | 0 | 0 |
| 5 | 1 | 0 | 1 | 0 | 0 | 0 |
| 6 | 0 | 1 | 1 | 0 | 0 | 0 |
| 7 | 1 | 1 | 1 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 1 | 0 | 0 |
| 9 | 1 | 0 | 0 | 1 | 0 | 0 |
| 10 | 0 | 1 | 0 | 1 | 0 | 0 |
| 11 | 1 | 1 | 0 | 1 | 0 | 0 |
| 12 | 0 | 0 | 1 | 1 | 0 | 0 |
| 13 | 1 | 0 | 1 | 1 | 0 | 0 |
| 14 | 0 | 1 | 1 | 1 | 0 | 0 |
| 15 | 1 | 1 | 1 | 1 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 1 | 0 |
| 17 | 1 | 0 | 0 | 0 | 1 | 0 |
| 18 | 0 | 1 | 0 | 0 | 1 | 0 |
| 19 | 1 | 1 | 0 | 0 | 1 | 0 |
| 20 | 0 | 0 | 1 | 0 | 1 | 0 |
| 21 | 1 | 0 | 1 | 0 | 1 | 0 |
| 22 | 0 | 1 | 1 | 0 | 1 | 0 |
| 23 | 1 | 1 | 1 | 0 | 1 | 0 |
| 24 | 0 | 0 | 0 | 1 | 1 | 0 |
| 25 | 1 | 0 | 0 | 1 | 1 | 0 |
| 26 | 0 | 1 | 0 | 1 | 1 | 0 |
| 27 | 1 | 1 | 0 | 1 | 1 | 0 |
| 28 | 0 | 0 | 1 | 1 | 1 | 0 |
| 29 | 1 | 0 | 1 | 1 | 1 | 0 |
| 30 | 0 | 1 | 1 | 1 | 1 | 0 |
| 31 | 1 | 1 | 1 | 1 | 1 | 0 |

| ID Number | Dipswitches | | | | | |
|-----------|-------------|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| 32 | 0 | 0 | 0 | 0 | 0 | 1 |
| 33 | 1 | 0 | 0 | 0 | 0 | 1 |
| 34 | 0 | 1 | 0 | 0 | 0 | 1 |
| 35 | 1 | 1 | 0 | 0 | 0 | 1 |
| 36 | 0 | 0 | 1 | 0 | 0 | 1 |
| 37 | 1 | 0 | 1 | 0 | 0 | 1 |
| 38 | 0 | 1 | 1 | 0 | 0 | 1 |
| 39 | 1 | 1 | 1 | 0 | 0 | 1 |
| 40 | 0 | 0 | 0 | 1 | 0 | 1 |
| 41 | 1 | 0 | 0 | 1 | 0 | 1 |
| 42 | 0 | 1 | 0 | 1 | 0 | 1 |
| 43 | 1 | 1 | 0 | 1 | 0 | 1 |
| 44 | 0 | 0 | 1 | 1 | 0 | 1 |
| 45 | 1 | 0 | 1 | 1 | 0 | 1 |
| 46 | 0 | 1 | 1 | 1 | 0 | 1 |
| 47 | 1 | 1 | 1 | 1 | 0 | 1 |
| 48 | 0 | 0 | 0 | 0 | 1 | 1 |
| 49 | 1 | 0 | 0 | 0 | 1 | 1 |
| 50 | 0 | 1 | 0 | 0 | 1 | 1 |
| 51 | 1 | 1 | 0 | 0 | 1 | 1 |
| 52 | 0 | 0 | 1 | 0 | 1 | 1 |
| 53 | 1 | 0 | 1 | 0 | 1 | 1 |
| 54 | 0 | 1 | 1 | 0 | 1 | 1 |
| 55 | 1 | 1 | 1 | 0 | 1 | 1 |
| 56 | 0 | 0 | 0 | 1 | 1 | 1 |
| 57 | 1 | 0 | 0 | 1 | 1 | 1 |
| 58 | 0 | 1 | 0 | 1 | 1 | 1 |
| 59 | 1 | 1 | 0 | 1 | 1 | 1 |
| 60 | 0 | 0 | 1 | 1 | 1 | 1 |
| 61* | 1 | 0 | 1 | 1 | 1 | 1 |
| 62 | 0 | 1 | 1 | 1 | 1 | 1 |
| 63 | 1 | 1 | 1 | 1 | 1 | 1 |

12. Planning the classroom layout

Draw a sketch of your proposed classroom layout. Decide the teacher's position. Figures 7 to 10 illustrate four different configurations. Minicom can preview your sketches, providing general advice and further tips.



13. The Quattro front panel cables

The following cables connect to the Quattro's front panel:

- System cable
- (Optional) Audio cable

14. Connecting the System cable

The System cable is a coaxial cable that links the TIU and the Quattro units in a daisy-chain pattern. See Figure 11.

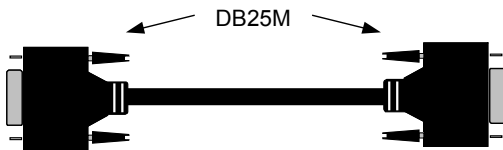


Figure 11 The System cable

To connect the System cable to each Quattro unit:

1. Connect one connector to one Quattro's System port.
2. Connect the other connector to the next Quattro's System port.

Figure 12 illustrates the System cable connections.

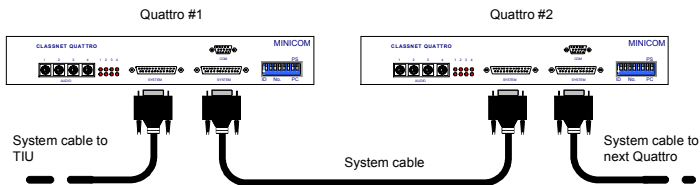


Figure 12 The System cable connections

15. Connecting the optional Audio cable

The Audio cable is only used with the Quattro Audio. Each Student unit has an Audio cable. One end connects to the Quattro Audio, and the other to the computer's Sound card and to headphones and a microphone.

Figure 13 illustrates the Audio cable.

To connect the Audio cable:

1. Connect the MiniDIN8M Audio connector to the Quattro's Audio port. The Audio port number corresponds to the student number. So student #1 will have his Audio cable in Audio port #1.
2. Connect the Ear connector to a pair of headphones.
3. Connect the Micro connector to a microphone.
4. Connect the Aux. In plug to the Microphone port on the computer's Sound card.
5. Connect the Aux. Out plug to the Speaker port on the computer's Sound card.

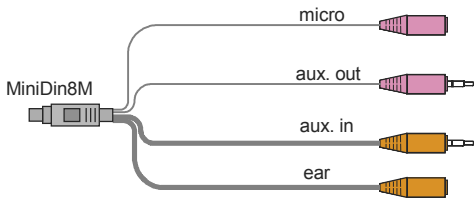


Figure 13 The Audio cable

Figure 14 below illustrates all the connections of the **Quattro** front panel.

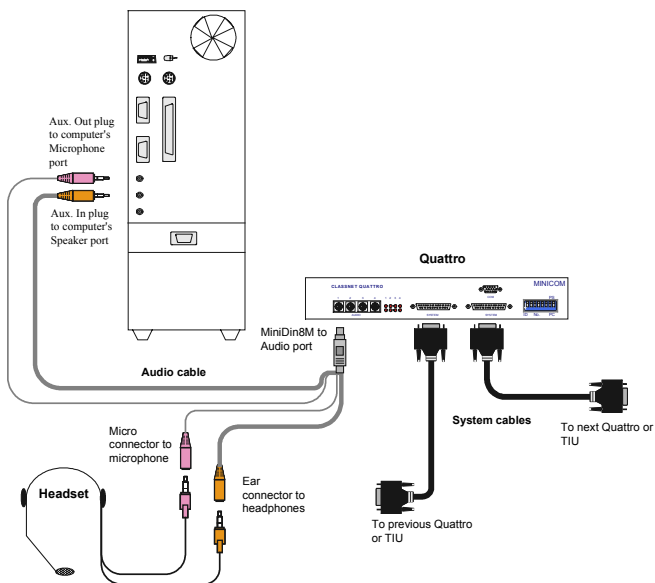


Figure 14 The Quattro front panel connections

16. The Quattro rear panel cables

The following connect to the rear panel:

- KVM cable for PS/2 or AT
- CPU cable for PS/2 or AT
- Power adapter

17. Connecting the PS/2 KVM cable

Figure 15 illustrates the PS/2 KVM cable.

To connect the PS/2 KVM cable:

1. Connect the DB25F connector to the Quattro's Station port.
2. Connect the MiniDIN6F Keyboard connector to the keyboard.
3. Connect the HDD15F Screen connector to the monitor.
4. Connect the MiniDIN6F Mouse connector to the mouse.

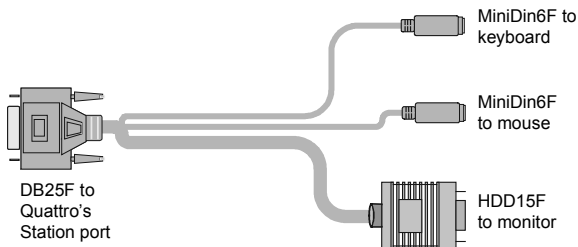


Figure 15 The PS/2 KVM Cable

18. Connecting the PS/2 CPU cable

Figure 16 illustrates the PS/2 CPU cable.

To connect the PS/2 CPU cable:

1. Connect the DB25M connector to the Quattro's Computer port.
2. Connect the MiniDIN6M Keyboard connector to the computer's Keyboard port.
3. Connect the HDD15M Screen connector to the computer's Screen port.
4. Connect the MiniDIN6M Mouse connector to the computer's Mouse port.

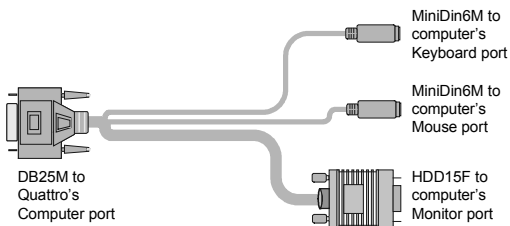


Figure 16 The PS/2 CPU cable

19. Connecting the AT KVM cable

Figure 17 illustrates the AT KVM cable.

To connect the AT KVM cable:

1. Connect the DB25F connector to the Quattro's Station port.
2. Connect the DIN5F Keyboard connector to the keyboard.
3. Connect the HDD15F Screen connector to the monitor.
4. Connect the DB9M Mouse connector to the mouse.

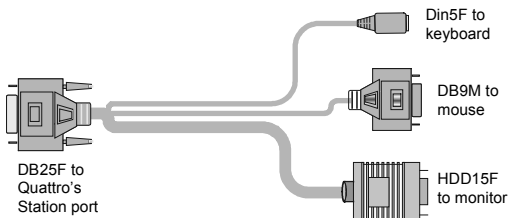


Figure 17 The AT KVM Cable

20. Connecting the AT CPU cable

Figure 18 illustrates the AT CPU cable

To connect the AT CPU cable:

1. Connect the DB25M connector to the Quattro's Computer port.
2. Connect the DIN5M Keyboard connector to the computer's Keyboard port.
3. Connect the HDD15M Screen connector to the computer's Screen port.
4. Connect the DB9F Mouse connector to the computer's Mouse port.

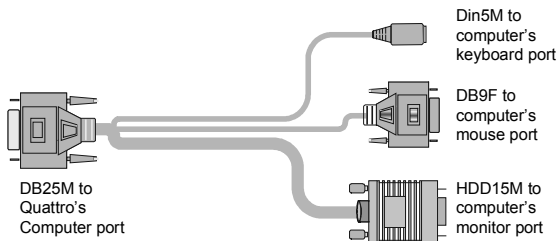


Figure 18 The AT CPU Cable

21. Power supply

Connect the Quattro to the power supply with the AC Power adapter and cord provided.

Figures 19 and 20 illustrate the connections to the rear panel of the **Quattro** unit, for AT and PS CPU types respectively.

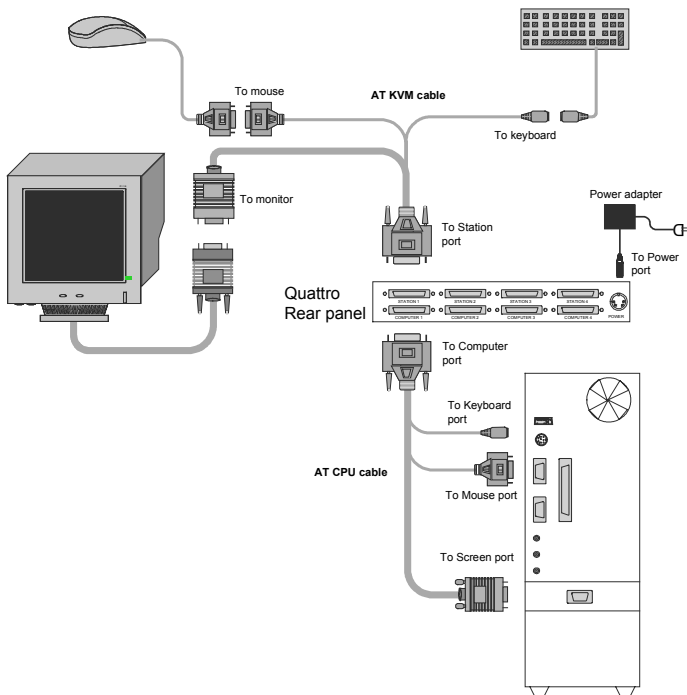


Figure 19 Rear panel connections for AT computers

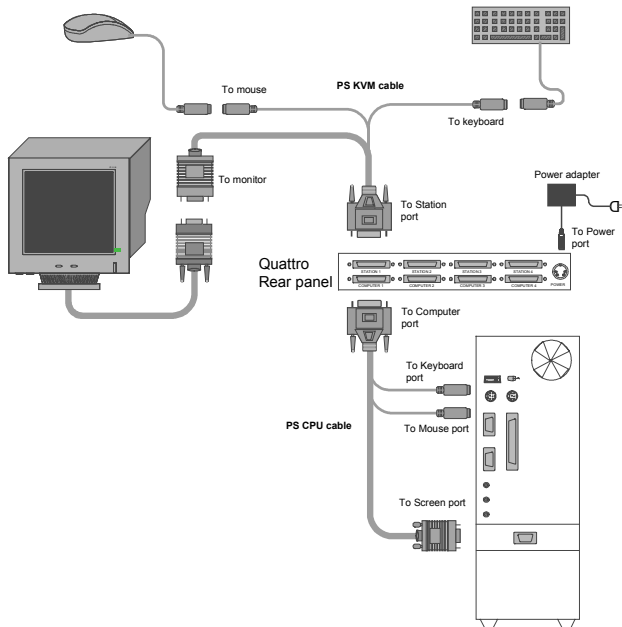


Figure 20 Rear panel connections for PS/2 computers

22. Connecting the Terminators

Terminators must be connected at both ends of the Classnet system. Figure 21 illustrates a Terminator.

To connect the Terminators:

Connect the Terminator to the free System ports of the two end Classnet units. These could be the TIU and a **Quattro** unit, or two **Quattro** units.



Figure 21 Terminator

23. Operating the Classnet functions

You operate the Classnet functions using either software or hardware.

For software operation, use the **AristoClass** software from Minicom.

For hardware operation, use the TCU and refer to the Classnet Multilingual Operating Guide (For The Teacher).

24. Technical Specifications

Video Specifications

| | |
|------------|-------------------------------------|
| Bandwidth | Not less than 100 MHz |
| Resolution | Transfer of up to 1024 x 768 @ 85Hz |

System Specifications

| | |
|----------|--------------|
| Keyboard | AT, PS/2 |
| Mouse | Serial, PS/2 |

Quattro Specifications

| | |
|------------|---|
| Dimensions | 46mm x 277.5mm x 148mm 1.8" x 10.9" x 5.7" |
|------------|---|

Power

| | |
|--------------|----------------|
| Power supply | 110VAC/9VAC 2A |
| | 230VAC/9VAC 2A |

Temperature

| | |
|-----------------------|------------|
| Operating temperature | 5° – 40° C |
|-----------------------|------------|

Humidity

| | |
|----------|--------------------------------------|
| Humidity | 80% non-condensing relative humidity |
|----------|--------------------------------------|