Duet UTP

USER'S GUIDE

The Duet TWP System is produced by Minicom Advanced Systems Limited, and includes new features that are described later in this User's Guide, Version 20600.

Technical precautions

This equipment generates radio frequency energy and if not installed in accordance with the manufacturer's instructions, may cause radio frequency interference.

This equipment complies with Part 15, Subpart J of the FCC rules for a Class A computing device. This equipment also complies with the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications. These above rules are designed to provide reasonable protection against such interference when operating the equipment in a commercial environment. If operation of this equipment in a residential area causes radio frequency interference, the user, and not Minicom Advanced Systems Limited, will be responsible.

Changes or modifications made to this equipment not expressly approved by Minicom Advanced Systems Limited could void the user's authority to operate the equipment.

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Chapter 1: Introduction

The *Duet TWP* (*Twisted Pair*) can function as either of the following systems:

The ***Duet TWP Extender system.*** This system extends the distance between a computer and a remote KVM (keyboard, video and mouse) workstation.

Or

The ***Duet TWP Central system.*** This system enables two users to share a single computer and includes a local and remote KVM workstation.

The *Duet TWP* comes with a choice of two remote units:

- The ***Duet TWP Remote unit*** with a range of up to 110m/360ft; or
- The ***Duet TWP Remote Long Range unit*** with a range of up to 250m/820ft.

How to use this User's Guide

The *Duet TWP Extender* and *Central systems* are discussed separately.

Chapters 2-4 - The Duet TWP Extender

Overview, Installation, and Operation.

Chapters 5-7 - The Duet TWP Central

Overview, Installation, and Operation.

Chapters 8-10 - The Duet TWP Units

Chapter 2: Overview

Figure 2-1 illustrates the *Duet TWP Extender system*, configuration:

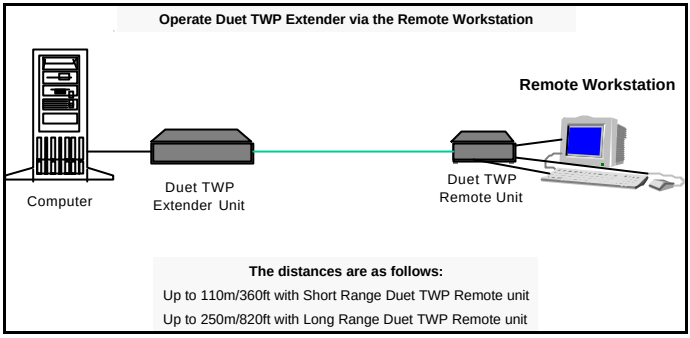


Figure 2-1 The Duet TWP Extender System

Compatibility

Duet TWP Extender supports:

- IBM AT or PS compatible machines
- VGA, SVGA, or XGA video standards
- Automatic mouse emulation as a standard feature
- Compatibility with IntelliMouse™: Microsoft, Genius Netmouse Pro, Logitech Pilot Mouse, and IBM ScrollPoint™ Mouse.

Chapter 3: Installation

The installation of the *Duet TWP Extender system*, includes connecting the following:

- The *Duet TWP Extender unit* to the *Duet TWP Remote unit* using System Cabling.
- A *Duet TWP Remote unit* to the Remote KVM Workstation
- Single 4-pair 100 Base-T4 CAT5 FTP System Cable
- Keyboard Cables for both AT and PS
- Mouse Cables for both AT and PS
- Screen Cables
- Power Supply

Installing the System Cables

Each System Cable consists of a single 4-pair 100 Base-T4 CAT5 FTP Cable with a RJ-45M connector attached at each end, as Figure 3-1 illustrates.

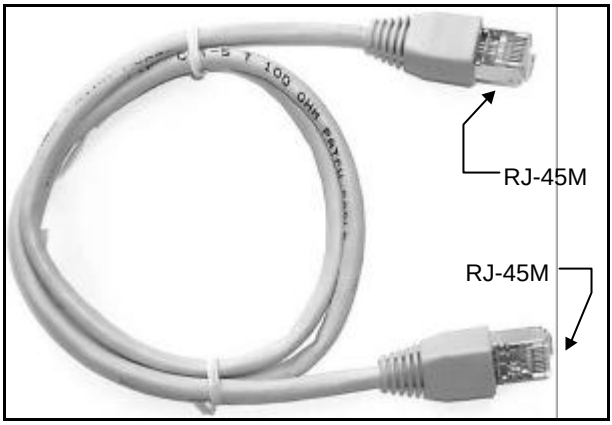


Figure 3-1 The FTP System Cable

Figure 3-2 illustrates the pinout, as follows:

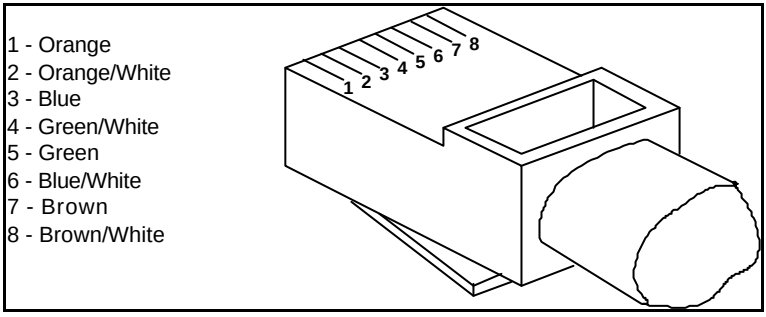


Figure 3-2 The RJ-45M Connector PINS

You use either one or two System Cables when connecting the *Duet TWP Extender system*.

Connecting a single System Cable

A single System Cable connects the *Duet TWP Extender unit* directly to the *Duet TWP Remote unit*, as Figure 3-3 illustrates.

1. Connect one of the System Cable's RJ-45M connectors to the *TO REMOTE UNIT* port on the *Duet TWP Extender* unit's rear panel.

   Connect the other System Cable's RJ-45M connector to the *TO CENTRAL UNIT* port on the *Duet TWP Remote unit's* rear panel. The System Cable now connects the *Duet TWP Extender* unit directly to the *Duet TWP Remote unit*.

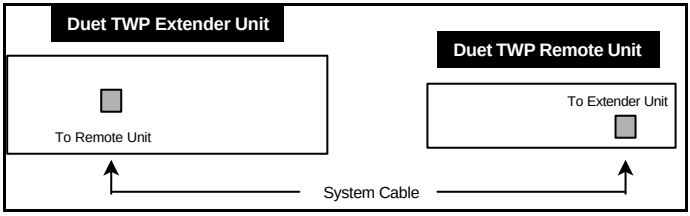


Figure 3-3 Using a single System Cable

Connecting two System Cables

Two System Cables, # 1 and # 2, connect the *Duet TWP Extender unit* indirectly to the *Duet TWP Remote unit*. The System Cables attach to different network wall outlets (patch panels) letting you use the standard pre-installed conduit cabling, as Figure 3-4 illustrates.

1. Connect one of System Cable # 1's RJ-45M connectors to the *TO REMOTE UNIT* port on the *Duet TWP Extender unit's* rear panel.
2. Connect the other System Cable # 1's RJ-45M connector to the network wall outlet.
3. Connect one of System Cable # 2's RJ-45M connectors to the *TO CENTRAL UNIT* port on the *Duet TWP Remote Unit's* rear panel.
4. Connect the other System Cable # 2's RJ-45M connector to the network wall outlet. Both System Cables now connect *the Duet TWP Extender unit* indirectly to the *Duet TWP Remote unit*.

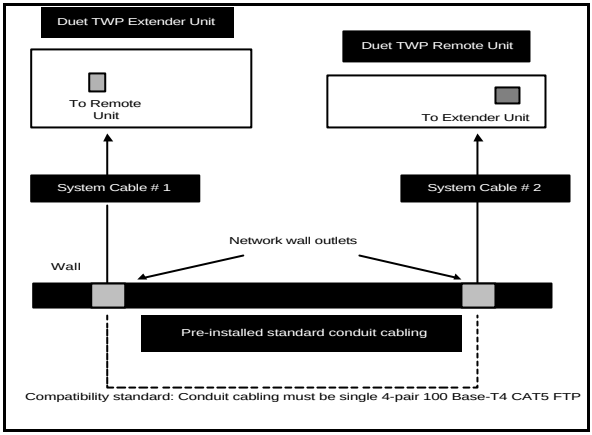


Figure 3-4 Using two System Cables

Connecting the Duet TWP Extender Unit

To connect the *Duet TWP Extender unit*, connect the following ports:

- Keyboard In/Out
- Mouse In/Out
- To Remote Unit
- Video In
- Local Monitor
- Power

Connecting the Keyboard Cable

You use the Keyboard Cable to connect the *Duet TWP Extender unit* to the computer. There is a different Keyboard Cable for AT or PS, as Figures 3-5 and 3-6 illustrate.

To connect the Keyboard Cable for AT:

1. Connect the DB9M connector to the *KEYBOARD IN/OUT* port on the *Duet TWP Extender unit's* rear panel.
2. Connect the DIN5M connector to the *keyboard* port on the computer's rear panel.
3. Leave the DIN5F connector **unconnected**.

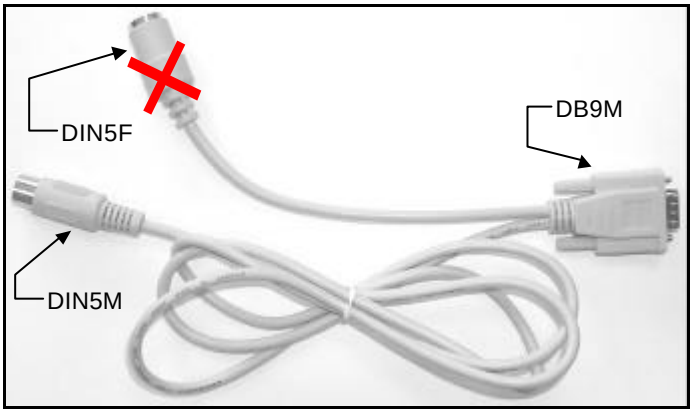


Figure 3-5 The Keyboard Cable for AT

To connect the Keyboard Cable for PS:

1. Connect the DB9M connector to the *KEYBOARD IN/OUT* port on the *Duet TWP Extender unit's* rear panel.
2. Connect the MiniDIN6M connector to the *keyboard* port on the computer's rear panel.
3. Leave the MiniDIN6F connector **unconnected**.

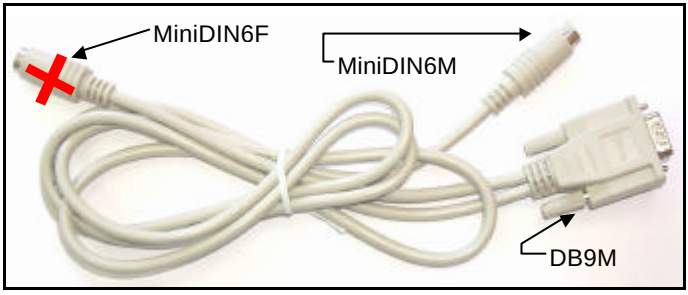


Figure 3-6 The Keyboard Cable for PS

Connecting the Mouse Cable

There is a different Mouse Cable for AT and PS computer types.

Connecting the Mouse cable for AT

To connect the *Duet TWP Extender unit* to an AT computer, use the AT Mouse Cable. See Figure 3-7.

Note! The mouse used with the Remote unit must be a PS type.

To connect the Mouse Cable:

1. Connect the DB25M connector to the *MOUSE In/Out* port on the *Duet TWP Extender unit's* rear panel.
2. Connect the DB9F connector to the *Serial MOUSE* port on the computer's rear panel.
3. Leave the MiniDIN6F connector **unconnected**.

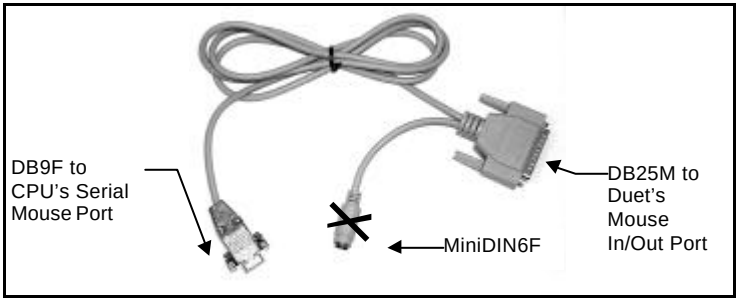


Figure 3-7 The AT Mouse Cable

Connecting the Mouse Cable for PS

To connect the *Duet TWP Extender unit* to a PS computer, use the PS Mouse Cable. See Figure 3-8.

1. Connect the DB25M connector to the *MOUSE IN/OUT* port on the *Duet TWP Extender unit's* rear panel.
2. Connect the MiniDIN6M connector to the *mouse* port on the computer's rear panel.
3. Leave the MiniDIN6F connector **unconnected**.

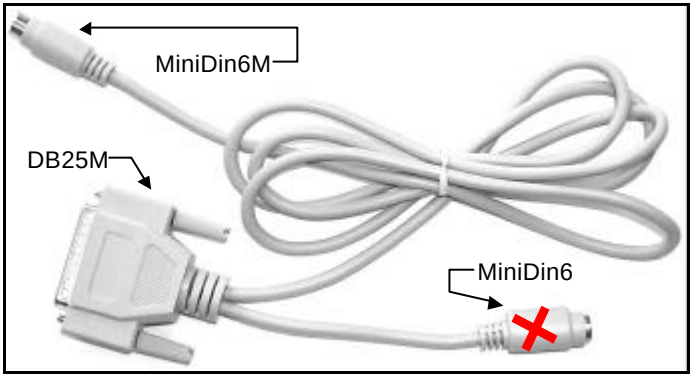


Figure 3-8 The PS Mouse Cable

Connecting the Screen

You use the Screen Cable, as Figure 3-9 illustrates, to connect the *Duet TWP Extender unit* to the computer. The Screen Cable is identical for both AT and PS.

To connect the Screen Cable:

1. Connect the Screen Cable's HDD15M connector to the *Screen* port of the computer.
2. Connect the Screen Cable's HDD15F connector to the *VIDEO IN* port on the *Duet TWP Extender unit's* rear panel.
3. Leave the *LOCAL MONITOR* port on the *Duet TWP Extender unit's* rear panel **unconnected**.

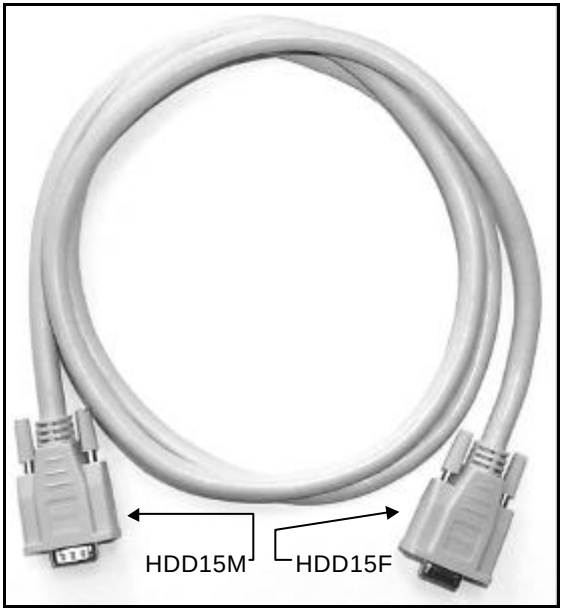


Figure 3-9 The Screen Cable

Connecting to the Power Supply

Prior to connecting the *Duet TWP system* to the Power Supply you should observe the following:

- ***Switch On*** *the Duet TWP Extender and Remote units* ***before*** *you Switch On the computer. The order is unimportant when using a non-IntelliMouse™. However, when using an IntelliMouse™, first switch on the Duet TWP Remote unit's power and then the computer's power.*
- ***Switch Off*** *the Duet TWP Extender and Remote units before you disconnect, and then reconnect, a keyboard or a mouse.*

To connect the Extender Unit to the Power Supply:

1. Connect the 9V AC/AC Adapter Plug to the Power Cable connector.
2. Connect the Power Cable to the 9V AC/AC Adapter and insert the Mains Plug into a wall socket. This connects the *Duet TWP Extender unit* to the Power Supply, as Figure 3-10 illustrates.

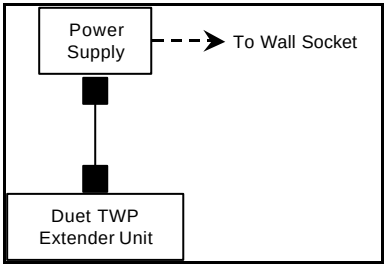


Figure 3-10 The Duet TWP Extender Unit Power Supply

Connecting the Remote Unit

The *Duet TWP Remote unit* is available in two models:

The *Remote unit* (up to 110m/360ft).

The *Long Range Remote unit* (up to 250m/820ft).

Connecting either of the remote units is the same, except for the Power Supply.

To connect the remote workstation to the *Duet TWP Remote unit's* rear panel, as Figures 3-12 and 3-13 illustrate, do the following:

1. Connect the System Cable's RJ-45M connector to the *TO CENTRAL UNIT* port.
2. Connect the Screen's HDD15M connector to the HDD15F *MONITOR* port.

For AT:

1. Connect the Keyboard's DIN5M connector to the Keyboard Adapter, as Figures 3-11 and 3-12 illustrate, adapting it to MiniDIN6M. Connect the MiniDIN6M connector to the MiniDIN6F *KEYBOARD* port.

Figure 3-11: The AT Keyboard Adapter

For PS:

1. Connect the Mouse's MiniDIN6M connector to the *PS MOUSE* port.
2. Connect the Keyboard's MiniDIN6M connector to the MiniDIN6F *KEYBOARD* port.

Connecting the Remote Units to the Power Supply

To connect the Duet TWP Remote Unit:

1. Connect the 9V AC/AC Adapter Plug to the Power Cable connector.
2. Connect the Power Cable to the 9V AC/AC Adapter and insert the Mains Plug into a wall socket. This connects *the Duet TWP Remote unit* to the Power Supply.

To connect the Duet TWP Remote Long Range Unit:

1. Connect the Power Adapter cable's DIN4M connector to the *Duet TWP Remote Long Range unit's* DIN4F power connector.
2. Connect the Power Cable to the 9V AC/AC and insert the Mains Plug into a wall socket. This connects *the Duet TWP Remote Long Range unit* to the Power Supply.

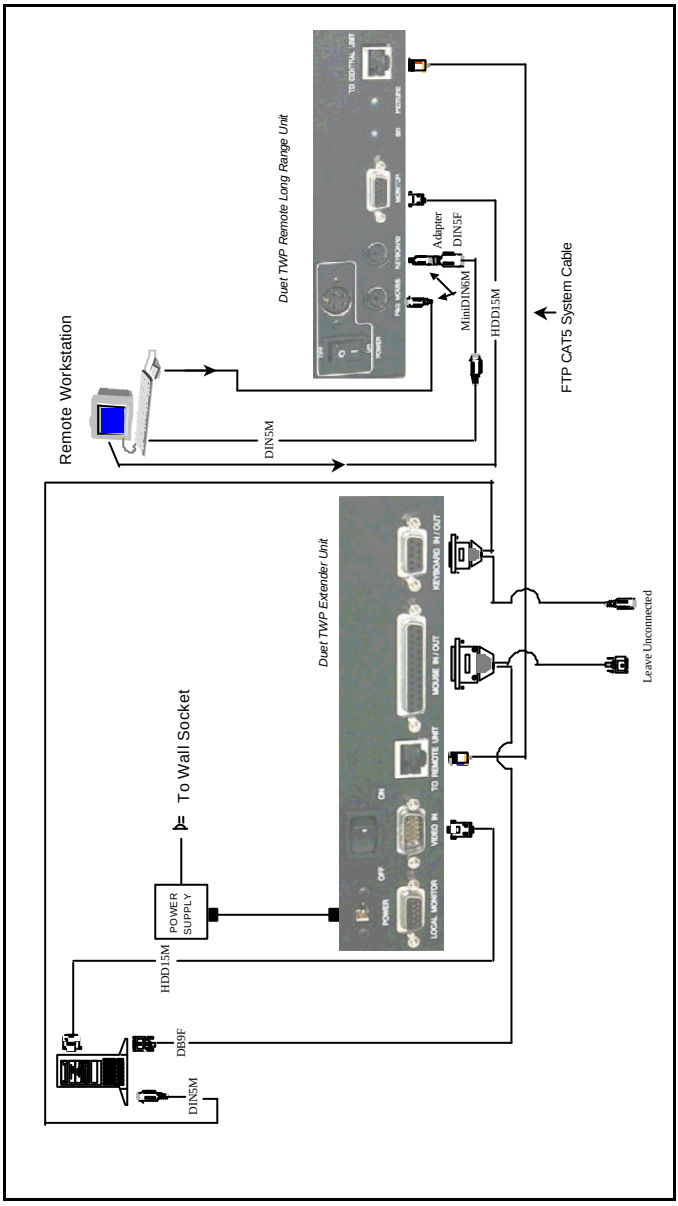


Figure 3-12 Duet TWP Extender Cable Diagram for AT

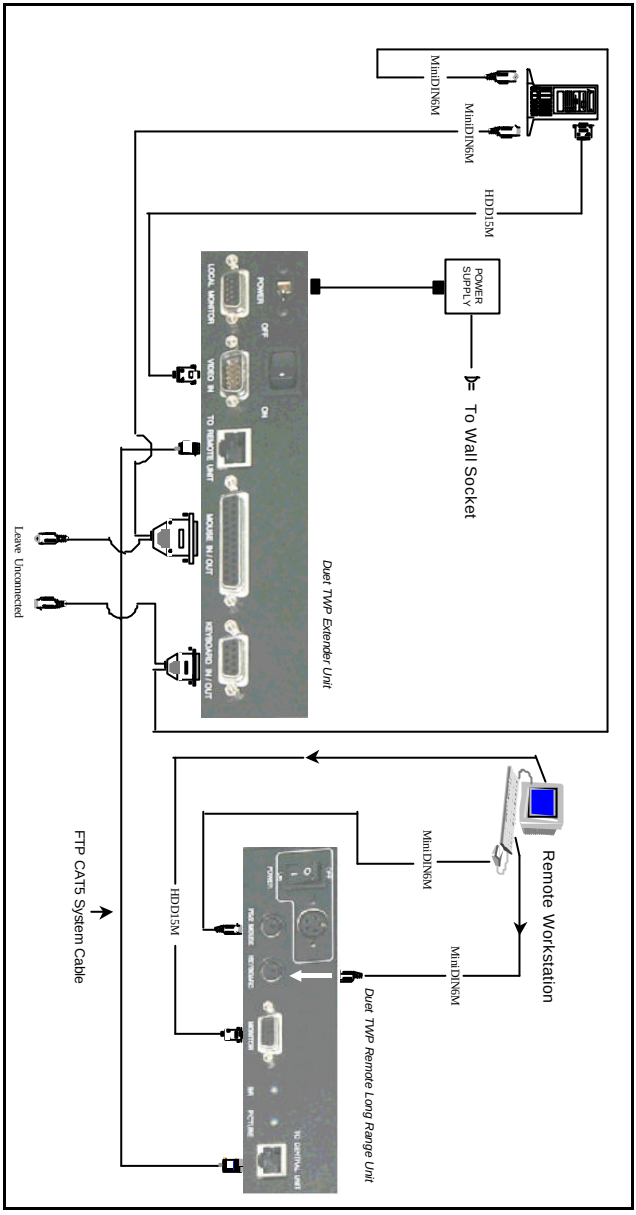


Figure 3-13 Duet TWP Extender Cable Diagram for PS

Chapter 4: Operation

This chapter deals with the operation of the *Duet TWP Extender system.*

Accessing the Computer

To access the computer:

1. Switch On both the *Duet TWP Extender unit* and the *Duet TWP Remote unit*.
2. Start working with the keyboard and mouse.

Improving Picture Quality

You regulate the screen's picture quality by turning the Potentiometer Adjuster located on both the *Duet TWP Remote unit's* rear panel and the *Duet TWP Remote Long Range unit's* rear panel.

Improving Brightness Quality

You regulate the brightness of the screen by turning the Potentiometer Adjuster located on the *Duet TWP Remote Long Range unit's* rear panel.

Chapter 5: Overview

This chapter describes the *Duet TWP Central system*, configured as Figure 5-1 illustrates:

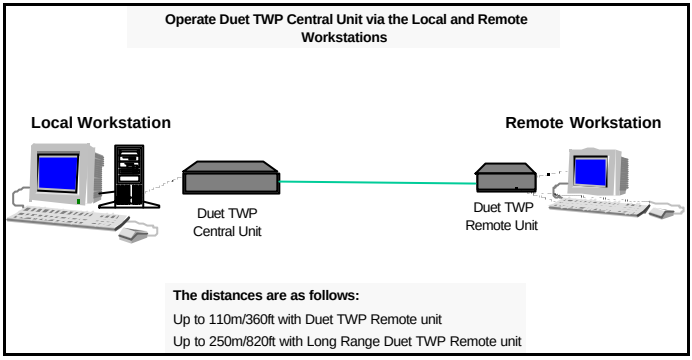


Figure 5-1 The Duet TWP Central System

Compatibility

Duet TWP Central supports:

- IBM AT or PS compatible machines.
- VGA, SVGA, or XGA video standards.
- Automatic mouse emulation as a standard feature.
- Compatibility with IntelliMouse™: Microsoft, Genius Netmouse Pro, Logitech Pilot Mouse, and IBM ScrollPoint™ Mouse.

Chapter 6: Installation

The installation of the *Duet TWP Central system*, includes connecting the following:

- The *Duet TWP Central unit* to the *Duet TWP Remote unit* using System Cabling
- The *Duet TWP Central unit* to the local KVM workstation
- One of the *Duet TWP Remote unit*s to the remote KVM workstation
- Single 4-pair 100 Base-T4 CAT5 FTP System Cable
- Keyboard Cables for both AT and PS
- Mouse Cables for both AT and PS
- Screen Cables
- Power Supply

Use identical type *keyboards* and *mice* at both the local and remote workstations.

Installing the System Cables

Each System Cable consists of a single 4-pair 100 Base-T4 CAT5 FTP Cable with a RJ-45M connector attached at each end, as Figure 6-1 illustrates.

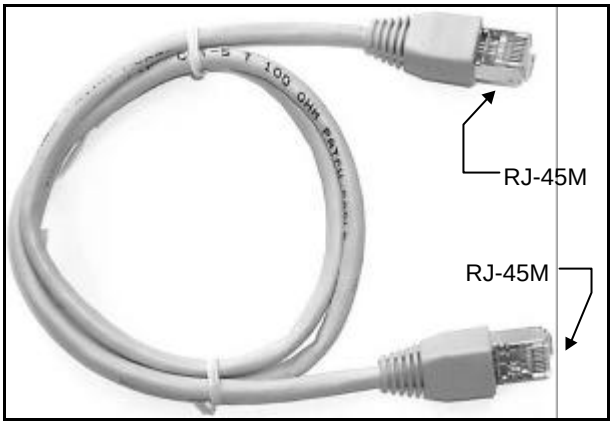


Figure 6-1 The FTP System Cable

Figure 6-2 illustrates the pinout, as follows:

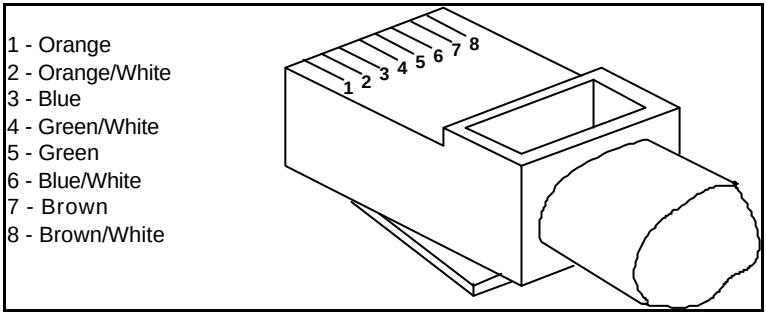


Figure 6-2 The RJ-45M Connector PINS

You use either a single System Cable or two System Cables when connecting the *Duet TWP Central system*.

Connecting a single System Cable

A single System Cable connects the *Duet TWP Central unit directly* to the *Duet TWP Remote unit*, as Figure 6-3 illustrates.

1. Connect one of the System Cable's RJ-45M connectors to the *TO REMOTE UNIT* port on the *Duet TWP Central* unit's rear panel.
2. Connect the other System Cable's RJ-45M connector to the *TO CENTRAL UNIT* port on the *Duet TWP Remote unit's* rear panel. The System Cable now connects the *Duet TWP Central* unit directly to the *Duet TWP Remote unit*.

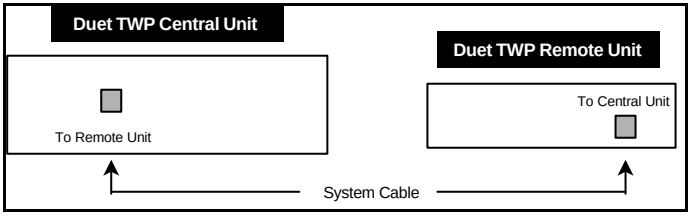


Figure 6-3 Using a single System Cable

Connecting two System Cables

Two System Cables, # 1 and # 2, connect the *Duet TWP Central unit* indirectly to the *Duet TWP Remote unit*. The System Cables attach to different network wall outlets (patch panels) letting you use the standard pre-installed conduit cabling, as Figure 6-4 illustrates.

1. Connect one of System Cable # 1's RJ-45M connectors to the *TO REMOTE UNIT* port on the *Duet TWP Central unit's* rear panel.
2. Connect the other System Cable # 1's RJ-45M connector to the network wall outlet.
3. Connect one of System Cable # 2's RJ-45M connectors to the *TO CENTRAL UNIT* port on the *Duet TWP Remote Unit's* rear panel.
4. Connect the other System Cable # 2's RJ-45M connector to the network wall outlet. Both System Cables now connect *the Duet TWP Central unit indirectly* to the *Duet TWP Remote unit*.

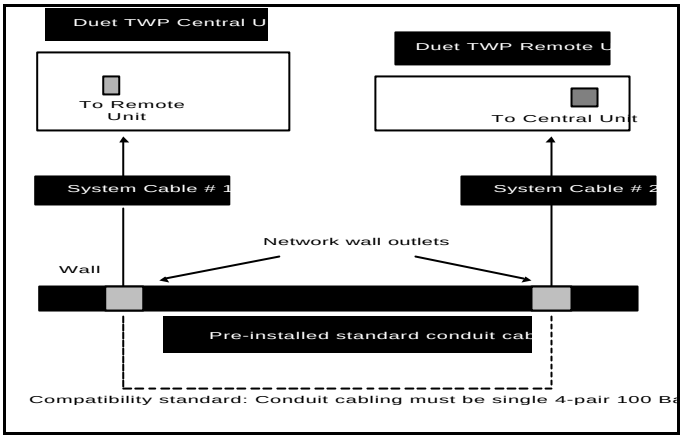


Figure 6-4 Using two System Cables

Connecting the Duet TWP Central Unit

To connect the *Duet TWP Central unit* to the local KVM workstation connect the following ports:

- Keyboard In/Out
- Mouse In/Out
- To Remote Unit
- Video In
- Local Monitor
- Power

Connecting the Keyboard Cable

You use the Keyboard Cable to connect the *Duet TWP Central unit* to the computer and the local keyboard. There is a different Keyboard Cable for AT or PS, as Figures 6-5 and 6-6 illustrate.

To connect the Keyboard Cable for AT:

1. Connect the DB9M connector to the *KEYBOARD IN/OUT* port on the *Duet TWP Central unit's* rear panel.
2. Connect the DIN5F connector to the keyboard.
3. Connect the DIN5M connector to the *keyboard* port on the computer's rear panel.

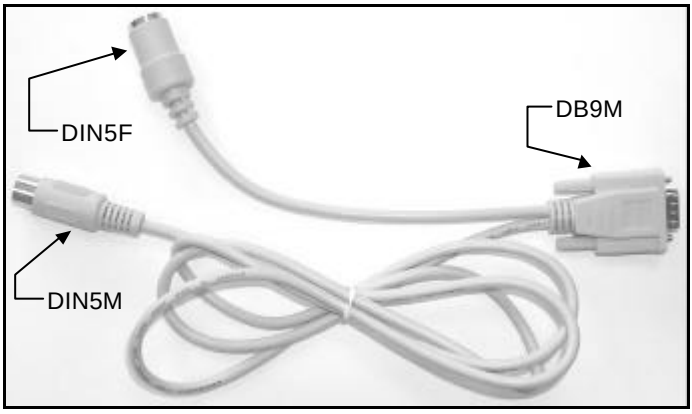


Figure 6-5 Keyboard Cable for AT

To connect the Keyboard Cable for PS:

1. Connect the DB9M connector to the *KEYBOARD IN/OUT* port on the *Duet TWP Central unit's* rear panel.
2. Connect the MiniDIN6F connector to the keyboard.
3. Connect the MiniDIN6M connector to the *keyboard* port on the computer's rear panel.

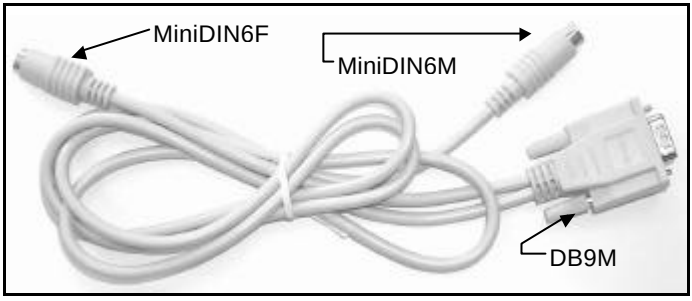


Figure 6-6 The Keyboard Cable for PS

Connecting the Mouse Cable

There is a different Mouse Cable for AT and PS computer types.

Connecting the Mouse Cable for AT

To connect the *Duet TWP Central unit* to an AT computer, use the AT Mouse Cable. See Figure 6-7.

The local mouse must be a PS type.

Note! The mice used with the Central and Remote units must be PS type.

To connect the Mouse Cable:

1. Connect the DB25M connector to the *MOUSE In/Out* port on the *Duet TWP Central unit's* rear panel.
2. Connect the DB9F connector to the *Serial MOUSE* port on the computer's rear panel.
3. Connect the MiniDIN6F connector to the PS type mouse.

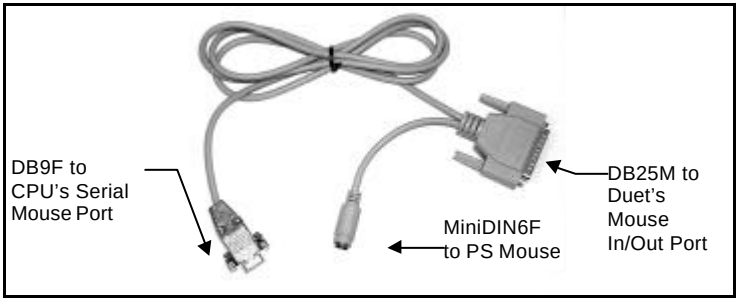


Figure 6-7 The AT Mouse Cable

Connecting the Mouse Cable for PS

To connect the *Duet TWP Extender unit* to a PS computer, use the PS Mouse Cable. See Figure 6-8.

1. Connect the DB25M connector to the *MOUSE IN/OUT* port on the *Duet TWP Central unit's* rear panel.
2. Connect the MiniDIN6F connector to the mouse.
3. Connect the MiniDIN6M connector to the *mouse* port on the computer's rear panel.

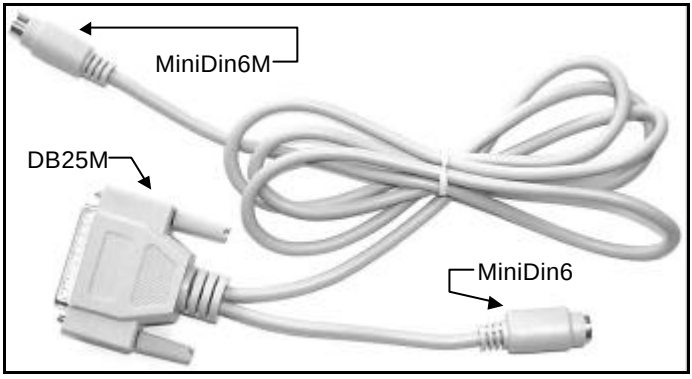


Figure 6-8 The PS Mouse Cable

Connecting the Screen

You use the Screen Cable, as Figures 6-9 and 6-10 illustrate, to connect the *Duet TWP Central unit* to the computer. The Screen Cable is identical for both AT and PS.

To connect the Screen Cable:

1. Connect the HDD15M connector from the screen to the *LOCAL MONITOR* port on the *Duet TWP Central unit's* rear panel.
2. Connect the Screen Cable's HDD15M connector to the *Screen* port of the computer.
3. Connect the Screen Cable's HDD15F connector to the *VIDEO IN* port on the *Duet TWP Central unit's* rear panel.

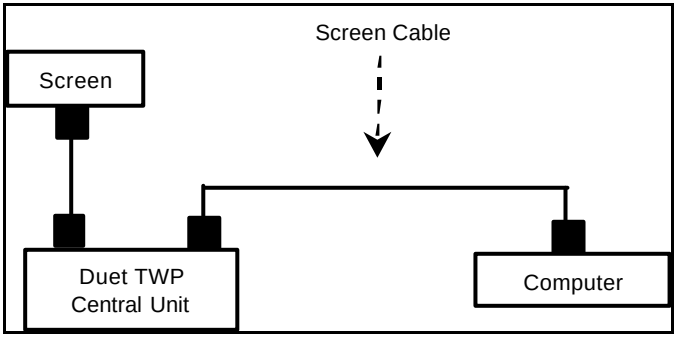


Figure 6-9 The Screen Cable Block Diagram

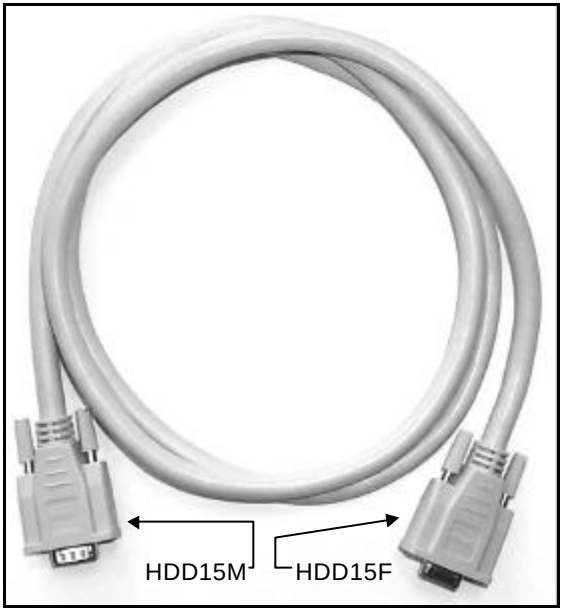


Figure 6-10 The Screen Cable

Connecting to the Power Supply

Prior to connecting the *Duet TWP system* to the Power Supply you should observe the following:

- ***Switch On*** *the Duet TWP Central and Remote units* ***before*** *you Switch On the computer. The order is unimportant when using a non-IntelliMouse™. However, when using an IntelliMouse™, first switch on the Duet TWP Remote unit's power and then the computer's power.*
- ***Switch Off*** *the Duet TWP Central and Remote units before you disconnect, and then reconnect, a keyboard or a mouse.*

To connect the Central Unit to the Power Supply:

1. Connect the 9V AC/AC Adapter Plug to the Power Cable connector.
2. Connect the Power Cable to the 9V AC/AC Adapter and insert the Mains Plug into a wall socket. This connects the *Duet TWP Central unit* to the Power Supply, as Figure 6-11 illustrates.

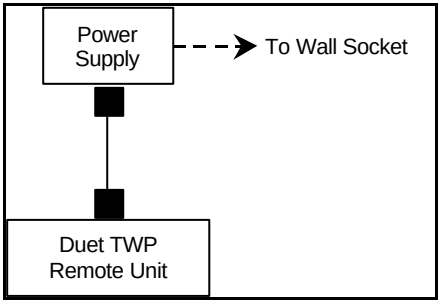


Figure 6-11: Duet TWP Central Unit Power Supply

Connecting the Remote Unit

The *Duet TWP Remote unit* is available in two models:

The *Remote unit* (up to 110m/360ft).

The *Long Range unit* (up to 250m/820ft).

Connecting either of the remote units is the same, except for the Power Supply.

To connect the remote workstation to the *Duet TWP Remote unit's* rear panel, as Figures 6-14 and 6-15 illustrate, do the following:

1. Connect the System Cable's RJ-45M connector to the *TO CENTRAL UNIT* port.
2. Connect the Screen's HDD15M connector to the HDD15F *MONITOR* port.

For AT:

1. Connect the Keyboard's DIN5M connector to the Keyboard Adapter, as Figures 6-12 and 6-14 illustrate, adapting it to MiniDIN6M. Connect the MiniDIN6M connector to the MiniDIN6F *KEYBOARD* port.

Figure 6-12 The AT Keyboard Adapter

For PS:

1. Connect the Mouse's MiniDIN6M connector to the *PS MOUSE* port.
2. Connect the Keyboard's MiniDIN6M connector to the MiniDIN6F *KEYBOARD* port.

Connecting to the Power Supply

To connect the Duet TWP Remote Unit:

1. Connect the 9V AC/AC Adapter Plug to the Power Cable connector.
2. Connect the Power Cable to the 9V AC/AC Adapter and insert the Mains Plug into a wall socket.

To connect the Duet TWP Remote Long Range Unit:

1. Connect the Power Adapter cable's DIN4M connector to the *Long Range unit's* DIN4F power connector.
2. Connect the Power Cable to the 9V AC/AC and insert the Mains Plug into a wall socket.

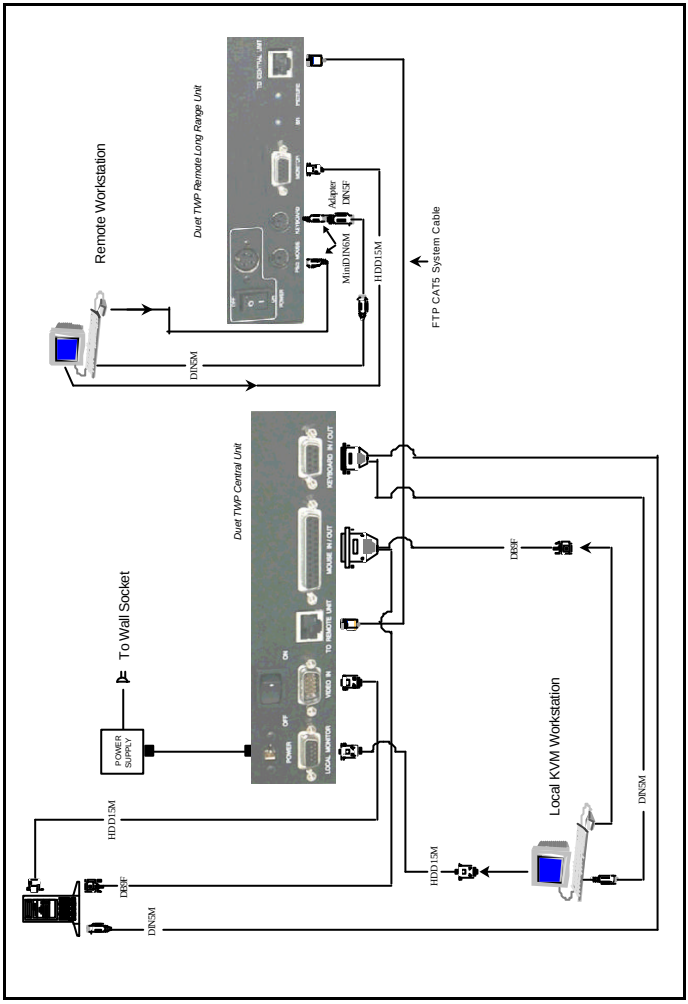


Figure 6-13 The Duet TWP Central Cable Diagram for AT

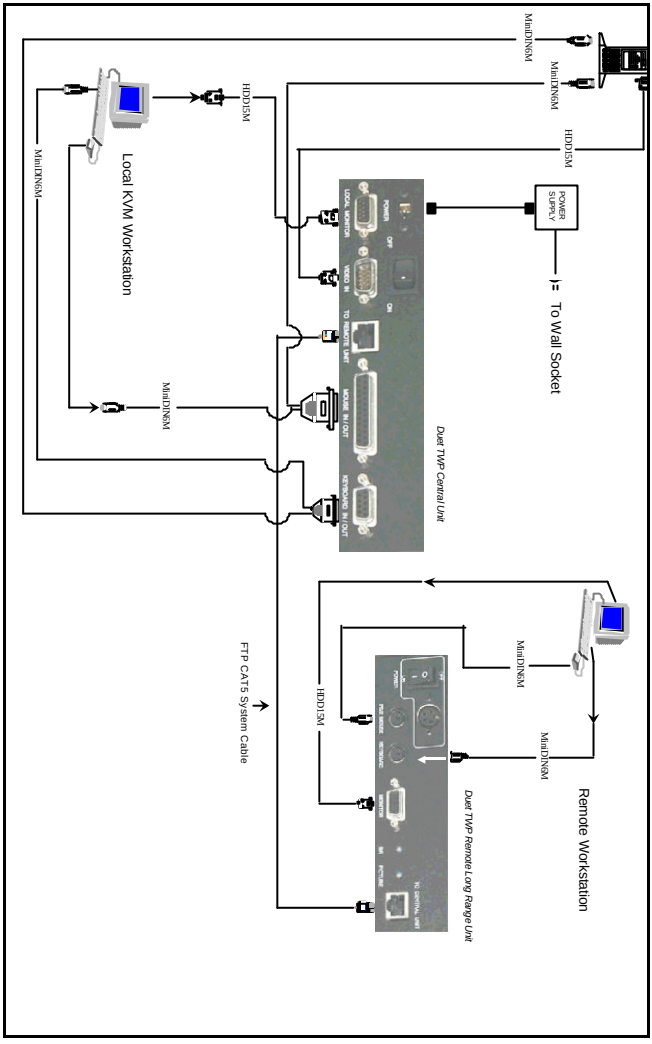


Figure 6-14 The Duet TWP Central Cable Diagram for PS

Chapter 7: Operation

This chapter deals with the operation of the *Duet TWP Central system.*

Gaining Control of the Computer

Duet TWP is easy to operate and functions automatically on a *first come first serve* basis.

To take control of the computer

1. Either the local or remote user can take over control of the computer by starting to work with the keyboard or mouse.
2. The inactive user can monitor the active user's work at his own workstation but cannot take over control whilst the active user is working on the computer.
3. *Duet TWP* is equipped with a time out function of one second, that is, after the active user stops working for a second, the inactive user can take over control of the computer, from his workstation.

Note! Use identical type *keyboards* and *mice* at both the local and remote workstations.

Improving Picture Quality

You regulate the remote screen's picture quality by turning the Potentiometer Adjuster located on the rear panels of both *Remote units*.

Improving Brightness Quality

You regulate the brightness of the remote screen by turning the Potentiometer Adjuster located on the *Long Range unit's* rear panel.

Operating the Lock Mode Hot-keys

There are two sets of Hot-keys:

- Left Shift + F11.
- Left Shift + F12.

Both sets of Hot-keys lock and keep KVM control at whichever Workstation presses them first. This could be either the Local or Remote Workstation.

NOTE!

☑ Only the **Left** Shift and **not** the **Right** Shift key works for the Hot-key functions.

☑ Release the Left Shift key **before** pressing F11 or F12

Pressing Left Shift + F11, causes the screen of the other workstation to display the screen of the controlling Workstation.

Pressing Left Shift + F12, causes the screen of the other workstation to appear dark.

Appendix C sets out the Hot-keys, their functions and effects in a table format.

Chapter 8: The Central/ Extender Unit

This Chapter explains how the *Duet TWP unit* switches from being a *Central unit* to an *Extender unit*, and vice versa. It also describes the panels of the *Duet TWP Central/Extender unit*, the dipswitches and their functions.

Auto detecting the KVM

The *Duet TWP Central/Extender unit*, auto detects whether there is a KVM (keyboard, video, and mouse) attached to it. The unit then acts accordingly, as follows:

- Where there is a KVM attached, the unit operates as a *Central* unit.
- Where there is no KVM attached, the unit operates as an *Extender* unit.

Note! To change the unit's function from a *Central* to an *Extender* unit or vice versa:

1. Switch the computer off. The *Duet TWP unit* switches off automatically.
2. Attach or detach the KVM as required.
3. Switch the computer on.

The Front Panel

Figure 8-1 illustrates the *Duet TWP Central/Extender unit* front panel.

Figure 8-1 Duet TWP Central/Extender Unit Front Pane

The Front Panel indicators

Title	Function
Power	Power indicator
Lock	Indicates that the Hotkeys have been pressed and control is now locked

The Rear Panel

Figure 8-2 illustrates the rear panel of the *Duet TWP Central/Extender unit*.

Figure 8-2 The Duet TWP Central/Extender Unit Rear Panel

The Rear Panel Connections and Operations

Title	Function
Power	Connect the 220 V or 110 V AC Adapter
On/Off Switch	Switches On the *unit*
Local Monitor	Connect the screen's connector
Video In	Connect the HDD15F connector
To Remote Unit	Connect the System Cable's connector
Mouse In/Out	Connect the mouse cable's connector
Keyboard In/Out	Connect the keyboard cable's connector

The Underside Panel

Figure 8-3 illustrates the underside panel of the *Duet TWP Central/Extender unit*. The dipswitches are circled.

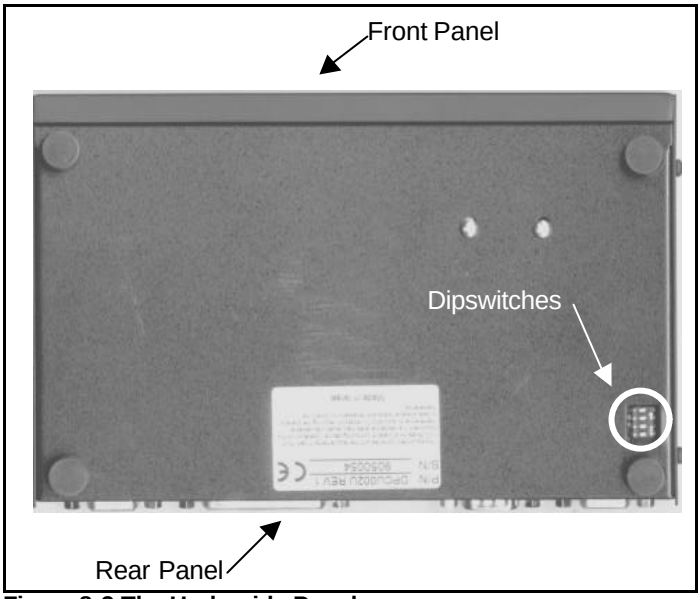


Figure 8-3 The Underside Panel

Dipswitch settings

Each Dipswitch has a different function. These are explained below.

Dipswitches 1 and 2 – UNIX settings

When using a UNIX computer set dipswitch 2 to the ON position and set dipswitch 1 according to the UNIX type as follows:

- HP UNIX – ON
- SGI UNIX, DEC ALPHA – OFF

Dipswitch 3 – Hotkeys enabled/disabled

You can disable the Duet TWP hotkeys. You may want to do this when cascading the Duet TWP with other devices, or when you don't want to use the hotkeys. Disable the hotkeys by setting dipswitch 3 to the ON position.

Note! The Hotkeys do not work in the Extender Mode.

Hotkeys currently available

SHIFT + F11 – locks the other workstation and displays the same screen at both workstations.
SHIFT + F12 – locks the other workstation and darken its screen.
SHIFT + F – generates a firmware version report. To find out the firmware version of the Duet TWP Central or Remote unit:

1. Open any text editor.
2. At the desired unit, press **SHIFT** + **F**. The firmware version of that unit appears on the screen.

Dipswitch 4 – Computer type

Set dipswitch 4 to the ON position if you use the PC/AT computer with Duet TWP AT Kit. This dipswitch should be in the OFF position for the PS/2 computer.

Default setting

The default setting for all dipswitches is OFF.

Changing a Dipswitch setting

To change a Dipswitch setting of the Duet TWP Central/Extender unit - do the following:

1. Switch the computer off. The Central/Extender unit switches off automatically.
2. Make the desired change.
3. Switch the computer on.

Chapter 9: The Remote Unit

This Chapter describes the front and rear panels of the *Duet TWP Remote unit*.

The Front Panel

Figure 9-1 illustrates the *Duet TWP Remote unit's* front panel.

Figure 9-1 The Front Panel

The Front Panel Indicators

Title	Function
Power	Power indicator
Lock	Indicates that the Hotkeys have been pressed and control is now locked

The Rear Panel

Figure 9-2 illustrates the *Duet TWP Remote unit's* rear panel. Table 9-2 describes the basic hardware connections.

Figure 9-2 The Rear Panel

The Rear Panel Connections and Operations

Title	Function
On/Off Switch	Switches On the *Duet TWP Remote unit*
Power	Connect the 220 V or 110 V AC Adapter
PS Mouse	Connect the PS mouse connector
Keyboard	Connect the keyboard connector
Picture	Improve picture quality by rotating the Potentiometer Adjuster
Monitor	Connect the screen connector
To Central Unit	Connect the System Cable's connector

Chapter 10:The Long Range Remote Unit

This Chapter describes the front, rear, and underside panels of the *Duet TWP Remote Long Range unit*.

The Front Panel

Figure 10-1 illustrates the *Duet TWP Remote Long Range unit's* front panel.

Figure 10-1 The Front Panel

The Front Panel Indicators

Title	Function
Power	Power indicator
Lock	Indicates that the Hotkeys have been pressed and control is now locked

The Rear Panel

Figure 10-2 illustrates the rear panel of the *Duet TWP Remote Long Range unit*.

Figure 10-2 The Rear Panel

The Rear Panel Connections and Operations

Title	Function
On/Off Switch	Push to Switch On the *unit*
Power	Connect the 220 V or 110 V AC Adapter
PS Mouse	Connect the PS mouse connector
Keyboard	Connect the keyboard connector
Monitor	Connect the screen connector
BR	Improve picture brightness by rotating the Potentiometer Adjuster
Picture	Improve picture quality by rotating the Potentiometer Adjuster
To Central Unit	Connect the System Cable connector

The Underside Panel

Figure 10-3 illustrates the underside panel of the *Duet TWP Remote Long Range unit*, with four sets of Dipswitches, one of which is not used.

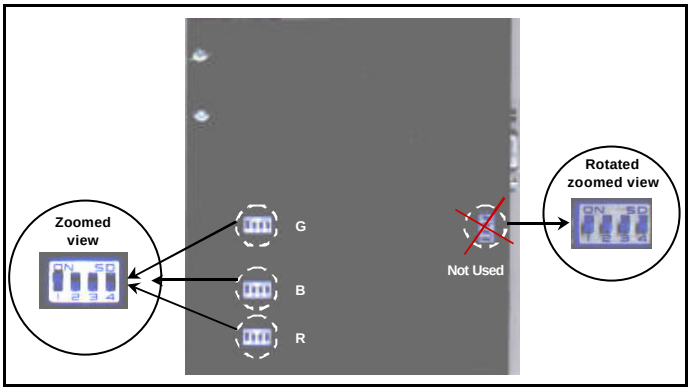


Figure 10-3 The Underside Panel

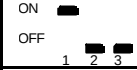
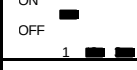
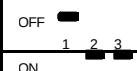
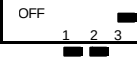
Dipswitch Settings

All Dipswitch setting should be the same. RGB compensation demands identical settings for all 3 sets of Dipswitches, G, B, and R;

There are 4 Dipswitches. You set Dipswitches 1 – 3 according to the cable length, screen resolution and refresh rates. See the table on page 10-4.

Please note! Dipswitch number 4 is not used.

The Remote Long Range Unit Dipswitch Settings

Cable Length		Screen Resolution and Refresh Rates			
M	**ft**	**640x480 75 Hz**	**800x600 75 Hz**	**1024x768 75 Hz**	**1280x1024 75 Hz**
50	165				
100	330				
150	490				
200	650				
250	820				

Appendix A: Technical Specifications

System Requirements	
CPUs	PS and AT
Video	SVGA or VGA or XGA
Temperature	0° to 40° Celsius For extended environmental conditions, contact us
Humidity	0% to 85% non-condensing
Keyboard	DIN 5 pin or MiniDIN 6 pin

Video Monitor Specifications		
Video Interface	Video Signal: Analog Signal Red Green Blue 0.7Vp-p/75 Ω positive	
	Sync:	TTL Compatible
	Horizontal:	Sync. positive/negative
	Vertical:	Sync. positive/negative
	Impedance:	75 Ohms
Resolution	Monitor:	Up to 1280 x 1024 pixels
	Horizontal frequency:	30-100 KHz
	Vertical frequency:	43-100 KHz

Transmission Distances	
From Duet TWP Remote Unit:	up to 110m/360ft
From Duet TWP Remote Long Range Unit:	up to 250m/820ft

Duet TWP Central/Extender Unit	
Power	110 V or 220 V 9 V AC/AC
Dimensions	46mm x 197mm x 128mm 1.81" x 7.76" x 5.04"

Duet TWP Remote Unit	
Power	110 V or 220 V 9 V AC/AC
Dimensions	46mm x 139mm x 93mm 1.81" x 5.47" x 3.66"

Duet TWP Remote Long Range Unit	
Power	110 V or 220 V 9 V x2 AC/AC
Dimensions	46mm x 190.5mm x 133mm 1.81" x 7.50" x 5.24"

Appendix B:The Duet TWP Product Line

Order Code	Details and Description
0DT22001	**DUET TWP PC-SPLITTER CENTRAL UNIT AT / PS 220V**
1DT22001	Duet TWP PC-splitter box
5PS10002	Power supply 220V-9VAC 1.5A
5CB60022	European power cord
5CB40056	Cable screen VGA HD15F-HD15M
5CB10050	Cable Y KB AT DB9M-DIN5F-DIN5M
5CB10124	Cable Y Mouse AT DB25M-DB9F-MINIDIN6F
5CB10049	Cable Y KB PS DB9M-MINIDIN6F-MINIDIN6M
5CB10122	Cable Y Mouse PS DB25M-MINIDIN6F-MINIDIN6M
0DT22002	**DUET TWP PC-SPLITTER CENTRAL UNIT AT / PS 110V**
1DT22001	DUET UTP CENTRAL UNIT
5PS00013	US power supply 110V-9VAC 1.5A
5CB40056	Cable screen VGA HD15F-HD15M
5CB10050	Cable Y KB AT DB9M-DIN5F-DIN5M
5CB10124	Cable Y Mouse AT DB25M-DB9F-MiniDIN6F
5CB10049	Cable Y KB PS DB9M-MINIDIN6F-MINIDIN6M
5CB10122	Cable Y Mouse PS DB25M-MINIDIN6F-MINIDIN6M
0DT21001	**DUET UTP REMOTE UNIT (UP TO 110M/360FT) AT+PS 220V**
1DT21001	Duet TWP Remote box

5CB10243	KB adapter. PS-AT miniDIN6M-DIN5F
5PS10002	Power supply 220V-9VAC 1.5A
5CB60022	European power cord

0DT21002	**DUET TWP REMOTE UNIT (UP TO 110M/360FT) AT / PS 110V**
1DT21001	Duet TWP Remote box
5CB10243	KB adapter. PS-AT miniDIN6M-DIN5F
5PS00013	US power supply 110V-9VAC 1.5A

0DT21003	**DUET TWP REMOTE UNIT LONG RANGE (UP TO 250M/820FT) AT / PS 220V**
1DT21003	Duet TWP Remote box long distance
5CB10243	KB adapter. PS-AT miniDIN6M-DIN5F
5PS10016	Power supply 220V-9VAC 1.5A
5CB60022	European power cord

0DT21004	**DUET TWP REMOTE UNIT LONG RANGE (UP TO 250M/820FT) AT / PS 110V**
1DT21003	Duet TWP Remote box long distance
5CB10243	KB adapter. PS-AT miniDIN6M-DIN5F
5PS20017	US power supply 110V-9VAC 1.5A
5CB60304	US power cord

FTP CAT5 SYSTEM CABLE

5CB20390/?	FTP CAT5 Cable 4X2X24

Appendix C: Using the Hot-keys

The Hot-keys, their functions and effects, are set out in the tables below.

Pressing at the Local Workstation		
Hot-keys	**Function**	**Effect**
Left Shift, F11	Both sets of Hot-keys lock and keep KVM control at the **Local** Workstation.	The **Remote** screen displays the **Local** Workstation screen
Left Shift, F12		The **Remote** screen appears dark

Pressing at the Remote Workstation		
Hot-keys	**Function**	**Effect**
Left Shift, F11	Both sets of Hot-keys lock and keep KVM control at the **Remote** Workstation.	The **Local** screen displays the **Remote** Workstation screen
Left Shift, F12		The **Local** screen appears dark

NOTE! To activate the Hot-Keys:

Press and release the **LEFT SHIFT** key before pressing F11 or F12.

To unlock KVM control, press the same Hot-keys again.

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