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Guntermann & Drunck
GmbH

TripleMUX/QuadMUX

Installation & Operating Instructions

Item number:	TripleMUX	A210 0044
	QuadMUX	A210 0046

06/12/2007 – Version 1.02
Firmware: TM1.04/QM1.02
Subject to errors and alterations

IMPORTANT INFORMATION

Attention

TO REDUCE THE RISK OF ELECTRIC SHOCK, NEVER OPEN THE DEVICE OR REMOVE ITS COVER. IF SERVICE IS REQUIRED, PLEASE CONTACT OUR TECHNICIANS.

READ THIS OPERATING MANUAL CAREFULLY BEFORE SETTING UP THE DEVICE.

FOLLOW ALL WARNINGS AND OPERATING INSTRUCTIONS FOUND ON THE DEVICE OR IN THE OPERATING MANUAL.

KEEP THE OPERATING MANUAL AT HAND FOR FUTURE USE.

POWER SUPPLY: ONLY OPERATE THIS DEVICE WITH THE SUPPLIED AC ADAPTER OR WITH THE AC ADAPTER DESCRIBED IN THE OPERATING MANUAL.
ONLY OPERATE THIS DEVICE ON AN EARTHED VOLTAGE SOURCE.

DEENERGISING OF DEVICE: BEFORE INSTALLING THE DEVICE, ENSURE THAT IT IS DEENERGISED. DISCONNECT THE MAINS PLUG OR POWER SUPPLY FROM THE DEVICE.
TO DEENERGISE THE DEVICE, UNPLUG THE MAINS PLUG. THEREFORE, PLEASE HEED THE ACCESSIBILITY OF THE POWER SUPPLY.

CABLES: ONLY USE CABLES SUPPLIED BY G&D. DAMAGE RESULTING FROM THE USE OF CABLES NOT SUPPLIED BY G&D IS NOT COVERED BY THE WARRANTY. AVOID CREATING TRIPPING HAZARDS WHEN LAYING CABLES.

VENTS: VENTS PREVENT THE DEVICE FROM OVERHEATING. DO NOT COVER THE VENTS.

WARRANTY EXCLUSIONS: G&D PROVIDES NO WARRANTY FOR DEVICES WHICH
- HAVE BEEN USED FOR ANY PURPOSE OTHER THAN THE INTENDED USE.
- HAVE BEEN REPAIRED OR MODIFIED WITHOUT AUTHORISATION.
- EXHIBIT MAJOR EXTERNAL DAMAGE THAT WAS NOT REPORTED UPON RECEIPT OF THE DELIVERY.
- WERE DAMAGED BY ACCESSORIES NOT SUPPLIED BY G&D.

G&D SHALL NOT BE LIABLE FOR ANY TYPE OF CONSEQUENTIAL DAMAGES THAT MAY ARISE FROM THE USE OF THIS PRODUCT.

AREA OF APPLICATION: THE DEVICES ARE DESIGNED FOR INDOOR USE. AVOID EXTREME COLD, HEAT AND HUMIDITY.

CONFORMITY: THE DEVICE CORRESPONDS TO THE ESSENTIAL PROTECTION REQUIREMENTS AND PROVISIONS OF LAW CONCERNING ELECTROMAGNETIC COMPATIBILITY (RL 89/336/EWG IN VERSION 2004/108/EG) AS WELL AS THE LOW-VOLTAGE GUIDELINE (RL 73/23, 93/68). THE FOLLOWING STANDARDS WERE USED IN THE ASSESSMENT: EN55022 (1998) + A1 + A2 CLASS B, EN55024 (1998) + A1 + A2, EN61000-3-2 (2000) + A2, EN61000-3-3 (1995) + A1+A2, EN60950-1 (2003) AND EN61000-6-2 (2001).

Table of contents *TripleMUX/QuadMUX*

1 Description

1.1 General information

The **TripleMUX** and **QuadMUX** allow you to manage up to four (4) computers using one keyboard and one mouse, and up to three or four parallel screens.

Each of the 4 computers can be equipped with a **Triple** or **Quad video** card. All four channels on this card can be switched.

The following variants are available (the differences lie in the type of graphics card fitted in the computer).

Product	Type of graphics card in the computer
TripleMUX	Triple graphics card
QuadMUX	Quad graphics card

As all the products differ only in the type of graphics card in the computer connected, it is normally the **TripleMUX** that is being referred to in this manual.

The option for ***scene switching*** means that the images from the various video sources on one or more computers can be switched to the four monitors connected, according to the user's requirements.

This **video scene** can be freely assigned the **operation of one** of the **computers** shown.

The **TripleMUX** therefore makes an active contribution to saving costs, energy and space for additional peripherals, and to use the computers connected more efficiently.

A user has easy access to the information provided on multiple computers.

1.2 Mode of operation

The **TripleMUX** is an electronic PC switch, with the following functional features, among others:

- Full **keyboard and mouse emulation** for error-free booting of all computers connected
- Provision of a **microprocessor** for each channel
- Can be operated on computers with **PS/2 and USB mouse**
- Full support for the **Microsoft Intelli-Mouse**
- Video bandwidth up to **400MHz**
- Switching (scene selection) via **keyboard HotKey or AdonIS**
- Freely adjustable **scenes**

- **AutoScan function** for automatic pass-through of the scenes
- AdonIS can be configured
- System can be secured using **password assignment**.

1.3 Factory settings / default settings

The **TripleMUX** is configured as follows with the **factory settings**:

- No user password assigned,
- Master password permanently set,
- **TripleMUX** can only be configured via the master password.

1.4 Master password

If you want to make changes to the default settings, enter the master password in the LOGIN window.

Your master password can be found in **Appendix A** to the operating manual.
Via the master password you have access to all configuration levels at all times, regardless of the current settings.

Please ensure that you remove the master password from the operating manual for your own security.

1.5 User password

There are no in-depth configuration rights assigned to the user password. The user password is used to avoid unauthorised use of the system.

A user password can only be assigned by the master (see **chap. 5.2.2.16**).

If a user password is assigned, it must be entered in the LOGIN window.

1.6 Scope of delivery

		Description	Item number
Switch	TripleMUX		A210 0044
	QuadMUX		A210 0046
Power supply	PowerCable-2 standard		A630 0057
Documentation	Triple_QuadMUX	German version	A 910 0080
	Triple_QuadMUX	English version	A 920 0044

In addition to the connection cable required for the product (can be ordered separately, lengths must be specified when ordering)

		Connection cable comprising	Item number
Single connection cable	CPU-1	VGA + 2 x PS/2 to MDR20-M, 1 metre	A610 0006
	CPU-2	VGA + 2 x PS/2 to MDR20-M, 2 metres	A610 0007
	CPU-4	VGA + 2 x PS/2 to MDR20-M, 4 metres	A610 0008
	CPU-6	VGA + 2 x PS/2 to MDR20-M, 6 metres	A610 0009
	CPU-9	VGA + 2 x PS/2 to MDR20-M, 9 metres	A610 0010
	CPU-USB-1	VGA, USB to MDR20-M, 1 metres	A610 0057
	CPU-USB-2	VGA, USB to MDR20-M, 2 metres	A610 0058
	CPU-USB-4	VGA, USB to MDR20-M, 4 metres	A610 0059
Connection cable set 2 channel (Triple & QuadMUX)	CPU-MC2-P-2	VGA + 2 x PS/2 to MDR20-M, 2 metre; plus 1 x VGA-M/M-2	A610 0066
	CPU-MC2-P-4	VGA + 2 x PS/2 to MDR20-M, 4 metre; plus 1 x VGA-M/M-4	A610 0067
	CPU-MC2-P-6	VGA + 2 x PS/2 to MDR20-M, 6 metre; plus 1 x VGA-M/M-6	A610 0068
	CPU-MC2-U-2	VGA, USB to MDR20-M, 2 metres; plus 1 x VGA-M/M-2	A610 0069
	CPU-MC2-U-4	VGA, USB to MDR20-M, 4 metres; plus 1 x VGA-M/M-4	A610 0070

Connection cable set 3 channel (Triple & QuadMUX)	CPU-MC3-P-2	VGA + 2 x PS/2 to MDR20-M, 2 metre; plus 2 x VGA-M/M-2	A610 0072
	CPU-MC3-P-4	VGA + 2 x PS/2 to MDR20-M, 4 metre; plus 2 x VGA-M/M-4	A610 0073
	CPU-MC3-P-6	VGA + 2 x PS/2 to MDR20-M, 6 metre; plus 2 x VGA-M/M-6	A610 0074
	CPU-MC3-U-2	VGA, USB to MDR20-M, 2 metres; plus 2 x VGA-M/M-2	A610 0075
	CPU-MC3-U-4	VGA, USB to MDR20-M, 4 metres; plus 2 x VGA-M/M-4	A610 0076
Connection cable set 4 channel (only with QuadMUX	CPU-MC4-P-2	VGA + 2 x PS/2 to MDR20-M, 2 metre; plus 3 x VGA-M/M-2	A610 0077
	CPU-MC4-P-4	VGA + 2 x PS/2 to MDR20-M, 4 metre; plus 3 x VGA-M/M-4	A610 0078
	CPU-MC4-P-6	VGA + 2 x PS/2 to MDR20-M, 6 metre; plus 3 x VGA-M/M-6	A610 0079
	CPU-MC4-U-2	VGA, USB to MDR20-M, 2 metres; plus 3 x VGA-M/M-2	A610 0080
	CPU-MC4-U-4	VGA, USB to MDR20-M, 4 metres; plus 3 x VGA-M/M-4	A610 0081

2 Installation

In the basic expansion level, 4 computers can be connected to the **TripleMUX**. Each of these computers can be equipped with a triple video card (QuadMUX: Four-way video card). This procedure will be explained in more detail in this chapter.

Computer connection:

- Disconnect the monitor, keyboard and mouse cable from the computers.
- Monitor:
  Plug the 15 pole Sub HD plug on the **CPU-x** cable (x=1, 2, 4, 6 or 9 metres) or **CPU-USB-x** (x= 2 or 4 metres) into the VGA port on computer 1.

  Additional monitor connection:
  - Connect the **VGA-M**/**M-x** connection cable to the other video channels on the computer.
  - Connect the other end of the **VGA-M**/**M-2** cable to the ***VGA CPU1.x –3.x*** ports

  Please note:
  When connecting the graphic cards, ensure that the **assignment is correct on the TripleMUX**. As described in **chapter 5.2.4.3**, due to physical restrictions not all video sources can be displayed on every monitor.
- Keyboard/mouse (PS/2):
  Now using the two PS/2 plugs of the **CPU-x** cable, establish the connection to the keyboard and mouse interface of computer 1. Both plugs have **corresponding symbols** on them.
- Alternative keyboard/mouse (USB):
  Now using the USB plug of the CPU-USB-x cable, establish the connection to the keyboard and mouse interface of computer 1.
- Then connect the other end of the CPU-x or CPU-USB-x cable (MDR 20 = Mini Delta Ribbon 20 pole) to the CPU1 port on the **TripleMUX**.
- To make the connection to the other computers, proceed as described above

Console connection:

- Plug the keyboard and mouse into the corresponding jacks. Connect the monitor to the **Monitor** interface on the back of the device.

  Additional monitor connection:
  Connect the monitors to the ***MONITOR 2 - 4*** jacks.

- Alternatively, you can connect keyboard and mouse via USB. The relevant connections for this purpose can be found on the front of the **TripleMUX.**

Once all the connections to the **TripleMUX** have been established, switch on the device.

3 Switching the device on / LED indicators

After **switching on the device** using the rocker switch on the rear, the **TripleMUX** initialises the keyboard and mouse. The user LED (green) comes on immediately after the **TripleMUX** has been switched on.

The user-LED (yellow) blinks after the device is switched on until a keyboard (PS/2 or USB) has been found. After **successful initialisation** of keyboard and mouse, the user-LED (yellow) changes to a permanent yellow light.

Behaviour of the 4x PC-channel LEDs:

PC-LED below, green:

- After switching the device on, the LED blinks briefly if the channel was off and then remains off
- After switching the device on, the LED remains permanently lit if the channel was on, that is, the LED was already lit up and it lights up further as follows
- lights up permanently as soon as a computer with active power supply is plugged into this channel

PC-LED above, yellow:

- Goes out after switching on (until it blinks once briefly)
- if you switch to an input channel (via OSD or HotKey), the LED associated with the channel lights up permanently until you change the channel.

If one of the **connected computers is switched on**, the corresponding channel indicator switches from red to green.

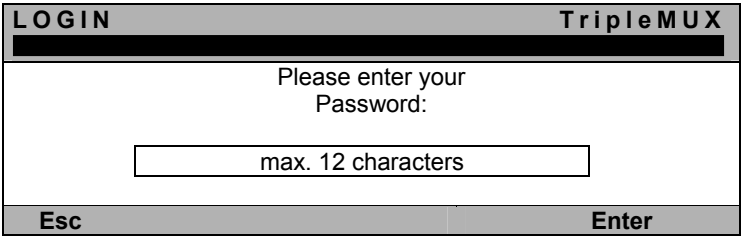
If the initialisation does not occur (red/green blinking does not end), please check the correct fit of the connection cable (keyboard/mouse) on the user side.

4 System access and operation

4.1 The login window

If the device is still set to the factory settings (OpenAccess), this window will not be displayed.

The login window can only be accessed if the free system access (OpenAccess) has been deactivated.



In this case, enter your personal user password here. The number of attempts is unlimited. Confirm your inputs using the **ENTER** key. **ESC** cancels the input.

If you want to change the factory settings for the device, enter the master password (see **Appendix A**).

In the status on delivery, the ***SELECT SCENE*** selection menu will appear immediately after switching on or entering the password.

SELECT SCENE means that screen scenes are connected up here. These scenes consist of 3 or 4 different image sources, and these image sources can originate from one computer or from different computers. For more on this topic, see **chap. 5.2.4**.

When the ***SELECT SCENE*** menu appears for the first time, the system waits for the selection of a scene via AdonIS.

In principle, a scene can be selected via **keyboard HotKey** or via the **OSD (On-Screen-Display) menu**.

4.2 Keyboard HotKey switching

4.2.1 Default setting

To switch, hold down the **CRTL key** and then press the **NUM key** of the required scene. Permissible keys are the alphanumeric characters above the letter block from 1 - 8.

Selection of computer 1: **CTRL + 1**

The **default setting** begins with 1 and ends with 8.

4.2.2 Customer setting

Master function

Both the first and the second key of the HotKey combination can be modified according to your requirements (**see chap. 5.2.2.11 + 5.2.2.13**).

If the default setting has been lost or if changes are required, the settings can be requested from your system administrator.

4.3 AdonIS scene switching

4.3.1 Initiating the AdonIS

The AdonIS is initiated by holding down the **CRTL** key and also holding down the **NUM** key.

If the you changed the HotKey from the default setting of **CRTL** (**chap. 5.2.2.11**), **this new HotKey** will also be the first key for **initiating the AdonIS**.

The second key for **initiating the AdonIS (NUM)**, **cannot be changed**.

The ***SELECT SCENE*** window appears on the screen, where 8 possible scenes will be displayed.

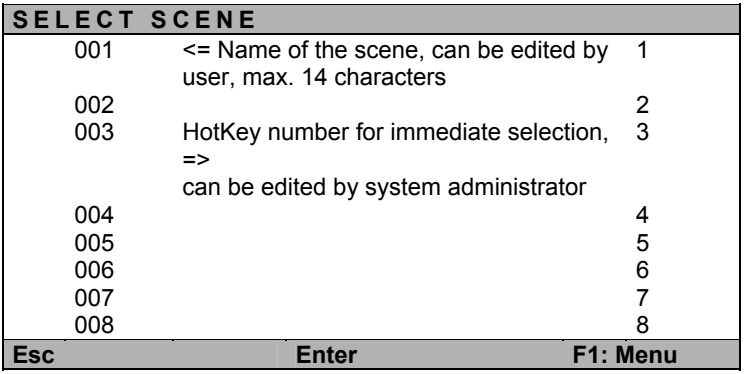
Whether the scene in question assigned to the computer is switched on or off is indicated by the colour display in the corresponding line in the menu:

green: Computer switched on
red: Computer switched off or port not occupied

4.3.2 Operating the AdonIS

The AdonIS can be operated **either using the keyboard or the mouse**.

4.3.2.1 Keyboard operation



↑↓	Select the scene using arrow keys
Enter	Triggers the switchover
Esc	Cancel without new selection (back)
F1	Open the FUNCTION menu (configuration)

4.3.2.2 Mouse operation

The AdonIS window can also be operated using the **mouse**.

Scrolling	**-**	Select the PC
left key	**-**	Enter
right	**-**	Escape

When using a mouse with three buttons, also:

centre key	**-**	**F1**

This assignment applies to all AdonIS windows.

4.3.2.3 Display of the scene selected

If the selection is made using the keyboard or mouse, the name and the HotKey of the scene selected is displayed **permanently on the screen**.

001 (scene name, can be edited)
TripleMUX (console name, can be edited)

The scene is displayed on the monitor(s) which receive an image from a PC on which the keyboard/mouse pointer is also positioned according to the setting in the K/M Scene menu.

K/M SCENE						TripleMUX
Scene	Name	A	B	C	D	K/M
1	001	**1**	**1**	**1**	**1**	**1**

The scene is displayed on **monitor A, B, C + D.**

K/M SCENE						TripleMUX
Scene	Name	A	B	C	D	K/M
1	001	**1**	**2**	**3**	**4**	**1**

The scene is displayed **on monitor A only.**

If a scene is selected where there is no keyboard/mouse pointer within that scene on any of the PCs, according to the setting in the **K/M Scene** menu,

K/M SCENE						TripleMUX
Scene	Name	A	B	C	D	K/M
1	001	**1**	**2**	**3**	**4**	**-**

the scene name is displayed on all monitors.

The scene name can be displayed in red or green:
red: Assigned computer is **switched off** or channel is unoccupied.
green: Channel is occupied and computer **switched on**.

The **permanent display** of the scene can be **switched off** (see **chap. 5.2.2.6**).

4.3.3 Position of the scene display

he position of the scene display on the screen can be changed (see **chap. 5.2.2.7**).

5 Function menu

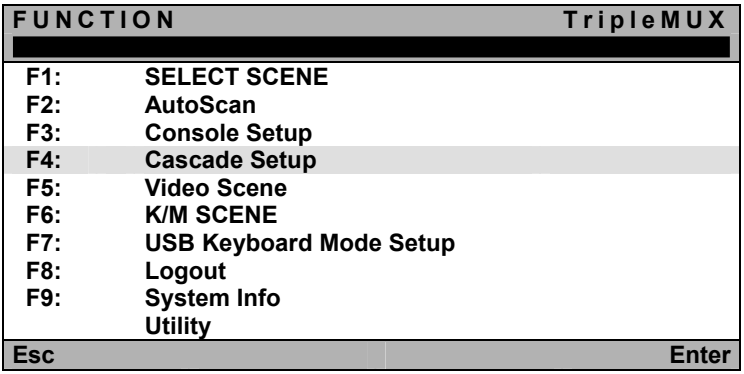
Setup settings and information services are also carried out via the AdonIS.

5.1 Opening the AdonIS function menu

Activate the AdonIS window using the key combination **CRTL** + **NUM**.

Press key **F1**.

From the **SELECT SCENE** menu, this will take you to the **FUNCTION** menu:



The AdonIS is operated in the same as described in **chap. 4.3.2** using the keyboard and mouse.

There is also the option of using the relevant
F keys to access the required function directly.

The **SELECT COMPUTER** menu will also take you to the sub-menus or functions listed in the **FUNCTION** menu by entering the ***F keys*** directly.

5.2 The individual functions

Key **F1** Back to the **SELECT SCENE** menu

5.2.1 AutoScan function

Key **F2** **Triggering the AutoScan function**

Activating the AutoScan function causes the automatic interconnection of all channels.

Even unassigned channels or computers which are switched off can be included in the AutoScan function (e.g. to check the boot phase).

5.2.1.1 Opening the AutoScan function

Open the AdonIS; key combination (default): **CRTL + NUM**. You can open the AutoScan function, as described above, directly from the Select Scene menu, as well as from the **FUNCTION** menu.

Then press **F 2**.

The enabled channels will now be switched to your console in sequence for approx. 5 seconds. This time period can be changed **(see point 5.2.1.4)**

5.2.1.2 Identifying the AutoScan function

The activated Scan function is indicated by the "Scan" display.

001 **(Scene name, can be edited)**
TripleMUX **(Console name, can be edited)**
Scan **(Active Scan function)**

5.2.1.3 Clearing the AutoScan function

In the event of inputs via the keyboard or mouse, the AutoScan function is paused and is only enabled once again after the final character. The function is closed by opening the AdonIS (**CRTL** + **NUM**) or a scene selection via HotKey.

The Scan display will go out.

5.2.1.4 Setting the AutoScan time

see point 5.2.2.1

5.2.2 Console setup

Pressing the **F 3** key will take you to the console setup.

CONSOLE SETUP		
AutoScan Time:		5 sec.
Keyboard Layout:		German
ScreenSaver:		Off
AutoLogoff:		Off
Console Name:		TripleMUX
Display:		Temp
Display Position		
Menu Position:		
Scancode Set:		2
AdonIS by Mouse		No
Hotkey:		Ctrl
Double Hotkey:		No
Scenekey:		1 - 8
Quick Access		Yes
Accesskey:		F1 – F8
User Password:		
Master Password:		
Open Access:		Yes
Keyboard Type …		
Set System Defaults		
Esc	Enter	F1: Save

5.2.2.1 Setting the AutoScan time

Move the cursor to the AutoScan Time row. The existing entry can be overwritten, or can be edited by pressing the **ENTER** key.

A scan time of 2 - 60 seconds is permissible. **ENTER** completes the input process.

To save the settings, close this menu using **F1.**

5.2.2.2 Keyboard layout

Adjust the keyboard set used here by **TripleMUX** to the actual layout of the keyboard connected. For example, you should change the layout if you notice a Y/Z reversal (American/German layout).

The following alternatives are available:

- **German**
- **English US**

- **English UK**
- **French**

After moving the cursor to the ***KEYBOARD LAYOUT*** field you can use the ***SPACE*** key (toggle) to select the required option.

5.2.2.3 ScreenSaver

The ScreenSaver to be set here is generated by the **TripleMUX** and bears no relation to the ScreenSaver on the computer.

As there is normally only an indirect connection (via the **TripleMUX**) between the computer and the monitors, you should switch off the computer ScreenSaver to make your work easier.

The ScreenSaver on the **TripleMUX** carrys out this task; it switches the monitor to the power-down mode.

Move the cursor to the **ScreenSaver** row. The existing entry can be overwritten, or can be edited by pressing the **ENTER** key.

A time of 1 - 60 minutes is permissible. The input "0" sets the ScreenSaver to "OFF".

ENTER completes the entry.

To save the settings, close this menu with **F 1**.

5.2.2.4 Auto logoff

This setting can be used to activate an automatic **LOGOFF** from the system. The automatic **LOGOFF** takes you back to the **LOGIN** screen, in the same way as the manual option (**F8** key).

This means that the system is not protected against unauthorised access and only once the password is entered in the **LOGIN** window is it possible to access the computer again (only valid if the **OPEN ACCESS** has been deactivated).

The time for triggering the automatic **LOGOFF** is set by moving the cursor to the **Auto Logoff** row. The existing entry can be overwritten, or can be edited by pressing the **ENTER** key.

A time of 1 - 60 minutes is permissible. Entering "0" switches the logout to "**OFF"**.

ENTER completes the entry.

To save the settings, close this menu using ***F 1*** .

5.2.2.5 Assigning the console name

In the case of a combined use of multiple **G&D devices** every **G&D** unit can be assigned an unique name, the **Console Name**.

Move the cursor to the ***Console Name*** row. The existing entry can be overwritten, or edited, after the **ENTER** key is pressed.

The permissible input is 10 alphanumeric characters. **ENTER** completes the entry.

To save the settings, close this menu with **F 1**.

5.2.2.6 Activating the channel display

Here you have the option of setting the display for the selected computer to either

- **Continuous** => Yes or
- **Temporary** => No (disappears after approx. 5 seconds after switch-over)
  ^

.

After moving the cursor to the DISPLAY field you can either use the **SPACE** key (toggle) or the keys **Y** + **N** to select the required option.

To save the settings, close this menu with **F 1**.

If you have selected the temporary channel display, you can open the display of the selected channel at any time using the key combination **CRTL** + **CAPS LOCK**.

5.2.2.7 Setting the display position + size

Here you can set the **position + size of the channel display** on the screen. Move the cursor to the relevant entry in the Console Setup menu.

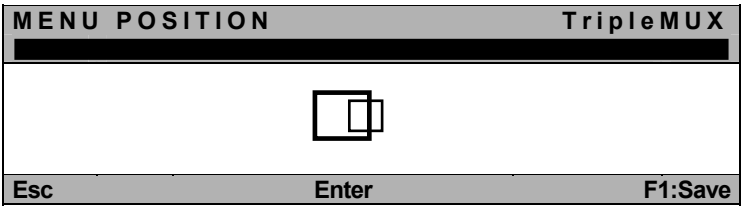
Pressing the **ENTER** key will take you to edit mode and you can then use the **arrow keys** or the **mouse** to move the display to the required point.

ENTER completes the setting and returns you back to the console setup (saved temporarily). To save the setting, close the console setup with **F 1** (saved permanently).

5.2.2.8 Setting the menu position / size

Change the position and size of all AdonIS windows here. Move the cursor to the relevant entry in the Console Setup menu.

Pressing the **ENTER** key will take you to edit mode and you can then use the ***arrow keys*** or the ***mouse*** to move the display to the required position.



To ensure optimum legibility of the AdonIS at all resolutions, the **size** of the display can be changed using the ***Page up*** + ***Page down*** keys with a monitor resolution greater than 640 x 480.

ENTER completes the input and takes you back to the Console Setup (saved temporarily).

To save the settings, close the Console Setup using **F1** (saved permanently).

5.2.2.9 Setting the Scancode Set

Note:
To run this function you need to be logged on as a master!

The scancode designates the "language" in which the keyboard communicates with the computer. The **TripleMUX** works in scancode 2.

Only carry out this setting in consultation with our service department.

Move the cursor to the relevant entry.

By pressing the ***SPACE*** key you can select between the following alternatives: **3** or **2.**

5.2.2.10 AdonIS by mouse

Here you can activate the support for the special buttons on the Intelli-Explorer mouse for working with the **TripleMUX**. If you set the entry here to "**Yes"**, the **AdonIS**, can be opened by pressing button 4 or 5 on the Explorer mouse (left side buttons) as well as using the keyboard.

After moving the cursor to the "AdonIS by Mouse" field, you can use the **SPACE** key (toggle) or the buttons **Y** + **N** to select the required option.

To save the settings, close the menu using **F 1**.

5.2.2.11 Definition of the first hotkey

Move the cursor to the **HotKey** entry**.**

By pressing the **SPACE** key you can then select between the following alternatives:

Ctrl, Alt, AltGr, Win, Shift, AltShift

Please note that the **HotKey set here** is also used as the first key to **open the** AdonIS (e.g. **WIN** + **NUM**).

To save the settings, close this menu using **F 1**.

5.2.2.12 Activating the double HotKey

Here you can specify whether you want to use a **double HotKey** to open the **AdonIS**.

Move step by step using the **arrow keys** or move the mouse onto the double Hotkey entry. You can use the **Space key** to select between the entries

- **Yes**
- **No** (default).

Once you have changes the entry to **Yes**, the entry in the **HotKey** row will change automatically (see **chap. 5.2.2.11**). You can then select the double HotKey required in this row. The following positions are available:

Ctrl (Strg) + Shift
Alt +Shift
Alt Gr + Ctrl (Strg)
Windows + Ctrl (Strg)
Shift + Windows

Please note that the **HotKey set here** is also used as the first button for **opening the AdonIS** (e.g. **WIN (+CTRL)** + **NUM**).

To save the settings, close this menu using **F 1**. After this setting, you need to press a total of **three** buttons to open the **AdonIS** or the **IVT** menu.

5.2.2.13 Defining the second key (Scene Key)

The **second button** on the HotKey for triggering the scene switchover can also be modified. Proceed in the same way as the process described to change Hotkey1.

The following alternatives are available, and it is only possible to select groups of buttons:

- **numerical 0 ..9 (default)**
- **numerical (NUM block) 0 .. 9**
- **alphabetical A .. K**

Once you have made the relevant changes, your new HotKey for scene 2, for example could look like this: ***WIN*** + ***B***.

5.2.2.14 Setting the QuickAccess

Within the scene config (see **chap. 5.2.4**) there is the option of setting permanent scenes. Each video scene is also **permanently** assigned to the operation of a specific computer with keyboard + mouse.

The QuickAccess function allows you to **switch the keyboard and mouse back and forth freely between the computers shown on the monitors**. This means that the scene does not necessarily have to be closed to be able to operate another computer. The switchover is carried out by pressing the **Hotkey** and at the same time pressing the **Accesskey.**

Default: **CRTL + F1 (to F10)**

Move the cursor to the QuickAccess option in the **Console Setup** menu.

By pressing the **SPACE** key you can then

enable the QuickAccess:	Yes
or block:	No (default)

ENTER confirms the change. To save the settings, close this menu using **F 1**.

5.2.2.15 Setting the Accesskey

The actual switchover process in QuickAccess is carried out via the keyboard.

As the default value the F1 – F10 keys are set as Accesskeys. If within a scene you press the keys **CRTL + F 1**, the keyboard and mouse will be assigned to the computer with the screen being displayed via the **CPU 1 port** on the **TripleMUX**. With three monitors this should normally be the left-hand one.

CRTL + F 2 therefore switches the keyboard and mouse to the second monitor, and **CRTL + F 3** to the third monitor. The scene display (see. **chap. 5.2.2.6**) also changes at the same time.

If you want to change the default **F1- F10**, move the cursor onto the Accesskey option in the **CONSOLE SETUP** menu.

By pressing the **SPACE** key you can then switch between the following alternatives:

NUM 0 – 9 / F1 – F10 / A - K.

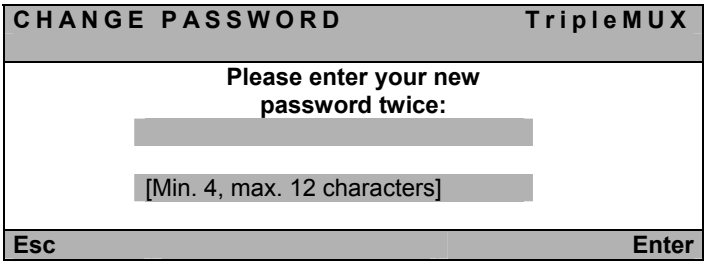
ENTER confirms the change. To save the setting, close this menu using **F 1**.

5.2.2.16 Changing the user password

Note:
To run this function you need to be logged on as a master!

If you want to change the default value (accessed using **ENTER**) and protect the **TripleMUX** with a user password, move the cursor in the Console Setup menu to the "User Password" field and then press the **ENTER** key.

Another menu will appear which prompts you to enter the new password.



The cursor is located in the input box and you can enter the password, which may contain a minimum of 4 and a maximum of 12 characters.

Default: No password.

ENTER Cancels the input and goes to the Console Setup menu. The new user password is saved.

ESC cancels the input without changes.

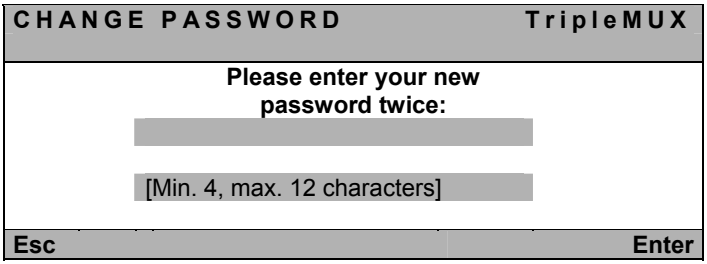
The changes made here have **no effect whatsoever on your master password.**

5.2.2.17 Changing the master password

Note:
To run this function you need to be logged on as a master!

If you want to change the default value according to Appendix A in the manual, move the cursor in the **Console Setup** menu onto the "Master Password" field and then press the **ENTER** key.

Another menu will appear which prompts you to enter the new password.



Otherwise prompt in the same way as in **chap. 5.2.2.16**.

5.2.2.18 Setting the OpenAccess

Note:
To run this function you need to be logged on as a master!

With access via OpenAccess anyone can access the **TripleMUX** and the connected PCs.

The OpenAccess is defined as follows with the factory settings:

- Access to the connected PCs without logging on first with login name and password
- Authorisation to perform the AutoScan
- Access to the **Console Setup menu (restricted)**
- Authorisation for manual logout using **F8**
- Authorisation to re-initialise the mouse

On delivery, with the factory settings, the access is active for the OpenAccess. If you want to deactivate this, move the cursor to the **OpenAccess** entry and press the **SPACE** key to select from the following alternatives:

YES: OpenAccess active
NO: OpenAccess deactivated

ENTER confirms the change. To save the setting, close the menu using **F 1**.

5.2.2.19 Keyboard Type

You can activate the support of the PixelPower keyboard *PixelPower Clarity (blue)* with the selection of the menu item *Keyboard Type*.

This special keyboard enables the operation of the character generator Clarity of the company PixelPower. The support of this keyboard is deactivated in the default settings.

Activate this support by pressing **SPACE** key (toggle function). A yellow “X” appears behind the entry.

To save the setting, leave this menu by pressing **ENTER**.

5.2.2.20 Restoring the factory settings (Set System Defaults)

Note:
To run this function you need to be logged on as a master!

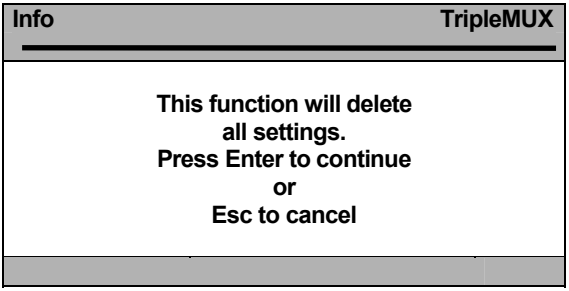
Using the function returns the device to the factory settings.

The passwords set will also be reset.

The relevant **default settings** can be found in the display of the individual menu windows in this manual.

Using the arrow keys to move step by step to the relevant menu option.

Pressing **ENTER** will run the function and the following info window will be opened.



Confirm this once more by pressing the **ENTER** key. The window will change to the **FUNCTION** menu.

5.2.3 Cascade setup

Note:
To run this function you need to be logged on as a master!

In the **Cascade Setup** menu you determine which terminal has been connected to the four possible PC channels. The following are available:

- PC (default assignment)
- MUX4 (permits the number of computers to be increased to up to 16 computers by using a miniMUX4. However, the access to the multi-way graphic is only possible on the PCs directly connected to the **TripleMUX**. All PCs connected via a **miniMUX4** to the **TripleMUX** transmit only one graphics signals on the other hand.).

A comprehensive description of cascading the **TripleMUX** using a **miniMUX4** can be found in the relevant manual.

Open the AdonIS for the **TripleMUX** using the HotKey combination you have set or using the default HotKey **CRTL** + **NUM**.

In the open AdonIS ("**Select Scene"** menu) press the **F4** key
In the open "**Cascade Setup**" menu you set for each channel which device is connected here. The **Space** key can be used to change the entries. By default the value here is set to "PC". Pressing the **Space** key allows you to switch the entry to "miniMUX 4".

To save your inputs, press the **F1** key. This will return you to the Select Scene menu.

5.2.4 Setting the video scenes

5.2.4.1 Explanation

Opening the Video Scene menu will switch the monitors to dark and only the menu will be visible on the monitors.

In the Video Scene menu you define video scenes to be switched to your workstation screen. Video scenes are monitor sequences which you can configure as you wish. In this process you define for which video scene a video source on a multi-graphic computer is to be switched to a specific monitor on your workstation.

Open the AdonIS for the **TripleMUX** using the HotKey combination you have set or using the default HotKey **CRTL** + **NUM**.

In the open AdonIS ("Select Scene" menu), press the **F5** key.
In the open window there will be up to eight scenes available.

Video Scene		TripleMUX			
Scene	Name	A	B	C	D
1	001	1	1	1	1
2	002	2	2	2	2
3	003	3	3	3	3
4	004	4	4	4	4
...					
8	008	4	4	4	4
Esc	Enter				F1: Save

Column 1: HotKey for immediate selection
Column 2: Scene designation (can be edited; 13 characters)
Column 3: VGA allocation matrix

The menu displayed reflects the **default setting.** Four computers, each with 1 quad video card has been assumed here. The three pieces of image information per computer are placed 1:1 on the video outputs A, B, C + D of the **TripleMUX**.

Example scene 1 (equivalent to default scene 1)

Hot	Scene Name	A	B	C	D
1	001	1	1	1	1

Scene key for this scene: 1
Scene designation: 001
Image on monitor A: A1 from TripleMUX = CPU 1 from PC1
Image on monitor B: B1 from TripleMUX = VGA CPU 1.2 from PC1
Image on monitor C: C1 from TripleMUX = VGA CPU 1.3 from PC1
Image on monitor D: D1 from TripleMUX = VGA CPU 1.4 from PC1

Example scene 2 (not based on default setting)

Naturally the scenes can also be adapted to your requirements. Example 2 shows an adapted scene based on the connection schematic on this page.

Please contact your system administrator for modifications.

Hot	Scene Name	A	B	C	D
6	a1b2c4 PC4	**1**	**1**	**2**	**4**

Scene key for this scene: 6
Scene designation: a1b2c4 PC4
Image on monitor A: A1 from TripleMUX = CPU 1 from PC1
Image on monitor B: B1 from TripleMUX = VGA CPU 1.2 from PC1
Image on monitor C: C2 from TripleMUX = VGA CPU 2.2 from PC2
Image on monitor D: D4 from TripleMUX = VGA CPU 4.3 from PC4

5.2.4.2 Setting the scene designation

Select the field to be edited using the arrow keys or using the mouse. If you want to rename the scene, the previous entry can simply be **overwritten**.

Pressing the **SPACE** key will take you to the **edit mode** for this field.

Enter the scene designation using the letter block or the number keys above the letter block. It is not possible to enter special characters.

ENTER completes the input process and automatically goes to the next scene designation.

Other fields in the Video Scene menu can **only be changed by the master**.

To save the settings, close the menu using **F1**.

5.2.4.3 Modifying the allocation matrix

Note:
To run this function you need to be logged on as a master!

In addition to the change of scene designation which every user can carry out, the **video combinations** and **computer assignments** allocated to the scenes can also be changed by the master.

It is important to bear this point in mind **during the installation process** as due to physical limitations not every video source can be displayed on every monitor (see explanation below).

Select the field to be edited using the arrow keys or using the mouse, after you have logged onto the system using the master password.

The master can also edit the greyed out fields as well:

Hot	Scene Name	A	B	C	D
1	001	1	1	1	1

The previous entry can simply be **overwritten**.

Based on the connection diagram shown above, an edited Video Scene menu is given below with explanations of the changes resulting from this.

Video Scene		TripleMUX			
Scene	Name	A	B	C	D
1	a1b1c1PC1	1	1	1	1
2	a3b3c3PC3	2	2	2	2
3	a3b2c4PC2	3	3	3	3
4	a3b1c1PC3	4	4	4	4
...					
8	008	4	4	4	4
Esc	Enter				F1: Save

This setting gives the following:

A	B	C	D	
1	1	1	1	Image from PC 1 on monitor A,B,C
3	3	3	3	as before, but with PC3
3	2	4	2	Monitor A = image V3.1 from PC3 Monitor B = image V2.2 from PC2 Monitor C = image V4.3 from PC4 Monitor D = image V2.4 from PC2
3	1	1	2	Monitor A = image V3.1 from PC3 Monitor B = image V1.2 from PC1 Monitor C = image V1.3 from PC1 Monitor D = image V2.4 from PC2

The table shows that only ever one **PC used for operation** is included in a scene if it is visible on at least **one monitor**.

This procedure should still be followed to prevent accidental inputs on computers which are not visible.

The **HotKeys assigned to the scenes cannot be changed in the SCENE CONFIG menu**. If you want to use another group of HotKeys, open the **Console Setup** menu (see **chap. 5.2.2.13**)

To save the settings, close the menu using **F1**.

5.2.5 Setting the keyboard/mouse scenes

In the keyboard/mouse menu you can define where the keyboard/mouse pointer is to be located in an activated video scene. This is because with a scene up to max. three different multi-graphic computers can distribute one (or more) VGA signals onto the three workstation monitors with a **TripleMUX**. This will have been defined as a video scene, as defined in **chap. 5.2.4**. In this menu you specify the computer on which the keyboard and mouse is to be active during the selected video scene.

K/M SCENE						TripleMUX
Scene	Name	A	B	C	D	K/M
1	001	1	1	1	1	1
2	002	1	2	4	3	3
3	003	2	2	4	4	4
4	004	3	1	2	4	2
…						
8	008	1	1	3	1	1
ESC	Enter					F1: Save

The entries in the VGA columns (A, B, C & D) are transferred from the settings from the "**Video Scene"** menu.

The column "**K/M**." is used to specify on which of the connected computers the keyboard/mouse pointer is to be located within a video scene.

If in this you position the cursor using the arrow keys or using the mouse in the "**K/M"** column, you can enter a numerical value of 1 to 4 (according to the possible PC channels on the **TripleMUX**). This definition will call up the computer defined here on the **TripleMUX** when the required video scene is opened. At the same time, this computer will have the keyboard/mouse pointer.

In the example menu shown above, the definition has been set in scene "003" that **channel 4** is to be operated on the **TripleMUX** and has the keyboard/mouse pointer.

To save the settings, close the menu using **F1**.

5.2.6 USB Keyboard Mode Setup

Important: The setup of the *USB keyboard mode* can only be selected within the AdonIS of the master device. This setup is not available, if the **TripleMUX** is operated as a slave within a cascade.

In this case, temporarily operate the **TripleMUX** as a master device and change the setup of the USB keyboard mode.

Recent standard keyboards are usually provided with 105 keys. Several manufacturers of USB keyboards expand the number of the keys. Special functions of the computer can be operated through the additional keys.

The following models are counted among the expanded USB keyboards:
- The multimedia keyboard of the Apple Mac minis provided with a special key to open the DVD drive.
- The keyboards of Sun desktops and servers have separate keys to operate the special system functions.

Besides these examples, further keyboards are available at the market that enable the operation of the special functions of the computer through keys. The **TripleMUX** supports the following types of USB keyboards:

- **PC Multimedia**: USB keyboard with additional multimedia keys
- **PC Standard**: standard USB keyboard
- **SUN German**: German USB keyboard for Sun desktops and Sun servers
- **SUN US**: American USB keyboard for Sun desktops and Sun servers

Hint: The setup of the keyboard layout of Sun desktops and Sun servers is carried out during the booting. Therefore, a reboot of the Sun desktops and the Sun servers is required after the activation of the keyboard mode **SUN German** or the keyboard mode **SUN US**.

In the default settings of the **TripleMUX**, the USB Keyboard Mode "**PC Multimedia**" is active on all channels:

USB KEYBOARD MODE		TripleMUX
Channel		Mode
1		PC Multimedia
2		PC Multimedia
3		PC Multimedia
4		PC Multimedia
ESC	Space:Change	F1: Save

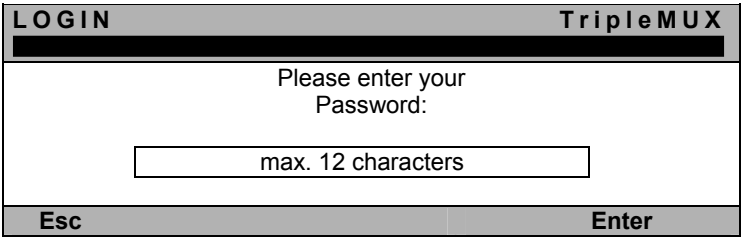
To change the *USB Keyboard Mode* of a channel, select this channel with the arrow keys. By pressing the **SPACE** key you can switch between the different keyboard modes.

To save the settings, leave the menu by pressing **F1**.

5.2.7 Logout

This function cancels the assignment to a selected scene **and your session logged onto TripleMUX**. You will only be able to access the system again once you have entered your user password or the master password.

Using this function means that the input screen for the password will appear when the **F 8** key is pressed.



You can also use this function by going to the relevant option in the Function menu using the arrow keys or the mouse and then pressing the **ENTER** key.

You should only ever use this function if you want to protect your computer against unauthorised access, e.g. when you leave your workstation.

5.2.8 System Info

The **System Info** window, which is opened using the **F 9** key, cannot be used to make settings at all. Here you will instead find information on the **TripleMUX** which is relevant for site service staff.

ESC closes this window.

5.2.9 Mouse Utilities - Utility

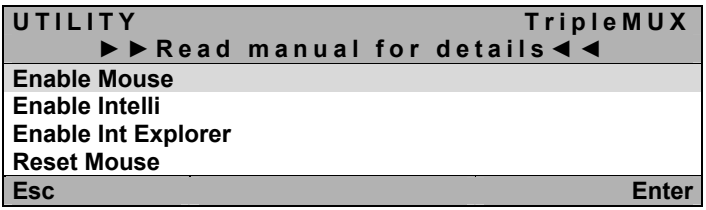
If the mouse on **one computer** is no longer functioning during operation (mouse pointer isn't moving), there is the option of performing a re-initialisation.

First check that all the connection cables are correctly connected. Please note that a mouse enable is only carried out for the **active channel in question** (PC1 to PC4).

Using AdonIS to switch to this computer and press the **F 1** key. This will take you to the **FUNCTION** menu.

Use the arrow keys to move step by step in the menu section under **F10** to the **Mouse Utility** menu option.

Pressing **ENTER** will open up a sub-menu providing the following options:



Caution! Only carry out the **appropriate Enable/Reset** for the individual computer!

Enable Mouse (standard mouse)

Use this function with non-Windows systems (e.g. Linux) if the computer is working with a standard mouse driver.

Enable Intelli (MS IntelliMouse)

Use this function with non-Windows systems (e.g. Linux) if the connected computer has the MS IntelliMouse driver loaded on it.

Enable Int Explorer (MS IntelliMouse)

Use this function with non-Windows systems (e.g. Linux) if the connected computer has the MS Intelli Explorer mouse driver loaded.

Reset Mouse

Select function for Windows operating systems; **regardless of the mouse driver set.**

This applies to:
WIN 98, WIN NT, WIN ME, WIN 2000, WIN XP.

Move the cursor to the relevant option using the arrow keys.

Press the **ENTER** key.

The mouse is initialised and the menu closed. The mouse will be working again with full functionality.

6 Technical data

Video

- Format: VGA (analogue)
- Resolution: from 640 x 350 @120 Hz to 1920 x 1440 @ 60 Hz
- Video bandwidth: up to 400 MHz
- H/V-Sync: 135KHz/150Hz
- Transmittable signals: RGBHV, RGsB, RsGsBs, RGBc

Keyboard / mouse
(ON COMPUTER + USER SIDE)

- Computer-side
  - direct: PS/2, USB, MAC USB, RS 6000, HP 9000, SGI, DEC Alpha Station, Open Bloomberg
  - via converter: SUN, SUN-USB, MAC via computer-side converter **(mixed operation possible)**
- User-side
  - direct: PS/2, USB, MAC USB, RS 6000, HP 9000, SGI, DEC Alpha Station, Open Bloomberg
  - via converter: SUN, SUN-USB via user-side converter **(mixed operation possible)**

Interfaces

- Console-side : 2 x 6-pin miniDIN-F for keyboard and mouse
  2 x USB-A for keyboard and mouse (front side)
  3 x 15 pole SUB-HD-M for monitor connection (**TripleMUX**) or
  4 x 15 pole SUB-HD-M for monitor connection (**QuadMUX**) or
- Computer-side : 4 x 20-pin MDR-M
  4 x (2) x 15 pole SUB-HD-M for monitor connection (**TripleMUX**) or
  4 x (3) x 15 pole SUB-HD-M for monitor connection (**QuadMUX**) or

Switching:
Via keyboard inputs (HotKey), SCAN function or OSD.

Housing dimensions (W x H x D in mm)

	Desktop	**19" variant**
TripleMUX	270 x 88 x 210	19" x 2 HU x 210
QuadMUX	270 x 88 x 210	19" x 2 HU x 210

Power supply:

TripleMUX: 100 – 240 V primary, 60 – 50 Hz, 205 - 95 mA
QuadMUX: 100 – 240 V primary, 60 – 50 Hz, 235 - 105 mA

Power consumption (operation):

TripleMUX: 100 VAC = 11.0W / 240VAC = 11.4W
QuadMUX: 100 VAC = 12.8W / 240VAC = 13.2W

Temperature ranges:

- Operation: 5 to 40° C rel. humidity < 80%, non-condensing
- Storage: -10 to 55° C rel. humidity < 85%, non-condensing

Options:
Cascading of the system by using a **miniMUX4**

Appendix:

Your master password is:

4658

Please ensure that you remove this appendix from the operating manual!

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