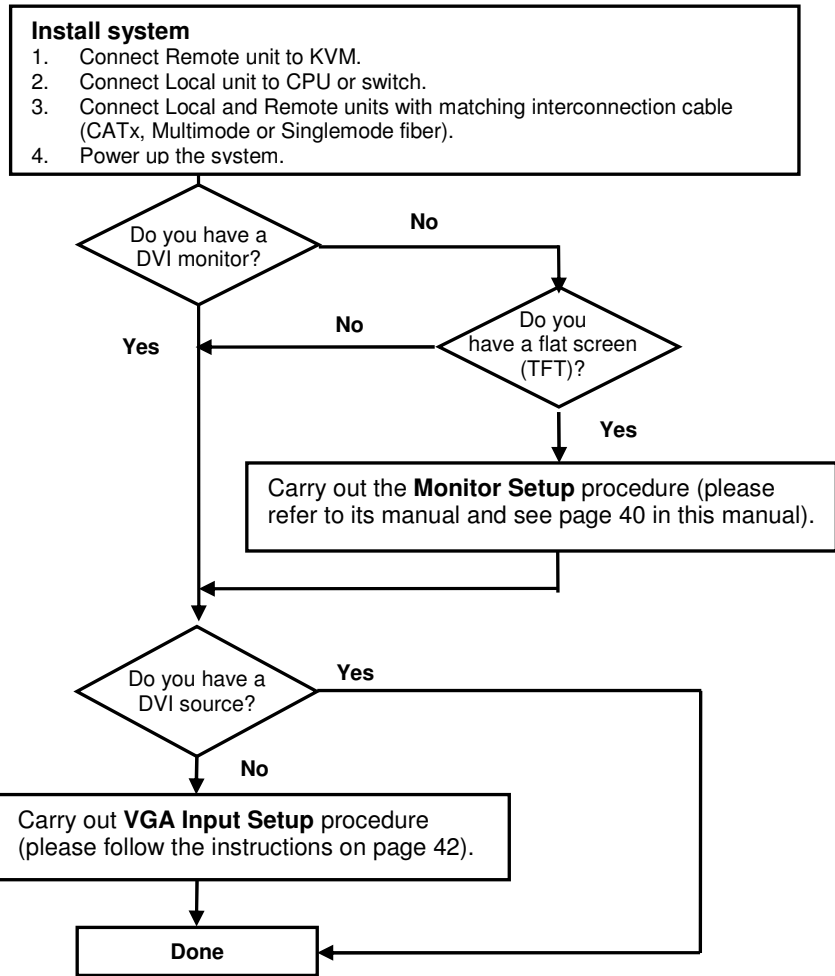# 1   Quick Setup

This section briefly describes how to install your KVM extender system and optimize the video signals. Unless you are an experienced user, we recommend that you follow the full procedures described in the rest of this manual. Refer to the command summary when following this procedure.

```
Install system
1.   Connect Remote unit to KVM.
2.   Connect Local unit to CPU or switch.
3.   Connect Local and Remote units with matching interconnection cable
     (CATx, Multimode or Singlemode fiber).
4.   Power up the system.
```

Do you have a DVI monitor? — **No** → Do you have a flat screen (TFT)? — **No** → **Yes**

Do you have a flat screen (TFT)? — **Yes** → Carry out the **Monitor Setup** procedure (please refer to its manual and see page 40 in this manual).

Do you have a DVI source? — **Yes** →

Do you have a DVI source? — **No** → Carry out **VGA Input Setup** procedure (please follow the instructions on page 42).

Done

2   Installation

For first-time users, we recommend that you carry out a test placement, confined to a single room, before commencing full installation. This will allow you to identify and solve any cabling problems, and experiment with the KVM extender system more conveniently.

2.1   Package Contents

You should receive the following items in your extender package (all types) If anything is missing, please contact Technical Support:

- Extender Local/Remote unit.
- 2x 6V DC 12W universal power supply for Local/Remote unit.
- 2x DVI-I to VGA adapter (DVI-I dual link male to HD15 female) connector.
- 1x VGA to DVI-I adapter (HD15 male to DVI-I dual link female) connector.
- Programming cable (DB9 female to RJ11 4p4c).
- User manual (Quick Setup).
- 2x US-type power cord.

All PS/2 models are supplied with:

- KVM CPU cable set (1.8m) with PS/2 (6-pin mini-DIN male-to-male) keyboard and mouse connector and DVI-I video (DVI-I dual link male-to-male) connector
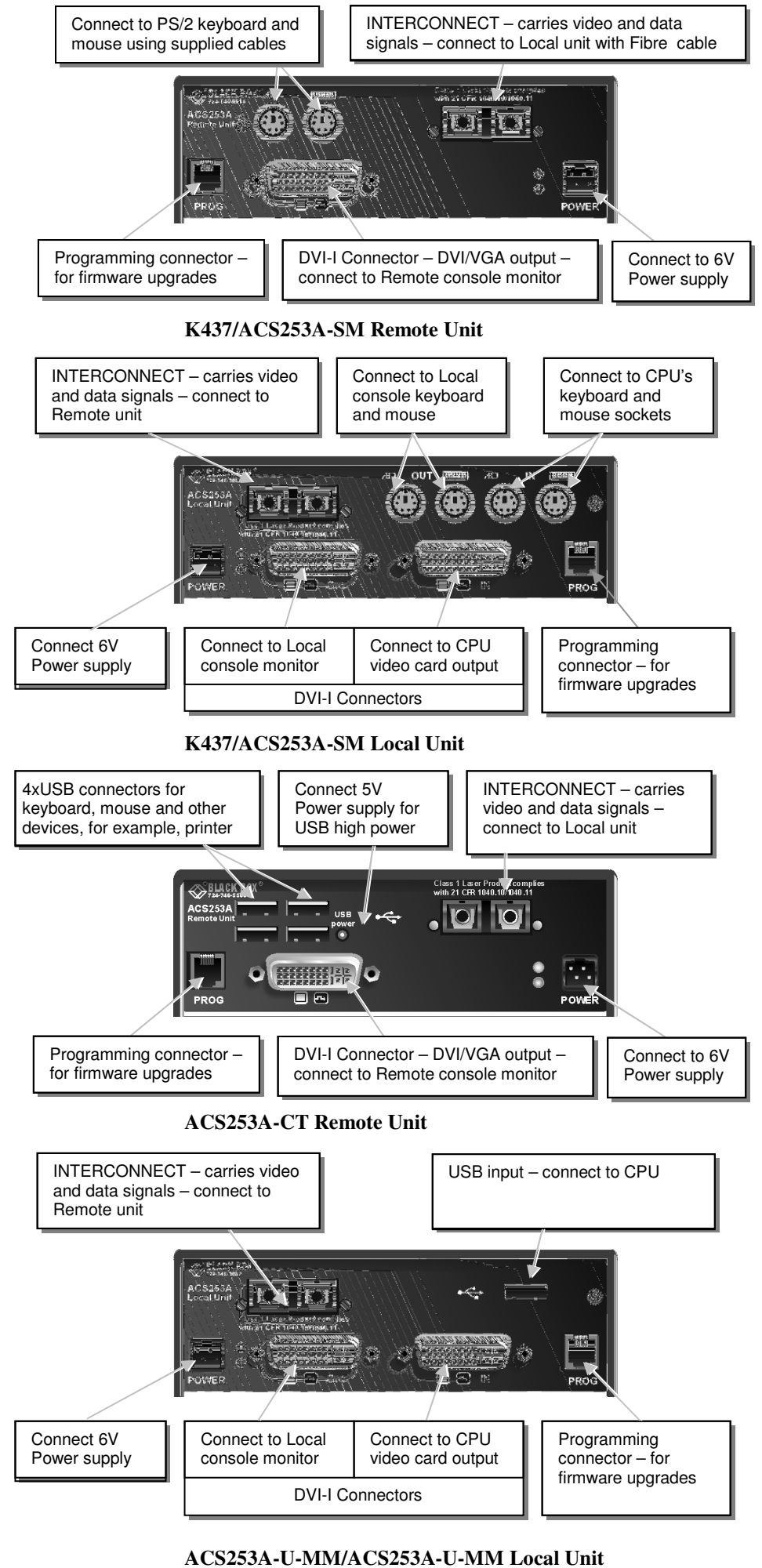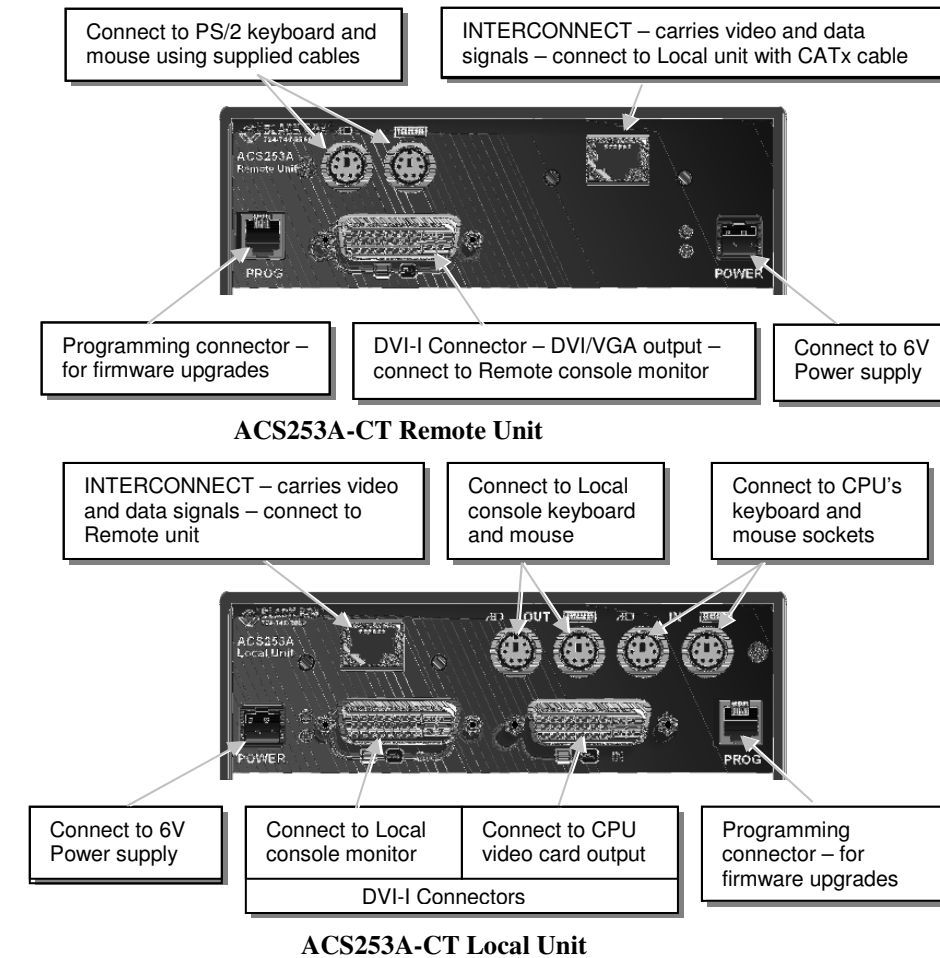
All USB types are supplied with:

- DVI-I video cable (DVI-I dual link male-to-male)
- USB cable (USB type A to type B)
- 5V DC 12W universal power supply for Remote unit (only required when connecting two or more High Power USB
- US-type power cord (additional)

2.2   System Setup

To install your ACS253A - DVI KVM Extender system:

1. Switch off all devices.
2. Connect your keyboard, monitor(s) and mouse to the Remote unit as shown below (ACS253A-CT), (ACS253A-MM/ACS253A-SM) or (ACS253A-U-MM/ACS253A-U-MM).

   These ports may also be attached to the CPU side of a KVM switch in order to have a Remote CPU. However, if you are attempting to use the extender between cascaded KVM switches this may not work. Please contact Technical Support to discuss your application.

3. Connect the interconnect cable to the INTERCONNECT socket(s) as shown below (ACS253A-CT), (ACS253A-MM/ACS253A-SM) or (ACS253A-U-MM/ACS253A-U-MM).
4. Connect the 6V power supply to power the unit.

   ⚠ **Only use the power supply originally supplied with this equipment or a manufacturer-approved replacement.**

5. Using the supplied CPU KVM cable(s), connect the keyboard, monitor(s) and mouse connectors on the computer (or KVM switch) to the corresponding connectors on the Local unit as shown below (ACS253A-CT), (ACS253A-MM/ACS253A-SM) or (ACS253A-U-MM/ACS253A-U-MM).
   Ensure that you attach the keyboard and mouse connectors to the correct ports. The keyboard connector is purple; the mouse connector is green.

   If your PC does not have a PS/2 mouse port, an active serial converter will be required

6. For a dual access system, connect the keyboard, mouse and monitor for the Local console to the appropriate ports on the Local unit. The ports may also be used to feed into a KVM switch.
7. Connect the Interconnection cable from the Remote unit to the INTERCONNECT socket on the Local unit as shown below (ACS253A-CT), (ACS253A-MM/ACS253A-SM) or (ACS253A-U-MM/ACS253A-U-MM).
8. Power up the system.

3   Device View (depending on device type)

Connect to PS/2 keyboard and mouse using supplied cables

INTERCONNECT – carries video and data signals – connect to Local unit with CATx cable

Programming connector – for firmware upgrades

DVI-I Connector – DVI/VGA output – connect to Remote console monitor

Connect to 6V Power supply

ACS253A-CT Remote Unit

INTERCONNECT – carries video and data signals – connect to Remote unit

Connect to Local console keyboard and mouse

Connect to CPU's keyboard and mouse sockets

Connect to 6V Power supply

Connect to Local console monitor

Connect to CPU video card output

Programming connector – for firmware upgrades

DVI-I Connectors

ACS253A-CT Local Unit

Connect to PS/2 keyboard and mouse using supplied cables

INTERCONNECT – carries video and data signals – connect to Local unit with Fibre cable

Programming connector – for firmware upgrades

DVI-I Connector – DVI/VGA output – connect to Remote console monitor

Connect to 6V Power supply

K437/ACS253A-SM Remote Unit

INTERCONNECT – carries video and data signals – connect to Remote unit

Connect to Local console keyboard and mouse

Connect to CPU's keyboard and mouse sockets

Connect 6V Power supply

Connect to Local console monitor

Connect to CPU video card output

Programming connector – for firmware upgrades

DVI-I Connectors

K437/ACS253A-SM Local Unit

4xUSB connectors for keyboard, mouse and other devices, for example, printer

Connect 5V Power supply for USB high power

INTERCONNECT – carries video and data signals – connect to Local unit

Programming connector – for firmware upgrades

DVI-I Connector – DVI/VGA output – connect to Remote console monitor

Connect to 6V Power supply

ACS253A-CT Remote Unit

INTERCONNECT – carries video and data signals – connect to Remote unit

USB input – connect to CPU

Connect 6V Power supply

Connect to Local console monitor

Connect to CPU video card output

Programming connector – for firmware upgrades

DVI-I Connectors

ACS253A-U-MM/ACS253A-U-MM Local Unit

3.1   Diagnostic LEDs

Each Extender unit is fitted with four indicator LEDs: *Communication Error*, *Link Status*, *Device Ready* and *Video Signal*. The Indicator LEDs are located in the same positions on all models in the ACS253A - DVI KVM Extender range. The *Communication Error* and *Link Status* LEDs are to the left and right, respectively, of the Interconnect sockets. The *Device Ready* and *Video Signal* LEDs are next to the Power socket.

As an example, the location of the LEDs is shown below for ACS253A-CT Remote and Local units:

Communication Error   **Link Status**   **Communication Error**   **Link Status**

Video Signal   **Device Ready**   **Device Ready**   **Video Signal**
(Green)   **(Red)**   **(Red)**   **(Green)**
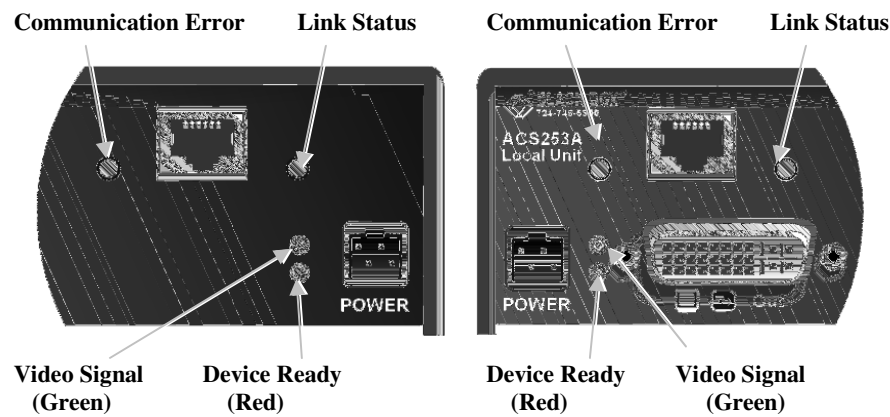
Figure 1   **Diagnostic LEDs on Remote (left) and Local (right) units**

LED	Appearance	Diagnostics		
Communication Error	Off	No communication error for >60 minutes		
	Flashing	Indicates number of communication errors during previous 60 minutes:		
	slow	10-100 (CATx)	1-2	(Fiber)
	medium	100-1000 (CATx)	3-10	(Fiber)
	fast	>1000 (CATx)	>10	(Fiber)

Error counter cleared automatically 60 minutes after previous communication error.

LED	Appearance	Diagnostics
Link Status	On	Link connection is locked
	Flashing	Interconnection cable not connected or not functioning
Device Ready (Red LED)	Off	Device not ready
	On	Device ready
Video Signal (Green LED)	Off	No video signal or valid mode detected
	On	Attached and valid mode detected

4   Device Control

If you are using the DVI output from your video card and the DVI input to a TFT monitor, no adjustment should be required. In other cases, when the video signal is converted between analog and digital formats, either by the Local unit and/or the monitor, you may need to optimize the video signal using the Extender's on-screen display (OSD).
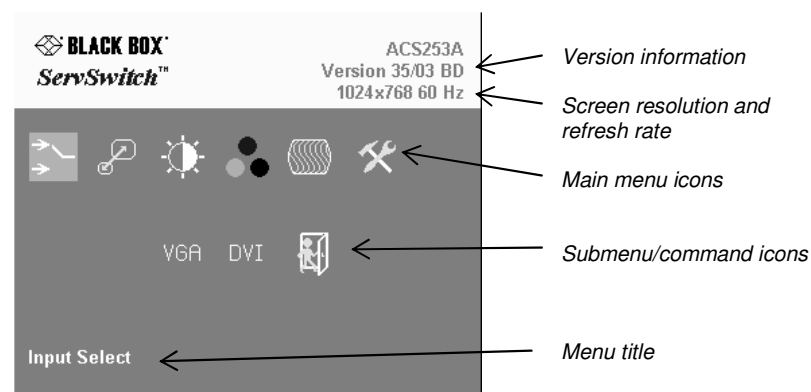

Version information

Screen resolution and refresh rate

Main menu icons

Submenu/command icons

Menu title

Figure 2   **OSD Utility**

You can adjust the following properties using the OSD:

- Adaptation to analog signal sources (VGA/RGB) – see also manual
- Color temperature
- Brightness/contrast
- Saturation
- OSD operation, factory reset.

4.1   Opening the OSD

You can access the OSD in two ways:

- Using the keyboard attached to the Remote Unit:
- Using our small WINDOWS™ program with a serial connection to the programming port.

While the OSD is active, the mouse is locked and only menu keystrokes are allowed at the keyboard. To indicate that the OSD mode is active, the status LEDs (Num Lock, Caps Lock and Scroll Lock) are flashed. There is a summary of OSD commands in the manual.

4.1.1   Using the keyboard attached to the Remote Unit

Type the following key sequence at the Remote console keyboard:

<Ctrl> + <Shift> + < I >

Note. On some keyboards, **<Ctrl>** is replaced by **<Strg>**.

To navigate within the OSD:

- Use the left and right arrow keys to highlight a submenu and/or function.
- Press the <ENTER> key to select the highlighted submenu or function.
- Select the Exit icon to go back to the previous menu level.
- Press the <ESC> key to exit the OSD mode.

4.1.2   Using our WINDOWS™ program

On all devices, you can use our small WINDOWS™ program, running on a WINDOWS™ computer for OSD access:

- Download the program from our server

- Connect the programming cable to the programming port of the Remote unit.
- Connect the programming cable to the serial port of your computer, where the program is running.
- Start the program and follow the on-screen instructions.
- Type in the following key sequence:
  < O > + < S > + < D > followed by **<ENTER>**

When the OSD starts, it displays information about the attached device and firmware version, for example:

```
Company Name : BlackBox
Modul Name   : ACS253A-12lo
Version      : Vers.1.3
Date         : 03/05/15
```

To navigate within the OSD:

- Use the <L> and <R> keys to highlight a submenu and/or function.
- Press the <S> key to select the highlighted submenu or function.
- Select the Exit button to go back to the previous menu level.

Press the <X> key to exit the OSD mode.

DVI/VGA-KVM-Extender

ACS253A-MM
ACS253A-SM
ACS253A-CT
ACS253A-U-MM
ACS253A-U-MM

(Quick Setup)

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The world's largest network services company
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