TANNOY

User Guide

VNET^{TM} USB AND RS232 INTERFACE

Please read carefully and keep the following instructions and safety information. Heed all warnings and follow all instructions.

CAUTION	ATTENTION
RISK OF ELECTRIC SHOCK DO NOT OPEN	RISQUE DE CHOC ELECTRIQUE NE PAS ENLEVER
DO NOT EXPOSE TO RAIN OR MOISTURE	NE PAS EXPOSER A LA PLUIE NI A L'HUMIDITE

1. Do not remove covers. There are no user-serviceable parts inside; please refer servicing to qualified service personnel.
2. This equipment must be earthed.
3. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
4. Only use attachments/accessories specified by the manufacturer.
5. Servicing is required when the apparatus has been damaged in any way, such as the power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

TANNOY®

IMPORTANT SAFETY INFORMATION

Please read carefully and keep the following instructions and safety information. Heed all warnings and follow all instructions.

- Do not remove covers. There are no user-serviceable parts inside; please refer servicing to qualified service personnel.
- Only use attachments/accessories specified by the manufacturer.
- Servicing is required when the apparatus has been damaged in any way, such as liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

QUICK START

- Install the drivers
- Connect computer via USB or RS232
- Apply power if using RS232
- Connect devices via RJ45 cables

REGULATORY COMPLIANCE

This product complies with the EMC Directive (89/336/EEC) as issued by the Commission of the European Community.

Compliance with these directives imply conformity with the following European standards:

- EN55103-1 Electromagnetic Interference (Emission)
- EN55103-2 Electromagnetic Susceptibility (Immunity)

This product is intended for operation in the E2 (commercial & light industrial) and E3 (urban outdoors) Electromagnetic Environments.

THANK YOU

Thank you for choosing this product for your application. Please spare a little time to study the contents of this guide, so that you obtain the best possible performance from this unit.

UNPACKING

After unpacking the unit please check carefully for damage. If damage is found, please notify the carrier concerned at once. You, the consignee, must instigate any claim. Please retain all packaging in case of future re-shipment.

INTRODUCTION / KEY FEATURES

This product gives your Personal Computer connectivity to a network of VNET™ equipped devices so they can be controlled and monitored. The VNET™ Interface can connect via USB or Serial (RS232).

VNET™ is a fast networking topology using standard Cat5 cabling to interconnect compatible devices using a simple cabling scheme. The total span of the network may be at least 1km without repeaters. There is no maximum length for a single span within this limit.

Housed in a convenient, rugged steel case, it can be used free-standing or, using the rack-mount kit, may be racked along with up to two additional accessory products in 1U rack-space.

FEATURES:

- Rugged steel enclosure
- Free-standing or rack-mount options
- Rugged Ethercon network connectors
- Self-powered (using USB)
- Capable of driving 1km of network cable
- No special cables

COMPUTER SYSTEM REQUIREMENTS

Minimum requirements:

- PC with Pentium processor
- 32-bit Windows tm operating system (NT, 2000, XP, Vista).
- CD-ROM drive or Internet access
- RS232 or USB port *

*Note that the network will operate slightly more quickly when using RS232, so this is the preferred method of connection.

INSTALLING THE SOFTWARE

If you only want to use the VNET™ Interface with the Serial (RS232) port of your computer, you do not need to install any drivers. If you wish to use USB, then you need to install USB drivers for this product.

When you plug the USB connection of the VNET™ Interface into a computer for the first time, the computer will say "Found new hardware", and will prompt you to install drivers for it. Two drivers will be installed: One for the USB port itself, and one for the Virtual Com Port (VCP). Note that both of these drivers may report that they have "Not passed Windows Logo Testing". You should select "Continue Anyway".

If the driver software has been supplied to you on a CD-ROM, place this in your CD-ROM drive. Alternatively, download the drivers from your vendor's web site.

3

WINDOWS 2000 DRIVER INSTALLATION
You need to have administrator privileges to install any new drivers under Windows2000. To install the driver or update the configuration please log onto Windows 2000 as "Administrator" or ask your system administrator to install the USB driver. Please proceed with the following steps to install the driver:
1. Connect a USB cable from your computer (or USB hub) to the USB port of the Interface.
2. The connection brings up "Found New Hardware Wizard".
3. Click "Next".
4. Select "Search for the best driver for my device", and click "Next".
5. Select "Specify a location" and click "Next". In the "Copy Manufacturer's file from", type "D:" where "D:" is the location of your CD-ROM (or browse to where you have copied the drivers if you have downloaded them from a web site).
6. Windows driver file searches for the device "USB VNET™ Interface".
7. Click "Next" to continue.
8. Windows has finished installing the software. Click "Finish" to complete the first part of installation.
9. The "Found New Hardware Wizard" appears again, and will complete the installation for the device "USB VNET™ Port".
10. Repeat step (4) to (8) to complete installation.

WINDOWS XP DRIVER INSTALLATION
Please proceed with the following steps to install the driver:
1. Connect a USB cable from your computer (or USB hub) to the USB port of the Interface.
2. The connection brings up "Found New Hardware Wizard".
3. Click "Next".
4. Select "Search for the best driver for my device", and click "Next".
5. Select "Specify a location" and click "Next". In the "Copy Manufacturer's file from", type "D:" where "D:" is the location of your CD-ROM (or browse to where you have copied the drivers if you have downloaded them from a web site).
6. Windows driver file searches for the device "USB VNET™ Interface".
7. Click "Next" to continue.
8. Windows has finished installing the software. Click "Finish" to complete the first part of installation.
9. The "Found New Hardware Wizard" appears again, and will complete the installation for the device "USB VNET™ Port".

10. Repeat step (4) to (8) to complete installation.

COM PORT
The PodWare application uses a COM port to communicate with the connected devices. When you use the RS232 connection from your computer to the VNET™ Interface, the COM port will be the one which your computer normally uses for the Serial (RS232) port; usually COM1.
When you use USB to connect from your computer to the VNET™ Interface, the Driver software causes a "Virtual COM Port" (VCP) to be created. This will appear to PodWare as just another COM port, and can be selected using Network > Com Port. To find out the COM port which the VNET™ Interface is using, select Start > Control Panel > System > Hardware > Device Manager > Ports. Here, you should see an entry in the tree for an item called "USB VNET™ Port. Against this will be the COM port number
(e.g. COM5).
If you wish to change this to a different COM port number, right-click on the existing COM port tree node, select Properties > Port Settings > Advanced. There, you will see a COM port selector. Do not change it to a COM port which is already in use.

EXTERNAL POWER SUPPLY
Provision is made to power the unit from an external Tannoy VNET™ Accessory Power Supply. An external supply is required in either of these two circumstances:
• If it is desired to use an RS232 (serial) connection to the PC
• If there are VNET™ network cable powered devices anywhere on the network
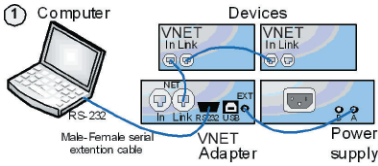If USB is being used and there are no such VNET™ cable powered devices, no external supply is required and the interface will be powered from the computer's USB port.

CONNECTING A COMPUTER
You can connect your computer to the **VNET** Interface in one of two ways:
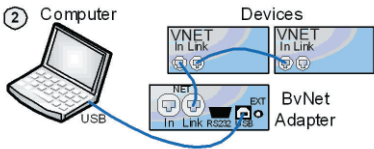
RS232
If your computer has a native Serial (RS-232) port, just connect this to the RS232 socket on the VNET™ Interface using an RS-232 extension cable (a straight-through female-to-male), as in diagram 1. When using RS232, it is necessary to supply DC power to the VNET™ Interface from the companion Accessory Power Supply product via the 3.5mm jack cable provided with the power supply. This can power either one or two compatible accessories. Either the A or the B output on the Power supply may be used since these are identical.™™™™

USB

You can connect your computer to the VNET™ Interface via USB using a USB Type A to USB Type B cable as in diagram 2. It is not usually necessary to use a Power Supply to power the VNET™ Interface when using USB, since USB will supply sufficient power for the Interface. If there are any Network powered devices on the network however, then it will be necessary to use the Accessory Power Supply.

CONNECTING DEVICES

Connect the VNET™ Link socket on the VNET™ Interface to the VNET™ In socket of the first device you wish to control, then the VNET™ Link socket of this device to the VNET™ In socket of the next device, and so on. The order in which the devices are connected is not important. The Link socket of the last device in the 'chain' need not be connected. The In socket of the VNET™ Interface is intended for special applications, and would not normally be connected. The 'Ethercon' network connectors are fully compatible with standard RJ45 Ethernet patch cables which may be used to make these connections. If additional ruggedness is required, we recommend using the Neutrik Ethercon locking type of connector.

RACKING

The VNET™ Interface and Accessory Power Supply may be used free-standing. If you wish to mount them in a 19-inch rack, then the Tannoy VNET™ accessory rack-mount kit may be used. To mount an Accessory in the Mounting Kit panel:

1. Remove the two mounting brackets and blanking sheet which are covering the aperture you wish to mount the Accessory in, by removing the two nuts. (Keep these and the screws and washers).
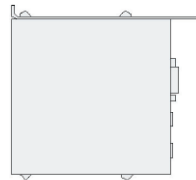
2. Remove the two screws from one side of the Accessory.

3. Using the two screws removed in 2, attach one mounting bracket loosely to the side of the Accessory, with the 'ear' towards the front, pointing outwards.
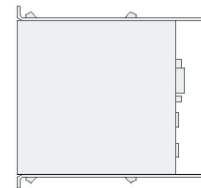

4. Repeat 2 and 3 for the other side. Now push the lid towards the back of the unit as far as it will go then align the bracket ears with the front edge of the lid.

Now tighten the screws.

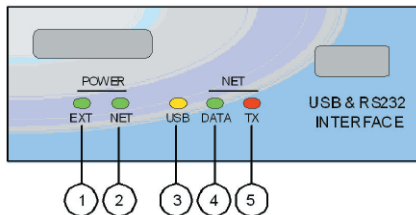5. Offer the Accessory with its mounting brackets up

to the reverse side of the Mounting Panel, and fix it in place using the two sets of screws, washers and nuts removed in 1.

Note that the holes at the rear ends of the brackets may be used as cable tie-off points if desired.

5

OPERATION

Once the VNET™ Interface has been connected to the computer and to the devices (and if applicable, to the optional VNET™ Power Supply) then there are no further adjustments to make on the interface itself. The indicators on the front of the unit operate as follows

The EXT Power indicator (1) will illuminate when DC power is being applied to the EXT Power socket on the rear of the unit.
The NET Power indicator (2) will illuminate when the unit is applying power to the network. This is used for powering network-powered accessories, and for signalling.
The USB indicator (3) will illuminate when the unit has an active USB connection with a computer.
The Net DATA indicator (4) will illuminate when data is being received from the network.
The Net TX indicator will illuminate when the unit is transmitting data onto the network.

TROUBLE SHOOTING

The EXT Power indicator does not illuminate
If you are operating via RS232, you need to use the Accessory Power Supply. Make sure this is connected properly. Check if the power indicator on the Power Supply illuminates. If you are operating via USB (and there are no network-powered devices on the network), it is not usually necessary for an external power supply to be used, in which case this indicator will not illuminate.
The USB indicator does not illuminate
Make sure the USB cable is plugged in both ends. If you are using a USB hub, make sure it is capable of providing sufficient power. You may need to use a powered hub. Has the driver been installed? Try unplugging the USB cable, then plugging it in again.
If you are using RS232, this indicator will not illuminate.
Cannot find the COM port for the USB device
Has the driver been installed?
Is the USB cable plugged in both ends?
Does the USB indicator illuminate? (Check above).
PodWare finds no devices
Have you selected the correct COM port in PodWare?

Are the appropriate indicators illuminated? (See above).

Make sure the network cable is not too long, is correctly connected, and is not damaged.
Check that the Tx indicator flashes when PodWare attempts to go online.
Will not operate via RS232
Have you selected the correct COM port in PodWare?
You must use the Accessory Power Supply when operating via RS232.

TECHNICAL SPECIFICATIONS

USB communication

Compliance	1.1 and 2.0
Power descriptor	150mA
Connector	Type B

Serial communication

Compliance	EIA RS232C
Connector	Female 9 pin 'D'
	(fully wired)

VNET™

Cable type	Category 5 UTP
	(or better)
Max. total cable length	1km
Max. Network Span	1km
Connector	Standard RJ45
	(or ruggedised
	Neutrik 'Ethercon')

External Power
Only to be provided by a Tannoy VNet Accessory power supply via a 3.5mm jack-to-jack lead.

Power consumption

USB powered	750mW max.
Externally powered	3W max.

Environmental

Temperature	0 to +45°C
Humidity	0 to 80% RH
	(non-condensing)

Dimensions

Height	43mm
Width	115mm
Depth	115mm
Weight	500g

6

V∕NET™

SC1 | SYSTEM
CONTROLLER

Revision Date: 23/11/15

Part Number: 6481 0509

tannoy⊚com