
**Owner's
Installation & Operation
Manual
Model: VN100**



Voice NETwork & Personal PBX

Available in

TriVOX and TriNET Model Series

Safety Information:

As with any AC operated product, precautions should be observed during handling and use:

- 1) Follow all warnings, safety and operating instructions.
- 2) Do not expose the product to moisture or extreme temperatures.
- 3) Leave sufficient space around the product for ventilation.
- 4) Connect only to the type of power source marked on the product.
- 5) Do not disassemble the product.
- 6) Only qualified personnel should service this product.

Packing List:

One (1) or more VN100 Control Module(s) (depending on Avinta Model)
One (1) AC Power Adapter (per VN100 unit)
One (1) Small Screwdriver (per product package)
One (1) Owner's Manual
One (1) Warranty Card

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1.0 Introduction

The VN100 is a modular component that can provide Voice Network (VN) and Personal PBX functions using your existing phone wiring and telephone devices.

The VN100 can be used simultaneously with Home Network computer products using the HomePNA standard over the existing phone wiring inside your residence.

The VN100 can also be used simultaneously with DSL (Digital Subscriber Line) service from your local telephone company over the same telephone line.

When all phones and phone devices are installed with the VN100 (up to 12), a one-line PBX is formed without any rewiring.

Two-line wiring configuration information is provided in Section 4.0 for those who wish to enhance the operation of two-line phone systems.

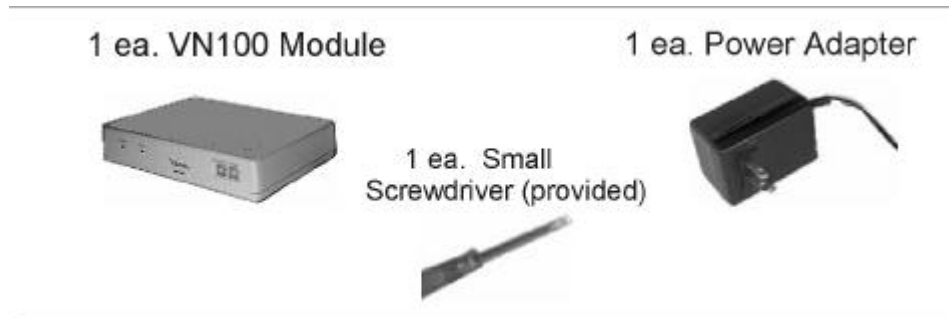
The information included in this Owner's Manual is designed to cover the most common voice NETWORK situations.

However, Avinta NET products are versatile enough to create many additional and more sophisticated configurations. Examples of more advanced configurations can be found on the Avinta web site:

www.avinta.com

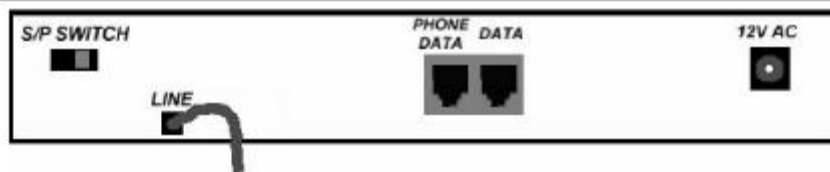
2.0 Setup

1. Check that you have the following components for each phone device on your **NETwork**. You can install all or only some of the phone devices on the same phone line with the VN100. Those installed with the VN100 will form a **NETwork** and will work with the other phone devices on the same line as normal.



2. Familiarize yourself with the VN100 module.

(Rear View)



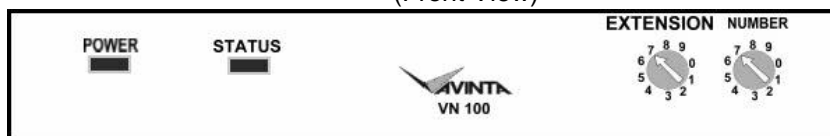
*The **PHONE+DATA** connection is for the main phone number line on which you wish to create your Voice **NETwork** and Personal PBX system.

*The **DATA** connection is a pass-through port for a second phone number line that is to be used for other purposes such as a Private Line, Data Line, etc.

*The **S/P SWITCH** is used to designate the Primary or Secondary phone device in the **NETwork**. (See details in Installation Step 2.)

*The **LINE** cord is to connect to a modular wall jack.

(Front View)



*The **POWER** indicator confirms that the unit is receiving power.

*The **STATUS** light indicates various conditions of the phone line.

* The **EXTENSION NUMBER** rotary switches set the extension number for each phone device in the **NETwork**.

3. Determine the phone number line on which you plan to install your Voice NETWORK and Personal PBX.

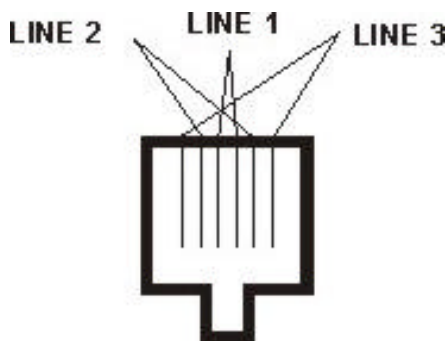
One Phone Number Line

If you have only one phone number or if you have different phone numbers on different wall jacks, then connect the VN100 **LINE** cord to the wall jack that corresponds to the phone number line you wish to have NETWORKed.

Two Phone Number Lines

If you have more than one phone number and the numbers are on a modular phone jack with two or more twisted pairs, the VN100 will be in the NETWORK on the line number that is assigned to the center wire pair. The second number is also available for phones, fax or data connections through the **DATA** port on the back of the VN100. However, it will not be part of the Voice NETWORK and Personal PBX system you are creating. If you wish to use the second or third number (outer wire pairs) for the NETWORK, then you need to change the colored phone wire connections behind the wall plate. Consult your phone company or phone installation company for instructions.

(Modular Wiring Representation)



4. Organize the phone devices that you wish to have on the NETWORK.



FAX

PHONE

TAD

VN100

NOTE: IF USING ANSWERING DEVICES OR FAX MACHINE IN YOUR PERSONAL PBX NETWORK, GO TO SECTION 3.13 FOR EXTENSION SET-UP INSTRUCTIONS.

In a Voice Network, all incoming calls are received normally and all outgoing calls are placed normally. In addition, you can customize your Voice NETwork and personal PBX for Call Transferring, Call Conferencing, Auto-Attendant, Intercom and Paging between phone extensions. A VN100 module is needed for each phone device in the NETwork.

2.1 Basic Installation

STEPS: Follow these instructions for each VN100 located in your NETwork.

1. Locate the rotary switches (labeled “extension number”) on the front panel.
2. Use the screwdriver (included) to set the VN100 extension to the desired number. This is the number to be dialed to reach the phone or other device connected to the VN100 at this location.

Example: To set a phone as Extension 23, dial the left (“extension”) rotary switch to “2”, and right (“number”) rotary switch to “3”.

Use numbers (1 – 9) for the first digit.

Extension number “99” is reserved for the Page-All broadcasting feature.

3. Set the S/P Switch on the VN100 backpanel as follows:
Set to "S" (Secondary) if you do not want that extension to ring on incoming calls
Set to "P" (Primary) if you want the extension to ring on incoming calls

NOTE: THROUGHOUT THIS MANUAL, THE DESIGNATIONS "PRIMARY" AND "SECONDARY" WILL REFER TO THE SETTING OF THE VN100 MODULE AT THE LOCATION BEING REFERRED TO.

4. Plug your phone into the “PHONE + DATA” jack on the VN100 backpanel.
5. Plug the provided AC power adapter output plug into the “12VAC” jack on the VN100 backpanel and then plug the AC adapter into a 120V AC wall outlet. The red LED on the VN100 front panel should flash five times and then turn off. The green LED should stay on.
6. Plug the VN100’s phone line cord into the phone wall jack. Lift the phone receiver – you should hear a dial tone. The front panel red LED light should turn on. Dial your own phone number – you should hear a busy tone. Hang up the receiver. Apply the labels (included) with the assigned extension number to the phone.

Note: If a dial tone is not detected, a busy tone is not heard or the LED does not turn on, consult the Troubleshooting Guide in the Appendix.

Repeat steps 1-6 for each VN100 location.

Compile a location/extension number list as a directory for reference.

Please spend a few moments to familiarize yourself with the commands used to operate the VN100 and their respective status displays. A similar table appears on the bottom of each VN100 unit.

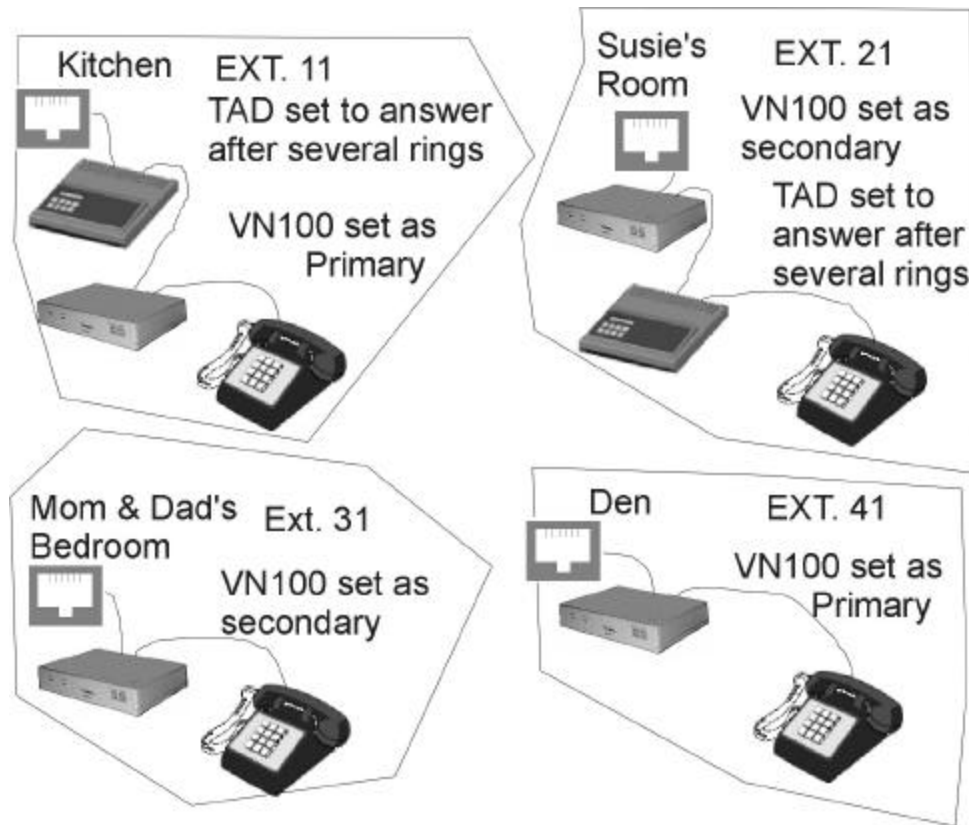
Operations		Status (Appearance of Red LED)	
To Transfer a Call:	Dial “#NN”	Power ON:	Flashes 5 times
For a Conference Call:	Dial “#NN, #NN, ...”	Line Busy:	Slow Flash
For an Intercom Call:	Dial “#NN”	Phone Off-Hook:	Always ON
For an Intercom Ring-All:	Dial “#99”	Ringing:	Fast Flash
To Stop Ringing:	Dial “#”		

Note: When placing a call to an outside party, use “ # * “ instead of “ # “ before the extension number for Transfer and Conference Calls to other extensions on your own site.

You Are Now Ready to Operate Your NETWORK!

SEE FOLLOWING SAMPLE CONFIGURATIONS

RESIDENTIAL ARRANGEMENT EXAMPLE



Extensions are accessed internally by pressing and the extension number, e.g., dial to reach extension 23. External (incoming) calls need to only dial the extension number without the , for example .

Example #1 – A call comes in and only rings the phones in the kitchen and the den. The TAD in the kitchen answers:

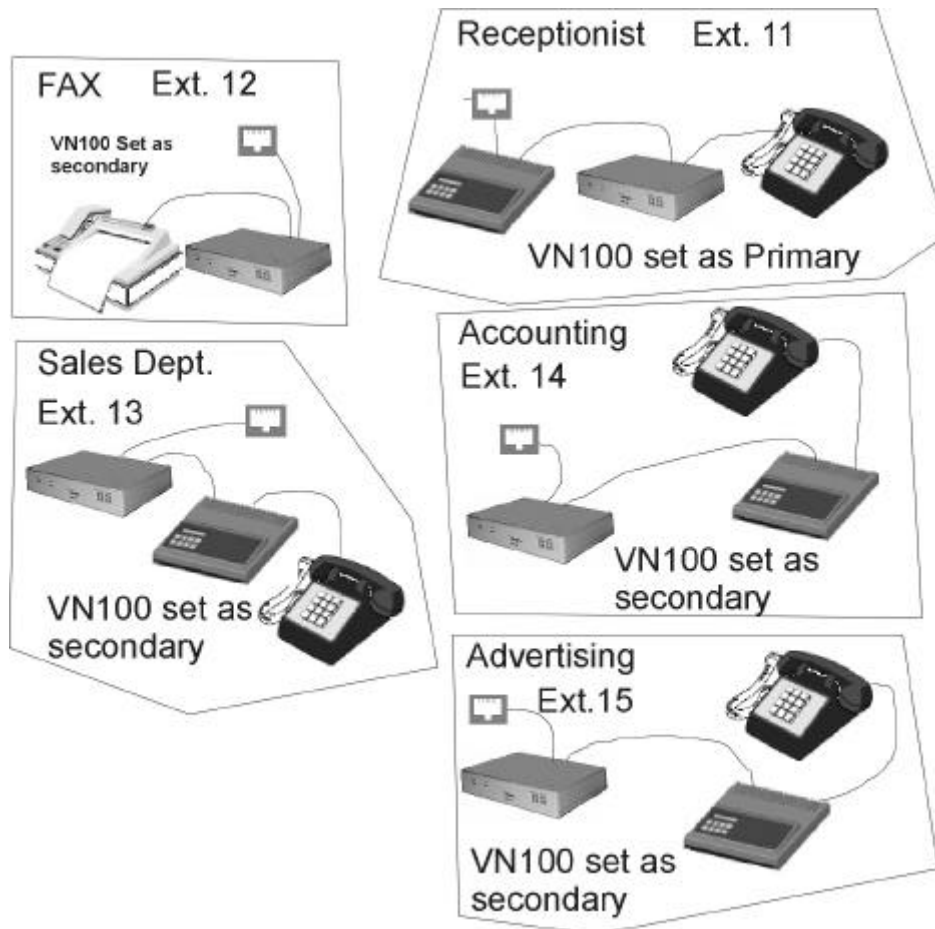
“Hi, you’ve reached the Smith family. To contact Susie, press . To leave a message for Mom and Dad, wait for the tone.”

Caller presses and Susie’s phone rings until either Susie or her phone’s answering machine answers.

Example #2 - A call comes in. Only the phones in the kitchen and the den ring. Susie answers it in the kitchen. The call is for Mom, who is sewing in the bedroom. Susie asks the caller to hold and then presses . The phone in the bedroom rings and Mom answers.

Example #3 – Dad is in the Den, Susie’s in her room and Mom is in the kitchen. Dad picks up the phone and presses . All phones ring. Mom and Susie both answer. Dad tells them that they are going out for dinner.

SMALL OFFICE ARRANGEMENT EXAMPLE



Example #1 – The TAD at the receptionist answers an incoming call:

“Hi, you have reached ABC products. To send a fax press . To reach Sales, press . To reach Accounting, press . To reach Advertising, press . To leave a message in the main mailbox, wait for the tone.”

Example #2 – The Sales Dept. needs to talk to the Advertising Dept. The Sales Dept. presses .

Example #3 – The receptionist needs to speak to everyone, so she presses .

In this setup, the incoming calls only ring at the receptionist unless transferred to another department's extension.

3.0 Voice NETWORK and Personal PBX

In a Voice Network, all incoming calls are received normally and all outgoing calls are placed normally. In addition, you can customize your Voice NETWORK and personal PBX for Call Transferring, Call Conferencing, Auto-Attendant, Intercom and Paging between phone extensions. A VN100 module is needed for each phone device in the NETWORK.

3.1 Basic Operation

General

- When you pick-up any extension on the NETWORK, a dial tone should be heard.
- When dialing internal extension numbers, you must press the pound key " # ", on the phone dial pad before the extension or code number is entered. (Example: dial "# 23" to reach extension 23.
- Incoming callers only need to enter the extension number (no "#" key necessary)
- Incoming calls can be answered normally from any extension.
- Outgoing calls can be dialed normally from any extension.

3.11 Incoming Calls

A. When the NETWORK is not in use (all phones are hung up)

- Primary extensions and any phone devices directly connected (without VN100 modules) on the same phone number line should ring.
- Secondary extensions do not ring.
- Calls can be answered from any extension or by a directly connected answering machine.
- Once a call is answered, the caller can dial any extension on the NETWORK and be transferred to that extension.
- The caller can dial another extension at any time by re-dialing a new extension number (#NN).
- When any extension answers, the phone on the dialed extension stops ringing.

B. When the NETWORK is in use (one or more phones are in use)

- A person on an extension being dialed will hear the ring in their handset and know a call is coming in.
- To answer, hang-up the phone. The incoming call can then be answered by picking up the phone receiver again, a few seconds later. (Any extension can answer.)
- You can also choose to either have the other extension(s) hang-up or have them join in the conversation.
- Once the incoming call is answered, all parties on the extensions can hear the caller.
- This feature is similar to the Call Waiting feature provided by the phone company.

C. Primary Set Extensions

- Phone rings on all incoming calls
- Any answering machine that is being used as an "Auto Attendant" should be located at a "Primary" extension.

D. Secondary Set Extensions

- The phone will ring only when its extension number is entered by another extension in the NETwork or by an outside caller.
- Answering machines that are used as personal mailboxes should be located on a "Secondary" extension.
- Incoming calls can be answered at Secondary extensions.

E. Independent Phones (on the same phone line as the NETwork phones)

- Phones will ring normally for incoming calls.
- Phones can dial any extension number in the NETwork.
- An incoming call answered at an independent phone extension can be transferred to a NETwork extension by entering the “ # ” key and then the extension number.
- Because independent phones are outside the NETwork, NETwork extensions cannot reach them.

F. Answering Machines

(See 2.2.3 "Auto-Attendant" & 2.2.4 "Voice Mailboxes" for detailed use)

- Answering machines can be connected to any extension equipped with a VN100.
- Answering machines can be connected directly to a wall jack without a VN100.
- Answering machines that are connected to a Primary extension will respond to all incoming calls.
- Answering machines that are connected to a Secondary extension will respond only when the extension number is dialed either by an incoming caller or from another extension in the NETwork.

G. Fax Machines (See 2.2.3 "Auto Attendant" for detailed use)

- Fax machines can be connected to any extension in the NETwork.
- Fax machines with answering machine capabilities can be integrated into the NETwork to serve as an Auto-Attendant.
- Fax machines without answering machine capabilities should be connected "behind" a VN100 module.
- Fax machines at Primary extensions will respond to all incoming calls.
- Fax machines at Secondary extensions will respond only when extension number is dialed either by an incoming caller or from another extension.

3.12 Outgoing Calls

A. When the NETWORK is not in use (all phones are hung up)

- All phones at all extensions or anywhere on the same phone line can dial-out as normal.
- Fax machines can dial-out (send faxes) as normal.

B. When the NETWORK is in use (one or more phones are off-hook)

- When the NETWORK is in use but no outside calls have been placed, any on-hook extension can make an outgoing (outside) phone call.
- A new call will cause the dial tone and subsequent conversation to be heard by other parties on extensions in use as an intercom or conferencing within the NETWORK.

NOTE: IT IS RECOMMENDED THAT USERS REGARD A DIAL TONE AS AN "INTERRUPT" WARNING AND TO EITHER DISCONTINUE THEIR USE OF THE NETWORK OR ASK THE NEW PARTY TO DELAY HIS/HER CALL UNTIL THE NETWORK IS FREE.

- If a new user simply wishes to join others in conversation on the NETWORK, press # to stop the dial tone and join in the conversation.

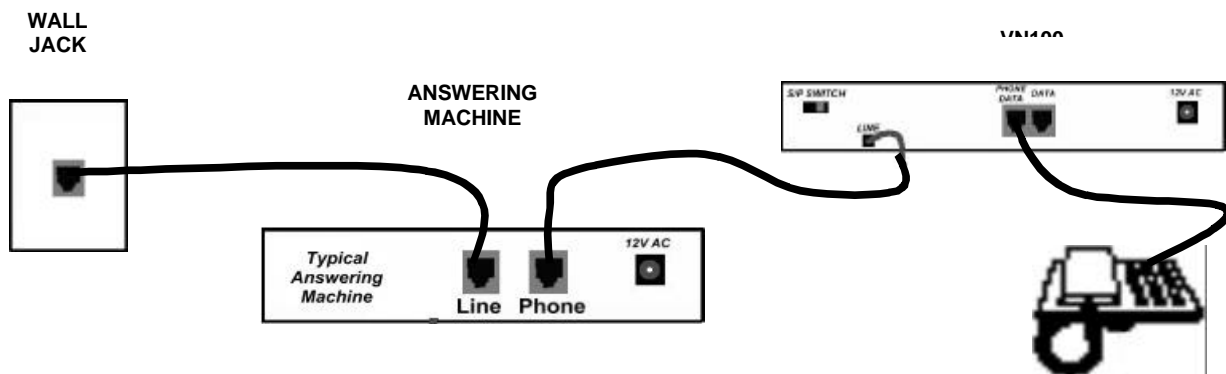
C. Primary Set Phones / Secondary Set Phones

- All extensions operate the same for outgoing calls, regardless of their setting.

Once an outgoing call has been initiated, the outside line is "in use" and additional calls cannot be placed. For larger NETWORKS with simultaneous calling needs, additional phone numbers may be needed from the phone service provider. VN100 products can then be used with standard multi-line phones to create a wider NETWORK capacity. (See Section 3 for more details.)

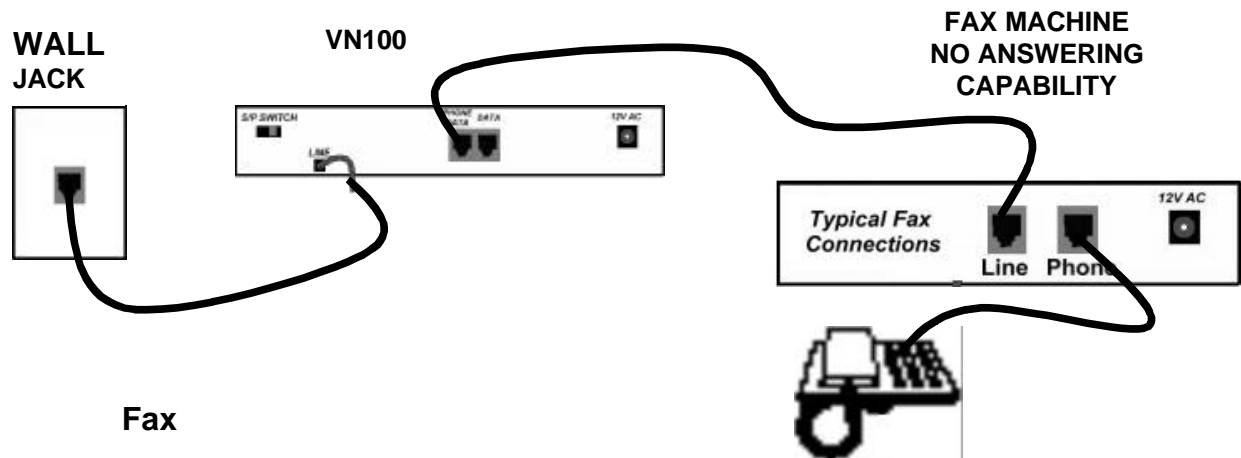
3.13 Auto - Attendant

Note: The Auto-Attendant function enables an answering machine's greeting to direct incoming calls to the correct extensions in the NETwork, eliminating the need of a person to answer the calls.



A. Answering Machines

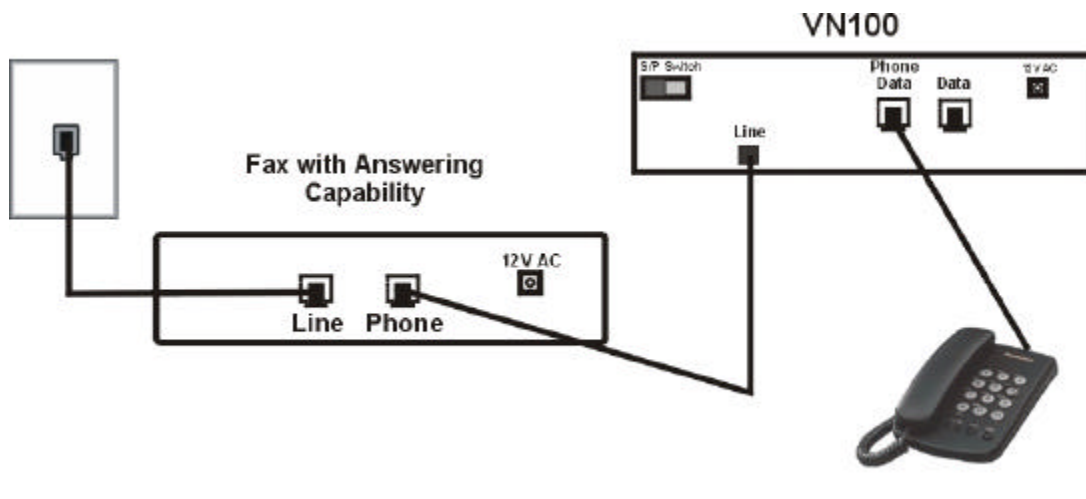
- Connect the answering machine's line cord to a wall jack.
- Connect the VN100's LINE cord to the answering machine's phone jack.
- Connect the phone device's line cord to the VN100 PHONE+DATA jack.
- Set the VN100 to the Primary setting.
- If only an answering machine is connected to a wall jack, it will operate with the NETwork in the same manner as below.
- When an answering machine is set to "on" mode, it will answer incoming calls. A greeting can be recorded on the answering machine to direct callers to the appropriate extensions in the NETwork.
- Example: "Hello, you have reached ACME Company. For sales press '23', for advertising press '34', to send a fax press '45', to leave a message - wait for the tone." We suggest that when used as an "Auto-Attendant", the answering machine should be set to answer calls on one or two rings to provide more efficient NETwork operation.
- If used in combination with a person, the answering machine can be set to answer on more rings to give the receptionist the option of answering first.
- The Auto Attendant can be bypassed by dialing an extension number (NN). The greeting will then stop and calls will ring at the extension selected. (Note: dial each digit firmly and distinctly.)



B. Fax

AVINTA RECOMMENDS THAT FAX MACHINES WITHOUT A BUILT-IN ANSWERING MACHINE BE USED AT A SECONDARY VN100 EXTENSION FOR MAXIMUM NETWORK EFFICIENCY.

- **Fax machines without Auto-Attendant or answering machine** capabilities must be installed after a VN100 module (with the VN100 between the fax and the wall jack).
Note: Some fax machines can be programmed not to answer an incoming call, but can be triggered to initiate its fax function by dialing some special keys such as “ ** ” (star-star). Some can even be programmed to respond to two-digit signals. This capability is available on certain fax machines and is known as “Remote Fax Receiving using an Extension Phone”. These types of fax machines can be directly connected to the phone line without a VN100.
- Connect the VN100’s LINE cord to a wall jack.
- Connect the fax machine’s line cord to the VN100’s PHONE+DATA jack.
- Connect a telephone to the fax machine’s phone jack.
- Set the VN100 to the Secondary setting.
- The fax machine will then receive faxes when that extension is dialed, either from inside the NETwork or from outside calls.



- **Fax machines with built-in answering machines** can be connected directly to the wall jack to serve as an Auto-Attendant if its location does not need an extension in the NETwork.
- Connect the fax machine's line cord to a wall jack.
- A fax machine setup as an Auto-Attendant will respond to incoming fax signals and faxes will be received normally.
- The Auto Attendant greeting should direct incoming calls to the various extensions in the NETwork. (See greeting example in 2.2.3 "Auto Attendant".)
- To give a NETwork extension location a professional impression (receptionist function), connect the VN100's LINE cord to the phone jack on a fax machine.
- Then, connect the phone line cord to the VN100's PHONE+DATA jack.
- The fax Auto Attendant will still function as above, but other NETwork extensions will also be able to reach this extension.

3.14 Voice Mailboxes

- To create a Voice Mailbox at any extension, connect an answering machine between the VN100 and the phone.
- Connect the VN100's LINE cord to a wall jack.
- Connect an answering machine to the PHONE+DATA jack on the VN100.
- Connect the telephone to the phone jack on the answering machine.
- Set the VN100 to the Secondary setting.
- Set the answering machine to answer on an appropriate number of rings.
- Now, when the extension is dialed by a calling party or by another extension on the NETwork, the phone will ring and the answering machine will activate after the preset number of rings.

3.15 Conferencing

A. Internal NETwork (Intercom Conference Call)

- To conference call other extensions in the NETwork, an extension needs to dial “ # ” and the extension number. Example: # 23.
- Once the extension answers, additional extensions can be added to the conference by repeating the above procedure.

B. Incoming Calls

- After receiving a call, additional parties in the NETwork may be brought into the conversation by dialing “ # ” and the extension number (NN). Example: # 31.
- The selected extension should then ring. Upon answering, that extension will join the conference call.
- Additional extensions can be brought into the conference by repeating the above procedure to a maximum of three parties on the local network.

C. Outgoing Calls

- When an outside call has been placed from within the NETwork, other extensions on the same site can be added by dialing “ # * ” and the extension number (NN). Example: # *31.
- Additional parties can be added by repeating this process.

**IF THE STATION BEING ALERTED DOES NOT RESPOND, DIAL “ # ” TO CANCEL THE ALERT.
(THIS APPLIES TO ALL THREE CASES ABOVE.)**

3.16 Transferring

A. Incoming Calls

- An incoming call can be transferred from the extension that answered by pressing “ # ” and the desired extension number (NN). Example: # 23.

B. Outgoing Calls (to a NETwork extension)

- If an outgoing call has been placed and connected from an extension, it can be transferred to another NETwork extension by pressing “ # * ” and the extension number (NN). Example: # * 31.
- Transfers can continue to be made to additional extensions using the same method.

C. Internal NETwork Calls to a NETwork Extension

- Any extension can transfer another internal NETwork extension call to another NETwork extension by pressing “ # ” and the extension number (NN). Example: # 31.

**IF THE STATION BEING ALERTED DOES NOT RESPOND, DIAL “ # ” TO CANCEL THE ALERT.
(THIS IS COMMON TO ALL THREE CASES ABOVE.)**

3.17 Intercom

A. Specific Extension

- Press " # " and the extension number. Example: # 31.

B. Multiple Extensions

- After each alerted extension answers, you can dial another " # " and the extension number for another extension. You must wait for each extension to answer before dialing another sequence. However, if an extension does not answer, entering the " # NN " sequence will discontinue ringing that extension and move the intercom call to another extension.

C. Stand-Alone Intercom

- An intercom NETWORK can be created without a "live" phone line connected to any of the extensions.
- Connect one VN100 LINE cord to another VN100 via two wall jacks that are interconnected by a continuous pair of wires to start up the first two extensions. (You may need jack extenders/couplers and more line cord, available from any phone accessory retailer.)
- Connect each phone device line cord to a VN100's PHONE+DATA jack.
- Repeat the above two steps for additional extensions.
- Now you have created a Stand-Alone NETWORK that will operate the same as a connected NETWORK (see "A" and "B" above).

D. Emergency Intercom

- If phone service is interrupted, an Avinta NETWORK powered by VN100 modules can continue to provide intercom service as long as electrical power is still available to the VN100 modules. This can be a significant safety factor for communication to all extensions on the NETWORK in the event of a phone outage.

3.18 Ring-All

- To reach all extensions simultaneously, dial " # " and " 99 ". Example: # 99.
- Primary set extensions will ring for 30 seconds and the red LED on the VN100 will flash.
- Secondary set extensions will ring once (to avoid having the answering machine pick-up) and the red LED will flash for 30 seconds.

3.2 Unique Features

3.21 Call Screening

- By recording a greeting on a Primary Auto-Attendant answering machine that does not disclose the NETwork and its extensions, unwanted telemarketing and other calls are blocked from the extensions. This will tend to frustrate telemarketers and have your number removed from their files, as it imposes a cost to them for the call without a resulting contact. Eliminating the distraction and annoyance caused by such calls can be very beneficial for both business and residential applications.

3.22 Audible Line-in-Use Signal

- Since any NETwork extension will cause a line-in-use condition when it is connected to an outside call, when a new extension picks up the receiver, a three-second busy tone will be heard on the "picked-up" extension. That extension should then hang-up and try again later.
- When a NETwork has no outside connection or calls in progress but is in use with an intercom or conference call within the NETwork, such conversation is not regarded as a line-in-use. This is because the line is readily available to receive an incoming call or to place an outgoing call.

3.23 Interrupt Alert

- When any NETwork extension is in use with an outside call and another extension picks up the receiver, the new party trying to access the line will hear a busy tone for three seconds and can hang-up before interrupting.
- After three seconds, all parties will hear a short beep tone to alert them of a new party on the NETwork.
- When the NETwork has no outside connections or calls in progress but is in use with an intercom or conference call within the NETwork, a dial tone will alert all extensions that a new party has entered the NETwork.

3.24 Emergency Interrupt

- When any NETwork extension is in use with an outside call, a short beep tone will be heard by all parties on the line three seconds after a new extension picks up , signaling that a new picked-up extension is now on the NETwork. This allows the party on the new extension to advise all parties the other extensions of an emergency situation.
- When the NETwork has no outside connections or calls in progress but is in use with intercom or conference calls within the NETwork, a new extension can pick up the receiver, dial " # " to stop the dial-tone, and announce an emergency situation to the extensions on the NETwork.

3.25 Attendant Bypass

- If a calling party is familiar with the NETwork, they can dial an extension number immediately after the "Auto-Attendant" device answers and thereby bypass the greeting. Dial firmly and distinctly so that the VN100 equipment recognizes each digit.

3.26 Back-Up Extensions

- The call transfer feature of the NETwork (described earlier) can be used repeatedly by a caller to "hop" from one extension to another in search of a person to answer their call. This works for all modes of calls. It is especially useful when the caller is remote, that is, for incoming calls.
- For a professional impression, include a sentence such as "If your call is urgent, please dial " #nm " for immediate assistance" in the OGM (Out-Going Message) of a personal voice mailbox, where "nm" is any valid extension number in the NETwork.
- Furthermore, a knowledgeable caller can dial " #nm " while an extension is ringing, even before the OGM starts to play. This can save time for the caller.
- Note that arbitrarily guessing extension numbers will cause the connection to be terminated.

3.27 Emergency Ring Through

- "Emergency Ring Through" is designed as a fail-safe measure if a "Primary Extension" or "Auto-Attendant" extension is disabled for whatever reason (a power outage, the answering machine serving as an Auto-Attendant is not set to "ON", etc.).
- After 16 rings, all extensions set to the Secondary setting will begin to ring, allowing any extension to receive the call.
- Any answering machine in a Voice Mailbox designed NETwork can also answer an "Emergency Ring Through" call.
- In order to truly benefit from this unique feature, Avinta recommends setting one of the Secondary Answering Machine extensions to a lower number of "rings" than the others. Example: Ext. 23 set to answer on two rings while ext. 34, ext. 56 and ext. 65 are set to answer on four rings. In the event of an Emergency Ring Through, the answering machine at ext. 23 would answer the call. This will eliminate any confusion caused by multiple greetings being played simultaneously.

3 Two Line Configurations

General

A two-line configuration refers to NETWORK environments that have two phone number services from the phone company. This is an ADVANCED application for the NETWORK. If you have trouble installing, consult your local phone company, independent telecommunications professionals or refer to the Avinta web site at (www.avinta.com)

4.1 Basic Two-Line NETWORK

IMPORTANT:

- A. FOR THE PURPOSE OF THIS SECTION, THE TERMS "LINE 1" AND "LINE 2" WILL BE USED TO DESIGNATE ONE OR THE OTHER OF A TWO PHONE NUMBER SERVICE AND ITS INSTALLATION AND OPERATION ON AN AVINTA NETWORK.
- B. A WALL JACK CAN HAVE SEVERAL "LINE" CONFIGURATIONS. ONE WALL JACK MAY ACTUALLY HAVE TWO OR THREE NUMBERS CONNECTED TO IT.

SOME MULTI-LINE PHONE DEVICES ARE DESIGNED TO SENSE BOTH LINES ON A SINGLE WALL JACK AND OPERATE THEIR FUNCTIONS ON EACH INDEPENDENT PHONE NUMBER LINE.

THE VN100 IS DESIGNED TO ONLY SENSE ONE PHONE NUMBER SIGNAL FROM THE WALL JACK.

IF YOU HAVE MULTIPLE NUMBERS COMBINED INTO ONE WALL JACK, THEN YOU WILL NEED A "SPLITTER" TO CREATE AN EFFICIENT TWO-LINE NETWORK.

SPLITTERS CAN BE READILY FOUND AT MOST STORES THAT STOCK PHONE ACCESSORIES.



IF YOUR MULTIPLE PHONE NUMBERS ARE ALL ON SEPARATE INDEPENDENT WALL JACKS, THEN A SPLITTER IS NOT NEEDED TO CREATE THE NETWORK

OUR TWO-LINE INSTRUCTIONS WILL REFER TO "LINE 1" AND "LINE 2" TO CONNECT TO WALL JACKS OR SPLITTER JACKS

IF USING A SPLITTER, YOU NEED TO TEST YOUR SYSTEM TO BE SURE THAT THE CORRECT NUMBERS ARE GOING TO THE CORRECT EXTENSIONS.

- C. CREATING A NETWORK ON TWO OR MORE PHONE NUMBER LINES WITH VN100s CAN EXPAND THE NETWORK'S POTENTIAL TREMENDOUSLY. IT MUST BE UNDERSTOOD THAT MANY FUNCTIONS WHICH OPERATE BETWEEN THE TWO PHONE NUMBER LINES AND THEIR EXTENSIONS MAY BE CONTROLLED BY THE MULTI-LINE DEVICES (PHONES, ANSWERING MACHINES, ETC.) AND NOT THE VN100. ALL VN100 NETWORK FEATURES WILL STILL BE AVAILABLE ON EACH INDEPENDENT NUMBER LINE.

We will designate "Single Number Wall Jack Locations" and "Multi-Number Wall Jack Locations" and discuss each scenario independently.

4.2 Installation:

- A VN100 module is needed for each line number at each location to be NETworked.
- If a phone location is only to be NETworked to a single line number, then only one VN100 module is needed.
- If a phone location is to be NETworked to both line numbers and will use a two-line phone or device, then two VN100 modules are needed.

Single Number Wall Jack Locations:

- Follow the instructions in Section 2.0 - Basic Installation.
- Repeat the Basic Installation for each single number location in the NETwork.
- It is recommended that extension numbers on either line number be unique and not duplicated on the other line number NETwork. This will increase the flexibility of the NETwork.

Multi-Number Wall Jack Locations (Instructions are for two-number lines)

Follow 2.1 Basic Installation Instructions - Section 2.1, Steps 1, 2, 3, then....

- Connect the line cord of the first VN100 to Line 1's wall or splitter jack L1.
- Connect the line cord of a second VN100 to Line 2's wall or splitter jack L2.
- Connect a line cord between the PHONE+DATA jack on the first VN100 and the Line 1 connection of the two-line phone or device. (Some two-line devices have "hardwired" connecting cords and some use jack receptacles.)
- Connect a line cord between the PHONE+DATA jack on a second VN100 and the Line 2 connection of the two-line phone or device.
- Now follow 2.1 Basic Installation instructions Steps 5 and 6.

You Are Now Ready to Operate Your Two-Line NETwork!

All Operating features of the VN100 can be used on either phone number line. In addition, the features on two-line phone equipment (such as conferencing two outside parties to one conversation) will bridge both lines.

5.0 VN100 with Computer NETWORK

5.1 Installation

This section will describe the installation of a Home Network (PCI, USB or parallel port version) and Voice NETWORK on the same line.

The telephone cord and modular jacks on the back of the VN100 are set up to simplify the interconnections found in various situations:

Plug the Avinta HN100 or any other Home Network device to the wall outlet and then plug the VN100's LINE cord to the PHONE jack on the HN100 device. Plug a telephone into the PHONE+DATA jack on the VN100. Leave the VN100's DATA jack unused.



5.2 Operation

The voice NETWORK can be used simultaneously with the Home Network. You can call others on the same phone line while playing a multi-player game or while tutoring. Refer to the manuals provided by your Home Network device.

Appendix:

A.1 Troubleshooting

a. Sometimes the command prefix “ # ” doesn’t seem to function:

- You should always dial firmly and distinctly to allow the VN100 equipment to recognize each digit. Do not try to dial with "quick touches".
- To interoperate with other DTMF signal based services such as voice messaging, voice response, remote access systems, etc., the VN100 utilizes a convention of ignoring any “ # “ signal that follows a DTMF signal within three seconds. This rule is fairly transparent under normal operation scenarios.
- However, if you make a mistake in dialing DTMF digits when commanding the VN100 system, you cannot re-dial the command within three seconds. Doing so will force the VN100 to stay in this “filter loop”, causing it to ignore your commands.
- Therefore, be sure to wait at least three seconds before trying again.
- For incoming calls, if the initial attempt of selecting an extension (“#” not required) fails, wait at least three seconds. Then, dial “#” followed by the desired extension number.

b. Before attempting to change anything, observe the red LED on the VN100’s front panel:

This red LED informs you of the condition of the unit. The following is a list of how it should appear under normal conditions:

- Standby: The LED should be OFF.
- Phone in use: The LED should be always ON (local phone device is off-hook / active).
- Line busy: The LED should blink slowly (one or more other extensions are in use with a remote party).
- Ringing: The LED should flash quickly.
- Power On: The LED should flash five times, once per second, and then go out.

Note that the green LED should always be on as long as power is supplied to the VN100.

c. When the VN100 is first powered on, the LED flashes continually:

- Check to see if the first digit of the extension number was set to "0", which is not allowed.
- Change the first digit of the extension number to any number from 1 to 9.
- Remove the 12V AC plug from the VN100. Wait a few seconds, then plug it back in.

d. No dial tone, but there is a busy tone on some phones:

- Replace the phone with one that is known to be good to check if it’s operational. If there is still no dial tone, then:
- Unplug the AC adapter and then pick up the telephone receiver to verify that a dial tone can be heard. If a dial tone can be heard, then the VN100 unit may be defective.

e. No dial tone, but there is a busy tone on all phones:

- Check the condition of the line by directly plugging a phone that is known to be good into a wall jack. If no dial tone is heard, chances are that service from the telephone company has been interrupted.

f. The keypads of certain telephone instruments do not function properly during conference calls:

- List the other phones that were in conference when a particular "DialPad" was inoperative. Unplug all phones from their VN100 unit. Re-plug directly into the Wall Jack Take handsets "off-hook" on all listed phones. Try dialing an outside number from the handset suspected of failing to dial during a conference call. If it does not function properly, it is not compatible with the other phones on the network.

g. The sound level on certain telephones is weak or distorted during conference calls:

- Use the same procedure as described in the previous case to isolate the telephone instrument that is not compatible.

A.2 Technical Specifications

Capacity: 1 analog phone line from a phone service provider
89 customizable extension number addresses
12 physically installed nodes
3 local parties in one conference
4 parties in one intercom session

R.E.N.: 0.1B normally, 0.3B during Intercom

Ringling Signal: 4.0 R.E.N.

Power: 12V AC 500mA (120V AC Power Adapter provided)

Physical: 1 lb., 7.5" x 5.5" x 2"

Approvals: FCC Part 68 & Part 15, Subpart J, Class B

A.3 FCC Registration & Radio Interference Information

Registration: This equipment is registered with the Federal Communications Commission and is in compliance with Parts 15J and 68 FCC Rules and Regulation. 1) UPON REQUEST ONLY, you must provide the following data to your telephone utility company (Telco): (a) *The Ringer Equivalence Number, (R.E.N.) on the device label. Note that if several devices are connected to the same line, the R.E.N.s must not add up to more than 5 (A or B). This R.E.N. figure is important to your Telco. (b) *The (USOC) jack type to be provided by the Telco. Typically these are the RJ11C/W for single lines. *The *-flagged items above are noted on the equipment's FCC Compliance label. 2) This device may not be used on Telco-operated coin phone lines. Party lines and privately owned coin phones are subject to local state regulatory policies, and possible additional state special requirements. 3) The Telco has the right to make changes to their network that may affect the operation of your equipment, provided you are given adequate advance written notice to permit correct operation. 4) In case of operational problems, disconnect your unit by removing the modular or multi-conductor plug from the Telco jack. If your regular phone (or other devices or system) still works properly, your unit has a problem and must remain disconnected officially and serviced or returned for repairs. 5) Unless otherwise noted in the User's Manual (e.g., fuses, etc.), user may not under any circumstances (in or out of warranty) attempt any service, adjustments or repair on this unit. It must be returned to the factory or authorized U.S. service agency for all such work. Locations (or phone numbers) of factory or authorized U.S. service points are listed in this manual. 6) Special FCC rules apply to equipment connected behind a PBX or KTS. 7) Attached accessories: If you connect any equipment such as a FAX, answering machine, telephone or computer modem to the Unit, please make sure that they are registered in accordance to FCC Rules Part 68. Please check the manufacturer or dealer of the equipment if you are not sure.

Radio Interference: This equipment has been type-tested and found to comply with the limits for a Class B Computing Device in accordance with the specification in Subpart J of Part 15 FCC Rules. These Rules are designed to provide reasonable protection against radio and television interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this unit does cause interference to radio or television reception (which you can determine by turning the equipment off and on), try to correct the interference by one or more of the following measures. (1) Reorient the receiving antenna (that is, the antenna for radio or television that is receiving the interference). (2) Change the position of the unit with respect to the radio or television that is receiving the interference. (3) Move the unit away from the equipment receiving interference. (4) Plug the unit into a different wall outlet so that the unit and the equipment receiving interference are on different branch circuits. If these measures do not eliminate the interference, please consult your dealer or an experienced radio/television technician for additional suggestions. Also, the FCC has prepared a helpful booklet, "How To Identify and Resolve Radio/TV Interference Problems". It is available from the U.S. Government Printing Office, Washington, DC. 20402. Please specify stock number 004-000-00345-4 when ordering copies.

A.4 Limited Warranty

This product is warranted to be free of manufacturing defects for a 1-year period after the original date of consumer purchase. Opening of the product enclosure will void this warranty. This warranty does not include damages to the product resulting from an accident, misuse, improper installation or operation, or unauthorized repair or alteration. If the product should become defective within the warranty period, Manufacturer will, at its option, repair or replace it at no charge. The defective product should be sent to a designated service center, freight prepaid by the customer. The replacement product supplied under this warranty, may at our option, be new or rebuilt. If the defective product is found to be out of warranty, Manufacturer will repair it upon prepayment by the customer for any service and return freight charge. The consumer's sole remedy shall be such repair or replacement as is expressly provided above, and Manufacturer shall in no event be liable for any incidental or consequential damages arising out of the use or inability to use this product for any purpose whatsoever. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific rights. You may also have other rights that vary from state to state. For product purchased outside the United States, see your dealer for warranty.

A.5 Service

Only a trained technician should service this product. Contact Avinta Communications for service. Be sure to include your name and address, daytime phone number, proof of purchase including purchase date, and a short description of the problem. Attach your sales receipt to this booklet for future reference. This information will be valuable if service should be required during the warranty period. According to some state laws, and in the event service should be required, you may need both Model and Serial Numbers. Please record them below for your records. Keep this Manual in a secure location for reference:

Model No. _____ Serial No. _____

Purchased by _____ Purchase Date _____

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