

VNS2500

Wireless Public Address Controller

User's Manual / Installation Guide

Version 1.26

Visiplex, Inc. 2009

VNS2500

Wireless PA & Mass Notification Controller

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Notice to User Regarding Radio Frequency Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in residential areas is likely to cause harmful interference in which case the user will be required to correct the interference at their expense.

About This Manual

This VNS2500 User/Installation Manual describes how to install and setup the VNS2500 for wireless messaging. It also provides instructions for transmitter antenna installation.

It is imperative the manual is followed in the order it is presented to prevent damage to the equipment, as well as insuring proper system functionality.

The manual provides instructions for mounting preparation, determining system location and spacing in regard to antennas and other equipment. Information is also provided for verification of reception and transmission quality and troubleshooting of problems that may arise during installation or operation.

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Product Information

1.1 Introduction



The Visiplex VNS2500 wireless controller is designed to provide efficient wireless voice and data messaging as well as emergency mass notification.

Utilizing Visiplex's superior wireless communication technologies, the VNS2500 can provide an effective means of audible and visual notification for virtually any facility, regardless of size like college campuses, commercial and industrial complexes, government facilities, military bases, schools, etc.

The VNS2500 system can operate as a stand-alone unit, or be integrated with other existing facility systems such as Fire/Alarm, Access Control, Biological & Chemical detection, Public Address systems, etc.

The VNS2500 system provides a cost effective, wireless solution to applications ranging from simple wireless PA implementation, to a fully customized, network capable wireless mass notification and personnel alert system.

The VNS2500 is a powerful microprocessor-based desktop paging system capable of addressing up to 1000 wirelessly controlled devices. It consists of a fully featured paging encoder with an LCD display and a numeric keypad mounted in an attractively styled wall or desk mount housing.



1.2 Standard Features

- User configurable 1000 wirelessly controlled device database
- Includes desktop or hand-held microphone.
- Activate and controls wireless Public Address speakers
- Controls wireless sirens and strobe lights
- Sends text messages to wireless alphanumeric displays
- Built-in analog telephone interface for remote access and control
- Up to 100 user configurable device zones/groups
- Numeric keypad and four Alpha menu keys
- Built-in accurate Real-Time clock
- Built-in memory backup
- RS232 serial connection for serial communication
- Equipped with a 2 line by 16 character LCD display
- Desk or wall mountable

1.3 Optional Features

- Telephone line interface (RJ-11) for remote status change of system mode and parameters
- High power external digital transmitters (10 to 350 watt)
- Built-in tone generator for wireless receivers

1.4 Package Contents

The following items are included with the VNS2500:

- VNS2500 Wireless PA & Mass Notification Controller
- Power adaptor
- Desktop Microphone
- Manual
- TS638 Magnetic Mount antenna (for systems ordered with up to 40W transmitter)

1.5 Key Navigation

The following keys also function in system menus as detailed below:

#	Select / Acknowledge / Enter
*	Return to previous menu / Escape
1	On / Next
0	Off / Previous

1.6 Pre-Installation Test

It is recommended to test the VNS2500 and the entire system prior to installation in order to verify proper operation and get familiar with the unit operation.

Follow these steps to perform a pre-installation test:

1. If your system is equipped with an internal transmitter, connect the BNC antenna cable to the **ANTENNA** jack at the back of the VNS2500.

If your system uses an external transmitter, connect the transmitter data cable between the TS101-XX transmitter and the **J2** port at the back of the VNS2500. Connect the antenna to the external transmitter's **ANTENNA** BNC connector.

2. Connect the RJ-45 plug of the microphone to the **MIC** input at the back of the VNS2500.
3. Connect the provided power supply to the **DC** jack at the back of the VNS2500 and turn the **POWER** switch to **ON** position. The main menu should appear with the **PAGE TO:** displayed on the top line.
If you are using an external transmitter make sure it is powered on.
4. Press the **B** key for the **Administration Menu** and enter the default password (2500). The menu top line should display **SELECT OPTION:**
5. Press **2** followed by the **#** key for the internal clock **Time Setup**. Enter the local time in 24 hours (military) format. The display will change back to **Time Setup**.
6. Press **3** followed by the **#** key for the internal clock **Date Setup**. Enter the local date in MMDDYY format. The display will change back to **Date Setup**.
7. Press the ***** key to return to the **Main Menu**. Make sure the correct time as displayed on the VNS2500 display

Installation

2.1 Site Inspection and System Location

Consider the following requirements when planning system installation and choosing a location for the VNS2500 and other system components:

1. The transmitting antenna should be located as close as possible to the center of the site and should not be surrounded by large metal objects that may block the RF signal and decrease the coverage range of the system.
2. The transmitting antenna may be mounted vertically upward or downward, **NEVER horizontally**.
3. Magnetic Mount antenna (such as TS638) should be attached to a large metal object (like an air duct, metal shelf or cabinet) to provide it with a proper grounding.
4. Base Station antenna (such as included with TS654 kit) should be secured to a well-grounded metal structure or to a pole on the roof. Locate a path for running the coax cable between the antenna and the transmitter such as a riser (if there is no existing path, create one). Place the external transmitter in a location that is as close to the roof as possible such as the penthouse. Keep the distance between the antenna and the transmitter as short as possible to minimize RF power loss.

2.2 Magnetic Mount Antenna (VS638) Installation

1. Secure the antenna to an adequate grounding surface, HVAC duct or metal "I" beam. The antenna may be mounted vertically upward or downward, **NEVER horizontally**.
2. Choose a mounting location that will provide an adequate grounding surface and free space for RF radiation. If the antenna is mounted too close to metal, a high VSWR may occur which in the long term may cause damage to the transmitter.
3. The optional wall-mount "L" bracket allows mounting the antenna on the side of a building or other structure, providing the roof's overhang is not excessive.
4. If an external transmitter is used, connect the antenna to the **ANTENNA** terminal at the back of the external transmitter. Otherwise, connect the antenna to the **ANTENNA** terminal at the back of the VNS2500.

2.3 Base Station Outdoor Antenna Kit (VS654) Installation

1. To achieve maximum performance for your outdoor antenna choose a location that is unobstructed by trees, branches, power-lines, etc. Never mount the antenna where there is a signal-reflecting surface such as metal, power lines, mirrored glass, etc.
2. Choose a location that is easily accessible in case you need to perform maintenance on the antenna.
3. For optimal performance, make sure the antenna is installed at an elevation that will provide sufficient clearance to allow your antenna to radiate without interference.
4. It is recommended to mount the antenna where the path of the antenna cable is straight and as close as possible to the system transmitter. Do not coil up 100 feet of coaxial cable when only 20 feet of cable is required. Use a RG-8U coax cable that is specified as Low Loss to minimize power loss.
5. The antenna may be mounted vertically upward or downward, **NEVER horizontally**.

6. Install the grounding kit provided with the TS654 antenna kit.
7. If an external transmitter is used, connect the antenna to the **ANTENNA** terminal at the back of the external transmitter. Otherwise, connect the antenna to the **ANTENNA** terminal at the back of the VNS2500.

2.4 Final Installation Steps

The VNS2500 system encoder can be installed on a wall or shelf. Install a UPS power backup to protect the system from power outages and surges. If you are using an external transmitter, place it next to the VNS2500 and use the data cable provided to connect VNS2500 and the external transmitter.

Once the VNS2500 is placed properly, connect the microphone jack into the **MIC** input on the back of the unit (if you are planning to use a microphone with your system).

If you are planning to use the telephone interface that comes with the unit, connect the RJ-11 telephone jack coming from the wall into the **PHONE** input on the back of the VNS2500.

If an external transmitter is used, connect the control cable from the external transmitter into the **AUX (J2)** terminal at the back of the VNS2500.

Turn on the VNS2500.

Advanced System Information

The main menu shown below appears after the VNS2500 is turned on and is used for accessing the **Programming** and **Administration** menus. This menu can be used also for sending a voice or digital page to speakers, strobe lights, alphanumeric signboards, sirens, digital pagers, etc.

PAGE TO: 11:55

3.1 Administration Menu

From the **Main Menu** press the **B** key. Enter **2500** as password. The prompt **Select Option** will appear on the top line.

The **Administration Menu** provides access to the following available sub-menus:

1. Wireless Device Database
2. Unit Time Setup
3. Unit Date Setup
4. View Pre-Programmed Messages
5. Coverage Test Mode
6. Baud Rate Setup
7. View Last Message
8. Reset Database

To access a specific sub-menu, press the digit key representing it followed by the # key.

3.1.1 Wireless Device Database Menu

From the **Administration Menu**, select **1** followed by the # key. Following are the fields description:

Device to Edit	Enter 3 digit ID of the wireless device to be edited (001-999)
Device Capcode	Enter 7 digit address as appears at the back of the wireless device
Device Type	Select the required type and press the # key: 1 – Alphanumeric (Sirens, Strobe Lights, pagers and Displays) 2 – Numeric (Numeric pagers or displays). 3 – WPA Speaker (Wireless Speakers and Horns) 4 – Tone / Vibrate (Pagers)
Device Mode	Select Mode and Baud Rate and press the # key: 1 – 512 bps, Mode 0 2 – 512 bps, Mode 1 3 - 512 bps, Mode 2 4 – 512 bps, Mode 3 5 – 1200 bps, Mode 0 6 – 1200 bps, Mode 1 7 - 1200 bps, Mode 2 8 – 1200 bps, Mode 3 9 – 2400 bps, Mode 1 0 – 2400 bps, Mode 2
Group	If the controlled device is a member in a group or zone, enter the group number (1-99) and press the # key. Groups/zones are represented and accessed by paging to devices 901-999, when group 01 is represented as 901, group 02 as 902, and so on.

After the last step is completed, the display will flash **DATA SAVED** and go back to the **Pager to Edit** menu.

Repeat the above steps for each additional wirelessly controlled device, or press the * key twice to return to the **Main Menu**.

3.1.2 Time Setup Menu

From the **Administration Menu**, select **2** followed by the # key. The following screen will be displayed:

ENTER TIME:
12:00

Enter the local time in 24 hours (military) format. The display will change back to **Time Setup**.

3.1.3 Date Setup Menu

From the **Administration Menu**, select **3** followed by the # key. The following screen will be displayed:

ENTER NEW DATE:
010106

Enter the date information in MMDDYY format. The display will change back to **Date Setup**.

3.1.4 View System Pre-Programmed Messages

From the **Administration Menu**, select **4** followed by the # key. The following screen will be displayed:

PPGM MESSAGE: 01

Use this option to check the information that is programmed into each of the system keypad pre-programmed messages. The system includes 99 pre-programmed alphanumeric messages that can be accessed over the phone or from the unit keypad. To scroll up use the **A** key and to scroll down use the **B** key.

Press the * key to exit and return to the **Administration Menu**.

3.1.5 Coverage Test Mode

From the **Administration Menu**, select **5** followed by the # key.

COVERAGE TEST:
TEST PAGE 01

This option is useful when testing the system transmitter coverage area. In this mode the system will send an alphanumeric page every 30 seconds. The message include a count information with every page.

Press * to cancel and go back to the **Administration Menu**.

3.1.6 Baud Rate Setup

From the **Administration Menu**, select **6**.

BAUDRATE SETUP

Use this option to set the serial port baud rate. Use the **1** to **6** keys to select the required baud rate.

Press the ***** key to exit and return to the **Administration Menu**

3.1.7 View Last Message

From the **Administration Menu**, select **7** followed by the **#** key.

LAST MESSAGE:

Use this option to display the last message that was sent by the system

Press ***** to cancel and go back to the **Administration Menu**.

3.1.8 Reset Database Menu

NOTE: This is an **IRREVERSIBLE** command - **DO NOT** select this option unless you are absolutely sure you want to clear all the devices and pre-programmed messages data.

You may want to transcribe this information to paper first or use the optional PC software to backup the data to a computer.

From the **Administration Menu**, select **8** followed by the **#** key.

**CLEAR ALL DATA..
ARE YOU SURE???**

Press **#** to confirm the Database Reset. Press ***** or any other key to cancel and go back to the **Reset Database** menu.

3.2 Page To Menu

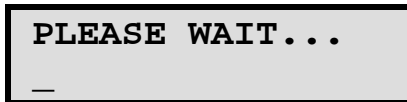
The main menu shown below appears after the VNS2500 is turned on and is also used for sending a page to an alphanumeric device.

PAGE TO: 11:55

The VNS2500 supports 999 wirelessly controlled devices that are accessible by entering the device number on the above menu. A 3 digits number between 001 and 999 is uniquely represents each device. Device database numbers from 001 to 900 allow access to individual devices while numbers 901 to 999 provides access to groups/zones of wireless devices.

Follow these steps to send a voice, tone, numeric or alphanumeric message using the VNS2500 keypad:

1. Program a wireless alphanumeric device in to the VNS2500 database as described in the **Wireless Device Database Menu** section (page 9).
2. Enter the device number as a 3 digit number. The device number can be also entered without leading zeros but it will have to be followed by the # key.
3. If the selected device is Tone / Vibrate digital pager, the page will be sent immediately after entering the pager number.
4. If the selected device is WPA speaker device, the following screen will be displayed:



PLEASE WAIT...

After 3-4 seconds the screen will change to:



SPEAK NOW...

Using the unit microphone you can speak your message now. To end the page and close the Open speaker(s) press the # key.

5. If the selected device is an Alphanumeric or a Numeric, the following screen will be displayed:



ENTER MESSAGE:

For a numeric page, enter a numeric message that will not exceed 16 digits. The page will be sent immediately after entering the 16th character or after the # is pressed.

To send an alphanumeric page from the numeric keypad, you will need to use one of the VNS2500 pre-programmed alphanumeric messages (pre-programmed via PC using the VisiDB software package). To select a specific pre-programmed message enter * followed by a valid pre-programmed message number **01-99**. For example to use pre-programmed message 12 enter ***12**. You can add digits to the end of the pre-programmed message by entering more digits. The page will be sent immediately after the # is pressed.

Follow these steps to send a page using a telephone (**Page by Phone**). See **Accessing Wireless Receivers (via keypad or phone)** on page 13 for more detailed information.:

1. Program a pager in to the VNS2500 as described in the **Wireless Device Database Menu** section (page 9).
2. Connect the RJ-11 phone jack located at the back of the VNS2500 to an analog telephone line or extension.
3. Using another phone, dial the number of the telephone line or extension connected to the VNS2500.
4. The VNS2500 will answer the call with 1 beep (or the "Enter Pager Number" prompt).

5. Enter the pager number as a 3 digit number. The pager number can be also entered without leading zeros but it will have to be followed by the # key. If the pager number entered is not valid, the VNS2500 will respond with the 1 long beep (or the "Invalid Pager" prompt).
6. If the pager selected is Tone / Vibrate, the page will be sent immediately after entering the pager number and the VNS2500 will respond with the 3 beeps (or the "Page Sent" prompt).
7. If the pager selected is an Alphanumeric or a Numeric pager, the VNS2500 will respond with 2 beeps (or the "Enter Message" prompt).
8. If the pager selected is a WPA pager, the VNS2500 will respond with the 2 beeps after a short delay (or the "Please Wait" prompt and shortly after that with the "Speak Message Now" prompt).
9. For Numeric or Alphanumeric pager, enter a numeric message using the telephone keypad. For WPA pager, speak your message.
10. To send the message, press #. The VNS2500 will respond with 3 beeps (or the "Page Sent" prompt).

3.2.1 Accessing Wireless Receivers (via keypad or phone)

Follow these steps to send a voice message or a tone to a speaker:

1. For voice messaging, program a WPA device in to the VNS2500. For tone only messaging, program an alphanumeric device in to the VNS2500. Verify that the speaker capcode was programmed properly.

If accessing via phone, follow steps 2-3. Otherwise, skip to step 5.

2. Using another phone, dial the number of the telephone line or extension connected to the VNS2500.
3. The VNS2500 will answer the call with 1 beep (or the "Enter Device Number" prompt).
4. To send a voice message, enter a WPA device number as a 3 digit number (for example, "105"). If required, to send a voice message in a specific volume level, enter ***vppp** where:
v is the Volume (digit between 1 and 4)
ppp is the WPA device number
5. To send a tone, enter an alphanumeric device number as a 3 digit number (for example, "105").
6. The device number can be also entered without leading zeros but it will have to be followed by the # key.
 If the device number entered is not valid, the VNS2500 will respond with the 1 beep (or the "Invalid Device" prompt, for phone access only).

If accessing via phone, follow steps 7-8. Otherwise, skip to step 9.

7. The VNS2500 will respond with the 2 beeps (or the "Please Wait" prompt and shortly after that with the "Speak Message Now" prompt).
8. To send a voice message, speak your message.
9. To send a tone, , enter a message using the formats below:
 For encoders supporting up to 8 tones:
t is the Alert Type (digit between 1 and 8)
l is the Length (digit between 0 and 9)
v is the Volume (digit between 1 and 4)

d is the Delay (optional, digit between 0 and 9)

r is the Repeat (optional, digit between 0 and 9)

For example, to send tone 4 with length 7 in volume 6, enter ****9476**.

For encoders supporting more than 8 tones:

t is the Alert Type (two digits number between 1 and 15)

l is the Length (digit between 0 and 9)

v is the Volume (digit between 1 and 4)

d is the Delay (optional, digit between 0 and 9)

r is the Repeat (optional, digit between 0 and 9)

For example, to send tone 4 with length 7 in volume 6, enter ****80476**.

10. To send the message, press **#**.

The VNS2500 will respond with 3 beeps (or the "Page Sent" prompt, for phone access only).

Software

4.1 VisiDB

The optional VisiDB software allows you to program and backup the VNS2500 database and synchronize the VNS2500 date and time to a PC or network clock.

4.1.1 Connections

Follow these steps to connect the VNS2500:

1. Connect the provided serial cable to the **RS232** jack and the other end to one of the serial port on the PC. Make a note of the serial port used (COM1, COM2, etc.).
2. Install the programming software. Refer to **Software Installation** section for more information.

4.1.2 Software Installation

NOTE: The VisiDB software must be installed by the PC administrator or by a user with administrator privileges. The VisiDB software is compatible with Windows ME, XP and 2000.

Locate the VisiDB software CD-ROM and insert it to the CD-ROM drive on the PC. If the installation program doesn't start automatically within 5 seconds, use Windows Explorer to browse to the CD-ROM drive and then run the **VisiDB_Setup.exe** file.

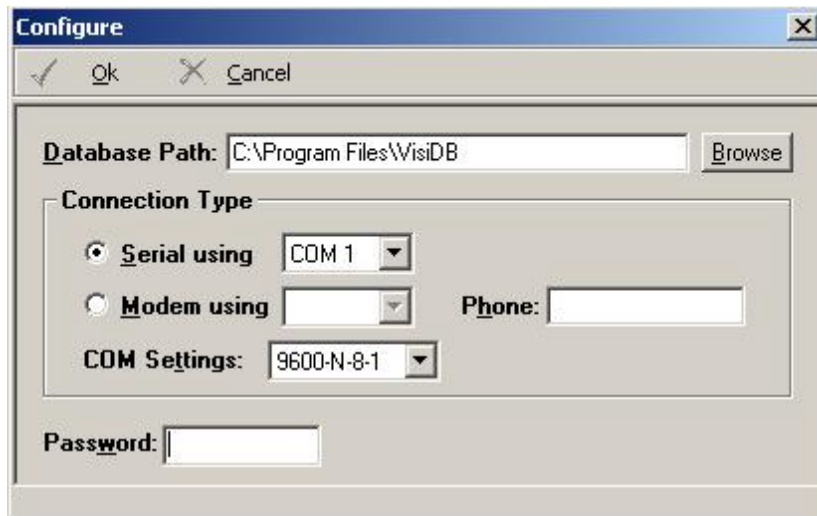
Press **Next** on each step until the installation process is completed.

4.1.3 Software Configuration

NOTE: VisiDB software must be used by a user with full access privileges to Windows **Program Files** folder. Depending on your operating systems and PC configuration, administrator privileges may be required in some cases while in other Standard or Power user privileges may be sufficient.

Follow these steps to configure VisiDB:

1. Make sure the VNS2500 is powered on and connected to the serial port on the PC.
2. Press the Windows **Start** button. Select **Programs, VisiDB** program group and then select **VisiDB**.
3. The Serial Number dialog will be displayed. Enter the serial number shown on the CD-ROM and press **Ok**.
4. Press **Ok** on the next dialog box.
5. Go to **File, Admin Login** menu. Since the default password is blank, just press **Ok**.
6. Go to **Setup, Configure** menu.
7. Set the **Database Path** where all files will be stored (the default is "C:\Program Files\VisiDB").
8. Set the **Connection Type**: Select the PC serial port connected to the VNS2500 (see **Connections** section). Set the **COM Settings** to **9600-N-8-1**. Press **Ok**.



9. To verify connection, go to **Help, About VisiDB** menu. The **Encoder Model** should show VNS2500 and the **Serial Number** should show the last 5 digits of the VNS2500 used. Press **Ok**. If this information is not displayed properly, verify all connections and go to step 6.



NOTE: To obtain further information and help for each screen, press F1 to display the online help.

4.1.4 Setting Date and Time from PC

Setting the VNS2500 date and time from a PC allows you to keep it's internal clock synchronized with the host PC time. This action can be performed manually or automatically as long as the VNS2500 is connected to the PC and VisiDB is running.

Follow these steps to set the date and time according to the date and time of the connected PC:

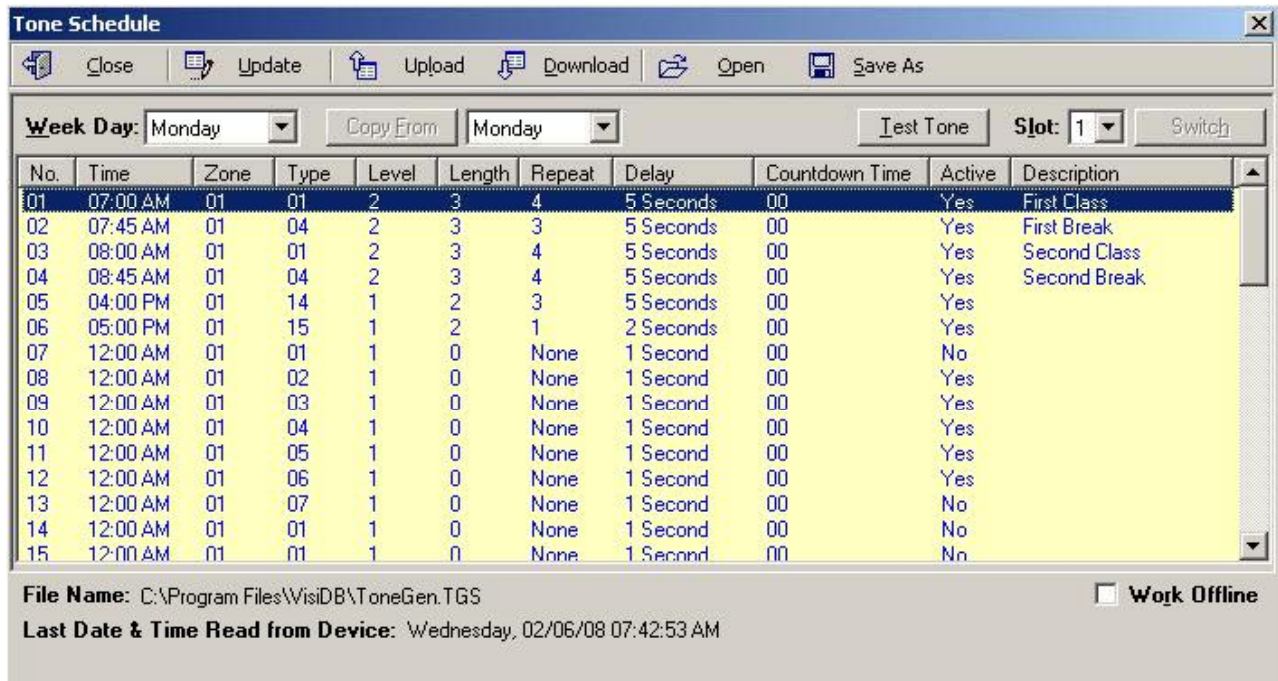
1. Make sure the VNS2500 is powered on and connected to the serial port on the PC.
2. Go to **Setup, Time Synchronization**.
3. To set the date and time, select **Set Date & Time from PC Now**. This will synchronize the time of the VNS2500 according the date and time on the PC.
4. To set the date and time periodically, select **Set Time from PC Automatically**. This will synchronize the time of the VNS2500 periodically according the date and time on the PC. The VNS2500 internal clock will be updated with this data and it will be used as the reference date and time sent any receivers. The automatic update is performed every hour.

4.1.5 Tone Schedule Programming

Follow these steps to program a schedule (see **IMPORTANT NOTES** at the end of this section):

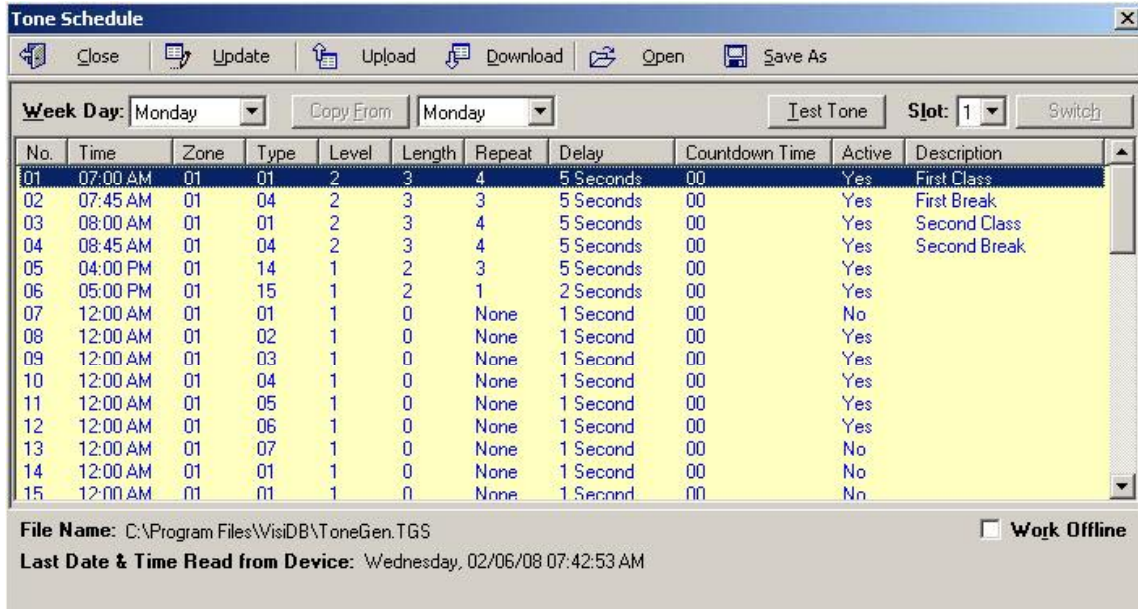
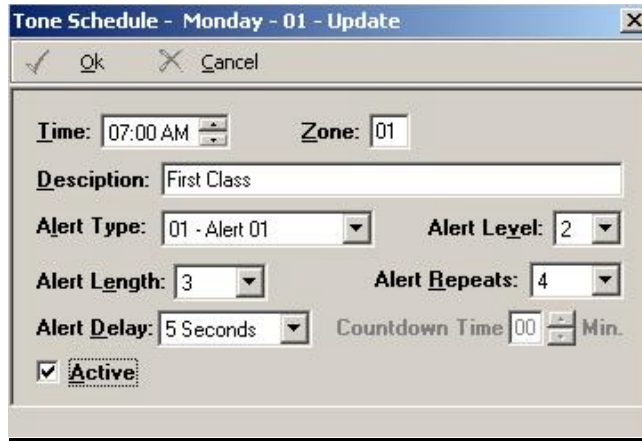
1. Make sure the VNS2500 is powered on and connected to the serial port on the PC.
2. Go to **File, Admin Login** menu. Enter password and press **Ok** (default password is blank).
3. Go to **Setup, Time Synchronization** menu. Select **Set Date and Time from PC Now**.
4. Go to **Setup, Tone Generator Programming, Schedule Programming** menu.
5. The **Tone Schedule** dialog box will be displayed. The last schedule file edited by the user will be retrieved from the hard drive and displayed. If this file does not exist, it will be automatically downloaded from the VNS2500. Below are the fields and functions description:

Close	Close the Tone Schedule dialog box
Update	Display a dialog box that allows updating the specific highlighted event on the schedule list (see step 5)
Upload	Upload the displayed schedule file in to the VNS2500 memory. This command will overwrite the existing programming of the selected schedule
Download	Download the active schedule from the VNS2500 memory to the PC
Open	Open and display previously saved schedule file. Note: The schedule is not active until uploaded to the VNS2500. Use the Upload command to program this schedule in to the VNS2500
Save	Save the displayed schedule to a file on the PC for later use
Week Day	Display the scheduled events for the selected day of the week
Copy From	Copy the daily schedule on to the selected Week Day (see step 6)
Test Tone	Test the tone programmed in to the highlighted event on the list.
Slot	Display the active weekly schedule. Also used to set active weekly schedule
File Name	Name of schedule file displayed
Last Date & Time Read from Device	Last date and time information read from the tone generator when this dialog was opened (usually used for troubleshooting)
Work Offline	Allows performing event updates to schedule file only without programming the VNS2500 (usually followed by the Upload command)

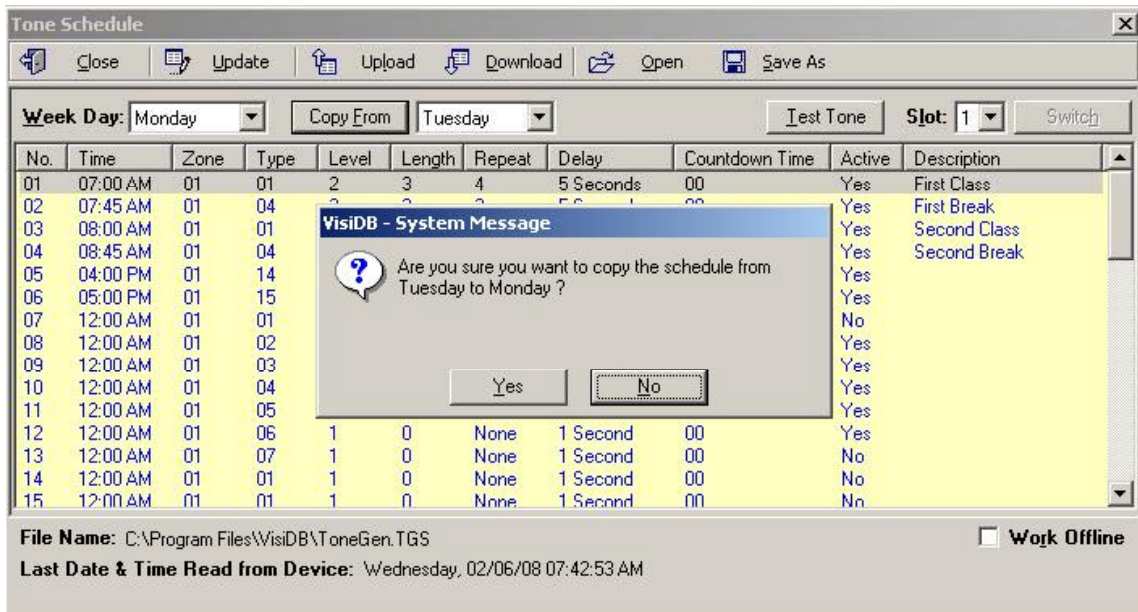


6. If the **Update** command is selected, the **Tone Schedule – Update** dialog box will be displayed. Below are the fields and functions description:

Ok	Update schedule file and tone generator (if connected) with changes
Cancel	Ignore all changes and exit
Time	Time of day in which a tone should be generated or dry-contact should be closed or opened
Zone	Define zone used for generating tones. The zone number represents a pager number from 001 to 099. For example, when generating a tone for zone 05, all wireless receivers programmed with the capcode of pager 005 will be activated.
Description	General friendly description for the updated event
Alert Type	Type of tone
Alert Level	Volume of tone
Alert Length	Length of tone (in some cases, created by repeating a shorter tone). Also used to determine the length of dry-contact closure or opening
Alert Repeats	Number of times to repeat the selected tone sequence (as determined by Type, Level and Length)
Alert Delay	Delay between each repeat of the tone sequence
Active	Determine if event is active. Non active events are stored but not executed

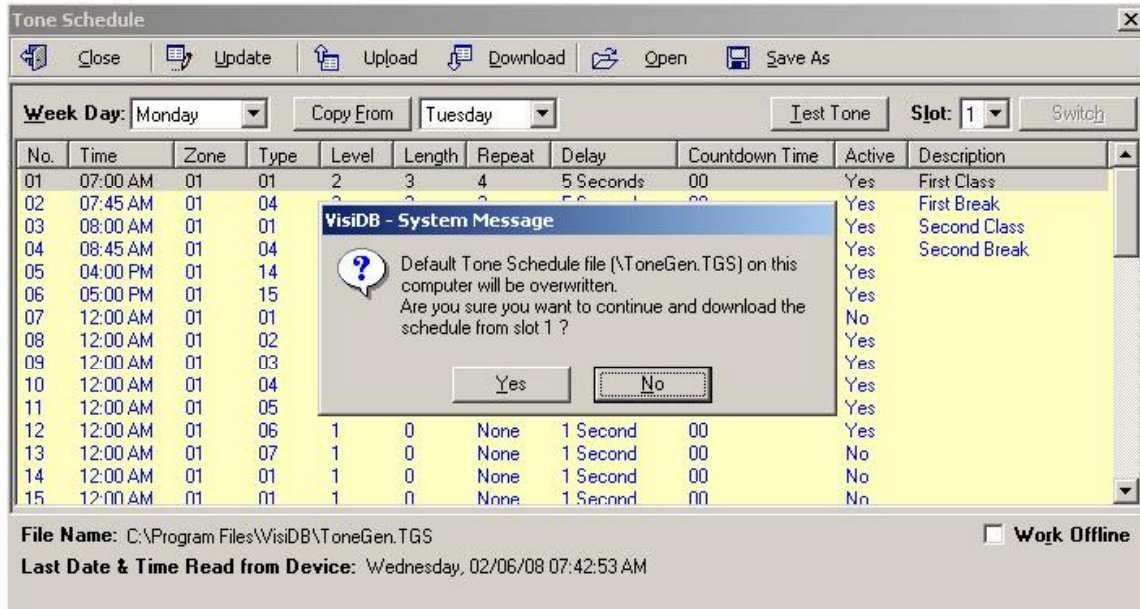


7. If the **Copy From** command is selected, the schedule will be copied from the selected day to the to the selected **Week Day**.

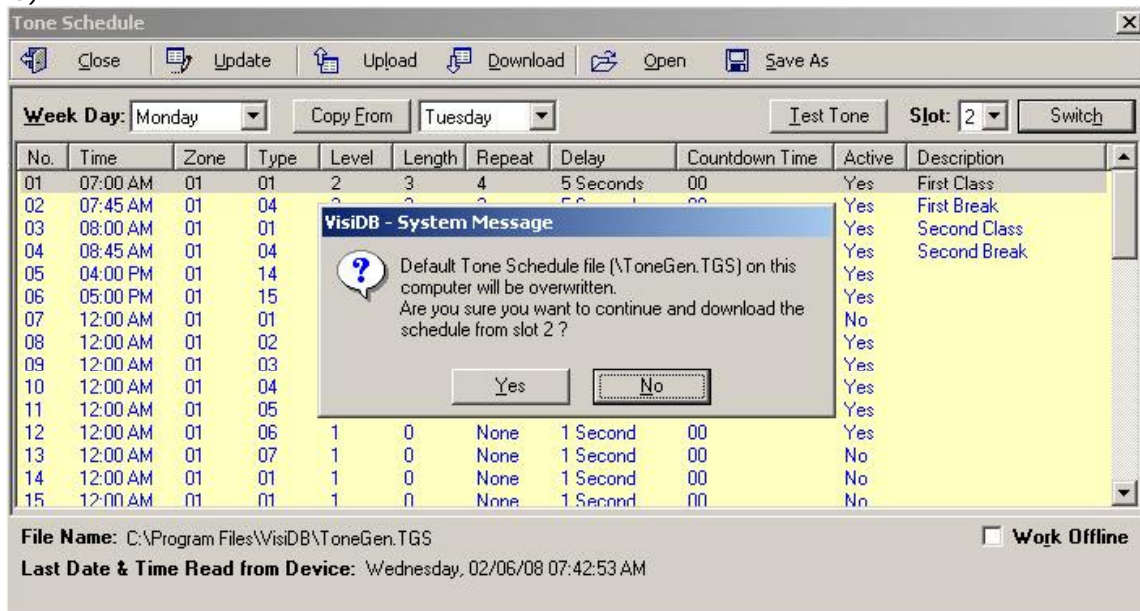


IMPORTANT NOTES

1. When the **Tone Schedule** programming screen is opened, it displays the last file that was edited by the user. It **DOES NOT** display the actual data stored in to the VNS2500.
2. To ensure the schedule displayed is same as programmed in to the VNS2500, always press **Download** after opening the **Tone Schedule** programming screen. This will download and display the active schedule from VNS2500. The schedule is downloaded and saved by default to the **ToneGen.TGS** file. Use the **Save As** to save the schedule under a different name.



3. All changes made are applied to the current active slot that represents the current active weekly schedule. Make sure you select the correct slot before using the **Update**, **Download** and **Upload** commands.
4. Every time the **Slot** is changed, the appropriate schedule is downloaded from the VNS2500 and displayed. Any changes made are programmed in to the VNS2500 immediately (if connected to the PC).



5. There is no need to press **Upload** after each change made. If the VNS2500 is connected properly to the PC, each modification made from the **Tone Schedule – Update** screen is applied immediately when you press **Ok**.

6. Use the **Upload** command to upload a schedule that was prepared while not connected to the VNS2500 or to program a schedule that was loaded using the **Open** command.
7. It is recommended that each schedule used will be downloaded from the VNS2500 and then saved to the PC hard drive with a name that will describe it appropriately. If required, saved schedules can be loaded to VisiDB using the **Open** command and then programmed in to the VNS2500 using the **Upload** command.
8. The execution of the schedule programmed in to the VNS2500 is dependent on the date and time stored in its internal clock. This clock **MUST** be kept accurate by either receiving time updates from a wireless time synchronization encoder (such as the TS2800) or from a PC connected to it via a serial port.

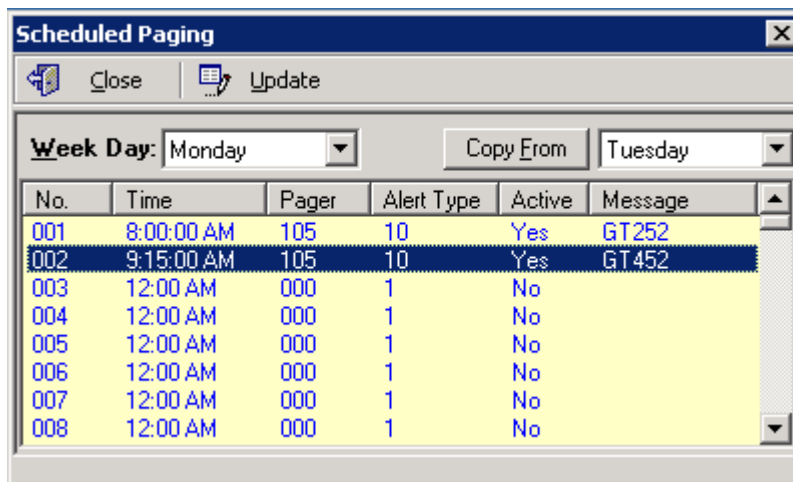
4.1.6 Scheduled Paging

Scheduled paging allows you to send tones or messages to device or speaker based on a preprogrammed schedule. This feature can be used as long as the VNS2500 is connected to the PC and VisiDB is running and the tones or messages are generated by the VisiDB software.

Follow these steps to set scheduled paging:

1. Make sure the VNS2500 is powered on and connected to the serial port on the PC.
2. Go to **File, Admin Login** menu. Enter password and press **Ok** (default password is blank).
3. Go to **Setup, Scheduled Paging** menu.
4. The **Scheduled Paging** dialog box will be displayed and the schedule file edited by the user will be retrieved from the hard drive and displayed. Below are the fields and functions description:

Close	Close the Tone Schedule dialog box
Update	Display a dialog box that allows updating the specific highlighted event on the schedule list (see step 5)
Week Day	Display the scheduled events for the selected day of the week
Copy From	Copy the daily schedule on to the selected Week Day (see step 6)



5. If the **Update** command is selected, the **Scheduled Paging – Update** dialog box will be displayed. Below are the fields and functions description:

Ok	Update schedule file and with changes
Cancel	Ignore all changes and exit
Time	Time of day in which a tone should be generated
Send to Device	Device number of the speaker to be accessed
Alert Type	Type of tone sent to the speaker. For more flexibility, use 10 – Freetext and enter Message Text using the GTtlv format where: t is the Alert Type (digit between 1 and 8) l is the Length (digit between 0 and 9) v is the Volume (digit between 1 and 4) For example, to send tone 4 with length 5 in volume 2, enter GT452 .
Active	Determine if event is active. Non active events are stored but not executed

Scheduled Paging - Monday - 002 - Update [X]

✓ Ok ✕ Cancel

Time: 09:15 AM ▾

Send To Pager: 105 Alert Type: 10 - Free Message ▾

Message Text: GT452

Active

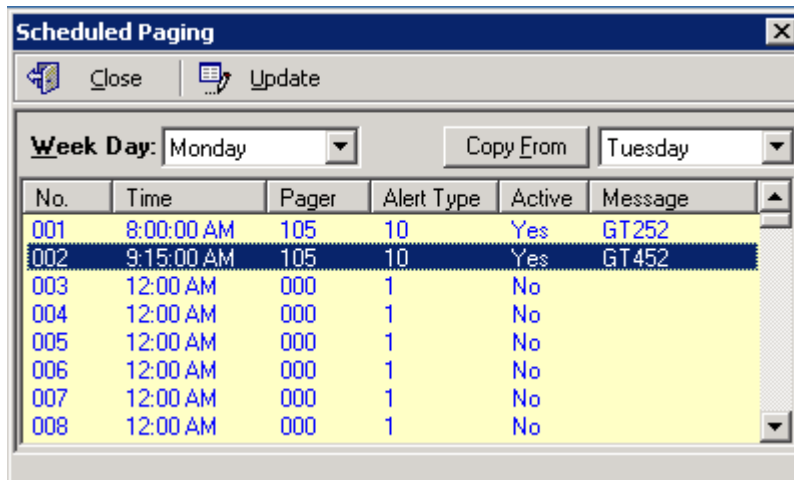
4.1.6 Scheduled Paging

Scheduled paging allows you to send tones or messages to wireless devices based on a preprogrammed weekly schedule. This feature can be used as long as the VNS2500 is connected to the PC and VISIDB is running and the tones or messages are generated by the VisiDB software.

Follow these steps to set scheduled paging:

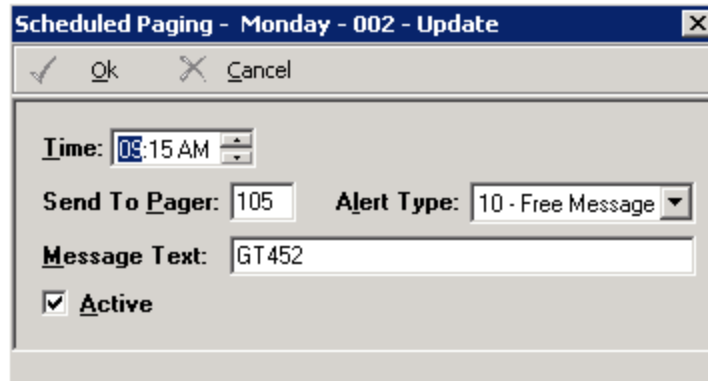
1. Make sure the VNS2500 encoder is powered and connected to the serial port on the PC.
2. Go to **File, Admin Login** menu. Enter password and press **Ok** (default password is blank).
3. Go to **Setup, Scheduled Paging** menu.
4. The **Scheduled Paging** dialog box will be displayed and the schedule file edited by the user will be retrieved from the hard drive and displayed. Below are the fields and functions description:

Close	Close the Tone Schedule dialog box
Update	Display a dialog box that allows updating the specific highlighted event on the schedule list (see step 5)
Week Day	Display the scheduled events for the selected day of the week
Copy From	Copy the daily schedule on to the selected Week Day (see step 6)



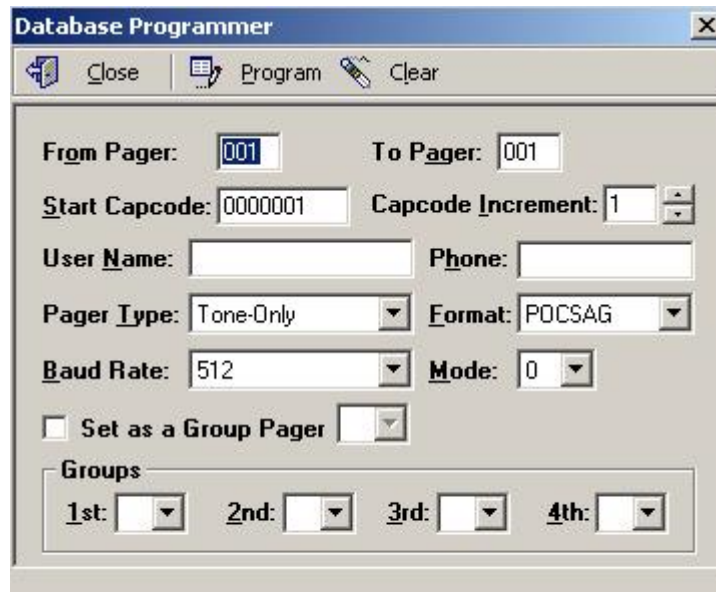
5. If the **Update** command is selected, the **Scheduled Paging – Update** dialog box will be displayed. Below are the fields and functions description:

Ok	Update schedule file and with changes
Cancel	Ignore all changes and exit
Time	Time of day in which a tone should be generated
Send to Device	Wireless device ID number to be accessed
Alert Type	Type of tone sent to the speaker. For more flexibility, use 10 – Freetext and enter Message Text using the GTtrv format where: t is the Alert Type (digit between 1 and 8) r is the Repeat (digit between 0 and 8) v is the Volume (digit between 1 and 4) For example, to send tone 4 with 5 repeats and volume 2, enter GT452 .
Active	Determine if event is active. Non active events are stored but not executed



4.1.7 Wireless Device Database Programmer

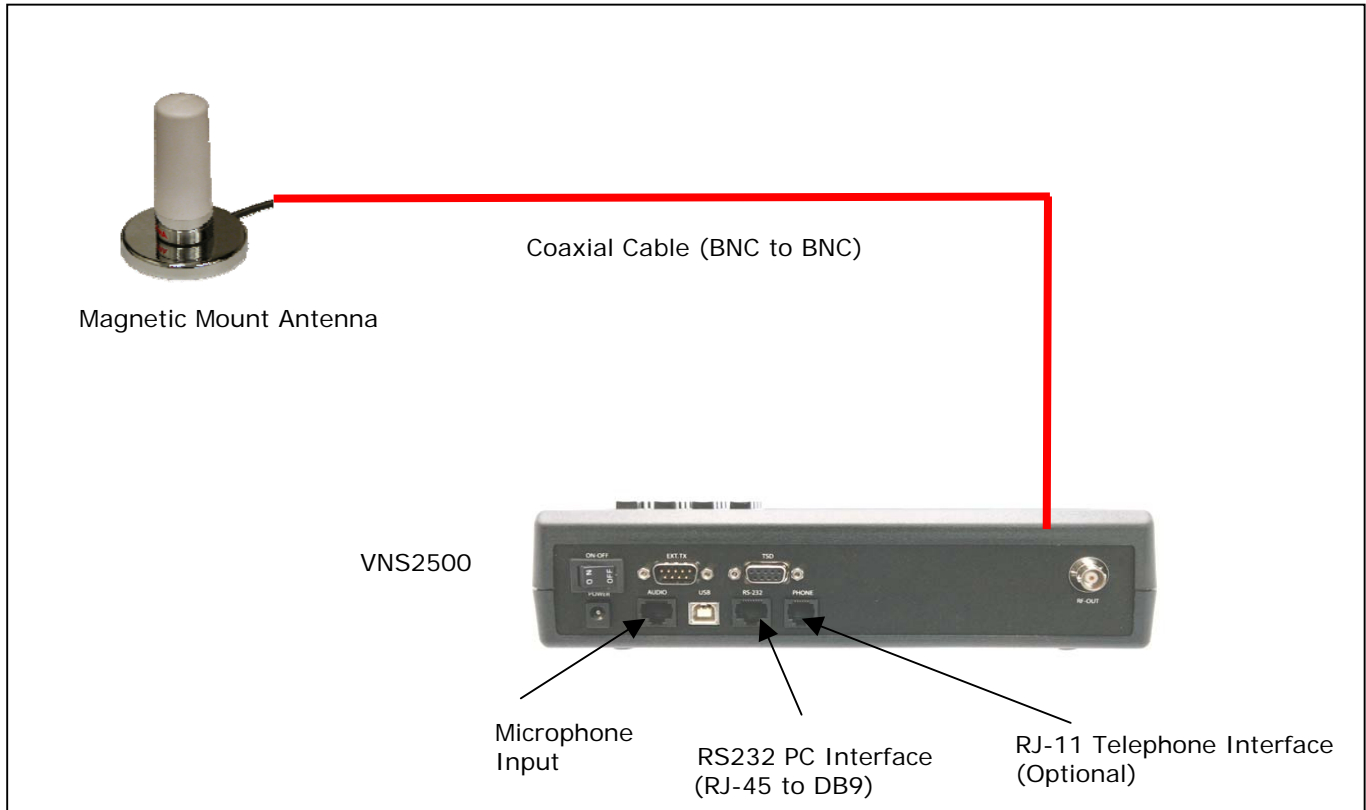
The Wireless Device Database Programmer allows you to add/edit a single or groups of wireless devices into the VNS2500 database. From the Devices menu of the main screen select the Device Programmer. The Wireless Device Database Programmer dialog box will be displayed.



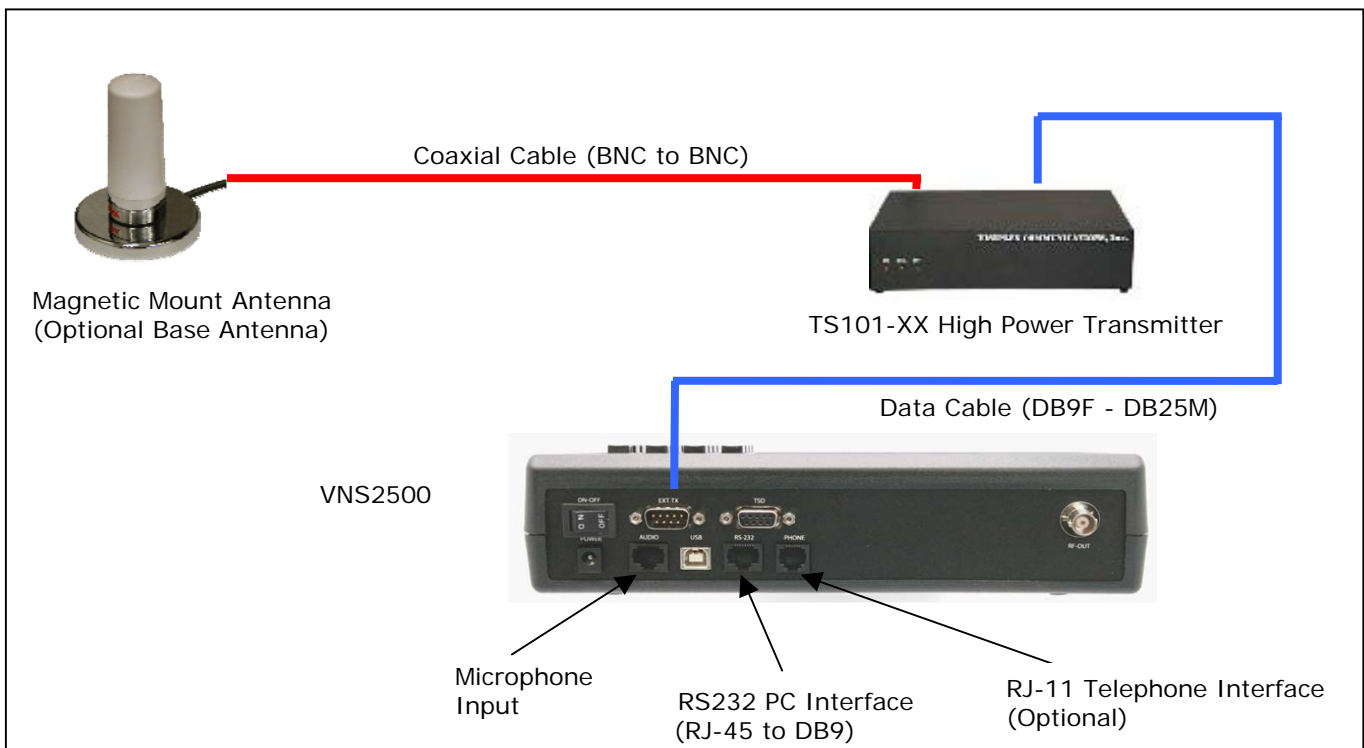
Enter the required information into the form and select the Program button to update/program the VNS2500 unit. To upload or download the device database from the VNS2500 to the PC use the Upload and Download options from the Devices Menu in the main screen.

Appendices

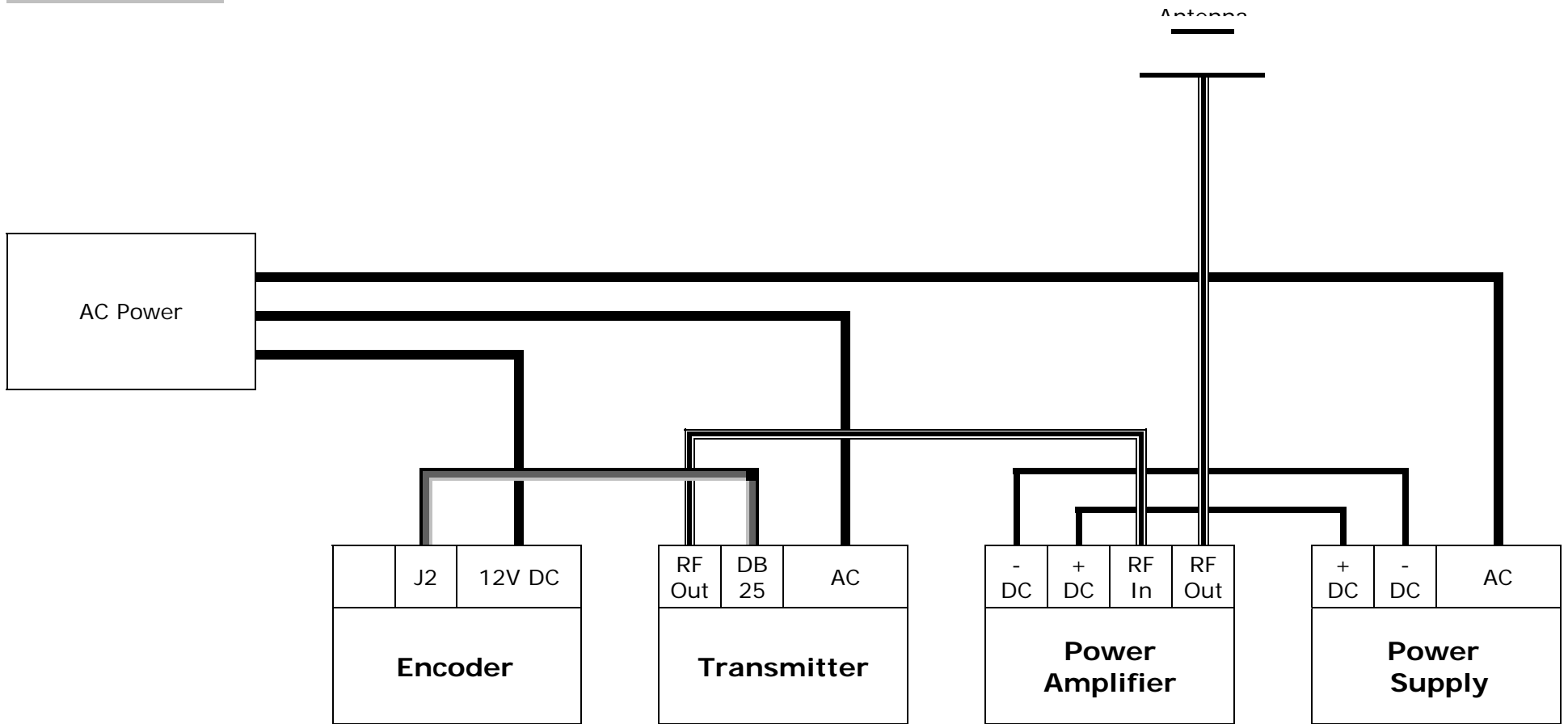
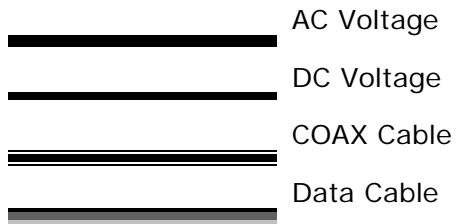
5.1 Appendix A – Installation Diagrams



Low Power System Installation Diagram



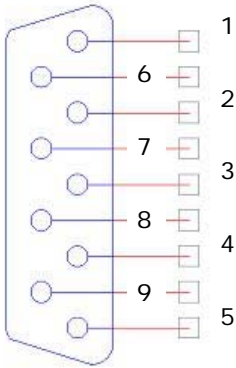
Medium/High Power System Installation Diagram



High Power System Installation Block Diagram

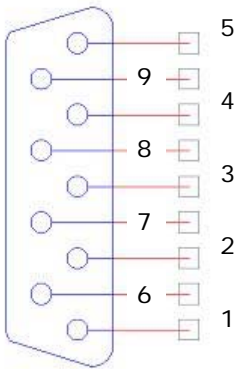
5.2 Appendix B – Connections, Wiring and Pin Out

5.2.1 External Transmitter Port Pin Out (EXT. TX)



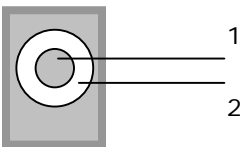
1 – DIGITAL DATA (OUT)	6 – DATA IN (IN)
2 – DIGITAL PTT (OUT)	7 – INHIBIT (IN)
3 – N.C.	8 – N.C.
4 – N.C.	9 – N.C.
5 – GND	

5.2.2 TSD Port Pin Out (TSD)



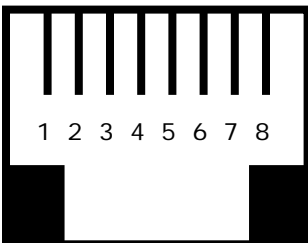
1 – PWR	6 – N.C.
2 – RX (RS232 IN)	7 – RTS (RS232 OUT)
3 – TX (RS232 OUT)	8 – N.C.
4 – DSR (RS232 OUT)	9 – N.C.
5 – GND	

5.2.3 Power Port Pin Out (POWER)



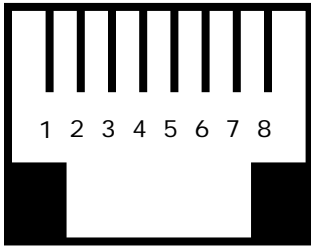
1 – POS (CENTER)
2 – GND

5.2.4 Audio Port Pin Out (AUDIO)



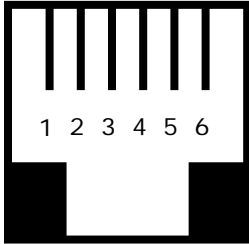
1 – N.C.	5 – GND
2 – N.C.	6 – N.C.
3 – MIC PTT (IN)	7 – N.C.
4 – MIC AUDIO (IN)	8 – N.C.

5.2.5 Serial Port Pin Out (RS-232)



1 – N.C.	5 – GND
2 – TX (OUT)	6 – DSR (OUT)
3 – RX (IN)	7 – GND
4 – N.C.	8 – N.C.

5.2.6 Phone Port Pin Out (PHONE)



1 – N.C.	4 – RING
2 – N.C.	5 – N.C.
3 – TIP	6 – N.C.

General Information

6.1 Specifications

Encoder

Frequency Range	VHF: 148-174 MHz, UHF: 403-433 MHz, 438-470 MHz
Data Baud Rate	512, 1200, 2400 BPS
Paging Format	POCSAG, Narrow or Wide Band
Paging Type	Voice, Tone, Numeric, Alphanumeric
Channel Spacing	12.5 kHz or 25 kHz
Power	AC Adaptor - Input: 100-240VAC, 50/60Hz Output: 12VDC, 3A
Approvals	UL/CSA listing
Operating Temperature	32° to 104° F / 0° to 40° C
Storage Temperature	14° to 140° F / -10° to 60° C
Operating Humidity	10%-65%
Dimensions (W x H x D)	7.5" x 1.75" x 5.0" / 190mm x 45mm x 127mm
Weight	2.10 lbs.
Warranty	1 Year, Parts and Labor

Internal Transmitter

RF Power Output	VTX-8: 8W
Modulation	Data and Tone: ± 3.5 kHz, Voice: ± 5.0 kHz
Frequency Stability	$\pm 0.0025\%$, -22° to 140° F / -30° to 60° C Reference Temperature: 77° F / 25° C
FM Noise	Minimum 40dB below ± 3.0 kHz deviation at 1000 Hz
Spurious & Harmonic	75 dB
FCC Registration	AIERIT11-450

Telephone Line

Input Impedance	600 Ω Nominal (Off-Hook)
Line Type	Line Level (End to End Station Level), DTMF
Telephone Audio	DTMF Receive Level Dynamic Range: -26 dBm minimum DTMF Receive Frequencies Tone (Nominal, $\pm 1.5\%$, ± 2 Hz): 697, 770, 852, 941, 1209, 1336, 1477, 1633

6.2 Warranty

Unless otherwise specified at the time of original purchase, all equipment is warranted as to quality and performance for one year from the date of original shipment from our factory.

This factory warranty covers all parts, software, and/or labor (as specified at time of purchase) at our factory, as well as return shipping to you, the customer, but does not apply to any batteries or other damage resulting from abuse of the equipment. Warranty coverage excludes free replacement of cosmetic items such as clips, logos, etc.

The warranty is void if:

1. There is evidence of abuse to the equipment (i.e., corrosion, unusual physical damage, signs of exposure to temperatures outside the range of specifications, etc.)
2. The equipment contains an unauthorized modification.
3. Identification numbers on the printed circuit boards or chassis have been altered or removed.
4. Evidence of the product having been exposed to or submerged in water.
5. Equipment is damaged through acts of God, including, but not limited to: flood, lightning, hurricane, tornado, sustained high winds, acts of war, natural disasters, etc.

Should you experience problems with any product, we would suggest consulting your system or clock maintenance guide to correct any routine problems such as replacing batteries, cleaning contacts, checking AC voltage, etc.

If the problem persists, please call our technical support department for additional assistance, remote diagnostics help, etc.

If your product must be returned for repair, our technical service department will provide you with a Returned Material Authorization (RMA) number and any other special instructions that will allow the repair to be handled as quickly as possible.

All non-warranty products require a purchase order number in addition to an RMA number for repair work to be started.

For more information, or to obtain technical assistance on any warranty or non-warranty product, please write, call, fax or email to:

Visiplex, Inc.

100 N Fairway Drive, Suite 120

Vernon Hills, IL 60061

Phone: (847) 918-0250 or (877) 918-7243

Fax: (847) 918-0259

E-mail: support@visiplex.com

Website: www.alertwave.com

Business Hours: Monday-Friday, 9:00 AM - 5:00 PM Central Time.