TELEX Application Note

Vertex Standard
VX-5500 Series Radios to
223 Series Adapter Panels

VOIProven TELEX Radio Dispatch

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Vertex Standard VX-5500 Series Radios to 223 Series Adapter Panels

1.0 General

This application note is intended to assist technical staff with cable assembly, software configuration and hardware setup of different 223 series adaptor panels (TRA-223, DSP-223 and IP-223) to the Vertex VX-5500 series mobile radio.

2.0 Interconnect Cable Assembly

A cable assembly is required to connect to the DB-25 pin accessory connector of the Vertex VX-5500 to the various 223 series adapter panels.

Use Table 1 to manufacture this cable assembly.

TABLE 1. Cable Assembly Pin Outs

TRA-223 DB-25 Pin	DSP-223 DB-25 Pin	IP-223 DB-25 Pin	VX-5500 DB-25 Pin	Signal
25	25	25	13	MIC+
24	24	24	17	RX +
14	14	14	11	PTT
7	7	7	7	GND
	8	8	3	D0
	21	21	4	D1
	9	9	5	D2
	22	22	6	D3

NOTE: The pins in the gray shaded cells are for Vertex frequency changes.

3.0 223 Series Panels

3.1 TRA-223 Setup

3.1.1 TRA-223 Dip Switch Settings

Set the front panel dip switch for the following settings:

Positions 4, 6 and 7 are on.
Positions 1, 2 and 3 are for selecting 2- or 4-wire operation.

REFERENCE: For more information, see the TRA-223 Technical Manual (P/N 803570).

3.2 DSP-223 Software Setup

To **configure the DSP-223 for channel change using digital outputs**, do the following:

1. Open the **DSP-223** application.
   The DSP-223 Configuration Application window appears.
2. In the Digital Output field for function tone 1, enter **1**.
3. In the Digital Output field for function tones 2–10, **increment each digital output value by 1**.

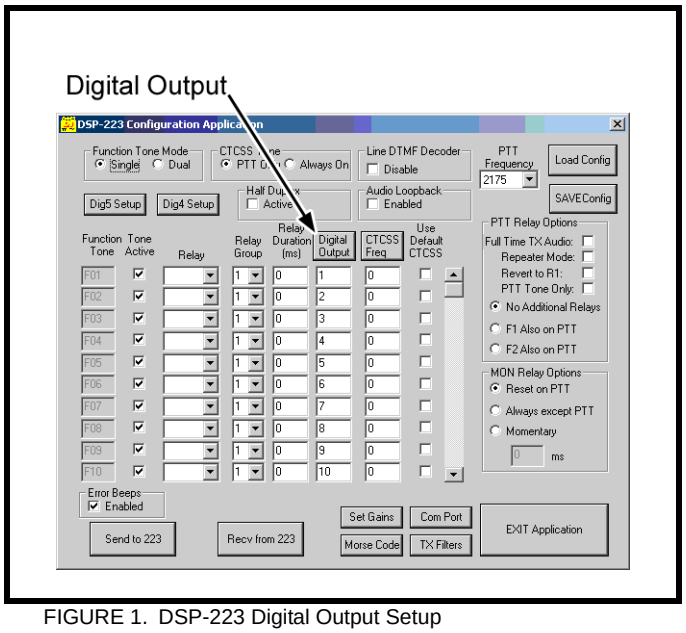

FIGURE 1. DSP-223 Digital Output Setup

3.2.1 DSP-223 Jumper Settings

To set the DSP-223 jumpers, do the following:

1. Set the following jumpers to the **A position**:
   - J14, J15, J22, J23, J24, J25, J27.
2. Set the following jumpers to the **B position**:
   - J12 and J13.
3. Solder close **JP2**.
4. Set J16 to the **center pin** (hanging).
5. For selecting **2- or 4-wire operation**.
   - J19, J20 and J21

REFERENCE: For more information see the DSP-223 Technical Manual (P/N 803274), DSP to Console Line Connection section. This document is available for download at www.telex.com/Downloads/.

3.3 IP-223 Setup

Configure the IP-223 software and jumper settings.

3.3.1 IP-223 Software Settings

To **configure the digital output,** do the following:

1. Open **TSM**.
2. In the Processed Devices pane, select the **IP-223** to configure.
3. Click the **Per Line Setup** tab.
   The Per Line Setup page appears.
4. Select the **Local** radio button for the channel to configure.
5. Click **Configure**.
   The Per Line Setup notebook appears.
6. In the Digital Output drop down menu for Function Tone 1, select **1**.
7. In the Digital Output drop down menu for Function Tones 2–10, **increment each digital output field by a value of 1**.

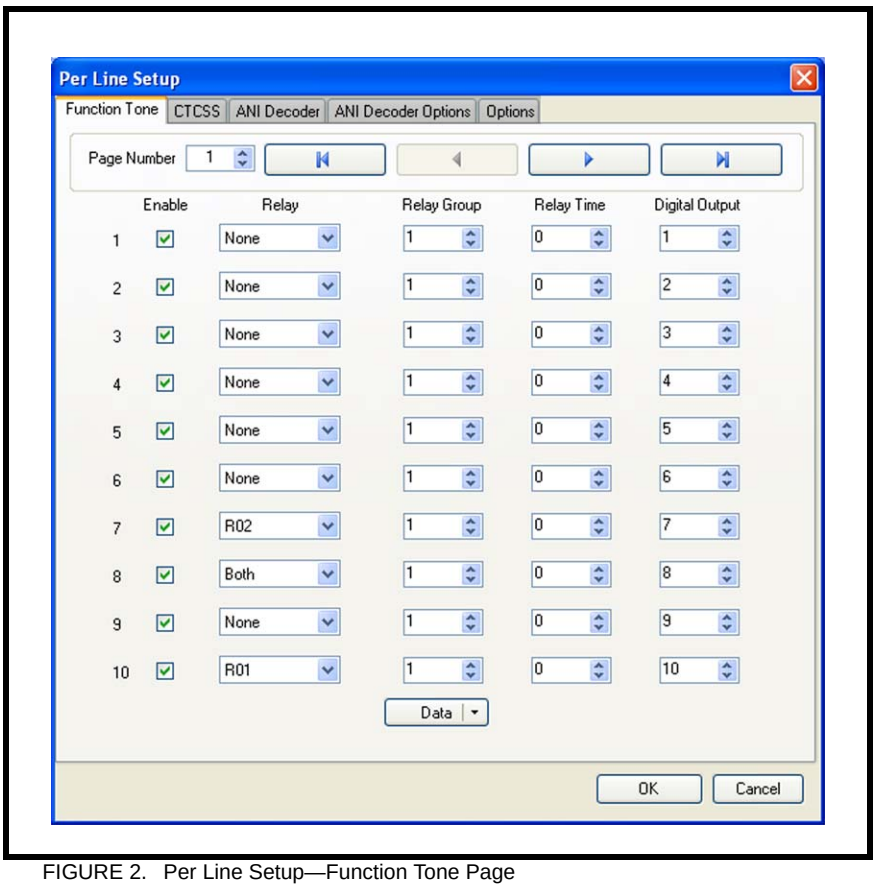

FIGURE 2. Per Line Setup—Function Tone Page

To **configure COR setup**, do the following:

1. From the Per Line Setup notebook, click the **Options** tab.
   The Options page appears.
2. Select the **LAM Enabled** check box.
3. Select the **PTT Notch Filter** check box.
4. Select the **RxAGC** check box.

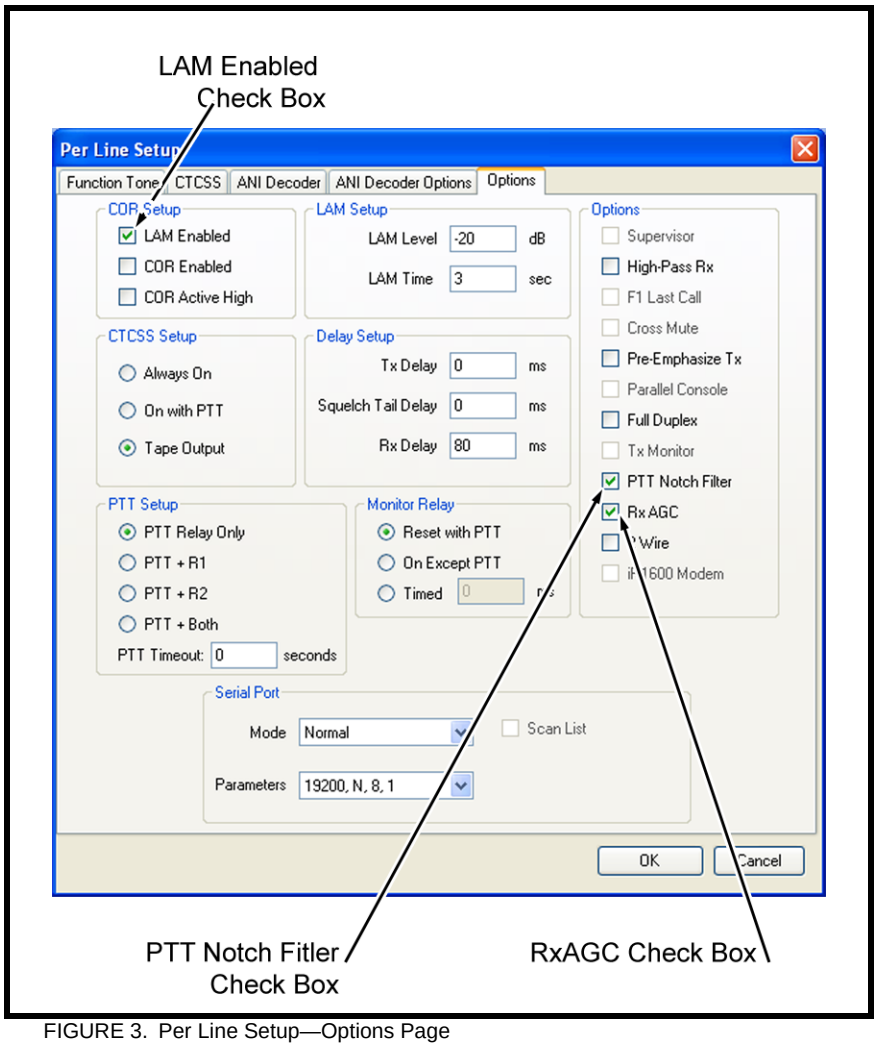

FIGURE 3. Per Line Setup—Options Page

3.3.2 IP-223 Jumper Settings

Use Table 2 to configure the IP-223 jumper settings.

TABLE 2.

Line 1	Jumper Setting	Line 2
J33, J34	B = 4-Wire	J5, J6
J16, J21	A= Single Ended	J19, J20
J14	Hanging on center pin = 10K Ohm	J24
J3, J9, J11	A = Single Ended	J25, J28, J29
J13	B = High	J27
J17, J22	B = 600 Ohms	J10, J15
J8	Hanging on enter pin = No pull-up voltage	J30

4.0 Radio Configuration

4.1 Configure the DB-25 Ports

To **configure the DB-25 ports for channel change**, do the following:

1. Open the **Vertex Standard** application.
2. Select **Common|DSUB-25** from the menu bar.
   The DSUB-25 connector window appears.
3. Click the **Input port** tab.
4. From the Select drop down menu, select **None**.
5. From the DSUB-03 drop down menu, select **CH SW0**.
6. From the DSUB-04 drop down menu, select **CH SW1**.
7. From the DSUB-05 drop down menu, select **CH SW2**.
8. From the DSUB-06 drop down menu, select **CH SW3**.
9. From the DSUB-16 drop down menu, select **None**.

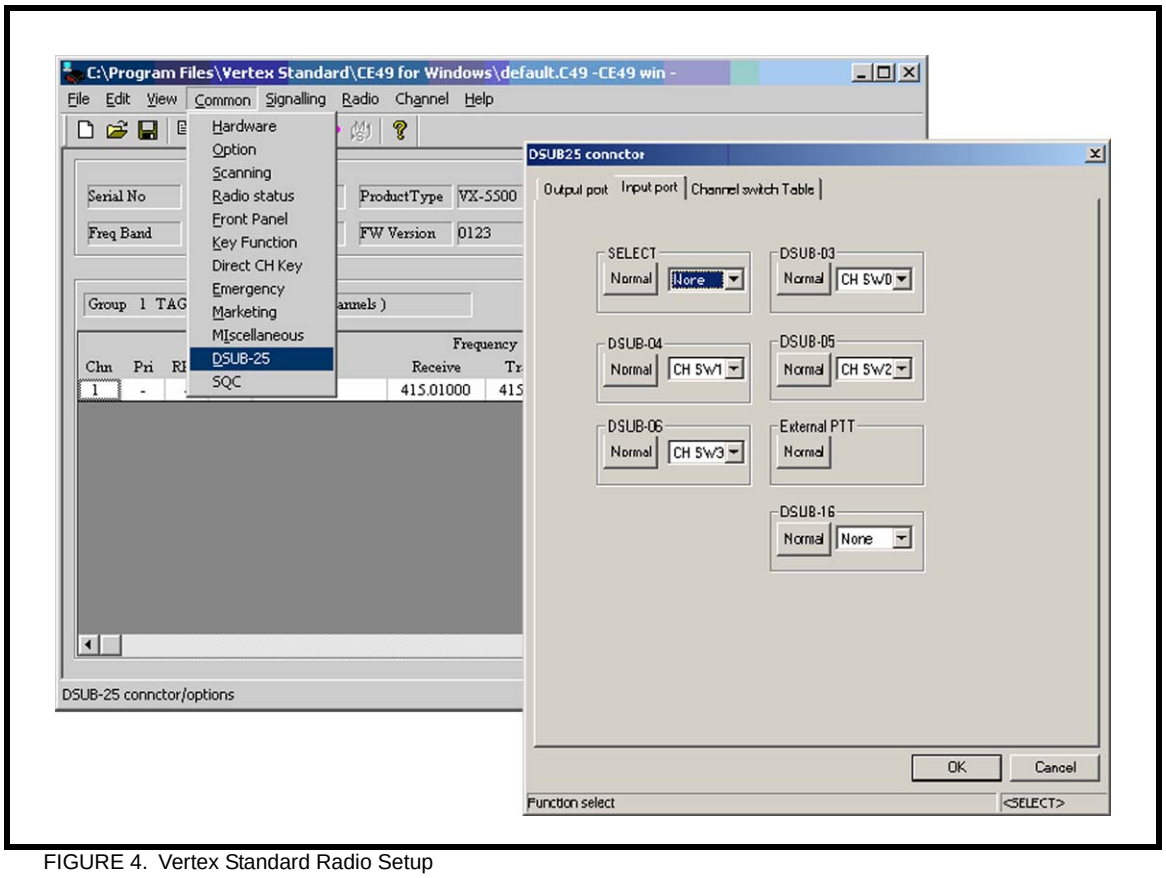

FIGURE 4. Vertex Standard Radio Setup

4.2 Configure the Channel

To **set the desired channel/frequency**, do the following:

1. From the DSUB25 connector notebook, click the **Channel switch Table** tab.
2. From the Channel tag drop down menu for the group you are configuring, select the desired **channel**.
3. Save the **radio configuration**.

NOTE: Up to 16 different groups can be configured.

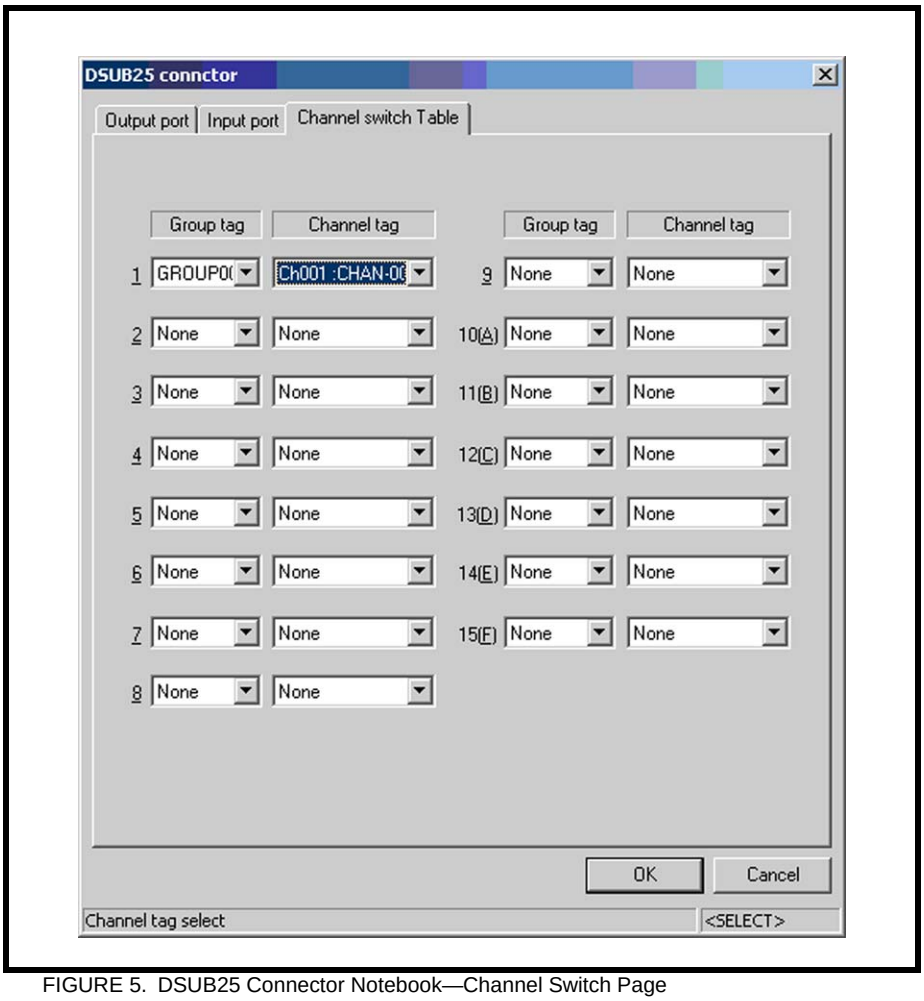

FIGURE 5. DSUB25 Connector Notebook—Channel Switch Page

NOTES:

Revision History		
Document Title: Vertex Standard VX-5500 Series Radios to 223 Series Adapter Panels		
Document Number: AN-DISPATCH-028		
Revision	**Change Description**	**Date**
A	Update brand, format and new document number. (From rev A)	01-OCT-2009

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