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# Technical Note

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## USING THE DIGITAL INPUT OF THE DIGIGRAM VXPOCKET



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## TN003 Using The Digital Input Of The Digigram VXpocket

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### 1 Introduction

The Digigram VXpocket is a high quality PCMCIA soundcard, which gives excellent results when used with Dirac. Due to incompatibilities between the VXpocket driver software and Dirac, it is not possible to calibrate the digital input of the VXpocket. This technical note describes a procedure that will allow you to use the digital input as if it were calibrated.

### 2 Problem background

To understand why Dirac cannot calibrate the digital input, it is important to know that during the soundcard calibration process, Dirac is continuously recording the signal at its input, while generating many different signals (e.g. different volume settings) at its output. The VXpocket however, will not allow a recording to be started when no valid signal is present at the (digital) input. Once a recording has started (because a valid signal was actually present), the signal can be removed from the input at any time without any problem, hence the recording will continue.

Starting with playback of the calibration signal followed by a start of the recording will also not work, because the VXpocket will not allow a (digital) recording to be started when an active signal is present on its (digital) output (which is connected to the input).

### 3 Caution

The procedure described in this document involves making changes to the registry of your computer. Although all changes are confined to a relatively safe registry hive (HKEY\_CURRENT\_USER), care should be exercised to prevent undesired changes. Note that if there is an error in your registry, your computer may not function properly.

### 4 The Procedure

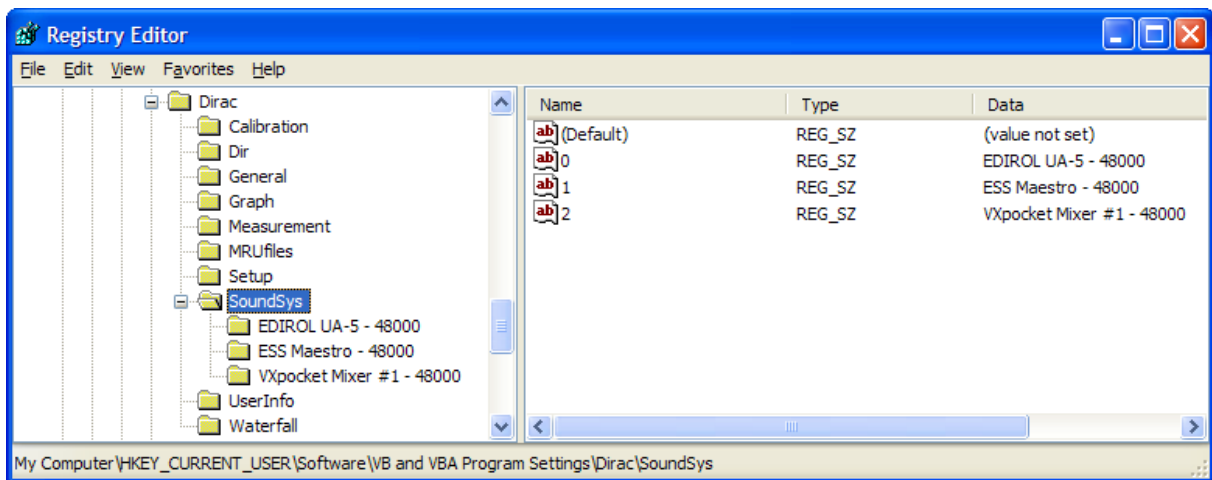
It is assumed you are using Dirac version 2.5 or later.

1. Perform a normal soundcard calibration for the analogue line-in and line-out channels at the desired sample frequency, if you have not already done this.
2. Start the registry editor (regedit.exe), and open the following key in the left pane:  
**HKEY\_CURRENT\_USER\Software\VB and VBA Program Settings\Dirac\SoundSys**

In the right hand pane, you will see one or more calibration names. You will find these values in the soundcard calibration selection listbox in the options dialog of Dirac. A typical value is

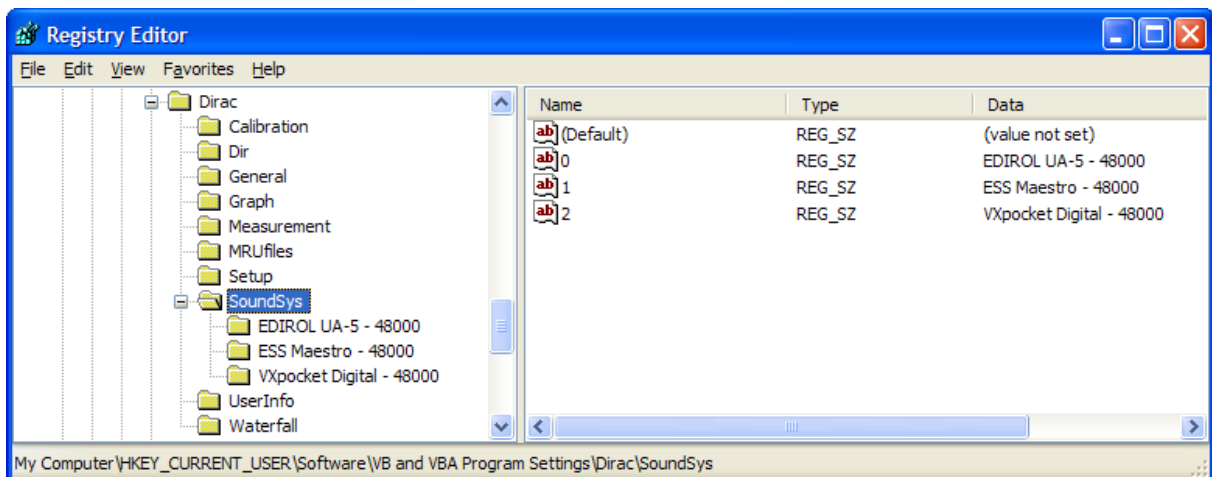
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named: **VXpocket Mixer #1 – 48000**. The number at the end (48000) indicates the sample frequency at which the calibration was executed.



Under the key ...\**SoundSys** you will see several subkeys that have the same names as the calibration names in the right hand pane. These subkeys contain the actual calibration data.

3. Change the value of the calibration to a new recognizable name such as: **VXpocket Digital – 48000**.
4. Rename the corresponding subkey under ...\**SoundSys** to the name entered in step 3.
5. Open the subkey that was renamed in step 4.



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For the next step, you will need the log file that was created during the soundcard calibration. This file can be found in the Calibration directory in the Dirac program directory (normally: **C:\Program Files\AE\Dirac\Calibration**), and contains the string changed in step 4 in its name. In the example used here, the name would be **CalibrationLog VXpocket Mixer #1 48000.txt**. The top section of this file contains a representation of the structure of the mixer devices present in your system. Note that your system may contain multiple sound devices.

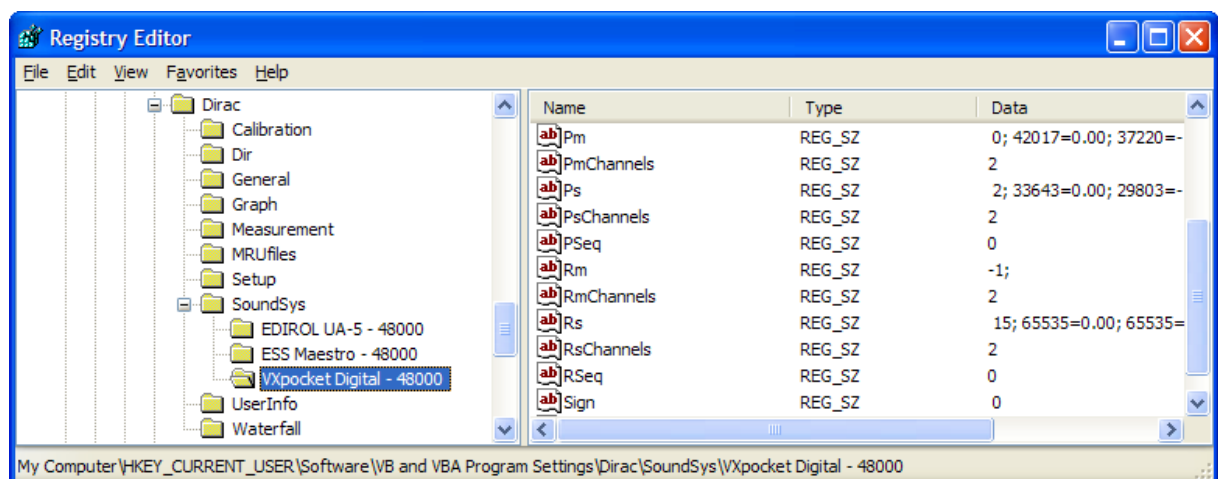
- In the calibration log file, find the mixer description pertaining to the VXpocket. This description starts with the calibration name:

```
Mixer /VXpocket Mixer #1/ Destinations:4
```

The input section of the VXpocket mixer will contain lines like the following:

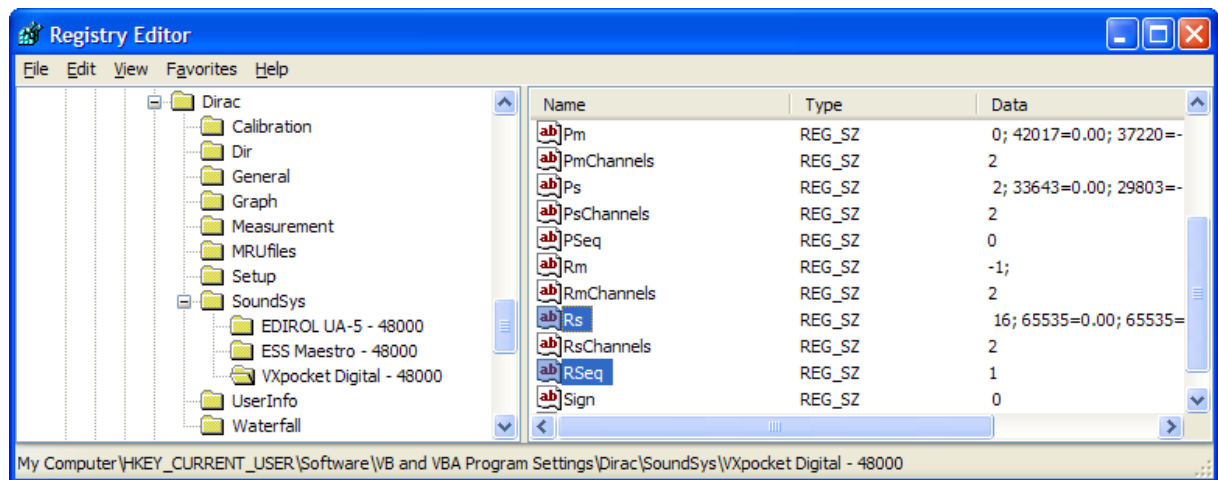
```
Destination (-65534) Wave In/Wave Input/ Connections:2,Controls:4,Channels:2
Ctrl (10) Record Source/Monitoring/ Type:Mux,UNIFORM,MULTIPLE,Items:2
Ctrl (11) Record Peakmete/Monitoring/ Type:PeakMeter
Ctrl (12) In Reserved 1/Monitoring/ Type:UnsignedMeter
Ctrl (13) In Reserved 2/Monitoring/ Type:UnsignedMeter
Source (131074) Analog In/Analog Input/ Controls:1,Channels:2/ Comp:Line
Ctrl (15) Line Volume/Analog Input/ Type:Volume
Source (196610) Digital In/Digital Input/ Controls:1,Channels:2/ Comp:Digital
Ctrl (16) Digital Volume/Digital Input/ Type:Volume
```

- In the registry, find the value named: **Rs**. The first number in the string contained in this value should be the same as the control number for the analogue line volume, which is 15 in the example given above.



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8. Change the control number in the registry to the control number for the digital input, which is 16 in the example above.
9. In the registry, find the value named **RSeq**. This value is the (zero based) sequence number for the recording source of the input destination. In the example above, the Analog Input is the first source for Wave In, resulting in sequence number 0.
10. Change the sequence number to that of the Digital In source, which is 1 in the example above.



## 5 Final remarks

After having performed these steps, you should be able to record using the digital input of the Digigram VXpocket. The procedure described above, actually modified the calibration for the analog input. The calibration for the analog input should therefore be performed again.

Note that in order to start a recording on the digital input of the VXpocket, a valid signal with the selected sample frequency should be present at the input. Dirac will start recording as soon as the measurement window is opened, and will stop recording when this window is closed again.

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