PROAS - Pro AudioSpectrum Initialization Program

Syntax

```
proas [D:# Q:# S:#,###,#,# M:#,###,# J:# V:# T:# W:# G U X R]
```

The syntax for the **proas.exe program** is the same as the syntax for the **mvsound.sys device driver**. Not all options are valid for all PAS products.

Options

`B:###` -	# = **Board** Base Port **Address**	mvsound default: **388h**
`D:#` –	# = **DMA** Channel	mvsound default: **1**
`Q:#` –	# = **IRQ** Channel	mvsound default: **7**
`S:#` –	# = **SB** on/off,port,dma,irq	mvsound default: **1,220h,1,5**
`M:#` –	# = **MPU** on/off,port,irq	mvsound default: **0,330h,2**
`J:#` –	# = **Joystick** on/off, 1/0	mvsound default: **1**
`V:#` –	# = **Volume** Level, 0-100 (%)	mvsound default: **80**
`T:#` –	# = **Clock** Source, 0/1, 14/28 MHz	mvsound default: **0**
`W:#` –	# = Allow **Warm** Boot, 1/0, on/off	mvsound default: **1**
`G` –	Increase **Gain**	mvsound default: **off**
`U` –	**Unload** driver after configuration (not used in proas.exe)	
`X` –	**display** PAS configuration found	
`R` –	**reset** PAS (not available in mvsound.sys)	
`?` –	this **help** (not available in mvsound.sys)	

Operation

The **proas.exe program** is the exact same code as the **mvsound.sys device driver**, except assembled to be a run-time executable.

Use the program to **locate** and **initialize** the Pro AudioSpectrum, **reconfigure** such, or to simply **report** the existing configuration.

Only those options specified are used; default values are not used in their absence to eliminate unwanted reconfiguring.

Users can use this program in their autoexec.bat file instead of mvsound.sys in your config.sys file, to ready the hardware for use without keeping the device driver in memory, if the DOS mixer

is not required. You can use the 'U' (unload after configuration) with the device driver to accomplish the same thing; proas.exe lets you reset any of the board parameters at any time.

Note: this program is not a replacement for the "mvsound.sys" program, in that it does install the device "mvproas", does not maintain a hardware state table, and so can not provide mixer control.

This program is merely a "board-programmer", and is provided to you so that you have additional control over your new hardware.

Usage

Use the **proas.exe** program to **configure** the **PAS** and its components.

This can be especially useful when first **installing** the board, as it allows you to install the board, power up the computer, then manually **wake** it up, **configure** it, and then **test** its performance.

You can "**reset**" the board to an **uninitialized** state, which is when **troubleshooting** systems.

You can change **DMA**, **IRQ**, and other parameters at the **command line**. With MV101 Chip **Rev D** boards, the board is completely configured from software; proas.exe allows you to set and then change these parameters from the command line, at any time.

It is possible to program the board to **different parameters** than those known by the **mvsound.sys** device driver. That is, the DMA channel may be set in **config.sys** to **5**, and then changed by **proas.exe** to **3**; **playfile.exe** would use **5** (the value known to mvsound.sys), but can be given a command line parameter to use **3** (the value set by proas.exe), which is very useful when troubleshooting systems.

Examples

Simply entering the program name generates a **hardware configuration report**. Of significant interest is the **PCB**, or **Product/Chip/Board** code:

```
C:> proas

Media Vision Pro Audio Spectrum Family, version 03.15
Copyright (c) 1991,1992. All Rights Reserved.
Spectrum Information:                        PCB: 3.4.1
        IO port:    0388
        IRQ #:      05
        DMA #:      03
Thunder Board Information:
        Active:     FF
        Port:       0220
        IRQ #:      00
        DMA #:      00
MPU 401 Emulator Information:
        Active:     00
        Port:       0330
        IRQ:        00
The board has a 16-bit DAC.
We have the MV101 chip.
MV 508 Mixer.
The FM chip is an OPL3.
The SCSI interface is special.
```

The "**?**" option to the program causes a display of the command line options, which should be similar to those described above:

```
C:> proas ?
... displays command line options ...
```

The "**r**" option "**resets**" the board, which then requires it to be "woken up" as though it were just powered up. Note that the IRQ/DMA for the Spectrum is "**FF**", indicating "unknown":

```
C:> proas r x

Media Vision Pro Audio Spectrum Family, version 03.15
Copyright (c) 1991,1992. All Rights Reserved.
Spectrum Information:                      PCB: 3.4.1
        IO port:    0388
        IRQ #:      FF
        DMA #:      FF
Thunder Board Information:
        Active:     00
        Port:       0200
        IRQ #:      00
        DMA #:      00
MPU 401 Emulator Information:
        Active:     00
        Port:       0300
        IRQ:        00
The board has a 16-bit DAC.
We have the MV101 chip.
MV 508 Mixer.
The FM chip is an OPL3.
The SCSI interface is special.
```

The following sequence of commands 1) **resets** the board, 2) **wakes up** the board, 3) sets the **volume**, 4) sets the Spectrum **DMA/IRQ**, and finally 5) sets the **SB PORT/DMA/IRQ**:

```
C:> proas r
C:> proas
C:> proas v:70
C:> proas d:5 q:15
C:> proas s:1,220,1,5
```

Notes

The device driver **mvsound.sys** maintains **a state table** in order to program the hardware since most registers are write-only. Because the **proas.exe** program as a standalone-executable **can not** now know the state of the hardware, **only** those parameters on the command line are processed (as opposed to setting default values for missing parameters, as the device driver version of the program does).

This means that **MPU** and **SB** parameters are displayed as "**zeroes**" if they are not specified in the command, because proas.exe **can not read** the hardware to determine their values.

It **does** detect, though, that **MPU** and **SB** emulation is **active**, and so displays the header and port information.

Also, **no mixer** programming is done if the "**'V:##'**" option is not given, and then only the **volume** is affected after initializing **all devices** to their **default** values.

The **proas.exe** program is built using the **self-same** code as **mvsound.sys**, with the inclusion of "set and test" variables to determine if a particular command line option was specified.

Additional Uses

Another use for this program is to "**wake up**" a **second** PAS board. In this scenario, you might keep **mvsound.sys** in **config.sys** to initialize the first board (and so pas.exe, Windows, etc. treat it exactly as normal), then use proas.exe to wake up the second board and other software to playback and record on it. In this scenario, you can record into the Digital Audio channel of one PAS, process it, and in realtime, playback on another PAS.

We provide several other programs that accept board addresses as parameters:

```
tpcm.exe        # play/record/display
pcm.com         # pas hardware access code
pcmfun.com      # pcm.com uses XMS for background play/record
loadpcm.exe     # load/unload sounds into XMS for pcmfun.com
```

Acknowledgments