

PRO AUDIO REVIEW

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BY WAYNE BECKER

TOA has always had a good reputation for making cost-effective, reliable and innovative audio products for the sound contracting market. Their foray into the digital realm goes back longer than most of us acknowledge, developing some of the first DSPs for contracting and live performance. One of the latest is the DP-0206, a two-in by six-out digital signal processor with an optional upgrade path to 12 channels of I/O (however the unit I tested did not have the optional cards installed). Like many of the DSP boxes on the market today, the DP-0206 is a software-controlled and configured piece of hardware using a Windows-based graphic user interface (GUI), via the DACSys 2000 version 2.0 software, to program and manipulate the processing control of parameters.

FEATURES

In addition to accessing and controlling the unit from a PC application, the unit has sixteen internal memories to store presets that can be recalled without connecting the PC. A locking scheme protects the unit against tampering. Up to 30 units can be daisy-chained and controlled via the RS485 port along with an optional remote control card that provides external control of memory recall and output volume and muting. The unit comes housed in a 2RU rack-mount-ready enclosure with controls on the front panel and interface connections in the rear. The front panel contains input and output level and status LEDs, a memory/unit ID number display, memory/unit ID number selector keys, a memory recall key, a master indicator ID and a power indicator LED. The security panels, accessed by removing a Philips-head screw, hides access to the RS232 connection and the main power fuse, a reset button and a system lock switch which disables specific front panel accesses

TOA DP-0206 Digital Processor



functions. The rear panel provides connectivity for the power cord, the control and optional I/O ports, RS485 I/O connections and the input and output connections; all on Phoenix type connectors.

Up to 30 units can be arranged in a serial network, providing centralized control of a large system or multiple rooms with systems. Addressing of the units is straightforward and explained in detail in the manual. The front panel preset display doubles as an indicator for unit address and status.

Unlike some of the other DSP products on the market today, TOA takes a "fixed" approach to determining the DSP processing you will have available. The fixed processors can be bypassed if not required in a certain stage. I like this, because even though we like to think we have everything

figured out, it's always nice to be able to go back in at moments notice to tweak a certain part of the system we didn't think we'd have to. The processing chain is straightforward; each input goes through an A/D converter, a gain stage, a compressor and a 12-band filter section before it gets to the mixer matrix. From there the outputs go through a second 12-band filter section, a compressor, a delay, the D/A converter and then output attenuators. Each filter can be individually configured as parametric, high/low pass, high/low shelving, all-pass, notch or CD horn EQ.

IN USE

First off, there was no contact information in either the hardware or software manuals. So make sure your tech has the phone

number for TOA before they leave the shop in the event tech support is required. As far as I'm concerned, any product that ships today that requires the connection of a PC running a control or programming application should have tech support contact information readily accessible to the installer. The manuals do provide very good information on the connection of the hardware and the installation of the software application, but there were a few hitches in getting the box to talk to the PC, so having this information available could save time. Additionally, the "help" menu only contained information about the software version. There is no typical on-line help or manual. Also, the laptop or computer that you will use to control and configure the unit will have to be equipped with a floppy



drive or preloaded at the shop as the application software is provided on two 3.5-inch floppy disks rather than CD-ROM. You can also download the software from the company's web site, www.toaelectronics.com. The software provided with the unit is the DACSys 2000 version 1.3 (version 2.0 is now available) as well as a utility for uploading the latest firmware revisions. Loading the software on the computer is straight-forward, and a simple DB9 serial cable is required to make the connections from the computer to the unit. Be sure to use a quality cable and mind the RS232 protocol distance rules or communication could be a problem. After getting the computer and box to communicate, creating a new configuration and entering the main configuration control screen was very straightforward and intuitive. Kudos to TOA for providing a full size screen with different windows that keeps the current state of each process in front of you throughout the programming process. I think this is a significant advantage over selecting tabs or reopening windows to remember what the setting of a particular process are. The software provides an autoconnect function which scans the computers serial ports for units and connects it automatically.

Setting up a new project is as easy as selecting "New," naming the project and selecting the DSP input/output preference. The unit offers configurations of 2 x 6, 2 x 8, 2 x 10 and 4 x 6, 4 x 8 and 6 x 6. After a few short clicks of selecting and naming the unit and configuration, you are into the main screen. To adjust a parameter simply put your pointer on the box representing the process, click and all the adjustable parameters are instantly available in the window just below the configuration window. There, you simply click on the parameter, adjust the slider, move the EQ point, etc. There are helpful and subtle graphic icons that keep you focused on the changes you are making during process like turning off channels, changing volumes to null, etc. It is truly a point and click scenario. The main screen

has a memory compare function that allows you to virtually flip between presets and settings for different configurations. So configuring a system with multiple boxes (chained units) is a breeze. Connecting inputs and outputs is fast and easy. The sound quality of the unit is good with smooth transitions between presets.

SUMMARY

The DP-0206 is a well-thought-out processor with an intuitive user interface and excellent sound quality. Its setup is relatively easy and can be controlled via presets or a computer GUI. Its "nailed up" approach to processing can be a time saver without sacrificing quality. In installations where you don't anticipate the need to design tailored DSP functions but still need the flexibility to tweak the system with changes, this is a great box. The fact that you can chain units together with centralized control increases the flexibility of this system and its usefulness.



TOA Electronics, Inc.
601 Gateway Blvd., Suite 300
South San Francisco, CA 94080
Telephone: 650-588-2538
Toll Free: 1-800-733-7088
Fax: 650-588-3349
Website: www.toaelectronics.com
Email: info@toaelectronics.com

Fast Facts

Applications:

Sound reinforcement, installation, multizone distributed sound systems

Key Features:

User presets; intuitive GUI interface; multiple unit operation

Price:

\$3,294; two channel I/O expander modules - \$514 each

Contact:

TOA Electronics at 800-733-7088, www.toaelectronics.com.