



## CDS Application Note #3©

**Application:** Interfacing analog composite STL's and stereo generators to IBOC or digital input analog exciters using the CDS-300/302 Composite DA/Switcher with the *CTD-1 Composite to Digital* converter module.

### **Benefits:**

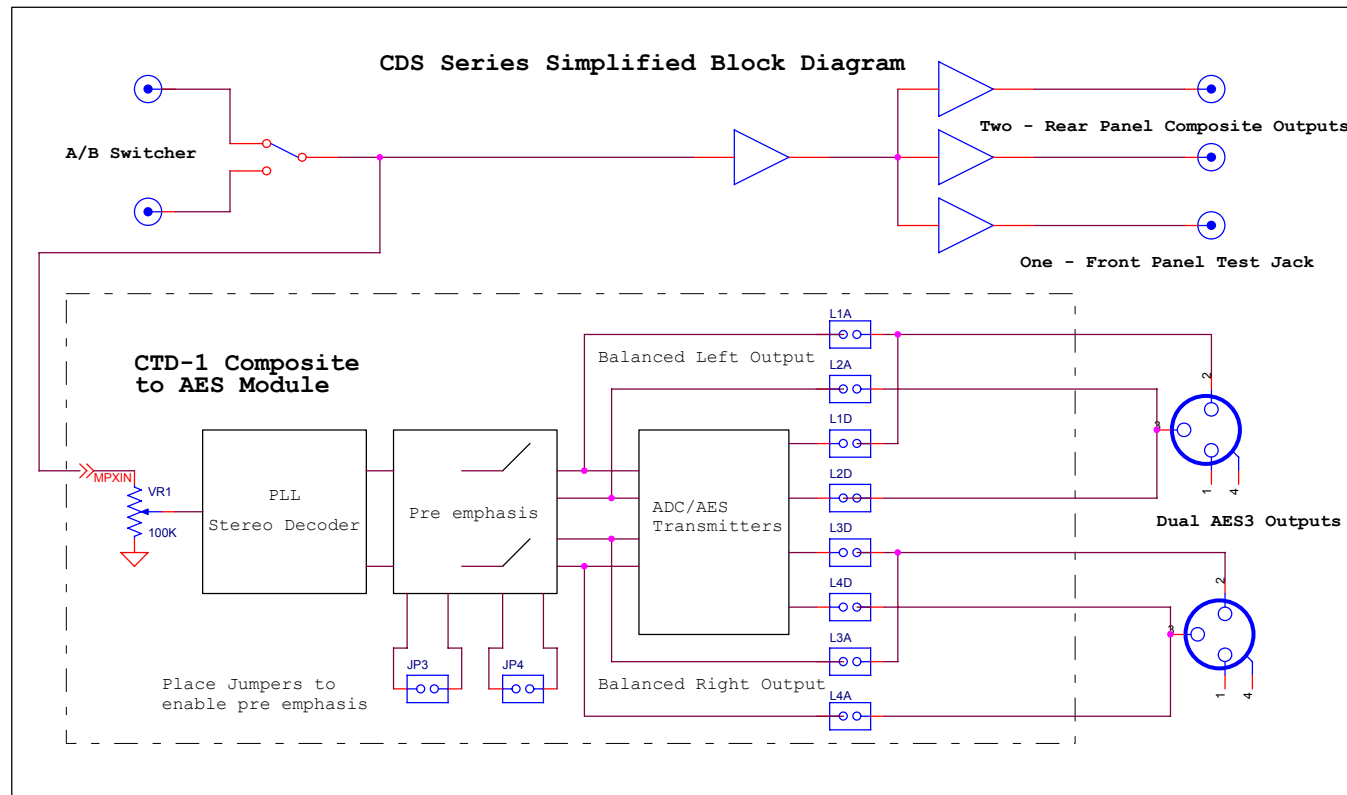
This application reduces the cost of a digital conversion by allowing the station to utilize older but serviceable equipment such as composite STL's and older processor stereo generator systems. The application provides an analog bypass in case of failure of IBOC exciter equipment. Newer analog exciters such as the \*Continental 802D/1 series have provision to accept AES or composite input. By feeding the analog output of the CDS series to the analog input of the above mentioned exciter it is possible to automatically bypass the digital input of the exciter in the event of a failure of any component of the digital path. Two AES3 outputs for main and back up operation are available.

**How it Works:** Refer to the accompanying block diagram for this discussion. The CDS series switcher is installed to accept up to two composite inputs. In the example an STL and processor/stereo generator system are the composite sources. The CDS series switcher has installed in it the CTD-1 module which accepts the selected composite input and converts it to two – AES3 streams for application to digital input equipment. Two rear panel composite outputs are available simultaneously to the digital outputs. Selection of sample rate is via DIP switch. 32, 44.1, 48 and 96 KHz are available. De emphasis is provided for IBOC applications. If pre emphasis is desired, jumper selection of 75 uS pre emphasis can be performed in the field. 50 and 25 uS pre and de emphasis is available on special order. Call or email us for special applications. Factory default is 44.1 KHz sample rate and 75 uS de emphasis.

It is also possible to derive an analog decoded left and right output via the CDS switcher rear panel XLR connectors for analog operations. Consult the supplied CTD-1 technical manual for jumper selection to provide analog output. As with the digital output, 75 uS de emphasis is factory default. 75 uS pre emphasis is field jumper selectable. For other de emphasis/ pre emphasis time constants contact us by telephone or email for availability.

For any application feel free to call or email us for further information. Telephone – (914) 737-5032 or email us at [Techsupport@Broadcast-Devices.com](mailto:Techsupport@Broadcast-Devices.com)

\* For more information about the Continental 802D/D1 series exciters visit [www.Contelec.com](http://www.Contelec.com) and click on support.



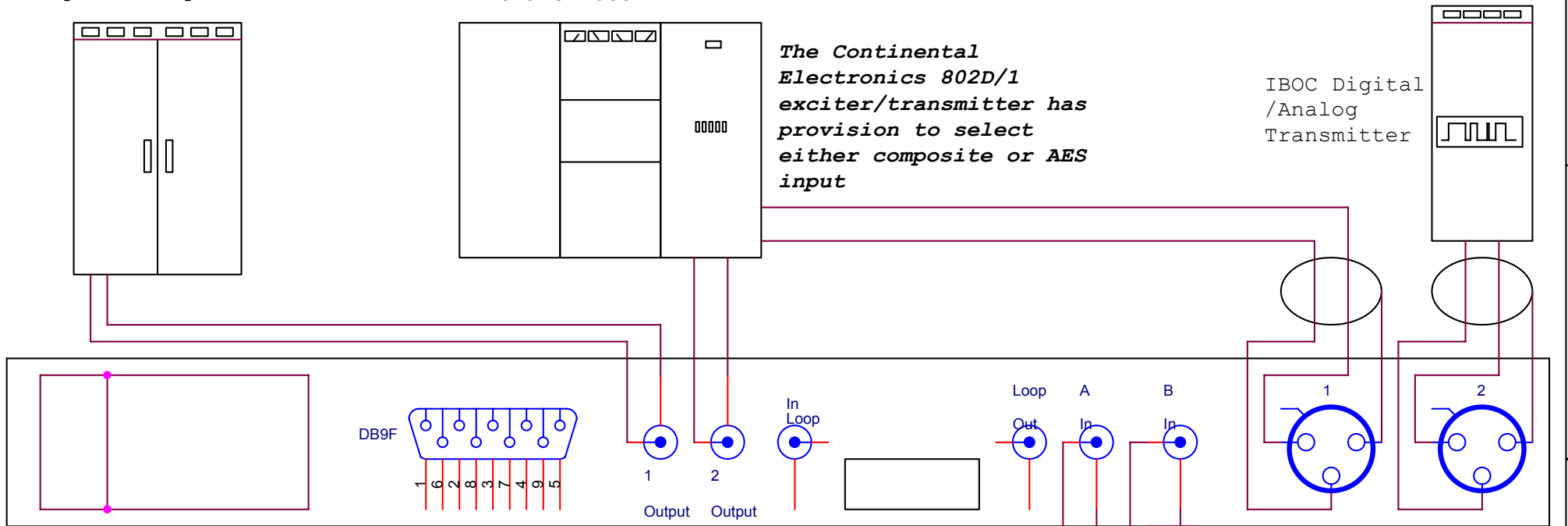
Note: Optional Balanced Left/Right Output is selectable by removing L1,2,3,4D and placing Jumpers in L1,2,3,4,A.

Analog transmitter with composite input

Analog digital input transmitter

*The Continental Electronics 802D/1 exciter/transmitter has provision to select either composite or AES input*

IBOC Digital /Analog Transmitter



Two Analog Outputs Available

Two AES3 Outputs Available

STL

Analog Proc/Stereo Gen.

### BDI Tech Talk Application Note

CDS-300/302 Application 3

CDS-300/302/Digital Interface

Call BDI Applications Engineering at (914) 737-5032 or email to:  
TechSupport@Broadcast-Devices.com

