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Tech Note

Connections between the DFP-2000 and the Dolby® SA10
Surround EX™ processor.

Product: DFP-D2000.
S/N: All units.
Document: **TN99043002-3**, CC/TS
Summary: Describes in brief the connections required to connect an SA10 to a DFP-2000.

This information is provided to users of the DFP-2000 to assist them in connecting
to a Dolby SA10. As of April 1999 the specifications of the SA10 were incomplete.
See your Dolby representative for up to date details.

Step by step.

The following steps are recommended for setting up the SA10 with a DFP-2000; see
the SA10 manual and your Dolby representative for specific details:

1. Set SW1, located on the daughter board of the SA10, to the "CP50/500" position
   or to the "CP65" position. Note that logic interface wiring will be different for
   each setting; see the chart below.
2. Set the outside front panel "Surround" switch to OUT (EX decode mode)
3. Set the Inside front panel "Alignment 602" switch to IN (non-decode mode, or
   Normal in Dolby terminology). Note that the SA10 does not have a bypass mode
   or any form of hard bypass.

Logic connections.

The SA10 was not designed to be compatible with the logic interface of the
DFP-D2000. Dolby may have corrected this problem after this Tech Note was
written. See your Dolby representative for assistance in connecting the SA10 to a
DFP-2000. The following pins may be of use to installers of third-party interface and
automation equipment. Such manufacturers include Smart Devices, Ultra Stereo,
Odyssey, and many others. Consult the manufacturer for specific details of their
equipment.

DFP-2000 Automation (37-pin D-Sub male)
Pin 14,15; Logic Common
Pin 32; SDDS OK, Low = OK

Logic output details.

The output tally at Pin 32 pulses at a 1 Hz rate whenever valid SDDS data is
unavailable. The leading edge of the first positive transition of this waveform occurs
approximately 300 milliseconds after loss of SDDS data (whereupon the system will
fall back to its bypass inputs).

Third party solutions.

Third part solutions are available from a variety of outside vendors and suppliers of
cinema equipment, such as Smart Devices Inc (USA), Hasso GmbH (Germany) and

others. Contact the vendors directly for the latest information about their available products.

Audio connections.

The audio connections are made from the left and right surround outputs of the DFP-2000 SYSTEM OUTPUT connector, according to THX® pinout conventions.

DFP-2000 System Output (25-pin D-Sub)
Pin 9; L Surround GND
Pin 10; L Surround LOW (–)
Pin 11; R Surround LOW (–)
Pin 22; R Surround GND
Pin 23; L Surround HOT (+)
Pin 24; R Surround HOT (+)

The DFP-2000 has balanced outputs.

Note that these connections are balanced. Sony recommends that these connections not be made directly to equipment with unbalanced inputs. The Dolby SA10 has unbalanced inputs and outputs. Many products are available to interface balanced equipment to unbalanced equipment. See your Dolby representative for assistance with maintaining professionally balanced environments when using the SA10.

Signal level matching.

Note also that the current SA10 manual requires setting the input levels to the SA10 to 120mV (-16dBu) using the Dolby Cat. No. 69T test film played into the primary cinema processor. This level may have been changed to 145mV, see your Dolby representative for the current recommendation. With a DFP-D2000, it is instead recommended to activate the internal 1kHz signal generator of the surround channels and adjust the output level to 145 mV.

The SA10 Installation Manual also recommends removing all room equalization from equipment feeding the SA10. This means foregoing the 28-band graphic EQ in the DFP-2000 and using the more limited trim-pot type 7-band equalizer in the SA10 for surround channel equalization. See the SA10 Installation manual and your Dolby representative for specific alignment recommendations.