

GW DCPD Transimpedance Amplifier (TIA) Measurement

J. Kissel, 2023-03-10

DUT Setup

Can set up SR785 in the *front* of ISC-R5 rack, if more convenient, since only thing that changes between measuring DCPDA and DCPDB is the BNC Monitor Hook-up

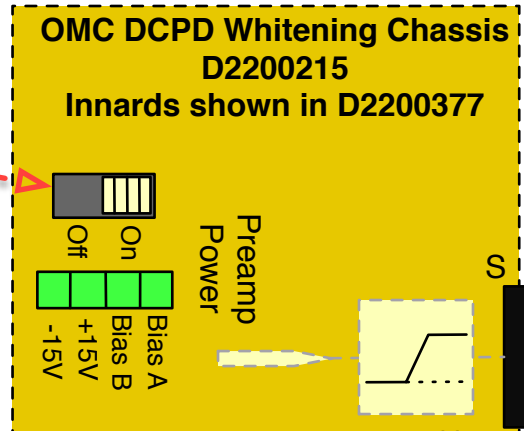
You might be tempted to use D1900068's DB9 output and a DB9 cable to connect "cleanly" to DAC drive. See LHO aLOG 61289 for discussion of compromise.

Cable connected to in-vac DCPD Chain as normal

OK to disconnect DAC cable and BNC monitor cables without powering down DCPDs

ALL OTHER CHASSIS / CABLE CONNECTIONS NOT SHOWN REMAIN CONNECTED AS NORMAL

ISC-R5 Rack



OMCA DCPD Pins Are:
DCPDA = 5+ & 18-
DCPDB = 1+ & 14-
Chassis GND = 13

Turn both Test Input Relays ON during measurement (State of Whitening Relays doesn't matter)

Excitation drives both DCPDA & DCPDB through pins 1+ & 6-

Internal "Unity Gain" Buffers b/w primary signal and monitors

Weave drive BNCs from the *back* of the rack to the *front*. Make sure exposed BNC shields aren't touching each other or the chassis.

Change from A to B monitors to record response of DCPDA and DCPDB in-vac TIA, respectively

BNC Shields connected to Chassis 0V pin 5

Disconnect Remote DAC excitation cable

DB9 Cable ~3 ft

BNC Cables ~3 ft

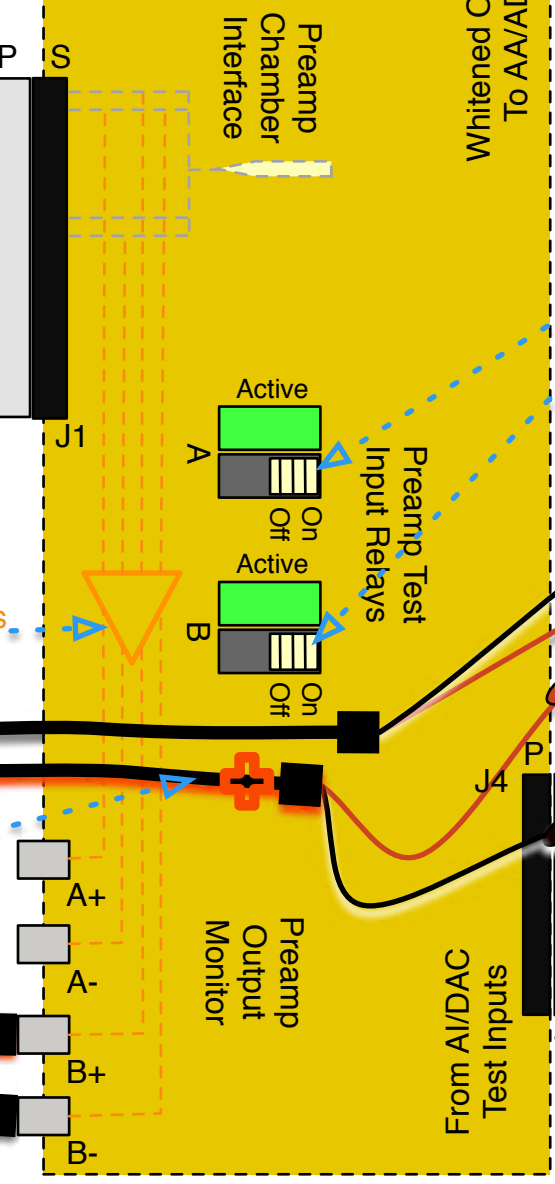
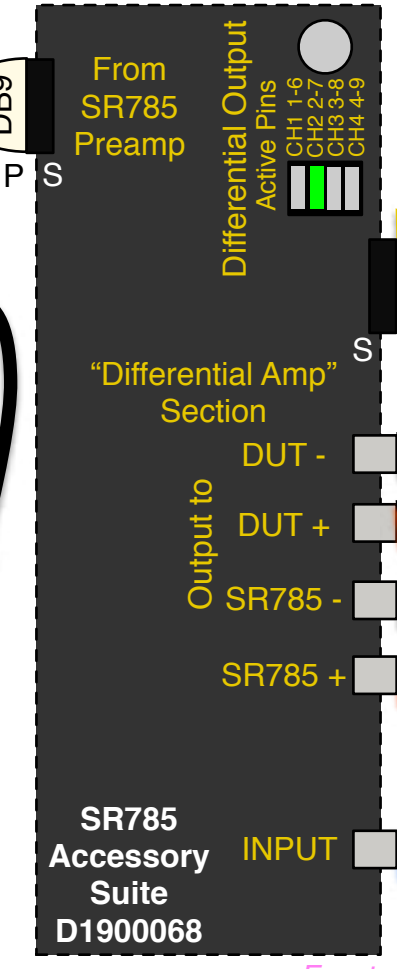
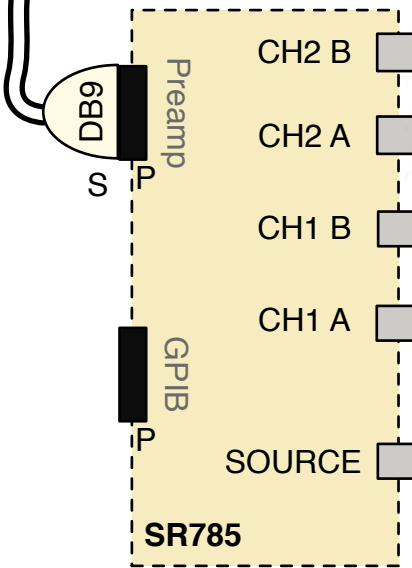
BNC Cables ~10 ft

BNC Cables ~3 ft

BNC Cables ~3 ft

Oscilloscope

O-Scope not strictly necessary, but *very* helpful in terms of understanding signal levels in/out of the SR785 Accessory Box and into PUM Driver



Back Front

Back Front

Front Back

Back Front

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Meas Setup CONFIG 2

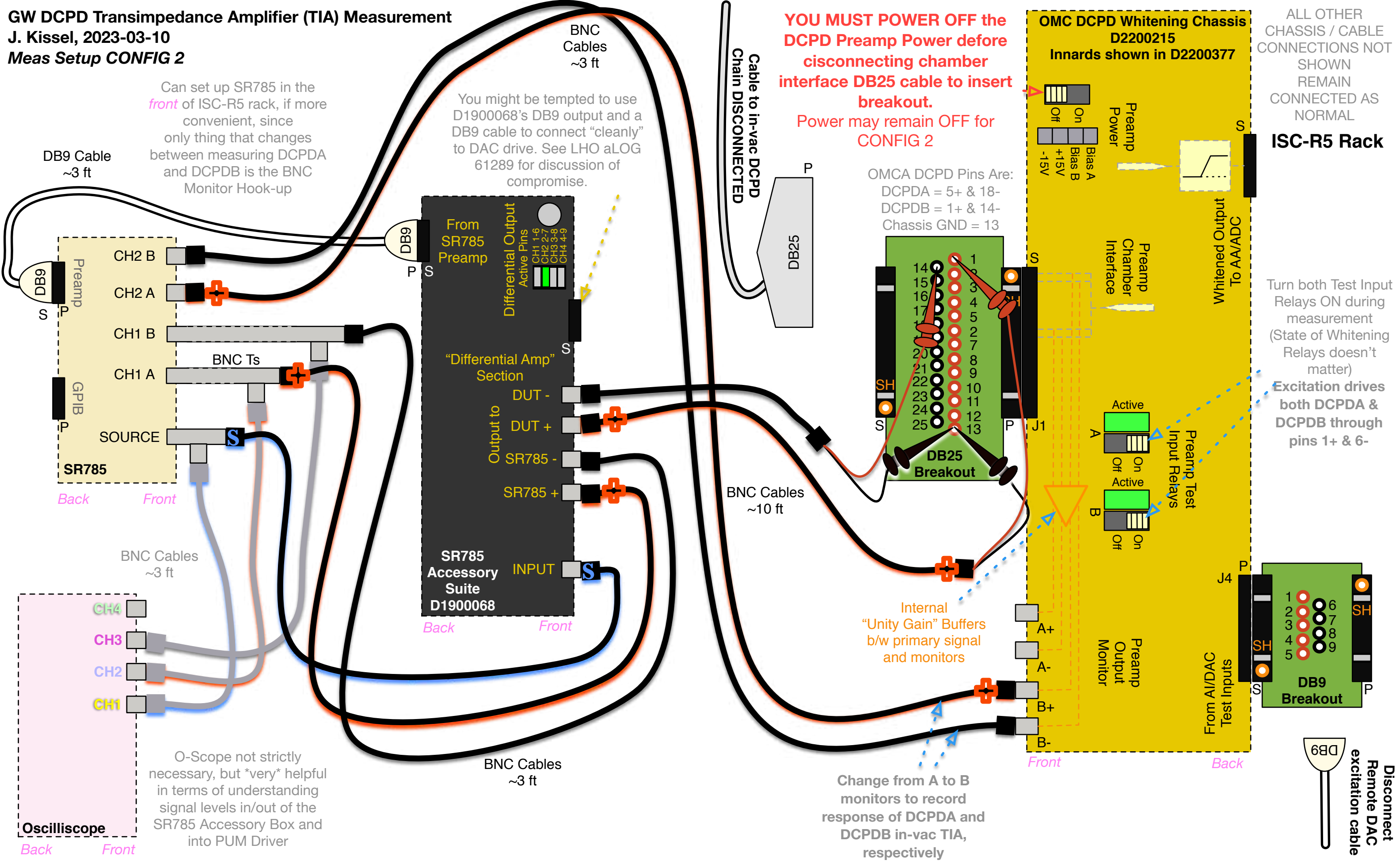
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YOU MUST POWER OFF the DCPD Preamp Power before disconnecting chamber interface DB25 cable to insert breakout.
Power may remain OFF for CONFIG 2

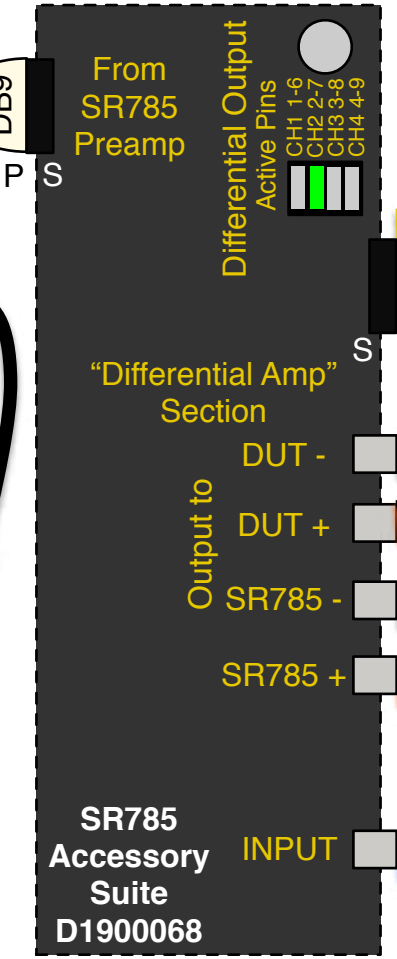
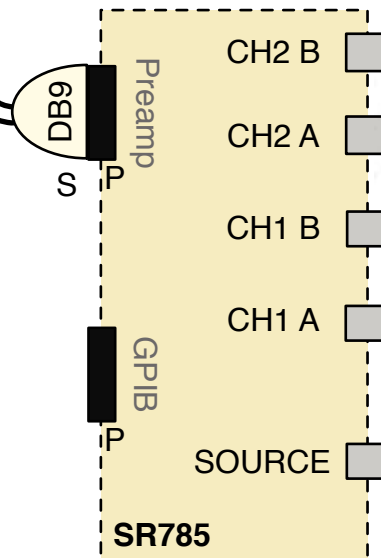
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ISC-R5 Rack

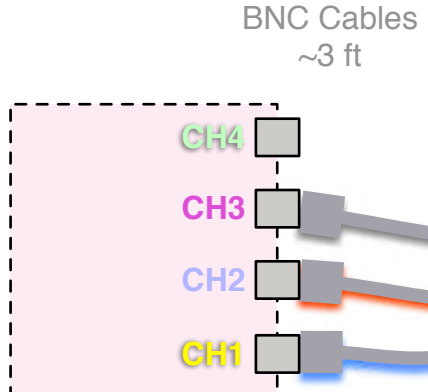
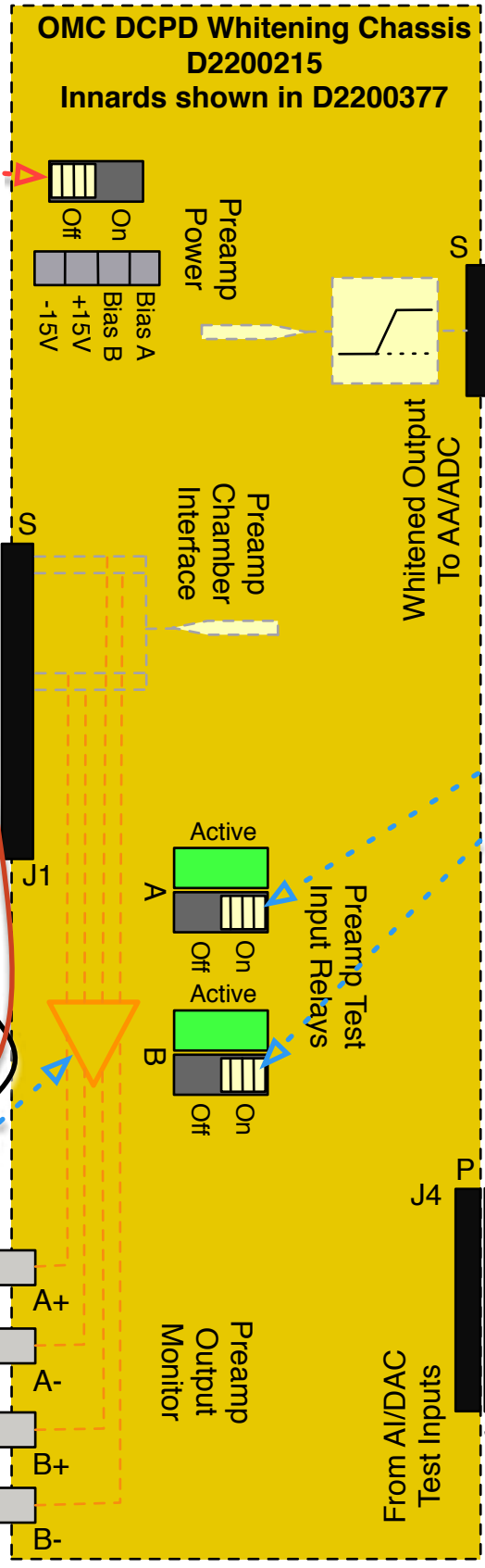
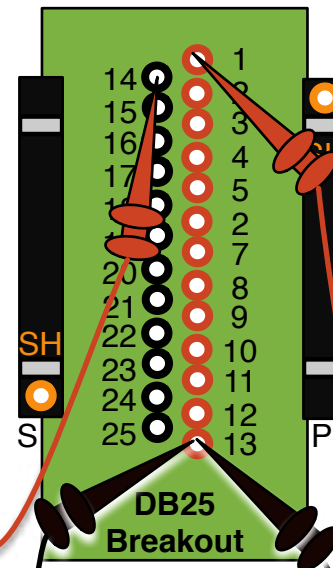


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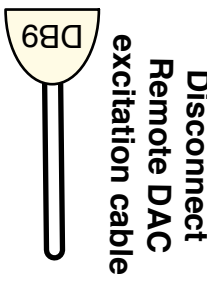
BNC Cables ~3 ft

BNC Cables ~10 ft

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