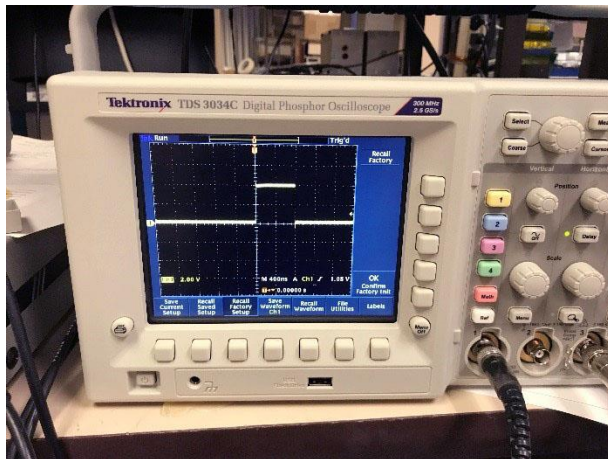


DG535 front panel output termination

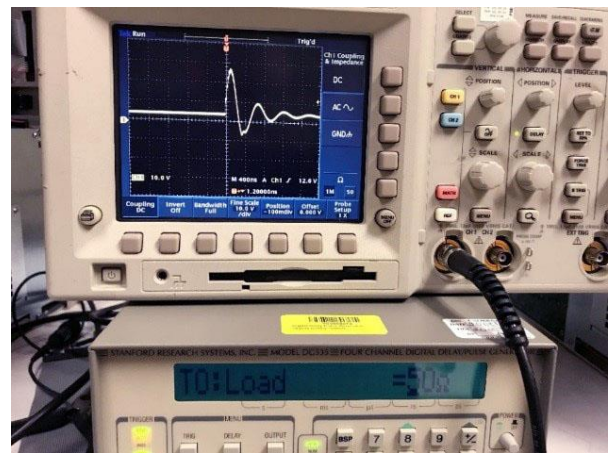
The DG535 was designed to always drive a 50Ω load. The DG535 will switch in an internal 50Ω terminator when set to high Z. When using a DG535 output set to 50Ω, the source must be terminated to 50Ω, or the output will be distorted.

Channels A, B, C & D Output Amplitude

DG535 output termination	Source Termination	Result
Set to 50Ω	50Ω	Correct Amplitude
Set to 50Ω	High Z	Distorted (see photo below)
Set to High Z	50Ω	1/2 Amplitude
Set to High Z	High Z	Correct Amplitude



Normal Output



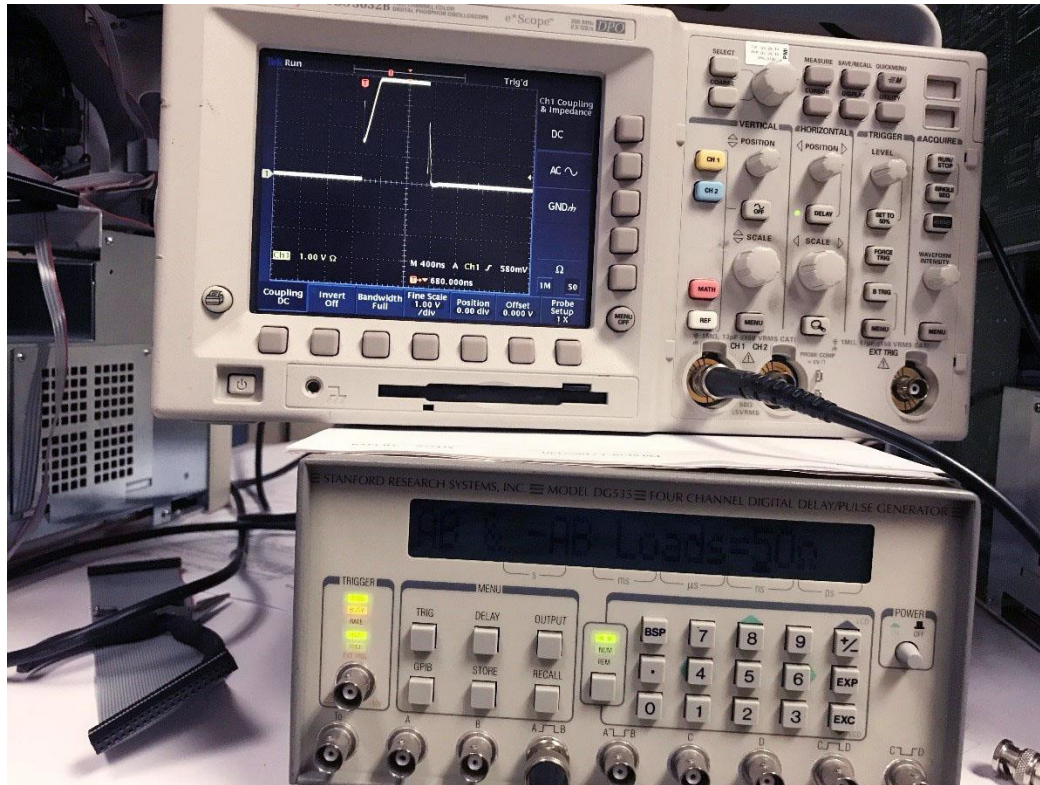
Distorted output: DG535 set to 50Ω
Oscilloscope set to High Z

Channels AB (CD) Complimentary Outputs Amplitude

DG535 output termination:	Ch AB (CD) Source termination	Ch \overline{AB} (\overline{CD}) Source Termination	Result:
Set to 50Ω	50Ω	50Ω	Correct Amplitude
Set to 50Ω	50Ω	High Z	Distorted (See Photo below)
Set to 50Ω	High Z	50Ω	Distorted
Set to 50Ω	High Z	High Z	Distorted
Set to High Z	High Z	High Z	Correct Amplitude
Set to High Z	50Ω	High Z	AB= 1/2 Amplitude

Set to High Z	High Z	50Ω	\overline{AB} 1/2 Amplitude
Set to High Z	50Ω	50Ω	both channels = 1/2 amplitude

The most common error using the complimentary outputs is to set the output to 50Ω, terminate one channel to 50Ω and leave the other channel open (unterminated -High Z).



Distorted Output: Ch. AB / \overline{AB}

DG setting: Ch. AB / \overline{AB} set to 50 Ω.

Ch. AB source (Oscilloscope) terminated to 50Ω.

Ch. \overline{AB} open (High Z).