

ZVA Formatted data to memory

Intent

I am writing formatted data into a memory trace via SCPI commands on both the ZVA and ZNB.

Problem

While the SCPI command works as expected on the ZNB, it fails on the ZVA.

Scope

Confirmed on:

- ZNB firmware 2.60 beta 1.226
- ZVA firmware 3.60

Work-around

Writing complex data to memory instead, making sure that the complex data corresponds to the formatted trace data that is expected.

Example

In this example I will use SCPI commands to start from a preset instrument, create a channel, a diagram, a data trace and memory trace (see figure: Initial Trace). Then I will attempt to write formatted trace data to memory, which will generate a SCPI command error.

```
# Preset the instrument
*RST

# Wait for preset to complete
*OPC?

# The instrument should be in a factory preset state.
# It should have
# - 1 channel (Ch1)
# - 1 diagram (#1)
# - 1 trace (Trc1), with dB magnitude format

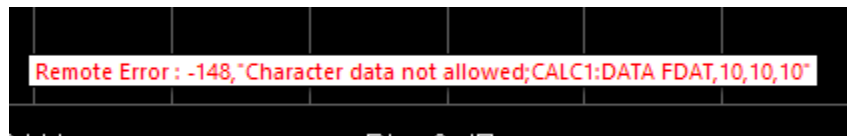
# Set the number of points
SENS1:SWE:POIN 3

# Create memory trace
TRAC:COPY 'memory_trace', 'Trc1'

# Assign the memory trace to diagram 2
DISP:WIND1:TRAC:EFE 'memory_trace'

# Write custom formatted values to memory trace
# Units should correspond to current trace format (dB)
CALC1:PAR:SEL 'memory_trace'
CALC1:DATA FDAT,10,10,10 # 10 dB
```

Note: When the preceding step is performed on a ZNB, no error occurs. On a ZVA, however, the following SCPI command error is generated



ZVA SCPI Error

"Character data not allowed"

```
# Writing complex data works on both instruments
CALC1:DATA SDAT,3.16227766017,0,3.16227766017,0,3.16227766017,0
# Complex (sqrt(10),0) => ~10 dB
```