



# Agilent 34980A Multifunction Switch/Measure Unit Command Quick Reference

Version 1.01

## Syntax Conventions

- Braces ( { } ) enclose the parameter choices for a given command string. The braces are not sent with the command string.
- A vertical bar ( | ) separates multiple parameter choices for a given command string.
- Triangle brackets ( < > ) indicate that you must specify a value for the enclosed parameter. The brackets are not sent with the command string. You must specify a value for the parameter (e.g., "VOLT:DC:RANG 10").
- Some parameters are enclosed in square brackets ( [ ] ). The square brackets indicate that the parameter is optional and can be omitted. The brackets are not sent with the command string. If you do not specify a value for an optional parameter, the instrument chooses a default value.

## Measurement Commands

MEASure:CURRent:AC? [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

MEASure:CURRent[:DC]? [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

MEASure:DIGital[:{BYTE|WORD|LWORD}]? (@<ch\_list>)

MEASure:DIGital[:BYTE]:BIT? <bit>, (@<ch\_list>)

MEASure:FREQuency? [{<range>|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

MEASure:FRESistance? [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

MEASure:PERiod? [{<range>|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

MEASure:RESistance? [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

MEASure:TEMPerature? {TCouple|RTD|FRD|THERmistor|DEF}, {<type>|DEF} [, 1 [, {<resolution>|MINIMAX|DEF}] ]  
[, (@<ch\_list>)]

MEASure:TOTalize? {READ|IRRESet}, (@<ch\_list>)

MEASure[:VOLTage]:AC? [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

MEASure[:VOLTage][:DC]? [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]

## Temperature Configuration Commands

```
CONFigure:TEMPerature {TCouple|RTD|FRD|DITHERmistor|DEF}, {<type>|DEF} [,1 [, {<resolution>|MINIMAX|DEF} ] ]  
[, (@<ch_list>)]  
CONFigure? [(@<ch_list>)]
```

```
[SENSe:]TEMPerature:APERture {<seconds>|MINIMAX|DEF} [, (@<ch_list>)]  
[SENSe:]TEMPerature:APERture? [( (@<ch_list>)|MINIMAX)]
```

```
[SENSe:]TEMPerature:APERture:ENABled? [( (@<ch_list>)]
```

```
[SENSe:]TEMPerature:NPLC {<PLCs>|MINIMAX|DEF} [, (@<ch_list>)]  
[SENSe:]TEMPerature:NPLC? [( (@<ch_list>)|MINIMAX)]
```

```
[SENSe:]TEMPerature:TRANsdncer:TYPE {TCouple|RTD|FRD|DITHERmistor} [, (@<ch_list>)]  
[SENSe:]TEMPerature:TRANsdncer:TYPE? [( (@<ch_list>)]
```

```
[SENSe:]TEMPerature:ZERO:AUTO {OFF|O|ON|1} [, (@<ch_list>)]  
[SENSe:]TEMPerature:ZERO:AUTO? [( (@<ch_list>)]
```

```
UNIT:TEMPerature {C|FIK} [, (@<ch_list>)]  
UNIT:TEMPerature? [( (@<ch_list>)]
```

### Thermocouple Configuration

```
[SENSe:]TEMPerature:RJUNction[:|INTernal]? (@<ch_list>)
```

```
[SENSe:]TEMPerature:TRANsdncer:TCouple:CHECK {OFF|O|ON|1} [, (@<ch_list>)]  
[SENSe:]TEMPerature:TRANsdncer:TCouple:CHECK? [( (@<ch_list>)]
```

```
[SENSe:]TEMPerature:TRANsdncer:TCouple:IMPedance:AUTO  
[SENSe:]TEMPerature:TRANsdncer:TCouple:IMPedance:AUTO?
```

```
[SENSe:]TEMPerature:TRANsdncer:TCouple:RJUNction {<temperature>|MINIMAX|DEF} [, (@<ch_list>)]  
[SENSe:]TEMPerature:TRANsdncer:TCouple:RJUNction? [( (@<ch_list>)|MINIMAX)]
```

```
[SENSe:]TEMPerature:TRANsdncer:TCouple:RJUNction:EXTernal?
```

```
[SENSe:]TEMPerature:TRANsdncer:TCouple:RJUNction:TYPE {EXTernal|FIXed|INTernal} [, (@<ch_list>)]  
[SENSe:]TEMPerature:TRANsdncer:TCouple:RJUNction:TYPE? [( (@<ch_list>)]
```

```
[SENSe:]TEMPerature:TRANsdncer:TCouple:TYPE {B|E|J|K|N|IR|S|IT} [, (@<ch_list>)]  
[SENSe:]TEMPerature:TRANsdncer:TCouple:TYPE? [( (@<ch_list>)]
```

## RTD Configuration

```
[SENSe:]TEMPerature:TRANSDUCER:FRTD:OCOMPensated {OFF|O|ON|1} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:FRTD:OCOMPensated? [(@<ch_list>)]

[SENSe:]TEMPerature:TRANSDUCER:FRTD:REFerence {OFF|O|ON|1} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:FRTD:REFerence? [(@<ch_list>)]

[SENSe:]TEMPerature:TRANSDUCER:FRTD:RESistance[:REFerence] {<reference>|MINIMAX|DEF} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:FRTD:RESistance[:REFerence]? [({@<ch_list>}|MINIMAX)]

[SENSe:]TEMPerature:TRANSDUCER:FRTD:TYPE {85|91} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:FRTD:TYPE? [(@<ch_list>)]

[SENSe:]TEMPerature:TRANSDUCER:RTD:OCOMPensated {OFF|O|ON|1} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:RTD:OCOMPensated? [(@<ch_list>)]

[SENSe:]TEMPerature:TRANSDUCER:RTD:REFerence {OFF|O|ON|1} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:RTD:REFerence? [(@<ch_list>)]

[SENSe:]TEMPerature:TRANSDUCER:RTD:RESistance[:REFerence] {<reference>|MINIMAX|DEF} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:RTD:RESistance[:REFerence]? [({@<ch_list>}|MINIMAX)]

[SENSe:]TEMPerature:TRANSDUCER:RTD:TYPE {85|91} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:RTD:TYPE? [(@<ch_list>)]
```

## Thermistor Configuration

```
[SENSe:]TEMPerature:TRANSDUCER:THERMISTOR:REFerence {OFF|O|ON|1} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:THERMISTOR:REFerence? [(@<ch_list>)]

[SENSe:]TEMPerature:TRANSDUCER:THERMISTOR:TYPE {2252|5000|10000} [, (@<ch_list>)]
[SENSe:]TEMPerature:TRANSDUCER:THERMISTOR:TYPE? [(@<ch_list>)]
```

## Voltage Configuration Commands

### DC Voltage Configuration

CONFigure[:VOLTage][:DC] [{<range>|AUTO|MINIMAXIDEF} [, {<resolution>|MINIMAXIDEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]VOLTage[:DC]:APERture {<seconds>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]VOLTage[:DC]:APERture? [(@<ch\_list>)|MINIMAX]

[SENSe:]VOLTage[:DC]:APERture:ENABLEd? [(@<ch\_list>)]

[SENSe:]VOLTage[:DC]:IMPedance:AUTO <mode> [, (@<ch\_list>)]  
[SENSe:]VOLTage[:DC]:IMPedance:AUTO? [(@<ch\_list>)]

[SENSe:]VOLTage[:DC]:NPLC {<PLCs>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]VOLTage[:DC]:NPLC? [(@<ch\_list>)|MINIMAX]

[SENSe:]VOLTage[:DC]:RANGe {<range>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]VOLTage[:DC]:RANGe? [(@<ch\_list>)|MINIMAX]

[SENSe:]VOLTage[:DC]:RANGe:AUTO {OFF|0|ON|1} [, (@<ch\_list>)]  
[SENSe:]VOLTage[:DC]:RANGe:AUTO? [(@<ch\_list>)]

[SENSe:]VOLTage[:DC]:RESolution {<resolution>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]VOLTage[:DC]:RESolution? [(@<ch\_list>)|MINIMAX]

[SENSe:]VOLTage[:DC]:ZERO:AUTO {OFF|0|ON|1} [, (@<ch\_list>)]  
[SENSe:]VOLTage[:DC]:ZERO:AUTO? [(@<ch\_list>)]

### AC Voltage Configuration

CONFigure[:VOLTage]:AC [{<range>|AUTO|MINIMAXIDEF} [, {<resolution>|MINIMAXIDEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]VOLTage:AC:BANDwidth {3|20|200|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]VOLTage:AC:BANDwidth? [(@<ch\_list>)|MINIMAX]

[SENSe:]VOLTage:AC:RANGe {<range>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]VOLTage:AC:RANGe? [(@<ch\_list>)|MINIMAX]

[SENSe:]VOLTage:AC:RANGe:AUTO {OFF|0|ON|1} [, (@<ch\_list>)]  
[SENSe:]VOLTage:AC:RANGe:AUTO? [(@<ch\_list>)]

## Resistance Configuration Commands

### 2-Wire Resistance Configuration

CONFigure:RESistance [{<range>|AUTO|MINIMAXIDEF} [, {<resolution>|MINIMAXIDEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]RESistance:APERture {<seconds>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]RESistance:APERture? [(@<ch\_list>)|MINIMAX]

[SENSe:]RESistance:APERture:ENABLEd? [(@<ch\_list>)]

[SENSe:]RESistance:NPLC {<PLCs>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]RESistance:NPLC? [(@<ch\_list>)|MINIMAX]

[SENSe:]RESistance:OCOMPensated <mode> [, (@<ch\_list>)]  
[SENSe:]RESistance:OCOMPensated? [(@<ch\_list>)]

[SENSe:]RESistance:RANGe {<range>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]RESistance:RANGe? [(@<ch\_list>)|MINIMAX]

[SENSe:]RESistance:RANGe:AUTO {OFF|O|ON|1} [, (@<ch\_list>)]  
[SENSe:]RESistance:RANGe:AUTO? [(@<ch\_list>)]

[SENSe:]RESistance:RESolution {<resolution>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]RESistance:RESolution? [(@<ch\_list>)|MINIMAX]

[SENSe:]RESistance:ZERO:AUTO {OFF|O|ON|1} [, (@<ch\_list>)]  
[SENSe:]RESistance:ZERO:AUTO? [(@<ch\_list>)]

### 4-Wire Resistance Configuration

CONFigure:FRESistance [{<range>|AUTO|MINIMAXIDEF} [, {<resolution>|MINIMAXIDEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]FRESistance:APERture {<seconds>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]FRESistance:APERture? [(@<ch\_list>)|MINIMAX]

[SENSe:]FRESistance:APERture:ENABLEd? [(@<ch\_list>)]

[SENSe:]FRESistance:NPLC {<PLCs>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]FRESistance:NPLC? [(@<ch\_list>)|MINIMAX]

[SENSe:]FRESistance:OCOMPensated <mode> [, (@<ch\_list>)]  
[SENSe:]FRESistance:OCOMPensated? [(@<ch\_list>)]

[SENSe:]FRESistance:RANGe {<range>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]FRESistance:RANGe? [(@<ch\_list>)|MINIMAX]

[SENSe:]FRESistance:RANGe:AUTO {OFF|O|ON|1} [, (@<ch\_list>)]  
[SENSe:]FRESistance:RANGe:AUTO? [(@<ch\_list>)]

[SENSe:]FRESistance:RESolution {<resolution>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]FRESistance:RESolution? [(@<ch\_list>)|MINIMAX]

## Current Configuration Commands

### DC Current Configuration

CONFigure:CURRent[:DC] [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]CURRent[:DC]:APERture {<seconds>|MINIMAX|DEF} [, (@<ch\_list>)]  
[SENSe:]CURRent[:DC]:APERture? [{(@<ch\_list>)|MINIMAX}]

[SENSe:]CURRent[:DC]:APERture:ENABLEd? [(@<ch\_list>)]

[SENSe:]CURRent[:DC]:NPLC {<PLCs>|MINIMAX|DEF} [, (@<ch\_list>)]  
[SENSe:]CURRent[:DC]:NPLC? [{(@<ch\_list>)|MINIMAX}]

[SENSe:]CURRent[:DC]:RANGe {<range>|MINIMAX|DEF} [, (@<ch\_list>)]  
[SENSe:]CURRent[:DC]:RANGe? [{(@<ch\_list>)|MINIMAX}]

[SENSe:]CURRent[:DC]:RANGe:AUTO {OFF|0|ON|1} [, (@<ch\_list>)]  
[SENSe:]CURRent[:DC]:RANGe:AUTO? [(@<ch\_list>)]

[SENSe:]CURRent[:DC]:RESolution {<resolution>|MINIMAX|DEF} [, (@<ch\_list>)]  
[SENSe:]CURRent[:DC]:RESolution? [{(@<ch\_list>)|MINIMAX}]

[SENSe:]CURRent[:DC]:ZERO:AUTO {OFF|0|ON|1} [, (@<ch\_list>)]  
[SENSe:]CURRent[:DC]:ZERO:AUTO? [(@<ch\_list>)]

### AC Current Configuration

CONFigure:CURRent:AC [{<range>|AUTO|MINIMAX|DEF} [, {<resolution>|MINIMAX|DEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]CURRent:AC:BANDwidth {3|20|200|MINIMAX|DEF} [, (@<ch\_list>)]  
[SENSe:]CURRent:AC:BANDwidth? [{(@<ch\_list>)|MINIMAX}]

[SENSe:]CURRent:AC:RANGe {<range>|MINIMAX|DEF} [, (@<ch\_list>)]  
[SENSe:]CURRent:AC:RANGe? [{(@<ch\_list>)|MINIMAX}]

[SENSe:]CURRent:AC:RANGe:AUTO {OFF|0|ON|1} [, (@<ch\_list>)]  
[SENSe:]CURRent:AC:RANGe:AUTO? [(@<ch\_list>)]

## Frequency and Period Configuration Commands

### Frequency Configuration

CONFigure:FREQuency [{<range>|MINIMAXIDEF} [, {<resolution>|MINIMAXIDEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]FREQuency:APERture {<seconds>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]FREQuency:APERture? [(@<ch\_list>)|MINIMAX]

[SENSe:]FREQuency:RANGe:LOWer {<timeout>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]FREQuency:RANGe:LOWer? [(@<ch\_list>)|MINIMAX]

[SENSe:]FREQuency:VOLTagE:RANGe {<voltage\_range>|AUTO|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]FREQuency:VOLTagE:RANGe? [(@<ch\_list>)|MINIMAX]

[SENSe:]FREQuency:VOLTagE:RANGe:AUTO {OFF|0|ON|1} [, (@<ch\_list>)]  
[SENSe:]FREQuency:VOLTagE:RANGe:AUTO? [(@<ch\_list>)]

### Period Configuration

CONFigure:PERiod [{<range>|MINIMAXIDEF} [, {<resolution>|MINIMAXIDEF}] , ] [(@<ch\_list>)]  
CONFigure? [(@<ch\_list>)]

[SENSe:]PERiod:APERture {<seconds>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]PERiod:APERture? [(@<ch\_list>)|MINIMAX]

[SENSe:]PERiod:VOLTagE:RANGe {<voltage\_range>|MINIMAXIDEF} [, (@<ch\_list>)]  
[SENSe:]PERiod:VOLTagE:RANGe? [(@<ch\_list>)|MINIMAX]

[SENSe:]PERiod:VOLTagE:RANGe:AUTO <mode> [, (@<ch\_list>)]  
[SENSe:]PERiod:VOLTagE:RANGe:AUTO? [(@<ch\_list>)]

## Digital I/O and Totalizer Configuration Commands

### Digital I/O Configuration

CONFigure:DIgital:STATe {INPut|OUTPut}, (@<ch\_list>)  
CONFigure:DIgital:STATe? (@<ch\_list>)

CONFigure:DIgital:WIDTh {BYTE|WORD|LWORD}, (@<ch\_list>)  
CONFigure:DIgital:WIDTh? (@<ch\_list>)

[SENSe:]DIgital:DATA[:{BYTE|WORD|LWORD}]? (@<ch\_list>)

[SENSe:]DIgital:DATA[:BYTE]:BIT? <bit>, (@<ch\_list>)

SOURce:DIgital:DATA[:BYTE|WORD|LWORD] <data>, (@<ch\_list>)  
SOURce:DIgital:DATA[:BYTE|WORD|LWORD]? (@<ch\_list>)

SOURce:DIgital:DATA[:BYTE]:BIT <bit>, <0|1>, (@<ch\_list>)  
SOURce:DIgital:DATA[:BYTE]:BIT? <bit>, (@<ch\_list>)

SOURce:DIgital:STATe {OFF|0|ON|1}, (@<ch\_list>)  
SOURce:DIgital:STATe? (@<ch\_list>)

### Totalizer Configuration

CONFigure:TOTalize {READ|IRRESet}, (@<ch\_list>)

[SENSe:]TOTalize:CLEar:IMMediate (@<ch\_list>)

[SENSe:]TOTalize:DATA? (@<ch\_list>)

[SENSe:]TOTalize:SLOPe {NEGative|POSitive}, (@<ch\_list>)  
[SENSe:]TOTalize:SLOPe? (@<ch\_list>)

[SENSe:]TOTalize:THReshold[:MODE] {ACITTL}, (@<ch\_list>)  
[SENSe:]TOTalize:THReshold[:MODE]? (@<ch\_list>)

[SENSe:]TOTalize:TYPE {READ|IRRESet}, (@<ch\_list>)  
[SENSe:]TOTalize:TYPE? (@<ch\_list>)



## DAC Configuration Commands

OUTPut[:STATe] {OFF|O|ON|1}, (@<ch\_list>)  
OUTPut[:STATe]? (@<ch\_list>)

SOURce:CURRent[:LEVel] {<current>|MINIMAX|DEF}, (@<ch\_list>)  
SOURce:CURRent[:LEVel]? [{MINIMAX}, ] (@<ch\_list>)

SOURce:FUNcTion:TRIGger:SOURce {IMMediate|MANual|EXTernal}, (@<ch\_list>)  
SOURce:FUNcTion:TRIGger:SOURce? (@<ch\_list>)

SOURce:MODE {VOLTage|CURRent}, (@<ch\_list>)  
SOURce:MODE? (@<ch\_list>)

SOURce:MODule:CLOCK:FREQuency {<frequency>|MINIMAX}, {1|2|3|4|5|6|7|8}  
SOURce:MODule:CLOCK:FREQuency? [{MINIMAX}, ] {1|2|3|4|5|6|7|8}

SOURce:MODule:CLOCK:STATe {OFF|O|ON|1}, {1|2|3|4|5|6|7|8}  
SOURce:MODule:CLOCK:STATe? {1|2|3|4|5|6|7|8}

SOURce:MODule:TRIGger:EXTernal:IMMediate {1|2|3|4|5|6|7|8}

SOURce:MODule:TRIGger:OUTPut {OFF|O|ON|1}, {1|2|3|4|5|6|7|8}  
SOURce:MODule:TRIGger:OUTPut? {1|2|3|4|5|6|7|8}

SOURce:VOLTage[:LEVel] {<voltage>|MINIMAX|DEF}, (@<ch\_list>)  
SOURce:VOLTage[:LEVel]? [{MINIMAX}, ] (@<ch\_list>)

## Trace Waveform Configuration

SOURce:FUNcTion:CLOCK:EXTernal:DIVisor {<value>|MINIMAX|DEF}, (@<ch\_list>)  
SOURce:FUNcTion:CLOCK:EXTernal:DIVisor? [{MINIMAX}, ] (@<ch\_list>)

SOURce:FUNcTion:CLOCK:SOURce <source>, (@<ch\_list>)  
SOURce:FUNcTion:CLOCK:SOURce? (@<ch\_list>)

SOURce:FUNcTion:CURRent:GAIN {<gain>|MINIMAX|DEF}, (@<ch\_list>)  
SOURce:FUNcTion:CURRent:GAIN? [{MINIMAX}, ] (@<ch\_list>)

SOURce:FUNcTion:CURRent:OFFSet {<offset>|MINIMAX|DEF}, (@<ch\_list>)  
SOURce:FUNcTion:CURRent:OFFSet? [{MINIMAX}, ] (@<ch\_list>)

SOURce:FUNcTion:ENABLE {OFF|O|ON|1}, (@<ch\_list>)  
SOURce:FUNcTion:ENABLE? (@<ch\_list>)

SOURce:FUNcTion:FREQuency {<frequency>|MINIMAX|DEF}, (@<ch\_list>)  
SOURce:FUNcTion:FREQuency? [{MINIMAX}, ] (@<ch\_list>)

SOURce:FUNcTion:HALT (@<ch\_list>)

SOURce:FUNcTion:SAMPle:PERiod {<period>|MINIMAX|DEF}, (@<ch\_list>)  
SOURce:FUNcTion:SAMPle:PERiod? [{MINIMAX}, ] (@<ch\_list>)

SOURce:FUNcTion:TRACe:NCYCles {<count>|MINIMAX|DEF|INFinity}, (@<ch\_list>)  
SOURce:FUNcTion:TRACe:NCYCles? [{MINIMAX}, ] (@<ch\_list>)

SOURce:FUNcTion:TRACe:SINDeX <point>, (@<ch\_list>)  
SOURce:FUNcTion:TRACe:SINDeX? (@<ch\_list>)

SOURce:FUNcTion:TRACe[:NAME] <name>, (@<ch\_list>)  
 SOURce:FUNcTion:TRACe[:NAME]? (@<ch\_list>)  
  
 SOURce:FUNcTion:TRIGger:IMMediate (@<ch\_list>)  
  
 SOURce:FUNcTion:VOLTagE:GAIN {<gain>|MINIMAXIDeF}, (@<ch\_list>)  
 SOURce:FUNcTion:VOLTagE:GAIN? [{MINIMAX}, ] (@<ch\_list>)  
  
 SOURce:FUNcTion:VOLTagE:OFFSet {<offset>|MINIMAXIDeF}, (@<ch\_list>)  
 SOURce:FUNcTion:VOLTagE:OFFSet? [{MINIMAX}, ] (@<ch\_list>)  
  
 TRACe:CATalog? {1|2|3|4|5|6|7|8}  
  
 TRACe:DELeTe:ALL {1|2|3|4|5|6|7|8}  
  
 TRACe:DELeTe[:NAME] {1|2|3|4|5|6|7|8}, <name>  
  
 TRACe:FRee? {1|2|3|4|5|6|7|8}  
  
 TRACe:POINts? {1|2|3|4|5|6|7|8}, <name>  
  
 TRACe[:DATA] {1|2|3|4|5|6|7|8}, <name>, {<binary\_block>|<value>, <value> [,<value>, ... ]}  
 TRACe[:DATA]:DAC {1|2|3|4|5|6|7|8}, <name>, {<binary\_block>|<value>, <value> [,<value>, ... ]}  
  
 TRACe[:DATA]:FUNcTion {1|2|3|4|5|6|7|8}, <type>, <name>, <points>

## Monitor Commands

ROUTe:MONitor:DATA?  
  
 ROUTe:MONitor:MODE {CHANnelIDMM}  
 ROUTe:MONitor:MODE?  
  
 ROUTe:MONitor:STATe {OFFIOION1}  
 ROUTe:MONitor:STATe?  
  
 ROUTe:MONitor[:CHANnel] (@<channel>)  
 ROUTe:MONitor[:CHANnel]?  
  
 ROUTe:MONitor[:CHANnel]:ENABle {OFFIOION1}, (@<ch\_list>)  
 ROUTe:MONitor[:CHANnel]:ENABle? (@<ch\_list>)

## Scan Configuration Commands

ABORt

INITiate

FORMat:BORDer {NORMal|SWAPped}

FORMat:BORDer?

FORMat:READIng:ALARm {OFF|O|ON|1}

FORMat:READIng:ALARm?

FORMat:READIng:CHANnel {OFF|O|ON|1}

FORMat:READIng:CHANnel?

FORMat:READIng:TIME {OFF|O|ON|1}

FORMat:READIng:TIME?

FORMat:READIng:TIME:TYPE {ABSolutelRELative}

FORMat:READIng:TIME:TYPE?

FORMat:READIng:UNIT {OFF|O|ON|1}

FORMat:READIng:UNIT?

READ? [(@<ch\_list>)]

ROUTE:CHANnel:DELay {<seconds>|MINIMAXIDEF}, (@<ch\_list>)

ROUTE:CHANnel:DELay? [{MINIMAXIDEF}, ] (@<ch\_list>)

ROUTE:CHANnel:DELay:AUTO {OFF|O|ON|1}, (@<ch\_list>)

ROUTE:CHANnel:DELay:AUTO? (@<ch\_list>)

ROUTE:SCAN (@<scan\_list>)

ROUTE:SCAN?

ROUTE:SCAN:ADD (@<ch\_list>)

ROUTE:SCAN:REMOve (@<ch\_list>)

ROUTE:SCAN:ORDERed {OFF|O|ON|1}

ROUTE:SCAN:ORDERed?

ROUTE:SCAN:SIZE?

SAMPle:COUNT {<count>|MINIMAXIDEF}

SAMPle:COUNT? [{MINIMAX}]

SWEep:COUNT {<count>|MINIMAXIDEF}

SWEep:COUNT? [{MINIMAX}]

TRIGger:COUNT {<count>|MINIMAXIDEF|INfInity}

TRIGger:COUNT? [{MINIMAX}]

TRIGger:SOURce {IMMediate|BUSIEXternal|TIMER}

TRIGger:SOURce?

TRIGger:TIMer {<seconds>|MINIMAXIDEF}

TRIGger:TIMer? [{MINIMAX}]

## Switch Control Commands

ROUTE:CHANnel:LABel:CLEar:MODUle {1-8|SLOT1-SLOT8|ALL}

ROUTE:CHANnel:LABel[:DEFine] "<label>" , (@<ch\_list>)  
ROUTE:CHANnel:LABel[:DEFine]? [<type>, ] (@<ch\_list>)

ROUTE:CLOSe (@<ch\_list>)  
ROUTE:CLOSe? (@<ch\_list>)

ROUTE:CLOSe:EXCLusive (@<ch\_list>)

ROUTE:MODUle:BUSY? {1-8|SLOT1-SLOT8|ANY}

ROUTE:MODUle:WAIT {1-8|SLOT1-SLOT8|ANY}  
ROUTE:MODUle:WAIT? {1-8|SLOT1-SLOT8|ANY}

ROUTE:OPEN (@<ch\_list>)  
ROUTE:OPEN? (@<ch\_list>)

ROUTE:OPEN:ABUS [{<abus>|ALL}]

ROUTE:OPEN:ALL [{1-8|SLOT1-SLOT8|ALL}]

ROUTE:OPERation:OVERlap[:ENABLE] {OFF|ON|1}  
ROUTE:OPERation:OVERlap[:ENABLE]?

SYSTEM:CPON {1|2|3|4|5|6|7|8}

SYSTEM:CTYPe? {1|2|3|4|5|6|7|8}

SYSTEM:MODUle:PFAil:JUMPer:AMP5? {1|2|3|4|5|6|7|8} (34937A/938A only)

SYSTEM:MODUle:TEMPerature? [{TRANsducer|TTHReshold}], {1|2|3|4|5|6|7|8} (34937A/938A only)

SYSTEM:MODUle:WIRE:MODE {WIRE1|WIRE2}, {1|2|3|4|5|6|7|8} (34923A/925A/933A only)

## Triggering Commands

\*TRG

INITiate

READ? [(@<ch\_list>)]

TRIGger:COUNT {<count>|MINIMAX|DEFININFINITY}  
TRIGger:COUNT? [{MINIMAX}]

TRIGger:DELay {<seconds>|MINIMAX}  
TRIGger:DELay? [{MINIMAX}]

TRIGger:DELay:AUTO {OFF|ON|1}  
TRIGger:DELay:AUTO?

TRIGger:SOURce {IMMediate|BUSIEXTernal|TIMER}  
TRIGger:SOURce?

TRIGger:TIMer {<seconds>|MINIMAX|DEF}  
TRIGger:TIMer? [{MINIMAX}]

## Measurement Statistics Commands

CALCulate:AVERage:AVERage? [(@<ch\_list>)]  
CALCulate:AVERage:CLEar [(@<ch\_list>)]  
CALCulate:AVERage:COUNt? [(@<ch\_list>)]  
CALCulate:AVERage:MAXimum? [(@<ch\_list>)]  
CALCulate:AVERage:MAXimum:TIME? [(@<ch\_list>)]  
CALCulate:AVERage:MINimum? [(@<ch\_list>)]  
CALCulate:AVERage:MINimum:TIME? [(@<ch\_list>)]  
CALCulate:AVERage:PTPeak? [(@<ch\_list>)]  
DATA:LAST? [,@<channel>]

## Reading Memory Commands

DATA:POINts:EVENT:THReshold <num\_readings>  
DATA:POINts:EVENT:THReshold?  
  
DATA:POINts?  
  
DATA:REMOve? <num\_readings>  
  
FETCh?  
  
R? [<max\_count>]  
  
SYSTem:TIME:SCAN?

## Mx+B Scaling Commands

CALCulate:SCALE:GAIN <gain> [, (@<ch\_list>)]  
CALCulate:SCALE:GAIN? (@<ch\_list>)  
  
CALCulate:SCALE:OFFSet <offset> [, (@<ch\_list>)]  
CALCulate:SCALE:OFFSet? (@<ch\_list>)  
  
CALCulate:SCALE:STATe {OFF|O|ION|1} [, (@<ch\_list>)]  
CALCulate:SCALE:STATe? [(@<ch\_list>)]  
  
CALCulate:SCALE:UNIT "<units>" [, (@<ch\_list>)]  
CALCulate:SCALE:UNIT? [(@<ch\_list>)]

## Calibration Commands

CALibration?  
CALibration:ABORt  
CALibration:BEgin[:VOLTage] [<setup\_#>, ] (@<channel>)  
CALibration:COUNT? [{1-8|SLOT1-SLOT8|MAINframe|DMM}]  
CALibration:LFRequency {50|60|400}  
CALibration:LFRequency?  
CALibration:MODule? [{1-8|SLOT1-SLOT8|ALL}]  
CALibration:POINt? <value>  
CALibration:SECure:CODE <new\_code>  
CALibration:SECure:STATe {OFF|O|ON|1}, <code>  
CALibration:SECure:STATe?  
CALibration:STRing "<string>" [{1-8|SLOT1-SLOT8|MAINframe|DMM}]  
CALibration:STRing? [{1-8|SLOT1-SLOT8|MAINframe|DMM}]  
CALibration:VALue <value>  
CALibration:VALue?

## State Storage Commands

\*RCL {1|2|3|4|5}  
\*SAV {1|2|3|4|5}  
MEMory:NSTates?  
MEMory:STATe:CATalog?  
MEMory:STATe:DELete {1|2|3|4|5}  
MEMory:STATe:DELete:ALL  
MEMory:STATe:NAME {1|2|3|4|5} [,<name>]  
MEMory:STATe:NAME? {1|2|3|4|5}  
MEMory:STATe:RECall:AUTO {OFF|O|ON|1}  
MEMory:STATe:RECall:AUTO?  
MEMory:STATe:RECall:SELect {1|2|3|4|5}  
MEMory:STATe:RECall:SELect?  
MEMory:STATe:VALid? {1|2|3|4|5}

## IEEE-488 Commands

\*CLS  
\*ESE <enable\_value>  
\*ESE?  
\*ESR?  
\*IDN?  
\*OPC  
\*OPC?  
\*RCL {1|2|3|4|5}  
\*RST  
\*SAV {1|2|3|4|5}  
\*SRE <enable\_value>  
\*SRE?  
\*STB?  
\*TRG  
\*TST?  
\*WAI

## System-Related Commands

\*IDN?  
\*RST  
\*TST?  
CALibration:LFRequency {50|60|400}  
CALibration:LFRequency?  
DISPlay[:STATe] {OFF|O|ON|1}  
DISPlay[:STATe]?  
DISPlay:TEXT "<string>"  
DISPlay:TEXT?  
DISPlay:TEXT:CLEAr  
SYSTem:ABUS:INTerlock:SIMulate {OFF|O|ON|1}  
SYSTem:ABUS:INTerlock:SIMulate?  
SYSTem:BEEPer  
SYSTem:CDEscription? {1|2|3|4|5|6|7|8}  
SYSTem:CPON {1|2|3|4|5|6|7|8}  
SYSTem:CTYPe? {1|2|3|4|5|6|7|8}  
SYSTem:DATE <yyyy>,<mm>,<dd>  
SYSTem:DATE?

SYSTem:ERRor?  
SYSTem:PRESet  
SYSTem:SECurity:IMMediate  
SYSTem:TIME <hh>,<mm>,<ss.sss>  
SYSTem:TIME?  
SYSTem:TIME:SCAN?  
SYSTem:VERSion?

## Remote Interface Configuration Commands

SYSTem:COMMunicate:ENABle {OFFIOION1}, {GPIBUSILANISOCKets|TELNet|VXI11|WEB}  
SYSTem:COMMunicate:ENABle? {GPIBUSILANISOCKets|TELNet|VXI11|WEB}  
  
SYSTem:COMMunicate:GPIB:ADDRes <address>  
SYSTem:COMMunicate:GPIB:ADDRes?  
  
SYSTem:LOCK:OWNer?  
  
SYSTem:LOCK:RELEase  
  
SYSTem:LOCK:REQUest?

## LAN Configuration Commands

SYSTem:COMMunicate:LAN:AUTOip {OFFIOION1}  
SYSTem:COMMunicate:LAN:AUTOip?  
  
SYSTem:COMMunicate:LAN:BSTatus?  
  
SYSTem:COMMunicate:LAN:CONTRol?  
  
SYSTem:COMMunicate:LAN:DHCP {OFFIOION1}  
SYSTem:COMMunicate:LAN:DHCP?  
  
SYSTem:COMMunicate:LAN:DNS <address>  
SYSTem:COMMunicate:LAN:DNS?  
  
SYSTem:COMMunicate:LAN:DOMain "<name>"  
SYSTem:COMMunicate:LAN:DOMain? [{CURRENT|STATIC}]  
  
SYSTem:COMMunicate:LAN:GATEway <address>  
SYSTem:COMMunicate:LAN:GATEway? [{CURRENT|STATIC}]  
  
SYSTem:COMMunicate:LAN:HISTory:CLEar  
  
SYSTem:COMMunicate:LAN:HISTory?  
  
SYSTem:COMMunicate:LAN:HOSTname "<name>"  
SYSTem:COMMunicate:LAN:HOSTname? [{CURRENT|STATIC}]  
  
SYSTem:COMMunicate:LAN:IPADdress <address>  
SYSTem:COMMunicate:LAN:IPADdress? [{CURRENT|STATIC}]  
  
SYSTem:COMMunicate:LAN:KEEPalive {<seconds>|MINIMAX}  
SYSTem:COMMunicate:LAN:KEEPalive? [{MINIMAX}]



SYSTem:COMMunicate:LAN:MAC?  
SYSTem:COMMunicate:LAN:SMASK <mask>  
SYSTem:COMMunicate:LAN:SMASK? [{CURRent!STATic}]  
SYSTem:COMMunicate:LAN:TELNet:PROMpt "<string>"  
SYSTem:COMMunicate:LAN:TELNet:PROMpt?  
SYSTem:COMMunicate:LAN:TELNet:WMESsage "<string>"  
SYSTem:COMMunicate:LAN:TELNet:WMESsage?

## Status System Commands

\*CLS  
\*ESE <enable\_value>  
\*ESE?  
\*ESR?  
\*SRE <enable\_value>  
\*SRE?  
\*STB?  
STATus:ALARm:CONDition?  
STATus:ALARm:ENABle <enable\_value>  
STATus:ALARm:ENABle?  
STATus:ALARm[:EVENT]?  
STATus:MODule:ENABle <enable\_value>  
STATus:MODule:ENABle?  
STATus:MODule:EVENT?  
STATus:MODule:SLOT[*n*]:CONDition?  
STATus:MODule:SLOT[*n*]:ENABle <enable\_value>  
STATus:MODule:SLOT[*n*]:ENABle?  
STATus:MODule:SLOT[*n*][:EVENT]?  
STATus:OPERation:CONDition?  
STATus:OPERation:ENABle <enable\_value>  
STATus:OPERation:ENABle?  
STATus:OPERation[:EVENT]?  
STATus:PRESet  
STATus:QUESTionable:CONDition?  
STATus:QUESTionable:ENABle <enable\_value>  
STATus:QUESTionable:ENABle?  
STATus:QUESTionable[:EVENT]?  
SYSTem:MODule?

## Service-Related Commands

DIAGnostic:DMM:CYCLes? {1|2|3|4|5|6}

DIAGnostic:RELAy:CYCLes? (@<ch\_list>)

DIAGnostic:RELAy:CYCLes:CLEar (@<ch\_list>)

INSTrument:DMM:CONNect

INSTrument:DMM:CONNect?

INSTrument:DMM:DISConnect

INSTrument:DMM:DISConnect?

INSTrument:DMM:INSTalled?

INSTrument:DMM[:STATe] {OFF|0|ON|1}

INSTrument:DMM[:STATe]?