



# Compatibility Mode

FCA3000, FCA3100 and MCA3000 Series

How-To Guide

## Seamless Plug-n-play

For seamless plug-n-play into existing ATE systems, you can set “compatibility mode” on your Tektronix FCA and MCA products to emulate the behavior and responses of 53131A/53132A/53150A/53151A/53152A/53181A products.

## Introduction

The FCA3000, FCA3100 and MCA3100 Series Timer/Counter/Analyzers from Tektronix are designed for high-speed and high-resolution measurements over GPIB or USB. A “native SCPI” bus mode comes complete with a command set that optimizes every aspect of the instrument performance.

These products come standard with a unique “compatibility mode” that is intended to easily integrate into an ATE system currently using an Agilent 53131A, 53132A, 53150A, 53151A, 53152A and 53181A while maintaining as much as possible of the SW control program.

Please note that some minor programming is required since the FCA and MCA products are not identical to the Agilent products. For example, one obvious difference is the response to the Identity Query (\*IDN?), where the 53131A answers to “HP or Agilent 53131A” and the FCA or MCA answers to Tektronix nomenclature.

This How-to Guide describes the few incompatibility issues, which the user should be aware of in order to make a seamless drop-in replacement with minimal programming changes.

## Responses to Identification Queries

1. Response to \*IDN? is the product nomenclature, e.g., "FCA3000" instead of e.g., "Agilent 53131A".
2. Response to \*OPT? depends on the actual option installed.

## Missing Functions

The FCA3000 and MCA3000 Series products incorporate all input settings and all measuring functions from the Agilent/HP counters with one exception which is the Totalize function. Commands beginning with :FUNC:TOT will result in an error message.

## Internal Calibration and Diagnostics

Commands starting with ":CAL" and ":DIAG" are intended for calibration and diagnostics of internal parameters in the HP/Agilent units and are not supported.

## Missing Hardware

HP/Agilent units have an RS232-port for "talker only" purposes, e.g. for printing measurement results on a serial printer. Tektronix FCA and MCA products do not have an RS232 port, so the commands related to this port which are highlighted in the table below will result in the following error messages:

Command Sent	Error Message
:SYST:COMM:SER:CONT:DTR ON	110,"Command header error"
:SYST:COMM:SER:CONT:DTR IBF	110,"Command header error"
:SYST:COMM:SER:CONT:DTR LIM	110,"Command header error"
:SYST:COMM:SER:TRAN:PAR EVEN	110,"Command header error"
:SYST:COMM:SER:TRAN:PAR ODD	110,"Command header error"
:SYST:COMM:SER:TRAN:PAR NONE	110,"Command header error"
:BAUD 300 ... BAUD 19200	113,"Undefined header"
:PACE XON	113,"Undefined header"

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**For Further Information**

Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit [www.tektronix.com](http://www.tektronix.com)



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