TEKTRONIX INC

TM 500 SERIES REAR INTERFACE DATA BOOK

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INTRODUCTION

The TEKTRONIX TM 500 line of modular instrumentation offers a new approach to electronic tests and measurements. In the past, monolithic signal sources such as function generators, sine-wave oscillators, pulse generators, ramp generators, and dc power supplies were often interconnected to DMMs, digital counters, and oscilloscopes for accurate electrical set-ups or measurements of frequency, period, pulse width, rise and fall times, ac-dc currents, and voltages. The front panel interconnections between these monolithic instruments can often become a confusing maze of wires and cables that obscures one's view of displays and interferes with convenient operation of front panel controls.

The promise of a better way is here today in the rear interconnecting interface system of TM 500 modular instrumentation. No one except TEKTRONIX offers such an easy-to-interconnect-and-use system.

In almost all TM 500 plug-in instruments, a duplication of front panel input and output connections appears on the plug-ins' rear edge circuit board connector. Since each plug-in connector is located inside the power mainframe on a common rear interface circuit board, plug-ins can be interfaced to "talk to" one another by way of interconnecting wires and cables easily installed by the user. *SEE FIGURE 1-1.* The number of possible interfacing schemes is only limited by the imagination. For example, the DM 502 DMM rear input terminals can be interconnected to an alongside PS 503A power supply for accurately setting power supply voltages. The DMM is not permanently connected to the power supply because a special INT-EXT front panel switch can be pressed; thereby returning the DMM to external full function capability. The operation of external circuits under test can now be measured by the use of standard probes or external wire connections. Another similar example could include interfacing the DC 505A universal counter-timer's dc trigger level output to the DMM for setting up the counter's channel A and B LEVEL controls. Accurate time measurements can now be made by setting the LEVEL control to DMM-displayed dc voltages representing 10 to 90% amplitude points for rise times and 50% amplitude points for pulse widths. The list can go on and on. However, sooner or later one gets around to asking the question, "How do I connect these instruments together to form my own viable instrument package?" This rear interface manual will suggest some ideas on interconnected systems and provide readily-accessible reference data so that you can easily design your own special purpose test set.

The APPLICATIONS INDEX describes some of the already-in-use interconnect application ideas. The section on BACKGROUND INFORMATION presents ways to obtain the most useful interface scheme. The MODULE DATA section provides signal input and output pin numbers for all TM 500 plug-ins.