

Timing Software

TimeMaster/TimeKeeper

The TimeMaster and TimeKeeper are a comprehensive software suite used to achieve time synchronization with all networked hosts over local and wide-area networks using Sun Solaris 2.x. To communicate time synchronization and status information, a client server approach is used where the TimeMaster is the server and the TimeKeeper the client. The server handles all time synchronization with a synchronized clock or a pseudo clock and responds to time communications requests from a TimeKeeper Host. The client initiates time synchronization requests to the server and subsequently adjusts the system time of the corresponding client Host. Time domains allow both TimeMasters and TimeKeepers to respond to management requests for maintaining time synchronization throughout the enterprise network.

Time Clock Modules support the Arbiter line of clocks with server synchronization of <1 ms to the clock. The client can achieve time synchronization of <5 ms with the server on a 10Mb/sec Ethernet LAN and over a WAN with a bandwidth of 14.4Kb/sec, the time synchronization obtained is typically <20 ms. Internal system clock drift is calculated during initial time synchronization and a system time correction factor is applied to the internal clock on a periodic basis. A dynamic auto-ranging mechanism is applied to minimize time synchronization errors during periods of high context switching and heavy network traffic. Multiple TimeMasters can be configured within a time domain to provide Timekeepers with both a primary and secondary time server.

TimeMaster/TimeKeeper software incorporates a user-friendly Graphical User Interface (GUI) front-end and an automatic detection/update of new software versions. Updates to all TimeKeepers are achieved by installing the binary in a common file system. This provides a means for the TimeKeeper to sense that a new version of code exists and to stop and restart using the new software version.

Model 10741A PC Clock

The Model 10741A PC Clock Synchronization Software is a Windows program for the IBM-PC and Compatibles. This terminate-and-stay-resident (TSR) program accepts the continuous extended ASCII ("B5") broadcast timecode output and maintains synchronization of the real-time clock in the PC to within one PC clock tick. Features include a selectable Time Margin which determines the error large enough to consider updating the PC system clock, and the Error Threshold which sets how many consistent errors must persist before the system time is updated. When the Error Count *exceeds* the Error Threshold, system time will be updated. *Available free on our web page.*

ClockSet

The ClockSet Software is a free DOS setup utility that works on the Models 1084A/B/C, 1088B, 1092A/B/C and 1093A/B/C Satellite-Controlled Clocks. ClockSet allows the user to set or read all user configurable parameters via the main serial port and to store configuration information to a file. *Available free on our web page.*

Other Synchronization Software

The Arbiter Systems line of clocks are also supported by the Network Time Protocol (NTP) and TimeServ (part of the Windows NT Resource Kit). For the latest information on these programs and other products visit our web page at "www.arbiter.com".