

# MODEL 4100 LOGIC ANALYZER

## SETUP/DATA MEMORY OPTIONS



### FEATURES:

#### Setup Memory Option

- Stores eight complete machine setups (all screens)

#### Setup/Data Memory Option

- Stores eight complete machine setups (all screens)
- Complete nonvolatile data memory
- Automatic sequencing through up to eight predefined tests
- Comparison with reference data in memory (single or continuous)
- Word search and pattern search capability
- Pass/Fail count during automatic sequencing
- Editing of reference data in memory (including "Don't Cares")

With the addition of either option, the ML4100 logic analyzer becomes an even more effective instrument for portable field service work and production test environments.

The basic Setup Memory option saves eight complete machine setups in nonvolatile memory. These setups are not lost when power is turned off.

The Setup/Data Memory option is an expanded version which includes A/B data memory as well as the setup memory. The added A/B Memory provides the ML4100 Logic Analyzer with the ability to

copy, save, recall, and edit a whole captured data memory set (1,000 samples deep at 32 channels wide, and up to 8,000 samples deep at 4 channels wide).

With the Setup/Data Memory option, the ML4100 can also compare and search the captured data. It can also automatically sequence through prestored machine setups, and count and display the number of tests passed and failed. These features make it a powerful tool for field service or production test personnel, who can execute tests simply and efficiently by calling them from the setup directory available at powerup.

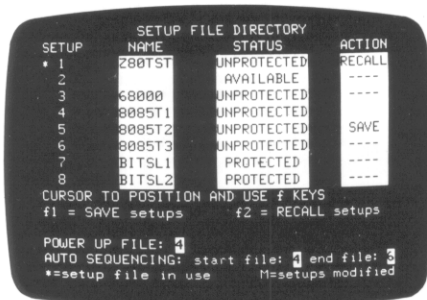
The compact Arium ML4100 logic analyzer is priced at a fraction of the cost of other 100 MHz analyzers. Features include:

- 8- and 16-bit microprocessor disassembly
- Up to 32 channels and speeds of up to 100 MHz
- State, timing and disassembly displays
- Multilevel combinational triggering
- Personality pods for most  $\mu$ P's
- Optional PROM emulator and  $\mu$ P disassembly

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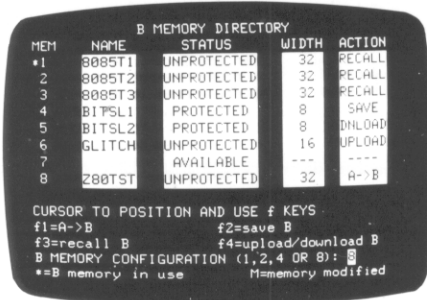
Manufacture of

# MODEL 4100 LOGIC ANALYZER SETUP/DATA MEMORY OPTIONS



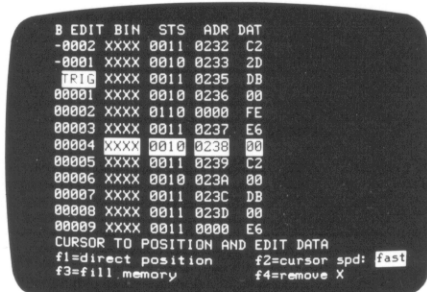
**SETUP DIRECTORY** — Up to eight ML4100 setup files can be saved, including timing line probe designations and their labels. (A setup file contains all setup parameters selected by the user.) Each file can be assigned a 6-character name and a status of "Protected" or "Unprotected". The "Protected" status, designated by a 2-digit security code, prevents accidental erasure or loss of stored data.

The user can designate a setup file to be loaded automatically at powerup, and can also upload or download setup files via the RS-232C link (ROM Emulator option is required). This saving of setups permits rapid, convenient paging between different analysis methods for any given piece of captured data (i.e., paging between different sets of timing lines with alternate labels and positions on the display). Similarly, without re-entering any labeling or triggering conditions, the user can switch from 32-channel, state, data-qualified mode to 4-channel, 100-MHz mode immediately, and have all of the data capture parameters already defined. If the Setup/Data Memory Option is present, the automatic sequencing order is specified on this screen.

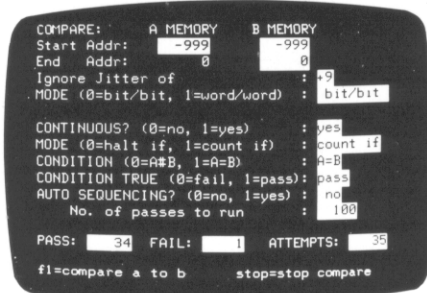


**B MEMORY DIRECTORY** — Data captured by the ML4100 in any allowed configuration can be saved in B Memory (temporarily or permanently) to be used as reference data, and partitioned into 1, 2, 4, or 8 equal segments. These segments can then be used by the various setup files, either singly or in the automatic

sequence mode. Each saved data segment can be assigned a 6-character name and a status of "Protected" or "Unprotected," as described under "Setup Directory." The data width mode (32, 16, 8 or 4 channels) is shown for each file. This screen can also be used to upload or download data segments via the RS-232C link (if it is present).



**B MEMORY EDIT** — With this screen, the user can edit reference data (in B Memory). A typical use might be to enter a "Don't Care" ("X") in some positions in some fields so that a Search or Compare will ignore extraneous data. As with all ML4100 data displays, the user can direct the cursor to any desired address in the buffer via the f1 key. Scrolling speed (fast or slow) is controlled via the f2 key. The f3 key (Fill) is a timesaving convenience which permits filling a range of addresses with a particular word or portion of a word.

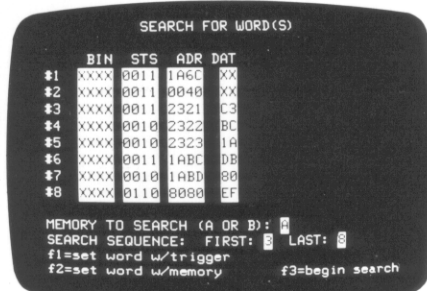


**COMPARE** — When comparing captured data (in A Memory) to previously saved reference data (in B Memory), this screen permits independent specification of starting and ending addresses in both memories. The amount of jitter to be permitted in the patterns in the comparison can also be specified. The user can designate whether to make a single comparison, or to continuously capture and compare new data. The user can also designate whether to stop, or to continue counting occurrences if the comparisons are/are not successful. More importantly, the user can specify both whether the pass condition is

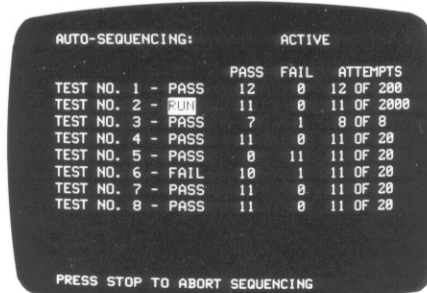
met by a match or by a nonmatch, and whether to count or to hold on passes and fails.

This screen also allows the user to select the automatic sequencing mode, to select the number of attempts to execute for each test, and to display the number of passes and fails (and attempts to date) at any given time. The screen continuously displays summarized test results, which allows review of how the tests proceeded while the ML4100 was testing unattended.

Reference data (in B Memory) can be manually compared with the captured data (in A Memory) by simply alternating between the two State displays. (B Memory data is displayed in State format only.)



**SEARCH-FOR WORDS** — This screen allows the user to specify a sequence of up to 8 words to search for in either A or B Memory. The f1 and f2 keys are used to facilitate loading of a complex word into the search list from a trigger word or from memory.

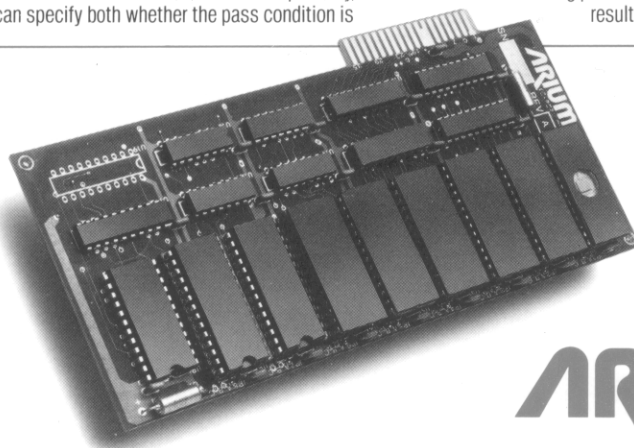


**AUTO SEQUENCING** — This screen summarizes automatic tests run to date, and always indicates which one is in progress. It also indicates the order in which the tests are being performed. This capability allows automatic powerup and operation of the ML4100 for sophisticated tests without expert knowledge of logic analyzer operation. Even more significantly, the ML4100 can now run repetitive, unattended tests for long periods, and displays cumulative results on demand at any time.

## ORDERING INFORMATION

Catalog No.	Option
SM-080	Setup Memory Option (machine setups only)
AB-032	Setup/Data Memory Option (machine setups, plus reference memory, search, and compare)

The SM-080 and AB-032 options are contained on a single option card which is field-installed. These options are fully compatible with all ML4100 Logic Analyzers.



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