



TELEDYNE INSTRUMENTS

Advanced Pollution Instrumentation

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Service Note

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CPU MEMORY CONFIGURATION

All microprocessor based API instruments utilize the same CPU board, the SBC40. The various instruments, however, use this board with different memory and jumper configurations. In order to avoid confusion and potential problems when performing service or spare parts replacement of the CPU, the following is a summary of the configuration options of the SBC40.

Currently two different configurations of the SBC40 are used in API instruments. These configurations differ primarily in the size of the UV Prom chip used. These "Large Memory" and "Small Memory" configurations are used in API instruments as follows:

MODEL	SOFTWARE VERSIONS	MEMORY CONFIGURATION
M100, M101, M102	ALL	SMALL'
M200, M201, M202	ALL	SMALL*
M300	ALL	LARGE
M400	B.7 AND EARLIER	SMALL
M400	B.8 AND LATER	LARGE
M401	ALL	LARGE

***Some instruments which have been modified to include special/custom capabilities may use a large memory configuration.**

If in doubt about the memory configuration of a CPU card, the physical size of the UV Prom chip located at U8 can be used to determine the memory configuration. A small memory configuration will have a 28 pin chip at U8 and a large memory configuration will have a 32 pin chip.

When replacing a CPU or UV Prom, it is important to insure that the jumper configurations and memory chip placement is correct for the configuration being used. The following tables give the correct settings for the two configurations:

JUMPER SETTINGS		
	SMALL MEMORY CONFIGURATION	LARGE MEMORY CONFIGURATION
JUMPER	PINS	PINS
J4	1-2, 3-4, 5-6, 7-8	5-6, 7-8
J5	1-2, 3-4, 5-6, 7-8	1-2, 3-4, 5-6, 7-8
J6	NONE	NONE
J7	1-2	1-2
J8	2-3	2-3
J9	1-2	1-2
ii0	1-2	1-2
iii	1-2	2-3
J12	1-2	1-2
J14	1-2	1-2
J15	1-2	1-2
J16	3-4	3-4
J17	3-4, 7-8, 11-12, 15-16,	17-18, 21-22
	17-18, 21-22, 23-24	
J18	5-6	1-2, 3-4
J20	2-3	1-2
1 J23	12-3	12-3

MEMORY CHIP PLACEMENT		
SOCKET	SMALL MEMORY CONFIGURATION	LARGE MEMORY CONFIGURATION
U8	UV PROM	UV PROM
U9	EE PROM	RAM/SMART WATCH
U10	RAM/SMART WATCH	NONE
U11	NONE	EE PROM

The attached chart shows the location of jumper pins and memory sockets.

