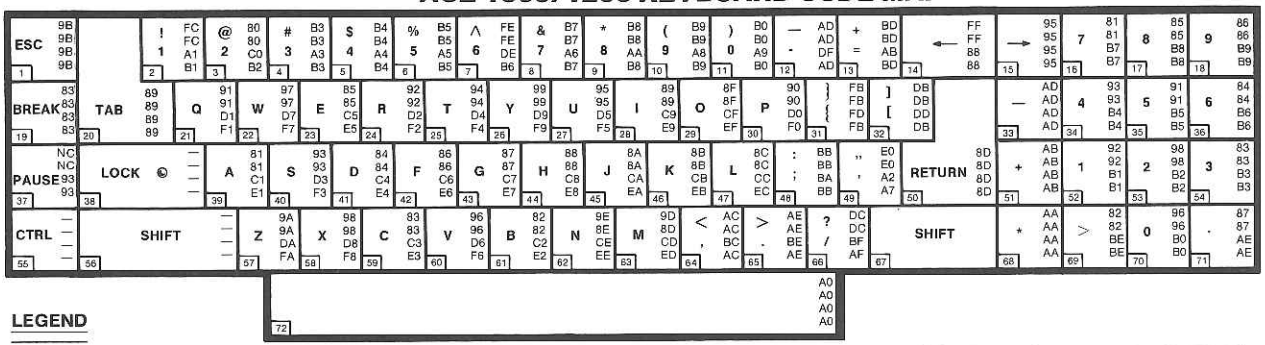
Keyboard Code Map

ACE 1000/1200 KEYBOARD CODE MAP



LEGEND

BOLD INDICATES CHARACTERS ON KEYBOARD

INDICATES KEY NUMBER

HH	CONTROL & SHIFTED MODE
HH	CONTROL MODE
HH	SHIFTED MODE
HN	NORMAL MODE

"LOCK" IS AN ALPHA LOCK—IT CONVERTS ALL ALPHAS TO SHIFTED MODE (UPPER CASE).

"NUM LOCK" IS A NUMERIC PAD/CURSOR PAD LOCK—IT TOGGLES BETWEEN NUMERIC PAD MODE AND CURSOR PAD MODE. IN CURSOR PAD MODE THE CONTROL CODES ON THE NUMERIC PAD ARE PRODUCED.

1200 OPTION:

KEY 37 LEGEND: NUM LOCK / PAUS

NUMERIC PAD LEGEND:

FOR KEYS 16, 17, 18, 34, 35, 36, 52, 53, 54, 69, 70, 71

7 PREV WORD	8 ↑	9 NEXT WORD
4 ←	5 MENU	6 →
1 PREV SCRN	2 ↓	3 NEXT SCRN
FORMT	0 INSRT	DEL CHAR.

(2/25/83)

Monitor Program— Differences Between The ACE And APPLE II

This appendix details the program differences between the Franklin ACE computers and the APPLE II Plus computers. The versions of the ACE monitors used for the comparison are three — version 2.0, version 2.1, and version 2.2. Version 2.0 was shipped in most of the ACE 100 models, version 2.1 was shipped in the early ACE 1000's and version 2.2 is the latest version for the ACE 1000. These are all compared to the Apple monitor known as the AUTOSTART ROM.

There are three primary areas of differences:

1.) The sign-on name and its location have been changed.

2.) The cassette I/O routines in the APPLE are not present in the ACE.

3.) The ACE will recognize and display lowercase characters.

There was only one change made between versions 2.1 and 2.2. This was at addresses FD11-FD1A. To save space in the following table, version 2.2 is not listed in the version column except at those addresses. Everything elsewhere that is noted as applying to 2.1 also applies to 2.2.

ADDRESSES	APPLE HAS	ACE HAS	ACE VERSIONS
FAD5-FAD6	two NOP's	two bytes of 00h	2.0 only 2.1 has NOP's
FB09-FB10	title: "APPLE II"	eight bytes of 00h	2.0 & 2.1
FB64	title size byte	same but = 0Ch same but = 0Dh	2.0 2.1
FB66	title loc, low byte	same but = B2h same but = FDh	2.0 2.1
FB67	title loc, high byte	same but = FCh	2.1 only
FB69	start screen pos of title, low byte	same but = 0Dh	2.0 & 2.1
FBB3-FBC0	fourteen NOP's	title string = "ACE 100 V2.0" = C1, C3, C5, A0, B1, B0, B0, A0, F6, B2, AE, B0, 00, 00	2.0 only 2.1 has NOP's

FCC9	HEADR routine entry	RTS	2.0 & 2.1
FCCA-FCD5	HEADR routine body	twelve 00h pads	2.0 & 2.1
FCD6	WRBIT routine entry	RTS	2.0 & 2.1
FCD7-FCDE	part of WRBIT body	JSR $FCE2 AND #$3F ORA #$40 RTS	2.0 & 2.1
FCDF-FCE8	more of WRBIT body	LDA $200, Y CMP #$E0 BCC $FCE8 AND #$DF RTS	2.0 & 2.1
FCE9-FCEB	end of WRBIT body	three 00h pads	2.0 & 2.1
FCEC	RDBYTE routine entry	RTS	2.0 & 2.1
FCED-FCF9	RDBYTE routine body	thirteen 00h pads	2.0 & 2.1
FCFA-FCFC	RD2BIT routine entry	three NOP's	2.0 & 2.1
FCFD	RDBIT routine entry	RTS	2.0 & 2.1

FCFE-FD0B	RDBIT routine body	fourteen 00h pads	2.0
		title string = "ACE 1000 v2.1" = C1, C3, C5, A0, B1, B0, B0, B0, A0, F6, B2, AE, B1, 00	2.1
FD11-FD1A	part of RDKEY routine	LDY $24 LDA ($28), Y PHA JSR $FCD7 STA ($28), Y PLA JMP ($38) DB 0	2.0 & 2.1
		LDY $24 LDA ($28) ,Y PHA JSR $FCD7 NOP STA ($28) ,Y	2.2

		PLA JMP ($38)	
FD7E-FD83	convert to uppercase	six NOP's	2.0 & 2.1
FEAE-FEAF	two NOP's	two 00h pads	2.0 only 2.1 has NOP's
FEC3	one NOP	one 00h pad	2.0 only 2.1 has NOP's
FEC5-FEC9	five NOP's	five 00h pads	2.0 only 2.1 has NOP's
FECD	WRITE routine entry	RTS	2.0 & 2.1
FECE-FEEC	WRITE routine body	thirty-one 00h pads	2.0 & 2.1
FEED	WRBYTE routine entry	RTS	2.0 & 2.1
FEEE-FEF5	WRBYTE routine body	eight 00h pads	2.0 & 2.1
FEFD	READ routine entry	RTS	2.0 & 2.1
FEFE-FF2C	READ routine body	forty-seven 00h pads	2.0 & 2.1
FFAD-FFAF	LDA $200,Y	JSR $FCDF	2.0 & 2.1

FFCF	CTRL T vector B2h	same but = EDh	2.0 & 2.1
FFD2	CTRL S vector B2h	same but = ECh	2.0 & 2.1
FFE9	CTRL Y vector C4h	same but = C3h	2.0 & 2.1

Memory Configuration Jumpers

At location F'2 on the ACE 1000 motherboard is a sixteen-pin DIP socket. This socket allows you to change the ACE's memory configuration. These options have been preset at our factory to provide you with a normal 12K bank of RAM or ROM at $D000 to $FFFF. We include this information for those of you who are interested in using some unusual features of the ACE 1000.

The functions of the pins are shown on the next page.

NOTE: If peripheral slot zero is to be used for any peripheral card (especially a RAM card), cut X3 and jumper Y3 to disable the on-board 16K RAM bank.

Pins to Jump	Results
1-16	Normal mode. With this option, you have two 4K banks of RAM located at $D000-$DFFF. The user selects which bank is active.
2-15	If this jumper is installed, the user has only one bank of 4K RAM from $D000 to $DFFF.
3-14	Normal mode. The user's program can write enable the 12K RAM bank at $D000 to $FFFF.
4-13	This option allows the user to write into the 12K RAM bank until it is write inhibited. From that point on, the 12K RAM can not be write enabled, except by turning the power off and back on.
5-12	Normal mode. This allows the user to read enable or disable the 12K RAM bank.
6-11	This option, when memory is write inhibited, enables the 12K RAM bank. The RAM is permanently enabled if option 4-13 is in effect.
7-10	Normal mode. This allows the 12K ROM bank in the range $D000 to $FFFF to be enabled or disabled from the data bus.
8-9	This prevents the 12K ROM bank from ever being on the data bus when the 12K RAM bank is read enabled.

Schematics