


```

L05812
00* Note: 21 *
L05814
00* Note: 20 *
L05816
00* Note: 19 *
L05818
00* Note: 18 *
L05820
00* Note: 17 *
L05822
00* Note: 16 *
L05824
00* Note: 15 *
L05826
10* Note: 14 *
The last, as noted, is a check sum.
C2B48*           Note: Fuse Checksum*
♥4FF2

```

Now, you may ask, "How do you know which fuse is which?" You have to find this information somewhere. On your WARP2 disk you will find files named:

PLD.phy, C37x.phy, and C34x.phy. (They will be found in the WARP/BIN directory). The first contains the fuse data for PLD's, the second for the Flash 370 series PLD's and the last for the 340 series. The portion of the PLD.phy file applicable to the 22V10 is shown below. Again, comments have been added.

```

$ C22V10 5828
$ P22V10 5828

```

The first two lines (above) start the data for the 22V10.

```
00000 : PT * 1 -> BANK 1
```

Links 0 to 43 are for "Bank 1", the asynchronous preset.

```
00044 : PT * 1 -> OE 23 : PT * 8 -> PIN 23
```

Links 44 to 439 are for the macrocell on pin 23, the first P term is the OE term. It is followed by 8

product terms for the array, the other 9 cells are the same..

```

00440 : PT * 1 -> OE 22 : PT * 10 -> PIN 22
00924 : PT * 1 -> OE 21 : PT * 12 -> PIN 21
01496 : PT * 1 -> OE 20 : PT * 14 -> PIN 20
02156 : PT * 1 -> OE 19 : PT * 16 -> PIN 19
02904 : PT * 1 -> OE 18 : PT * 16 -> PIN 18
03652 : PT * 1 -> OE 17 : PT * 14 -> PIN 17
04312 : PT * 1 -> OE 16 : PT * 12 -> PIN 16
04884 : PT * 1 -> OE 15 : PT * 10 -> PIN 15
05368 : PT * 1 -> OE 14 : PT * 8 -> PIN 14
05764 : PT * 1 -> BANK 2

```

Fuses 5764 to 5807 are for the synchronous preset term.

Following this are the pairs of fuses for programming the macrocells.

```
05808 : POL 23 [ AL | AH ] : REG 23 [ D | COMB ]
```

05810	:	POL	22	[	AL	|	AH	]	:	REG	22	[	D	|	COMB]
05812	:	POL	21	[	AL	|	AH	]	:	REG	21	[	D	|	COMB]
05814	:	POL	20	[	AL	|	AH	]	:	REG	20	[	D	|	COMB]
05816	:	POL	19	[	AL	|	AH	]	:	REG	19	[	D	|	COMB]
05818	:	POL	18	[	AL	|	AH	]	:	REG	18	[	D	|	COMB]
05820	:	POL	17	[	AL	|	AH	]	:	REG	17	[	D	|	COMB]
05822	:	POL	16	[	AL	|	AH	]	:	REG	16	[	D	|	COMB]
05824	:	POL	15	[	AL	|	AH	]	:	REG	15	[	D	|	COMB]
05826	:	POL	14	[	AL	|	AH	]	:	REG	14	[	D	|	COMB]