

IsoMax V0.2

WORDS

24C5 TASK	2C75 END-MACHINE-CHAIN		
2C70 MACHINE-CHAIN	2C5D SCHEDULE-RUNS	2C59 CYCLES	2C5B EVERY
2C58 DINT	2C57 EINT	2C56 STOP-TIMER	2C53 TCFOVFLO
2C51 TCFTICKS	2C29 END-PROC	2C1E PROC	2C39 AS-TAG
2C11 FOR-INPUT	2BF8 FOR-OUTPUT	2BC3 WITH-VALUE	2BC1 SET-MASK
2BBF CLR-MASK	2BBD XOR-MASK	2BBB AND-MASK	2BB9 DATA-MASK
2BB7 TEST-MASK	2BB5 AT-ADDR	2BA1 IS-STATE?	2B96 SET-STATE
2B90 TO-HAPPEN	2B90 NEXT-TIME	2B8A THIS-TIME	2B6A THEN-STATE
2B5F CAUSES	2B4A CONDITION	2B48 IN-STATE	2B36 ON-MACHINE
2B20 APPEND-STATE	2B0F MACHINE	2B0B CURSTATE	2AFB ALLOC
2AF9 RAM	2BAD DEFINE	2ADF \	2996 PFMOVE
296E PFD	2962 PFERASE	2961 PF!	295F EEERASE
298A PTYPE	2984 PCOUNT	297E P,	2978 PC,
2974 PALLLOT	2970 PHERE	296C PDP	2964 PC!
2963 PC@	295A P@	295B P!	2ADA TD3
2AD5 TD2	2AD0 RS422XCV	2ACB RS232XMT	2AC6 PD0
2AC1 PD1	2ABC PD2	2AB7 PD3	2AB2 PB0
2AAD PB1	2AA8 PB2	2AA3 PB3	2A9E PB4
2A99 PB5	2A94 PB6	2A8F PB7	2A8A PA0
2A85 PA1	2A80 PA2	2A7B PA3	2A76 PA4
2A71 PA5	2A6C PA6	2A67 PA7	2A62 GRNLED
2A5D YELLED	2A58 REDLED	2A48 I/O	2A13 OFF
29E2 ON	2586 IS	1EF4 FALSE	1EFE TRUE
21EE (	1F1D @	1F06 C@	1F48 !
1F07 C!	2038 2@	2034 2!	258D :
2596 ;	1F36 +	1F2D -	1F7F 1-!
1F7A 1+!	1F38 +!	1F47 *	1FB2 /
1F4B ><	1F4A SWAP	2048 2OVER	2042 2SWAP
1F19 DUP	1F4F 2DUP	1F35 OVER	1F3F ROT
204E 2ROT	2006 PICK	2020 ROLL	200D -ROLL
1F18 DROP	1F4E 2DROP	1F4C >R	1F3C R>
1F1B =	1F31 NOT	1F57 0=	2056 D0=
1F84 0>	1F58 0<	1F55 U<	1F26 <
1F13 DU<	203D D<	205A D=	1F21 >
1F04 AND	1F34 OR	1F56 XOR	2474 IF
247C THEN	2482 ELSE	248F BEGIN	24AF UNTIL
24A5 REPEAT	249D WHILE	2494 AGAIN	24B8 END
243B DO	2460 LOOP	246A +LOOP	1F24 K
1F23 J	1F22 I	1F3B R@	2444 LEAVE
28E0 EXIT	1F25 KEY	1F1A EMIT	21F3 ?TERMINAL
2030 S->D	1F02 ABS	2064 DABS	1F2C MIN
206B DMIN	1F2B MAX	2075 DMAX	20E8 SPACES
1FFD DEPTH	20D5 CR	20F4 TYPE	1F0F COUNT
2384 -TRAILING	1F33 1+	1F51 2+	1F32 1-
1F50 2-	1F52 2/	1F53 2*	1F12 D+
1F11 D-	1F10 D2/	1F44 /MOD	1FB7 MOD
2089 */MOD	208F */	1F17 UM*	1F16 UM/MOD
1F2F NEGATE	205E DNEGATE	2586 CONSTANT	259F VARIABLE
25AE 2CONSTANT	25A9 2VARIABLE	28DE SF!	28DD SF@
28D9 FTAN	28C7 FCOS	28D6 FSIN	2707 FATAN2
28C6 FATAN	26E5 F?	28D7 FSQRT	28B8 F2/
28B9 F2*	26E9 F.S	272A FNUMBER	26E0 E.
26DB F.	26CC (E.)	26B6 (F.)	28C0 F**

28C5 FALOG	28CA FEXP	28DF 2**X	28CB FLN
28CE FLOG	28DA LOG2	2723 ODD-POLY	2713 POLY
28CF FLOOR	28D5 FROUND	2755 FLITERAL	28DB PI
28B5 e	267D PLACES	28CC FLOAT+	28CD FLOATS
2763 FVARIABLE	2775 FCONSTANT	276E F,	28C1 F!
28BA F@	28C4 FABS	28D1 FMIN	28D0 FMAX
28BB F<	28B7 F0<	28B6 F0=	28D2 FNEGATE
28C3 F>D	28DC S>F	28C2 D>F	28BE F/
28BF F*	28BC F-	28BD F+	28C8 FDROP
28D8 FSWAP	28D4 FOVER	28C9 FDUP	28D3 FNIP
2669 FDEPTH	28E1 FSP	1FC3 FSP0	1F5B TOGGLE
1F46 SP!	1F40 RP@	1F41 RP!	1FE3 UABORT
1FE1 WARNING	1FBF R0	2530 SMUDGE	233B DLITERAL
2225 MESSAGE	2246 ERROR	2260 ?ERROR	2267 ?COMP
226F ?EXEC	2276 ?PAIRS	227C ?CSP	228A ?STACK
1F74 @!	1F1E @@	1F1C EXECUTE	1F45 SP@
1F0E CMOVE>	1F0D CMOVE	21EA ;S	25BD CODE-SUB
25B5 CODE	25C8 END-CODE	25D8 USER	2167 .
215C .R	2157 D.	216B U.	2162 U.R
2149 D.R	2142 #S	212F #	2126 SIGN
211E #>	2119 <#	216F ?	239A EXPECT
23E1 QUERY	1FF3 BL	1FDD STATE	1FC9 CURRENT
20A7 CONTEXT	1FD7 BLK	1FC5 DP	1FCF FLD
1FE5 DPL	1FD5 >IN	1FD1 BASE	1FC1 S0
1FCB TIB	1FD9 #TIB	1FDB SPAN	2175 C/L
2100 PAD	2093 HERE	2097 ALLOT	20A1 ,
209B C,	20E4 SPACE	1F3A ?DUP	20AA TRAVERSE
20D1 LATEST	2414 COMPILE	2211 [	220B]
2106 HEX	210C DECIMAL	25DE ;CODE	256F <BUILDS
2579 DOES>	2299 ."	2899 .(	1F20 FILL
1FF5 ERASE	1FF9 BLANK	2112 HOLD	21DF WORD
22C4 CONVERT	2307 NUMBER	24C7 FIND	2542 ID.
2580 CREATE	241D [COMPILE]	2331 LITERAL	2352 INTERPRET
2536 IMMEDIATE	2421 RECURSE	242F >MARK	2427 <MARK
2434 >RESOLVE	242A <RESOLVE	25CC :CASE	2411 '
2409 [']	20B7 LFA	20CE >BODY	20BA CFA
20BE NFA	20C5 PFAPTR	2173 B/BUF	25FE AUTOSTART
24D3 UNDO	24E3 FORGET	281B DUMP	28A0 .S
2857 WORDS	23F6 QUIT	24BB ABORT"	221B ABORT
25FA COLD	1F05 BRANCH	1F39 ?BRANCH	1F59 ATO4
29AD EEWORD	278B EEMOVE	2960 EEC!	295E EE!
1FEB EDP	1FED EDELAY	190 FLASH	279A EXRAM
1FE9 seed	24C3 FORTH-83		

Now let me break those down for you so you have an idea of what is what.

(*Beginning of user definitions/code*

TASK

(*O.S. words to install machines*

END-MACHINE-CHAIN MACHINE-CHAIN SCHEDULE-RUNS CYCLES EVERY

(*Timer words*

DINT EINT STOP-TIMER TCFOVFLO TCFTICKS

(*Procedural defining words*

END-PROC PROC

(*Trinary defining words*

**AS-TAG FOR-INPUT FOR-OUTPUT WITH-VALUE SET-MASK CLR-MASK XOR-MASK
AND-MASK DATA-MASK TEST-MASK AT-ADDR**

(*State machine defining words*

**IS-STATE? SET-STATE TO-HAPPEN NEXT-TIME THIS-TIME THEN-STATE CAUSES
CONDITION IN-STATE ON-MACHINE APPEND-STATE MACHINE CURSTATE**

(*Words dealing with Harvard architecture*

**ALLOC RAM DEFINE \ PFMOVE PFDP PFERASE PF! EEERASE PTYPE PCOUNT P, PC,
PALLOT PHERE PDP PC! PC@ P@ P!**

(*Words dealing with onboard I/O*

**TD3 TD2 RS422XCV RS232XMT PD0 PD1 PD2 PD3 PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7 GRNLED YELLED REDLED I/O OFF ON IS FALSE TRUE**

(*Below this level is currently a full implementation of our MaxForth*

(*This is what is used to program the procedural portions of IsoMax*

(*in the conditions and actions and setup, and whatever interactive*

(*examination of memory, etc., the user may wish to do.*

(*Later, this will be trimmed back to just what is necessary, but we are*

(*looking for feedback about what is and isn't really necessary.*

21EE (	1F1D @	1F06 C@	1F48 !
1F07 C!	2038 2@	2034 2!	258D :
2596 ;	1F36 +	1F2D -	1F7F 1-!
1F7A 1+!	1F38 +!	1F47 *	1FB2 /
1F4B ><	1F4A SWAP	2048 2OVER	2042 2SWAP
1F19 DUP	1F4F 2DUP	1F35 OVER	1F3F ROT
204E 2ROT	2006 PICK	2020 ROLL	200D -ROLL
1F18 DROP	1F4E 2DROP	1F4C >R	1F3C R>
1F1B =	1F31 NOT	1F57 0=	2056 D0=
1F84 0>	1F58 0<	1F55 U<	1F26 <
1F13 DU<	203D D<	205A D=	1F21 >
1F04 AND	1F34 OR	1F56 XOR	2474 IF
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206B DMIN	1F2B MAX	2075 DMAX	20E8 SPACES
1FFD DEPTH	20D5 CR	20F4 TYPE	1F0F COUNT
2384 -TRAILING	1F33 1+	1F51 2+	1F32 1-
1F50 2-	1F52 2/	1F53 2*	1F12 D+
1F11 D-	1F10 D2/	1F44 /MOD	1FB7 MOD
2089 */MOD	208F */	1F17 UM*	1F16 UM/MOD
1F2F NEGATE	205E DNEGATE	2586 CONSTANT	
259F VARIABLE	25AE 2CONSTANT	25A9 2VARIABLE	

(Just to answer another of your questions, the following words are
(floating point routines.

28DE SF!	28DD SF@		
28D9 FTAN	28C7 FCOS	28D6 FSIN	2707 FATAN2
28C6 FATAN	26E5 F?	28D7 FSQRT	28B8 F2/
28B9 F2*	26E9 F.S	272A FNUMBER	26E0 E.
26DB F.	26CC (E.)	26B6 (F.)	28C0 F**
28C5 FALOG	28CA FEXP	28DF 2**X	28CB FLN
28CE FLOG	28DA LOG2	2723 ODD-POLY	2713 POLY
28CF FLOOR	28D5 FROUND	2755 FLITERAL	28DB PI
28B5 e	267D PLACES	28CC FLOAT+	28CD FLOATS
2763 FVARIABLE	2775 FCONSTANT	276E F,	28C1 F!
28BA F@	28C4 FABS	28D1 FMIN	28D0 FMAX
28BB F<	28B7 F0<	28B6 F0=	28D2 FNEGATE
28C3 F>D	28DC S>F	28C2 D>F	28BE F/
28BF F*	28BC F-	28BD F+	28C8 FDROP
28D8 FSWAP	28D4 FOVER	28C9 FDUP	28D3 FNIP
2669 FDEPTH	28E1 FSP	1FC3 FSP0	

(Then the rest of Forth follows

1F5B TOGGLE			
1F46 SP!	1F40 RP@	1F41 RP!	1FE3 UABORT
1FE1 WARNING	1FBF R0	2530 SMUDGE	233B DLITERAL
2225 MESSAGE	2246 ERROR	2260 ?ERROR	2267 ?COMP
226F ?EXEC	2276 ?PAIRS	227C ?CSP	228A ?STACK
1F74 @!	1F1E @@	1F1C EXECUTE	1F45 SP@
1F0E CMOVE>	1F0D CMOVE	21EA ;S	25BD CODE-SUB
25B5 CODE	25C8 END-CODE	25D8 USER	2167 .
215C .R	2157 D.	216B U.	2162 U.R
2149 D.R	2142 #S	212F #	2126 SIGN
211E #>	2119 <#	216F ?	239A EXPECT
23E1 QUERY	1FF3 BL	1FDD STATE	1FC9 CURRENT
20A7 CONTEXT	1FD7 BLK	1FC5 DP	1FCF FLD
1FE5 DPL	1FD5 >IN	1FD1 BASE	1FC1 S0
1FCB TIB	1FD9 #TIB	1FDB SPAN	2175 C/L
2100 PAD	2093 HERE	2097 ALLOT	20A1 ,
209B C,	20E4 SPACE	1F3A ?DUP	20AA TRAVERSE
20D1 LATEST	2414 COMPILE	2211 [	220B]
2106 HEX	210C DECIMAL	25DE ;CODE	256F <BUILDS
2579 DOES>	2299 ."	2899 .(	1F20 FILL
1FF5 ERASE	1FF9 BLANK	2112 HOLD	21DF WORD
22C4 CONVERT	2307 NUMBER	24C7 FIND	2542 ID.
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2434 >RESOLVE	242A <RESOLVE	25CC :CASE	2411 '
2409 [']	20B7 LFA	20CE >BODY	20BA CFA
20BE NFA	20C5 PFAPTR	2173 B/BUF	25FE AUTOSTART
24D3 UNDO	24E3 FORGET	281B DUMP	28A0 .S
2857 WORDS	23F6 QUIT	24BB ABORT"	221B ABORT
25FA COLD	1F05 BRANCH	1F39 ?BRANCH	1F59 ATO4
29AD EEWOR	278B EEMOVE	2960 EEC!	295E EE!
1FEB EDP	1FED EDELAY	190 FLASH	279A EXRAM
1FE9 seed	24C3 FORTH-83		