MTX Rom Board Version 5.1

Viewed from the solder side, pont to point wiring assumed.   bottom

U6 - 74HC138 3 to 8

P0	P1	P1	P3	A15	A14	nc	0V
5v	Y0	Y1	nc	Y3	nc	nc	nc

System

	Y0	
Y1	ROM	Y3

U3 - 74HCT0 4X DUAL NAND

A2	A2	*A2	prcs	prcs	romu	0V
5V	5v	A14	port	grom	rom	prcs

0v	R1	4k7	Q0
0v	R2	4k7	Q1
0v	R3	4k7	Q2
0v	R4	4k6	Q3
0v	R5	4k6	Q4

Left connector column:

0v	ser 2
ser 1	*recpm
R2	R1
R0	P3
P2	P1
P0	lnk12
*int	*nmi
*busreq	*wait
*busak	*halt
*rfsh	PHI
*mi	*wr
*rd	*iorq
*mreq	*reset
0v	0v
-v	12v
5v	5v
D7	D6
D5	D4
D3	D2
D1	D0
A15	A14
A13	A12
A11	A10
A9	A8
A7	A6
Keyway	Keyway
0v	A5
A4	A3
A2	A1
A0	*GROM

U1 - 74HCT32 4X DUAL OR

*wr	*iorq	IOW	romu	re/com	RCS	0V
5V	*mrq	*rd	MRD	IOW	*FB	page

U7 - 74HCT374 D type flip flop

0v	page
nc	nc
0v	0v
D2	0v
Q2	nc
Q1	Q4
D1	D4
D0	D3
Q0	Q3
port	5v

U8 - 512k x 8bit FLASH ROM

0V	D3
D2	D4
D1	D5
D0	D6
A0	D7
A1	RCS
A2	A10
A3	MRD
A4	A11
A5	A9
A6	A8
A7	A13
A12	X0
X1	x3
X2	5v
X4	5v

U4 - 74HCT30 8 input NAND

A2*	A3	A4	A5	A6	A7	0v
5v	NC	A1	A0	NC	NC	*FB

top

Version 3 tested & working, version 4 replaces the HCT20 with HCT30 to eliminante one of the HCT138's
and Rom7 select now OR'd with *re/cpm as per Mark's suggestions
Version 5 includes the remaider of Mark's suggestions and *grom replacing rom 7 identification
Version 5.1 A2 inverted on entry to HC30, changing I/O port to &FB instead of &FF
ROM does 2 jobs

Paged in as ROM 7 it's the controlling software
Paged in bank 1 of the half ram page, it's the game data store

Paging for rom 7 - R15=0 R14=0 R13=1 R0=1 R1=1 R2=1, X0-X4 =0 *RE/CPM=0
Paging for Bank1 R15=0 R14=1 P2=0 P3=0 P0/P1=0,1 or 3 for MTX500/MTX512/RS128
Ouput port selected when IOWR low(via OR) and A0-A7= &FB via NAND