SCD-DZV11 8-Channel Asynchronous Multiplexer for LSI-11 Manual

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Section 1 - General Information

1.1 INTRODUCTION

This manual provides the information needed to install and operate the SCD-DZV11 multiplexed asynchronous serial line interface manufactured by Sigma Information Systems, Anaheim, California. The material in this manual is arranged into the following sections:

Section 1 - GENERAL INFORMATION. This section contains a general description of the SCD-DZV11. Specifications are included.

Section 2 - INSTALLATION. This section explains the requirements and procedures for equipment installation. Interface information and switch settings are provided. Diagnostic testing information is included.

Section 3 - PROGRAMMING. A description of the SCD-DZV11 control registers is presented for programming the multiplexer.

APPENDIX - Appendix A contains a list of the Q bus signals and associated pin assignments. Appendix B contains a complete list of address and vector switch settings.

1.2 GENERAL DESCRIPTION

The SCD-DZV11 provides a buffered, program-controlled interface between an LSI-11* and up to eight local or remote terminals. The dual-wide module plugs directly into any Q bus slot; two cables are optional, each terminating in four 25-pin connectors for connection to terminals.

The EIA multiplexer is suitable for applications such as real-time/transaction/communication processing and timesharing operation.

Local operation is possible at speeds up to 19200 baud. Remote operation using public switched telephone lines is possible. Data set control is provided for auto answer (dial-up) operation with modems capable of full-duplex operation such as Bell Models 103 or 113. Remote operation over private lines for full duplex point-to-point, or full duplex multipoint (as a master control station) is also possible. The SCD-DZV11 does not support half-duplex operation with secondary transmit and receive. Half-duplex modems, such as Bell 202, can be used on leased lines with these latter restrictions. Figure 1-1 illustrates example applications of the SCD-DZV11.

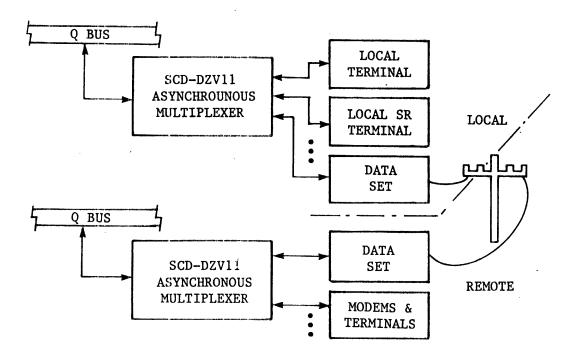


FIGURE 1-1: EXAMPLE APPLICATIONS OF THE SCD-DZV11

 \star LSI-11, Q bus and DEC are registered trademarks of Digital Equipment Corporation

1.3 FEATURES

- Software compatible with diagnostics and software designed for the DEC* DZ11.
- Programmable speeds up to 9600 baud and formatting on a per-line basis
- Data set control allows auto answer (dial-up) operation for full duplex modems
- FIFO buffered input transfers reduce interrupt overhead and improve latency.
- Dual-wide module plugs directly into any Q bus* slot.

1.4 BLOCK DIAGRAM

The SCD-DZV11 consists of three basic components: Q bus interface, control logic, and line interface, as shown in Figure 1-2.

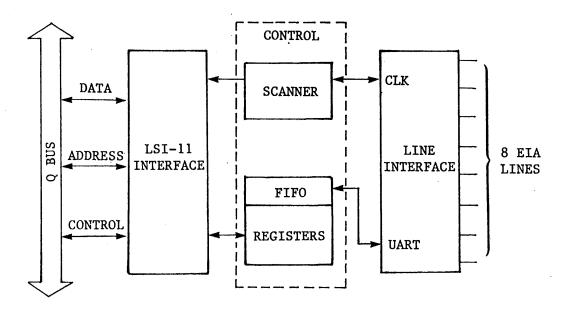


FIGURE 1-2: SCD-DZV11 BLOCK DIAGRAM

1.4.1 Q Bus Interface

All transactions between the Q bus and the SCD-DZV11 control logic depend on the Q bus interface, which performs data handling, address recognition, and interrupt control.

DATA HANDLING. The LSI-11 sends and receives data to/from registers via the control logic, and provides the voltage signals that determine transmission/reception of data to/from the Q bus.

ADDRESS RECOGNITION. Preselected LSI-11 address recognition activates the proper load (Write and Read signals) that is used to route the I/O data to the desired locations.

INTERRUPT CONTROL. This function initiates and controls interrupt processing between the SCD-DZV11 and the LSI-11 central processor.

1.4.2 Control Logic

The control logic, which consists of the scanner and registers, generates receiver/transmitter timing and control signals. The scanner, which produces data flow to/from the appropriate line, continuously analyzes information from the line interface and registers.

Four device registers are utilized to provide six 16-bit accessible registers. The registers store I/O data, monitor control signal conditions, and determine operating status. The registers are accessible in bytes and/or words and, depending on the operation, can be read or written.

1.4.3 Line Interface

The SCD-DZV11 is located between the LSI-11 parallel data path and serial data paths (terminals or telephone lines). The line interface provides serial-to-parallel and parallel-to-serial data format conversion. Each line is converted by independent universal asynchronous receiver/transmitter integrated circuits (UARTs). The line interface also allows the line receiver or driver to convert TTL voltage levels in the SCD-DZV11 to correspond to external device input lines.

1.5 SPECIFICATIONS

Device Address: 760000 to 777776 (octal) Switch Selectable

Vector Interrupt: 000 to 776 (octal) Switch Selectable

Operation: Full-duplex

Data Format: Program controlled, asynchronous, serial-by-bit

Start Bits: 1
Stop Bits: 1 or 1-1/2 (5-level codes only), or 2

Character Size: 5, 6, 7 or 8 bits. Program controlled. No parity bit.

Parity: Odd, even or none. Program controlled.

Bit Polarities: Q bus SCD-DZV11 EIA OUT

Data Signal: Low = 1 High - 1 1 = Mark

High = 0 Low = 0 0 = Space

Control Signal: Low = 1 High = 1 1 = Off High = 0 Low = 0 0 = On

Order of Bit: Transmit/Receive low-order bit first.

Break: Can be generated and detected on each line.

Baud Rates: Program controlled: 50, 75, 110, 134.5, 150, 300,

600, 1200, 1800, 2400, 4800, 7200, 9600, 200 and

19,200.

Throughput: 21,940 characters/second = (bits/second x number of

lines x direction)/(bits/character).

Example: $(9600 \times 8 \times 2)/7 = 21,940 \text{ characters/second.}$

NOTE: Theoretical maximum is 21,940. Actual throughput de-

pends on other factors such as type of CPU, system

software, etc.

EIA Interface:

Each line provides voltage levels and connector pins that conform to Electronic Industries Association (EIA) standard RS232C and CCITT recommendation V.24. The leads supported by this option are:

Pin 1 *Protective Ground Pin 2 Transmit Data Pin 3 Receive Data Pin 4 Request to Send Pin 7 *Signal Ground

Pin 8 Carrier

Pin 20 Data Terminal Ready

Pin 22 Ring

Pin 25 Force Busy

*Protective and Signal Ground are connected.

NOTE:

Request to Send is connected to Data Terminal Ready via a jumper. This allows control of Request to Send line for full-duplex modem applications that use the RTS circuit.

Power Requirements: +5VDC at 2.8A (typical) +12VDC at 0.2A (typical)

Distortion:

"Space to Mark" and "Mark to Space" in a received character = 40% MAX. Speed distortion in a received character for all baud rates = 4%. Speed distortion from transmitter for baud rates = less than 2%.

Interrupts:

RDONE Occurs each time a character appears at the FIFO output.

SA FIFO Alarm. Occurs after 16 characters enter the FIFO. Rearmed by reading the FIFO. This interrupt disables the RDONE interrupt.

TRDY Occurs when the scanner finds a line ready to transmit on.

Operating

5°C to 50°C (41°F to 122°F).

Temperature:

Reduce 1.8°C/1000 meters (1.0°F/1000 feet) for operation at altitudes above sea level.

Relative Humidity:

10% to 95% with maximum wet bulb of 32°C (90°F) and a minimum dewpoint of 2°C (36°F).

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Section 2 - Installation

2.1 UNPACKING AND INSPECTION

The SCD-DZV11 is shipped in a special packing carton designed to keep the equipment from vibrating and to give it maximum protection during shipment. The packing carton should be retained in the event the product requires reshipment.

To unpack the SCD-DZV11, remove any packing material and visually inspect for damage. If any damage has occurred, notify Sigma Information Systems immediately.

Verify the carton contains the following items:

- SCD-DZV11 dual-wide module
- Two 40-pin cables, each terminated with four 25-pin connectors (optional)
- SCD-DZV11 8-Channel Asynchronous Multiplexer Manual.

2.2 COMPONENT LOCATIONS

Before installing the module, ensure that jumpers and switch settings are correct. Figure 2-1 shows the component locations for jumper and switch selections.

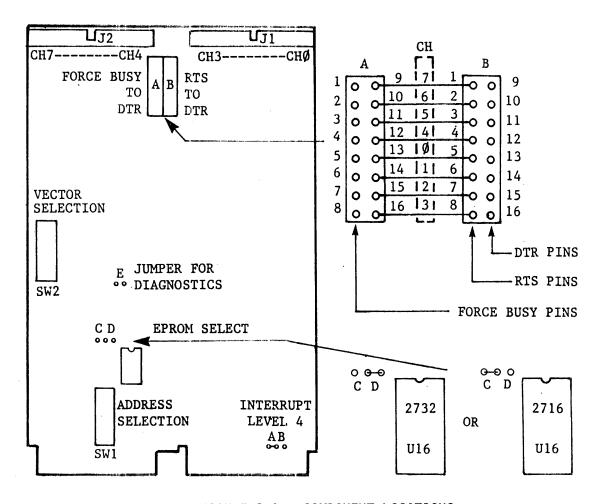


FIGURE 2-1: COMPONENT LOCATIONS

2.3 ADDRESS AND VECTOR SEQUENCE ASSIGNMENTS

The SCD-DZV11 device and vector addresses are selected from floating device and vector address spaces that allow the multiplexer to be assigned the lowest space in a defined sequence of addressable options. The device floating address space is 760010 to 773776 (octal), and the vector space is 300 to 776 (octal). The sequence for the floating spaces are defined in Digital's "Memories and Peripherals - Microcomputer Handbook Series." Examples illustrating the vector/device address assignments are shown in Section 2.4. A complete list of vector/device address switch settings are shown in Appendix B.

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2.4 ADDRESS AND VECTOR SWITCH SELECTION

Address selection ranges from 760000 to 777770 by octal decoding of switch SW1. Device registers R0, R2, R4 and R6 (Section 3.1) are assigned in a contiguous block by setting the CSR (R0) address where 7XXXX0 = R0. The sequential address (7XXXX2 = R2, 7XXXX4 = R4, 7XXXX6 = R6) are automatically implemented.

The SCD-DZV11 utilizes the floating point address space that starts at 760010 and extends to 764000. Refer to DEC's Microcomputer Interface Handbook for alternate address assignments, and to Appendix B for a complete list of address switch settings.

Examples of the CSR address data bits with associated switch positions are shown below.

		<u>S</u>	W	1	004	RE:	<u>22</u>				
SW1 POSITIONS	3	5	8	9	7	4	2	1	10	6	
SW1 SETTINGS:	0FF	0FF	0FF	0FF	0FF	0FF	0FF	0FF	0FF	ON	
ADDRESS: 7	6		0			0			1		0
SW1 POSITIONS	3	5	8	9	7	4	2	1	10	6	
SW1 SETTINGS:	0FF	0FF	0FF	0FF	0FF	ON	ON	0FF	0FF	0FF	
ADDRESS: 7	6		0			3			0		0
SW1 POSITIONS	3	5	8	9	7	4	2	1	10	6	
SW1 SETTINGS:	0FF	0FF	ON	0FF	0FF	0FF	ON	ON	0FF	ON	
ADDRESS: 7	6		2		_	1			5		0



Vector selection ranges from 300 to 770, where XXO is set by octal decoding of switch SW2. Device registers R0, R2, R4 and R6 (Section 3.1) are assigned in a contiguous block by setting the CSR (R0) vector where XXO = R0. The sequential vectors (XX2 = R2, XX4 = R4, XX6 = R6) are automatically implemented.

The SCD-DZV11 utilizes the floating point interrupt vector space that starts at 300 and extends to 777. Refer to DEC's Microcomputer Interface Handbook for floating vector conventions, and to Appendix B for a complete list of vector switch setting.

The CSR vector data bits with associated switch positions are shown in the examples below.

		SWZ		VΕ	CTOR	
SW2 POSITIONS:	7 6	5	4	3	2	
SW2 SETTINGS:	ON OF	F OFF	ON	ON	ON	
VECTOR:	3			0		0
SW2 POSITIONS:	7 6	5	4	3	2	
SW2 SETTINGS:	OFF 0	N ON	0FF	0FF	0FF	
VECTOR:	4			7		0
SW2 POSITIONS:	7 6	5	4	3	2	
SW2 SETTINGS:	OFF OF	F OFF	0FF	ON	0FF	
VECTOR:	7			5		0

2.5 VECTOR PRIORITY JUMPER

The SCD-DZV11 can be configured to operate at level 4 or level 5. The module is shipped configured at level 4, which is determined by a jumper installed in location "A" as shown in Figure 2-1. Level 5 can be selected by removing the jumper in location "A" and replacing it in location "B."

2.6 FULL-DUPLEX MODEM JUMPER CONFIGURATION

Jumpers A and B control full-duplex modem operation. Each line is individually jumpered. The B jumpers connects Data Terminal Ready (DTR) to Request to Send (RTS). This allows the SCD-DZV11 to assert both DTR and RTS when using a modem that requires control of RTS. The A jumpers are also connected to the DTR lead for use in modems that implement the Force Busy function. Both jumpers should be in for diagnostic operation. Remove if there is interference with modem operation. Figure 2-2 defines the A and B jumper logic configurations.

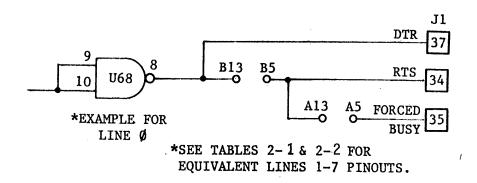


FIGURE 2-2: FULL-DUPLEX MODEM JUMPER CONFIGURATIONS

2.7 CONNECTOR PIN ASSIGNMENTS

A 40-conductor ribbon cable is connected to J1 and J2. The pin assignments for these connectors are shown in Tables 2-1 and 2-2, respectively.

PIN	DESCRIPTION	PIN	DESCRIPTION
1	GND	2	XMTDTA 3
3	RCVDDTA 3	4	DTR3
3 5 7	RING 3	6	FORCED BSY 3
7	RTS3	8	N/C
9	GND	10	CARRIER 3
11	GND	12	XMTDTA 2
13	RCVDDTA 2	14	DTR2
15	RING 2	16	FORCED BSY 2
17	RTS 2	18	N/C
19	GND	20	CARRIER 2
21	CARRIER 1	1	GND
23	N/C	24	RTS 1
25	FORCED BSY 1	26	RING 1
27	DTR1	28	
29	XMTDTA 1	30	GND
31	CARRIER O	32	GND
33	N/C	34	RTS 0
35	FORCED BSY 0	36	RING O
37	DTRO	38	RCVDDTA 0
39	XMTDTA 0	40	GND

PIN	DESCRIPTION	PIN	DESCRIPTION
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37	GND RCYDTA 7 RING 7 RTS 7 GND GND RCYDDTA 6 RING 6 RTS 6 GND CARRIER 5 N/C FORCED BSY 5 DTR 5 XMTDTA 5 CARRIER 4 N/C FORCED BSY 4 DTR 4 XMTDTA 4	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	XMTDTA 7 DTR7 FORCED BSY 7 N/C CARRIER 7 XMTDTA 6 DTR6 FORCED BSY 6 N/C CARRIER 6 GND RTS5 RING 5 RCYDDTA 5 GND GND RTS 4 RING 4 RCYDDTA 4 GND

TABLE 2-1: J1 PIN ASSIGNMENTS

TABLE 2-2: J2 PIN ASSIGNMENTS

Each 40-conductor cable is terminated with four 25-pin connectors for peripheral terminals. The pin assignments for these connector are shown in Table 2--3 below.

PIN	SIGNAL	DESCRIPTION
1	GND	*Shield Ground
2	XMTDATA	Transmit Data
3	RCVDATA	Receive Data
4	RTS	Request to Send
7	GND	*Signal Ground
8	CARRIER	Carrier
20	DTR	Data Terminal Ready
22	RING	Ring
25	FORCED BSY	Force Busy

*Shield & Signal Ground are connected.

TABLE 2-3: PERIPHERAL CONNECTOR PIN ASSIGNMENTS

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2.8 DIAGNOSTIC TESTING

Use the following procedure for diagnostic testing.

- 1. Install jumper at location "E" for proper diagnostic timing compatibility. Assure that chassis line clock (LTC) SWITCH IS OFF.
 Assure that comsole terminal is set to Jump scroll mode.
- 2. Run DEC MAINDEC-11 ZDZAEO diagnostics.
- 3. After Status Table and "Running" appears, halt program and open location 176. Deposit a "1".
- 4. Put Halt switch in Enable position and type "200G".
- 5. Input desired starting address, vector, and BR level.

NOTE

The board is factory set to BR level 4. Enter BR level 4 in program.

- 6. Select EIA Module.
- 7. Select Internal diagnostics.
- 8. Input number of SCD-DZV11 modules in backplane.
- 9. Run at least TWO passes error free. If not error free, check that "E" jumper is installed (step 1) and BR level is correct (step 5).
- 10. For additional testing, install optional staggered loop back connectors at J1 and J2 and repeat test, selecting staggered test at step 7.
- 11. For cable testing, install cables at J1 and J2. Halt program, open 176 and deposit a "2".
- 12. Put Halt switch in Enable position and type "210G".
- 13. Select "C" for cable test.
- 14. Install optional cable loop back adapter on channel to be tested. Select desired baud rate and channel. Run several passes error free. Hit any key to select another channel.
- 15. Repeat test on all channels.

2.9 OPTIONAL REAR RACKMOUNT CONNECTOR PANEL

An optional connector panel can be mounted at the rear of a standard 19" RETMA rack. The connector panel accommodates 25-pin connectors and provides convenient cabling to peripheral terminals. The panel accepts connectors from two 8-channel devices.

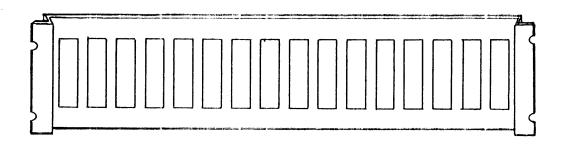


FIGURE 2-3: OPTIONAL REAR CONNECTOR PANEL

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Section 3 - Programming

3.1 INTRODUCTION

This section provides programming information for the SCD-DZV11. A description of each register, including bit assignments and program limits, is provided for programming and maintenance.

The SCD-DZV11 consists of four discrete device registers:

RO	Control Status Register	CSR	Read/Write
R2	Receiver Buffer	RBUF	Read Only
	Line Parameter	LPR	Write Only
R4	Transmit Control Register	TCR	Read/Write
R6	Transmit Data Register	TDR	Write Only
	Modem Status Register	MSR	Read Only

The four register are expanded to six registers by assigning a Read Only or Write Only status to R2 and R6. The LSI-11 processor instructions that perform a Read-Modify-Write (DATIP) bus cycle cannot be utilized with R2 and R6. R2 permits only word instructions, but byte or word instructions may be used with R6. R0 and R4 have no programming restraints. For all registers, Read Only bits are not affected by a Write operation, and a Read operation results in binary 0 for Write Only or Not Used bits.

3.2 CONTROL AND STATUS REGISTER (CSR) 76XXXO

The control and Status register has no programming restraints. Write Only and Not Used bits are read as zero. Read Only bits are not affected by Write attempts.

15	14	13	12	11	10	9	8	7	6	5	4	, 3	2	1	0
TX RDY		FIFO ALRM			TX	LINE ENB	ELIMPTONE 100	RX DN		SCAN ENB	CLR	MAINT			

TX RDY

TRANSMITTER READY. Bit 15 is set when a line with the LINE ENB bit set also has an empty transmit buffer. Cleared by CLR, BUS INIT, or by loading the transmit buffer. Read Only.

TX INT TRANSMIT INTERRUPT ENABLE. When set, bit 14 permits an interrupt if Transmitter Ready is set. Read/Write.

FIFO ALARM FIFO ALARM. Bit 13 is set after 16 characters enter FIFO. An interrupt is generated if bit 6 is set. FIFO must be emptied when FIFO flag occurs since the flag will not set again until another 16 characters enter FIFO. Cleared by CLR, BUS INIT, and reading RBUF. Read Only.

FIFO ENB

FIFO ALARM ENABLE. Bit 12 allows bit 13 to cause an interrupt after 16 characters enter the FIFO, providing bit 6 is set. If bit 6 is not set, FIFO Alarm can be used as a flag. This bit can prevent Receiver Done from causing interrupts. Cleared by CLR and BUS INIT.

TX LINE ENB TRANSMIT LINE ENABLE. When bit 15 is set, these bits indicate which line is ready to transmit a character.

When the character is loaded into the transmit buffer, bit 15 clears. If a second line is ready, bit 15 sets again. After a CLR or BUS INIT, these bits return to line 0. These bits are relavent only if bit 15 is true. Read Only.

RX DN RECEIVER DONE. If bit 6 is set and bit 12 is clear, this bit generates RCV INT, and clears when the receiver buffer is read. Resets when another word reaches the FIFO output. This bit can be used as a flag to indicate the FIFO contains a character if bit 6 is clear.

RX INT RECEIVER INTERRUPT ENABLE. Bit 6 enables receiver interrupts. Cleared by CLR and BUS INIT. Read/Write.

SCAN ENB

MASTER SCAN ENABLE. Bit 5 activates the scanner to enable the receiver transmitter and FIFO. Cleared by CLR and BUS INIT. Read/Write.

CLR CLEAR. Bit 4 generates a reset which clears the receiver FIFO, all UARTs and the CSR. The CSR and line parameters must be reset after CLR is issued. Bits 0 through 14 of RBUF and modem control registers are not affected. CLR = 1 indicates a Clear operation is in progresss. Read/Write.

MAINT MAINTENANCE. When bit 3 is set, serial output data from the transmitter is looped back as input data to the receiver, which permits running diagnostics without disturbing any connectors. Cleared by BUS INIT and CLR. Read/Write.

3.3 RECEIVE BUFFER REGISTER (RBUF) 76XXX2

The Receive Buffer register is the Read Only portion of register R2. Programming constraints are:

Byte, TST, or BIT instructions cannot be used.

CSR bit 5 (Master Scan Enable) must be set or else bit 14-0 of RBUF are invalid regardless of the status of Data Valid (bit 15) and the FIFO held empty. Each reading advances the FIFO and presents the next character to the program. Although Bits 14-9 do not go to zero, they become invalid and the FIFO is emptied after a CLR or BUS INIT. Data Valid (bit 15) goes to zero.

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
DATA VLD	OVR ERR	ERR	PAR ERR		AND SHARE MERITAGE PROPERTY AND	RX LINE	- The second		and the second s	And the section of th	RX C	HAR	Anto-Auto-Auto-Auto-Auto-Auto-Auto-Auto-Au	THE PERSON NAMED OF THE PE	

DATA VLD

DATA VALID. Bit 15 indicates that the character read from FIFO (RBUF) is valid. The RBUF is read until the Data Valid = 0, indicating an invalid character and an empty FIFO. Cleared by CLR and BUS INIT.

OVR ERR

OVERRUN ERROR. Bit 14 indicates a Receive Buffer overflow. When overflow occurs a received character is replaced by another received character before storage in the FIFO. One is valid.

FRM ERR

FRAMING ERROR. Bit 13 indicates improper framing (Stop bit is not a Mark) of received character. Also used for break detection.

PAR ERR PARITY ERROR. Bit 12 does not appear in the RBUF and is generated by the SCD-DZV11. It indicates that the received bit had a parity error when set.

RX LINE RECEIVE LINE NUMBER. Bits 10-08 indicate the line number on which the character is received.

RX CHAR

RECEIVED CHARACTER. Bits 07-00 contain the received character. Highorder bits are forced to zero when the selected code level is less than 8 bits wide.

3.4 LINE PARAMETER REGISTER (LPR) 76XXX2

The line parameter register is the Write Only part of register R2. After a CLR (bit 4 of CSR) or BUS INIT operation, line parameters for each line must be reloaded. Programming restraints do not allow byte operations, BIS or BIC instructions and the Read Only status of the line parameter register.

15	14	13	12	11	10	9	. 8	7	6	. 5	4	3	2	1	0
			RX CLK		BAUD	SEL		PAR TYPE		ST0P		IAR GTH	LI N		

RX CLK

RECEIVER ON. Bit 12 activates the receiver clock. It must be set when loading paramters. CLR or BUS INIT turns the receiver clock off.

BAUD SEL BAUD SELECT. These bits select the baud rates as defined by the TRAN and RCV speed for the line determined by bits 00-02. The baud rate decode for bits 11-08 are:

		BI	TS	
BAUD RATE	11	10	09	80
EO	0	0	^	^
50 75	0	0	0	0
75	0	0	0	1
110	0	0	1	0
134.5	0	0	1	1
150	0	1	0	0
300	0	1	0	1
600	0	1	1	0
1200	0	1	1	1
1800	1	0	0	0
* 200	1	0	0	1
2400	1	0	1	0
3600	1	0	1	1
4800	1	1	0	0
7200	1	1	0	1
9600	1	1	1	0
19200	1	1	1	1

*DEC baud rate is 2000 for 1001

NOTE

Transmit and Receive speeds must be the same

PAR TYPE PARITY TYPE. Bit 7 determines even or odd parity (0 = even, $\overline{1 = \text{odd}}$). Bit 6 must be set for this bit to be effective.

PAR ENB PARITY ENABLE. Bit 6 enables the parity option. If no parity is desired, this bit should not be set (i.e., 0 = no parity, 1 = parity).

STOP STOP CODE. Bit 5 sets the Stop Code length (0 = 1 unit stop, $\overline{1}$ = 2 unit stop or 1.5 unit stop if a 5-level code is used).

CHAR LGTH CHARACTER LENGTH. These bits define the character length for the selected line:

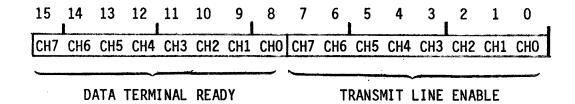
-B3	[T-		
3	4	CHARACTER	LENGTH
		-	
0	0	5 bits	
0	1	6 bits	
1	0	7 bits	
1	1	8 bits	

LINE NO LINE NUMBER. These bits determine the line for parameter (bits 3-12) loading.

--BIT--

3.5 TRANSMIT CONTROL REGISTER (TCR) 76XXX4

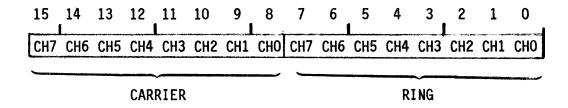
The Transmit Control register is a Read/Write register. The low byte contains the transmit line bits, which must be set to initiate transmission on each line. The high byte contains DTR for each line and is cleared by BUS INIT only, not CLR.



ON = LOGICAL 1

3.6 MODEM STATUS REGISTER (MSR) 76XXX6

The Modem Status register is the Read Only part of register R6. The low byte of the register monitors the state of each line's ring indicator lead (R1). The high byte monitors the state of each line's carrier lead (CO). Programming considerations should include the register format below, the Read Only status of the register, and the fact that CLR and BUS INIT have no effect on the register.



ON = LOGICAL 1

3.7 TRANSMIT DATA REGISTER (TDR) 76XXX6

The Transmit Data register is the Write Only part of register R6. The low byte is the Transmit Buffer (TBUF) that stores the character that is to be transmitted. The high byte is the Break register with each line controlled by an individual bit (7-0). When a break is set, the associated line transmits zeros immediately and continuously. Programming considerations should include the Write Only status of the register, the fact that BIS and BIC instructions cannot be used, and the realization that this register is cleared by CLR and BUS INIT. The character loaded into the TBUF must be right-justified for character lengths less than 8 bits since the hardware induces the most significant bits to zero.

15	14	13	12	11	10	9 l	8	7	6	5	4	3	2	1	0
BRK 7			BRK 4				BRK 0			•	TRANS	SMIT	DAT	A	

PIN	SIGNAL	LSI-11/2	LSI-11/23	PIN	SIGNAL	LSI-11/2	LSI-11/23
AA1 AB1 AC1 AD1 AE1 AF1	BIRQ5L BIRQ6L BDAL16L BDAL17L *SS1 *SRUNL	STOP L SRUNL	SINGLE STEP SRUNL	AA2 AB2 AC2 AD2 AE2 AF2	+5V -12V GND +12V BDOUTL BRPLYL		
AH1 AJ1 AK1 AL1 AM1 AN1	*SRUNL GND *MSPAREA *MSPAREB GND BDMRL	SRUNL MTOEL GND	SRUNL NOT USED NOT USED	AH2 AJ2 AK2 AL2 AM2 AN2	BDINL BSYNCL BWTBTL BIRQ4L *BIAK1L *BIAKOL	NOT USED	MMUSTRH
AP1 AR1 AS1 AT1 AU1 AV1	BHALTL BREFL +12VB GND PSPARE1 +5VB	NOT USED	NOT USED	AP2 AR2 AS2 AT2 AU2 AV2	BBS7L *BDMG1L *BDMGOL BINITL BDALOL BDAL1L	NOT USED	UBMAAPL
BA1 BB1 BC1 BD1 BE1 BF1	BDCOKH BPOKH *SSPARE4 *SSPARE5 *SSPARE6 *SSPARE6	SCLK3H SWMIB18H SWMIB19H SWMIB2OH	MMUDAL18H MMUDAL19H MMUDAL20H MMUDAL21H	BA2 BB2 BC2 BD2 BE2 BF2	+5V -12V GND +12V BDAL2L BDAL3L		
BH1 BJ1 BK1 BL1 BM1 BN1	*SSPARE8 GND *MSPAREB *MSPAREB BND BSACKL	SWMIB21H NOT USED NOT USED	CLKDISL NOT USED NOT USED	BH2 BJ2 BK2 BL2 BM2 BN2	BDAL4L BDAL5L BDAL6L BDAL7L BDAL8L BDAL9L		
BP1 BR1 BS1 BT1 BU1 BV1	BIRQ7L BEVNTL PSPARE4 GND PSPARE2 +5V	PSPARE4	+12VB	BP2 BR2 BS2 BT2 BU2 BV2	BDAL10L BDAL11L BDAL12L BDAL13L BDAL14L BDAL15L		

^{*}NOT BUSSED

Q BUS PIN ASSIGNMENTS

SCD-DZV11 INTERRUPT VECTOR SW2 SWITCH SETTINGS

NOTE
SW2 POSITION 1 MUST ALWAYS BE ON.

INTERRUPT VECTOR	SW2 SWITCH POSITIONS 7 6 5 4 3 2VECTOR DATA BITS V08 V07 V06 V05 V04 V03	SW2 SWITCH POSITIONS 7 6 5 4 3 2 VECTOR DATA BITS V08 V07 V06 V05 V04 V03
000 010 020 030 040 050 060 070	ON O	400 OFF ON OFF ON ON OFF ON ON OFF ON ON OFF ON OFF ON OFF OFF ON ON OFF ON OFF ON OFF ON OFF OFF ON OFF OFF ON OFF OFF
100 110 120 130 140 150 160	ON ON OFF ON ON ON ON ON ON OFF ON ON OFF ON OFF OFF	500 OFF ON OFF ON ON ON ON ON ON OFF 510 OFF ON OFF ON ON OFF 520 OFF ON OFF ON OFF ON OFF 530 OFF ON OFF ON OFF OFF OFF OFF 540 OFF ON OFF OFF ON OFF OFF ON OFF 550 OFF ON OFF OFF ON OFF OFF ON OFF 560 OFF ON OFF OFF OFF OFF OFF 570 OFF ON OFF OFF OFF OFF OFF
200 210 220 230 240 250 260 270	ON OFF ON ON ON ON ON ON OFF ON ON OFF ON ON OFF ON ON OFF OFF	600 OFF OFF ON ON ON ON ON 610 OFF OFF ON ON ON OFF OFF ON ON OFF OFF
300 210 220 230 240 250 260 270	ON OFF OFF ON ON ON ON ON OFF OFF ON OFF OFF	700 OFF OFF OFF ON ON ON ON 710 OFF OFF OFF OFF ON ON OFF OFF OFF ON OFF OFF

SCD-DZV11 ADDRESS ASSIGNMENTS VIA SW1 SWITCH SETTINGS

NOTES

SW1 SWITCH POSITIONS ARE NOT IN NUMERICAL ORDER.
REFER TO DEC'S MICROPROCESSOR INTERFACE HANDBOOK FOR
RECOMMENDED ADDRESS ASSIGNMENTS

		SW1 SWI	TCH POSITIONS	
ADDRESS	3	5 8 9 ADD	7 4 2 RESS BITS	1 10 6
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
760000 760010	OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF OFF	OFF OFF OFF OFF OFF ON
760020 760030	OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF OFF	OFF ON OFF
760040	0FF	OFF OFF OFF	OFF OFF OFF	ON OFF OFF
760050 760060	OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF OFF	ON OFF ON ON OFF
760070	0FF	OFF OFF OFF	OFF OFF OFF	ON ON ON
760100	0FF	OFF OFF OFF	OFF OFF ON	OFF OFF OFF
760110 760120	OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF ON	OFF OFF ON OFF ON OFF
760130	0FF	OFF OFF OFF	OFF OFF ON	OFF ON ON
760140 760150	OFF OFF	OFF OFF OFF OFF OFF OFF	OFF OFF ON	ON OFF OFF ON OFF ON
760160	0FF	OFF OFF OFF	OFF OFF ON	ON ON OFF
760170	0FF	OFF OFF OFF	OFF OFF ON	ON ON ON
760200	0FF	OFF OFF OFF	OFF ON OFF	OFF OFF OFF
760210 760220	OFF OFF	OFF OFF OFF	OFF ON OFF	OFF ON OFF
760230	0FF	OFF OFF OFF	OFF ON OFF	OFF ON ON
760240 760250	OFF OFF	OFF OFF OFF	OFF ON OFF	ON OFF OFF ON OFF ON
760260	0FF	OFF OFF OFF	OFF ON OFF	ON ON OFF
760270	OFF	OFF OFF OFF	OFF ON OFF	ON ON ON
760300	0FF	OFF OFF OFF	OFF ON ON	OFF OFF OFF
760310 760320	OFF OFF	OFF OFF OFF	OFF ON ON	OFF ON OFF
760330	0FF	OFF OFF OFF	OFF ON ON	OFF ON ON
760340	OFF	OFF OFF OFF	OFF ON ON	ON OFF OFF ON OFF ON
760350 760360	OFF OFF	OFF OFF OFF	OFF ON ON	ON ON OFF
760370	OFF	OFF OFF OFF	OFF ON ON	ON ON ON
760400	OFF	OFF OFF OFF	ON OFF OFF	OFF OFF OFF
760410 760420	OFF OFF	OFF OFF OFF	ON OFF OFF	OFF OFF ON
760420	0FF	OFF OFF OFF	ON OFF OFF	OFF ON ON
760440	0FF	OFF OFF OFF	ON OFF OFF	ON OFF OFF
760450 760460	OFF OFF	OFF OFF OFF	ON OFF OFF	ON ON OFF
760470	OFF	OFF OFF OFF	ON OFF OFF	ON ON ON

ADDRESS	3	5 8 9	TCH POSITIONS	1 10 6
	A12	A11 A10 A09	RESS BITS A08 A07 A06	A05 A04 A03
760500 760510 760520 760530 760540 760550 760560 760570	OFF OFF OFF OFF OFF OFF	OFF	ON OFF ON	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
760600 760610 760620 760630 760640 760650 760660 760670	OFF OFF OFF OFF OFF OFF	OFF	ON ON OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
760700 760710 760720 760730 760740 760750 760760 760770	OFF OFF OFF OFF OFF OFF	OFF	ON O	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
761000 761010 761020 761030 761040 761050 761060 761070	OFF OFF OFF OFF OFF OFF	OFF OFF ON	OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
761100 761110 761120 761130 761140 761150 761160 761170	OFF OFF OFF OFF OFF OFF	OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF	OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF	OFF OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON ON OFF
761200 761210 761220 761230 761240 761250 761260 761270	OFF OFF OFF OFF OFF OFF	OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF	OFF ON OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF

В
•
4

ADDRECC			TCH_POSITIONS	l 1 10 6
ADDRESS	3		7 4 2 RESS BITS	1 10 6
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
761300	0FF	OFF OFF ON	OFF ON ON	OFF OFF OFF
761310	OFF	OFF OFF ON	OFF ON ON	OFF OFF ON
761320 761330	OFF OFF	OFF OFF ON OFF OFF ON	OFF ON ON	OFF ON OFF
761340	0FF	OFF OFF ON	OFF ON ON	ON OFF OFF
761350	OFF	OFF OFF ON	OFF ON ON	ON OFF ON
761360	0FF	OFF OFF ON	OFF ON ON	ON ON OFF
761370	OFF	OFF OFF ON	OFF ON ON	ON ON ON
761400	OFF	OFF OFF ON	ON OFF OFF	OFF OFF OFF
761410	0FF	OFF OFF ON	ON OFF OFF	OFF OFF ON
761420	OFF	OFF OFF ON	ON OFF OFF	OFF ON OFF
761430	OFF	OFF OFF ON	ON OFF OFF	OFF ON ON ON OFF OFF
761440 761450	OFF OFF	OFF OFF ON	ON OFF OFF ON OFF OFF	ON OFF OFF ON OFF ON
761460	OFF	OFF OFF ON	ON OFF OFF	ON ON OFF
761470	0FF	OFF OFF ON	ON OFF OFF	ON ON ON
761500	OFF	OFF OFF ON	ON OFF ON	OFF OFF OFF
761510	OFF	OFF OFF ON	ON OFF ON	OFF OFF ON
761520	0FF	OFF OFF ON	ON OFF ON	OFF ON OFF
761530	0FF	OFF OFF ON	ON OFF ON	OFF ON ON
761540	0FF	OFF OFF ON	ON OFF ON	ON OFF OFF
761550	OFF	OFF OFF ON	ON OFF ON	ON OFF ON
761560 761570	OFF OFF	OFF OFF ON	ON OFF ON ON OFF ON	ON ON OFF
701370	OFF	OFF OFF ON	ON OIL ON	
761600	OFF	OFF OFF ON	ON ON OFF	OFF OFF OFF
761610 761620	OFF OFF	OFF OFF ON	ON ON OFF ON ON OFF	OFF OFF ON
761630	OFF	OFF OFF ON	ON ON OFF	OFF ON ON
761640	OFF	OFF OFF ON	ON ON OFF	ON OFF OFF
761650	OFF	OFF OFF ON	ON ON OFF	ON OFF ON
761660	0FF	OFF OFF ON	ON ON OFF	ON ON OFF
761670	OFF	OFF OFF ON	ON ON OFF	ON ON ON
761700	0FF	OFF OFF ON	ON ON ON	OFF OFF OFF
761710	OFF	OFF OFF ON	ON ON ON	OFF OFF ON OFF
761720	OFF OFF	OFF OFF ON	ON ON ON ON ON	OFF ON OFF
761730 761740	0FF	OFF OFF ON	ON ON ON	ON OFF OFF
761750	0FF	OFF OFF ON	ON ON ON	ON OFF ON
761760	0FF	OFF OFF ON	ON ON ON	ON ON OFF
761770	0FF	OFF OFF ON	ON ON ON	ON ON ON
762000	0FF	OFF ON OFF	OFF OFF OFF	OFF OFF OFF
762010	OFF	OFF ON OFF	OFF OFF OFF	OFF OFF ON
762020	OFF	OFF ON OFF	OFF OFF OFF	OFF ON OFF
762030	OFF	OFF ON OFF	OFF OFF OFF OFF OFF	OFF ON ON ON ON OFF OFF
762040 762050	OFF OFF	OFF ON OFF	OFF OFF OFF	ON OFF ON
762060	0FF	OFF ON OFF	OFF OFF OFF	ON ON OFF
762070	OFF	OFF ON OFF	OFF OFF OFF	ON ON ON

ADDRESS	3	5 8 9	TTCH POSITIONS	1 10 6
	A12	A11 A10 A09	DRESS BITS A08 A07 A06	A05 A04 A03
762100 762110 762120 762130 762140 762150 762160 762170	OFF OFF OFF OFF OFF OFF OFF	OFF ON OFF	OFF OFF ON	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
762200 762210 762220 762230 762240 762250 762260 762270	OFF OFF OFF OFF OFF OFF OFF	OFF ON OFF	OFF ON OFF	OFF OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
762300 762310 762320 762330 762340 762350 762360 762370	OFF OFF OFF OFF OFF OFF OFF	OFF ON OFF	OFF ON ON	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
762400 762410 762420 762430 762440 762450 762460 762470	OFF OFF OFF OFF OFF OFF OFF	OFF ON OFF	ON OFF OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
762500 762510 762520 762530 762540 762550 762560 762570	OFF OFF OFF OFF OFF OFF OFF	OFF ON OFF	ON OFF ON ON OFF ON OFF ON OFF ON OFF ON ON OFF ON ON OFF ON ON OFF ON	OFF OFF OFF OFF OFF ON OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON ON OFF
762600 762610 762620 762630 762640 762650 762660 762670	OFF OFF OFF OFF OFF OFF OFF	OFF ON OFF	ON ON OFF	OFF OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON ON OFF ON ON ON

7	7
•	•

	ADDRESS	3	5 8 9	TCH POSITIONS	1 10 6
		A12	A11 A10 A09	RESS BITS AO8 AO7 AO6	A05 A04 A03
	762700 762710 762720 762730 762740 762750	OFF OFF OFF OFF OFF	OFF ON OFF	ON O	OFF OFF OFF OFF ON OFF ON OFF ON ON OFF ON ON
	762760 762770	OFF OFF	OFF ON OFF	ON ON ON ON ON ON	ON ON OFF ON ON ON
	763000 763010 763020 763030 763040 763050 763060 763070	OFF OFF OFF OFF OFF OFF	OFF ON ON OFF ON ON OFF ON ON ON OFF ON ON ON OFF ON ON ON OFF ON ON OFF ON ON OFF ON ON	OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
B-4	763100 763110 763120 763130 763140 763150 763160 763170	OFF OFF OFF OFF OFF OFF	OFF ON ON ON OFF ON ON OFF ON ON ON OFF ON ON ON OFF ON ON OFF ON ON OFF ON ON OFF ON ON	OFF OFF ON	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON ON
	763200 763210 763220 763230 763240 763250 763260 763270	OFF OFF OFF OFF OFF OFF	OFF ON ON OFF ON ON OFF ON ON OFF ON ON ON OFF ON ON OFF ON ON OFF ON ON OFF ON ON	OFF ON OFF	OFF OFF OFF OFF OFF ON OFF ON OFF OFF ON ON ON OFF OFF ON ON OFF ON ON ON
	763300 763310 763320 763330 763340 763350 763360 763370	OFF OFF OFF OFF OFF OFF	OFF ON ON OFF ON ON OFF ON ON OFF ON ON ON OFF ON ON OFF ON ON OFF ON ON OFF ON ON	OFF ON ON OFF ON ON OFF ON ON OFF ON ON ON OFF ON ON ON OFF ON ON OFF ON ON	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON ON OFF
	763400 763410 763420 763430 763440 763450 763460 763470	OFF OFF OFF OFF OFF OFF	OFF ON ON	ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF

					5	W1 SW	TCH PO	SITI	ONS			
l 10 6	Newson & Adult	ADDRESS	3	5	8	9 ADI	7 Dress b	4	2 .	1	10	6
05 A04 A03			A12	A11	A10		A08			A05	A04	A03
F OFF OFF		763500	0FF	0FF	ON	ON	ON	0FF	ON	0FF	0FF	0FF
F OFF ON	9	763510	0FF	0FF	ON	ON	ON	0FF	ON	OFF	0FF	ON
F ON OFF		763520	0FF	0FF	ON	ON		0FF	ON	OFF	ON	OFF
FF ON ON		763530	0FF	OFF	ON	ON	ON	0FF	ON	OFF	ON	ON
ON OFF OFF		763540	0FF	0FF	ON	ON		0FF	ON	ON	0FF	0FF
ON OFF ON	-Australia	763550	0FF	OFF	ON	ON	E .	OFF	ON	ON		ON
ON ON OFF		763560	0FF	OFF	ON	ON		0FF	ON	ON		OFF
ON ON ON	Planted Process	763570	0FF	0FF	ON	ON	ON	0FF	ON	ON	ON	ON
FF OFF OFF	and the second	763600	0FF	0FF	ON	ON	ON		0FF		0FF	
FF OFF ON	100	763610	0FF	OFF	ON	ON	ON		OFF	OFF		ON
FF ON OFF	Pile All S	763620	OFF	OFF	ON	ON	ON		0FF	OFF		OFF
FF ON ON	1	763630	0FF	0FF	ON	ON	ON		0FF	OFF	ON	ON
ON OFF OFF		763640	OFF	OFF	ON	ON	ON		0FF	ON		0FF
ON OFF ON		763650	OFF	OFF	ON	ON	ON	ON	OFF OFF	ON	OFF	OFF
ON ON OFF	,	763660	OFF	OFF	ON	ON	ON		OFF	ON	ON	ON
ON ON ON		763670	OFF	0FF	ON	ON	ON	UN	UFF			ĺ
FF OFF OFF		763700	0FF	0FF	ON	ON	ON	ON	ON		OFF	
FF OFF ON		763710	0FF	0FF	ON	ON	ON	ON	ON		OFF	ON
FF ON OFF		763720	0FF	OFF	ON	ON	ON	ON	ON	OFF		OFF
FF ON ON		763730	OFF	0FF	ON	ON	ON	ON	ON	OFF	ON	ON
ON OFF OFF		763740	OFF	0FF	ON	ON	ON	ON	ON		OFF	
ON OFF ON		763750	OFF	0FF	ON	ON	ON	ON	ON	ON	OFF	ON
ON ON OFF		763760	OFF	0FF	ON	ON	ON	ON	ON	ON	ON	OFF ON
ON ON ON		763770	0FF	0FF	ON	ON	ON	ON	ON			ON
FF OFF OFF		764000	0FF		0FF			0FF			OFF	
FF OFF ON		764010	0FF	1	0FF	-		0FF		OFF		ON
FF ON OFF		764020	OFF		OFF			OFF		OFF	ON	OFF
FF ON ON		764030	OFF		OFF		1	OFF		OFF	OFF	ON
ON OFF OFF		764040	OFF		OFF OFF			OFF OFF		ON		ON
ON OFF ON		764050	OFF OFF		OFF		1	OFF		ON		0FF
ON ON OFF ON ON ON		764060 764070	0FF	ON	_			OFF		ON	ON	ON
												- 1
FF OFF OFF		764100	0FF		OFF			OFF	ON		OFF	
FF OFF ON		764110	OFF		OFF		OFF		ON		OFF	ON OFF
FF ON OFF		764120	OFF		OFF OFF		OFF	OFF	ON	OFF OFF	ON	ON
FF ON ON		764130	OFF		OFF		OFF		ON ON	ON		
ON OFF OFF ON OFF ON		764140 764150	OFF OFF		OFF		OFF		ON	ON	0FF	ON
			OFF		OFF			OFF	ON	ON		0FF
ON ON OFF ON ON ON		764160 764170	0FF		OFF			OFF	ON	ON	ON	ON
FF OFF OFF		764200	OFF		OFF		OFF		OFF		OFF	
FF OFF ON		764210	OFF		OFF		OFF		OFF		OFF	ON I
OFF ON OFF		764220	OFF		OFF		OFF		OFF	OFF		
OFF ON ON		764230	OFF		OFF		OFF		OFF OFF	OFF	ON OFF	OFF
ON OFF OFF		764240	0FF		OFF		OFF		OFF		0FF	ON
ON OFF ON		764250 764260	OFF		OFF OFF		OFF OFF		OFF	ON		0FF
ON ON OFF ON ON ON		764200	OFF OFF		0FF		OFF		0FF	ON		ON
ON ON ON		704270	UFF	UN	OFF	ULL	I OIT	UN	JI 1	1 01	UN	- OH

		SW1 SW	ITCH POSITIONS	
ADDRESS	3	5 8 9	7 4 2 DRESS BITS	1 10 6
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
764300	0FF	ON OFF OFF	OFF ON ON	OFF OFF OFF
764310	0FF	ON OFF OFF	OFF ON ON	OFF OFF ON
764320	0FF	ON OFF OFF	OFF ON ON	OFF ON OFF
764330	OFF	ON OFF OFF	OFF ON ON	OFF ON ON
764340 764350	OFF OFF	ON OFF OFF ON OFF OFF	OFF ON ON	ON OFF OFF ON OFF ON
764360	0FF	ON OFF OFF	OFF ON ON	ON OFF ON ON ON OFF
764370	0FF	ON OFF OFF	OFF ON ON	ON ON ON
764400	0FF	ON OFF OFF	ON OFF OFF	OFF OFF OFF
764410	0FF	ON OFF OFF	ON OFF OFF	OFF OFF ON
764420	0FF	ON OFF OFF	ON OFF OFF	OFF ON OFF
764430 764440	OFF OFF	ON OFF OFF ON OFF OFF	ON OFF OFF ON OFF OFF	OFF ON ON ON OFF OFF
764450	0FF	ON OFF OFF	ON OFF OFF	ON OFF ON
764460	0FF	ON OFF OFF	ON OFF OFF	ON ON OFF
764470	OFF	ON OFF OFF	ON OFF OFF	ON ON ON
764500	OFF	ON OFF OFF	ON OFF ON	OFF OFF OFF
764510	0FF	ON OFF OFF	ON OFF ON	OFF OFF ON
764520	0FF	ON OFF OFF	ON OFF ON	OFF ON OFF
764530	OFF	ON OFF OFF	ON OFF ON	OFF ON ON
764540 764550	OFF OFF	ON OFF OFF ON OFF OFF	ON OFF ON ON OFF ON	ON OFF OFF ON OFF ON
764560	OFF	ON OFF OFF	ON OFF ON	ON ON OFF
764570	0FF	ON OFF OFF	ON OFF ON	ON ON ON
764600	0FF	ON OFF OFF	ON ON OFF	OFF OFF OFF
764610	0FF	ON OFF OFF	ON ON OFF	OFF OFF ON
764620	0FF	ON OFF OFF ON OFF OFF	ON ON OFF	OFF ON OFF
764630 764640	OFF OFF	ON OFF OFF ON OFF OFF	ON ON OFF	OFF ON ON ON ON OFF OFF
764650	0FF	ON OFF OFF	ON ON OFF	ON OFF ON
764660	0FF	ON OFF OFF	ON ON OFF	ON ON OFF
764670	0FF	ON OFF OFF	ON ON OFF	ON ON ON
764700	0FF	ON OFF OFF	ON ON ON	OFF OFF OFF
764710	0FF	ON OFF OFF	ON ON ON	OFF OFF ON
764720 764730	OFF OFF	ON OFF OFF ON OFF OFF	ON ON ON ON	OFF ON OFF OFF ON ON
764740	OFF	ON OFF OFF	ON ON ON	ON OFF OFF
764750	0FF	ON OFF OFF	ON ON ON	ON OFF ON
764760	0FF	ON OFF OFF	ON ON ON	ON ON OFF
764770	0FF	ON OFF OFF	ON ON ON	ON ON ON
765000	0FF	ON OFF ON	OFF OFF OFF	OFF OFF OFF
765010	0FF	ON OFF ON	OFF OFF OFF	OFF OFF ON
765020	OFF	ON OFF ON ON OFF ON	OFF OFF OFF	OFF ON OFF OFF ON ON
765030 765040	OFF OFF	ON OFF ON ON OFF ON	OFF OFF OFF	ON OFF OFF
765050	0FF	ON OFF ON	OFF OFF OFF	ON OFF ON
765060	0FF	ON OFF ON	OFF OFF OFF	ON ON OFF
765070	OFF	ON OFF ON	OFF OFF OFF	ON ON ON

		SW1 SW	TCH POSITIONS	
ADDRESS	3	5 8 9	7 4 2 RESS BITS	1 10 6
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
765100	0FF	ON OFF ON	OFF OFF ON	OFF OFF OFF
765110 765120	OFF OFF	ON OFF ON ON OFF ON	OFF OFF ON	OFF OFF ON
765120	OFF	ON OFF ON ON OFF ON	OFF OFF ON	OFF ON OFF
765140	0FF	ON OFF ON	OFF OFF ON	ON OFF OFF
765150	OFF	ON OFF ON	OFF OFF ON	ON OFF ON
765160	0FF	ON OFF ON	OFF OFF ON	ON ON OFF
765170	0FF	ON OFF ON	OFF OFF ON	ON ON ON
765200	0FF	ON OFF ON	OFF ON OFF	OFF OFF OFF
765210 765220	OFF	ON OFF ON	OFF ON OFF	OFF OFF ON
765230	OFF OFF	ON OFF ON ON OFF ON	OFF ON OFF OFF ON OFF	OFF ON OFF
765240	0FF	ON OFF ON	OFF ON OFF	ON OFF OFF
765250	0FF	ON OFF ON	OFF ON OFF	ON OFF ON
765260	0FF	ON OFF ON	OFF ON OFF	ON ON OFF
765270	0FF	ON OFF ON	OFF ON OFF	ON ON ON
765300	0FF	ON OFF ON	OFF ON ON	OFF OFF OFF
765310	0FF	ON OFF ON	OFF ON ON	OFF OFF ON
765320	0FF	ON OFF ON	OFF ON ON	OFF ON OFF
765330 765340	OFF OFF	ON OFF ON	OFF ON ON OFF ON ON	OFF ON ON ON ON OFF OFF
765350	0FF	ON OFF ON	OFF ON ON	ON OFF ON
765360	0FF	ON OFF ON	OFF ON ON	ON ON OFF
765370	0FF	ON OFF ON	OFF ON ON	ON ON ON
765400	0FF	ON OFF ON	ON OFF OFF	OFF OFF OFF
765410	0FF	ON OFF ON	ON OFF OFF	OFF OFF ON
765420	0FF	ON OFF ON	ON OFF OFF	OFF ON OFF
765430 765440	OFF OFF	ON OFF ON ON OFF ON	ON OFF OFF ON OFF OFF	OFF ON ON ON ON OFF OFF
765450	0FF	ON OFF ON	ON OFF OFF	ON OFF ON
765460	0FF	ON OFF ON	ON OFF OFF	ON ON OFF
765470	0FF	ON OFF ON	ON OFF OFF	ON ON ON
765500	0FF	ON OFF ON	ON OFF ON	OFF OFF OFF
765510	0FF	ON OFF ON	ON OFF ON	OFF OFF ON
765520	0FF	ON OFF ON	ON OFF ON	OFF ON OFF
765530	0FF	ON OFF ON	ON OFF ON	OFF ON ON
765540 765550	OFF OFF	ON OFF ON ON OFF ON	ON OFF ON ON OFF ON	ON OFF OFF
765560	0FF	ON OFF ON	ON OFF ON	ON ON OFF
765570	0FF	ON OFF ON	ON OFF ON	ON ON ON
765600	0FF	ON OFF ON	ON ON OFF	OFF OFF OFF
765610	0FF	ON OFF ON	ON ON OFF	OFF OFF ON
765620	0FF	ON OFF ON	ON ON OFF	OFF ON OFF
765630	0FF	ON OFF ON	ON ON OFF	OFF ON ON
765640	OFF	ON OFF ON	ON ON OFF	ON OFF OFF
765650 765660	OFF OFF	ON OFF ON ON OFF ON	ON ON OFF ON ON OFF	ON OFF ON ON OFF
765670	0FF	ON OFF ON	ON ON OFF	ON ON OFF
, 000, 0		JII JII JII	311 311 311	J.1 J.1 J.1

			SW1 SW	TCH POSITIONS	
ADDRESS	3	5 8	3M1 3M.	7 4 2	1 10 6
-				RESS BITS	
	A12	A11 A10	A09	A08 A07 A06	A05 A04 A03
765700	0FF	ON OFF	ON	ON ON ON	OFF OFF OFF
765710	OFF	ON OFF		ON ON ON	OFF OFF ON
765720	OFF	ON OFF	ON	ON ON ON	OFF ON OFF
765730	0FF	ON OFF	ON	ON ON ON	OFF ON ON
765740	OFF	ON OFF	ON	ON ON ON	ON OFF OFF
765750	OFF	ON OFF	ON	ON ON ON	ON OFF ON
765760	OFF	ON OFF	ON	ON ON ON	ON ON OFF
765770	OFF	ON OFF	ON	ON ON ON	ON ON ON
766000	OFF	ON ON	0FF	OFF OFF OFF	OFF OFF OFF
766010	0FF	ON ON		OFF OFF OFF	OFF OFF ON
766020	OFF	ì	0FF	OFF OFF OFF	OFF ON OFF
766030	0FF		OFF	OFF OFF OFF	OFF ON ON
766040	0FF		OFF	OFF OFF OFF	ON OFF OFF
766050 766060	OFF	•	0FF	OFF OFF OFF	ON OFF ON
766070	OFF OFF		OFF OFF	OFF OFF OFF	ON ON OFF
700070	UFF	ON ON	UFF	OFF OFF OFF	ON ON ON
766100	0FF	ON ON	0FF	OFF OFF ON	OFF OFF OFF
766110	OFF	ON ON	0FF	OFF OFF ON	OFF OFF ON
766120	OFF	ON ON		OFF OFF ON	OFF ON OFF
766130	0FF	ON ON		OFF OFF ON	OFF ON ON
766140	OFF	ON ON		OFF OFF ON	ON OFF OFF
766150 766160	OFF OFF	ON ON ON ON		OFF OFF ON	ON OFF ON
766170	0FF	ON ON ON ON		OFF OFF ON OFF OFF ON	ON ON OFF ON ON ON
700170	Oi i	ON ON	UFF	OFF OFF ON	ON ON ON
766200	0FF	ŧ	0FF	OFF ON OFF	OFF OFF OFF
766210	OFF		0FF	OFF ON OFF	OFF OFF ON
766220 766230	0FF		OFF	OFF ON OFF	OFF ON OFF
766240	OFF OFF		OFF OFF	OFF ON OFF	OFF ON ON ON ON OFF OFF
766250	0FF		0FF	OFF ON OFF	ON OFF ON
766260	OFF	1	0FF	OFF ON OFF	ON ON OFF
766270	OFF		OFF	OFF ON OFF	ON ON ON
766300	OFF	ON ON	0FF	OFF ON ON	OFF OFF OFF
766310	0FF		0FF	OFF ON ON	OFF OFF ON
766320	0FF		0FF	OFF ON ON	OFF ON OFF
766330	0FF		OFF	OFF ON ON	OFF ON ON
766340	OFF		0FF	OFF ON ON	ON OFF OFF
766350	0FF		0FF	OFF ON ON	ON OFF ON
766360	OFF		0FF	OFF ON ON	ON ON OFF
766370	0FF	ON ON	0FF	OFF ON ON	ON ON ON
766400	0FF		0FF	ON OFF OFF	OFF OFF OFF
766410	OFF		0FF	ON OFF OFF	OFF OFF ON
766420	OFF		0FF	ON OFF OFF	OFF ON OFF
766430	OFF		0FF	ON OFF OFF	OFF ON ON
766440	OFF		OFF OFF	ON OFF OFF	ON OFF OFF
766450 766460	OFF OFF	ON ON ON ON	0FF 0FF	ON OFF OFF ON OFF OFF	ON OFF ON ON OFF
766470	OFF		OFF	ON OFF OFF	ON ON OFF
700770	<u> </u>	UII UII	<u> </u>		

l			SW1 SW	ITCH POSITIONS	
ADDRESS	3	5 8	9	i 7 4 2	1 10 6
ADDKESS	J	5 0			1 10 6
				PRESS BITS	
	A12	All Al0	A09	A08 A07 A06	A05 A04 A03
766500	0FF	ON ON	OFF	ON OFF ON	OFF OFF OFF
766510	OFF	ON ON) ·
		i e		ON OFF ON	OFF OFF ON
766520	0FF	ON ON	0FF	ON OFF ON	OFF ON OFF
766530	0FF	ON ON	OFF	ON OFF ON	OFF ON ON
766540	0FF	ON ON	0FF	ON OFF ON	ON OFF OFF
766550	OFF		0FF	ON OFF ON	ON OFF ON
766560	OFF		OFF	ON OFF ON	ON ON OFF
766570	0FF	ON ON	0FF	ON OFF ON	ON ON ON
766600	OFF	ON ON	OFF	ON ON OFF	OFF OFF OFF
766610	OFF	ON ON		ON ON OFF	OFF OFF ON
F					
766620	0FF	ON ON		ON ON OFF	OFF ON OFF
766630	OFF	ON ON	0FF	ON ON OFF	OFF ON ON
766640	OFF	ON ON	OFF	ON ON OFF	ON OFF OFF
766650	OFF	ON ON	OFF	ON ON OFF	ON OFF ON
766660	OFF				
766670	0FF	ON ON	OFF	ON ON OFF	ON ON ON
				*	
766700	OFF	ON ON	0FF	ON ON ON	OFF OFF OFF
766710	0FF	ON ON		ON ON ON	OFF OFF ON
	•	1			
766720	OFF	1	0FF	ON ON ON	OFF ON OFF
766730	OFF	ON ON	0FF	ON ON ON	OFF ON ON
766740	OFF	ON ON	0FF	ON ON ON	ON OFF OFF
766750	0FF	ON ON	0FF	ON ON ON	ON OFF ON
766760	OFF		OFF	ON ON ON	ON ON OFF
		i			•
766770	OFF	ON ON	OFF	ON ON ON	ON ON ON
	Į.	l			
767000	OFF	ON ON	ON	OFF OFF OFF	OFF OFF OFF
767010	OFF	ON ON	ON	OFF OFF OFF	OFF OFF ON
767020	OFF	ON ON		OFF OFF OFF	OFF ON OFF
767030	OFF	ON ON	ON	OFF OFF OFF	OFF ON ON
767040	OFF	ON ON	ON	OFF OFF OFF	ON OFF OFF
767050	OFF	ON ON	ON	OFF OFF OFF	ON OFF ON
767060	0FF	ON ON	ON	OFF OFF OFF	ON ON OFF
767070	OFF	ON ON		OFF OFF OFF	ON ON ON
10/0/0	011	ON ON	ON	OFF OFF OFF	ON ON ON
767100		0	•	000 000 000	000 000 000
767100	OFF	ON ON		OFF OFF ON	OFF OFF OFF
767110	0FF	ON ON	ON	OFF OFF ON	OFF OFF ON
767120	0FF	ON ON	ON	OFF OFF ON	OFF ON OFF
767130	OFF	ON ON		OFF OFF ON	OFF ON ON
767140	OFF	ON ON		OFF OFF ON	, ,
767150	OFF	ON ON		OFF OFF ON	ON OFF ON
767160	OFF	ON ON	ON	OFF OFF ON	ON ON OFF
767170	0FF	ON ON		OFF OFF ON	ON ON ON
i	l	511	-11	J	J J J
767200	חבר	011 011	Vri	000 011 000	000 000 000
767200	0FF	ON ON		OFF ON OFF	OFF OFF OFF
767210	0FF	ON ON		OFF ON OFF	OFF OFF ON
767220	OFF	ON ON	ON	OFF ON OFF	OFF ON OFF
767230	0FF	ON ON		OFF ON OFF	OFF ON ON
767240	OFF	ON ON		•	,
767250	OFF	ON ON		OFF ON OFF	ON OFF ON
767260	0FF	ON ON	ON	OFF ON OFF	ON ON OFF
767270	0FF	ON ON	ON	OFF ON OFF	ON ON ON
		<u> </u>	VII.	J JII JI	011 011 011

ADDRESS	3	SW1 SW1 5 8 9	TCH POSITIONS 7 4 2	1 10 6
ADDRESS			RESS BITS	1 10 0
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
767300	0FF	ON ON ON	OFF ON ON	OFF OFF OFF
767310	0FF	ON ON ON	OFF ON ON	OFF OFF ON
767320	0FF	ON ON ON	OFF ON ON	OFF ON OFF
767330	0FF	ON ON ON	OFF ON ON	OFF ON ON
767340	0FF	CN ON ON	OFF ON ON	ON OFF OFF
767350	0FF	ON ON ON	OFF ON ON	ON OFF ON
767360	0FF	ON ON ON	OFF ON ON	ON ON OFF
767370	0FF	ON ON ON	OFF ON ON	ON ON ON
767400	0FF	ON ON ON	ON OFF OFF	OFF OFF OFF
767410	0FF	ON ON ON	ON OFF OFF	OFF OFF ON
767420	0FF	ON ON ON	ON OFF OFF	OFF ON OFF
767430	0FF	ON ON ON	ON OFF OFF	OFF ON ON
767440	0FF	ON ON ON	ON OFF OFF	ON OFF OFF
767450	0FF	ON ON ON	ON OFF OFF	ON OFF ON
767460	OFF	ON ON ON	ON OFF OFF	ON ON OFF
767470	0FF	ON ON ON	ON OFF OFF	ON ON ON
767500	OFF	ON ON ON	ON OFF ON	OFF OFF OFF
767510	OFF	ON ON ON	ON OFF ON	OFF OFF ON
767520	0FF	ON ON ON	ON OFF ON	OFF ON OFF
767530	OFF	ON ON ON	ON OFF ON	OFF ON ON
767540	OFF	ON ON ON	ON OFF ON	ON OFF OFF
767550	0FF	ON ON ON	ON OFF ON	ON OFF ON
767560	0FF	ON ON ON	ON OFF ON	ON ON OFF
767570	0FF	ON ON ON	ON OFF ON	ON ON ON
767600	OFF	ON ON ON	ON ON OFF	OFF OFF OFF
767610	OFF	ON ON ON	ON ON OFF	OFF OFF ON
767620	0FF	ON ON ON	ON ON OFF	OFF ON OFF
767630	0FF	ON ON ON	ON ON OFF	OFF ON ON
767640	0FF	ON ON ON	ON ON OFF	ON OFF OFF
767650	0FF	ON ON ON	ON ON OFF	ON OFF ON
767660	0FF	ON ON ON	ON ON OFF	ON ON OFF
767670	OFF	ON ON ON	ON ON OFF	ON ON ON
767700	0FF	ON ON ON	ON ON ON	OFF OFF OFF
767710	0FF	ON ON ON	ON ON ON	OFF OFF ON
767720	OFF	ON ON ON	ON ON ON	OFF ON OFF
767730	0FF	ON ON ON	ON ON ON	OFF ON ON
767740	0FF	ON ON ON	ON ON ON	ON OFF OFF
767750	0FF	ON ON ON	ON ON ON	ON OFF ON
767760	0FF	ON ON ON	ON ON ON	ON ON OFF
767770	OFF	ON ON ON	ON ON ON	ON ON ON
770000	ON	OFF OFF OFF	OFF OFF OFF	OFF OFF OFF
770010	ON	OFF OFF OFF	OFF OFF OFF	OFF OFF ON
770020	ON	OFF OFF OFF	OFF OFF OFF	OFF ON OFF
770030	ON	OFF OFF OFF	OFF OFF OFF	OFF ON ON
770040	ON	OFF OFF OFF	OFF OFF OFF	ON OFF OFF
770050	ON	OFF OFF OFF	OFF OFF OFF	ON OFF ON
770060	ON	OFF OFF OFF	OFF OFF OFF	ON ON OFF
770070	ON	OFF OFF OFF	OFF OFF OFF	ON ON ON

		CU1 CU1	TCH POSITIONS	
ADDRESS	3	5 8 9	1 7 4 2	1 10 6
ADDICESS			RESS BITS	1 10 0
}	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
770100	ON -	OFF OFF OFF	OFF OFF ON	OFF OFF OFF
770110	ON	OFF OFF OFF	OFF OFF ON	OFF OFF ON
770120	ON	OFF OFF OFF	OFF OFF ON	OFF ON OFF
770130	ON	OFF OFF OFF	OFF OFF ON	OFF ON ON
770140	ON	OFF OFF OFF	OFF OFF ON	ON OFF OFF
770150 770160	ON ON	OFF OFF OFF OFF OFF	OFF OFF ON	ON OFF ON ON OFF
770180	ON	OFF OFF OFF OFF OFF OFF	OFF OFF ON	ON ON ON
770170	ON	011 011 011	OFF OFF ON	ON ON ON
770200	ON	OFF OFF OFF	OFF ON OFF	OFF OFF OFF
770210	ON	OFF OFF OFF	OFF ON OFF	OFF OFF ON
770220	ON	OFF OFF OFF	OFF ON OFF	OFF ON OFF
770230	ON	OFF OFF OFF	OFF ON OFF	OFF ON ON
770240	ON	OFF OFF OFF	OFF ON OFF	ON OFF OFF
770250	ON	OFF OFF OFF	OFF ON OFF	ON OFF ON
770260	ON	OFF OFF OFF	OFF ON OFF	ON ON OFF
770270	ON	OFF OFF OFF	OFF ON OFF	ON ON ON
770300	ON	OFF OFF OFF	OFF ON ON	OFF OFF OFF
770310	ON	OFF OFF OFF	OFF ON ON	OFF OFF ON
770320	ON	OFF OFF OFF	OFF ON ON	OFF ON OFF
770330	ON	OFF OFF OFF	OFF ON ON	OFF ON ON
770340	ON	OFF OFF OFF	OFF ON ON	ON OFF OFF
770350	ON	OFF OFF OFF	OFF ON ON	ON OFF ON
770360	ON	OFF OFF OFF	OFF ON ON	ON ON OFF
770370	ON	OFF OFF OFF	OFF ON ON	ON ON ON
770400	ON	OFF OFF OFF	ON OFF OFF	OFF OFF OFF
770410	ON	OFF OFF OFF	ON OFF OFF	OFF OFF ON
770420	ON	OFF OFF OFF	ON OFF OFF	OFF ON OFF
770430	ON	OFF OFF OFF	ON OFF OFF	OFF ON ON
770440	ON	OFF OFF OFF	ON OFF OFF	ON OFF OFF
770450	ON	OFF OFF OFF	ON OFF OFF	ON OFF ON
770460	ON	OFF OFF OFF	ON OFF OFF	ON ON OFF
770470	ON	OFF OFF OFF	ON OFF OFF	ON ON ON
770500	ON	OFF OFF OFF	ON OFF ON	OFF OFF OFF
770510	ON	OFF OFF OFF	ON OFF ON	OFF OFF ON
770520	ON	OFF OFF OFF	ON OFF ON	OFF ON OFF
770530	ON	OFF OFF OFF	ON OFF ON	OFF ON ON
770540	ON	OFF OFF OFF	ON OFF ON	ON OFF OFF
770550	ON	OFF OFF OFF	ON OFF ON	ON OFF ON
770560	ON	OFF OFF OFF	ON OFF ON	ON ON OFF
770570	ON	OFF OFF OFF	ON OFF ON	ON ON ON
770600	ON	OFF OFF OFF	ON ON OFF	OFF OFF OFF
770610	ON	OFF OFF OFF	ON ON OFF	OFF OFF ON
770620	ON	OFF OFF OFF	ON ON OFF	OFF ON OFF
770630	ON	OFF OFF OFF	ON ON OFF	OFF ON ON
770640	ON	OFF OFF OFF	ON ON OFF	ON OFF OFF
770650	ON	OFF OFF OFF	ON ON OFF	ON OFF ON
770660	ON	OFF OFF OFF	ON ON OFF	ON ON OFF
770670	ON	OFF OFF OFF	ON ON OFF	ON ON ON

	Γ	SW1 SW	TCH POSITIONS	
ADDRESS	3	5 8 9	7 4 2	1 10 6
	410		RESS BITS	405 404 403
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
770700	ON	OFF OFF OFF	ON ON ON	OFF OFF OFF
770710	ON	OFF OFF OFF	ON ON ON	OFF OFF ON
770720	ON	OFF OFF OFF	ON ON ON	OFF ON OFF
770730	ON	OFF OFF OFF	ON ON ON	OFF ON ON
770740	ON	OFF OFF OFF	ON ON ON	ON OFF OFF
770750	ON	OFF OFF OFF	ON ON ON	ON OFF ON
770760	ON	OFF OFF OFF	ON ON ON	ON ON OFF
770770	ON	OFF OFF OFF	ON ON ON	ON ON ON
771000	ON	OFF OFF ON	OFF OFF OFF	OFF OFF OFF
771010	ON	OFF OFF ON	OFF OFF OFF	OFF OFF ON
771020	ON	OFF OFF ON	OFF OFF OFF	OFF ON OFF
771030	ON	OFF OFF ON	OFF OFF OFF	OFF ON ON
771040	ON	OFF OFF ON	OFF OFF OFF	ON OFF OFF
771050	ON	OFF OFF ON	OFF OFF OFF	ON OFF ON
771060	ON	OFF OFF ON	OFF OFF OFF	ON ON OFF
771070	ON	OFF OFF ON	OFF OFF OFF	ON ON ON
771100	ON	OFF OFF ON	OFF OFF ON	OFF OFF OFF
771110	ON	OFF OFF ON	OFF OFF ON	OFF OFF ON
771120	ON	OFF OFF ON	OFF OFF ON	OFF ON OFF
771130	ON	OFF OFF ON	OFF OFF ON	OFF ON ON
771140	ON	OFF OFF ON	OFF OFF ON	ON OFF OFF
771150	ON	OFF OFF ON	OFF OFF ON	ON OFF ON
771160	ON	OFF OFF ON	OFF OFF ON	ON ON OFF
771170	ON	OFF OFF ON	OFF OFF ON	ON ON ON
771200	ON	OFF OFF ON	OFF ON OFF	OFF OFF OFF
771210	ON	OFF OFF ON	OFF ON OFF	OFF OFF ON
771220	ON	OFF OFF ON	OFF ON OFF	OFF ON OFF
771230	ON	OFF OFF ON	OFF ON OFF	OFF ON ON
771240	ON	OFF OFF ON	OFF ON OFF	ON OFF OFF
771250	ON	OFF OFF ON	OFF ON OFF	ON OFF ON ON OFF
771260 771270	ON	OFF OFF ON	OFF ON OFF OFF ON OFF	ON ON OFF ON ON ON
771270		011 011 011	011 011 011	ON ON ON
771300	ON	OFF OFF ON	OFF ON ON	OFF OFF OFF
771310	ON	OFF OFF ON	OFF ON ON	OFF OFF ON
771320	ON	OFF OFF ON	OFF ON ON	OFF ON OFF
771330	ON	OFF OFF ON	OFF ON ON OFF ON ON	OFF ON ON ON OFF OFF
771340 771350	ON	OFF OFF ON	OFF ON ON OFF ON ON	ON OFF OFF
771360	ON	OFF OFF ON	OFF ON ON	ON ON OFF
771370	ON	OFF OFF ON	OFF ON ON	ON ON ON
				000 000 000
771400	ON	OFF OFF ON	ON OFF OFF	OFF OFF OFF
771410 771420	ON ON	OFF OFF ON	ON OFF OFF ON OFF OFF	OFF OFF ON
771420 771430	ON	OFF OFF ON	ON OFF OFF	OFF ON OFF
771430	ON	OFF OFF ON	ON OFF OFF	ON OFF OFF
771450	ON	OFF OFF ON	ON OFF OFF	ON OFF ON
771460	ON	OFF OFF ON	ON OFF OFF	ON ON OFF
771470	ON	OFF OFF ON	ON OFF OFF	ON ON ON

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ADDRESS	3	SW1 SW1 5 8 9	ITCH POSITIONS ! 7 4 2	1 10 6
ADDRESS			7 4 2 DRESS BITS	1 10 6
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
	<u> </u>			
771500	ON	OFF OFF ON	ON OFF ON	OFF OFF OFF
771510	ON	OFF OFF ON	ON OFF ON	OFF OFF ON
771520	ON	OFF OFF ON	ON OFF ON	OFF ON OFF
771530	ON	OFF OFF ON	ON OFF ON	OFF ON ON
771540	ON	OFF OFF ON	ON OFF ON	ON OFF OFF
771550 771560	ON ON	OFF OFF ON OFF OFF ON	ON OFF ON	ON OFF ON
771570	ON	OFF OFF ON	ON OFF ON ON OFF ON	ON ON OFF
771370	ON	OII OII ON	UNI OFF UN	ON ON ON
771600	ON	OFF OFF ON	ON ON OFF	OFF OFF OFF
771610	ON	OFF OFF ON	ON ON OFF	OFF OFF ON
771620	ON	OFF OFF ON	ON ON OFF	OFF ON OFF
771630	ON	OFF OFF ON	ON ON OFF	OFF ON ON
771640	ON	OFF OFF ON	ON ON OFF	ON OFF OFF
771650	ON	OFF OFF ON	ON ON OFF	ON OFF ON
771660	ON	OFF OFF ON	ON ON OFF	ON ON OFF
771670	ON	OFF OFF ON	ON ON OFF	ON ON ON
771700	ON	OFF OFF ON	ON ON ON	000 000 000
771710	ON	OFF OFF ON	ON ON ON ON ON ON	OFF OFF OFF OFF OFF ON
771720	ON	OFF OFF ON	ON ON ON	OFF ON OFF
771730	ON	OFF OFF ON	ON ON ON	OFF ON ON
771740	ON	OFF OFF ON	ON ON ON	ON OFF OFF
771750	ON	OFF OFF ON	ON ON ON	ON OFF ON
771760	ON	OFF OFF ON	ON ON ON	ON ON OFF
771771	ON	OFF OFF ON	ON ON ON	ON ON ON
772000	011	000 00 000	000 000 000	000 000 000
772000 772010	ON	OFF ON OFF OFF ON OFF	OFF OFF OFF	OFF OFF OFF
772010	ON	OFF ON OFF	OFF OFF OFF	OFF OFF ON OFF
772030	ON	OFF ON OFF	OFF OFF OFF	OFF ON ON
772040	ON	OFF ON OFF	OFF OFF OFF	ON OFF OFF
772050	ON	OFF ON OFF	OFF OFF OFF	ON OFF ON
772060	ON	OFF ON OFF	OFF OFF OFF	ON ON OFF
772070	ON	OFF ON OFF	OFF OFF OFF	ON ON ON
770100		AFE 011 0FF		
772100	ON	OFF ON OFF	OFF OFF ON	OFF OFF OFF
772110	ON	OFF ON OFF	OFF OFF ON	OFF OFF ON
772120 772130	ON ON	OFF ON OFF	OFF OFF ON	OFF ON OFF
772130	ON	OFF ON OFF	OFF OFF ON OFF OFF ON	OFF ON ON ON ON OFF OFF
772140	ON	OFF ON OFF	OFF OFF ON	ON OFF ON
772160	ON	OFF ON OFF	OFF OFF ON	ON ON OFF
772170	ON	OFF ON OFF	OFF OFF ON	ON ON ON
772200	ON	OFF ON OFF	OFF ON OFF	OFF OFF OFF
772210	ON	OFF ON OFF	OFF ON OFF	OFF OFF ON
772220	ON	OFF ON OFF	OFF ON OFF	OFF ON OFF
772230 772240	ON ON	OFF ON OFF OFF ON OFF	OFF ON OFF	OFF ON ON
772240 772250	ON	OFF ON OFF	OFF ON OFF	ON OFF OFF ON OFF ON
772260	ON	OFF ON OFF	OFF ON OFF	ON ON OFF
772270	ON	OFF ON OFF	OFF ON OFF	ON ON ON
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ADDRESS	3	5 8 9	SWITCH POSITIONS	1 10 6
	A12	A11 A10 A09	ADDRESS BITS AO8 AO7 AO6	A05 A04 A03
772300 772310 772320 772330 772340 772350 772360 772370	ON ON ON ON ON ON ON	OFF ON OFF	OFF ON ON	OFF OFF OFF OFF OFF ON OFF ON ON OFF ON ON ON OFF ON ON ON ON ON ON ON ON ON
772400 772410 772420 772430 772440 772450 772460 772470	ON ON ON ON ON ON ON	OFF ON OFF	ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF ON OFF OFF	OFF OFF OFF ON OFF ON OFF ON ON OFF ON
772500 772510 772520 772530 772540 772550 772560 772570	ON ON ON ON ON ON	OFF ON OFF	ON OFF ON	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
772600 772610 772620 772630 772640 772650 772660 772670	ON ON ON ON ON ON	OFF ON OFF	ON ON OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
772700 772710 772720 772730 772740 772750 772760 772772	ON ON ON ON ON ON ON	OFF ON OFF	ON O	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
773000 773010 773020 773030 773040 773050 773060 773070	ON ON ON ON ON ON	OFF ON ON	OFF	OFF OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON ON OFF ON ON ON

ADDRESS	3	SW1 SW 5 8 9	ITCH POSITIONS	1 10 6
	A12	A11 A10 A09	DRESS BITS A08 A07 A06	A05 A04 A03
773100 773110 773120 773130 773140 773150 773160	ON ON ON ON ON ON	OFF ON ON	OFF OFF ON	OFF OFF OFF OFF ON OFF ON OFF ON OFF ON ON ON ON ON ON OFF ON
773170 773200 773210 773220 773230 773240 773250 773260 773270	ON ON ON ON ON ON ON ON ON	OFF ON ON	OFF OFF ON OFF ON OFF	ON ON ON OFF OFF OFF ON OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON ON
773300 773310 773320 773330 773340 773350 773360 773370	ON ON ON ON ON ON ON	OFF ON ON	OFF ON ON	OFF OFF OFF ON OFF ON OFF ON OFF ON ON OFF ON ON ON ON ON ON ON ON
773400 773410 773420 773430 773440 773450 773460 773470	ON ON ON ON ON ON	OFF ON ON	ON OFF OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
773500 773510 773520 773530 773540 773550 773560 773570	ON ON ON ON ON ON	OFF ON ON	ON OFF ON	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON OFF ON ON ON OFF
773600 773610 773620 773630 773640 773650 773660 773670	ON ON ON ON ON ON ON	OFF ON ON OFF ON ON OFF ON ON OFF ON ON ON OFF ON ON ON OFF ON ON OFF ON ON	ON ON OFF	OFF OFF OFF OFF ON OFF OFF ON ON ON OFF OFF ON OFF ON ON ON OFF ON ON ON

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ADDRESS	3	SW1 SWI 5 8 9	TCH POSITIONS	1 10 6
ADDRESS		ADÖ	RESS BITS	A05 A04 A03
	A12	A11 A10 A09	A08 A07 A06	AU3 AU4 AU3
773700	ON	OFF ON ON	ON ON ON	OFF OFF OFF
773710	ON	OFF ON ON	ON ON ON	OFF OFF ON
773720	ON	OFF ON ON	ON ON ON	OFF ON OFF
773730	ON	OFF ON ON	ON ON ON	OFF ON ON
773740	ON	OFF ON ON	ON ON ON	ON OFF OFF
773750	ON	OFF ON ON	ON ON ON	ON OFF ON ON OFF
773760	ON ON	OFF ON ON OFF ON ON	ON ON ON ON ON ON ON ON ON	ON ON ON
//3//0	UN	OFF ON ON	ON ON ON	ON ON ON
774000	ON	ON OFF OFF	OFF OFF OFF	OFF OFF OFF
774010	ON	ON OFF OFF	OFF OFF OFF	OFF OFF ON
774020	ON	ON OFF OFF	OFF OFF OFF	OFF ON OFF
774030	ON	ON OFF OFF	OFF OFF OFF	OFF ON ON
774040	ON	ON OFF OFF	OFF OFF OFF	ON OFF OFF
774050	ON	ON OFF OFF	OFF OFF OFF	ON OFF ON
774060	ON	ON OFF OFF	OFF OFF OFF	ON ON OFF
774070	ON	OF OFF OFF	OFF OFF OFF	ON ON ON
774100	ON	ON OFF OFF	OFF OFF ON	OFF OFF OFF
774110	ON	ON OFF OFF	OFF OFF ON	OFF OFF ON
774120	ON	ON OFF OFF	OFF OFF ON	OFF ON OFF
774130	ON	ON OFF OFF	OFF OFF ON	OFF ON ON
774140	ON	ON OFF OFF	OFF OFF ON	ON OFF OFF
774150	ON	ON OFF OFF	OFF OFF ON	ON OFF ON
774160	ON	ON OFF OFF	OFF OFF ON	ON ON OFF
774170	ON	ON OFF OFF	OFF OFF ON	ON ON ON
774200	ON	ON OFF OFF	OFF ON OFF	OFF OFF OFF
774210	ON	ON OFF OFF	OFF ON OFF	OFF OFF ON
774220	ON	ON OFF OFF	OFF ON OFF	OFF ON OFF
774230	ON	ON OFF OFF	OFF ON OFF	OFF ON ON
774240	ON	ON OFF OFF	OFF ON OFF	ON OFF OFF
774250	ON	ON OFF OFF	OFF ON OFF	ON OFF ON
774260	ON	ON OFF OFF	OFF ON OFF	ON ON OFF
774270	ON	ON OFF OFF	OFF ON OFF	ON ON ON
774300	ON	ON OFF OFF	OFF ON ON	OFF OFF OFF
774310	ON	ON OFF OFF	OFF ON ON	OFF OFF ON
774320	ON	ON OFF OFF	OFF ON ON	OFF ON OFF
774330	ON	ON OFF OFF	OFF ON ON	OFF ON ON
774340	ON	ON OFF OFF	OFF ON ON	ON OFF OFF
774350	ON	ON OFF OFF	OFF ON ON	ON OFF ON
774360	ON	ON OFF OFF	OFF ON ON	ON ON OFF ON ON ON
774370	ON	ON OFF OFF	OFF ON ON	ON ON ON
774400	ON	ON OFF OFF	ON OFF OFF	OFF OFF OFF
774410	ON	ON OFF OFF	ON OFF OFF	OFF OFF ON
774420	ON	ON OFF OFF	ON OFF OFF	OFF ON OFF
774430	ON	ON OFF OFF	ON OFF OFF	OFF ON ON
774440	ON	ON OFF OFF	ON OFF OFF	ON OFF OFF
774450	ON	ON OFF OFF	ON OFF OFF	ON OFF ON
774460	ON	ON OFF OFF	ON OFF OFF	ON ON OFF
774470	ON	ON OFF OFF	ON OFF OFF	ON ON ON

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			TCH_POSITIONS	1 10 6
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4	410		RESS BITS	AOE AOA AO2
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
774500	ON	ON OFF OFF	ON OFF ON	OFF OFF OFF
774500	ON	ON OFF OFF	ON OFF ON	OFF OFF ON
774510	i i	ON OFF OFF	ON OFF ON	OFF ON OFF
774520	ON ON	ON OFF OFF	ON OFF ON	OFF ON ON
774540	ON	ON OFF OFF	ON OFF ON	ON OFF OFF
774540	ON	ON OFF OFF	ON OFF ON	ON OFF ON
774560	ON	ON OFF OFF	ON OFF ON	ON OFF
774570	ON	ON OFF OFF	ON OFF ON	ON ON ON
774570	UN	ON OFF OFF	ON OFF ON	ON ON ON
774600	ON	ON OFF OFF	ON ON OFF	OFF OFF OFF
774610	ON	ON OFF OFF	ON ON OFF	OFF OFF ON
774620	ON	ON OFF OFF	ON ON OFF	OFF ON OFF
774630	ON	ON OFF OFF	ON ON OFF	OFF ON ON
774640	ON	ON OFF OFF	ON ON OFF	ON OFF OFF
774650	ON	ON OFF OFF	ON ON OFF	ON OFF ON
774660	ON	ON OFF OFF	ON ON OFF	ON ON OFF
774670	ON	ON OFF OFF	ON ON OFF	ON ON ON
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774700	ON	ON OFF OFF	ON ON ON	OFF OFF OFF
774710	ON	ON OFF OFF	ON ON ON	OFF OFF ON
774720	ON	ON OFF OFF	ON ON ON	OFF ON OFF
774730	ON	ON OFF OFF	ON ON ON	OFF ON ON
774740	ON	ON OFF OFF	ON ON ON	ON OFF OFF
774750	ON	ON OFF OFF	ON ON ON	ON OFF ON
774760	ON	ON OFF OFF	ON ON ON	ON ON OFF
774770	ON	ON OFF OFF	ON ON ON	ON ON ON
775000	ON	ON OFF ON	OFF OFF OFF	OFF OFF OFF
775010	ON	ON OFF ON	OFF OFF OFF	OFF OFF ON
775020	ON	ON OFF ON	OFF OFF OFF	OFF ON OFF
775030	ON	ON OFF ON	OFF OFF OFF	OFF ON ON
775040	ON	ON OFF ON	OFF OFF OFF	ON OFF OFF
775050	ON	ON OFF ON	OFF OFF OFF	ON OFF ON
775060	ON	ON OFF ON	OFF OFF OFF	ON ON OFF
775070	ON	ON OFF ON	OFF OFF OFF	ON ON ON
775100	011	מא טבב פא	000 000 000	OFE OFE OFE
775100	ON	ON OFF ON	OFF OFF ON	OFF OFF OFF
775110	ON		OFF OFF ON	OFF OFF ON OFF
775120 775130	ON	ON OFF ON ON OFF ON	OFF OFF ON	OFF ON ON
	ON ON	ON OFF ON ON OFF ON	OFF OFF ON	ON OFF OFF
775140 775150	ON	ON OFF ON	OFF OFF ON	ON OFF ON
775160	ON	ON OFF ON	OFF OFF ON	ON ON OFF
775170	ON	ON OFF ON	OFF OFF ON	ON ON ON
1/31/0	UN	UNI UEF UNI	OFF OFF UN	OH OH OH
775200	ON	ON OFF ON	OFF ON OFF	OFF OFF OFF
775210	ON	ON OFF ON	OFF ON OFF	OFF OFF ON
775220	ON	ON OFF ON	OFF ON OFF	OFF ON OFF
775230	ON	ON OFF ON	OFF ON OFF	OFF ON ON
775240	ON	ON OFF ON	OFF ON OFF	ON OFF OFF
775250	ON	ON OFF ON	OFF ON OFF	ON OFF ON
775260	ON	ON OFF ON	OFF ON OFF	ON ON OFF
775270	ON	ON OFF ON	OFF ON OFF	ON ON ON
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			TCH POSITIONS	1 10 6
ADDRESS	3	5 8 9 ADD	7 4 2 RESS BITS	1 10 6
	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
775300	ON	ON OFF ON	OFF ON ON	OFF OFF OFF
775310	ON	ON OFF ON ON OFF ON	OFF ON ON OFF ON ON	OFF OFF ON OFF
775320 775330	ON	ON OFF ON ON OFF ON	OFF ON ON	OFF ON ON
775340	ON	ON OFF ON	OFF ON ON	ON OFF OFF
775350	ON	ON OFF ON	OFF ON ON	ON OFF ON
775360	ON	ON OFF ON	OFF ON ON	ON ON OFF
775370	ON	ON OFF ON	OFF ON ON	ON ON ON
775400	ON	ON OFF ON	ON OFF OFF	OFF OFF OFF
775410	ON	ON OFF ON	ON OFF OFF	OFF OFF ON
775420	ON	ON OFF ON	ON OFF OFF	OFF ON OFF
775430	ON ON	ON OFF ON ON OFF ON	ON OFF OFF	OFF ON ON ON ON OFF OFF
775450	ON	ON OFF ON	ON OFF OFF	ON OFF ON
775460	ON	ON OFF ON	ON OFF OFF	ON ON OFF
775470	ON	ON OFF ON	ON OFF OFF	ON ON ON
775500	ON	ON OFF ON	ON OFF ON	OFF OFF OFF
775510	ON	ON OFF ON	ON OFF ON	OFF OFF ON
775520	ON	ON OFF ON	ON OFF ON	OFF ON OFF
775530	ON	ON OFF ON	ON OFF ON	OFF ON ON
775540 775550	ON	ON OFF ON ON OFF ON	ON OFF ON ON OFF ON	ON OFF OFF ON OFF ON
775560	ON	ON OFF ON	ON OFF ON	ON ON OFF
775570	ON	ON OFF ON	ON OFF ON	ON ON ON
775600	ON	ON OFF ON	ON ON OFF	OFF OFF OFF
775610	ON	ON OFF ON	ON ON OFF	OFF OFF ON
775620	ON	ON OFF ON	ON ON OFF	OFF ON OFF
775630	ON	ON OFF ON	ON ON OFF	OFF ON ON ON OFF OFF
775640	ON ON	ON OFF ON ON OFF ON	ON ON OFF	ON OFF ON
775660	ON	ON OFF ON	ON ON OFF	ON ON OFF
775670	ON	ON OFF ON	ON ON OFF	ON ON ON
775700	ON	ON OFF ON	ON ON ON	OFF OFF OFF
775710	ON	ON OFF ON	ON ON ON	OFF OFF ON
775720	ON	ON OFF ON	ON ON ON	OFF ON OFF
775730	ON	ON OFF ON	ON ON ON	OFF ON ON ON OFF OFF
775740	ON	ON OFF ON ON OFF ON	ON ON ON ON	ON OFF OFF ON OFF ON
775750 775760	ON	ON OFF ON	ON ON ON	ON ON OFF
775770	ON	ON OFF ON	ON ON ON	ON ON ON
776000	ON	ON ON OFF	OFF OFF OFF	OFF OFF OFF
776010	ON	ON ON OFF	OFF OFF OFF	OFF OFF ON
776020	ON	ON ON OFF	OFF OFF OFF	OFF ON OFF
776030	ON	ON ON OFF	OFF OFF OFF	OFF ON ON
776040	ON	ON ON OFF	OFF OFF OFF	ON OFF OFF ON OFF ON
776050	ON	ON ON OFF	OFF OFF OFF	ON ON OFF
776060 776070	ON	ON ON OFF	OFF OFF OFF	ON ON ON
770070	UN	OH OH OH	011 011 011	<u> </u>

			TCH_POSITIONS	
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	A12	A11 A10 A09	A08 A07 A06	A05 A04 A03
776100	ON	ON ON OFF	OFF OFF ON	OFF OFF OFF
776110	ON	ON ON OFF	OFF OFF ON	OFF OFF ON OFF
776120	ON	ON ON OFF	OFF OFF ON	OFF ON OFF OFF ON ON
776130 776140	ON ON	ON ON OFF ON ON OFF	OFF OFF ON	ON OFF OFF
776150	ON	ON ON OFF	OFF OFF ON	ON OFF ON
776160	ON	ON ON OFF	OFF OFF ON	ON ON OFF
776170	ON	ON ON OFF	OFF OFF ON	ON ON ON
776200	ÓN	ON ON OFF	OFF ON OFF	OFF OFF OFF
776210	ON	ON ON OFF	OFF ON OFF	OFF OFF ON
776220	ON	ON ON OFF	OFF ON OFF	OFF ON OFF
776230	ON	ON ON OFF	OFF ON OFF	OFF ON ON ON ON OFF OFF
776240	ON	ON ON OFF	OFF ON OFF	ON OFF ON
776250 776260	ON ON	ON ON OFF ON ON OFF	OFF ON OFF	ON ON OFF
776270	ON	ON ON OFF	OFF ON OFF	ON ON ON
776300	ON	ON ON OFF	OFF ON ON	OFF OFF OFF
776310	ON	ON ON OFF	OFF ON ON	OFF OFF ON
776320	ON	ON ON OFF	OFF ON ON	OFF ON OFF
776330	ON	ON ON OFF	OFF ON ON	OFF ON ON
776340	ON	ON ON OFF	OFF ON ON	ON OFF OFF
776350	ON	ON ON OFF	OFF ON ON	ON OFF OFF
776360	ON	ON ON OFF ON ON OFF	OFF ON ON	ON ON OFF ON ON ON
776370	ON	ON ON OFF		
776400	ON	ON ON OFF	ON OFF OFF	OFF OFF OFF
776410	ON	ON ON OFF	ON OFF OFF	OFF OFF ON OFF
776420	ON ON	ON ON OFF ON ON OFF	ON OFF OFF ON OFF OFF	OFF ON OFF OFF ON ON
776430 776440	ON	ON ON OFF	ON OFF OFF	ON OFF OFF
776450	ON	ON ON OFF	ON OFF OFF	ON OFF ON
776460	ON	ON ON OFF	ON OFF OFF	ON ON OFF
776470	ON	ON ON OFF	ON OFF OFF	ON ON ON
776500	ON	ON ON OFF	ON OFF ON	OFF OFF OFF
776510	ON	ON ON OFF	ON OFF ON	OFF OFF ON
776520	ON	ON ON OFF	ON OFF ON	OFF ON OFF
776530	ON	ON ON OFF	ON OFF ON	OFF ON ON ON ON OFF OFF
776540 776550	ON	ON ON OFF ON ON OFF	ON OFF ON	ON OFF ON
776560	ON	ON ON OFF	ON OFF ON	ON ON OFF
776570	ON	ON ON OFF	ON OFF ON	ON ON ON
776600	ON	ON ON OFF	ON ON OFF	OFF OFF OFF
776610	ON	ON ON OFF	ON ON OFF	OFF OFF ON
776620	ON	ON ON OFF	ON ON OFF	OFF ON OFF
776630	ON	ON ON OFF	ON ON OFF	OFF ON ON
776640	ON	ON ON OFF	ON ON OFF	ON OFF OFF
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	A12	Δ11	A10			A07		1 405	A04	VU3
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776700	ON	ON	ON	0FF	ON	ON	ON	0FF	OFF	0FF
776710	ON	ON	ON	0FF	ON	ON	ON	OFF	OFF	ON
776720	ON	ON	ON	OFF	ON	ON	ON	OFF	ON	OFF
776730	ON	ON	ON	0FF	ON	ON	ON	0FF	ON	ON
776740	ON	ON	ON	0FF	ON	ON	ON	ON	0FF	0FF
776750	ON	ON	ON	0FF	ON	ON	ON	ON	0FF	ON
776760	ON	ON	ON	OFF .	ON	ON	ON	ON	ON	OFF
776770	ON	ON	ON	0FF	ON	ON	ON	ON	ON	ON
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777000	ON	ON	ON	ON	OFF	0FF	OFF	OFF	0FF	0FF
777010	ON	ON	ON	ON	0FF	0FF	0FF	OFF	0FF	ON
777020	ON	ON	ON	ON	0FF	0FF		0FF	ON	0FF
777030	ON	ON	ON	ON	0FF	OFF	0FF	OFF	ON	ON
777040	ON	ON	ON	ON	OFF	OFF		ON		0FF
777050	ON	ON	ON	ON	OFF	OFF	OFF	ON	OFF.	ON
777060	ON	ON	ON	ON	0FF	OFF		ON		OFF
777070	ON	ON	ON	ON	0FF	0FF	OFF	ON	ON	ON
777100	ON	ON	ON	ON	0FF	0FF	ON	0FF	0FF	0FF
777110	ON	ON	ON	ON	0FF	0FF	ON	0FF	OFF	ON
777120	ON	ON	ON	ON	0FF	OFF	ON	0FF	ON	0FF
777130	ON	ON	ON	ON	OFF	OFF	ON	OFF	ON	ON
777140	ON	ON	ON	ON	OFF	OFF	ON	ON	0FF	OFF
777150	ON	ON	ON	ON	OFF	OFF	ON	ON	OFF	ON
777160	ON	ON	ON	ON	0FF	OFF	ON	ON	ON	OFF
777170	ON	ON	ON	ON	0FF	OFF	ON	ON	ON	ON
	1									
777200	ON	ON	ON	ON	OFF	ON	0FF	0FF	0FF	OFF
777210	ON	ON	ON	ON	0FF	ON	0FF	0FF	0FF	ON
777220	ON	ON	ON	ON	0FF	ON	0FF	0FF	ON	OFF
777230	ON	ON	ON	ON	OFF	ON	0FF	OFF	ON	ON
777240	ON	ON	ON	ON	0FF	ON	0FF	ON	0FF	0FF
777250	ON	ON	ON	ON	0FF	ON	0FF		0FF	ON
777260	ON	ON	ON	ON	OFF	ON	OFF	ON	ON	OFF
777270	ON	ON	ON	ON	0FF	ON	0FF	ON	ON	ON
777300	ON	ON	ON	ON	0FF	ON	ON	0FF	0FF	0FF
777310	ON	ON	ON	ON	0FF	ON	ON	0FF	0FF	ON
777320	ON	ON	ON	ON	0FF	ON	ON	OFF	ON	OFF
777330	ON	ON	ON	ON	0FF	ON	ON	OFF	ON	ON
777340	ON	ON	ON	ON	OFF	ON	ON	ON	OFF	OFF
777350	ON	ON	ON	ON	OFF	ON	ON		0FF	ON
777360	ON	ON	ON	ON	OFF	ON	ON	ON		0FF
777370	ON	ON	ON	ON	0FF	ON	ON	ON	ON	ON
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777400	ON	ON	ON	ON		OFF			0FF	
777410	ON	ON	ON	ON		0FF		OFF		ON
777420	ON	ON	ON	ON		0FF		OFF		OFF
777430	ON	ON	ON	ON		0FF		OFF	ON	ON
777440	ON	ON	ON	ON		0FF			0FF	
777450	ON	ON	ON	ON		OFF			0FF	ON
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ADDRESS	3	5	8	9	7 RESS	4	2	1	10	6
	A12	A11	A10				A06	A05	A04	A03
777500	ON	ON	ON	ON	ON	0FF	ON	OFF	0FF	OFF
777510	ON	ON	ON	ON	ON	OFF	ON	0FF	OFF	ON
777520	ON	ON	ON	ON	ON	OFF	ON	0FF	ON	0FF
777530	ON	ON	ON	ON	ON	0FF	ON	0FF	ON	ON
777540	ON	ON	ON	ON	ON	0FF	ON	ON	0FF	0FF
777550	ON	ON	ON	ON	ON	OFF	ON	ON	OFF	ON
777560	ON	ON	ON	ON	ON	0FF	ON	ON	ON	0FF
777570	ON	ON	ON	ON	ON	0FF	ON	ON	ON	ON
777600	ON	ON	ON	ON	ON	ON	0FF	OFF	0FF	0FF
777610	ON	ON	ON	ON	ON	ON	OFF	0FF	OFF	ON
777620	ON	ON	ON	ON	ON	ON	0FF	OFF	ON	0FF
777630	ON	ON	ON	ON	ON	ON	0FF	0FF	ON	ON
777640	ON	ON	ON	ON	ON	ON	0FF	ON	OFF	0FF
777650	ON	ON	ON	ON	ON	ON	0FF	ON	0FF	ON
777660	ON	ON	ON	ON	ON	ON	0FF	ON	ON	0FF
777670	ON	ON	ON	ON	ON	ON	0FF	ON	ON	ON
777700	ON	ON	ON	ON	ON	ON	ON	OFF	OFF	OFF
777710	ON	ON	ON	ON	ON	ON	ON	OFF	0FF	ON
777720	ON	ON	ON	ON	ON	ON	ON	OFF	ON	OFF
777730	ON	ON	ON	ON	ON	ON	ON	0FF	ON	ON
777740	ON	ON	ON	ON	ON	ON	ON	ON	OFF	0FF
777750	ON	ON	ON	ON	ON	ON	ON	ON	OFF	ON
777760	ON	ON	ON	ON	ON	ON	ON	ON	ON	0FF
777770	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON