ASR-9

SOFTWARE BASELINE

06/05/01

06/05/01

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The following list below shows the current airport surveillance radar-9 (ASR) software baseline as of 06/05/01. This list includes all modifications up to that date.

NAME	H##	VERSION	BOARD	DESCRIPTION
ASP	H16	7.0	1D18904	ASP ROM
MIP	H17	7.4	3D63647	MI Processor
9-PAC	n/a	1.7	3D64905	Proc Augmentation Card
RX/MON	H16	4.14	1D21091	Data Collect/Select
6WX/SC	H10	2.0	1D21091	Data Collect/Select
LSCC	H16	5.5	1D18978	SCI #1
LSCC	H02/H03	n/a	1D18980	SCI #2
RSCC	H20	5.1	1D18982	Panel Interface
SCIP-A	H19/H09	14.0	1D18968	General Interface
SCIP-C	H19	14.0	1D18972	Weather Output
Z PI	H06	11.3	1D18966	Programmable Int.
ZROM	H08	Z040788B	1D21053	SBC
RMS-D	H14	26.4	1D17992	iSBC 428
RMS-Q	H03/H04	Q031387A	1D17992	188/56-2
RMS-R	H06	2.2	1D17992	188/56-1
ASIS	CLK_MUX	1.1	ASR-002.6	Serial Interface
ASIS	DATA_MUX	1.1	ASR-002.6	Serial Interface
ASIS	CH5_MUX	1.1	ASR-002.6	Serial Interface
ASIS	ASIS II Boot	1.7,1.8	ASR-002.6	Serial Interface

The following pages describe each of the above items in more detail. Use these pages to verify that your system is up-to-date. The H#, found on each erasable programmable read-only memory (EPROM) label, identifies the revision level of the software contained in the EPROM. This number is incremented each time a new version of the software is released. The ASIS card however is different in that it is a system add-on and doesn’t follow the original nomenclature method. As for the ASIS, the chips are identified by abbreviated name (ie: CLK_MUX).

Menu 0.3.12 can be used as an aide in identifying the current revision level of the various software subsystems in the radar. All software in the ASR-9 is burned into EPROM’s (firmware). Normally, firmware version identification is achieved by reading the H# off the EPROM labels. However, this method requires powering down the

system to visually inspect each board. When the operator accesses this screen, the RMS generates a series of version identification request messages that are sent to each subsystem. All subsystems that support this feature will respond and RMS will display their version information on this screen.

For those subsystems that do not support this feature, or if a communications error occurred, TI 6310.24 text indicating an unknown status will be displayed for that subsystem. Thus, for those subsystems that do respond, manual verification of the H# on the EEPROM labels is not required.

Any deficiencies must be rectified immediately by ordering the corresponding modification kits through the Logistics and Inventory System (LIS) at the FAA Logistics Center (FAALC).

ARRAY SIGNAL PROCESSOR (ASP)
READ-ONLY MEMORY (ROM)

The ASP ROM board (1D18904) is found in slot 223 of each target channel. See figure 1 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U01	647A526	H16
U02	647A528	H16
U03	647A521	H16
U04	647A522	H16
U05	647A529	H16
U06	647A531	H16
U07	647A520	H16
U08	647A523	H16
U12	647A527	H16
U13	647A532	H16
U14	647A518	H16
U15	647A524	H16
U22	647A530	H16
U23	647A533	H16
U24	647A519	H16

The software change that created the H16 EPROMs is in Order 6310.18, SSM-ASR9-005, dated 4/1/99. Use national stock number (NSN) 0000-00-012-1567-1 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Channel A	_____	
Channel B	_____	
Spare	_____	

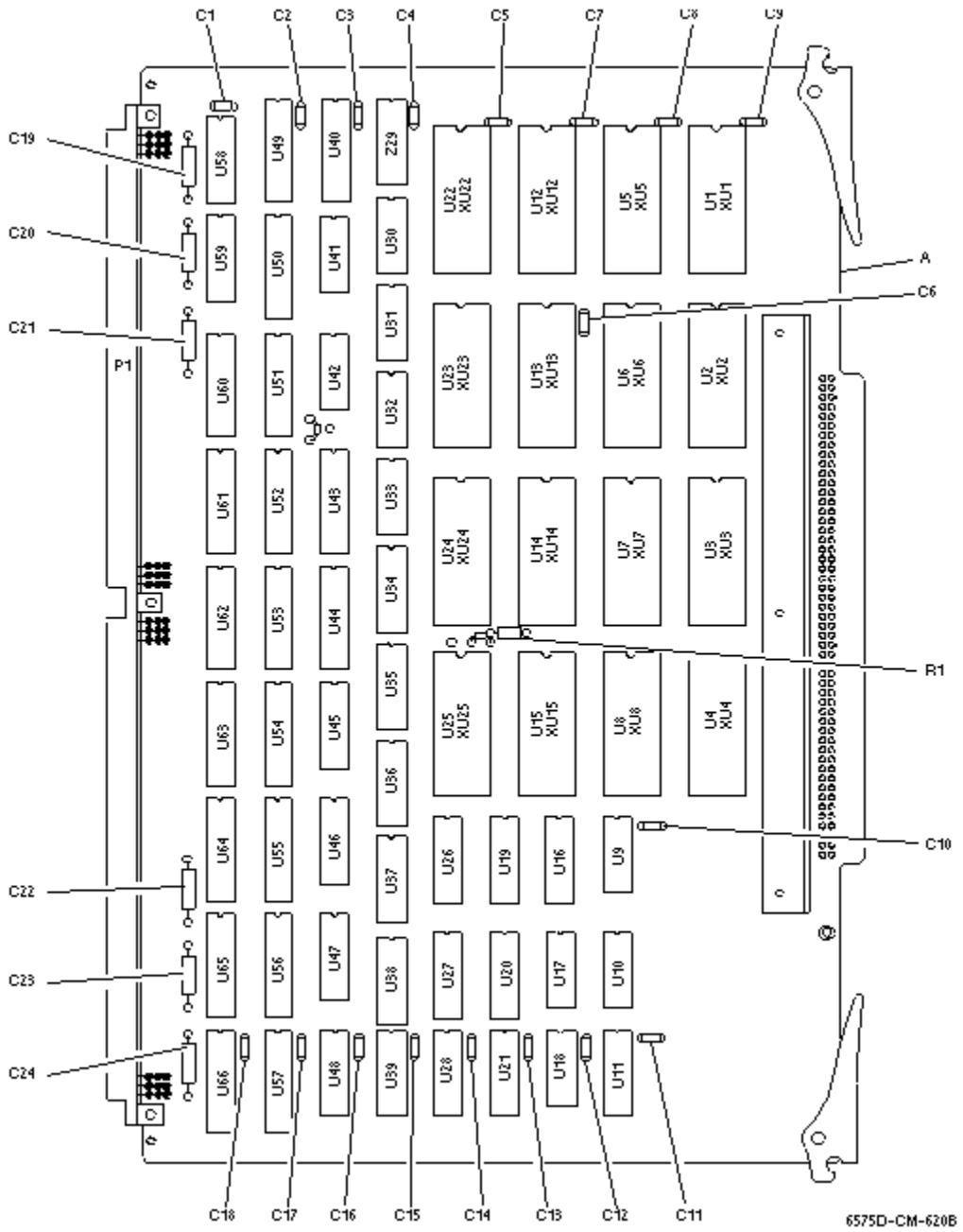

Figure 1 – ASP ROM Board (1D18904) Layout

MESSAGE INTERFACE PROCESSOR (MIP)

The MIP board (3D63647) is found in slot 207 of each target channel. See figure 2 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U30	647A144	H17
U31	647A145	H17
U50	647A146	H17
U51	647A147	H17
U60	647A148	H17
U61	647A149	H17
U91	3A27130	H01

The software change that created the H17 EPROMs is in Order 6310.18, SSM-ASR9-005, dated 4/1/99. Use NSN 0000-00-012-1567-1 to order this modification kit.

The software change that created the H01 PAL is in Order 6310.18, chapter 34, change 47, dated 5/21/96. Use NSN 0000-00-012-1430 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Channel A	_____	
Channel B	_____	
Spare	_____	

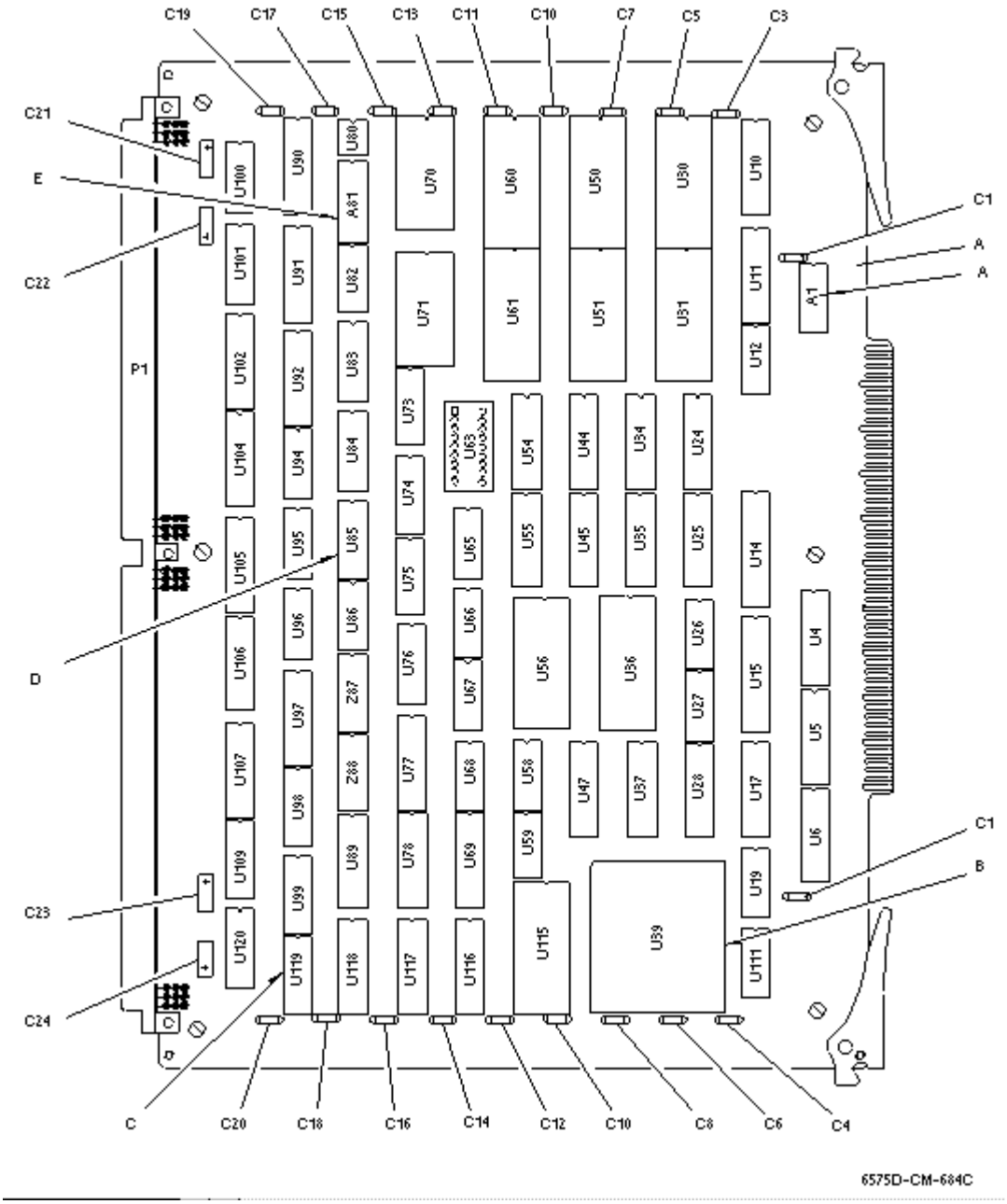

Figure 2 – MIP Board (1D63647) Layout

PROCESSOR AUGMENTATION CARD (9-PAC)

The 9-PAC board (3D64905) is found in slot 219 of each target channel.

CHIP NUMBER	MANUFACTURING CODE	H#
Flash Card	?	H??
U11	5A28439	H01

The software change that created the H?? Flash Card is in Order 6310.18, SSM-ASR9-005, dated 4/1/99. Use NSN 0000-00-012-1567-1 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Channel A	_____	
Channel B	_____	
Spare	_____	

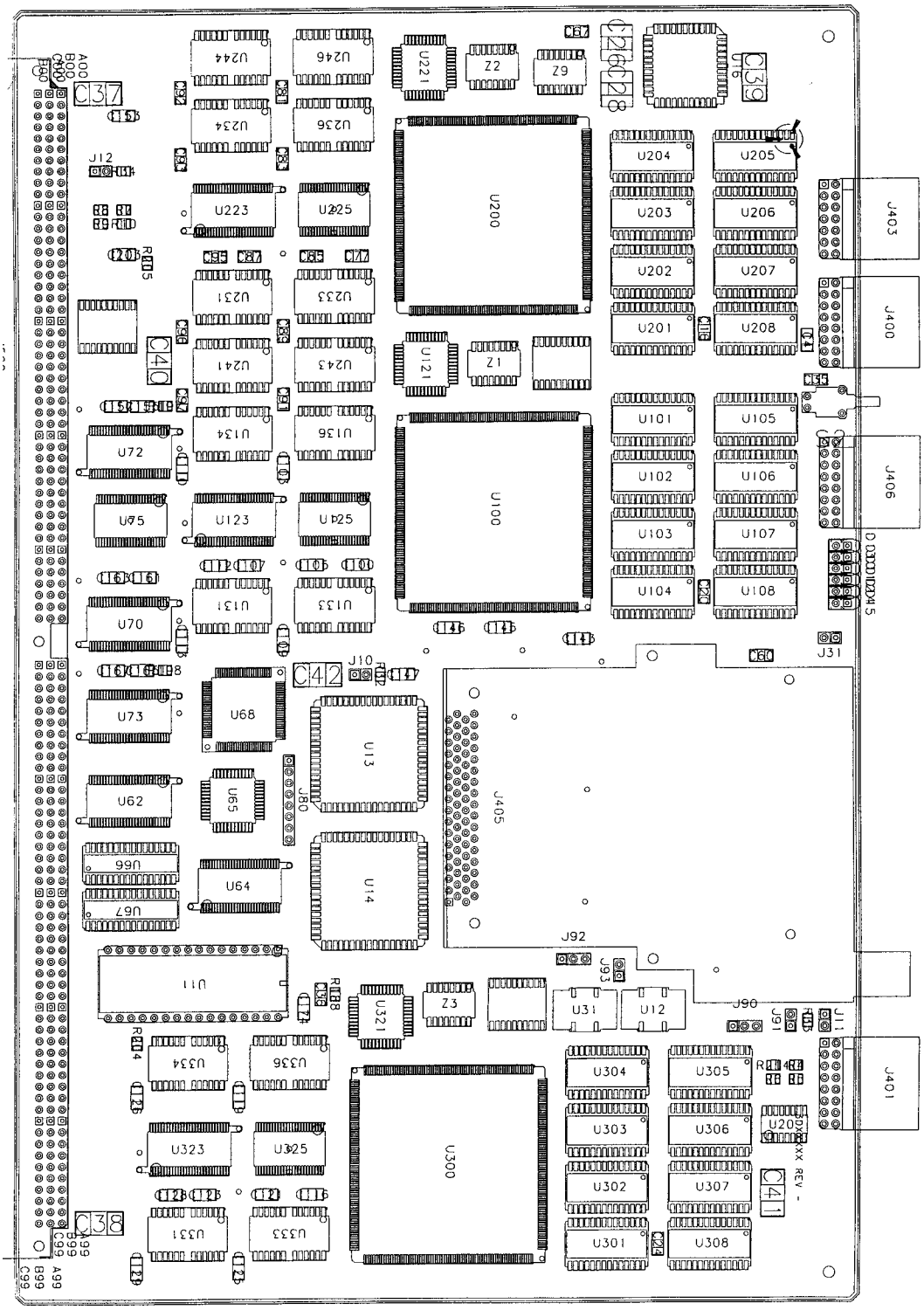

Figure 3 - 9PAC (3D64905) Board Layout - Front side

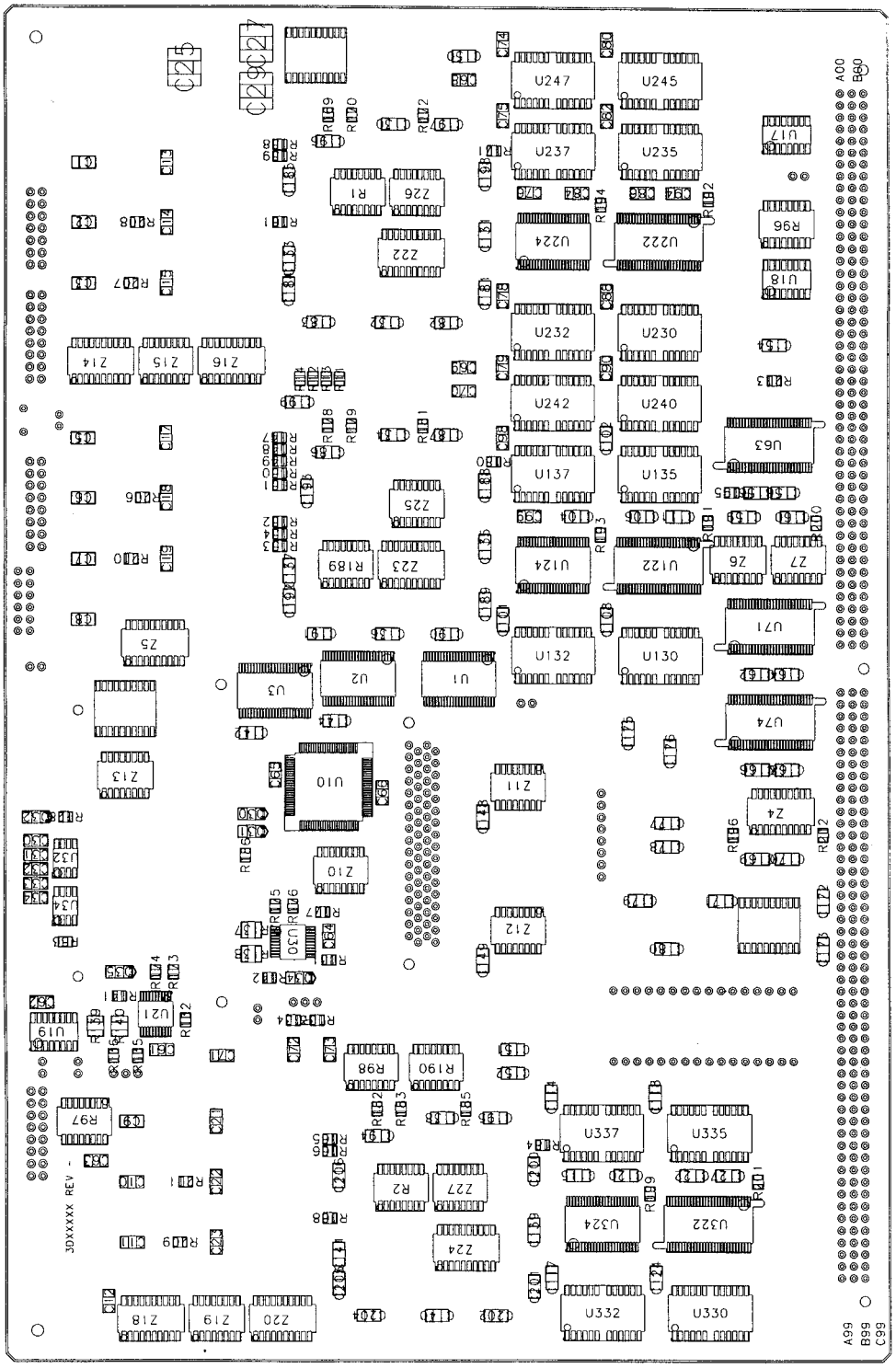

Figure 4 - 9PAC (3D64905) Board Layout - Back side

DATA COLLECT AND SELECT

The Data Collect and Select board (1D21091) is found in slot 119 of each target channel and slot 115 of the weather channel. The Receiver Monitor software is contained in EPROMs U21 - U35 (see figure 5). The Six Level Weather Smoothing and Contouring software is contained in EPROMs U96 and U98.

CHIP NUMBER	MANUFACTURING CODE	H#
U21	647A584	H16
U23	647A585	H16
U25	647A586	H16
U31	647A588	H16
U33	647A589	H16
U35	647A590	H16
U96	647A587	H10
U98	647A591	H10

The software change that created the H16 Receiver Monitor EPROMs is in Order 6310.18, chapter 19, change 21, dated 12/02/93. Use NSN 0000-00-012-1360 to order this modification kit.

The software change that created the H10 Six Level Weather EPROMs is in Order 6310.18, chapter 4, change 3, dated 7/17/91. Use part number 0004 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Channel A	_____	
Channel B	_____	
Weather Channel	_____	
Spare	_____	

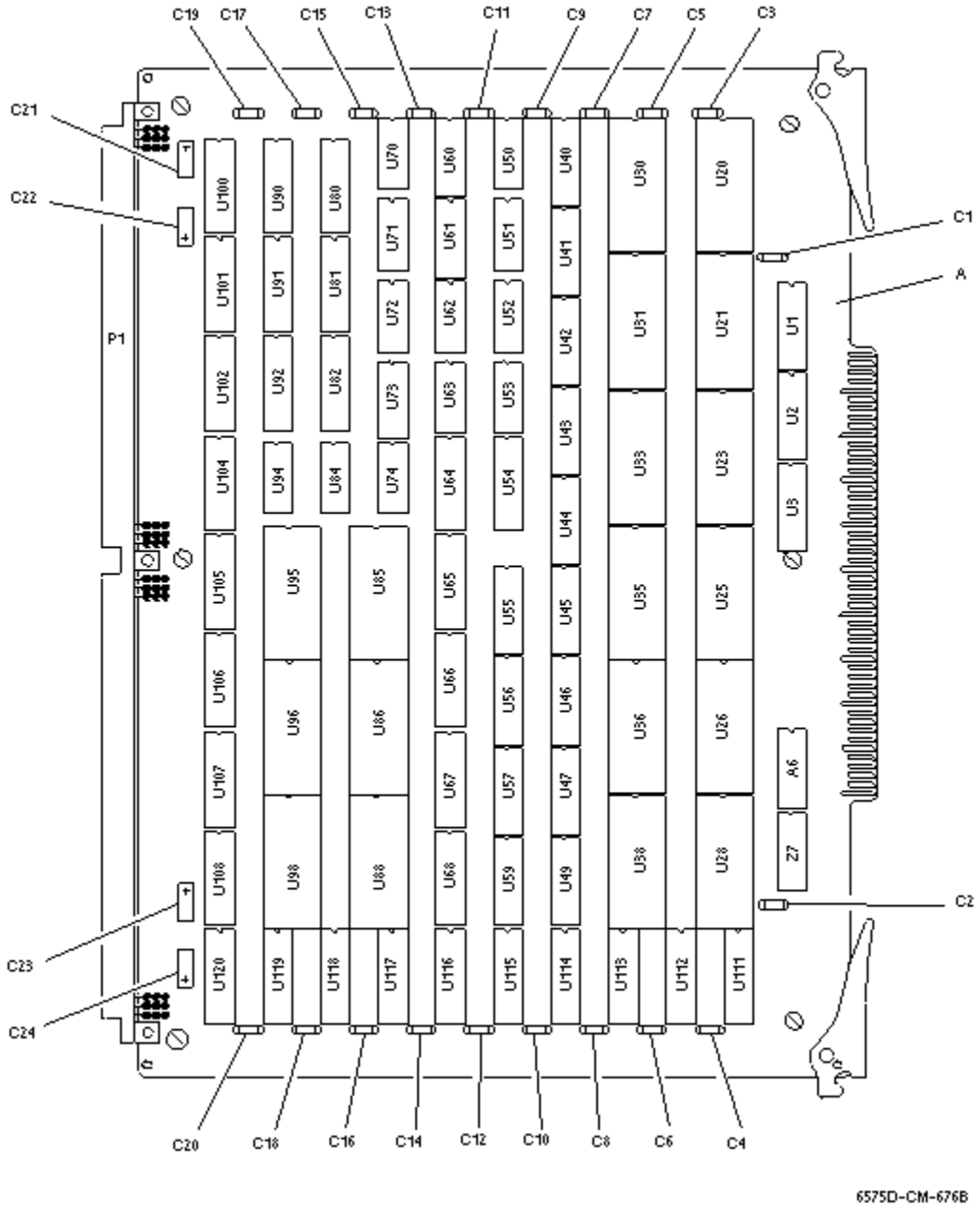

Figure 5 – Data Collect and Select Board (1D21091) Layout

SYSTEM CONTROL INTERFACE (SCI) NO. 1

The SCI No. 1 board (1D18978) is found in slot 216 of the weather channel and slot A38 of the Remote SCIP cabinet. See figure 6 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U20	647A240	H16
U30	647A242	H16

This is the Local System Control software. The software change that created the H16 EPROMs is in Order 6310.18, SSM-ASR9-004, dated 3/13/98. Use NSN 0000-00-012-1546 to order this modification kit.

This software only executes if the board is in the weather channel. Thus, it is possible for this board to fail in the local site and work in the remote site or vice-versa. So, to verify your spare board is capable of replacing either board in the system, it must be checked at both the local and remote sites.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Remote SCIP	_____	
Weather Channel	_____	
Spare	_____	

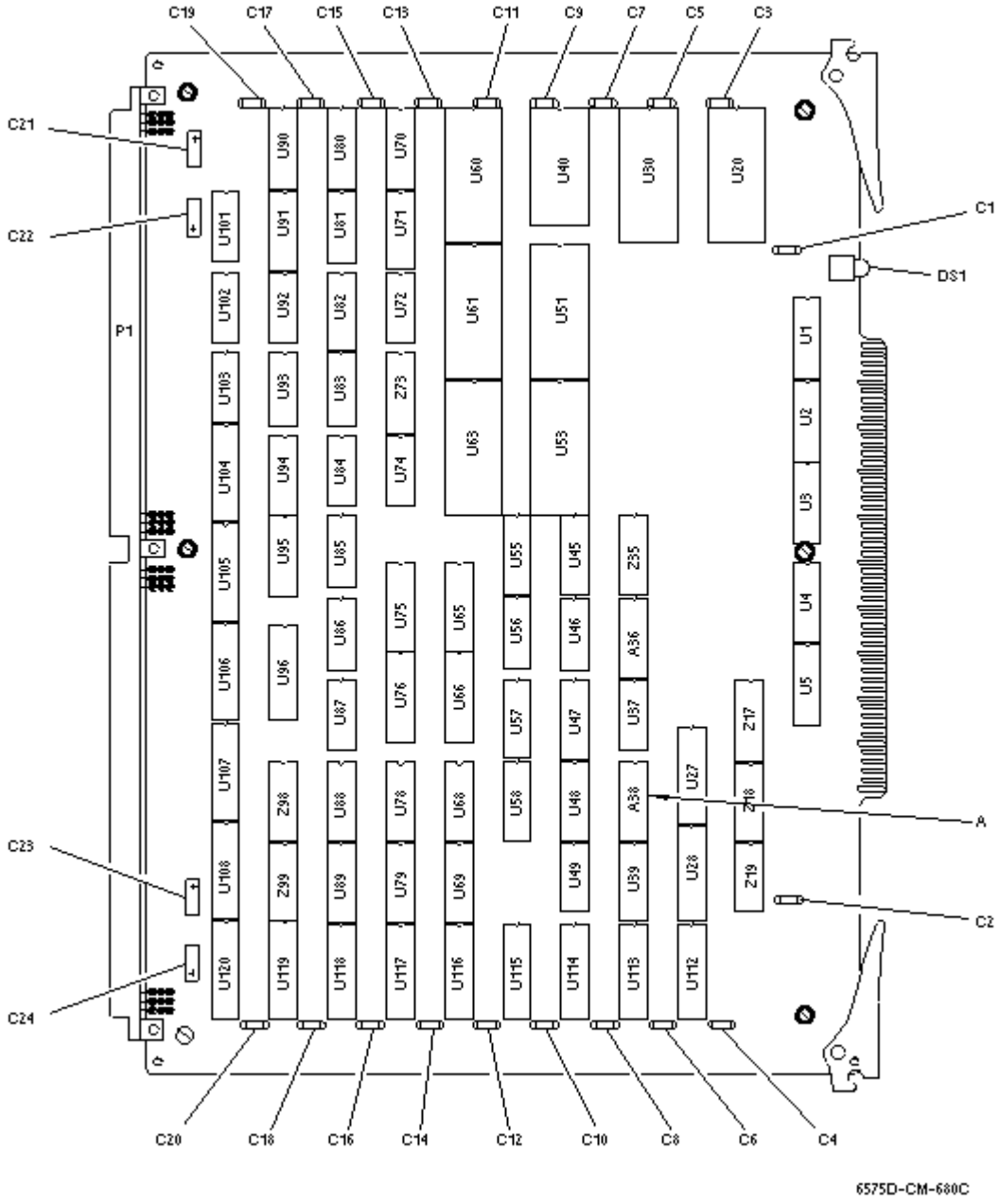

Figure 6 - SYSTEM CONTROL INTERFACE #1(SCI) Board (1D18978) Layout

SYSTEM CONTROL INTERFACE (SCI) NO. 2

The SCI No. 2 board (1D18980) is found in slot 215 and slot 217 of the weather channel. See figure 7 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U90	1A24177	H02
U91	1A24178	H03
U92	1A24179	H03

This is the ASR-9 System Control State sequence software. The software change that created the EPROMs is in Order 6310.18, SSM-ASR9-007, dated 6/7/99. Use NSN 0000-00-012-1466 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Weather Channel	_____	
2nd Weather Channel	_____	
Spare	_____	

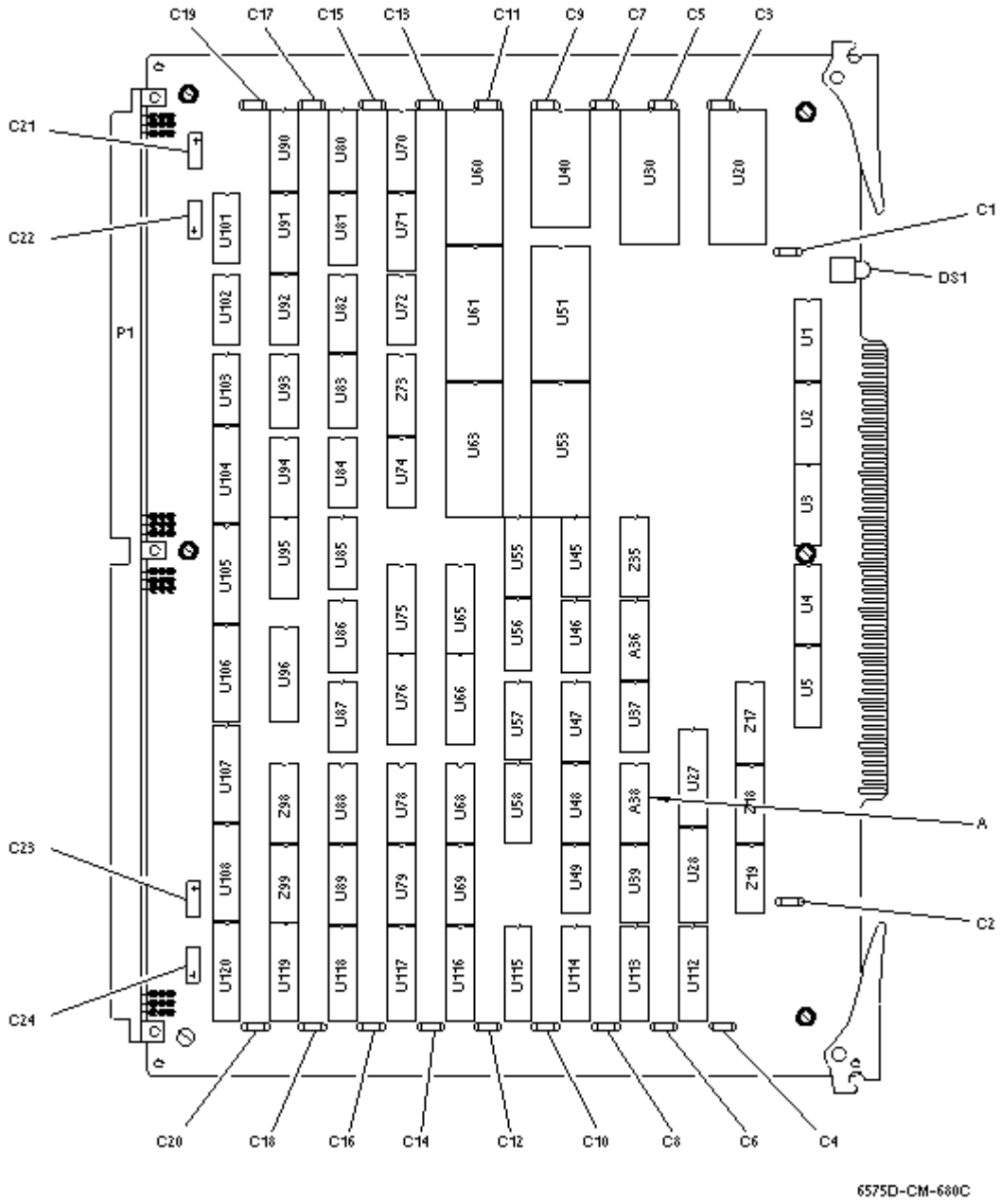

Figure 7 - SYSTEM CONTROL INTERFACE #2(SCI) Board (1D18980) Layout

PANEL INTERFACE

The Panel Interface board (1D18982) is found in slot 219 of the weather channel and slot A44 of the Remote SCIP cabinet. See figure 8 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U21	647A340	H20
U23	647A341	H20

This is the Remote System Control software. The software change that created the H20 EPROMs is in Order 6310.18, SSM-ASR9-004, dated 3/13/98. Use NSN 0000-00-012-1546 to order this modification kit.

This software only executes if the board is in the Remote SCIP cabinet. Thus, it is possible for this board to fail in the local site and work in the remote site or vice-versa. So, to verify your spare board is capable of replacing either board in the system, it must be checked at both the local and remote sites.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Remote SCIP	_____	
Weather Channel	_____	
Spare	_____	

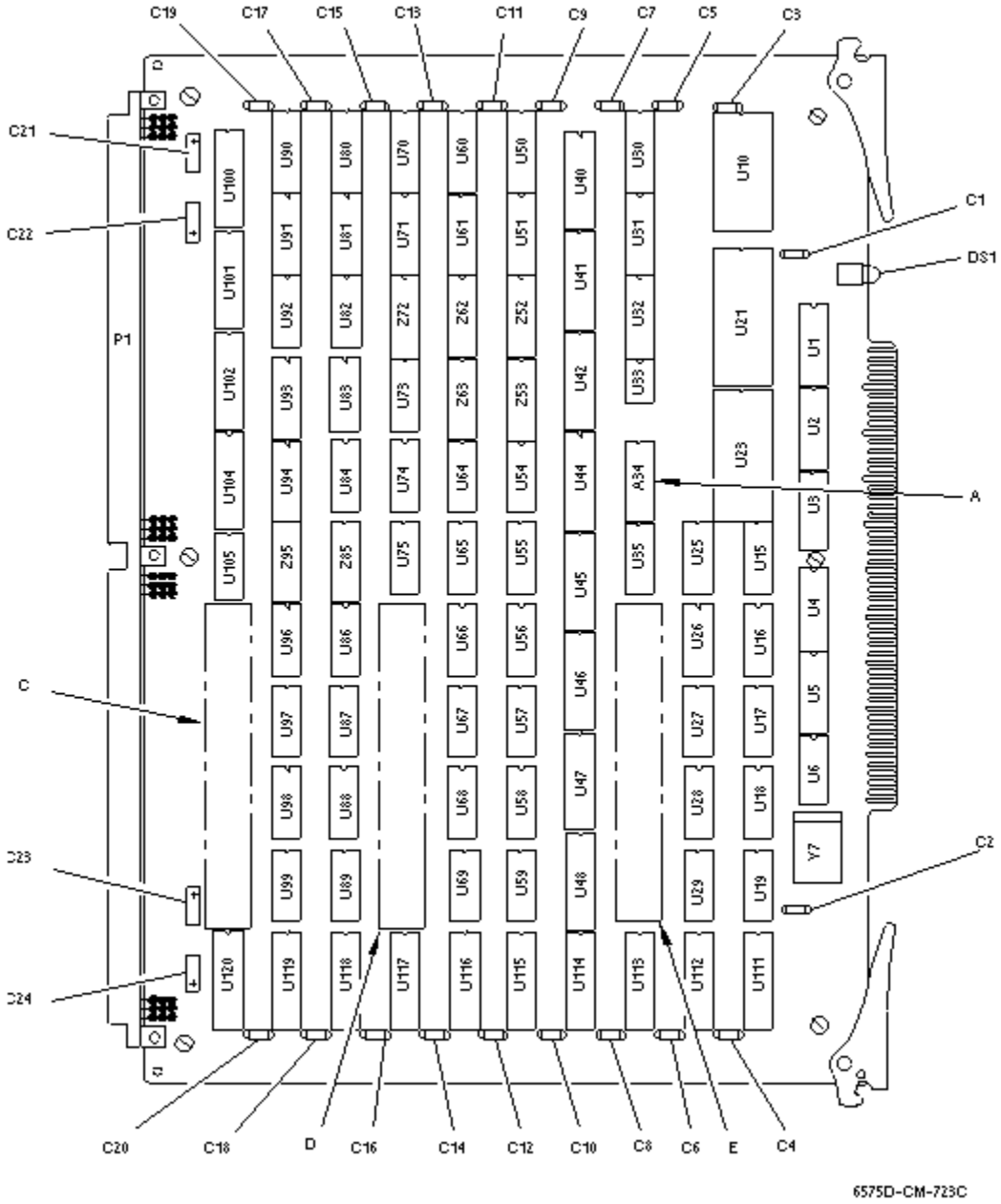

Figure 8 – Panel Interface Board (1D18982) Layout

GENERAL INTERFACE

The General Interface board (1D18968) is found in slot 201 of the weather channel and slot A03 of the Remote SCIP cabinet. See figure 9 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U21	647A354	H19
U23	647A355	H19
U31	647A357	H09
U33	647A358	H09

The software change that created the H19/H09 EPROMs is in Order 6310.18, chapter 39, change 52, dated 12/3/96. Use NSN 0000-00-012-1452 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Remote SCIP A	_____	
Remote SCIP B	_____	
2nd Remote SCIP A	_____	
2nd Remote SCIP B	_____	
Weather Channel	_____	
Spare	_____	

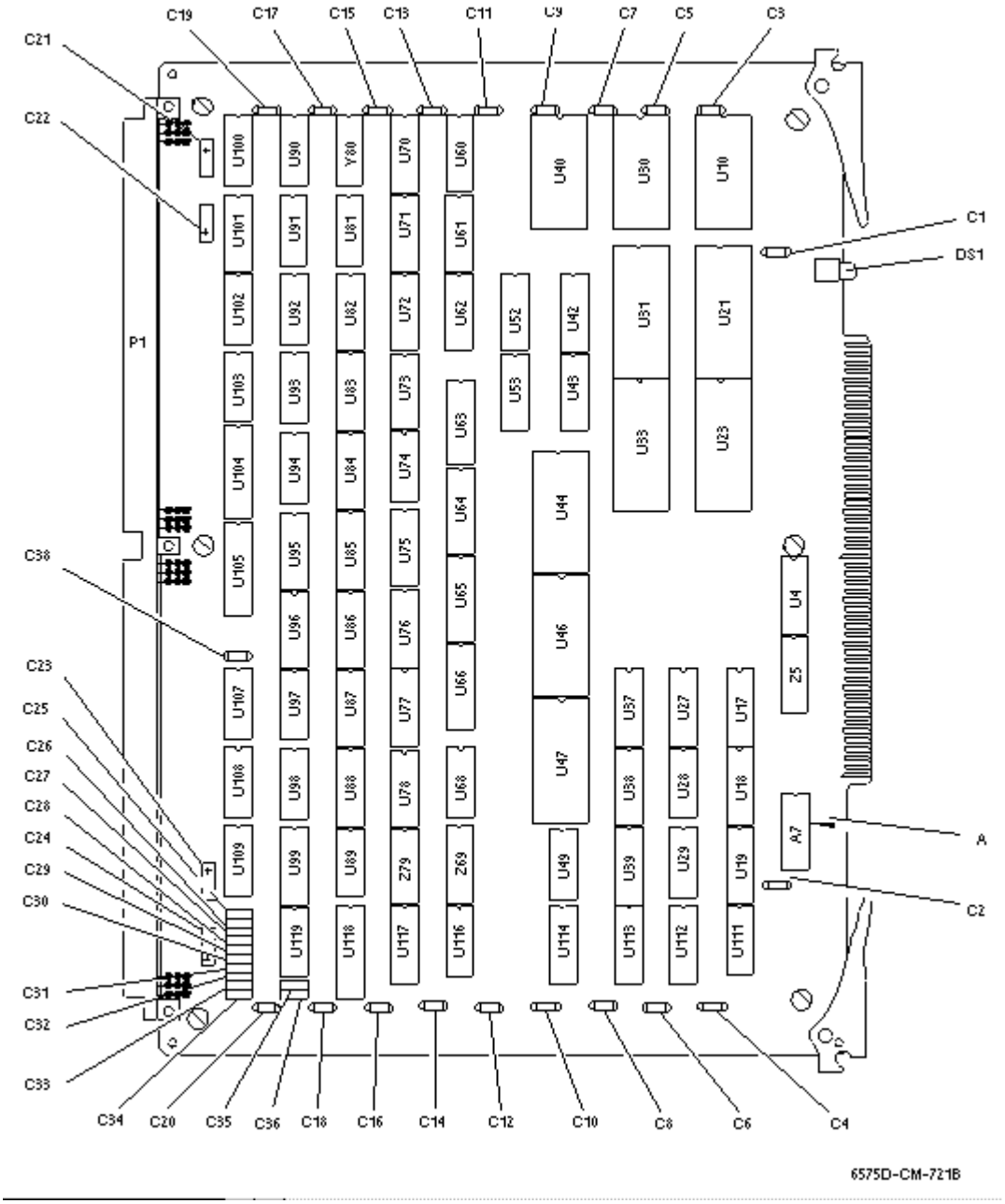

Figure 9 – General Interface Board (1D18968) Layout

WEATHER OUTPUT

The Weather Output board (1D18972) is found in slot 213 of the weather channel and slot A26 of the Remote SCIP cabinet. See figure 10 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U88	647A629	H19
U98	647A630	H19

The software change that created the H19 EPROMs is in Order 6310.18, chapter 39, change 52, dated 12/3/96. Use NSN 0000-00-012-1452 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Remote SCIP A	_____	
Remote SCIP B	_____	
2nd Remote SCIP A	_____	
2nd Remote SCIP B	_____	
Weather Channel	_____	
Spare	_____	

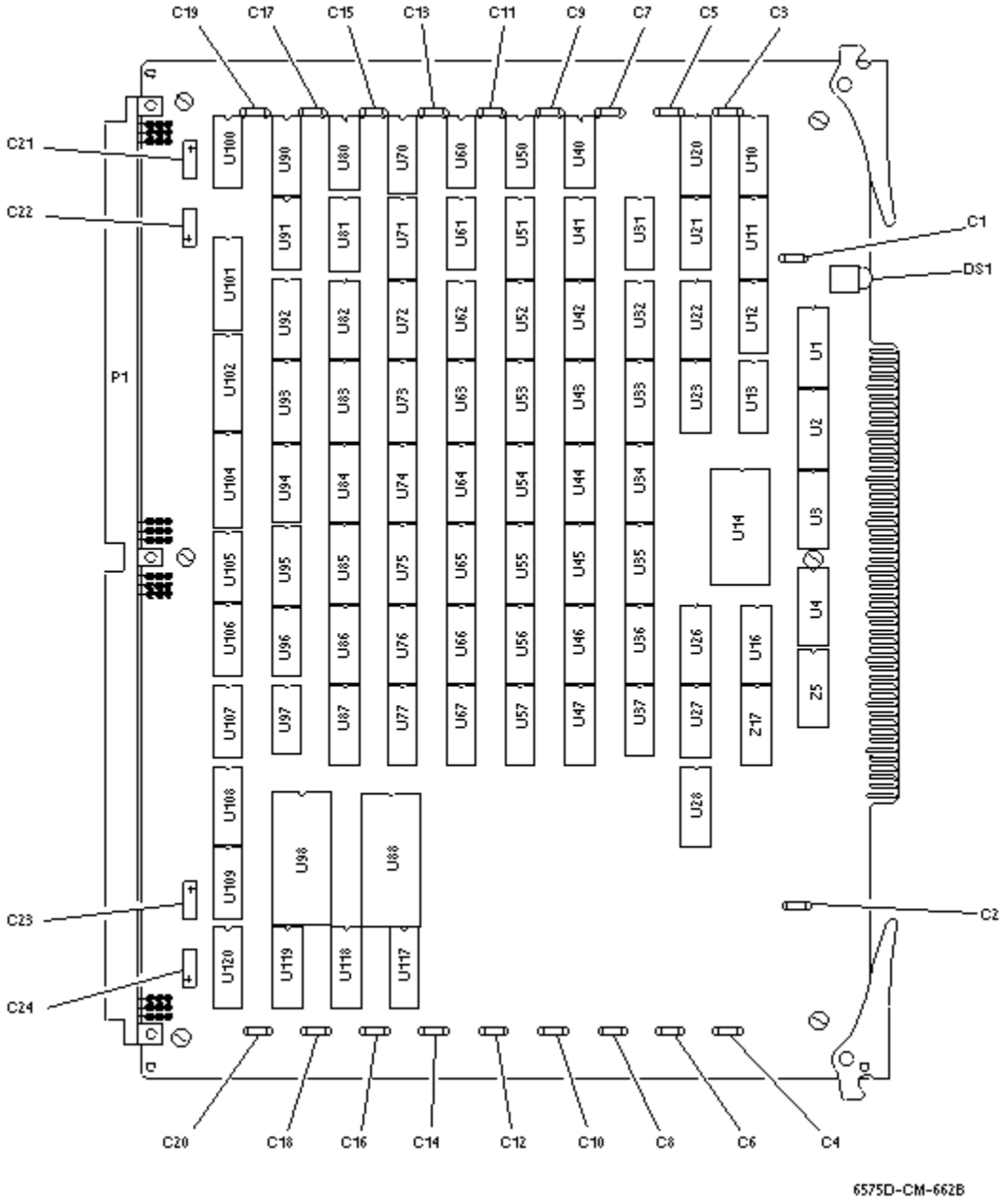

Figure 10 – Weather Output Board (1D18972) Layout

PROGRAMMABLE INTERFACE (PI)

The PI board (1D18966) is found in slots 112, 204, and 205 of the weather channel and slots A08, A09, A17, and A48 of the Remote SCIP cabinet. If the digital recorder interface (DRI) is installed, this board can also be found in slot 219 of the target channel. See figure 11 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U10	647A338	H06
U22	647A338	H06
U29	647A338	H06

The current version of this software dates back to 1987. Thus, it is highly unlikely that an older version is in your system.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Weather slot 112	_____	
Weather slot 204	_____	
Weather slot 205	_____	
Remote SCIP A A08	_____	
Remote SCIP A A09	_____	
Remote SCIP A A17	_____	
Remote SCIP A A48	_____	
Remote SCIP B A08	_____	
Remote SCIP B A09	_____	
Remote SCIP B A17	_____	
2nd RMT SCIP A A08	_____	
2nd RMT SCIP A A09	_____	
2nd RMT SCIP A A17	_____	
2nd RMT SCIP B A08	_____	
2nd RMT SCIP B A09	_____	
2nd RMT SCIP B A17	_____	
Target slot 219	_____	
Spare	_____	

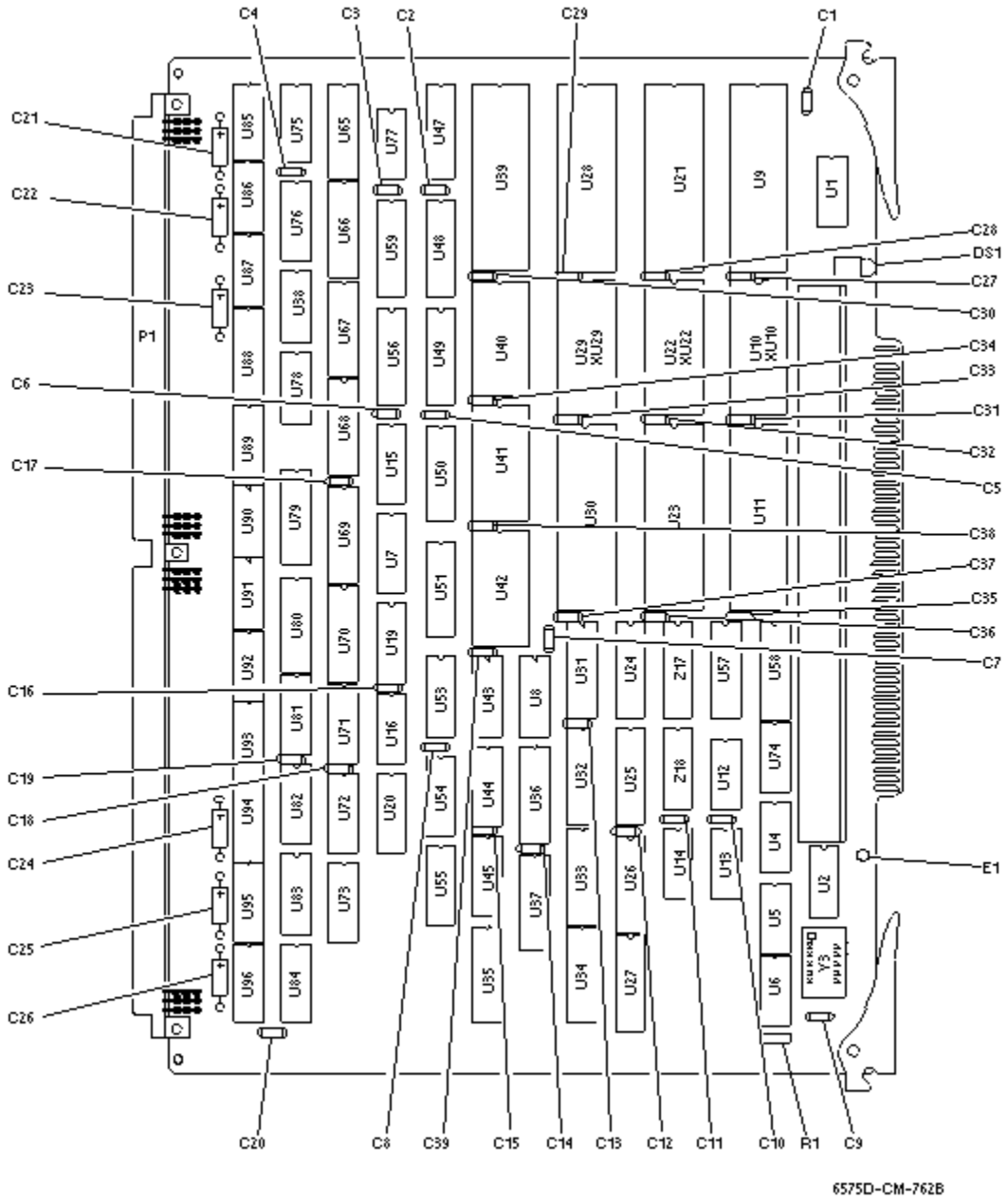

Figure 11 – Programmable Interface Board (1D18966) Layout

SINGLE BOARD COMPUTER (SBC)

The SBC board (1D21053) is found in slot 117 of the target channel; slots 110, 119, 202, 211, and 218 of the weather channel; and slots A05, A23, and A40 of the Remote SCIP cabinet. If the DRI is installed, this board can also be found in slot 227 of the target channel. See figure 12 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U05	647A650	H08
U06	647A651	H08

The current version of this software dates back to 1988. Thus, it is highly unlikely that an older version is in your system.

	SERIAL NO.	UP-TO-DATE (Yes/No)
Target A slot 117	_____	
Target B slot 117	_____	
Weather slot 110	_____	
Weather slot 119	_____	
Weather slot 202	_____	
Weather slot 211	_____	
Weather slot 218	_____	
Remote SCIP A A05	_____	
Remote SCIP A A23	_____	
Remote SCIP A A40	_____	
Remote SCIP B A05	_____	
Remote SCIP B A23	_____	
2nd RMT SCIP A A05	_____	
2nd RMT SCIP A A23	_____	
2nd RMT SCIP B A05	_____	
2nd RMT SCIP B A23	_____	
Target slot 227	_____	
Spare	_____	

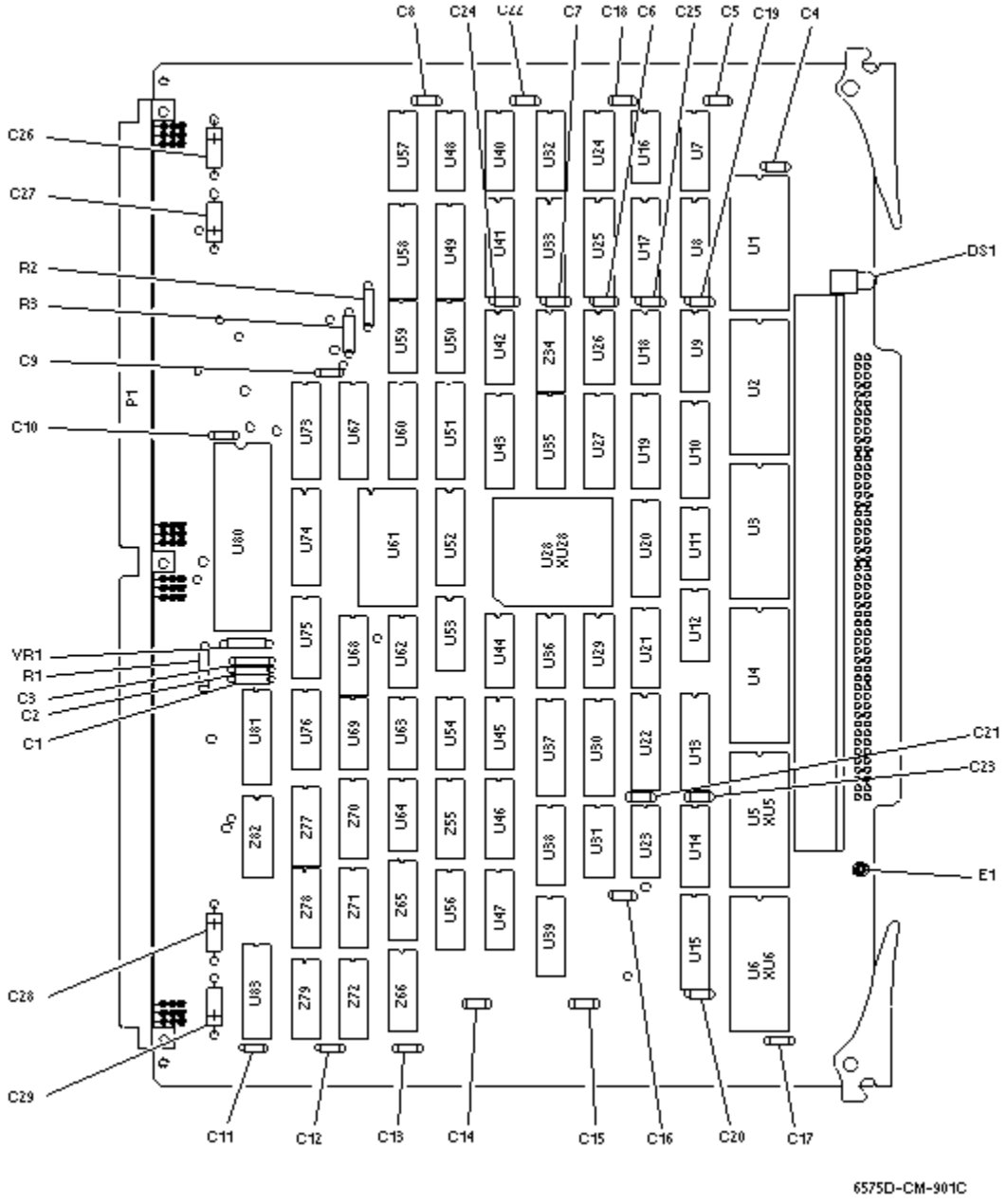

Figure 12 – Single Board Computer (SBC) (1D21053) Layout

iSBC 428

The iSBC 428 board is found in slot 2 of the Intel 310 box. See figure 13 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U5P	1A26051	H14
U3P	1A26052	H14
U5N	1A26053	H14
U3N	1A26054	H14
U5M	1A26055	H14
U3M	1A26056	H14
U5K	1A26057	H14
U3K	1A26058	H14
U5J	1A26059	H14
U3J	1A26060	H14
U5H	1A26061	H14
U3H	1A26062	H14
U5E	1A26063	H14
U3E	1A26064	H14

There are easier methods to determine the version of the EPROMs on this board other than extracting the board from the unit. The logon menu at the local terminal and the main menu at any terminal should indicate version 26.4.

The software change that created the H14 EPROMs is in Order 6310.18, SSM-ASR-005, dated 4/1/99. Use NSN 0000-00-012-1567-1 to order this modification kit.

	SERIAL NO.	UP-TO-DATE (Yes/No)
310 box slot 2	_____	

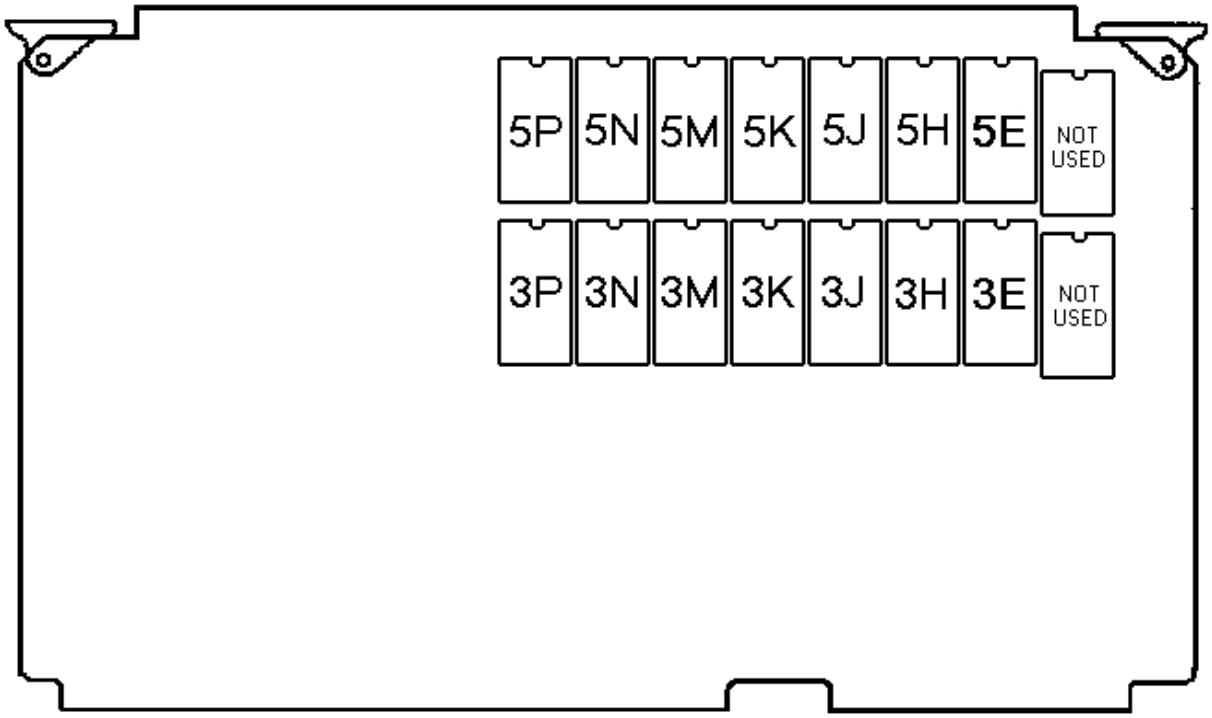

Figure 13 – iSBC 428 Intel Board (RMS) Layout

188/56

There are two 188/56 boards in the Intel 310 box.

The 188/56 board in slot 7 interfaces with all the SBCs in the system and the automatic network supervisor (ANS). See figure 14 for the location of the chip number.

CHIP NUMBER	MANUFACTURING CODE	H#
U46	1A24065	H03/H04
U90	1A24066	H03/H04

Since Intel installs these chips, they may have Intel labels on them instead of the normal Westinghouse label. If so, it is not possible to determine the revision level of the EPROM. But, the current version of this software dates back to 1987. Thus, it is highly unlikely that an older version is in your system.

The 188/56 in slot 3 interfaces with the maintenance processor subsystem (MPS).

CHIP NUMBER	MANUFACTURING CODE	H#
U46	1A24067	H06
U90	1A24068	H06

Since Intel installs these chips, they may have Intel labels on them instead of the normal Westinghouse label. If so, it is not possible to determine the revision level of the EPROM. But, the current version of this software dates back to 1988. Thus, it is highly unlikely that an older version is in your system.

	SERIAL NO.	UP-TO-DATE (Yes/No)
310 box slot 3	_____	
310 box slot 7	_____	

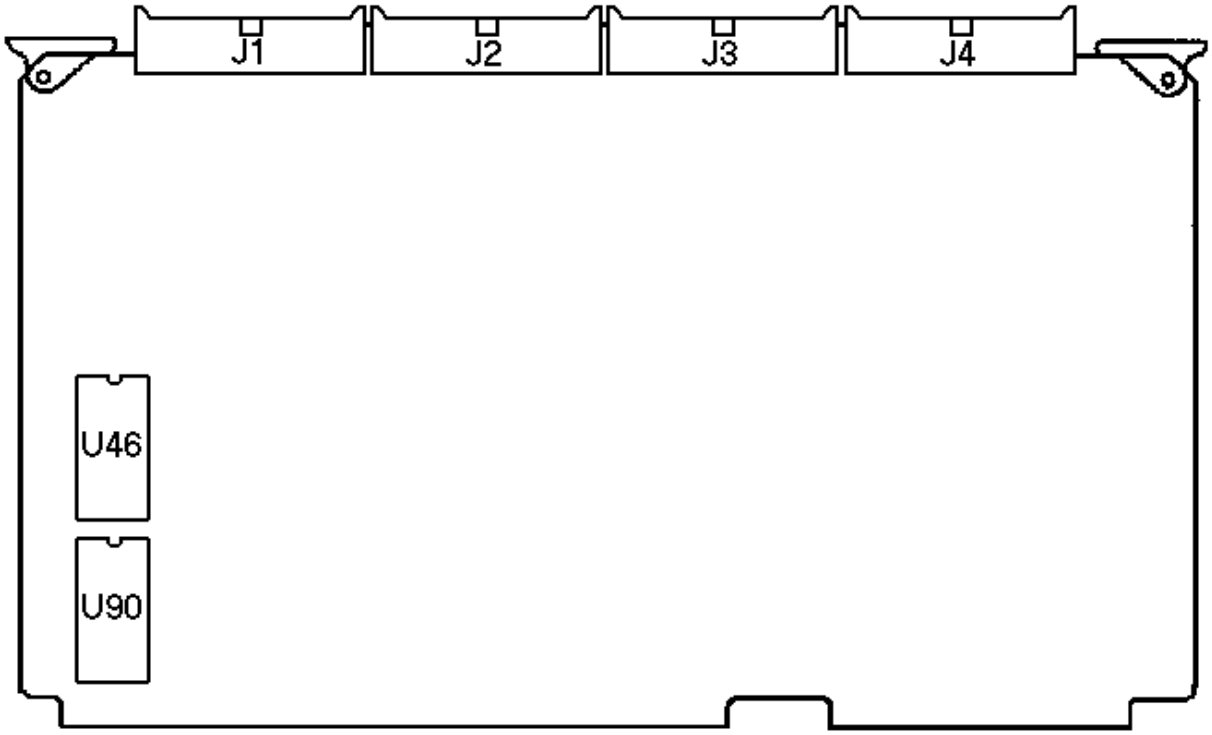

Figure 14 - 188/56 Intel Board (RMS) Layout

ASR-9 SERIAL INTERFACE SYSTEM (ASIS)
PHASE II

The ASIS board (ASR-002.6) is found in the A3A06 slot of the Remote SCIP(Unit 22)/Dual Remote SCIP (Unit 24). See figure 15 for the location of the chip number.

CHIP NAME	CHIP NUMBER	H#
CLK_MUX	U60,U62,U64,U66,U68,U70	1.1
DATA_MUX	U59,U61,U63,U65,U67,U69	1.1
ASIS II BOOT	U7	1.7,1.8
CH5_MUX	U51	1.1

	SERIAL NO.	UP-TO-DATE (Yes/No)
Remote SCIP	_____	_____
Dual Remote SCIP	_____	_____
Spare	_____	_____

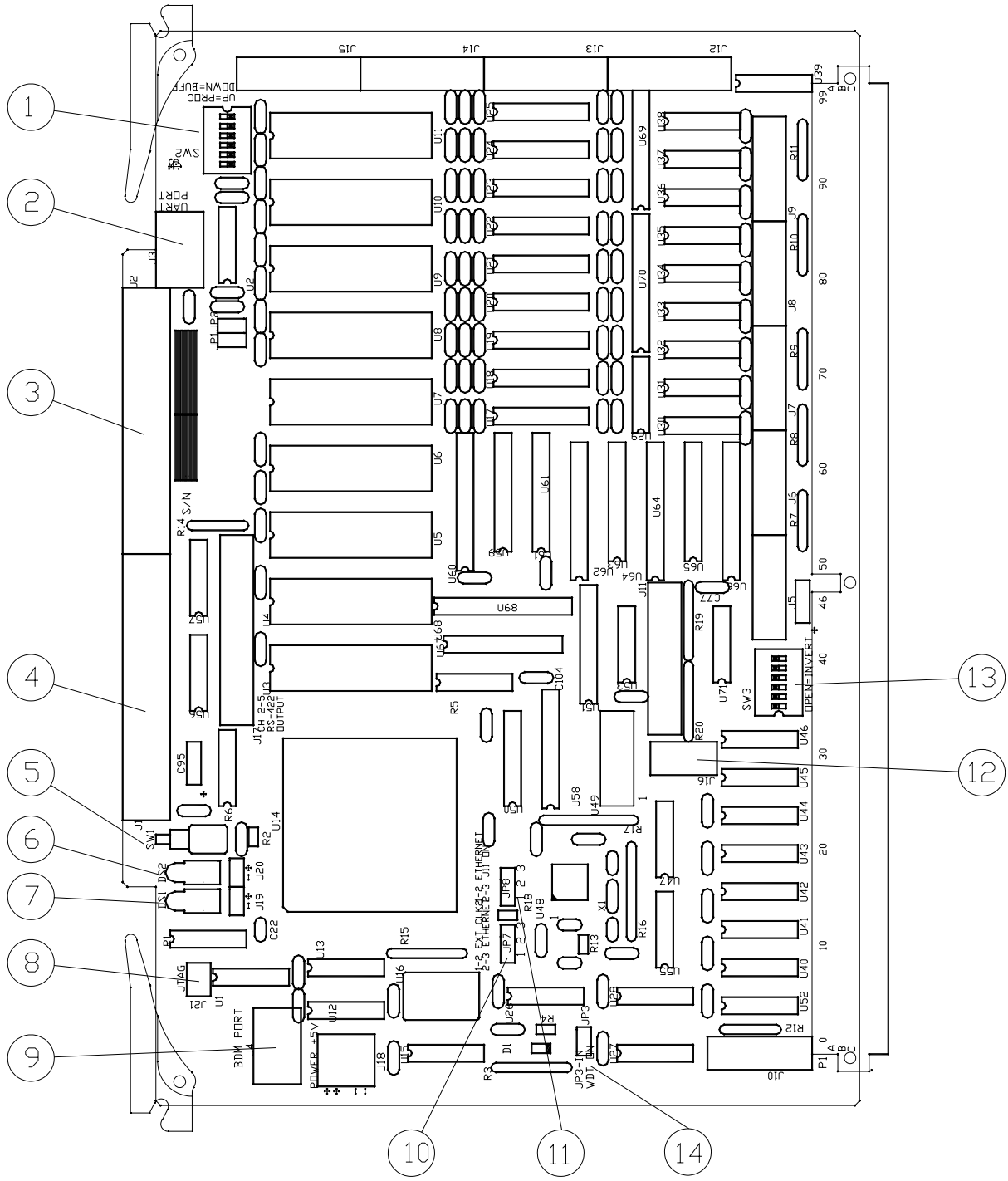

Figure 15. ASR-9 Serial Interface System (ASIS) Phase II