
1260 VXI SWITCHING CARD

1260-66 18GHz MICROWAVE SWITCH CARD

PUBLICATION NO. 980673-044

RACAL INSTRUMENTS

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For the specific terms of your standard warranty, or optional extended warranty or service agreement, contact your Racal customer service advisor. Please have the following information available to facilitate service.

1. Product serial number
2. Product model number
3. Your company and contact information

You may contact your customer service advisor by:

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	+44(0) 1628 662017	(UK)
	+852 2416 4335	(Hong Kong)

RETURN of PRODUCT

Authorization is required from Racal Instruments before you send us your product for service or calibration. Call your nearest Racal Instruments support facility. A list is located on the last page of this manual. If you are unsure where to call, contact Racal Instruments, Inc. Customer Support Department in Irvine, California, USA at 1-800-722-3262 or 1-949-859-8999 or via fax at 1-949-859-7139. We can be reached at:

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FOR YOUR SAFETY

Before undertaking any troubleshooting, maintenance or exploratory procedure, read carefully the **WARNINGS** and **CAUTION** notices.

This equipment contains voltage hazardous to human life and safety, and is capable of inflicting personal injury.

If this instrument is to be powered from the AC line (mains) through an autotransformer, ensure the common connector is connected to the neutral (earth pole) of the power supply.

Before operating the unit, ensure the conductor (green wire) is connected to the ground (earth) conductor of the power outlet. Do not use a two-conductor extension cord or a three-prong/two-prong adapter. This will defeat the protective feature of the third conductor in the power cord.

Maintenance and calibration procedures sometimes call for operation of the unit with power applied and protective covers removed. Read the procedures and heed warnings to avoid "live" circuit points.

Before operating this instrument:

1. Ensure the instrument is configured to operate on the voltage at the power source. See Installation Section.
2. Ensure the proper fuse is in place for the power source to operate.
3. Ensure all other devices connected to or in proximity to this instrument are properly grounded or connected to the protective third-wire earth ground.

If the instrument:

- fails to operate satisfactorily
- shows visible damage
- has been stored under unfavorable conditions
- has sustained stress

Do not operate until performance is checked by qualified personnel.

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NOTE FOR SYSTEMS WITH 1260-OPT 01T

The “Module-Specific Syntax” section of this manual shows the command syntax for the 1260-01S Smart Card. If you are using the newer 1260-01T Smart Card, the commands will NOT work as shown.

Consult the 1260-01T Manual for a description of the commands which may be used with the 1260-01T Smart Card.

The channel numbers described in this manual are valid for the 1260-01T. The channel numbers continue to be used for the 1260-01T.

The syntax of the commands which use channel numbers has changed for those cards controlled by the 1260-01T.

The new syntax used to close a channel is:

CLOSE (@ <module address> (<channel>))

For example, with for a relay module whose <module address> is set to 7, closing <channel> 0 is performed with the command:

CLOSE (@ 7 (0))

Using the older 1260-01S, the command would be (as shown in this manual):

CLOSE 7.0

Many other command syntax differences exist. Please consult chapter 2 of the 1260-01T manual for a description of the commands which are available for the 1260-01T.

Control Information for the 1260-66A

The following information describes the control-register-to-relay-channel mapping for a 1260-66A Relay Module. This information may be used to control a 1260-16 when using a 1260-01T in the register-based mode of operation.

Each 1P6T relay is controlled by a single control register. Each bit of the control register controls a single throw of the 1P6T relay. Setting the bit to a 1 connects the corresponding throw to the pole. At most 1 of the 6 control bits of this register should be set at any one time. **If this is not followed, two throws may be shorted together.**

The table below shows the mapping between logical channels used to operate the relay module in message-based mode and the bits within the Control Registers which may be used to operate the channel in register-based mode.

Each Control Register is located 2 addresses from the previous Control Register. This is shown in Table 2-2 of the 1260-01T manual. Control Register 0 is located at the “Base A24 Address” for the module. Consult the “Register-Based Operation” Section of Chapter 2 of this manual for a description of calculating control register addresses.

Channel	Control Register	Control Bit
0	0	0
1	0	1
2	0	2
3	0	3
4	0	4
5	0	5
10	1	0
11	1	1
12	1	2
13	1	3
14	1	4
15	1	5
20	2	0
21	2	1
22	2	2
23	2	3
24	2	4
25	2	5
30	3	0
31	3	1
32	3	2
33	3	3
34	3	4
35	3	5
40	4	0
41	4	1
42	4	2
43	4	3
44	4	4
45	4	5
50	5	0
51	5	1
52	5	2
53	5	3
54	5	4
55	5	5

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MODULE SPECIFICATION

General Information

The 1260-66 consists of up to six 1P6T, 18GHz switches.

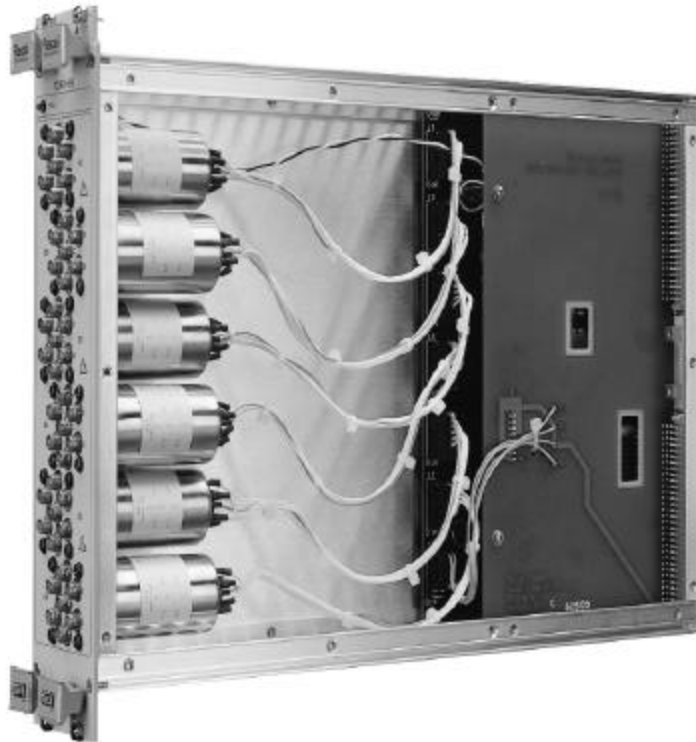


Figure 1-1, 1260-66

Specifications

Quantity of RF Switches

1260-66A

1260-66B

1260-66C

6 18GHz switches

4 18GHz switches

2 18GHz switch

User Connectors on Module

SMA Female - **Caution:**
Mating Connector
engagement should not
exceed 9 in. lbs. torque
maximum.

	Recommended Torque Wrench: Wiltron Model 01-201, 8 in. lbs.
RF Impedance	50S, nominal
Insertion Loss, dB Max	0.2 DC - 4GHz 0.3 4GHz - 12.4GHz 0.4 12.4GHz - 18GHz
Isolation, dB Min	60 DC - 18GHz
VSWR, Max	1.25:1 DC - 4GHz 1.40:1 4GHz - 12.4GHz 1.50:1 12.4GHz - 18GHz
Power rating, RF, Cold Switching, Watts Min: (25EC)	70 DC - 4GHz 40 4 - 12.4GHz 30 12.4 - 18GHz
Switch Life, Min:	1 x 10 ⁶ Operations
Switch Sequence:	Break Before Make
Switching Time, Max:	15mS
Minimum Option 01 Hardware Revision	401901-005 Rev. B or later
Minimum Option 01 Firmware Revision	231417-001, Rev. 29.1 (T) 231417-002, Rev. 29.1 (T)

General

Power Requirements (I _{pm}) +5V +12V	0.4A (2.8A with Option 01 installed) 300mA per RF relay (energized)
Cooling Requirements Airflow (at sea level)	4.0 L/S at 0.5 mm of H ₂ O
Weight	6.0lbs (2.25 Kg) 6.28lbs (2.38 Kg) with Option 01

Environmental

Temperature Operating Storage	0EC to 55EC -55EC to 75EC
Humidity	95%, non-condensing

Altitude

15,000 ft.

Safety

Refer to the “**FOR YOUR SAFETY**” page preceding the Table of Contents. Follow all **NOTES, CAUTIONS and WARNINGS** to ensure personal safety and prevent damage to the instrument.

Product Support

Racal Instruments has a complete Service and Parts Department. If you need technical assistance or should it be necessary to return your product for servicing, call 1-800-722-3262 or call 949-859-8999 and ask for Customer Support. Refer to Chapter 9, Product Support for further information.

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INSTALLATION INSTRUCTIONS

Unpacking and Inspection

1. Before unpacking the switching module, check the exterior of the shipping carton for any signs of damage. All irregularities should be noted on the shipping bill.
2. Remove the instrument from its carton, preserving the factory packaging as much as possible.
3. Inspect the switching module for any defect or damage. Notify the carrier immediately if any damage is apparent.
4. Have a qualified person check the instrument for safety before use.

Reshipment Instructions

1. Use the original packing if it is necessary to return the switching module to Racal Instruments for calibration or servicing. The original shipping carton and the instrument's plastic foam will provide the necessary support for safe reshipment.
2. If the original packing is unavailable, wrap the switching module in plastic sheeting and use plastic spray foam to surround and protect the instrument.
3. Reship in either the original or a new, sturdy shipping carton.

Option 01 Installation

Installation of the Option 01 into the 1260-66 is described in the Installation section of the 1260-Series VXI Switching Cards Manual. Note that lockout keying for the double-wide 1260-66 module differs from that described in the 1260 manual section.

Lockout Keys

The lockout key configuration for the 1260-66 is slightly different from that of the other 1260 modules because the 1260-66 occupies two VXI slots. Lockout key mounting holes are present in the front panel for each of the occupied VXI slots.

If the module is **not** the leftmost nor the rightmost module in the group, lockout key "A" (Racal Instruments P/N 455540) should be installed in the location corresponding to the module's left slot. Lockout key "C" (Racal Instruments P/N 455541) should be installed in the location corresponding to the module's right slot.

If the module is the leftmost module in the group, lockout key "C" should be installed in the location corresponding to the module's right slot.

If the module is the rightmost module in the group, lockout key "A" should be installed in the location corresponding to the module's left slot.

Module Installation

Installation of the 1260-66 Switching Module into a VXI mainframe, including the setting of DIP switches, is described in the Installation section of the 1260-Series VXI Switching Cards Manual. The ID byte DIP switches should be set as follows:

1260-66A	5=0	6=0
1260-66B	5=1	6=0
1260-66C	5=0	6=1

Note that incorrect setting of the ID byte DIP switches will cause an incorrect module ID to be reported to the user in response to a PDATAOUT command. All other module functionality is unaffected by the setting of the ID byte switches.

MODULE SPECIFIC SYNTAX

General

The Module Specific Syntax for the 1260-66 is required for use in the OPEN and CLOSE commands. It will also appear in data output by the 1260 Series Master in response to the PDATAOUT command.

The Module Specific Syntax for the 1260-66 module is as follows:

<mod addr>.<relay no><channel no>

where <mod addr> is the address of the 1260-66.

NOTE

The <mod addr> used here is NOT the VXIbus defined logical address of the 1260 Series Master. It is peculiar to the 1260 Series and describes the switching module in relation to the 1260 Master. This address corresponds to the binary value of the switch setting of SW1 on the switching module PCB.

<relay no> is a reference to the specific relay to be switched. It is a single digit number. The range for a valid <relay no> depends on the particular 1260-66 model used:

1260-66A:	0 # <relay no> # 5
1260-66B:	0 # <relay no> # 3
1260-66C:	0 # <relay no> # 1

<channel no> refers to the specific relay pole to be operated. This is a one-digit number that must be between 0 and 5.

Refer to Figure 4-1, and Table 4-1 for relay numbers, and pole connector locations of the 1260-66 module.

If more than one connection is to be made or broken on the 1260-66 with contiguous relays, the following format is

supported:

```
<mod addr>.<relay no><pole no>-<relay no><pole no>
```

OPEN

Multiple groups of relays can be specified on a single command line by separating the path designators by commas. Command lines terminate at the end of the line.

EXAMPLE:

```
OPEN 3.00, 21, 33
```

PDATAOUT

The PDATAOUT command causes the specified module to transmit the CLOSED state of the relays in the 1260-66 module. The syntax used is:

```
PDATAOUT <mod addr>[;<mod addr>][;<mod addr>]....
```

The response to the PDATAOUT command for the 1260-66 is as follows:

```
<header>
<mod addr>. <relay no><channel no>[,...]
<relay no><channel no>[,...]
<mod addr>.END
```

where <header> is as follows:

```
1260-66A: <mod addr>. 1260-66A SIX 1x6 SWITCHING MODULE
1260-66B: <mod addr>. 1260-66B QUAD 1x6 SWITCHING MODULE
1260-66C: <mod addr>. 1260-66C DUAL 1x6 SWITCHING MODULE
```

Note the actual <header> sent is determined by the setting of the ID Byte DIP switches on the module, and is independent of the number of microwave relays installed.

PSETUP

The PSETUP command causes the specified module to transmit its sequence mode. The supported sequence mode is BBM (Break-Before-Make). The syntax used is:

```
PSETUP <mod addr>[;<mod addr>][;<mod addr>]....
```

The response to the PSETUP command for the 1260-66 is as follows:

```
<header>
```

<mod addr>.<seq mode>
<mod addr>.END

where <seq mode> BBM and

where <header> is as follows:

1260-66A: <mod addr>. 1260-66A SIX 1x6 SWITCHING MODULE
1260-66B: <mod addr>. 1260-66B QUAD 1x6 SWITCHING MODULE
1260-66C: <mod addr>. 1260-66C DUAL 1x6 SWITCHING MODULE

Note the actual <header> sent is determined by the setting of the ID Byte DIP switches on the module, and is independent of the number of microwave relays installed.

CLOSE

The 1260-66 1x6 microwave relays (S1 through S6) each allow at most one of the six poles to be closed at any one time. The card implements an "implicit exclusion list" for each 1x6 microwave relay. For example, if the 1260-66 module address is 3, and relay 3.24 is currently closed, then the command:

CLOSE 3.21

will cause the card to open relay pole 3.24, and then close relay pole 3.21. Similarly, if the command:

CLOSE 3.20-25

is issued, the card will close only relay pole 3.25, with relay poles 3.20 through 3.24 being opened prior to closing relay pole 3.25.

SETUP

The SETUP command does not effect microwave relays S1 through S6. The microwave relays (S1 through S6) are always implemented as Break-Before-Make (BBM) to ensure that at most 1 of 6 poles are closed at any one time.

Other Commands

The 1260-66 supports most standard 1260 features. These include Confidence Mode, Equate/Exclude/Scan Lists commands, and the STORE/RECALL commands.

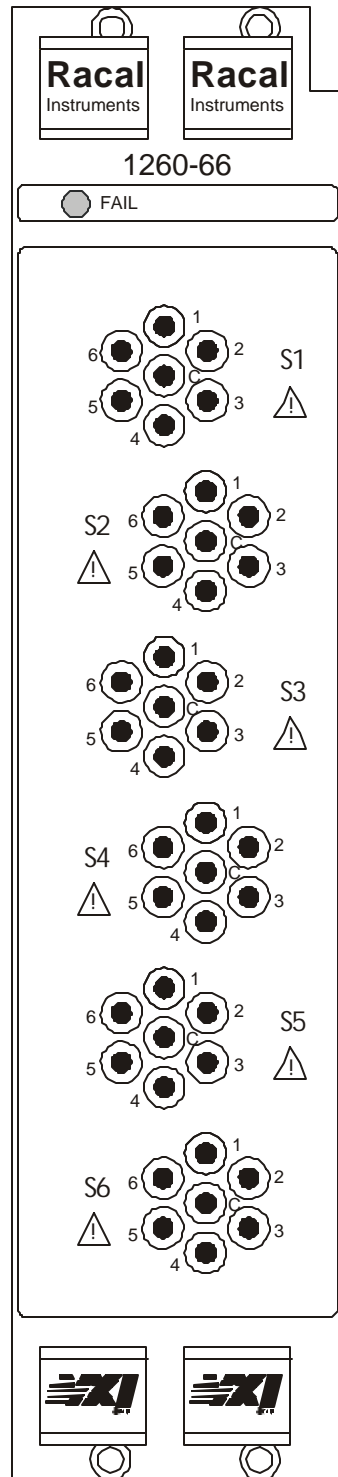
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Chapter 4

CONNECTOR PIN CONFIGURATION

RF Relays

Figure 4-1 shows the location of the six RF switches on the front panel of the 1260-66 module. The designations for each of the SMA male connectors common and poles on each switch is also shown.



CAUTION

Mating Connector engagement should not exceed 9in. lbs. torque maximum

Figure 4-1, 1260-66 Front Panel

Table 4-1, Relay Command to Control Map

1260-66A	1260-66B	1260-66C	<u>Relay No</u>	<u>Channel No</u>	<u>Connector In</u>	<u>Connector Out</u>		
			0	0	S1-C	S1-1		
			0	1	S1-C	S1-2		
			0	2	S1-C	S1-3		
			0	3	S1-C	S1-4		
			0	4	S1-C	S1-5		
			0	5	S1-C	S1-6		
					1	0	S2-C	S2-1
					1	1	S2-C	S2-2
					1	2	S2-C	S2-3
					1	3	S2-C	S2-4
					1	4	S2-C	S2-5
					1	5	S2-C	S2-6
					2	0	S3-C	S3-1
					2	1	S3-C	S3-2
					2	2	S3-C	S3-3
					2	3	S3-C	S3-4
					2	4	S3-C	S3-5
					2	5	S3-C	S3-6
					3	0	S4-C	S4-1
					3	1	S4-C	S4-2
					3	2	S4-C	S4-3
					3	3	S4-C	S4-4
					3	4	S4-C	S4-5
					3	5	S4-C	S4-6
					4	0	S5-C	S5-1
					4	1	S5-C	S5-2
					4	2	S5-C	S5-3
					4	3	S5-C	S5-4
					4	4	S5-C	S5-5
					4	5	S5-C	S5-6
			5	0	S6-C	S6-1		
			5	1	S6-C	S6-2		
			5	2	S6-C	S6-3		
			5	3	S6-C	S6-4		
			5	4	S6-C	S6-5		
			5	5	S6-C	S6-6		

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THEORY OF OPERATION

PCB Assemblies

The 1260-66 consists of two PCB Assemblies. The small PCB Assembly is required to pass the local bus signals, LBUS0 through LBUS11, through the unused second slot of this double-wide module. The VXI IACK and BUS GRANT 0 through 3 signals are jumpered to allow the PCB Assembly to be used in autoconfiguring backplanes.

The main logic PCB Assembly contains 1260 Local Bus interface circuitry, and drivers for the RF relays. The VXI interface is described in the Theory of Operation section of the 1260 Series VXI Switching Cards Manual. The relay driver circuitry is contained in monolithic IC driver chips.

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Chapter 6

DRAWINGS

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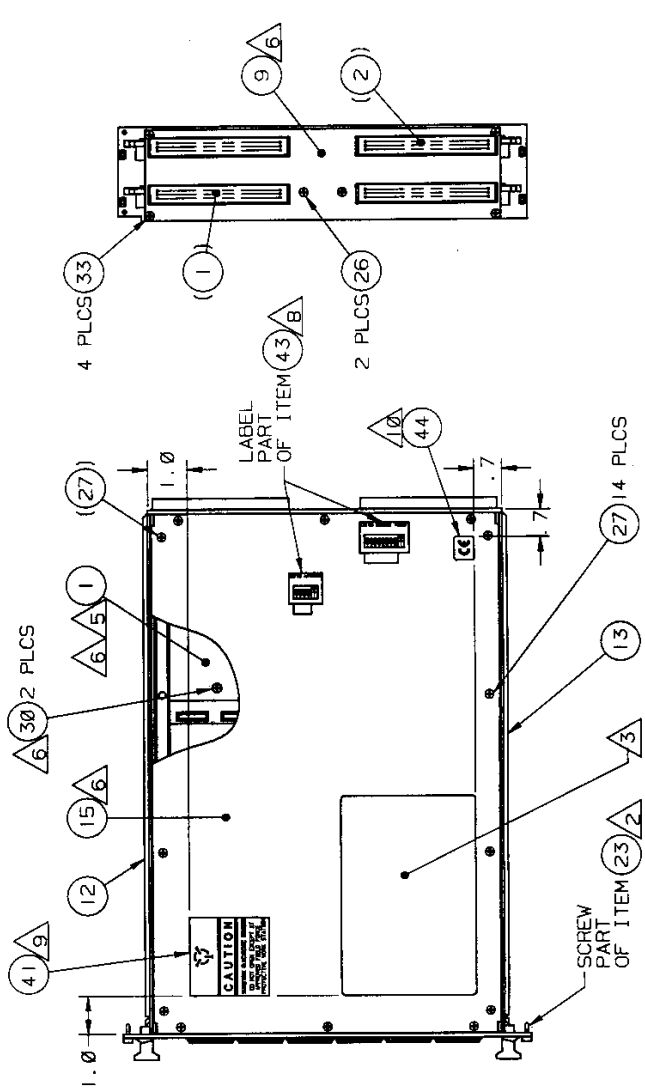
NOTES:

1. INCLUDE SHIPPING KIT (ITEM 6) IN SHIPPING CARTON WITH ASSEMBLY.
2. DISCARD UNUSED HARDWARE SUPPLIED WITH ITEM 23, WHICH CONSISTS OF MOUNTING HARDWARE FOR HANDLES AND ASSOCIATED PARTS.
3. LOCATE APPROPRIATE VXI LABEL WHERE SHOWN. REFERENCE 921410 FOR SPECIFIC LABEL INFORMATION.
4. REFER TO CONFIGURATION CHART FOR CONNECTIONS OF RELAY ASSEMBLIES (ITEM 4) AND SWI SWITCH POSITIONS ON ITEM 2. (FOR POSITIONS 1 THRU 4 REFER TO CONFIGURATION CHART OF 1260-66 RELAY DRIVE PCB ASSY, ITEM 2).
5. CONNECT CABLE FROM L-BUS BYPASS PCB ASSY (ITEM 1) TO J9 ON 1260-66 RELAY DRIVE PCB ASSY (ITEM 2). ORIENT EITHER ORANGE WIRE ON CABLE TO PIN 1 ON J9.
6. TO ACCESS 1260-66 RELAY DRIVE ASSY (ITEM 2), REMOVE RIGHT SIDE PANEL (ITEM 15) THEN REMOVE L-BUS BYPASS PCB ASSY (ITEM 1) AND REAR DOUBLE PANEL (ITEM 9) AS A UNIT BY REMOVING TWO SEMS SCREWS (ITEM 30).
7. APPLY LOCTITE (ITEM 39) SPARINGLY TO METRIC FLAT HEAD SCREWS (ITEM 32). DO NOT ALLOW CONTACT WITH EJECTOR HANDLES (ITEM 22) TOP AND (ITEM 21) BOTTOM.

8. AFFIX LABELS PART OF ITEM 43 AS SHOWN. ALIGN LABEL TEXT WITH APPROPRIATE SWITCH ACTUATORS.
 9. LOCATE CAUTION LABEL (ITEM 41) AS SHOWN.
 10. AFFIX CE MARKING LABEL (ITEM 44) PER DIMENSIONS SHOWN.
11. ASSEMBLY CONFIGURATION TO BE AS FOLLOWS:
 -001 1260-66A, 6 SP6T M/W SW, 18GHZ
 -002 1260-66B, 4 SP6T M/W SW, 18GHZ
 -003 1260-66C, 2 SP6T M/W SW, 18GHZ
- IMPORTANT: ADJUST RELAY ASSY (ITEM 4) TO ENSURE THAT RELAY CONNECTORS ARE CENTERED IN FRONT PANEL OPENINGS TO PROVIDE MAXIMUM CLEARANCE WITH MATING CONNECTOR BODY.
12. FOR -002 AND -003 ASSEMBLIES INSTALL COVER PLATE (ITEM 17) WHERE NO RELAY ASSEMBLIES EXIST. USE ITEMS 19, 20 AND 24 TO SECURE ITEM 17. MOUNT ON INSIDE OF FRONT PANEL WITH LINE GRAIN IN VERTICAL DIRECTION.

ASSY NO.	FRONT PANEL				SWI
	S1	S2	S3	S4	
407499-001	J5	J6	J7	J8	J10
407499-002	J5	J6	J7	J8	N/R/N/R
407499-003	J5	J6	N/R/N/R	N/R/N/R	0

4. CONFIGURATION CHART



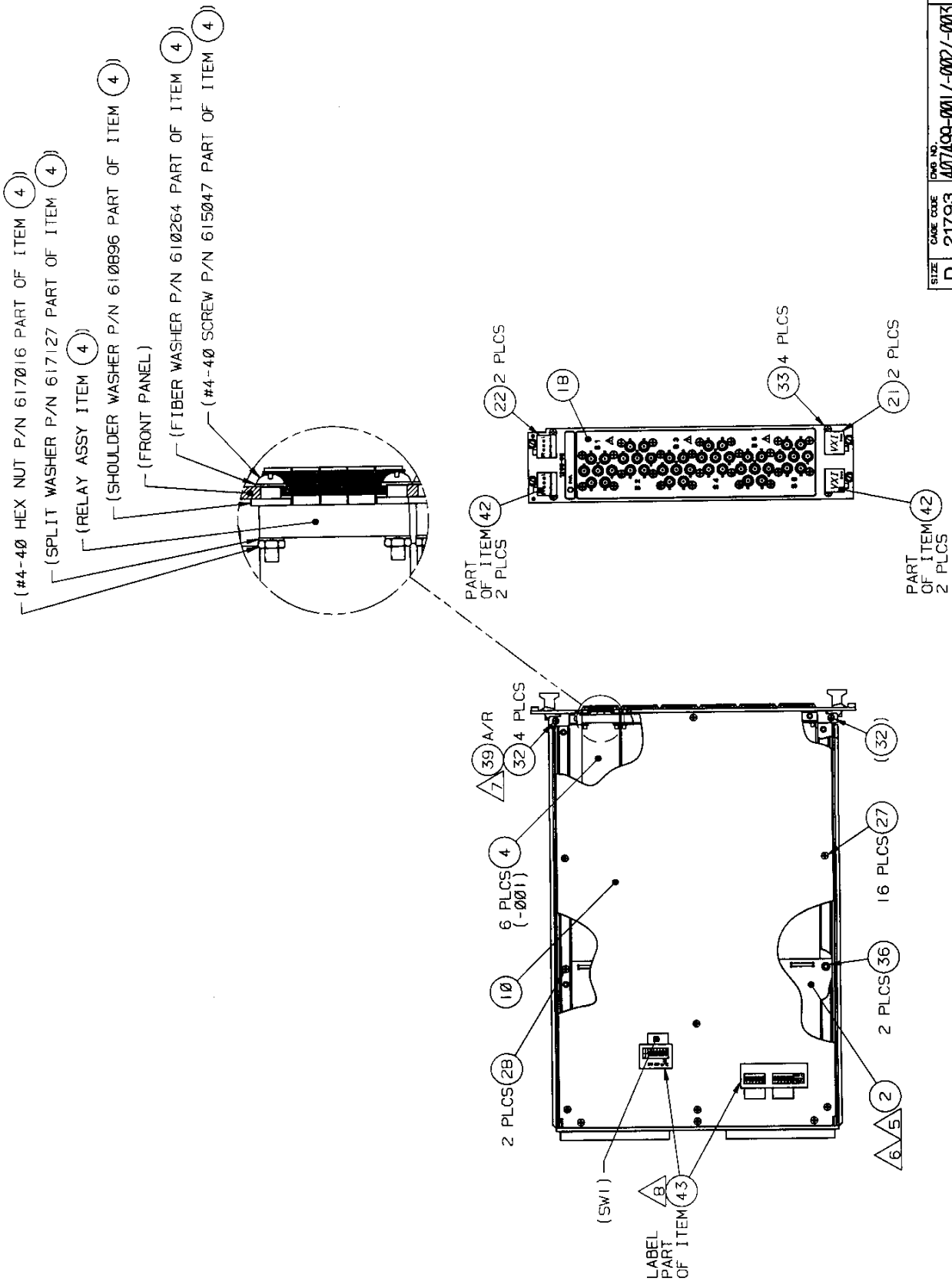
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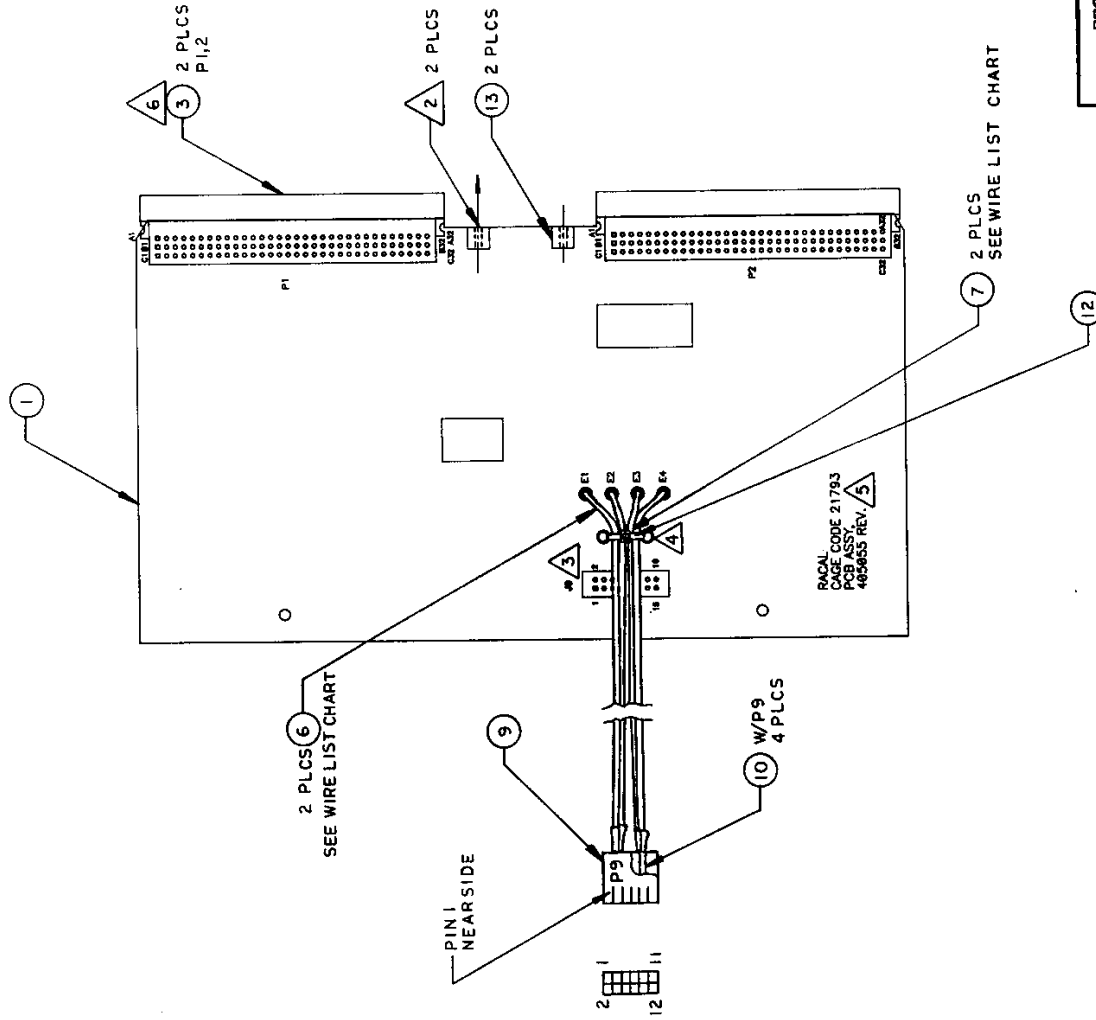
TITLE
FINAL ASSY., 1260-66

SIZE CASE CODE DWG NO.
 D 21793 407499-001/-002/-003 A

SCALE 1/2 SHEET 1 OF 4



SIZE	CAGE CODE	DRG NO.	REV.
D	21793	407499-001/-002/-003	A
SCALE 1/2		DRAWING SHEET 1 OF 4	



WIRE LIST CHART

FROM	TO	DESCRIPTION	WIRE LENGTH	REF
P9-1	E1	WIRE, TEF, STRND, 226 ORANGE, 523333 (ITEM 6)	5.50 ± .50	+ 12V
P9-2	E2	WIRE, TEF, STRND, 226 GRAY, 523888 (ITEM 7)	5.50 ± .50	+ 24V
P9-11	E3	WIRE, TEF, STRND, 226 GRAY, 523888 (ITEM 7)	"	+ 24V
P9-12	E4	WIRE, TEF, STRND, 226 ORANGE, 523333 (ITEM 6)	"	+ 12V

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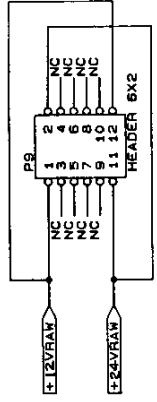
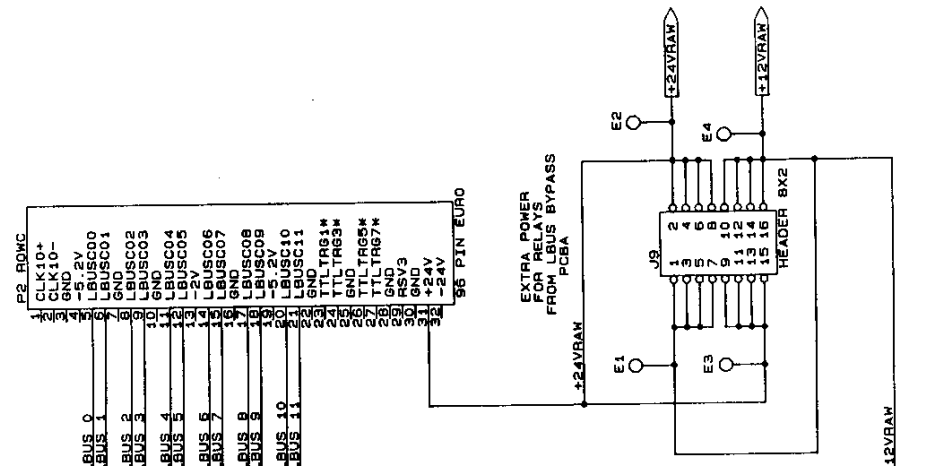
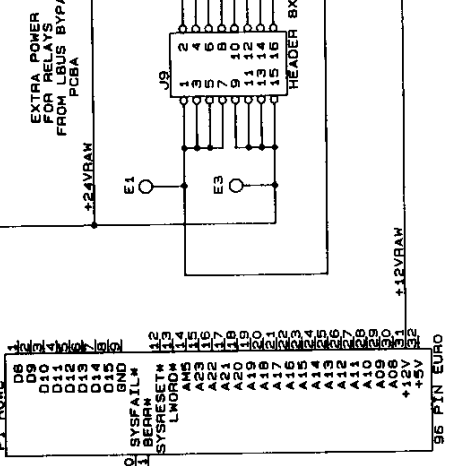
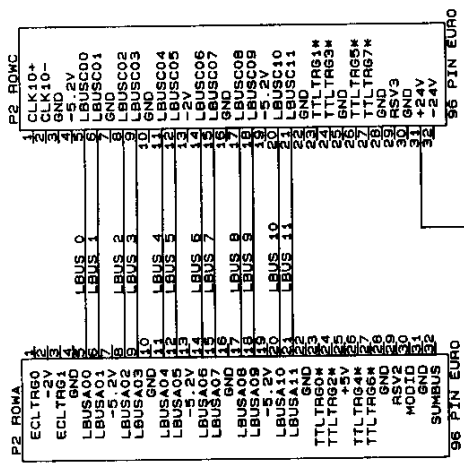
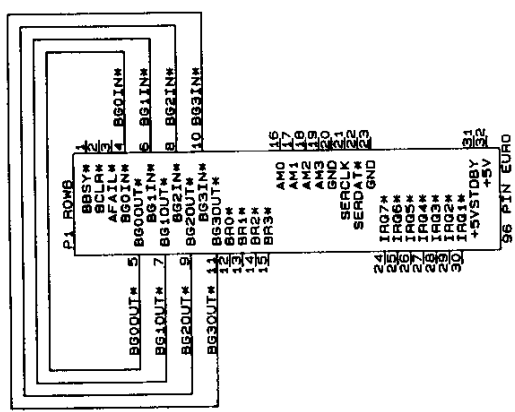
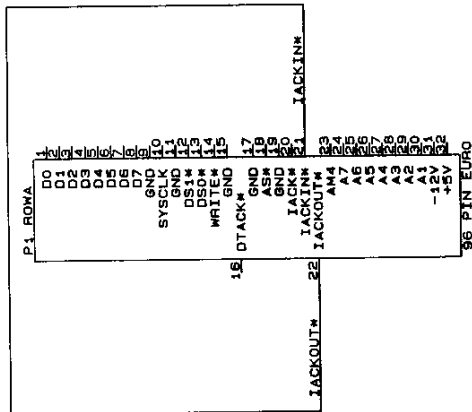
Racal Instruments, Inc.
 4 Goodyear St., Irvine, CA. 92718-2002

DOCUMENT TITLE
 PCB ASSY, L-BUS BYPASS, 1260

SIZE	CODE DEPT NO.	DOCUMENT NO.	REV.
D	21793	405055	C

SCALE 1/1 SHEET 1 OF 2

- △ 6 P1 & P2 MUST BE INSTALLED FLUSH AT RIGHT ANGLES TO PC BOARD.
- △ 5 INK STAMP CURRENT REV. ON COMPONENT SIDE APPROX. WHERE SHOWN.
- △ 4 THESE HOLES ARE PROVIDED FOR SECURING CABLE TIE (ITEM 12).
- △ 3 J9 IS NOT INSTALLED.
- △ 2 THREADED HOLE MUST FACE THIS DIRECTION AFTER INSTALLATION.
- 1. REFERENCE SCHEMATIC 435055.



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Racal Instruments, Inc.
4 Goodyear St., Irvine, CA 92718-2002

DOCUMENT TITLE

SCHEM, L-BUS BYPASS, 1260

SIZE	CODE IDENT NO.	DOCUMENT NO.	REV.
B	21793	435055	A

SCALE _____ SHEET 1 OF 1

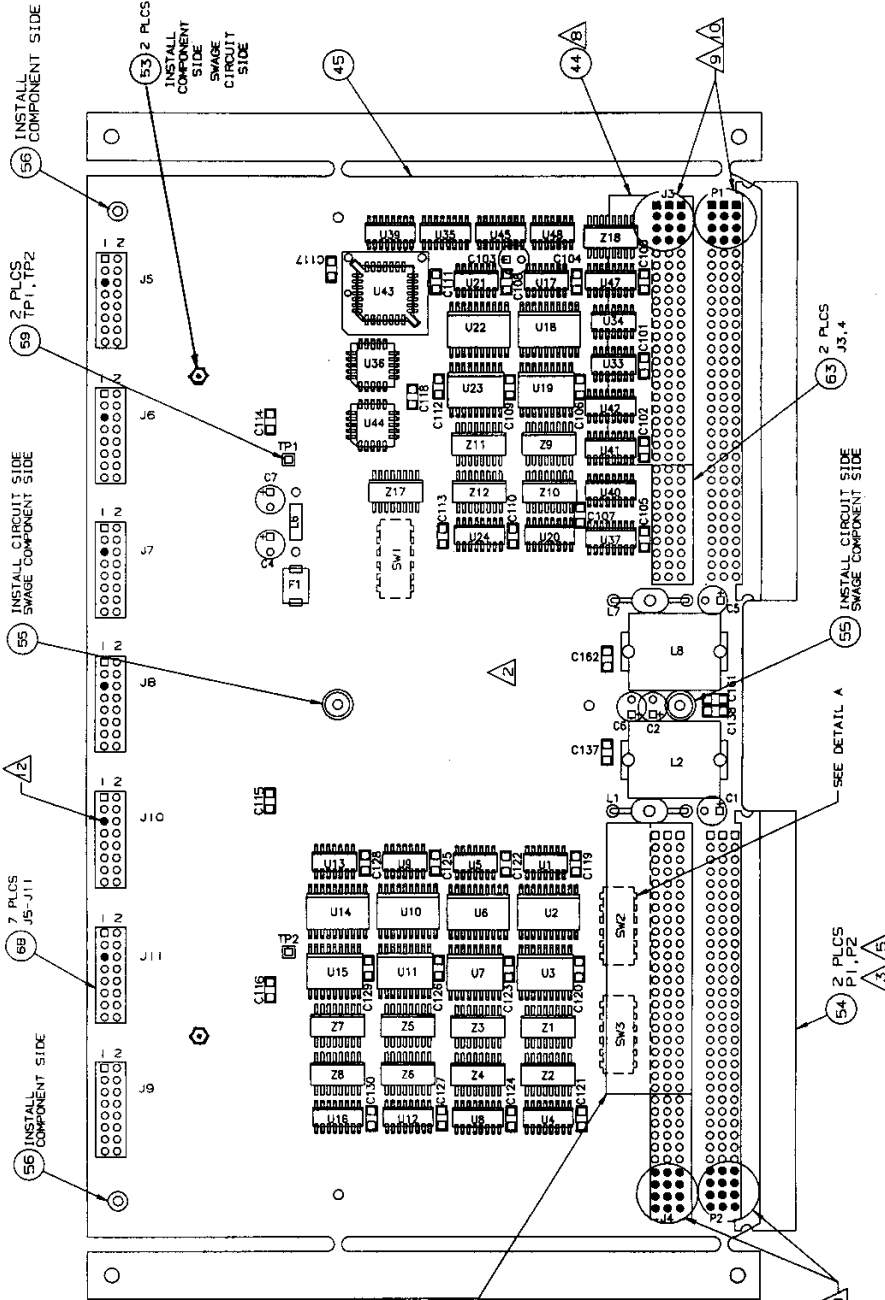
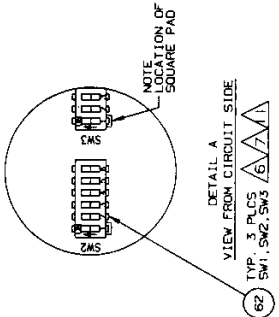


TABLE I

1 = ON
0 = OFF

MODULE ADDRESS	#6	#5	LSB #1	#3	#2	MSB #1
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	0	0	0	0	0	0
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	0



COMPONENT SIDE

- △ SET SW2 AND SW3 (ITEM 62) TO ON POSITION.
- △ INSTALL (ITEM 44) PCB INTO (ITEM 63) J3.
- △ SOLDER TAILS ON CIRCUIT SIDE OF PCB FOR NS ASSEMBLY (ITEM 63) BOARD. (6 PINS) TRIMMED TO A MAXIMUM HEIGHT OF .045.
- △ INCORPORATE FIRST 4 PINS OF P1 & J3 INSULATING COMPOUND (ITEM 76) WITH MAXIMUM HEIGHT OF .07.
- △ (NOTE COMPONENT ORIENTATION FOR SW1, SW2, SW3. (SEE DETAIL A).)
- △ CUT PIN 5 OF CONNECTORS J5, J6, J10 AND J11, 6 PLCS.

- △ REFERENCE SCHEMATIC 435115.
- △ INK STAMPS SERIAL NUMBER AND CURRENT REVISION ON COMPONENT SIDE APPROX. WHERE SHOWN.
- △ SOLDER TAILS ON CIRCUIT SIDE OF PCB FOR MAXIMUM HEIGHT OF .080. BE TRIMMED TO A MAXIMUM HEIGHT OF .045.
- △ INSTALL (ITEM 43) PCB INTO (ITEM 63) J4. P1 AND P2 MUST BE INSTALLED FLUSH AT RIGHT ANGLE TO PCB.
- △ SET SW1 (ITEM 62) TO MODULE ADDRESS 1 PER TABLE I. DO NOT WAVE SOLDER.

RACAL Instruments, Inc.
4 Bedford St., Irvine, CA, 92718-2002

TITLE: **PCB ASSY, 1260-66, RELAY DRIVE**

DATE: 03/78
DRAWING NO.: **405115**

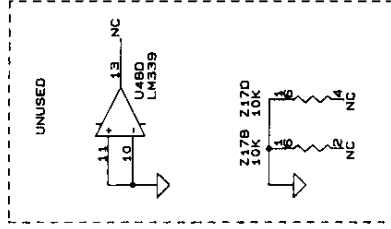
SCALE: 2:1

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U48	LM339	3	12
U47	74HCT85	16	8
U45	74LS138	16	8
U44	231153 (16R4)	20	10
U43	231154 (22V10H)	28	14
U42	26LS31	16	8
U40, 41	26LS32	16	8
U37, 39	74HCT253	16	8
U36	231152-001 (16L80)	20	10
U4, 6, 12, 16, 20, 24, 35	74HCT166	16	8
U3, 7, 11, 15, 19, 23	2803	NC	9
U2, 6, 10, 14, 18, 22	74HCT273	20	10
U1, 5, 9, 13, 17, 21, 33, 34	74HCT164	14	7
REF. DES.	IC TYPE	+5V PIN NO.	GND PIN NO.

IC POWER AND GROUND CONNECTIONS

Z18
U48
TP2
SW3
P2
LB
J11
C162
HIGHEST REF. DES.

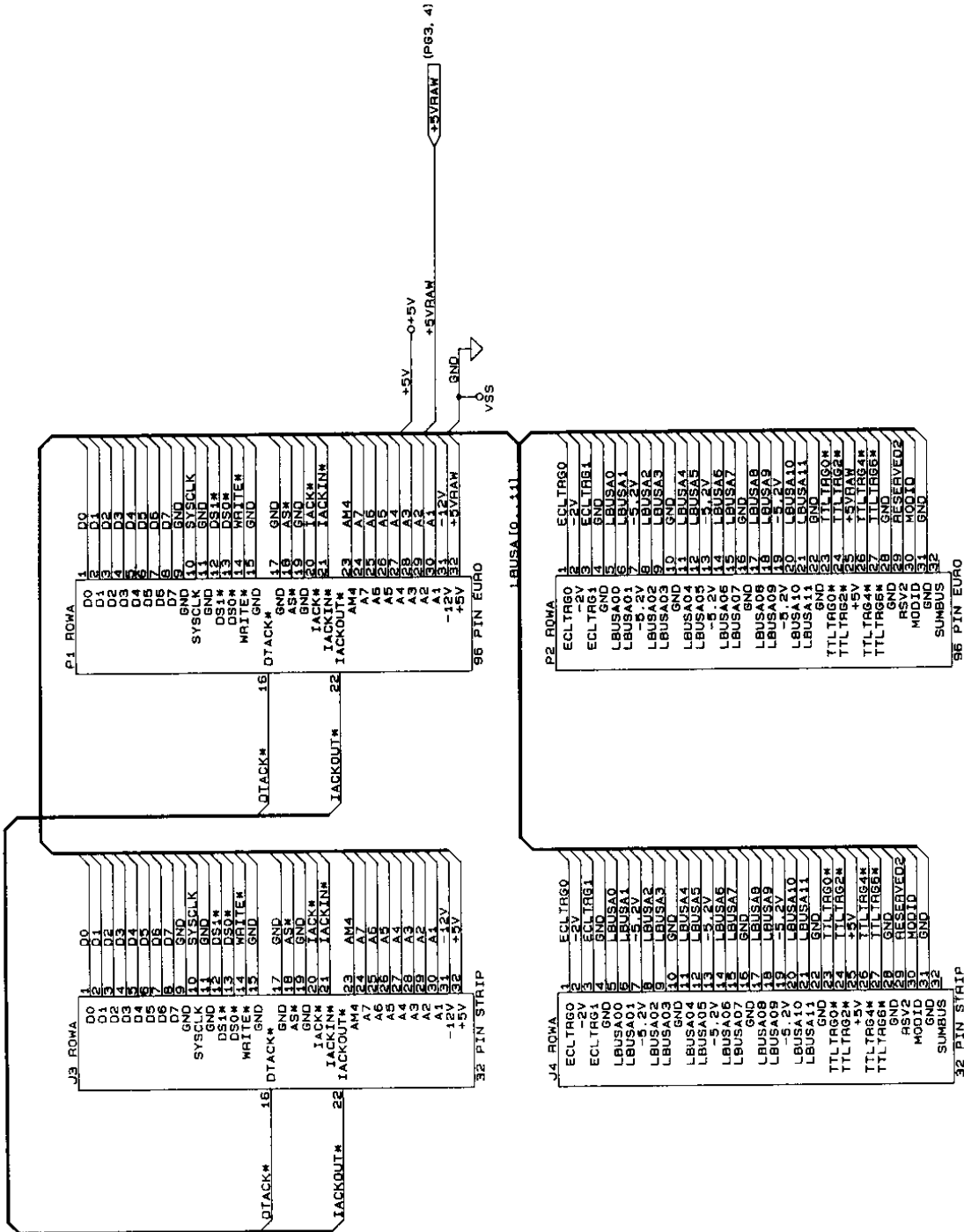


NOTES:

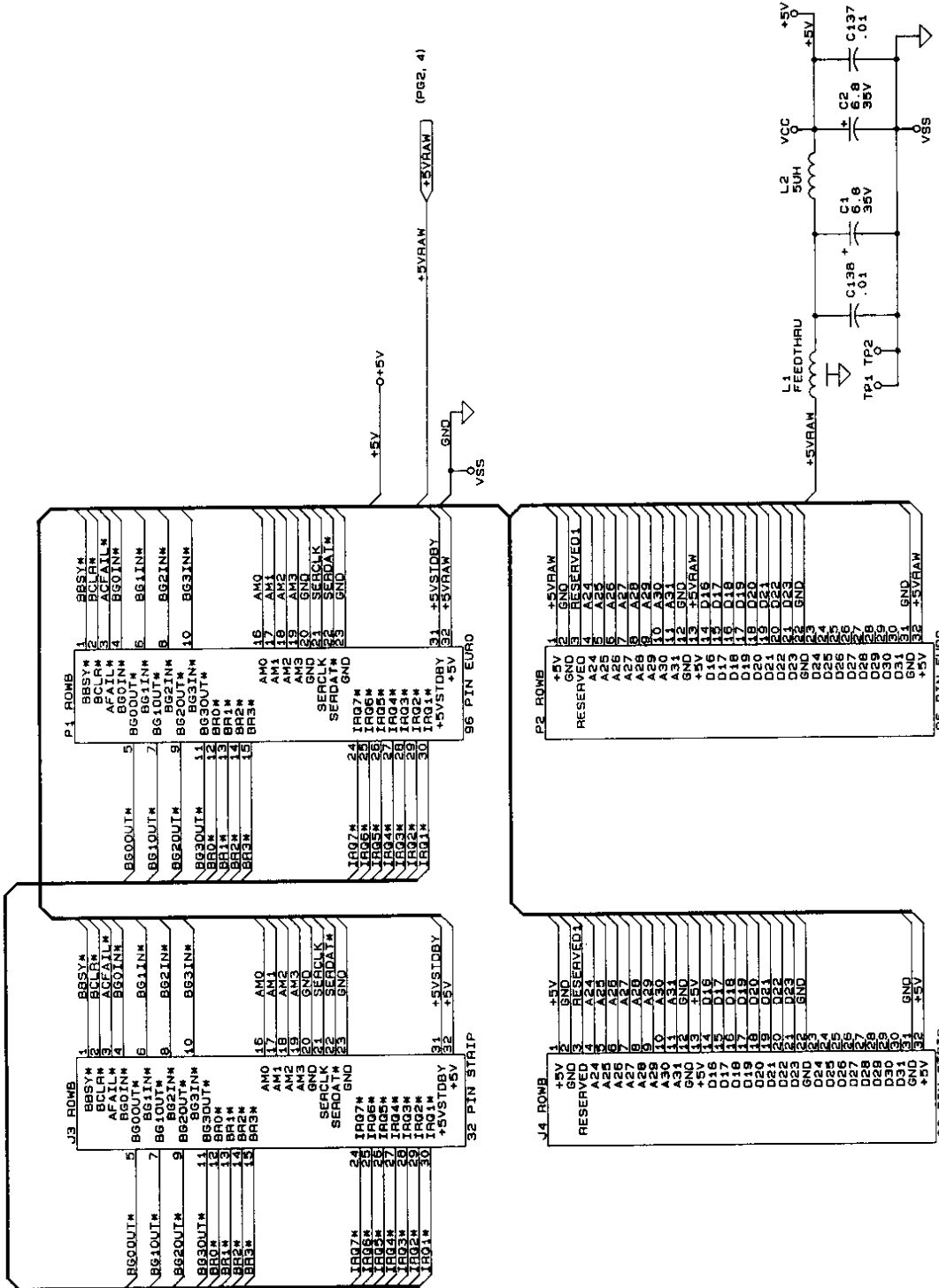
- CAPACITOR VALUES ARE IN MICROFARADS, 50V, +/-20% UNLESS OTHERWISE SPECIFIED.
- RESISTOR NETWORKS ARE IN OHMS.

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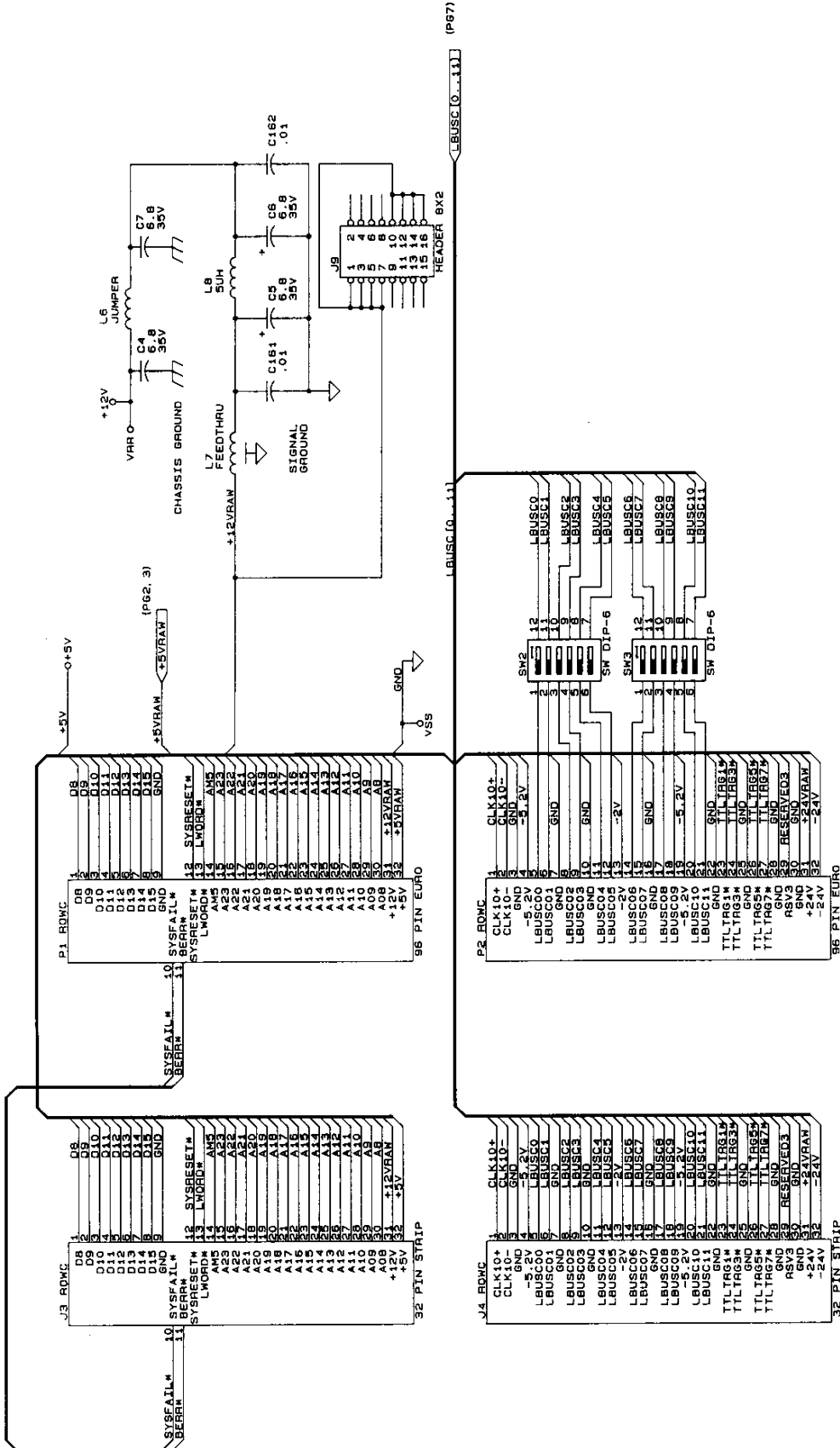
RACAL Instruments, Inc. 4 Goodyear St., Irvine, CA. 92618-2002	
TITLE SCHEM., 1260-66 RELAY DRIVE	
SIZE B	DWG NO. 435115
CAGE CODE 21793	REV. A
SCALE	DWG. WT ACT. WT SHEET 1 OF 10



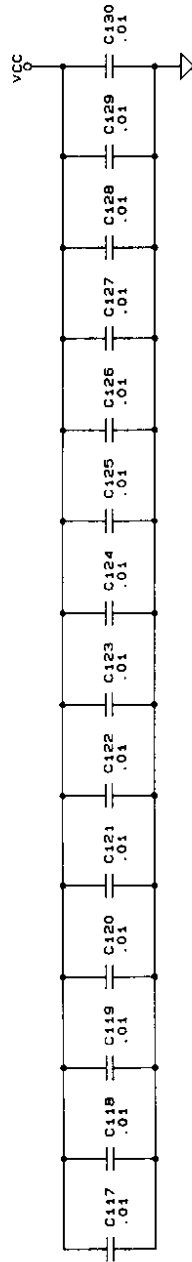
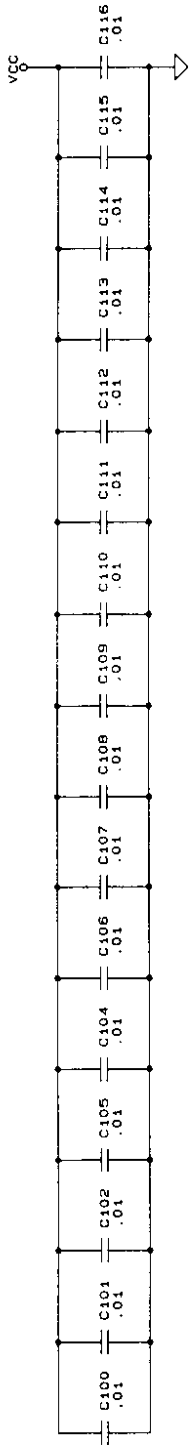
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B	21793	435115	A
SCALE	-----	CALC. BY	ACT. BY
			SHEET 2



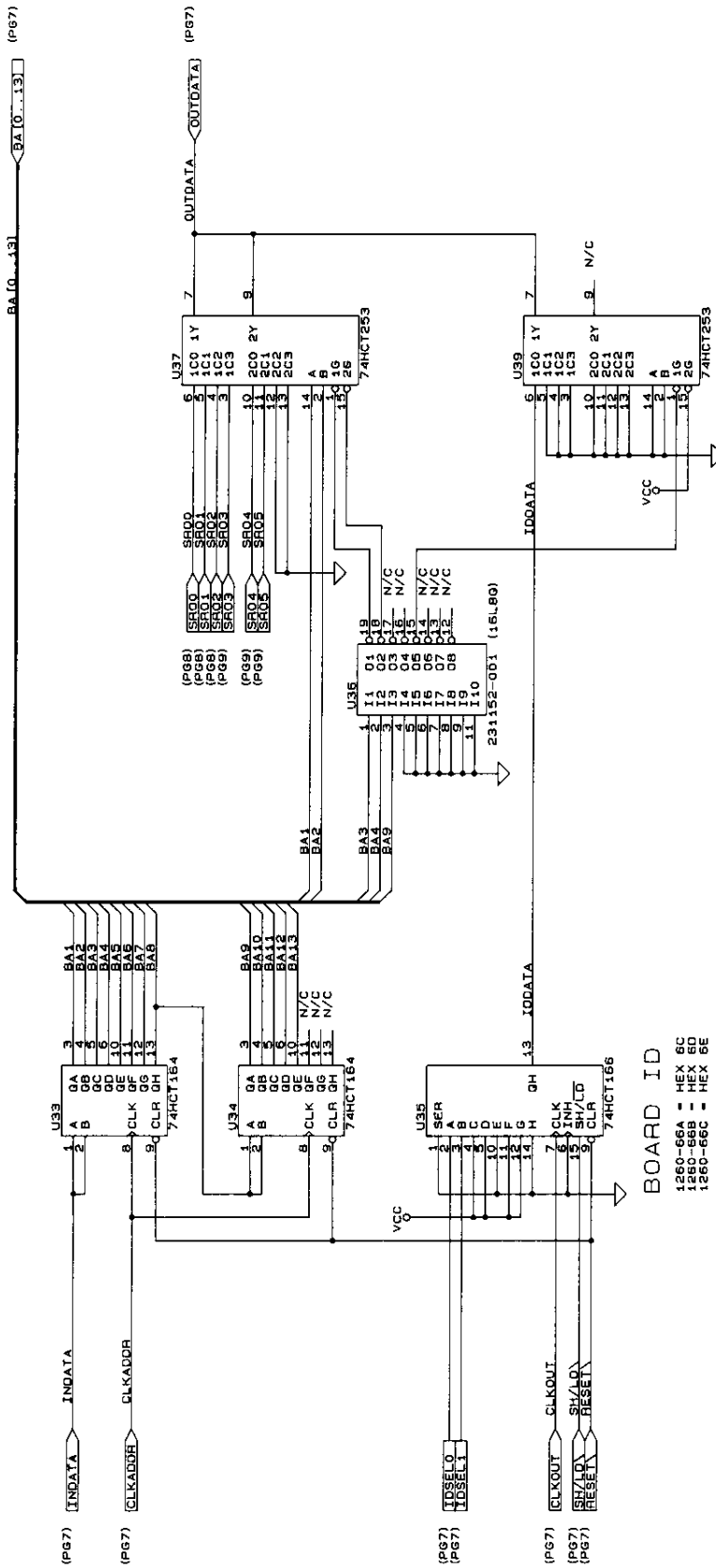
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B	21793	435115	A
SCALE	-----	SCALE	SHEET 3



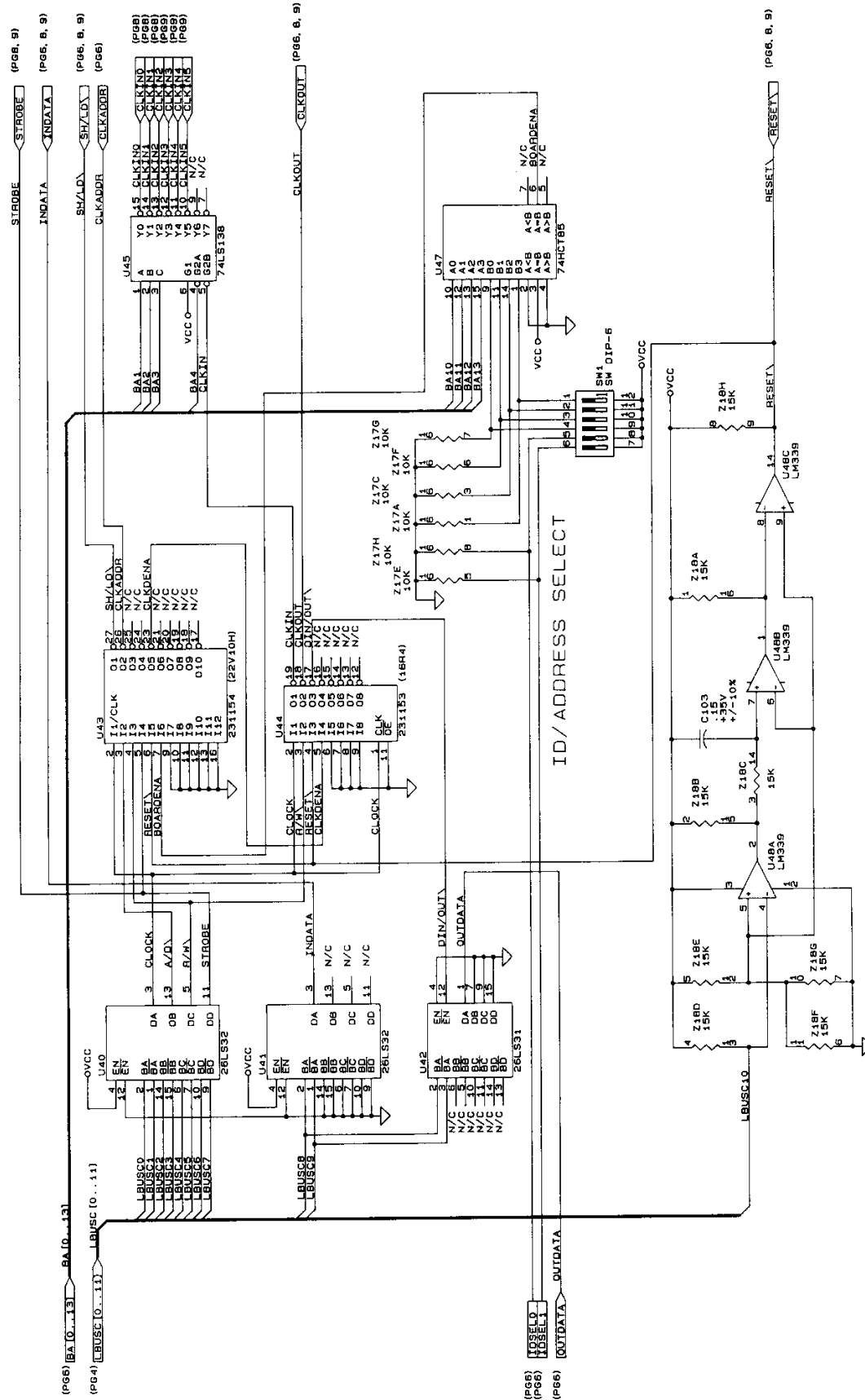
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B	21793	435115	A
SCALE	-----	DRAWN	SHEET
			4



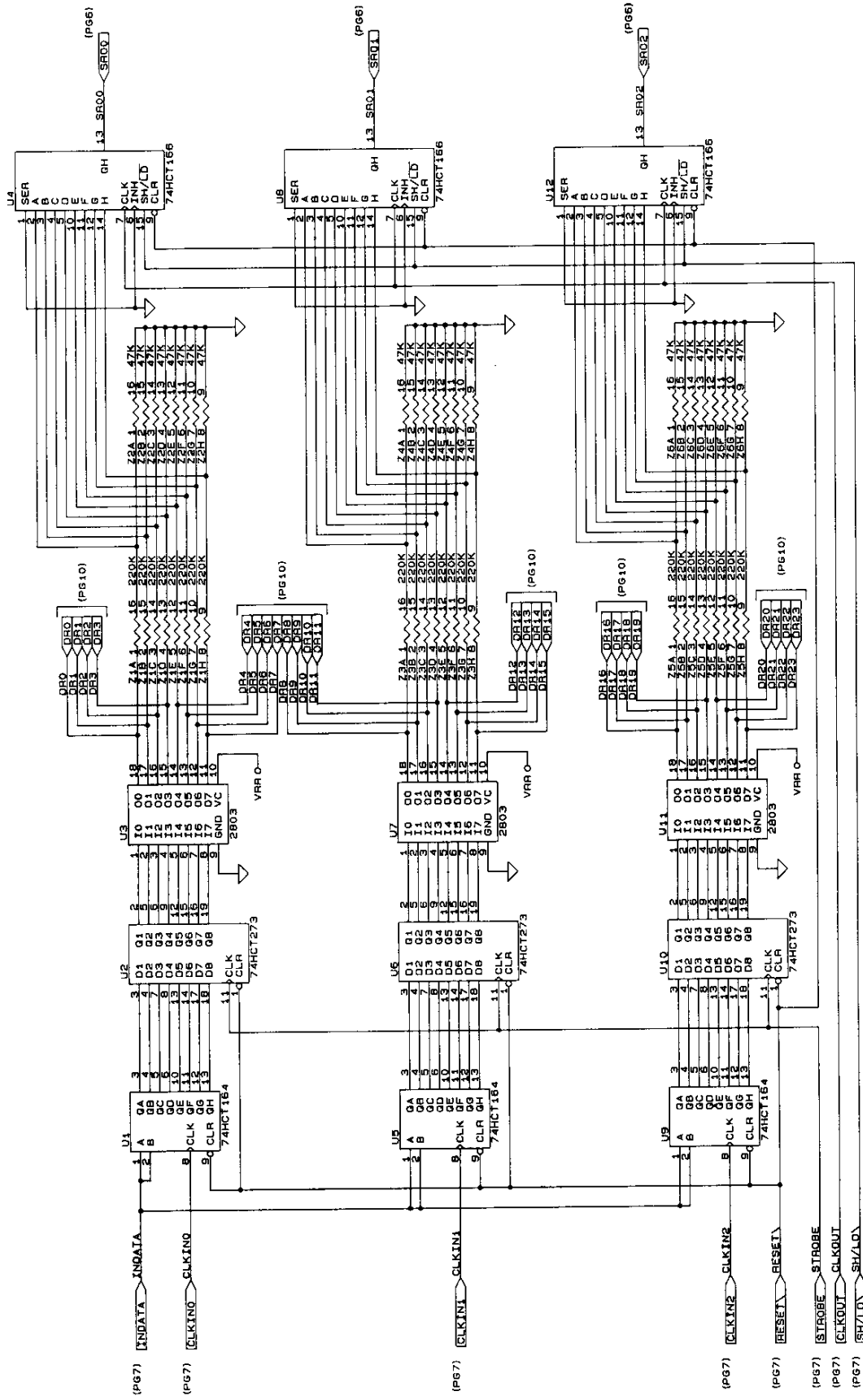
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B	21793	435115	A
SCALE		DWG:VT	ACT:VT
		SHEET	5



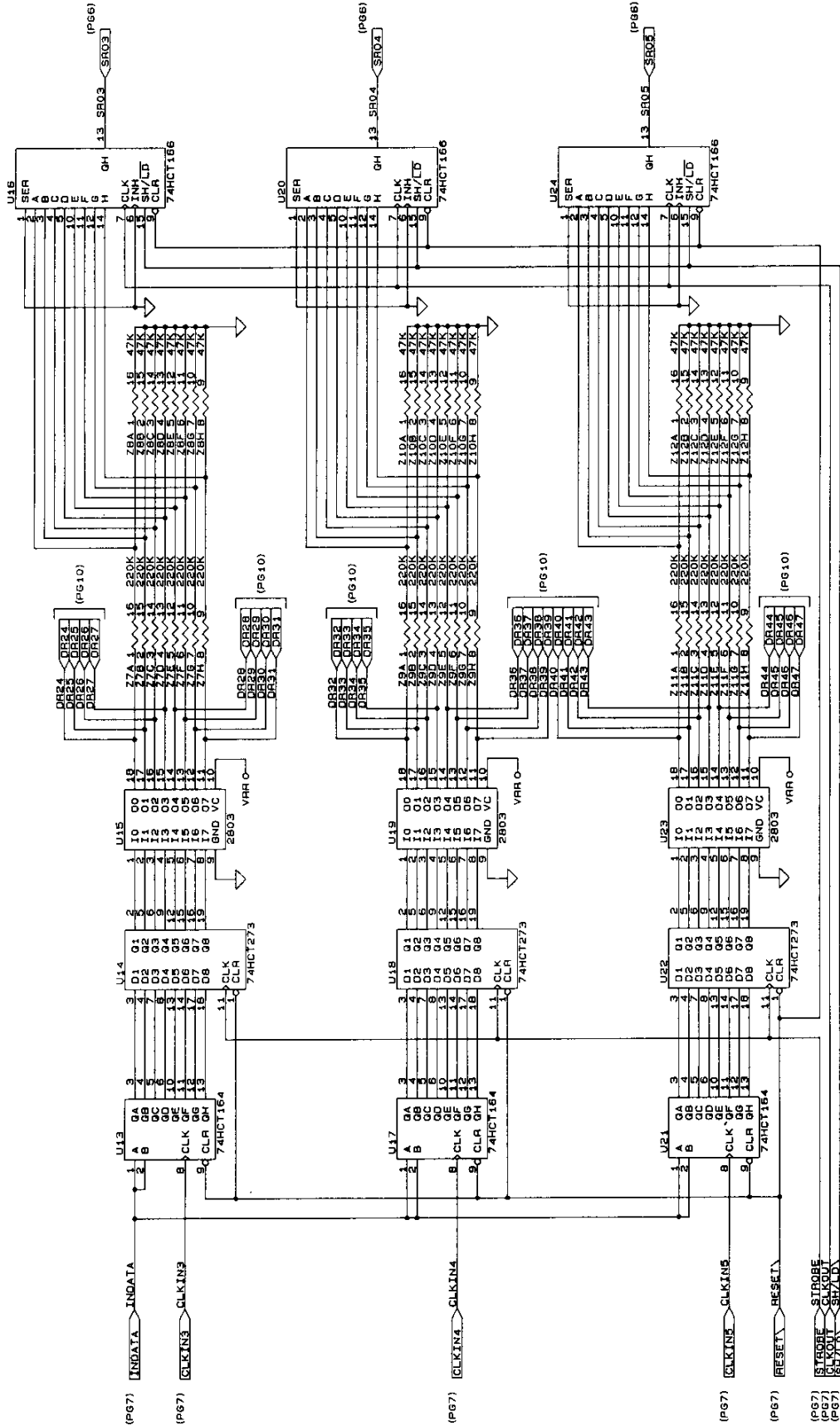
SIZE	DATE CODE	DWG NO.	REV.
B	21793	435115	A
SCALE		SHEET	SHEET 6



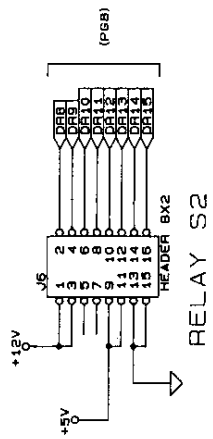
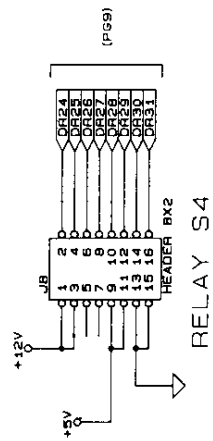
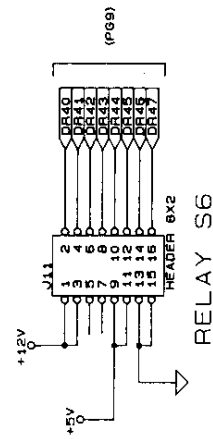
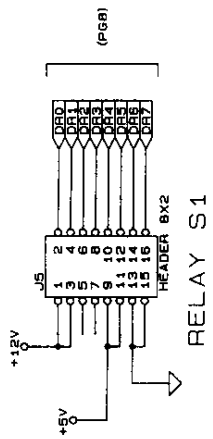
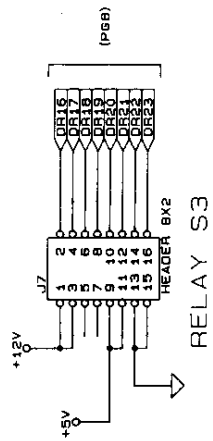
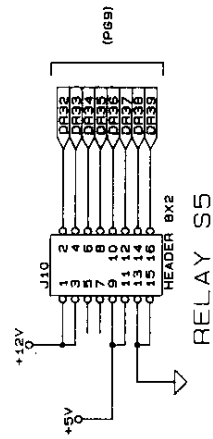
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B	21793	435115	A
SCALE	-----	CALC/MT/VT	SHEET 7



SIZE	CAGE CODE	DWG NO.	REV.
B	21793	435115	A
SCALE	DATE/ACT/VP		SHEET B



SIZE	CASE CODE	DWG NO.	REV.
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SCALE		DATE	SHEET
-----		ACT:VF	9

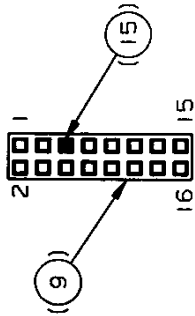
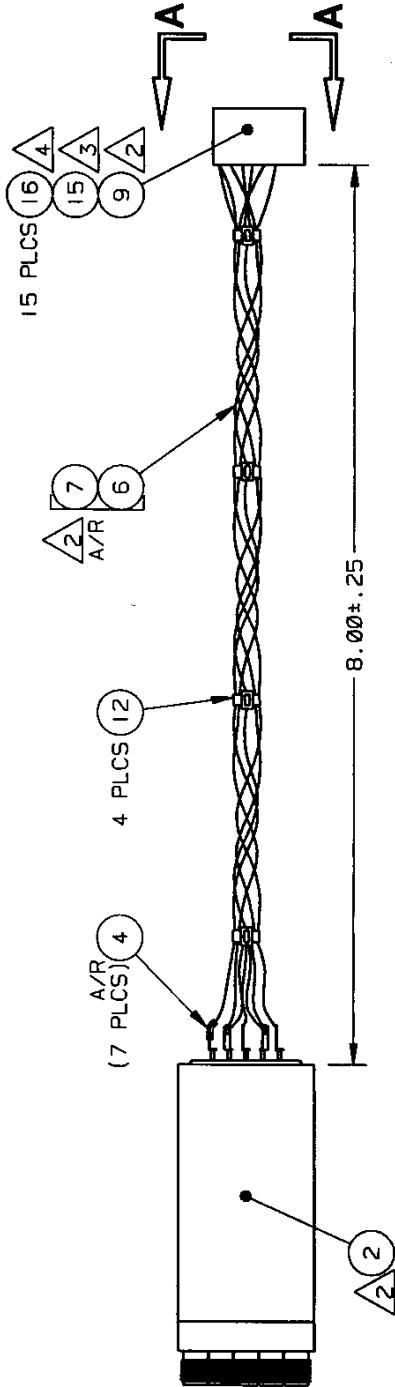


1260-66C (S1, S2 INSTALLED)

1260-66B (S1-S4 INSTALLED)

1260-66A (S1-S6 INSTALLED)

SIZE	CAGE CODE	DWG NO.	REV.
B	21793	435115	A
SCALE	---	DWG. MT. MT.	SHEET 10



ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
1	K1-C	J1-1 611311	24AWG ORG	524333	8"	+12V. COIL COMMON
2	K1-1	J1-2 611311	24AWG WHT	524999	8"	CONTACT COIL 1
3	K1-2	J1-4 611311	24AWG WHT	524999	8"	CONTACT COIL 2
4	K1-3	J1-6 611311	24AWG WHT	524999	8"	CONTACT COIL 3
5	K1-4	J1-8 611311	24AWG WHT	524999	8"	CONTACT COIL 4
6	K1-5	J1-10 611311	24AWG WHT	524999	8"	CONTACT COIL 5
7	K1-6	J1-12 611311	24AWG WHT	524999	8"	CONTACT COIL 6

NOTES:

1. BAG AND TAG ITEMS (11), (13), (18), (20) AND (21), AND COMPLETE CABLE ASSEMBLY. IDENTIFY WITH RACAL INSTRUMENTS PART NO. AND CURRENT REVISION LETTER.
2. SEE WIRE LIST FOR PIN ASSIGNMENTS, CONNECTORS AND CONDUCTORS.
3. INSTALL ITEM (15) INTO POSITION 5 OF ITEM (9).
4. POPULATE UNUSED LOCATIONS WITH ITEM (16) (8 PLCS).

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RACAL Instruments, Inc.
4 Goodyear St., Irvine, CA. 92718-2002

TITLE
RELAY ASSY, 1260-66, 18GHZ

WIRE
B 21793 DWG NO. **407498A** REV.

SCALE 1/1 | CALC. BY ACT. BY | SHEET 1 of 3

Chapter 7

PARTS LIST

407499-001	Final Assembly, 1260-66A	7-3
407499-002	Final Assembly, 1260-66B	7-4
407499-003	Final Assembly, 1260-66C	7-5
407511	Ship Kit, 1260-66	7-5
405055	PCB Assembly, L-BUS Bypass	7-6
405115	PCB Assembly, 1260-66 Relay Driver	7-7
407498	Relay Assy, 1260-66, 18GHz	7-9
	List of Suppliers	7-10

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User Manual 1260-66

407499-001 - FINAL ASSY, 1260-66A

REF DESIG	RACAL INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
{1}1	405055	PCB ASSY., L-BUS BYPASS	21793	405055
{2}1	405115	PCB ASSY, 1260-66 RELAY DRIVER	21793	405115
{4}6	407498	RELAY ASSY, 1260-66, 18GHZ	21793	407498
{6}1	407511	SHIPPING KIT, 1260-66	21793	407511
{9}1	455777-001	PANEL, REAR, DOUBLE	21793	455777-001
{10}1	455779-006	PANEL, SIDE, LEFT, 1260-66	21793	455779-006
{12}1	455818-002	PANEL, TOP, 1260-66	21793	455818-002
{13}1	455819-003	PANEL, BOTTOM, 1260-66	21793	455819-003
{15}1	455901	PANEL, RIGHT SIDE	21793	455901
{18}1	456516	PANEL ASSY, FRONT, 1260-66	21793	456516
{21}2	611264	HANDLE, EXTRACTOR, BOTTOM	62559	20817-327
{22}2	611265	HANDLE, EXTRACTOR, TOP	62559	20817-328
{23}1	611266	MOUNTING HARDWARE, HANDLE	62559	21100-745
{26}2	615292	SCREW, PFH, 4-40 X .312	-	-
{27}30	615539	SCREW, PFH, 4-40X. 125	-	-
{28}2	615542	SCREW, PFH, 4-40 X .312	-	-
{30}2	616251	SCREW, PPH, SEMS ASSY, 4-40X.250	78189	SEMS W/SQ CONE WA.
{32}4	616405	SCREW, PFH, M2.5 X 12	-	-
{33}8	616480	SCREW, PFH, 4-40 X .375	-	-
{36}2	617168	WASHER, NON-METALLIC, FLAT, #4	86928	5610-55-1000
{39}A/R	920962	LOCTITE, 242, MED STR.	05972	1272
{41}1	921059	LABEL, CAUTION, STATIC	21793	921059
{42}2	921148-001	LABEL SET VXI	21793	921148-001
{43}1	921309	LABEL, VXI SWITCH ID	21793	921309
{44}1	921423	LABEL, CE-96	21793	921423

407499-002 - FINAL ASSY, 1260-66B

REF DESIG	RACAL INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
{1}1	405055	PCB ASSY., L-BUS BYPASS	21793	405055
{2}1	405115	PCB ASSY, 1260-66 RELAY DRIVER	21793	405115
{4}4	407498	RELAY ASSY, 1260-66, 18GHZ	21793	407498
{6}1	407511	SHIPPING KIT, 1260-66	21793	407511
{9}1	455777-001	PANEL, REAR, DOUBLE	21793	455777-001
{10}1	455779-006	PANEL, SIDE, LEFT, 1260-66	21793	455779-006
{12}1	455818-002	PANEL, TOP, 1260-66	21793	455818-002
{13}1	455819-003	PANEL, BOTTOM, 1260-66	21793	455819-003
{15}1	455901	PANEL, RIGHT SIDE	21793	455901
{17}2	456515	PLATE, COVER, 1260-66	21793	456515
{18}1	456516	PANEL ASSY, FRONT, 1260-66	21793	456516
{19}8	610264	WASHER, INSULATING, .25X.12X.02	21793	610264
{20}8	610896	WASHER, SHOULDER, NYLON, #4	86928	5607-49
{21}2	611264	HANDLE, EXTRACTOR, BOTTOM	62559	20817-327
{22}2	611265	HANDLE, EXTRACTOR, TOP	62559	20817-328
{23}1	611266	MOUNTING HARDWARE, HANDLE	62559	21100-745
{24}8	611430	SCREW, PPH, 4-40X.375, SS, BLK OXIDE	-	-
{26}2	615292	SCREW, PFH, 4-40 X .312, 82 DEGREE CSK	-	-
{27}30	615539	SCREW, PFH, 4-40X .125	-	-
{28}2	615542	SCREW, PFH, 4-40 X .312, 100 DEGREE CSK	-	-
{30}2	616251	SCREW, PPH, SEMS ASSY, 4-40X.250	78189	SEMS W/SQ CONE WA.
{32}4	616405	SCREW, PFH, M2.5 X 12	-	-
{33}8	616480	SCREW, PFH, 4-40 X .375	-	-
{36}2	617168	WASHER, NON-METALLIC, FLAT, #4	86928	5610-55-1000
{39}A/R	920962	LOCTITE, 242, MED STR.	105972	272
{41}1	921059	LABEL, CAUTION, STATIC	21793	921059
{42}2	921148-001	LABEL SET VXI	21793	921148-001
{43}1	921309	LABEL, VXI SWITCH ID	21793	921309
{44}1	921423	LABEL, CE-96	21793	921423

User Manual 1260-66

407499-003 - FINAL ASSY, 1260-66C

REF DESIG	RACAL INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
{1}1	405055	PCB ASSY., L-BUS BYPASS	21793	405055
{2}1	405115	PCB ASSY, 1260-66 RELAY DRIVER	21793	405115
{4}2	407498	RELAY ASSY, 1260-66, 18GHZ	21793	407498
{6}1	407511	SHIPPING KIT, 1260-66	21793	407511
{9}1	455777-001	PANEL, REAR, DOUBLE	21793	455777-001
{10}1	455779-006	PANEL, SIDE, LEFT, 1260-66	21793	455779-006
{12}1	455818-002	PANEL, TOP, 1260-66	21793	455818-002
{13}1	455819-003	PANEL, BOTTOM, 1260-66	21793	455819-003
{15}1	455901	PANEL, RIGHT SIDE	21793	455901
{17}4	456515	PLATE, COVER, 1260-66	21793	456515
{18}1	456516	PANEL ASSY, FRONT, 1260-66	21793	456516
{19}16	610264	WASHER, INSULATING, .25X.12X.02	21793	610264
{20}16	610896	WASHER, SHOULDER, NYLON, #4	86928	5607-49
{21}2	611264	HANDLE, EXTRACTOR, BOTTOM	62559	20817-327
{22}2	611265	HANDLE, EXTRACTOR, TOP	62559	20817-328
{23}1	611266	MOUNTING HARDWARE, HANDLE	62559	21100-745
{24}16	611430	SCREW, PPH, 4-40X.375, SS, BLK OXIDE	-	-
{26}2	615292	SCREW, PFH, 4-40 X .312, 82 DEGREE CSK	-	-
{27}30	615539	SCREW, PFH, 4-40X .125	-	-
{28}2	615542	SCREW, PFH, 4-40 X .312, 100 DEGREE CSK	-	-
{30}2	616251	SCREW, PPH, SEMS ASSY, 4-40X.250	78189	SEMS W/SQ CONE WA.
{32}4	616405	SCREW, PFH, M2.5 X 12	-	-
{33}8	616480	SCREW, PFH, 4-40 X .375	-	-
{36}2	617168	WASHER, NON-METALLIC, FLAT, #4	86928	5610-55-1000
{39}A/R	920962	LOCTITE, 242, MED STR.	05972	272
{41}1	921059	LABEL, CAUTION, STATIC	21793	921059
{42}2	921148-001	LABEL SET VXI	21793	921148-001
{43}1	921309	LABEL, VXI SWITCH ID	21793	921309
{44}1	921423	LABEL, CE-96	21793	921423

407511 - SHIPPING KIT, 1260-66

REF DESIG	RACAL INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
{1}2	455541	KEY, LOCKOUT, TTL, C	21793	455541
{2}2	455542	KEY, LOCKOUT, TTL, A	21793	455542
{3}4	615013	SCREW, PPF, 2-56 X .188	-	-
{4}1	980673-044	MANUAL, 1260-66	21793	980673-044

405055 - PCB ASSY, L-BUS BYPASS, 1260

REF DESIG	RACAL INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
P1	601675-001	CONNECTOR, EUROCARD, 96 PIN MOD.	21793	601675-001
P2	601675-001	CONNECTOR, EUROCARD, 96 PIN MOD.	21793	601675-001
P9	602094-012	CONNECTOR HOUSING, CABLE RECEPT, 12 PIN	22526	65043-031
{1}1	415055	PCB, L-BUS BYPASS, 1260 (UNLOADED)	21793	415055
{6}A/R	523333	WIRE, TEFLON STRANDED, 22 GA, ORG	192194	5855/7-ORG
{7}A/R	523888	WIRE, TEFLON STRANDED, 22 GA, GRY	192194	5855/7-GRY
{10}4	611311	TERMINAL, CRIMP	22526	48251-000
{12}1	610777	CABLE TIE	16956	08-432
{13}2	610802	FASTENER, CHASSIS SWAGE, 4-40	88245	B1591B-11

User Manual 1260-66

405115 - PCB ASSY, 1260-66 RELAY DRIVE

REF DESIG	RACAL INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
C1	110126	CAP, TANTA, 6.8UF, 35V, 20 PERCENT	05397	T355F685M035A5
C2	110126	CAP, TANTA, 6.8UF, 35V, 20 PERCENT	05397	T355F685M035A5
C4-C7	110126	CAP, TANTA, 6.8UF, 35V, 20 PERCENT	05397	T355F685M035A5
C100-C102	R-21-1801	CAP, CHIP, 10 NF	95275	VJ1206Y103MF
C103	110165	CAP, TANTA, .15 MF, 35V, 10PCT	05397	T355A154K035AS
C104-C130	R-21-1801	CAP, CHIP, 10 NF	95275	VJ1206Y103MF
C137	R-21-1801	CAP, CHIP, 10 NF	95275	VJ1206Y103MF
C138	R-21-1801	CAP, CHIP, 10 NF	95275	VJ1206Y103MF
C161	R-21-1801	CAP, CHIP, 10 NF	95275	VJ1206Y103MF
C162	R-21-1801	CAP, CHIP, 10 NF	95275	VJ1206Y103MF
J3	601925	CONNECTOR, PCB, RECEPT, 3 ROW, 96P	52072	618008
J4	601925	CONNECTOR, PCB, RECEPT, 3 ROW, 96P	52072	618008
J5-J11	601731	CONNECTOR, PCB, PLUG, 16-PIN	52072	CA-D16-23B-43
L1	100164	CAP, FEED-THRU, 800PF, 50V	100779	842448-2
L2	310193	CHOKER, SHIELDED, 5UH	91637	IH-5-5-10
L6	600245	JUMPER, INSULATED	52210	L-2007-1
L7	100164	CAP, FEED-THRU, 800PF, 50V	100779	842448-2
L8	310193	CHOKER, SHIELDED, 5UH	91637	IH-5-5-10
P1	601675-001	CONNECTOR, EUROCARD, 96 PIN MOD.	21793	601675-001
P2	601675-001	CONNECTOR, EUROCARD, 96 PIN MOD.	21793	601675-001
SW1	601969	SWITCH, DIP 6 POS, LOW PROFILE	65832	K406S
SW2	601969	SWITCH, DIP 6 POS, LOW PROFILE	65832	K406S
SW3	601969	SWITCH, DIP 6 POS, LOW PROFILE	65832	K406S
TP1	601197	POST, TEST, .025 SQ	100779	6-87022-6
TP2	601197	POST, TEST, .025 SQ	100779	6-87022-6
U1	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U2	231130	IC, DIGITAL, FLIP FLOP	18324	PC74HC273
U3	231098	IC, SOIC TRANSISTOR	56289	ULN-2803LW
U4	231120	IC, 8-BIT, PARALLEL/SERIAL OUT S.R.	18324	74HCT166D
U5	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U6	231130	IC, DIGITAL, FLIP FLOP	18324	PC74HC273
U7	231098	IC, SOIC TRANSISTOR	56289	ULN-2803LW
U8	231120	IC, 8-BIT, PARALLEL/SERIAL OUT S.R.	18324	74HCT166D
U9	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U10	231130	IC, DIGITAL, FLIP FLOP	18324	PC74HC273
U11	231098	IC, SOIC TRANSISTOR	56289	ULN-2803LW
U12	231120	IC, 8-BIT, PARALLEL/SERIAL OUT S.R.	18324	74HCT166D
U13	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U14	231130	IC, DIGITAL, FLIP FLOP	18324	PC74HC273
U15	231098	IC, SOIC TRANSISTOR	56289	ULN-2803LW
U16	231120	IC, 8-BIT, PARALLEL/SERIAL OUT S.R.	18324	74HCT166D
U17	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U18	231130	IC, DIGITAL, FLIP FLOP	18324	PC74HC273
U19	231098	IC, SOIC TRANSISTOR	56289	ULN-2803LW
U20	231120	IC, 8-BIT, PARALLEL/SERIAL OUT S.R.	18324	74HCT166D
U21	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U22	231130	IC, DIGITAL, FLIP FLOP	18324	PC74HC273
U23	231098	IC, SOIC TRANSISTOR	56289	ULN-2803LW
U24	231120	IC, 8-BIT, PARALLEL/SERIAL OUT S.R.	18324	74HCT166D
U33	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U34	231131	IC, DIGITAL, SHIFT REGISTER	18324	PC74HCT164D
U35	231120	IC, 8-BIT, PARALLEL/SERIAL OUT S.R.	18324	74HCT166D
U36	231152-001	IC, DIGITAL 16L8, PAL	21793	231152-001
U37	231147	IC, MULTIPLEXER	104713	74HC253D
U39	231147	IC, MULTIPLEXER	104713	74HC253D
U40	231096	IC, QUAD DIFF RECEIVER	101295	AM26LS32ACD
U41	231096	IC, QUAD DIFF RECEIVER	101295	AM26LS32ACD
U42	231125	IC, DIGITAL, LINE DRIVER	27014	DS26LS31MN
U43	231154	IC, PROGRAMMED PLA	21793	231154

405115 - PCB ASSY, 1260-66 RELAY DRIVE

REF DESIG	RACAL P/N	INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
U44	231153		IC, PROGRAMMED PLA	21793	231153
U45	231094		IC, DEMUX DECODER	18324	N74LS138D
U48	231093		IC, QUAD COMPARATOR	04713	LM339D
Z1	080119		RES NETWORK, 220K	91637	SOMC-1603-224K
Z2	080117		RES NETWORK, 16P8R, 47K	73138	628-AL-473J
Z4	080117		RES NETWORK, 16P8R, 47K	73138	628-AL-473J
Z5	080119		RES NETWORK, 220K	91637	SOMC-1603-224K
Z6	080117		RES NETWORK, 16P8R, 47K	73138	628-AL-473J
Z7	080119		RES NETWORK, 220K	91637	SOMC-1603-224K
Z8	080117		RES NETWORK, 16P8R, 47K	73138	628-AL-473J
Z9	080119		RES NETWORK, 220K	91637	SOMC-1603-224K
Z10	080117		RES NETWORK, 16P8R, 47K	73138	628-AL-473J
Z11	080119		RES NETWORK, 220K	91637	SOMC-1603-224K
Z12	080117		RES NETWORK, 16P8R, 47K	73138	628-AL-473J
Z17	080120		RES NETWORK, 10K	11236	767-161R10K
Z18	080114		RES NETWORK, 16P8R, 15K	73138	628-AL-153J
Z23	080119		RES NETWORK, 220K	91637	SOMC-1603-224K
{43}1	401951		PCB ASSY., LBUS JUMPER	21793	401951
{44}1	401951-003		PCB ASSY., P3 JUMPER	21793	401951-003
{45}1	415115		PCB, 1260-66 RELAY DRIVE (UNLOADED)	21793	415115
{53}2	611260		STANOFF, SWG, 4-40 X 1.138L	51506	51075HB105-1.138L
{55}2	611367		STANDOFF, ROUND SWAGE, M3X0.5X4.3	06540	21003B-B-0350-28(L4.3
{56}2	610112		NUT, PRESS, 4-40	46384	KF2-440
{76}A/R	1920450		ADHESIVE/SEALANT	01139	RTV-108

User Manual 1260-66

407498 - RELAY ASSY, 1260-66, 18GHZ

REF DESIG	RACAL INST P/N	DESCRIPTION	FSC	MANUFACTURER'S P/N
K1	310259	RELAY, ELECTRO MECH., SP6T, 12V	12598	SR-6MIN-H
{4}A/R	500009	TUBING, SHRINK, . 12 ID, BLK	29005	RNF-100-1-1/8
{6}A/R	524333	WIRE, TEFLON STRANDED, 24 GA, ORG	-	-
{7}A/R	524999	WIRE, TEFLON STRANDED, 24 GA, WHT	-	-
{9}1	602094-016	CONNECTOR HOUSING, CABLE, 16 CONTACTS	22526	65043-029
{11}4	610264	WASHER, INSULATING, .25X.12X.02	21793	610264
{12}4	610777	CABLE TIE	16956	08-432
{13}4	610896	WASHER, SHOULDER, NYLON #4	86928	5607-49
{15}1	602094-900	POLARIZATION PLUG	22526	65307-001
{16}15	611311	TERMINAL, CRIMP	22526	48251-000
{18}4	611421	SCREW, PPH, 4-40X.625, SS, BLACK OXIDE	-	-
{20}4	617016	NUT, HEX, 4-40	-	-
{21}4	617127	WASHER, LOCK, #4, LIGHT SERIES	-	-

List of Suppliers

FSC	SUPPLIER	FSC	SUPPLIER
00779	AMP, INC. HARRISBURG, PA	62559	SCHROFF, INC. WARWICK, RI
01139	GENERAL ELECTRIC CO. (SILICONE PRODUCTS) WATERFORD, NY	65832	AMERICAN RESEARCH & ENGINEERING ELGIN, IL
01295	TEXAS INSTRUMENTS, INC. DALLAS, TX	73138	BECKMAN INSTRUMENTS FULLERTON, CA
04713	MOTOROLA, INC. (SEMICONDUCTOR PRODUCTS DIV.) PHOENIX, AZ	78189	ILLINOIS TOOL WORKS, INC. (SHAKEPROOF DIV.) ELGIN, IL
05397	UNION CARBIDE CORP. (MATERIALS SYSTEMS DIV.) CLEVELAND, OH	86928	SEASTROM MFG. CO. GRENDALE, CA
05972	LOCTITE CORP. HARTFORD, CT	88245	LITTON PERCISION PRODUCTS VAN NUYS, CA
06540	AMATOM ELECTRONIC HARDWARE NEW ROCHELLE, NY	91637	DALE ELECTORNICS, INC COLUMBUS, NE
11236	CTS OF BERNE, INC. BERNE, IN	92194	ALPHA WIRE ELIZABETH, NJ
12598	RLC ELECTRONICS, INC. MT. KISKO, NY	95275	VITRAMON, INC. BRIDGEPORT, CT
16956	DENNISON MFG. CO. FRAMINGTON, MA		
18324	SIGNETICS, INC. SUNNYVALE, CA		
21793	RACAL INSTRUMENTS INC. IRVINE, CA		
22526	DUPONT CONNECTOR CO. NEW CUMBERLAND, PA		
27014	NATIONAL SEMI-CONDUCTOR CORP. SANTA CLARA, CA		
29005	STORM PRODUCTS CO. LOS ANGELES, CA		
46384	PENN ENG. & MFG. CORP DOYLESTOWN, PA		
51506	ACCURATE SCREW MACHINE NUTLEY, NJ		
52072	CIRCUIT ASSY. CORP. COSTA MESA, CA		
52210	GETTING ENGRG. & MFG. CO. SPRING MILLS, PA		
56289	SPAGUE ELECTRIC CO. N. ADAMS, MA		

Chapter 8

OPTIONAL HARNESS ASSEMBLIES

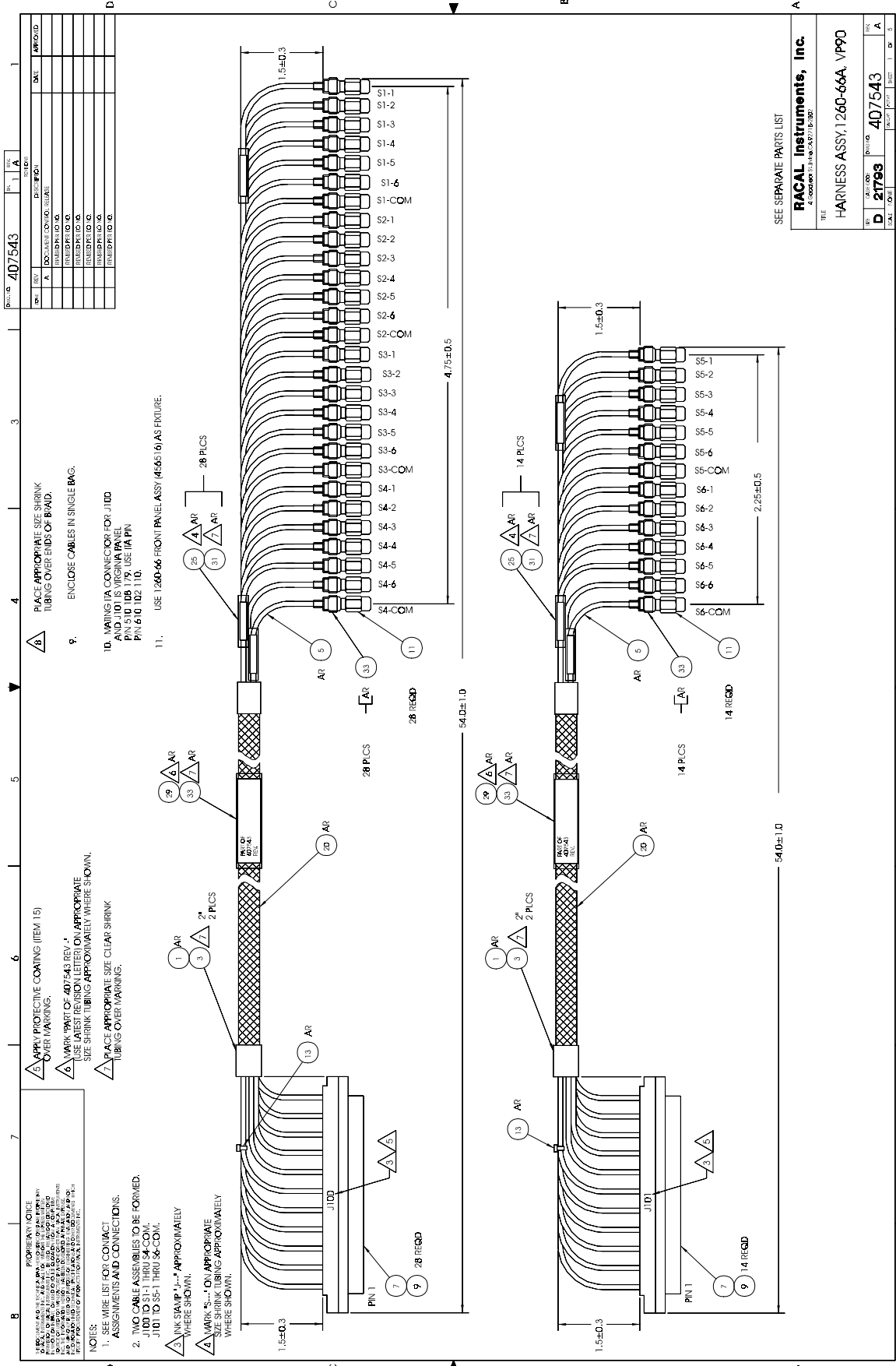
The following harness assemblies are used to connect Racal Instruments Model 1260-64 to Freedom Series Test Receiver Interfaces.

Each harness documentation consists of an assembly drawing, parts list, system wire list, and wire list.

407543	Harness Assy, 1260-66A, VP90	8-3
407543-001	Harness Assy, 1260-66B, VP90	8-9
407543-002	Harness Assy, 1260-66C, VP90	8-14

For more information on Racal Instruments complete line of Test Receiver Interface solutions, contact your Sales Representative.

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REV	DESCRIPTION	DATE	APP'D
A	DOCUMENT CHANGE		
B	REVISION		
C	REVISION		
D	REVISION		
E	REVISION		
F	REVISION		
G	REVISION		
H	REVISION		
I	REVISION		
J	REVISION		
K	REVISION		
L	REVISION		
M	REVISION		
N	REVISION		
O	REVISION		
P	REVISION		
Q	REVISION		
R	REVISION		
S	REVISION		
T	REVISION		
U	REVISION		
V	REVISION		
W	REVISION		
X	REVISION		
Y	REVISION		
Z	REVISION		

- NOTES:
- SEE WIRE LIST FOR CONTACT ASSIGNMENTS AND CONNECTIONS.
 - TWO CABLE ASSEMBLIES TO BE FORMED. J100 TO S1-1 THRU S4-COM, J101 TO S5-1 THRU S6-COM.
 - MARK "S..." ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
 - MARK "S..." ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
 - APPLY PROTECTIVE COATING (ITEM 15) OVER MARKING.
 - MARK PART OF 407543 REV. 1. USE LATEST DESIGN LISTED ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
 - PLACE APPROPRIATE SIZE CLEAR SHRINK TUBING OVER MARKING.
 - PLACE APPROPRIATE SIZE SHRINK TUBING OVER ENDS OF Braid.
 - ENCLOSE CABLES IN SINGLE BAG.
 - MAINTAIN A CONNECTOR FOR J100 AND J101 IN VIRGINIA PANEL FOR USE IN PIN P/N 610 102 110.
 - USE 1260-66 FRONT PANEL ASSY (456516) AS FEATURE.

SEE SEPARATE PARTS LIST

RACAL Instruments, Inc.
 1-800-440-1111 FAX 800-716-2001

HARNESS ASSY, 1260-66A, VP90

REV	DATE	BY	CHK
D	2/7/99		A

407543

RACAL INSTRUMENTS INC.

Assembly 407543

HARNESS Assy, 1260-66A, VP90

Rev Date 3/03/99 Revision A

#	Component	Description	U/M	Qty Reqd	Ref
1	500005	TIE CORD NYLON	FT	.00001	
3	500017	TBGSRK-POF. 500 ID-BLACK	FT	.00001	
5	500317	CACX-SHD-01C2 8G-1STR	FT	.00001	
7	602201-010	CON-RCV-PLGO32C. ---D-VP90	EA	2.00000	J100, 101
9	602201-908	CONTACT,COAX, 20GHZ, 5F142,VP	EA	42.00000	W/J100, 101
11	602231	CON-CXL-PLGO01C.	EA	42.00000	S1-6
13	610777	TIE-CA-LKG-.062-.750	EA	.00001	
15	910541	POLYURETHANE CONFORMAL COAT	EA	.00001	
20	GRP-110-1/2	TBGWOV-POY. 2501D-BLACK	FT	.00001	
25	M23053/5-104-4	TBGSRK-POF. 131D-YELLOW	FT	.00001	
29	M23053/5-109-4	TBGSRK- POF .7501 D-YELLOW	FT	.00001	
31	M23053/5-204-C	TBGSRK-POF. 1251D-CLEAR	FT	.00001	
33	M23053/5-209-C	TBGSRK-POF. 750 ID-CLEAR	FT	.00001	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
	BLK AA (J100)	Uxx-SLOT yy (S1-S4)	CABLE	407543		SYSTEM WIRE LIST
	BLK AA (J101)	Uxx-SLOT yy (S5,S6)	CABLE	407543		

This system wirelist serves as a template for incorporating this harness assembly into the overall system wirelist. It does not in any way affect the fabrication of this harness assembly.

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718				
DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66A, VP90	A	21793	407543	A
	DRN			SHEET 2 of 5

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
1	J100-1 602201-908	S1-1 (602231)	COAX	500317	54"	S1-1
2	J100-2 602201-908	S1-2 (602231)	COAX	500317	54"	S1-2
3	J100-3 602201-908	S1-3 (602231)	COAX	500317	54"	S1-3
4	J100-4 602201-908	S1-4 (602231)	COAX	500317	54"	S1-4
5	J100-5 602201-908	S1-5 (602231)	COAX	500317	54"	S1-5
6	J100-6 602201-908	S1-6 (602231)	COAX	500317	54"	S1-6
7	J100-7 602201-908	S1-COM (602231)	COAX	500317	54"	S1-COM
8	J100-8 NO CONNECT					
9	J100-9 602201-908	S2-1 (602231)	COAX	500317	54"	S2-1
10	J100-10 602201-908	S2-2 (602231)	COAX	500317	54"	S2-2
11	J100-11 602201-908	S2-3 (602231)	COAX	500317	54"	S2-3
12	J100-12 602201-908	S2-4 (602231)	COAX	500317	54"	S2-4
13	J100-13 602201-908	S2-5 (602231)	COAX	500317	54"	S2-5
14	J100-14 602201-908	S2-6 (602231)	COAX	500317	54"	S2-6
15	J100-15 602201-908	S2-COM (602231)	COAX	500317	54"	S2-COM
16	J100-16 NO CONNECT					
17	J100-17 602201-908	S3-1 (602231)	COAX	500317	54"	S3-1
18	J100-18 602201-908	S3-2 (602231)	COAX	500317	54"	S3-2
19	J100-19 602201-908	S3-3 (602231)	COAX	500317	54"	S3-3
20	J100-20 602201-908	S3-4 (602231)	COAX	500317	54"	S3-4
21	J100-21 602201-908	S3-5 (602231)	COAX	500317	54"	S3-5
22	J100-22 602201-908	S3-6 (602231)	COAX	500317	54"	S3-6
23	J100-23 602201-908	S3-COM (602231)	COAX	500317	54"	S3-COM
24	J100-24 NO CONNECT					
25	J100-25 602201-908	S4-1 (602231)	COAX	500317	54"	S4-1

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718

DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66A, VP90	A	21793	407543	A
DRN			SHEET 3 of 5	

ENGINEERING WIRE LIST

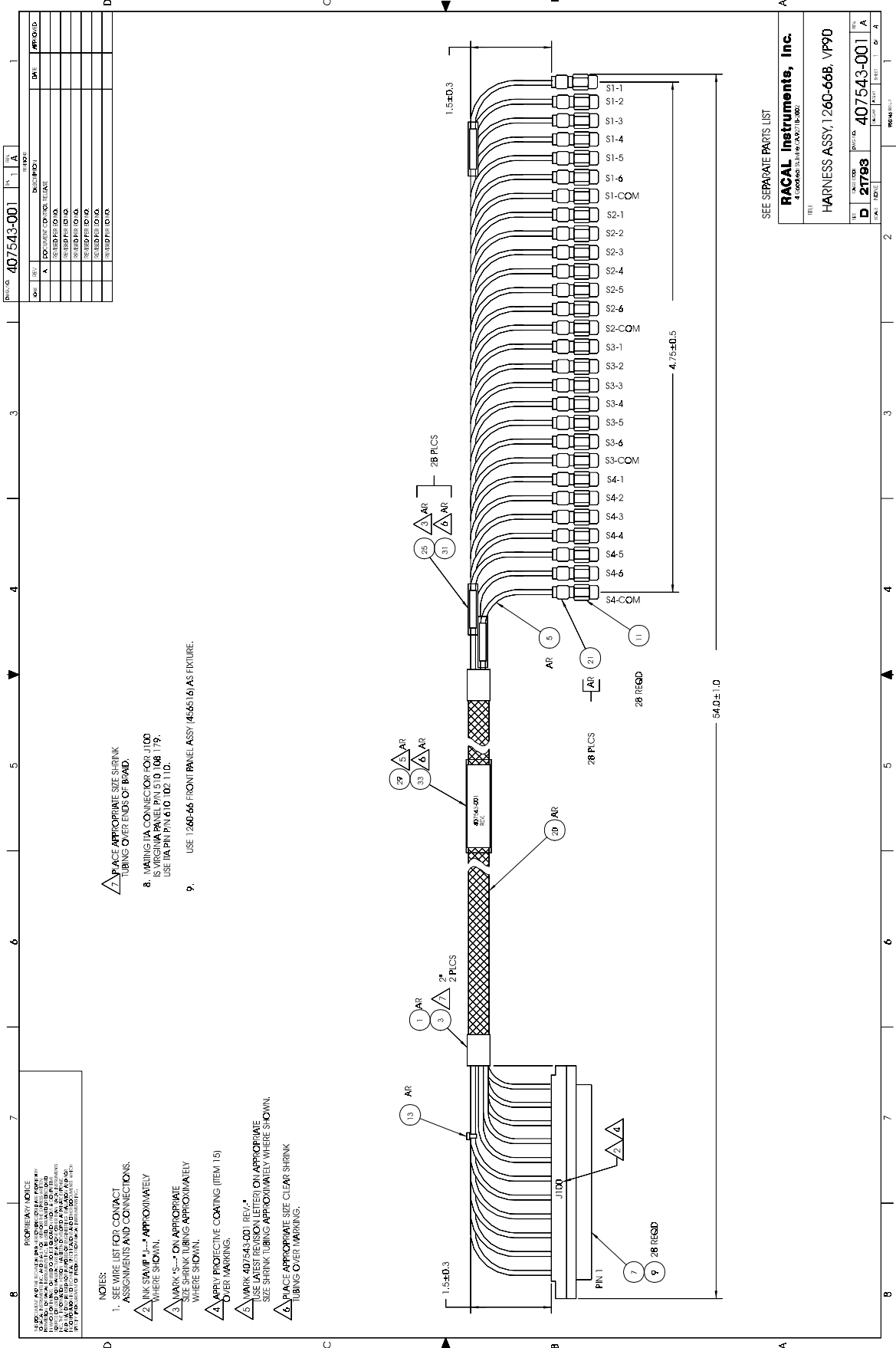
WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
26	J100-26 602201-908	S4-2 (602231)	COAX	500317	54"	S4-2
27	J100-27 602201-908	S4-3 (602231)	COAX	500317	54"	S4-3
28	J100-28 602201-908	S4-4 (602231)	COAX	500317	54"	S4-4
29	J100-29 602201-908	S4-5 (602231)	COAX	500317	54"	S4-5
30	J100-30 602201-908	S4-6 (602231)	COAX	500317	54"	S4-6
31	J100-31 602201-908	S4-COM (602231)	COAX	500317	54"	S4-COM
32	J100-32 NO CONNECT					
33	J101-1 602201-908	S5-1 (602231)	COAX	500317	54"	S5-1
34	J101-2 602201-908	S5-2 (602231)	COAX	500317	54"	S5-2
35	J101-3 602201-908	S5-3 (602231)	COAX	500317	54"	S5-3
36	J101-4 602201-908	S5-4 (602231)	COAX	500317	54"	S5-4
37	J101-S 602201-908	S5-5 (602231)	COAX	500317	54"	S5-5
38	J101-6 602201-908	S5-6 (602231)	COAX	500317	54"	S5-6
39	J101-7 602201-908	S5-COM (602231)	COAX	500317	54"	S5-COM
40	J101-8 NO CONNECT					
41	J101-9 602201-908	S6-1 (602231)	COAX	500317	54"	S6-1
42	J101-10 602201-908	S6-2 (602231)	COAX	500317	54"	S6-2
43	J101-11 602201-908	S6-3 (602231)	COAX	500317	54"	S6-3
44	J101-12 602201-908	S6-4 (602231)	COAX	500317	54"	S6-4
45	J101-13 602201-908	S6-5 (602231)	COAX	500317	54"	S6-5
46	J101-14 602201-908	S6-6 (602231)	COAX	500317	54"	S6-6
47	J101-15 602201-908	S6-COM (602231)	COAX	500317	54"	S6-COM
48	J101-16 NO CONNECT					
49	J101-17 NO CONNECT					
RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718						
DOCUMENT TITLE			SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66A, VP90			A	21793	407543	A
DRN					SHEET 4 of 5	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
50	3101-18 NO CONNECT					
51	3101-19 NO CONNECT					
52	3101-20 NO CONNECT					
53	3101-21 NO CONNECT					
54	3101-22 NO CONNECT					
55	3101-23 NO CONNECT					
56	3101-24 NO CONNECT					
57	3101-25 NO CONNECT					
58	3101-26 NO CONNECT					
59	3101-27 NO CONNECT					
60	3101-28 NO CONNECT					
61	3101-29 NO CONNECT					
62	3101-30 NO CONNECT					
63	3101-31 NO CONNECT					
64	3101-32 NO CONNECT					

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718

DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66A, VP90	A	21793	407543	A
	DRN			SHEET 5 of 5



SEE SEPARATE PARTS LIST

RACAL Instruments, Inc.	
4 Lockheed Drive, AKAZ1 Building	
TITLE: HARNESS ASSY, 1260-66B, VP90	
REV. NO.	407543-001
REV. DATE	11/11/79
REV. BY	DA
REV. CHECKED	DA

- 1. SEE WIRE LIST FOR CONTACT ASSIGNMENTS AND CONNECTIONS.
- 2. SHINK STAMP "J100" APPROXIMATELY WHERE SHOWN.
- 3. MARK "S-1" ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
- 4. APPLY PROTECTIVE COATING (ITEM 15) OVER MARKINGS.
- 5. MARK 407543-001 REV. A* (USE LATEST REVISION LETTER) ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
- 6. PLACE APPROPRIATE SIZE CLEAR SHRINK TUBING OVER MARKING.
- 7. PLACE APPROPRIATE SIZE SHRINK TUBING OVER ENDS OF BRAID.
- 8. MATING VIA CONNECTOR FOR J100 IS VIRGINIA PANEL PINS 108 179. USE IIA PIN 6 ID. 02. 11.D.
- 9. USE 1260-66 FRONT PANEL ASSY (465616) AS FIXTURE.

- 1. SEE WIRE LIST FOR CONTACT ASSIGNMENTS AND CONNECTIONS.
- 2. SHINK STAMP "J100" APPROXIMATELY WHERE SHOWN.
- 3. MARK "S-1" ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
- 4. APPLY PROTECTIVE COATING (ITEM 15) OVER MARKINGS.
- 5. MARK 407543-001 REV. A* (USE LATEST REVISION LETTER) ON APPROPRIATE SIZE SHRINK TUBING APPROXIMATELY WHERE SHOWN.
- 6. PLACE APPROPRIATE SIZE CLEAR SHRINK TUBING OVER MARKING.

RACAL INSTRUMENTS INC.

Assembly 407543-001

HARNESS Assy, 1260-66B, VP90

Rev Date 2/18/99 Revision A

#	Component	Description	U/M	Oty Reqd	Ref
1	500005	TIE CORD NYLON	FT	.00001	
3	500017	TBGSRK-POF. 500ID-BLACK	FT	.00001	
5	500317	CACX-SHD-01C28G-1STR	FT	.00001	
7	602201-010	CON-RCV-PLG032C. ---D-VP90	EA	1.00000	J100
9	602201-908	CONTACT, COAX, 20GHZ, SF142,VP	EA	28.00000	w/J100
11	602231	CON-CXL-PLG001C.	EA	28.00000	S1-4
13	610777	TIE-CA-LKG-.062-. 750	EA	.00001	
15	910541	POLYURETHANE CONFORMAL COAT	EA	.00001	
20	GRP-110-1/2	TBGWOV-POY. 250ID-BLACK	FT	.00001	
21	M23053/5-207-C	TBGSRK-POF. 375ID-CLEAR	EA	.00001	
25	M23053/5-104-4	TBGSRK-POF. 13ID-YELLOW	FT	.00001	
29	M23053/5-109-4	TBGSRK-POF. 750ID-YELLOW	FT	.00001	
31	M23053/5-204-C	TBGSRK-POF. 125ID-CLEAR	FT	.00001	
33	M23053/5-209-C	TBGSRK-POF. 750ID-CLEAR	FT	.00001	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
	BLK AA (J100)	Uxx-SLOT yy (S1-S4)	CABLE	407543- 001		SYSTEM WIRE LIST

This system wirelist serves as a template for incorporating this harness assembly into the overall system wirelist. It does not in any way affect the fabrication of this harness assembly.

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718				
DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66B, VP90	A	21793	407543-001	A
DRN			SHEET 2 of 4	

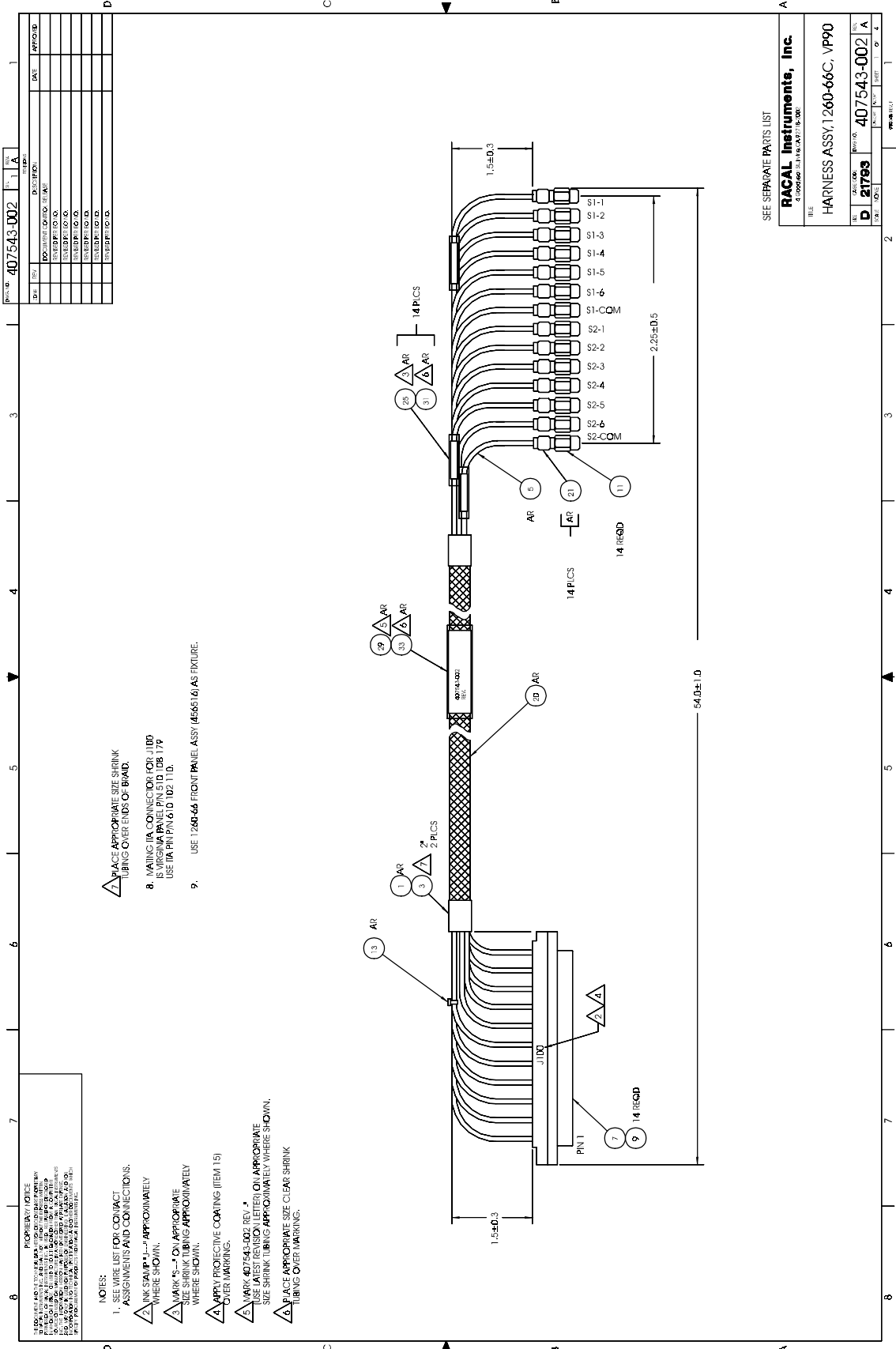
ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART	WIRE LEN	REFERENCE
1	J100-1 602201-908	S1-1 (602231)	COAX	500317	54"	S1-1
2	J100-2 602201-908	S1-2 (602231)	COAX	500317	54"	S1-2
3	J100-3 602201-908	S1-3 (602231)	COAX	500317	54"	S1-3
4	J100-4 602201-908	S1-4 (602231)	COAX	500317	54"	S1-4
5	J100-5 602201-908	S1-5 (602231)	COAX	500317	54"	S1-5
6	J100-6 602201-908	S1-6 (602231)	COAX	500317	54"	S1-6
7	J100-7 602201-908	S1-COM (602231)	COAX	500317	54"	S1-COM
8	J100-8 NO CONNECT					
9	J100-9 602201-908	S2-1 (602231)	COAX	500317	54"	S2-1
10	J100-10 602201-908	S2-2 (602231)	COAX	500317	54"	S2-2
11	J100-11 602201-908	S2-3 (602231)	COAX	500317	54"	S2-3
12	J100-12 602201-908	S2-4 (602231)	COAX	500317	54"	S2-4
13	J100-13 602201-908	S2-5 (602231)	COAX	500317	54"	S2-5
14	J100-14 602201-908	S2-6 (602231)	COAX	500317	54"	S2-6
15	J100-15 602201-908	S2-COM (602231)	COAX	500317	54"	S2-COM
16	J100-16 NO CONNECT					
17	J100-17 602201-908	S3-1 (602231)	COAX	500317	54"	S3-1
18	J100-18 602201-908	S3-2 (602231)	COAX	500317	54"	S3-2
19	J100-19 602201-908	S3-3 (602231)	COAX	500317	54"	S3-3
20	J100-20 602201-908	S3-4 (602231)	COAX	500317	54"	S3-4
21	J100-21 602201-908	S3-5 (602231)	COAX	500317	54"	S3-5
22	J100-22 602201-908	S3-6 (602231)	COAX	500317	54"	S3-6
23	J100-23 602201-908	S3-COM (602231)	COAX	500317	54"	S3-COM
24	J100-24 NO CONNECT					
25	J100-25 602201-908	S4-1 (602231)	COAX	500317	54"	S4-1
RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718						
DOCUMENT TITLE			SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66B, VP90			A	21793	407543-001	A
DRN					SHEET 3 of 4	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
26	J100-26 602201-908	S4-2 (602231)	COAX	500317	54"	S4-2
27	J100-27 602201-908	S4-3 (602231)	COAX	500317	54"	S4-3
28	J100-28 602201-908	S4-4 (602231)	COAX	500317	54"	S4-4
29	J100-29 602201-908	S4-5 (602231)	COAX	500317	54"	S4-5
30	J100-30 602201-908	S4-6 (602231)	COAX	500317	54"	S4-6
31	J100-31 602201-908	S4-COM (602231)	COAX	500317	54"	S4-COM
32	J100-32 NO CONNECT					

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718				
DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66B, VP90	A	21793	407543-001	A
	DRN			SHEET 4 of 4



SEE SEPARATE PARTS LIST

RACAL Instruments, Inc.	
10000 RACAL DRIVE, FORT MONROE, VA 22034	
HARNESS ASSY, 1260-66C, VP90	
Part No.	407543-002
Rev.	1

User Manual 1260-66

RACAL INSTRUMENTS INC.

Assembly 407543-002

HARNESS Assy, 1260-66C, VP90

Rev Date 2/18/99 Revision A

#	Component	Description	U/M	Qty Reqd	Ref
1	5000 OS	TIE CORD NYLON	FT	.00001	
3	500017	TBGSRK-POF. 500ID-BLACK	FT	.00001	
5	500317	CACX-SHD-01C28G-1STR	FT	.00001	
7	602201-010	CON-RCV-PLG032C. ---D-VP90	EA	1.00000	J100
9	602201-908	CONTACT, COAX, 20GHZ, SF142,VP	EA	14.00000	W/J100
11	602231	CON-CXL-PLG001C.	EA	14.00000	S1-2
13	610777	TIE-CA-LKG-. 062-. 750	EA	.00001	
15	910541	POLYURETHANE CONFORMAL COAT	EA	.00001	
20	GRP-110-1/2	TBGWOV-POY. 250ID-BLACK	FT	.00001	
21	M23053/5-207-C	TBGSRK-POF. 375ID-CLEAR	EA	.00001	
25	M23053/5-104-4	TBGSRK-POF. 13ID-YELLOW	FT	.00001	
29	M23053/5-109-4	TBGSRK-POF. 750ID-YELLOW	FT	.00001	
31	M23053/5-204-C	TBGSPK-POF. 125ID-CLEAR	FT	.00001	
33	M23053/5-209-C	TBGSRK-POF . 750ID-CLEAR	FT	.00001	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
	BLK AA (3100)	Uxx-SLOT yy (S1-S2)	CABLE	407543-002		SYSTEM WIRE UST

This system wirelist serves as a template for incorporating this harness assembly into the overall system wirelist. It does not in any way affect the fabrication of this harness assembly.

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718				
DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66C, VP90	A	21793	407543-002	A
DRN			SHEET 2 of 4	

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
1	J100-1 602201-908	S1-1 (602231)	COAX	500317	54"	S1-1
2	J100-2 602201-908	S1-2 (602231)	COAX	500317	54"	S1-2
3	J100-3 602201-908	S1-3 (602231)	COAX	500317	54"	S1-3
4	J100-4 602201-908	S1-4 (602231)	COAX	500317	54"	S1-4
S	J100-5 602201-908	S1-5 (602231)	COAX	500317	54"	S1-5
6	J100-6 602201-908	S1-6 (602231)	COAX	500317	54"	S1-6
7	J100-7 602201-908	S1-COM (602231)	COAX	500317	54"	S1-COM
8	J100-8 NO CONNECT					
9	J100-9 602201-908	S2-1 (602231)	COAX	500317	54"	S2-1
10	J100-10 602201-908	S2-2 (602231)	COAX	500317	54"	S2-2
11	J100-11 602201-908	S2-3 (602231)	COAX	500317	54"	S2-3
12	J100-12 602201-908	S2-4 (602231)	COAX	500317	54"	S2-4
13	J100-13 602201-908	S2-S (602231)	COAX	500317	54"	S2-5
14	J100-14 602201-908	S2-6 (602231)	COAX	500317	54"	S2-6
15	J100-15 602201-908	S2-COM (602231)	COAX	500317	54"	S2-COM
16	J100-16 NO CONNECT					
17	J100-17 NO CONNECT					
18	J100-18 NO CONNECT					
19	J100-19 NO CONNECT					
20	J100-20 NO CONNECT					
21	J100-21 NO CONNECT					
22	J100-22 NO CONNECT					
23	J100-23 NO CONNECT					
24	J100-24 NO CONNECT					
25	J100-25 NO CONNECT					

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718

DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66C, VP90	A	21793	407543-002	A
	DRN			SHEET 3 of 4

ENGINEERING WIRE LIST

WIRE	FROM	TO	TYPE	PART #	WIRE LEN	REFERENCE
26	J100-26 NO CONNECT					
27	J100-27 NO CONNECT					
28	J100-28 NO CONNECT					
29	J100-29 NO CONNECT					
30	J100-30 NO CONNECT					
31	J100-31 NO CONNECT					
32	J100-32 NO CONNECT					

RACAL Instruments, Inc., 4 Goodyear St., Irvine, CA 92718				
DOCUMENT TITLE	SIZE	CODE NO.	DOCUMENT NO.	REV
HARNESS ASSEMBLY, 1260-66C, VP90	A	21793	407543-002	A
	DRN			SHEET 4 of 4

Chapter 9

PRODUCT SUPPORT

Product Support

Racal Instruments has a complete Service and Parts Department. If you need technical assistance or should it be necessary to return your product for repair or calibration, call 1-800-722-3262. If parts are required to repair the product at your facility, call 1-949-859-8999 and ask for the Parts Department.

When sending your instrument in for repair, complete the form in the back of this manual.

For worldwide support and the office closes to your facility, refer to the Support Offices section on the following page.

Reshipment Instructions

Use the original packing material when returning the 1260-66 to Racal Instruments for calibration or servicing. The original shipping crate and associated packaging material will provide the necessary protection for safe reshipment.

If the original packing material is unavailable, contact Racal Instruments Customer Service for information.

Support Offices

Racal Instruments, Inc.

4 Goodyear St., Irvine, CA 92618-2002
Tel: (800) RACAL-ATE, (800) 722-2528, (949) 859-8999; FAX:
(949) 859-7139

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Racal Systems Electronique S.A.

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