SHEET INDEX

CONTENTS	SHEET NO.	SHEET ISS NO.
SHEET INDEX RECORD OF CHANGES SUPPORTING INFORMATION SYSTEM USED ON SYMBOLS NOTES	1	1
CPS SL87	2	1
COMPONENT LIST INPUT/OUTPUT INFORMATION CIRCUIT DESCRIPTION	3	1

RECORD OF CHANGES

DWG ISS	PREV FURN	STD	MFR DISC	SEE NOTE

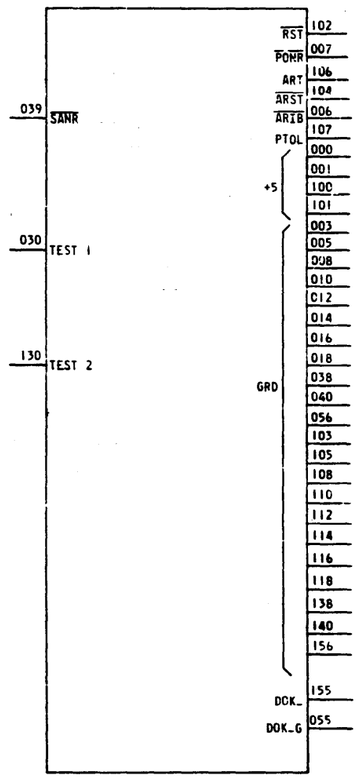
NOTES

1. ⏚ GROUND RETURN.
2. UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, AND VALUES PRECEDED BY THE SYMBOL + (PLUS) OR - (MINUS) ARE IN VOLTS.
3. BATTERY AND GROUND TERMINALS FOR INTEGRATED CIRCUITS.

IC CODE	BAT TERM +5	GRD TERM
SN54LS14	14	7
WA-LS00	14	7
SN54S38	14	7
MC14538BAL	16	8
MC14536BAL	16	8

DWG ISSUE	DATE ISSUE	DRAWN	APPD
1	2-22-84	CDI DP	BPE GWK RW

SYMBOL



SYSTEM USED ON	DESIGN CONTROL
COMMON (CDT)	CB

SUPPORTING INFORMATION

CATEGORY	NO.
CIRCUIT PACK SCHEMATIC DRAWING	SD-94868-01

SHEET INDEX NOTES

1. ONLY THE LATEST ISSUE, OR ISSUES IF CONCURRENT, ARE SHOWN IN THE INDEX.
2. FOR REISSUES, A CHANGED OR NEW SHEET IS ASSIGNED THE SAME ISSUE NUMBER AS SHEET 1.
3. THE ISSUE NUMBER OF SHEET 1 IS RECOGNIZED AS THE ISSUE NUMBER OF THE WHOLE DRAWING.

1N99

AT&TCO STANDARD

SL87 CIRCUIT PACK
RESET AND SANITY BOARD

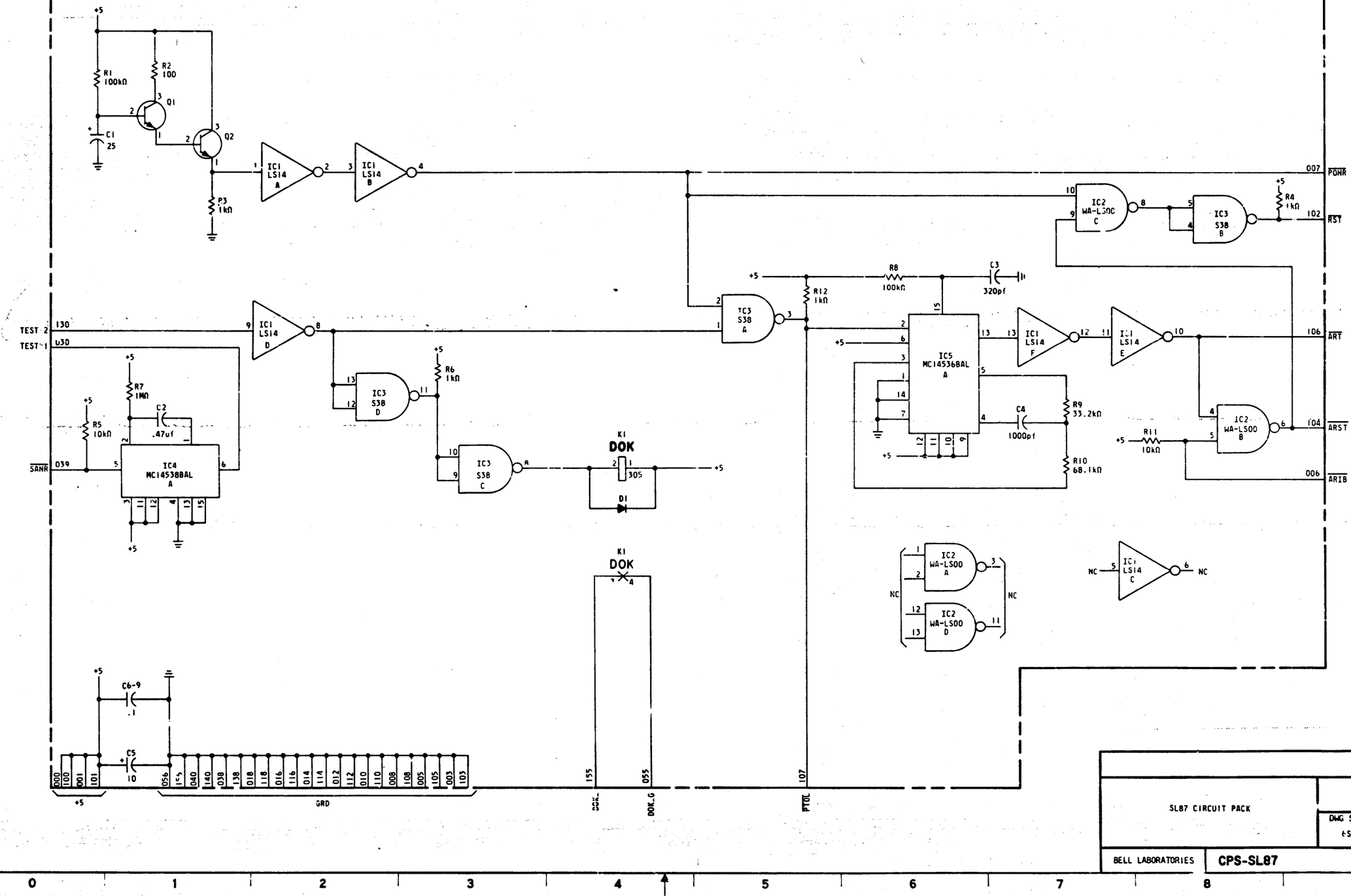
DWG SIZE 6S | ISSUE 1

BELL LABORATORIES | CPS-SL87 | 3 SHEETS

E-7000-A (8-79)
PRINTED IN U.S.A.

PART OF CPS SL87

RESET AND SANITY BOARD



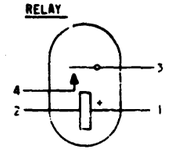
SL87 CIRCUIT PACK		DWG SIZE 6S	ISSUE 1
BELL LABORATORIES	CPS-SL87		SHEET 2

PART OF CPS SL87

RESET AND SANITY BOARD

COMPONENT LIST

RELAY



DESIG	DOK(KI)
CODE	345B
OPTION	
CONT	LOC
4	2B4
3	2B4
2	2E4
1	2E4

CIRCUIT, INTEGRATED

DESIG	CODE
IC1	SN54LS14J
IC2	WA-LS00
IC3	SN54S38J
IC4	MC14538BAL
IC5	MC14536BAL

CAPACITOR

DESIG	CODE
C1	601C
C2	KS-19774,L5,.47uf
C3	KS-20676,L13,320pf
C4	KS-20676,L16,1000pf
C5	601B
[4] C6-9	KS-20736,L4,.1uf

DIODE

DESIG	CODE
D1	533F

RESISTOR

DESIG	CODE
R1	KS-20616,L1A,100kΩ
R2	KS-20616,L1A,100
[2] R3,4	KS-20616,L1A,1kΩ
R5	KS-20616,L1A,10kΩ
R6	KS-20616,L1A,1kΩ
R7	KS-20616,L1A,1MΩ
R8	KS-20616,L1A,100kΩ
R9	KS-20616,L1A,33.2kΩ
R10	KS-20616,L1A,68.1kΩ
R11	KS-20616,L1A,10kΩ
R12	KS-20616,L1A,1kΩ

TRANSISTOR

DESIG	CODE
[2] Q1,2	665

INPUT/OUTPUT INFORMATION

CIRCUIT DESCRIPTION

THIS CIRCUIT PROVIDES A POWER-ON RESET CIRCUIT AND A SANITY TIMER WITH AN AUTOMATIC RESTART FEATURE. THE CIRCUIT IS INTENDED AS PART OF THE DIAGNOSTIC TEST PANEL-CIRCUIT (DTP) FOR THE COMMON SYSTEMS CONTROLLER NO. 1 (SD94868-01) HOWEVER IT WILL FUNCTION WITHOUT THE OTHER PARTS OF THE DTP.

POWER-ON RESET IS PROVIDED BY THE Q1,Q2 CIRCUIT. THIS CIRCUIT WILL CAUSE THE $\overline{\text{PONR}}$ AND THE $\overline{\text{RST}}$ LEADS TO GO TO THE INACTIVE STATE (HIGH) APPROXIMATELY 2 SECONDS AFTER THE +5 VOLT POWER IS APPLIED.

THE SANITY TIMER (IC4) IS A RETRIGGERABLE MONOSTABLE WITH AN OUTPUT PULSE WIDTH OF APPROXIMATELY .5 SECONDS. A HIGH TO LOW TRANSITION ON THE SANR LEAD WILL TRIGGER THE MONO. IF THE SYSTEM FAILS TO ASSERT THE SANR WITHIN THE TIMING INTERVAL THE MONO OUTPUT WILL GO LOW WHICH WILL DROP THE NORMALLY OPERATED DCX RELAY. THE OPEN CONTACTS OF THIS RELAY WILL CAUSE THE SYSTEM TO GENERATE AN ALARM. IN ADDITION TO THE ALARM THE PROGRAM TIMED OUT LED ON THE DTP PANEL WILL BE LIGHTED VIA THE PTOL LEAD. THE PROGRAMMABLE TIMER (IC5) PROVIDES THE AUTOMATIC RESTART FEATURE. IC5 HAS AN INTERVAL OSCILLATOR, A 24 BIT COUNTER AND AN OUTPUT PULSE WIDTH CONTROL CIRCUIT. WHEN THE SANITY TIMER TIMES OUT THE RESET PIN OF IC5 IS ASSERTED LOW WHICH STARTS THE COUNTER. APPROXIMATELY 2.5 SEC LATER THE OUT PIN WILL BE ASSERTED HIGH FOR 50uSEC. FROM THEN ON THE OUT PIN WILL BE PULSED EVERY 5 SECONDS UNTIL THE SANITY TIMER IS TRIGGERED. IC5 OUTPUT CAUSES SYSTEM REINITIALIZATION VIA THE $\overline{\text{RST}}$ LEAD. IF THE $\overline{\text{ARTB}}$ LEAD IS ACTIVE (LOW) AUTOMATIC REINITIALIZATION IS INHIBITED. THE $\overline{\text{ARTB}}$ LEAD IS CONTROLLED BY THE AUTO RESTART INHIBIT KEY ON THE DTP.

THE AUTOMATIC RESTART TEST (ART) OUTPUT IS USED FOR TEST PURPOSES. IT CAN BE USED TO TEST THE AUTO RESET OUTPUT WITH THE INHIBIT KEY OPERATED THEREBY TESTING WITHOUT RESETTING THE SYSTEM.

SL87 CIRCUIT PACT		DWG SIZE 6S	ISSUE 1
BELL LABORATORIES	CPS-SL87		SHEET 3