RCSL No: 44-RT 1946

Edition: December 1979

Author: Lars Myrup Jacobsen

Title:

TECHNICAL MANUAL

LPC 308

A/S REGNECENTRALEN
af 1979

Keywords:

Printer Controller and Printers.

Abstract:

This manual contains a description of the LPC 308 printer controller, which allows different printers to be interfaced to the RC3600 system. (53 printed pages).

Printed by A/S Regnecentralen af 1979, Copenhagen

42-i 1286

CONTENTS PAGE

CONTENTS (continued) PAGE

1. INTRODUCTION. 1.

1.1 Description.

The LPC 308 printer controller is prepared for use with different printer types. Some of the printers are identical, from a controller point of view, and some differs in details. A number of switches has been introduced in the controller, to make the use of different printer types possible.

The LPC 308 is based on the controllers LPC 301-307 and is able to run all the different kinds of printers.

1.2 Printer Types. 1.2

LPC 308 printer controller may be used with three printer types, of which the first and second exists in different versions. These printers are described on the next page.

1.3 Type 1 Printers.

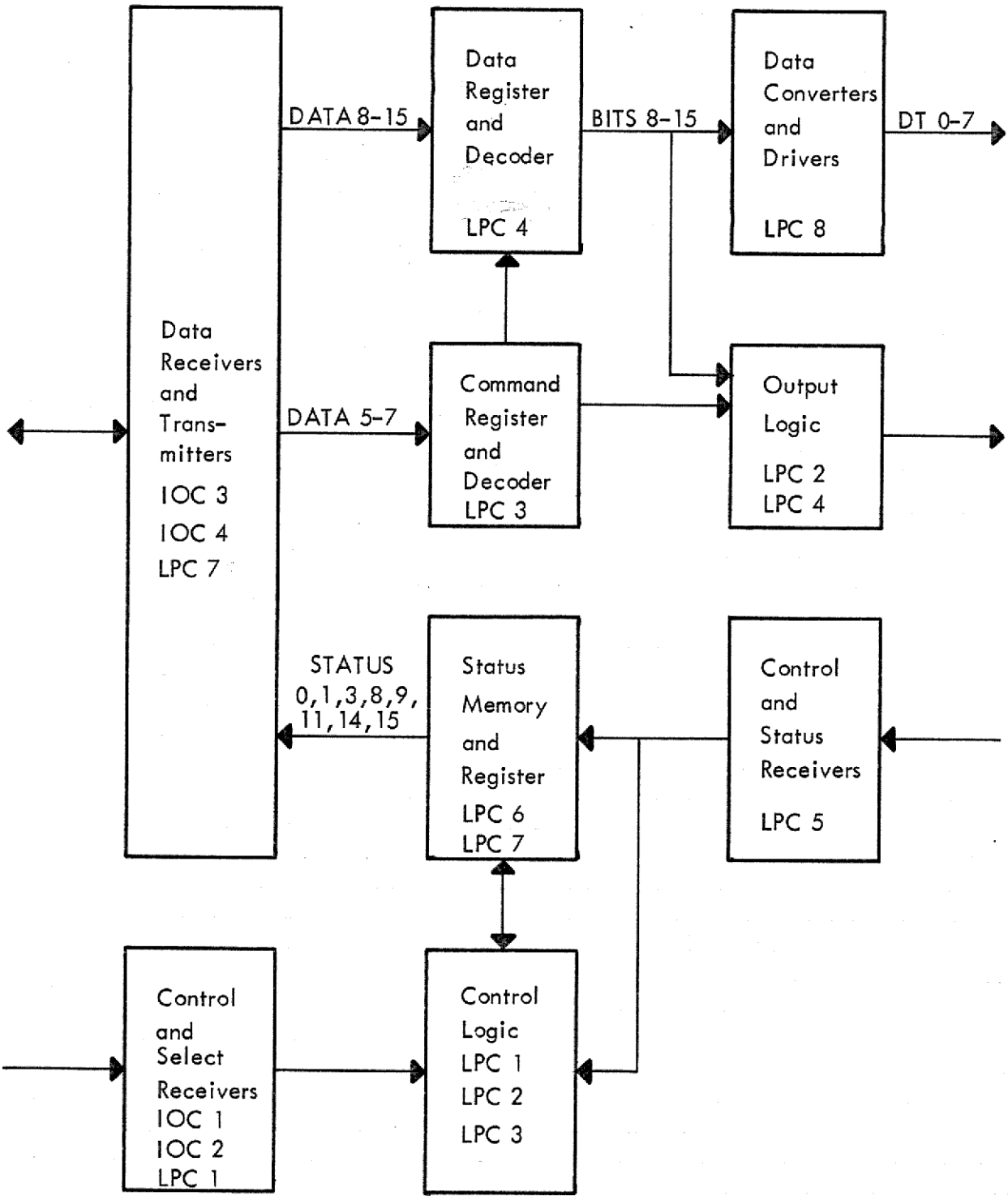
A:	Sales number	Technical number	Producer and Model	
	RC3632	LPT 703	Data Products	2470
	RC3632	LPT 704	- -	2470
	RC3633	LPT 704	- -	2470
	RC3634	LPT 702	- -	2440
	RC3635	LPT 702	- -	2440
	RC3636	LPT 701	- -	2420
	RC3641	LPT 705	- -	2230
	RC3641	LPT 709	- -	2230 DI
	RC3642	LPT 718	- -	2260
B:	RC3641	LPT 724	- -	2230
	RC3642	LPT 725	- -	2260
	RC3643	LPT 722	- -	2290
C:	RC3641	LPT 726	- -	2230
	RC3642	LPT 727	- -	2260
	RC3643	LPT 728	- -	2290
	RC3641	LPT 729	- -	2230
	RC3642	LPT 730	- -	2260
	RC3643	LPT 731	- -	2290

1.4 Type 2 Printers.

A:	Sales number	Technical number	Producer and Model	
	RC3638	LPT 706	Centronics	101A
	RC3638	LPT 708	Centronics	101AL
	RC3639	LPT 707	Centronics	102
B:	RC3640	MPT250/PIF001	FACIT	4540

1.5 Type 3 Printers.

Sales number	Technical number	Producer and Model	
RC3637	LPT 719	Mera-Blon	DZM-180



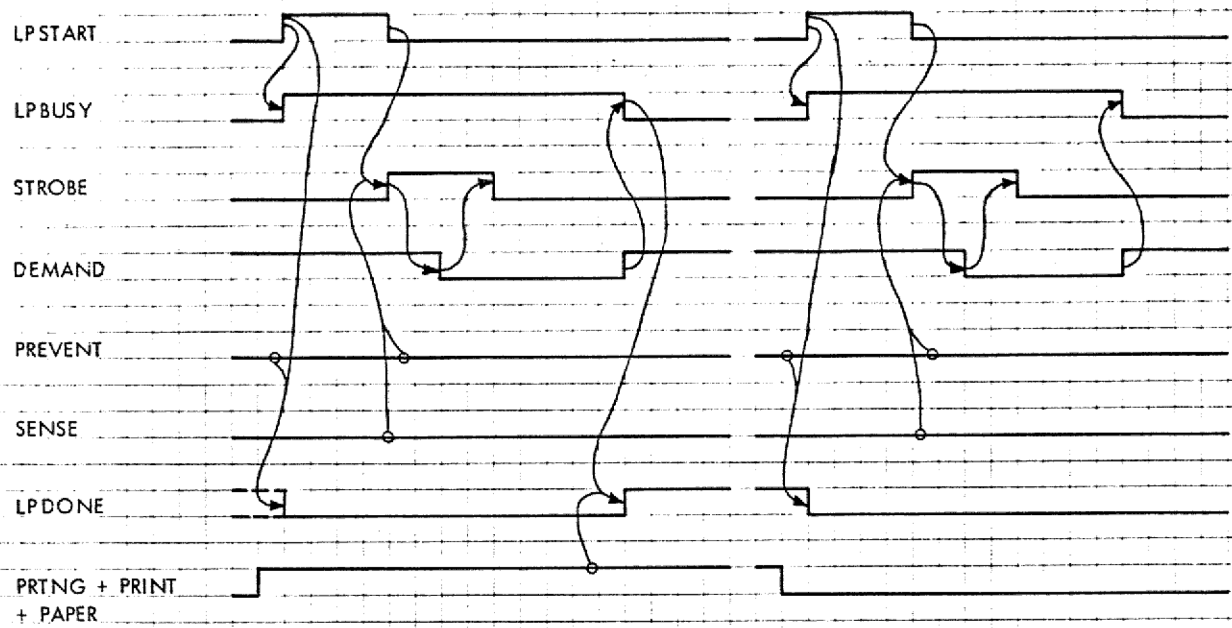
Replaced by Dwg. No.	
due to ECN	
Replaces Dwg. No.	
Design Check	
Dwg. Office Check	
Drawn by	760921 AOB
Designed by	760806 BRT

A/S REGNECENTRALEN

RC doc: VB 139

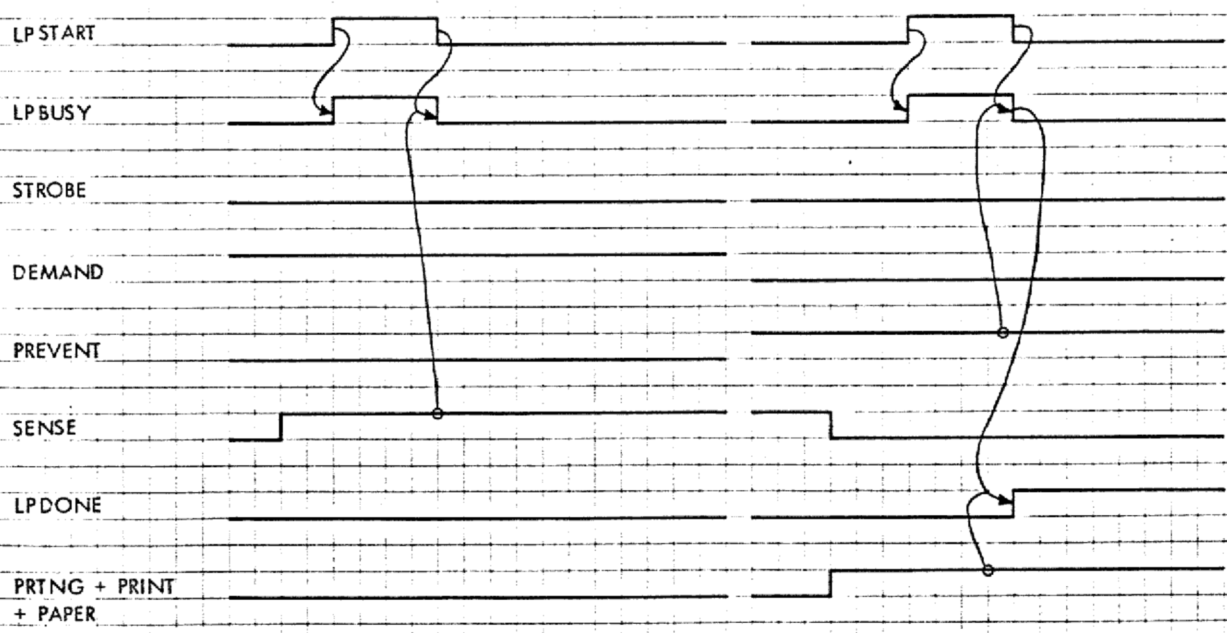
Unit LPC 307	BLOCKDIAGRAM	
Dwg. No.		

This page is intentionally left blank.



PRINT OR PAPER COMMAND

LOAD COMMAND



SENSE COMMAND

PREVENTED PRINT COMMAND

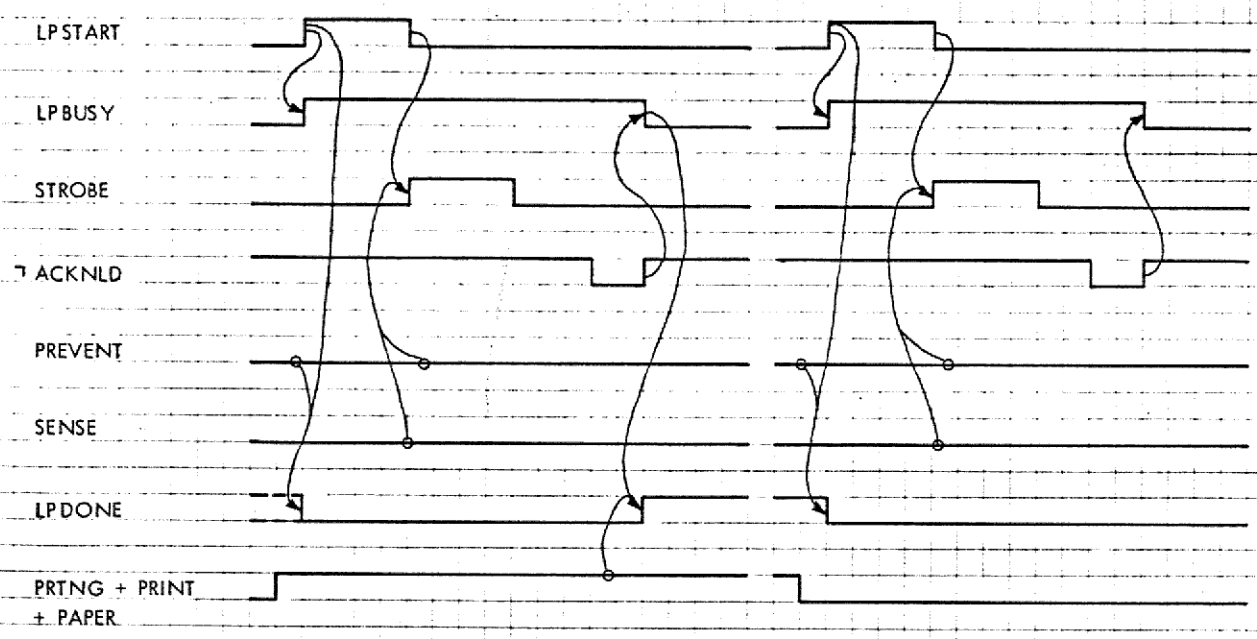
Drawn by 760811 AOB

Designed by 750411 JFA

A/S REGNECENTRALEN

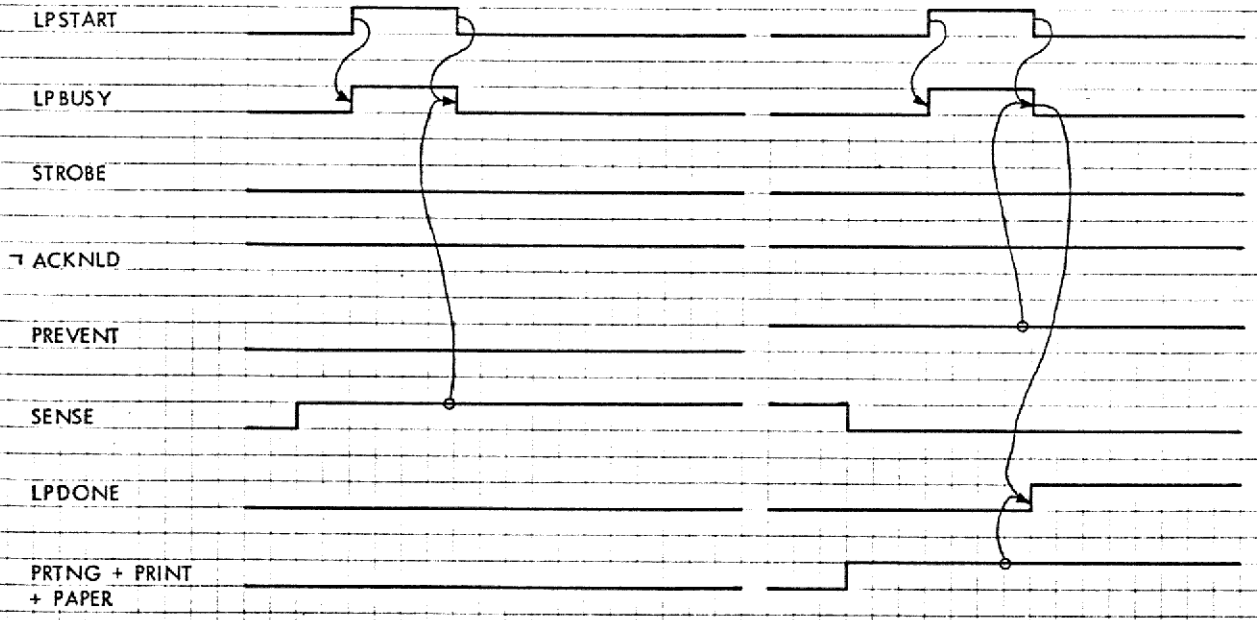
Unit LPC 306/307	TIMING OF BUSY, DONE AND STROBE WITH STRAPPINGS FOR PRINTER TYPES 1
Dwg. No. R11596	

This page is intentionally left blank.



PRINT OR PAPER COMMAND

LOAD COMMAND



SENSE COMMAND

PREVENTED PRINT COMMAND

Replaced by Dwg. No.

Due to ECH

Replaces Dwg. No.

Design Check

Dwg. Office Check

Drawn by 760311 AOB

Designed by 741001 SMN

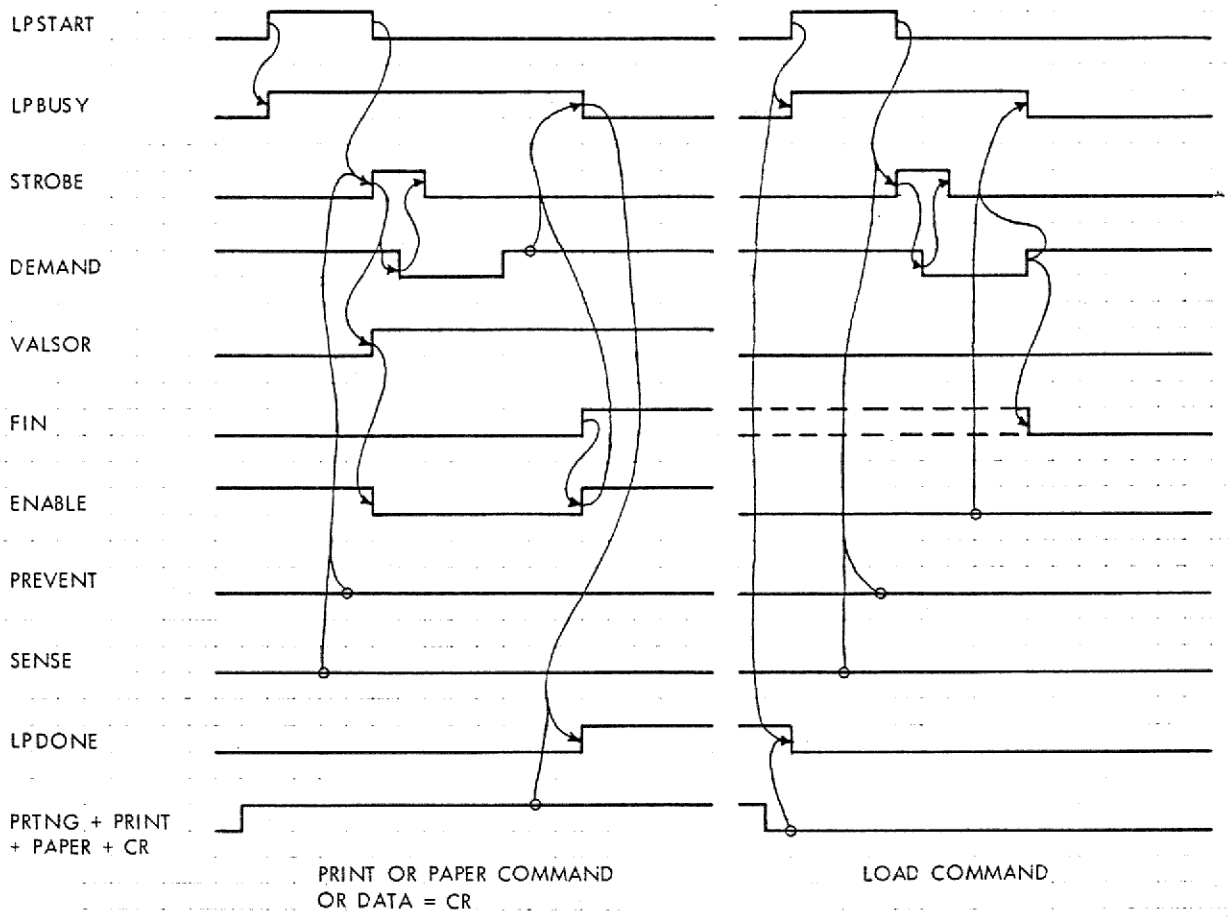
A/S REGNECENTRALEN

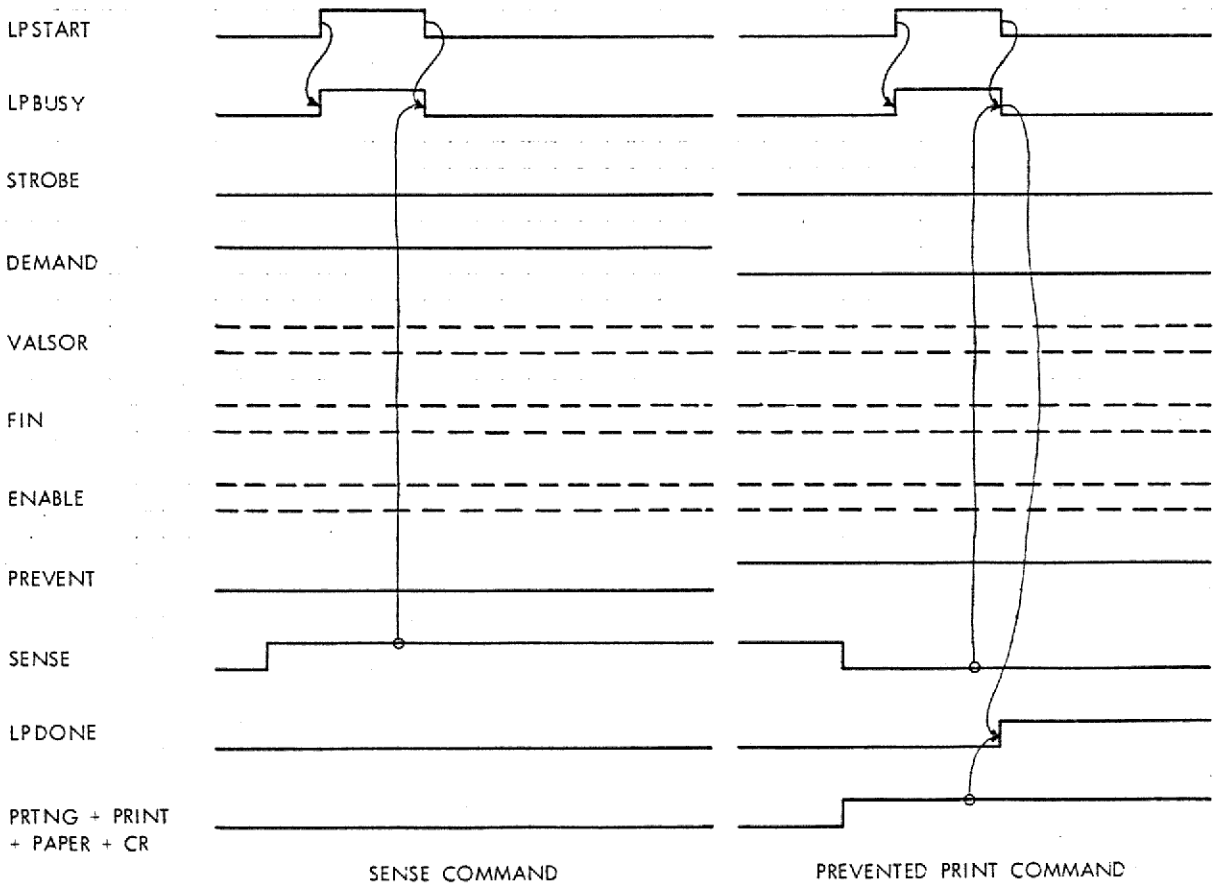
Unit LPC 306/307

Dwg. No. R11597

TIMING OF BUSY, DONE AND STROBE
WITH STRAPPINGS FOR PRINTER TYPES 2

This page is intentionally left blank.





760811 AOB

760721 BRT

LPC 306/307

R 11598

TIMING OF BUSY, DONE AND STROBE WITH STRAPPINGS FOR PRINTER TYPES 3

4. FUNCTIONAL DESCRIPTION.

4.1 Device Selection.

The device selection logic is of an RC standard type. The device code is selected by a number of switches. A logic one is obtained by turning on the belonging switch (red dot visible).

4.2 Commands and Data.

Any DOA instruction to the controller will load the command field (bits 5-7) into the command register, and the data field (bits 8-15) into the data register. The commands are decoded directly from the command register.

Data in the data register is decoded in a Read Only Memory (ROM). The ROM has a four bits output, and the first indicates data is to be rejected. This is not used at the moment. The second bit indicates data is Carriage Return to enable print out on type 3 printers. The third bit indicates data has a value greater than any of the characters used. These are converted to a Space (SP) when type 2 A printers are used. The last bit indicates one of four data: CR, LF, VT, or FF (Carriage return, Line feed, Vertical tab, or Form feed, octal 12-15). This bit is used to set done when the operation is finished, when type 1B and 1C printers are used.

Data in the data register is sent directly to a 4 to 1 multiplexer. One input for type 3 printers. One input for converting to space, and two inputs for type 1 and type 2 printers. One of these for paper commands and the other for load and print commands. The output from the data multiplexer is sent to a printer via the output drivers.

4.3 Status. 4.3

The status receivers have hysteresis on the input (Schmitt-triggers). Type 1A and 1B uses all status bits, while type 1C, type 2, and type 3 only use a part of the status bits. The output connector of the controller has a number of low and high level outputs, so any status input not used may be connected properly via the external cabling.

Status signals: disconnected, on line, ready, and printing, are latched as soon as they arrive. The status bits are updated into status register on the falling edge of busy. The VFU status memory bit is cleared as soon as it has been updated into status register. All the other status memory bits are cleared on the falling of busy, if the belonging status bit has disappeared.

The difference between the type 1 printers lies in the status signals. Type 1A and 1B have paper fault status on two different pins, and type 1B is missing the status printing. Type 1C is missing status signals paper fault, paper low (exhausted), tape 11, and printing. With type 1C printer status signal disconnected also generates paper fault and paper low.

4.4 Strobe - Demand/Acknowledge. 4.4

A DOAS-instruction to the controller with a load, print, or paper command will set the strobe flip-flop, unless the operation is prevented by a status bit. When type 1 and type 3 printers are used, the output from the strobe flip-flop is sent to the printer. When type 2 printers are used, the output from the strobe flip-flop starts a one-shot, and the one-shot output is sent to the printer. This strobe signal tells the printer that data is available on the data lines. When the printer has accepted the data, it sends a demand/acknowledge to the controller. Demand/acknowledge will clear the strobe flip-flop.

4.5 Enable Printout.

This circuit is used by type 3 printers. The strobe flip-flop will set enable flip-flop, if output is a print or paper command or a CR data. When the enable flip-flop is set, data is sent from the printer buffer to the printer control logic.

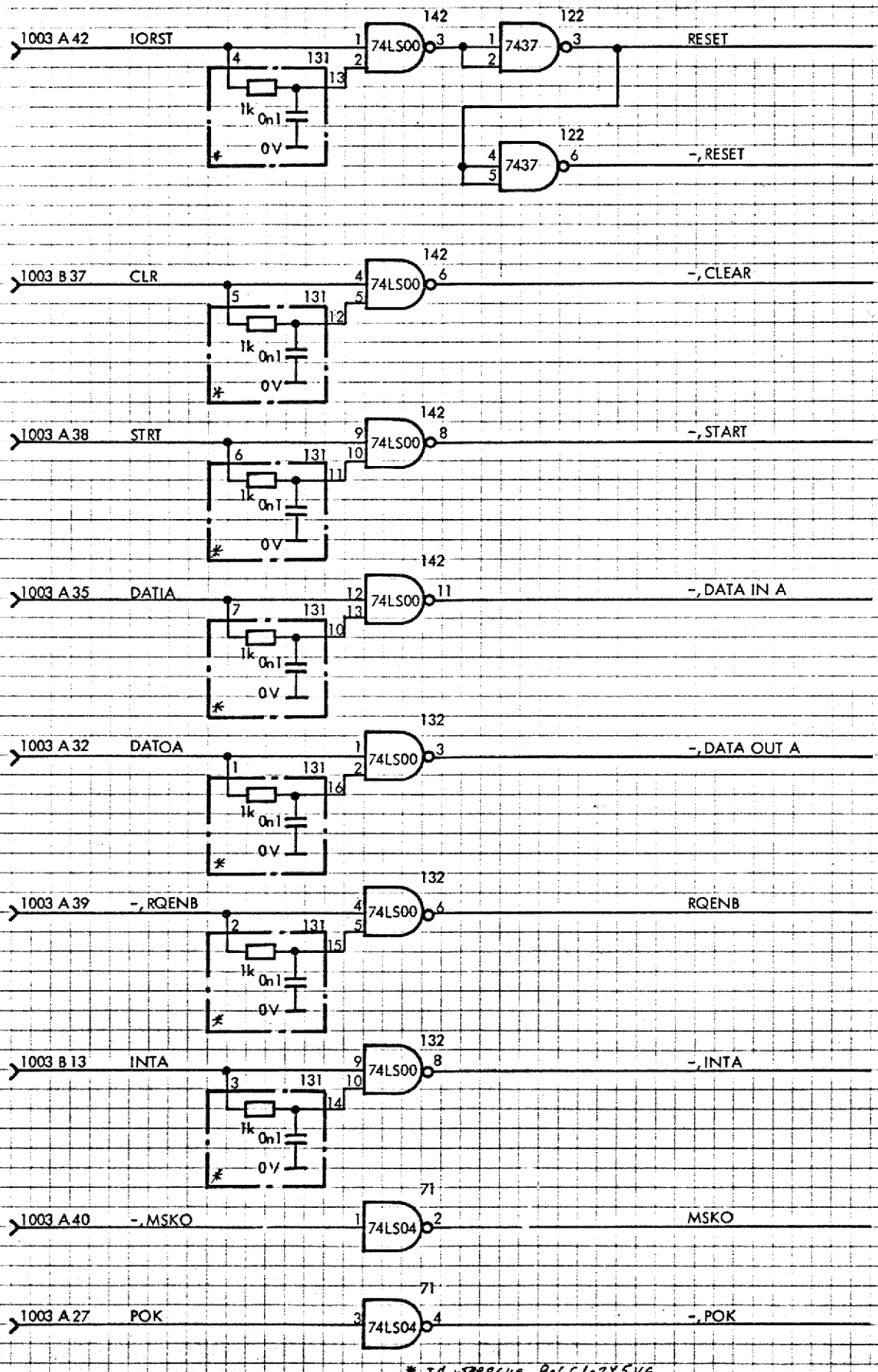
4.6 Busy, Done, and Interrupt.

Busy, done, and interrupt control logic are of standard type. Demand will clear busy immediately. Only when type 3 printers are used the clearing is delayed untill the printer has ended printing.

This page is intentionally left blank.

SIGNAL	DESTI-NATION	DESCRIPTION
IORST	1003	I/O Reset
CLR	1003	Clear device
STRT	1003	Start device
DATIA	1003	DIA instruction
DATOA	1003	DOA instruction
-, RQENB	1003	Request Enable
INTA	1003	Interrupts Acknowledge
-, MSKO	1003	Mask Out
POK	1003	Power OK
RESET	IOC1	Received CPU control signals
	LPC1	
	LPC6	
	OPC	
-, RESET	LPC3	
	LPC4	
	LPC6	
	LPC7	
	OPC	
-, CLEAR	LPC1	
	OPC	
-, START	LPC1	
	OPC	
-, DATA IN A	LPC7	
	OPC	
-, DATA OUT A	LPC4	
	OPC	
RQENB	LPC3	
	OPC	
-, INTA	LPC1	
	OPC	
MSKO	LPC3	
	OPC	

Unit		

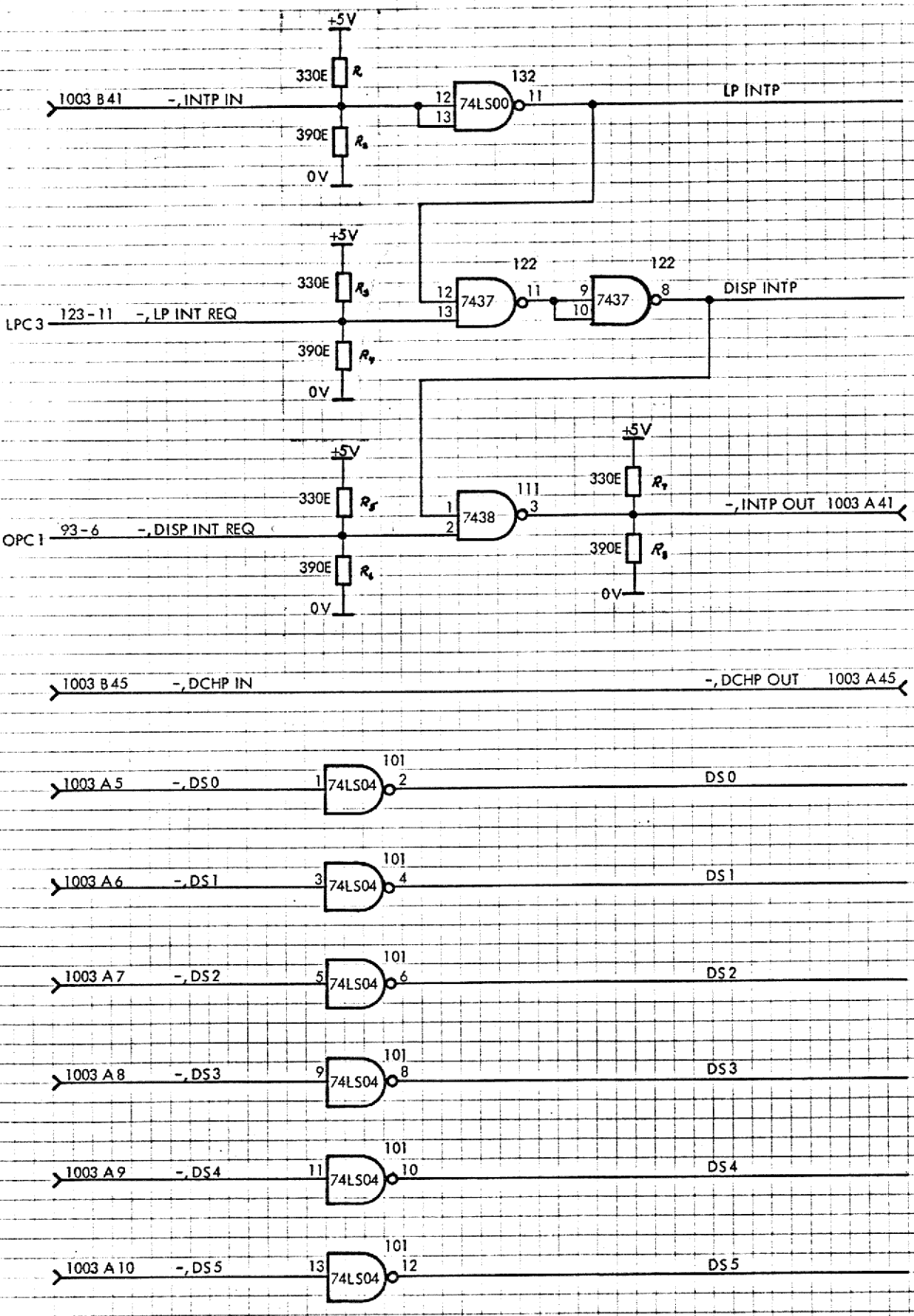


A/S REGNECENTRALEN	CONTROL SIGNAL RECEIVERS LOGIC DIAGRAM	IOC 1
Designed by 230174 JFA		
Drawn by 080376 ERC		
Dwg. Office Check		
Design Check		
Replaces Dwg. No.		
Replaced by Dwg. No. due to ECN		
Unit LPC 307		
Dwg. No. RC115		

AGF 2275

SIGNAL	DESTI-NATION	DESCRIPTION
-, INTP IN	1003	Interrupt priority chain received
LP INTP	LPC1	
DISP INTP	OPC	Not used
-, INTP OUT	1003	Interrupt priority chain passed through
-, DCHP IN	1003	Data channel priority chain received
-, DCHP OUT	1003	Data channel priority chain passed through
-, DS 0 - -, DS 5	1003	Device selection
DS 0 - DS 5	LPC1 OPC	Received device selection

Unit		



Replaced by Dwg. No.

Due to ECN

Replaces Dwg. No.

Design Check

Dwg Office Check

Drawn by 080376 ERC

Designed by 230174 JFA

A/S REGNECENTRALEN

Unit LPC 307

Dwg. No. R 12116

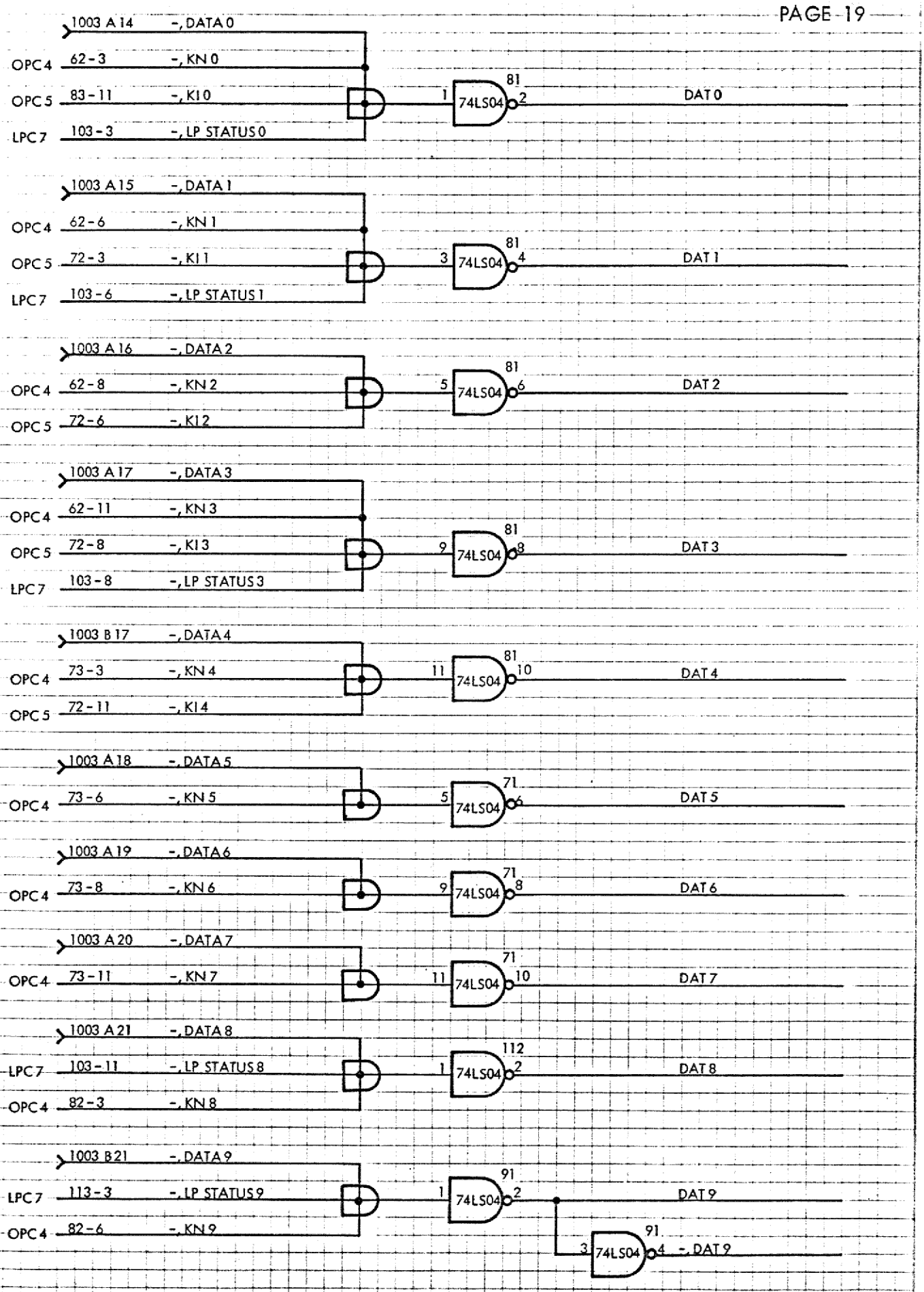
PRIORITY AND SELECT RECEIVERS
LOGIC DIAGRAM

IOC
2

AGF 2275

SIGNAL	DESTI-NATION	DESCRIPTION
-, DATA 0 - -, DATA 9	1003	CPU Databus
DAT 0 - DAT 9	LPC3 LPC4 OPC	Received Databus
-, DAT 9	OPC	

Unit		



Replaced by Dwg No.

Date Issued

Replaces Dwg No.

Design Check

Dwg Office Check

Drawn by 080376 ERC

Designed by 230174 JFA

A/S REGNECENTRALEN

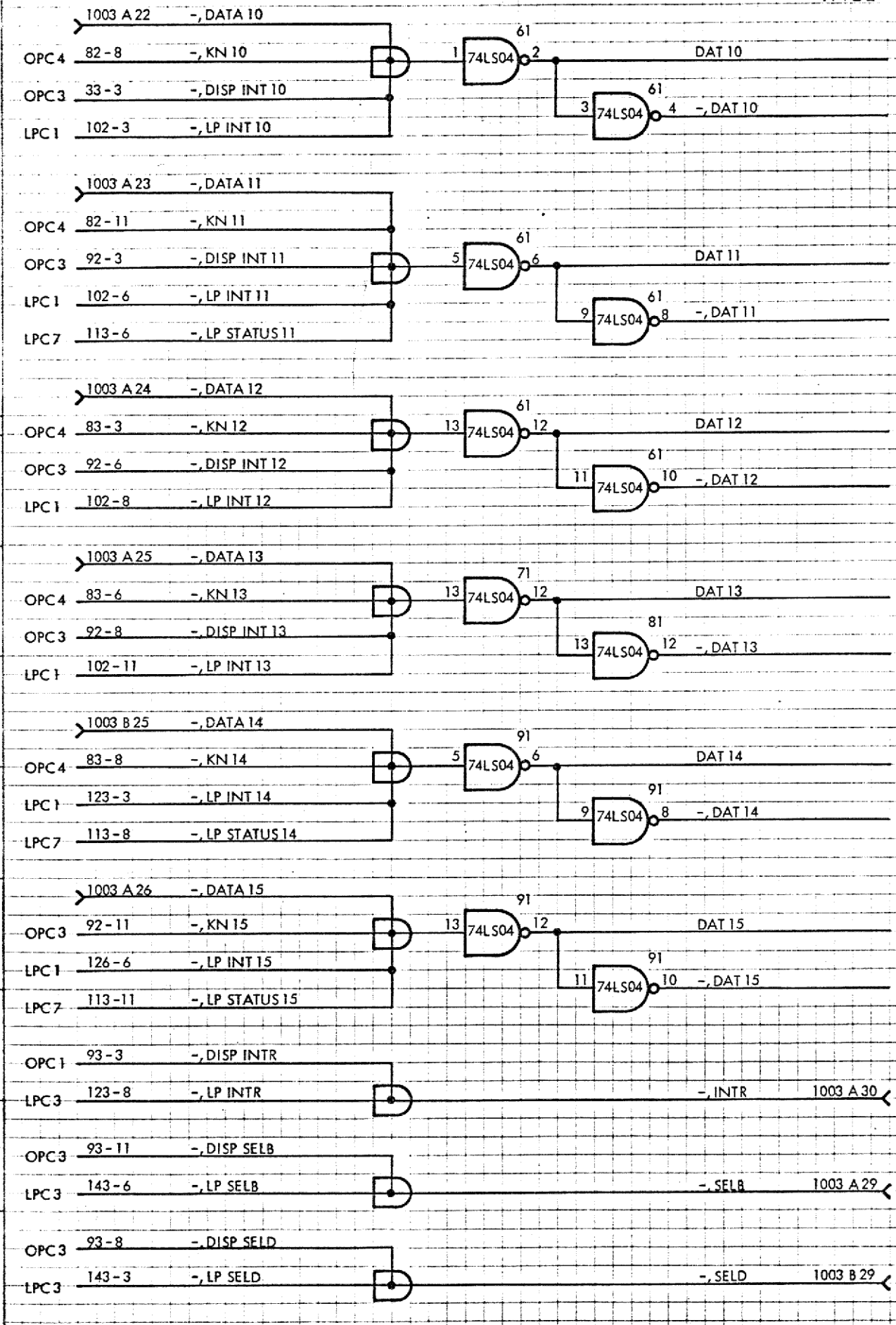
Unit LPC 307	DATA BUS LOGIC DIAGRAM	IOC 3
Dwg. No. R 1247		

AC doc. VD 202

AGF 2275

SIGNAL	DESTI-NATION	DESCRIPTION
-, DATA 10 - -, DATA 15	1003	CPU Databus
DAT 10 - DAT 15	LPC3 LPC4 OPC	Received Databus
-, DAT 10 - -, DAT 15	OPC	
-, INTR	1003	Interrupt Request
-, SELB	1003	Selected Busy
-, SELD	1003	Selected Done

Unit		



Replaced by Dwg. No.

Issue to ECN

Replaces Dwg. No.

Design Check

Dwg. Office Check

Drawn by 080376 ERC

Designed by 230174 JFA

A/S REGNECENTRALEN

Unit LPC 307

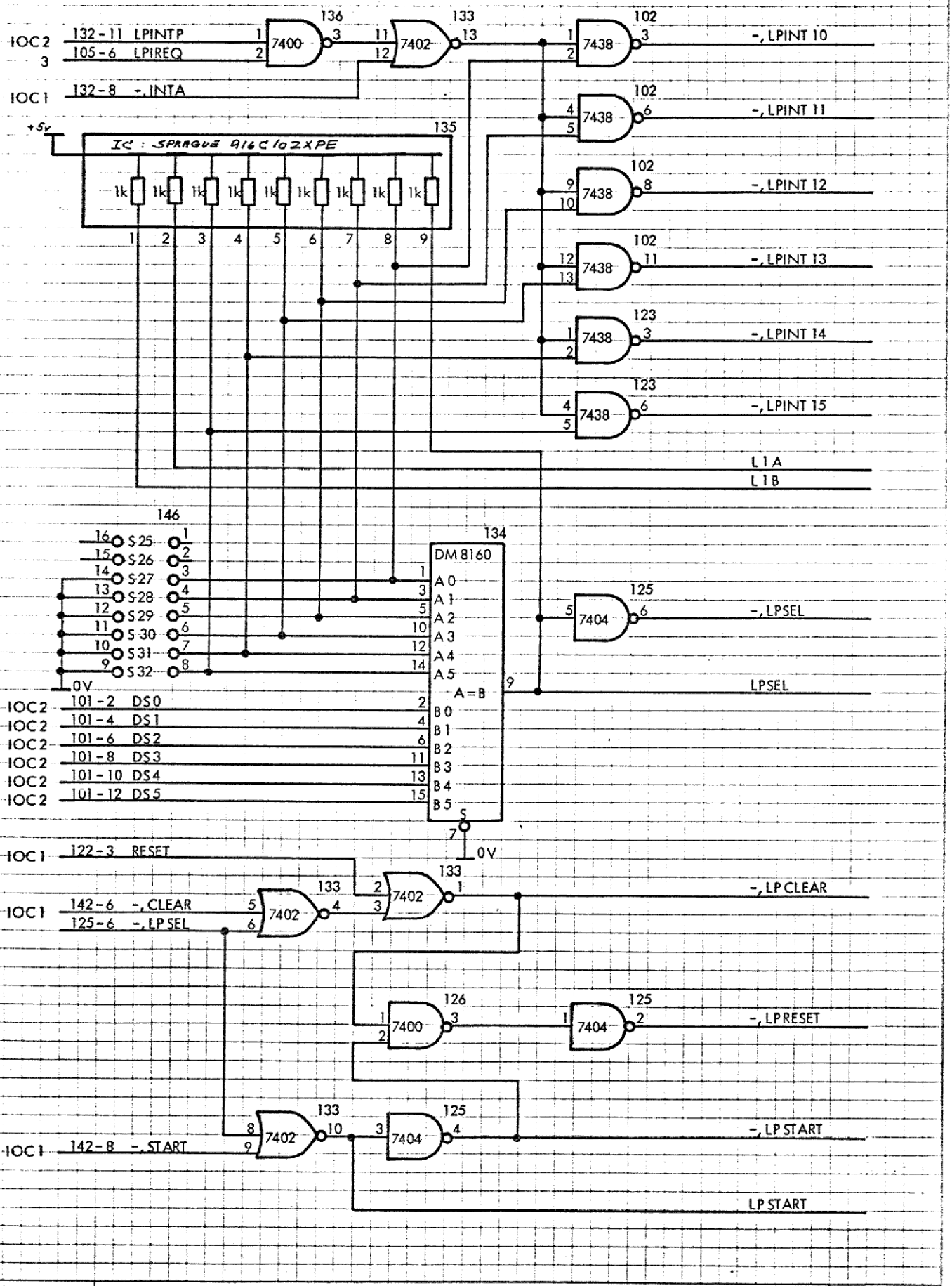
Dwg. No. R12/1

DATA BUS
LOGIC DIAGRAM

IOC
4

SIGNAL	DESTI-NATION	DESCRIPTION
-, LPINT 10 - -, LPINT 15	IOC 4	Transmitted Databus
L 1 A	LPC2 LPC6	Logic '1' Generator
L 1 B	LPC3 LPC7	
LPSEL	LPC1 LPC3	Device Selected
-, LPSEL	LPC1 LPC4 LPC7	
-, LPCLEAR	LPC1 LPC2 LPC3 LPC4	Received Device Clear
-, LPSTART	LPC1 LPC2	Received Device Start
LPSTART	LPC1 LPC3 LPC6	
-, LPRESET	LPC3 LPC6	Received Device Clear or Device Start

Unit		



Unit: LPC 307	SELECT LOGIC LOGIC DIAGRAM	LPC 1
Dwg. No.: R12119 -		

A/S REGNECENTRALEN

Designed by 060475 JFA

Drawn by 100576 ERC

Dwg. Office Check

Design Check

Replaces Dwg. No.

Date of Issue

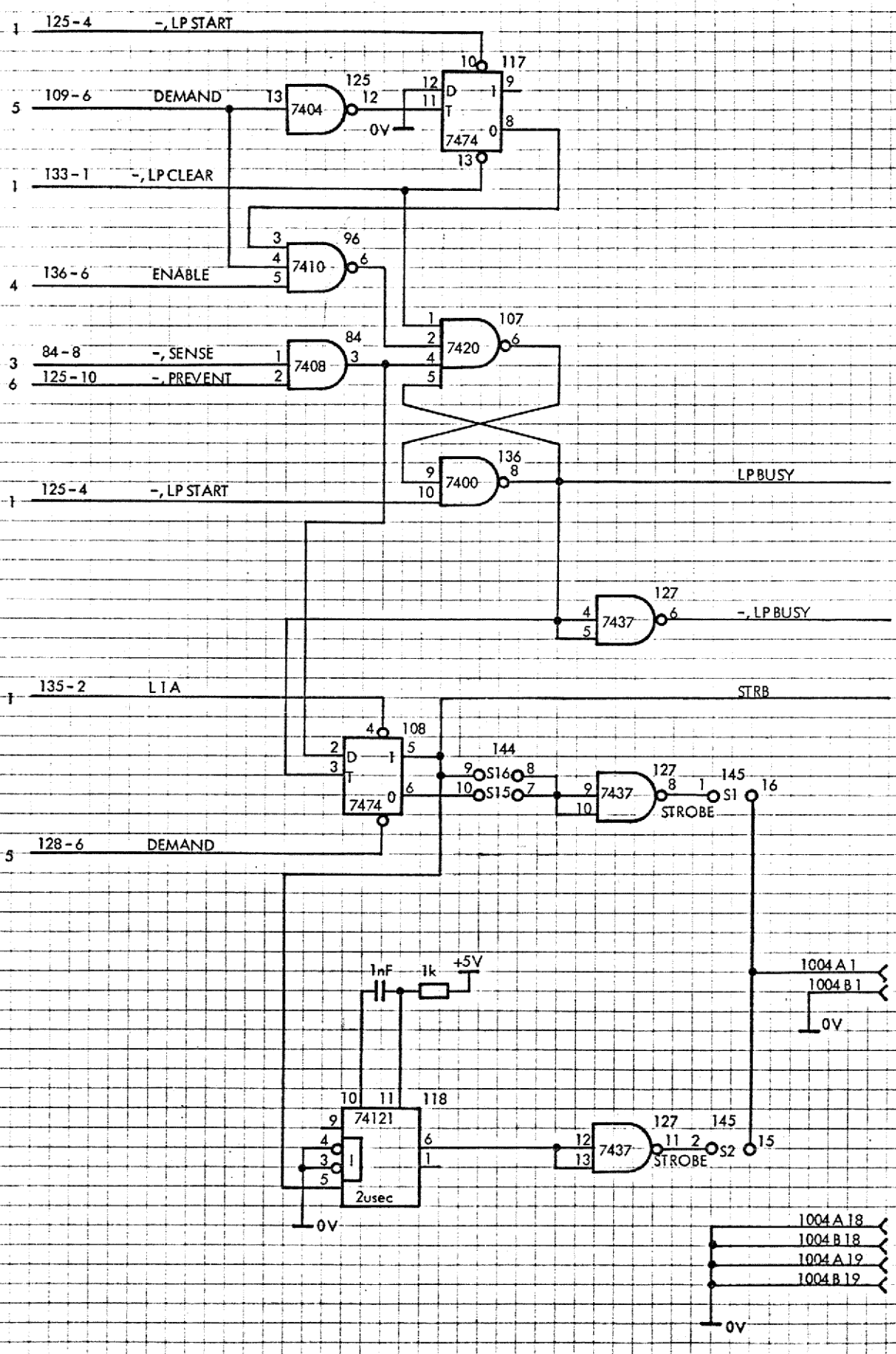
Replaced by Dwg. No.

RC doc: VB 202

AGF 2275

SIGNAL	DESTI-NATION	DESCRIPTION
LPBUSY	LPC2 LPC3	Device Busy
-, LPBUSY	LPC2 LPC3 LPC6 LPC7	
STRB	LPC2 LPC3 LPC4	Send Strobe
STROBE/S1	1004 A1	Transmitted Strobe Handshake Type
STROBE/S2	1004 A1	Transmitted Strobe Pulse Type

Unit		



Replaced by Dwg. No.

due to ECH

Replaces Dwg. No.

Design Check

Dwg. Office Check

Drawn by 100576 ERC

Designed by 030475 JFA

A/S REGNECENTRALEN

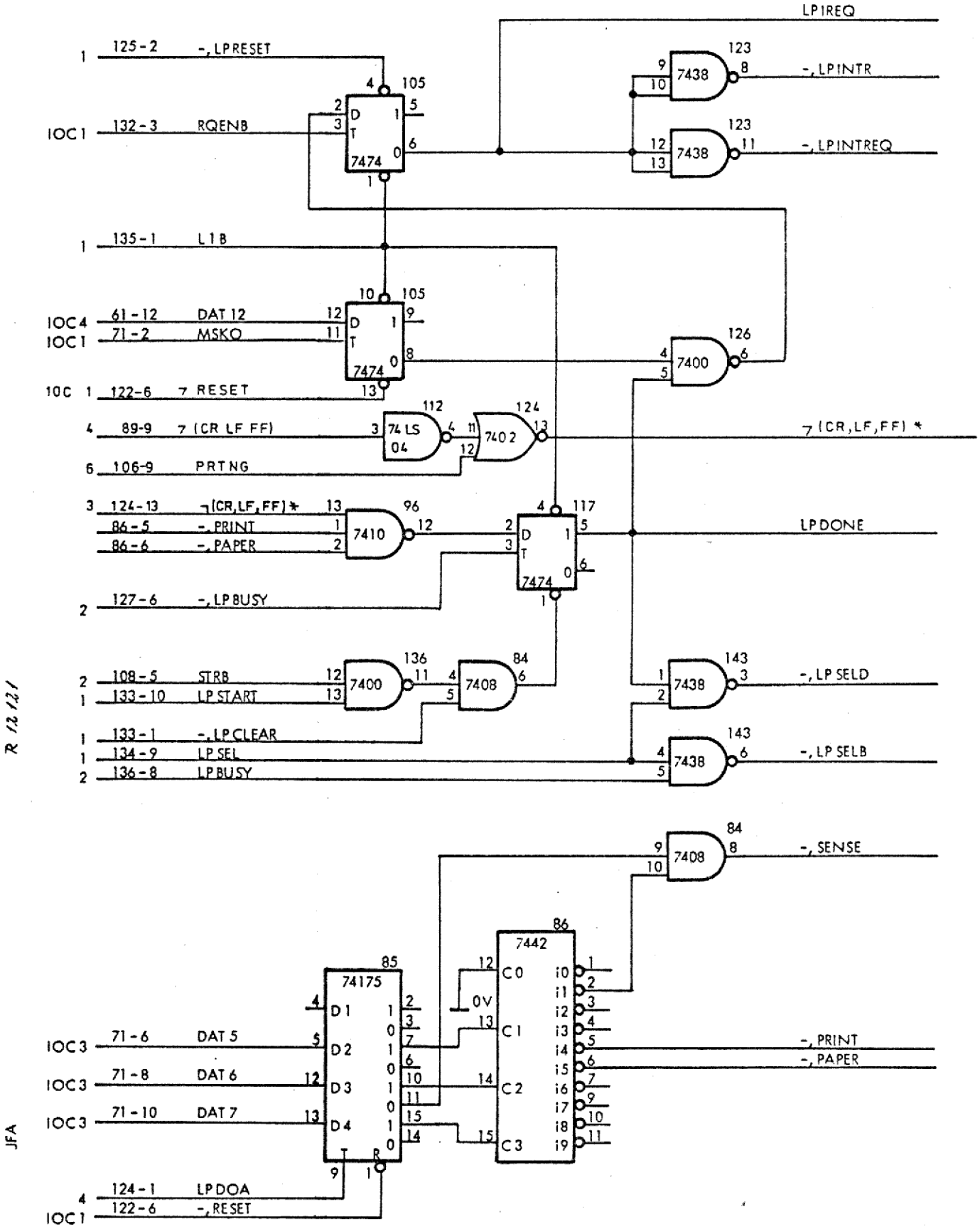
Unit LPC 307	BUSY AND STROBE LOGIC LOGIC DIAGRAM	LPC 2
Dwg. No. R 12/20		

RC doc. Vb 102

AGF 2275

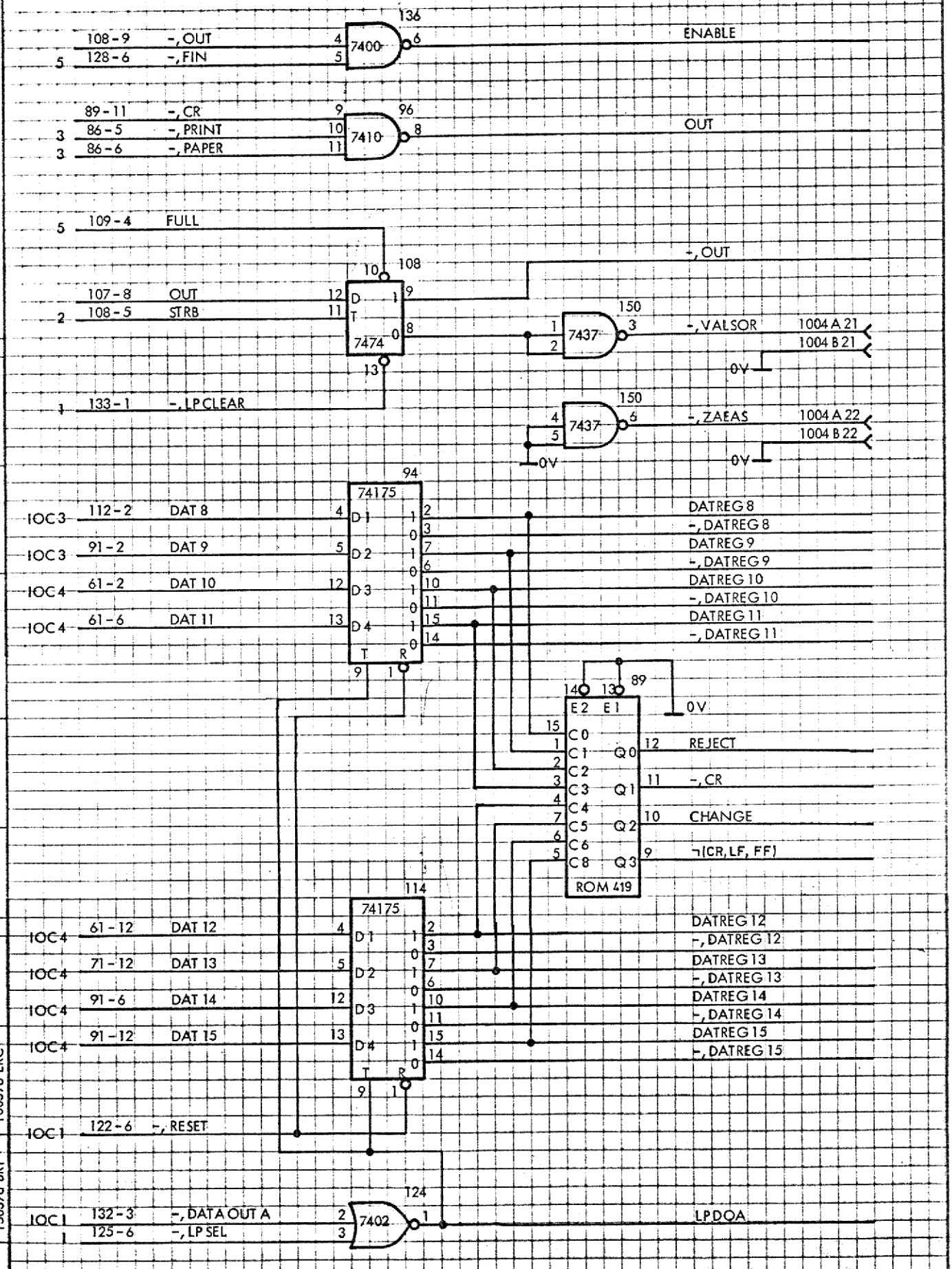
SIGNAL	DESTI-NATION	DESCRIPTION
LPIREQ	LPC1 LPC3	Device Interrupt Request
-, LPINTR	IOC4	Transmitted Interrupt Request
-, LPINTREQ	IOC2	Interrupt Priority Chain Transmitted
LPDONE	LPC3	Device Done
-, LPSELD	IOC4	Transmitted Device Done
-, LPSELB	IOC4	Transmitted Device Busy
-, SENSE	LPC2 LPC3	Sense/Load Command
-, PRINT	LPC3 LPC4	Print Command
-, PAPER	LPC3 LPC4 LPC8	Paper Command
-, (CR, LF, FF) *	LPC3	Set done if a CR, LF, FF or UT is executed

Unit		


LP IREQ
125-2 -, LP RESET
IOC 1 132-3 RQENB
105
7474
123
7438
-, LP INTR
-, LP INTREQ
135-1 L1B
IOC 4 61-12 DAT 12
IOC 1 71-2 MSKO
126
7400
10C 1 122-6 ⁊ RESET
4 89-9 ⁊ (CR LF FF)
112
74 LS 04
124
7402
⁊ (CR, LF, FF) *
6 106-9 PRT NG
3 124-13 ⁊(CR, LF, FF)*
86-5 -, PRINT
86-6 -, PAPER
96
7410
117
LP DONE
2 127-6 -, LP BUSY
2 108-5 STRB
1 133-10 LP START
136
7400
84
7408
143
7438
-, LP SELD
1 133-1 -, LP CLEAR
1 134-9 LP SEL
2 136-8 LP BUSY
-, LP SELB
-, SENSE
85
74175
86
7442
IOC 3 71-6 DAT 5
IOC 3 71-8 DAT 6
IOC 3 71-10 DAT 7
0V
-, PRINT
-, PAPER
4 124-1 LP DOA
IOC 1 122-6 -, RESET
R 12121
JFA

SIGNAL	DESTI-NATION	DESCRIPTION
ENABLE	LPC2	Enable Demand to Busy
OUT	LPC4	Make Print Out Possible
-, OUT	LPC4	Synchronized Output Enable
-, VALSOR	1004 A21	Transmitted Output Enable
-, ZAEAS	1004 A22	Transmitted Logic '1'
DATREG 8 - DATREG 15	LPC4 LPC8	Data Register
-, DATREG 8 - -, DATREG 15	LPC8	
REJECT	LPC6	Data Value to be Rejected
-, CR	LPC4	Data Value to Start Print Out
CHANGE	LPC8	Data Value to be Changed to Hardwired Value
-, (CR, LF, FF)	LPC3	Decoding of CR, LF, FF in order to set done when busy goes low.
LPDOA	LPC3 LPC4	Received Device DATOA

Unit		



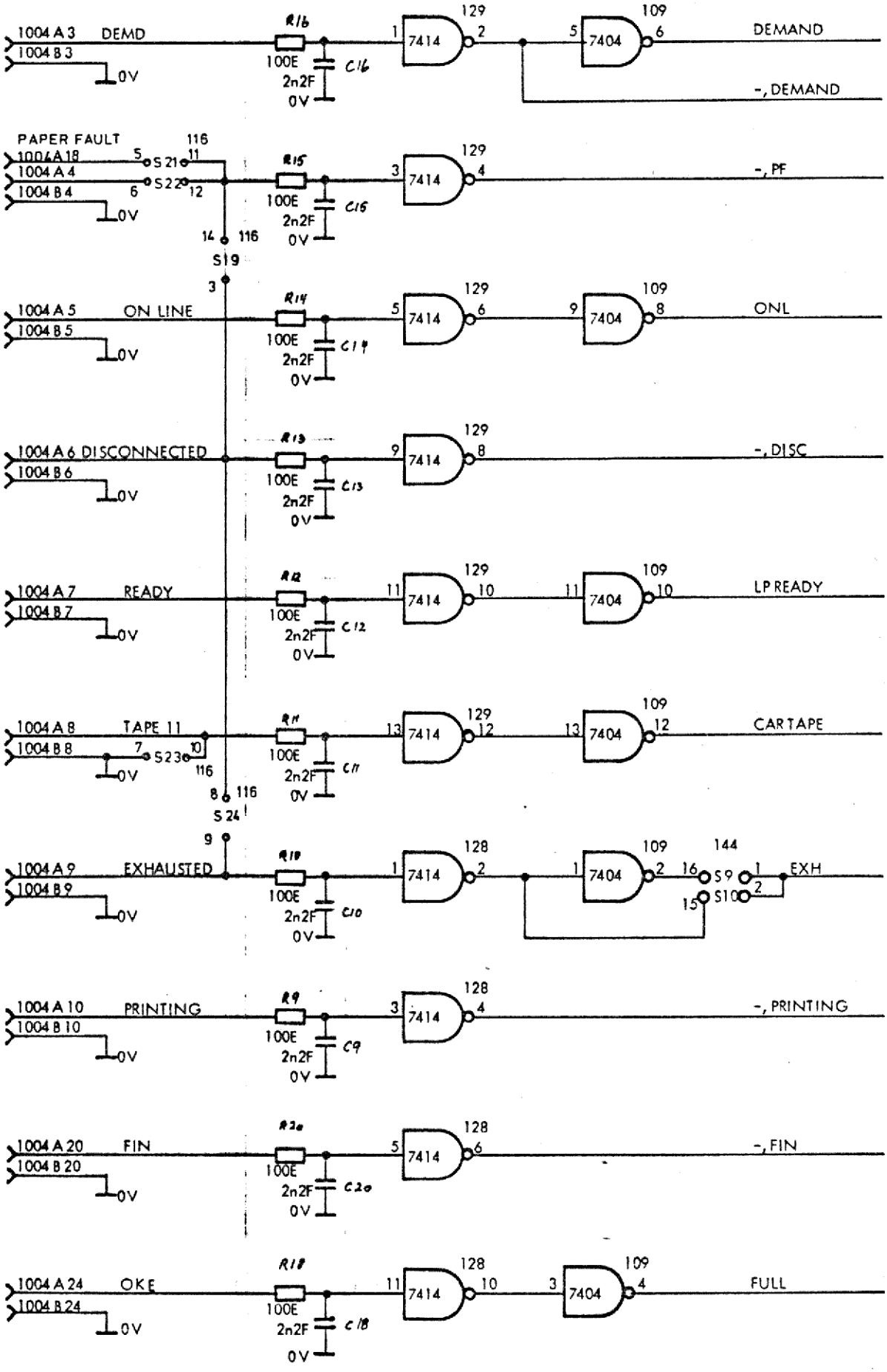
A/S REGRNC	Unit LPC 307	DATA REGISTER LOGIC DIAGRAM	LPC 4
Designed by 150376 BRT	Dwg. No. R12122		
Drawn by 100576 ERC			

Replaced by Dwg. No.
Replaces Dwg. as Dwg. No. due to ECN
Design Check
Drafting Check
Dwg. Office Check

AGF 2275

SIGNAL	DESTI-NATION	DESCRIPTION
DEMD	1004 A3	Demand/Acknowledge
DEMAND	LPC2	Received Demand/Acknowledge
-, DEMAND	LPC5 LPC6	
PAPER FAULT	1004 A4	Paper Fault Status
-, PF	LPC7	Received Paper Fault Status
ON LINE	1004 A5	On Line Status
ONL	LPC6	Received On Line Status
DISCONNECTED	1004 A6	Disconnected Status
-, DISC	LPC6	Received Disconnected Status
READY	1004 A7	Ready Status
LPREADY	LPC6	Received Ready Status
TAPE 11	1004 A8	VFU Channel 11 Status
CAR TAPE	LPC6	Received VFU Channel 11 Status
EXHAUSTED	1004 A9	Exhausted/Paper Out Status
EXH	LPC7	Received Exhausted/Paper Out Status
PRINTING	1004 A10	Printing Status
-, PRINTING	LPC6	Received Printing Status
FIN	1004 A20	Print Out Ended Status
-, FIN	LPC4	Received Print Out Ended Status
OKE	1004 A24	Buffer Full Status
FULL	LPC4	Received Buffer Full Status

Unit		

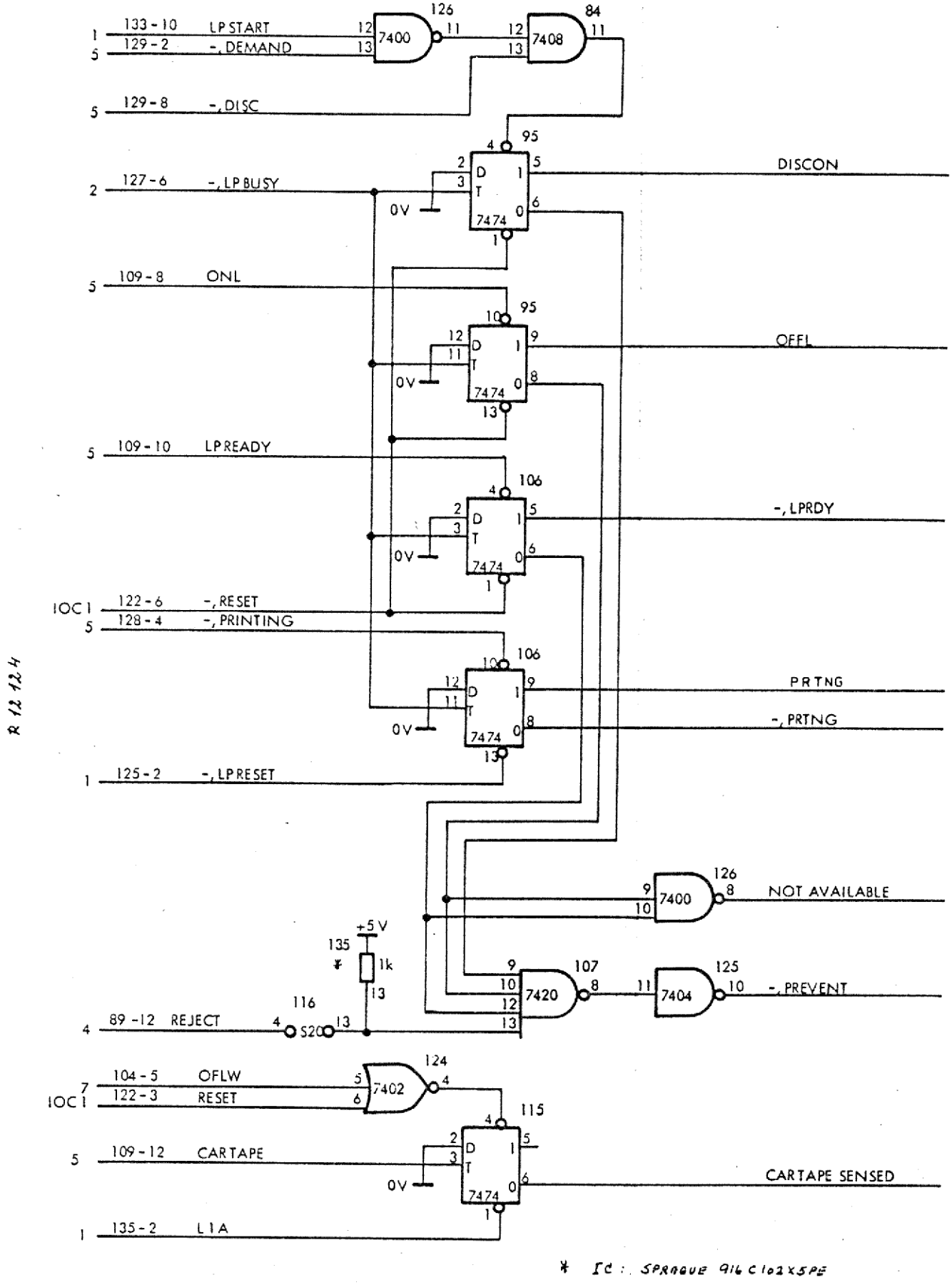


R 12133

060475 JFA 100576 ERC

SIGNAL	DESTI-NATION	DESCRIPTION
DISCON	LPC7	Disconnected Status Memory
OFFL	LPC7	Off line Status Memory
-, LPRDY	LPC7	Ready Status Memory
PRTNG	LPC3	Printing Status Memory
NOT AVAILABLE	LPC7	Printer Hard Error Status
-, PREVENT	LPC2	Print Out Rejected
CAR TAPE SENSED	LPC7	VFU Tape Memory

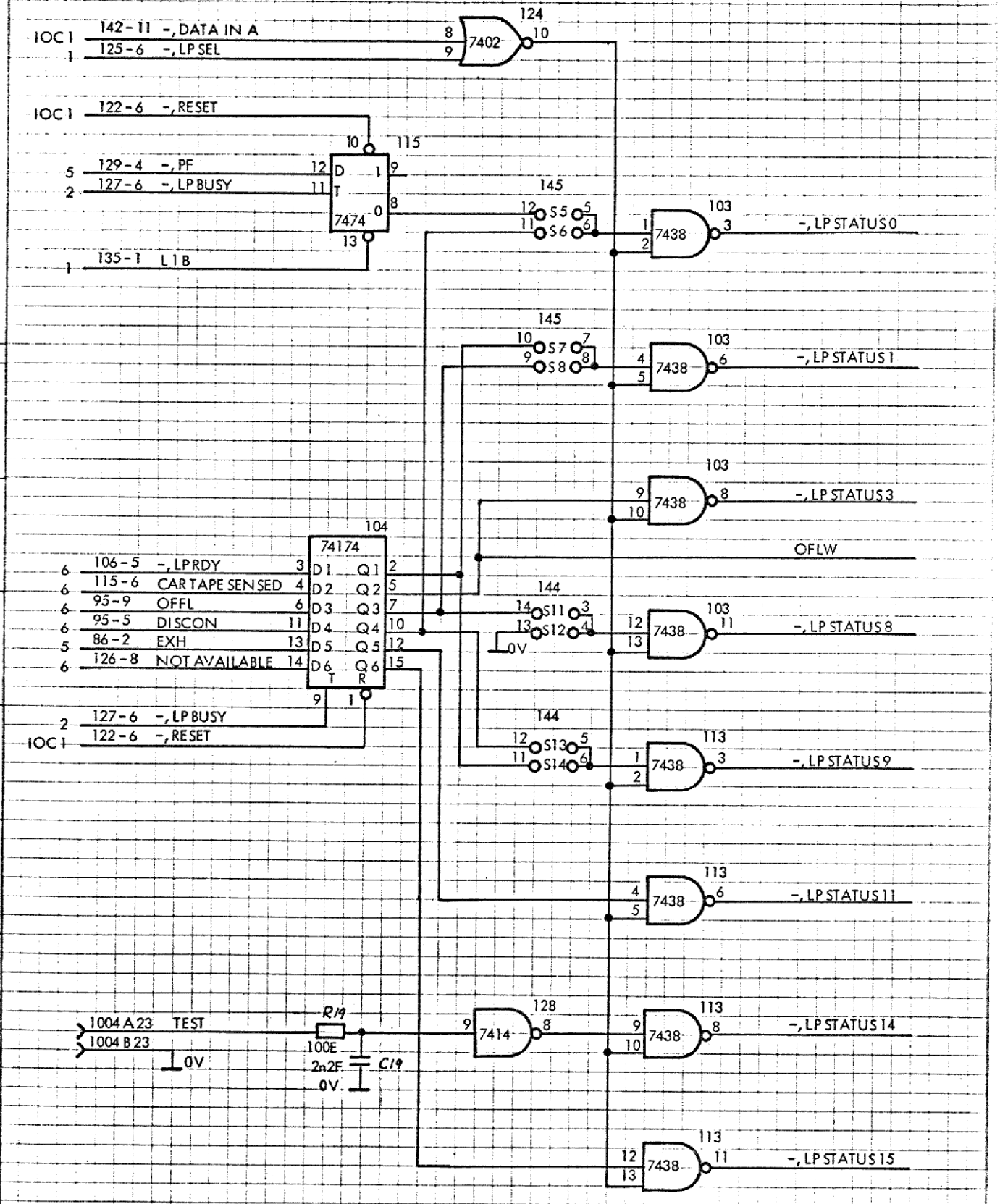
Unit		


133-10 LP START
129-2 -, DEMAND
7400
126
7408
84
129-8 -, DISC
95
127-6 -, LP BUSY
DISCON
0V
7474
109-8 ONL
OFFL
109-10 LP READY
-, LPRDY
106
IOC 1
122-6 -, RESET
128-4 -, PRINTING
PRTNG
-, PRTNG
125-2 -, LP RESET
NOT AVAILABLE
+5 V
135 *
1k
7420
107
7404
125
-, PREVENT
116
89-12 REJECT
S20
104-5 OFLW
122-3 RESET
7402
124
115
109-12 CARTAPE
CARTAPE SENSED
135-2 L1A
* IC : SPRAGUE 916C102X5PE

R 12 12 4

SIGNAL	DESTI-NATION	DESCRIPTION
-, LPSTATUS 0 - -, LPSTATUS 15		Transmitted Databus
-, LPSTATUS 0	IOC3	Paper Fault or Disconnected Status
-, LPSTATUS 1	IOC3	Ready or Off Line Status
-, LPSTATUS 3	IOC3	VFU Channel 11 Status
-, LPSTATUS 8	IOC3	Off Line or Logic '0' Status
-, LPSTATUS 9	IOC3	Disconnected or Ready Status
-, LPSTATUS 11	IOC4	Exhausted/Paper Out Status
-, LPSTATUS 14	IOC4	Test Status
-, LPSTATUS 15	IOC4	Not Available Status

Unit		



Unit	LPC 307
Dwg. No.	R/2125
	STATUS REGISTER LOGIC DIAGRAM
	LPC 7

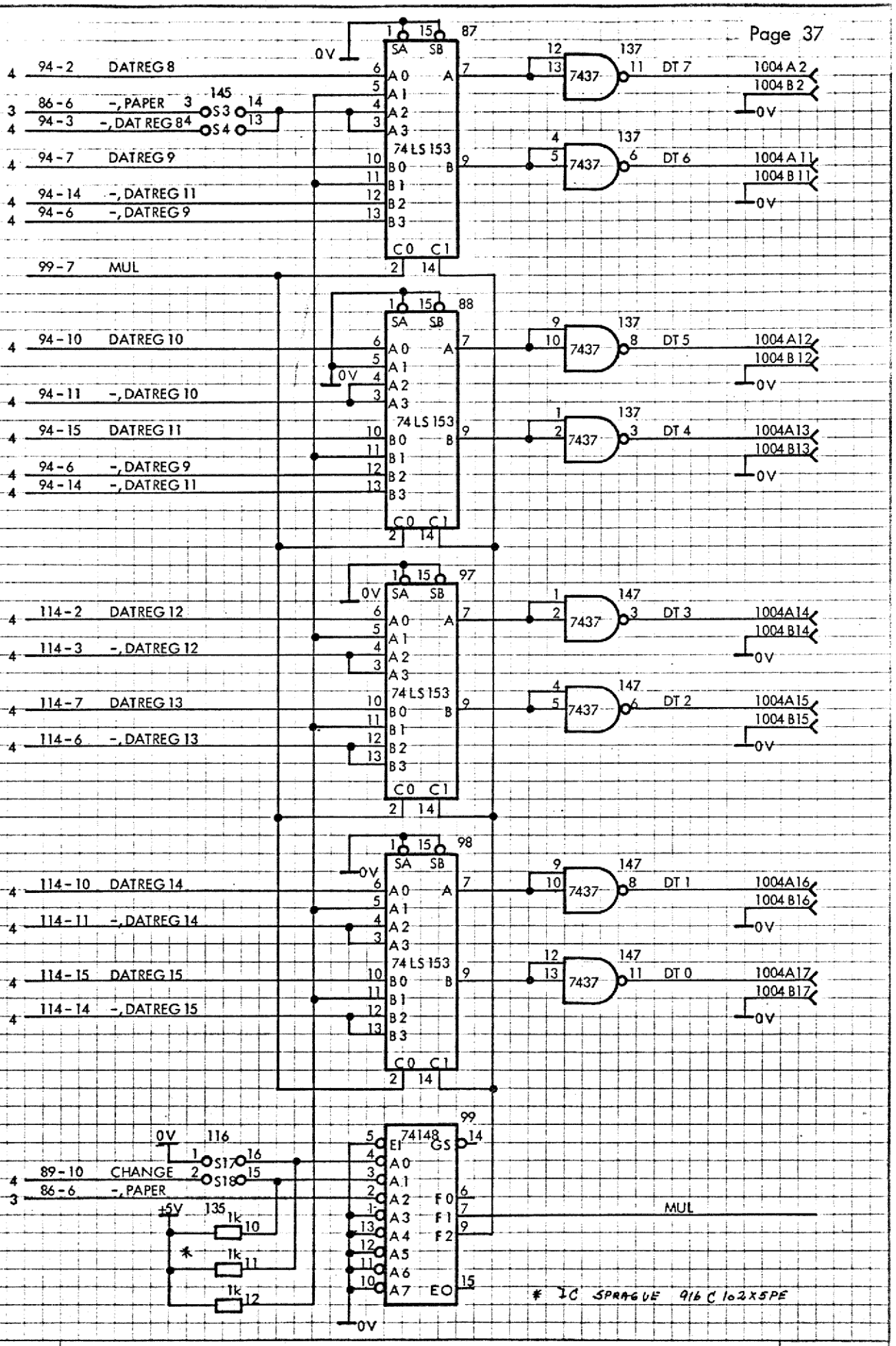
A/S REGNECENTRALEN
Designed by 060476 JFA
Drawn by 100576 ERC
Dwg Office Check
Design Check
Replaces Dwg. No
due to ECN
Replaced by Dwg No

RC doc V8.30

AGF 2275

SIGNAL	DESTI-NATION	DESCRIPTION
DT 0 - DT 7	1004	Transmitted Data
MUL	LPC8	Most Significant Bit to Data Multiplexer

Unit		



Replaced by Dwg. No.

due to ECN

Replaces Dwg. No.

Design Check

Dwg. Office Check

Drawn by 070776 ERC

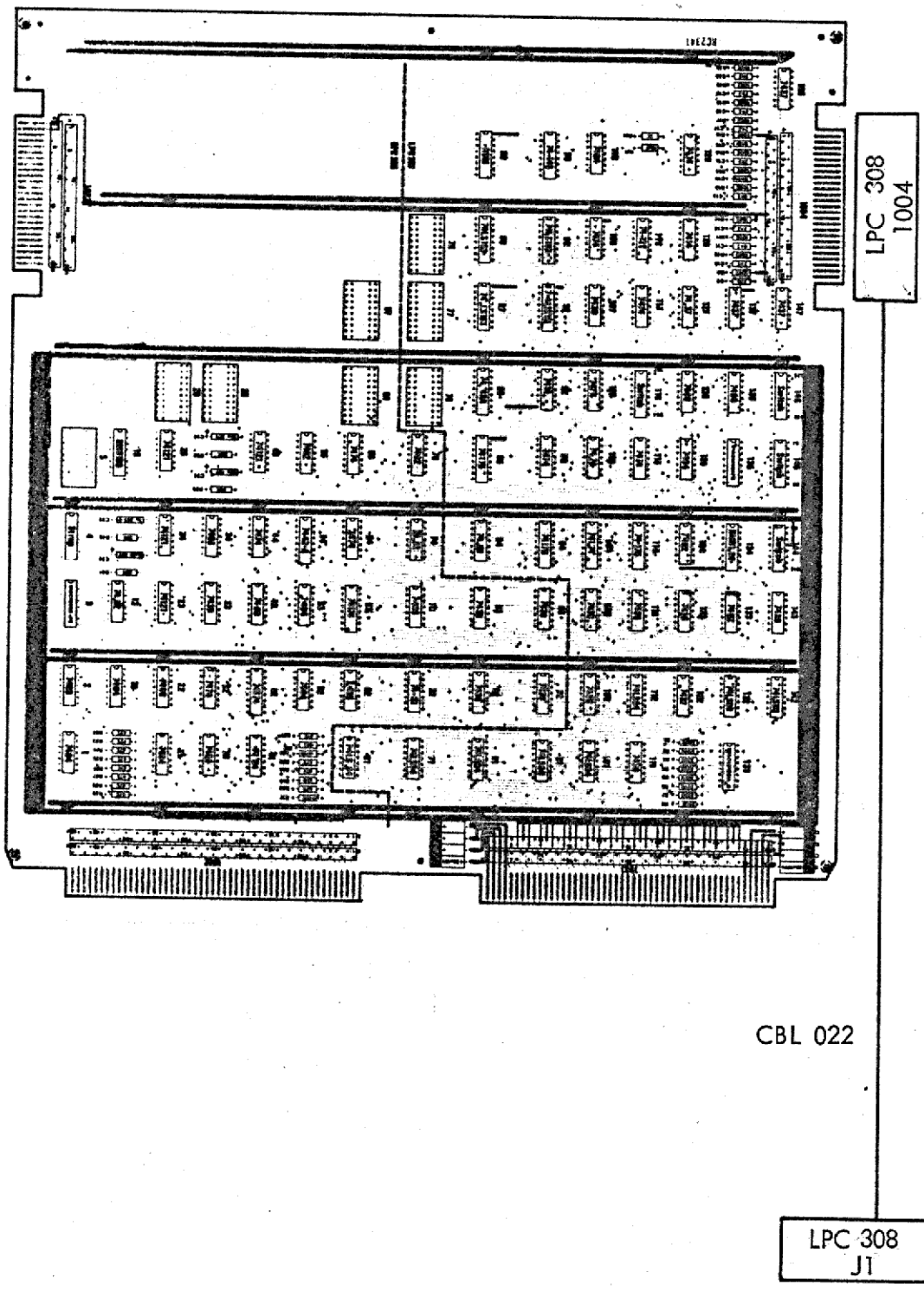
Designed by 160676 BTR

A/S REGNECENTRALEN

Unit LPC 307	OUTPUT SELECTOR AND DRIVER LOGIC DIAGRAM	LPC 8
Dwg. No. R 12/126		

AGF 2275

This page is intentionally left blank.


LPC 308
1004
CBL 022
LPC 308
J1

7. SWITCH SET THINGS.

7.1 Description.

The LPC 308 printer controller is prepared for use with different printer types. Some of the printers are identically, from a controller point of view, and some differs in details. A number of switches has been introduced in the controller, to make the use of different printer types possible. The switches are divided into two groups, one group covering the printer type used, and the other group covering the device code. The switches physically location on the printed circuit board are outlined on the Assembly Drawing page 39. A switch is closed when the red dot is visible, and a switch is open when the white dot is visible.

7.2 Printer Type Switch Settings.

Pos 145

Switch	Printer Type		
	1	2	3
S1	closed	open	closed
S2	open	closed	open
S3	closed	open	open
S4	open	closed	closed
S5	closed	open	open
S6	open	closed	closed
S7	closed	open	open
S8	open	closed	closed

Pos 144

S9	closed	closed	open
S10	open	open	closed
S11	closed	open	open
S12	open	closed	closed
S13	closed	open	open
S14	open	closed	closed
S15	closed	open	open
S16	open	open	closed

Pos 116

Switch	Printer Type 1A	1B	1C	2A	2B	3
S17	open	open	open	open	open	closed
S18	open	open	open	closed	open	open
S19	open	open	closed	open	open	open
S20	open	open	open	open	open	closed
S21	open	closed	closed	open	open	open
S22	closed	open	open	closed	closed	closed
S23	open	open	closed	open	open	open
S24	open	open	closed	open	open	open

7.3 Device Code Switch Settings. 7.3

The device codes used are (octal values):

	Printer Type 1	2	3
First controller	17	37	37
Second controller	57	67	67

Pos 146

Switch	Device Code 17	37	57	67
S25		not used		
S26		not used		
S27	closed	closed	open	open
S28	closed	open	closed	open
S29	open	open	open	closed
S30	open	open	open	open
S31	open	open	open	open
S32	open	open	open	open

This page is intentionally left blank.

Printer Type 1

Connector 1004	Gen. addr.	Signal Name	Connector LPC 307-J1	Connector 1004	Gen. addr.	Signal Name	Connector LPC 307-J1
A 1		STROBE	1	A14		DT3	26
B 1		0V	2	B 14		0V	25
A 2		PAPER INST	3	A15		DT2	24
B 2		0V	4	B 15		0V	23
A 3		DEMND	5	A16		DT1	22
B 3		0V	6	B 16		0V	21
A 4		PAPER FAULT 1)	7	A17		DT0	20
B 4		0V	8	B 17		0V	19
A 5		ON LINE	9	A18		PAPER FAULT 2)	18
B 5		0V	10	B 18		0V	36
A 6		DISCONNECTED	11	A19		0V	37
B 6		0V	12	B 19		0V	38
A 7		READY	13	A20		-, TEST	39
B 7		0V	14	B 20		0V	40
A 8		TAPE (7: 11) 1) 2)	15	A21			41
B 8		0V	16	B 21			42
A 9		EXHAUSTED 1) 2)	17	A22			43
B 9		0V	35	B 22			44
A10		PRINTING 1)	34	A23			45
B 10		0V	33	B 23			46
A11		DT6	32	A24			47
B 11		0V	31	B 24			48
A12		DT5	30	A25			49
B 12		0V	29	B 25			50
A13		DT4	28			Chassis	51
B 13		0V	27			Chassis	52

1) type 1A 2) type 1B

This page is intentionally left blank.

Printer Type 2

Connector 1004	Gen. addr.	Signal Name	Connector LPC 307-J1	Connector 1004	Gen. addr.	Signal Name	Connector LPC 307-J1
A 1		-, STROBE	1	A14		DT3	26
B 1		0V	2	B 14		0V	25
A 2		DT7	3	A15		DT2	24
B 2		0V	4	B 15		0V	23
A 3		DEMND	5	A16		DT1	22
B 3		0V	6	B 16		0V	21
A 4		PAPER FAULT	7	A17		DT0	20
B 4		0V	8	B 17		0V	19
A 5		ON LINE	9	A18		0V	18
B 5		0V	10	B 18		0V	36
A 6		DISCONNECTED	11	A19		0V	37
B 6		0V	12	B 19		0V	38
A 7		READY	13	A20		-, TEST	39
B 7		0V	14	B 20		0V	40
A 8			15	A21			41
B 8			16	B 21			42
A 9		EXHAUSTED	17	A22			43
B 9		0V	35	B 22			44
A10		PRINTING	34	A23			45
B 10		0V	33	B 23			46
A11		DT6	32	A24			47
B 11		0V	31	B 24			48
A12		DT5	30	A25			49
B 12		0V	29	B 25			50
A13		DT4	28			Chassis	51
B 13		0V	27			Chassis	52

This page is intentionally left blank.

Connector	Gen. addr.	Signal Name LPC 307 - LPT 719	Connector	Connector	Gen. addr.	Signal Name LPC 307 - LPT 719	Connector
A 1	127-8	STROBE - -,SE	1	A14	147-3	DT3 - -,ENT4	26
B 1		0V	2	B 14		0V	25
A 2	137-11	DT7 - -,ENT8	3	A15	147-6	DT - -,ENT3	24
B 2		0V	4	B 15		0V	23
A 3		DEMAND - -,ACK	5	A16	147-8	DT1 - -,ENT2	22
B 3		0V	6	B 16		0V	21
A 4		PAPER FAULT - -,ZAEAS	7 #	A17	147-11	DT0 - -,ENT1	20
B 4		NOT USED	8	B 17		0V	19
A 5		ON LINE - RELSEL	9	A18		0V	18
B 5		0V	10	B 18		0V	36
A 6		DISCONNECTED - 0V	11	A19		0V	37
B 6		0V	12	B 19		0V	38
A 7		READY - -,ZAEAS	13 #	A20		FIN - FIN	39
B 7		NOT USED	14	B 20		0V	40
A 8		TAPE 11 - -,ZAEAS	15 #	A21	150-3	-,VALSOR - -,VALSOR	41 *
B 8		NOT USED	16	B 21		0V	42
A 9		EXHAUSTED - -,FINPAP	17	A22	150-6	-,ZAEAS - -,ZAEAS/-,ZAS	43 #
B 9		0V	35	B 22		0V	44
A10		PRINTING - -,VALSOR	34 *	A23		TEST - -,ZAEAS	45 #
B 10		0V	33	B 23		0V	46
A11	137-6	DT6 - -,ENT7	32	A24		FULL - OKE	47
B 11		0V	31	B 24		0V	48
A12	137-8	DT5- -,ENT6	30	A25		NOT USED	49
B 12		0V	29	B 25		NOT USED	50
A13	137-3	DT4 - -,ENT5	28			Chassis	51
B 13		0V	27			Chassis	52

9. ROM CONTENTS.

ROM 422	PIN			
Address (octal)	9	10	11	12
0 - 11	1	1	1	1
12	0	1	1	1
13	0	1	1	1
14	0	1	1	1
15	0	1	0	1
16 - 137	1	1	1	1
140 - 176	1	0	1	1
177	1	1	1	1
200 - 377	1	0	1	1

R12173

MOJ

LPC307:

Pos 89: ROM419

RESISTORS:

R 1 to R 8
2% 0,4W Metalfilm

R 9 to R 40
5% 1/8W Carbonresistors

Pos 146 (S25 - S32):

LPC Device Code Selection
(Red dot = logic 1)

Pos 145 (S 1 - S 8) and
Pos 146 (S 9 - S 16) and
Pos 116 (S 17 - S 24):

Printer Type Selection

Pos 76, 77 and 78:

Spare

OPC303:

Pos 4 STRAP:

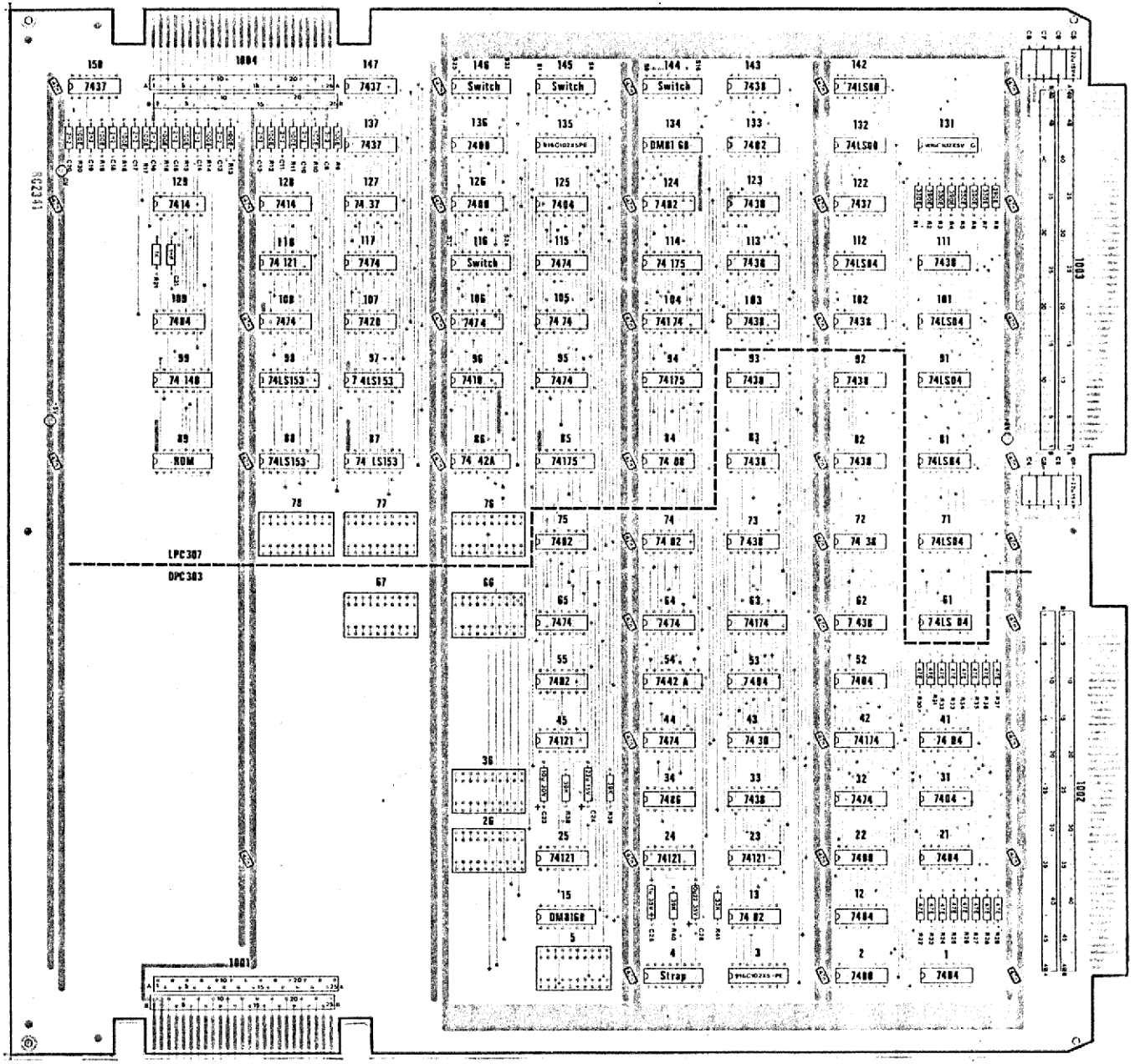
OPC Device Code Selection

(Strap = logic 0
No Strap = logic 1)

Pos 5, 26, 36, 66 and 67:

Spare

29/9-77



PCB ASSEMBLY DRAWING RC 2341

RETURN LETTER

Title: TECHNICAL MANUAL, LPC 308 RCSL No.: 44-RT 1946

A/S Regnecentralen af 1979/RC Computer A/S maintains a continual effort to improve the quality and usefulness of its publications. To do this effectively we need user feedback, your critical evaluation of this manual.

Please comment on this manual's completeness, accuracy, organization, usability, and readability:

Do you find errors in this manual? If so, specify by page.

How can this manual be improved?

Other comments?

Name: _____ Title: _____

Company: _____

Address: _____

Date: _____

Thank you

42 i 1288

..... Fold here .....

..... Do not tear - Fold here and staple .....

Affix
postage
here

REGNECENTRALEN
af 1979

Information Department
Lautrupbjerg 1
DK-2750 Ballerup
Denmark

R12173

MOJ

LPC307:

Pos 89: ROM419

RESISTORS:

R 1 to R 8
2% 0,4W Metalfilm

R 9 to R 40
5% 1/8W Carbonresistors

Pos 146 (S25 - S32):

LPC Device Code Selection
(Red dot = logic 1)

Pos 145 (S 1 - S 8) and
Pos 146 (S 9 - S 16) and
Pos 116 (S 17 - S 24):

Printer Type Selection

Pos 76, 77 and 78:

Spare

OPC303:

Pos 4 STRAP:

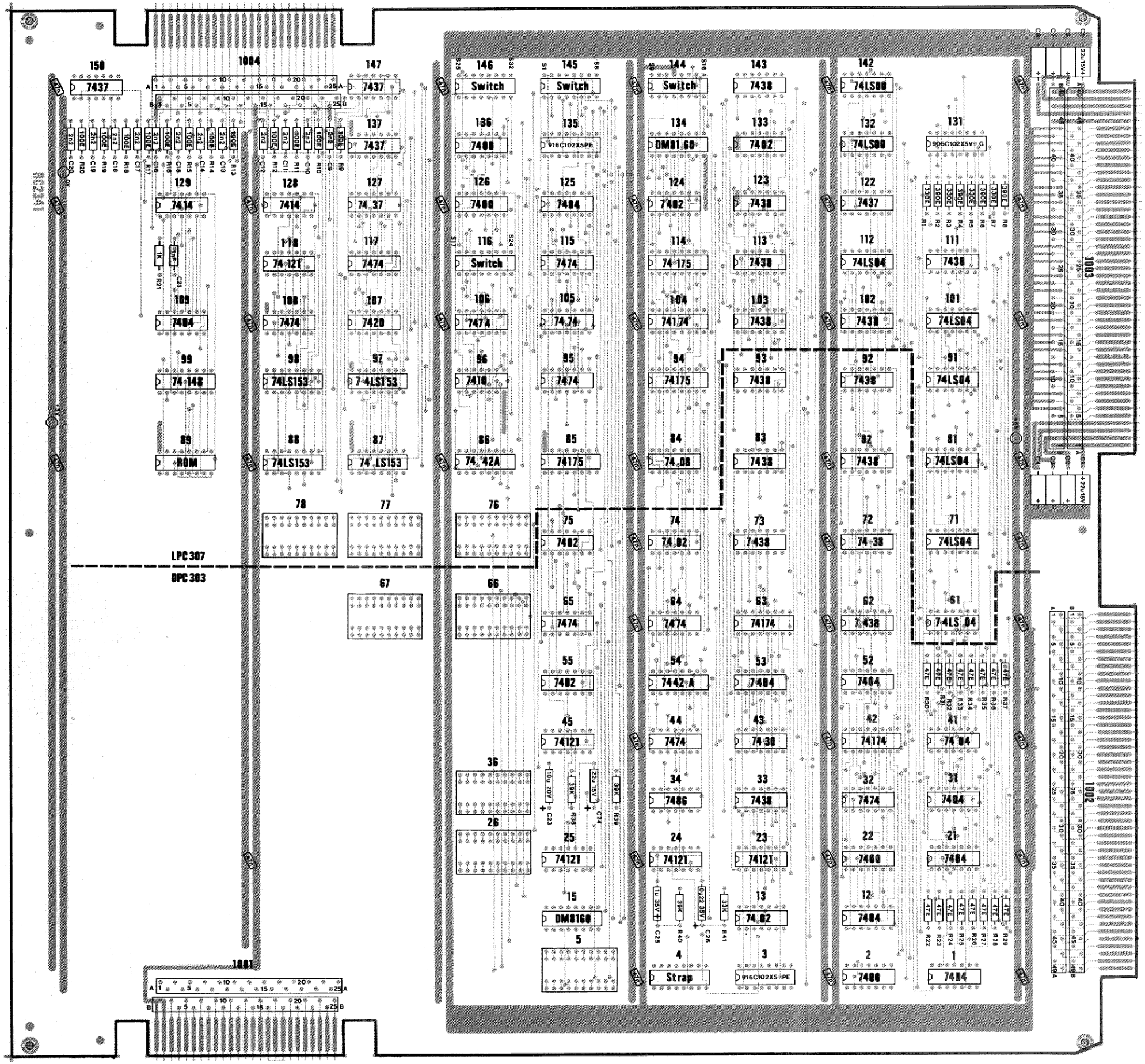
OPC Device Code Selection

(Strap = logic 0
No Strap = logic 1)

Pos 5, 26, 36, 66 and 67:

Spare

29/9-77



PCB ASSEMBLY DRAWING RC 2341

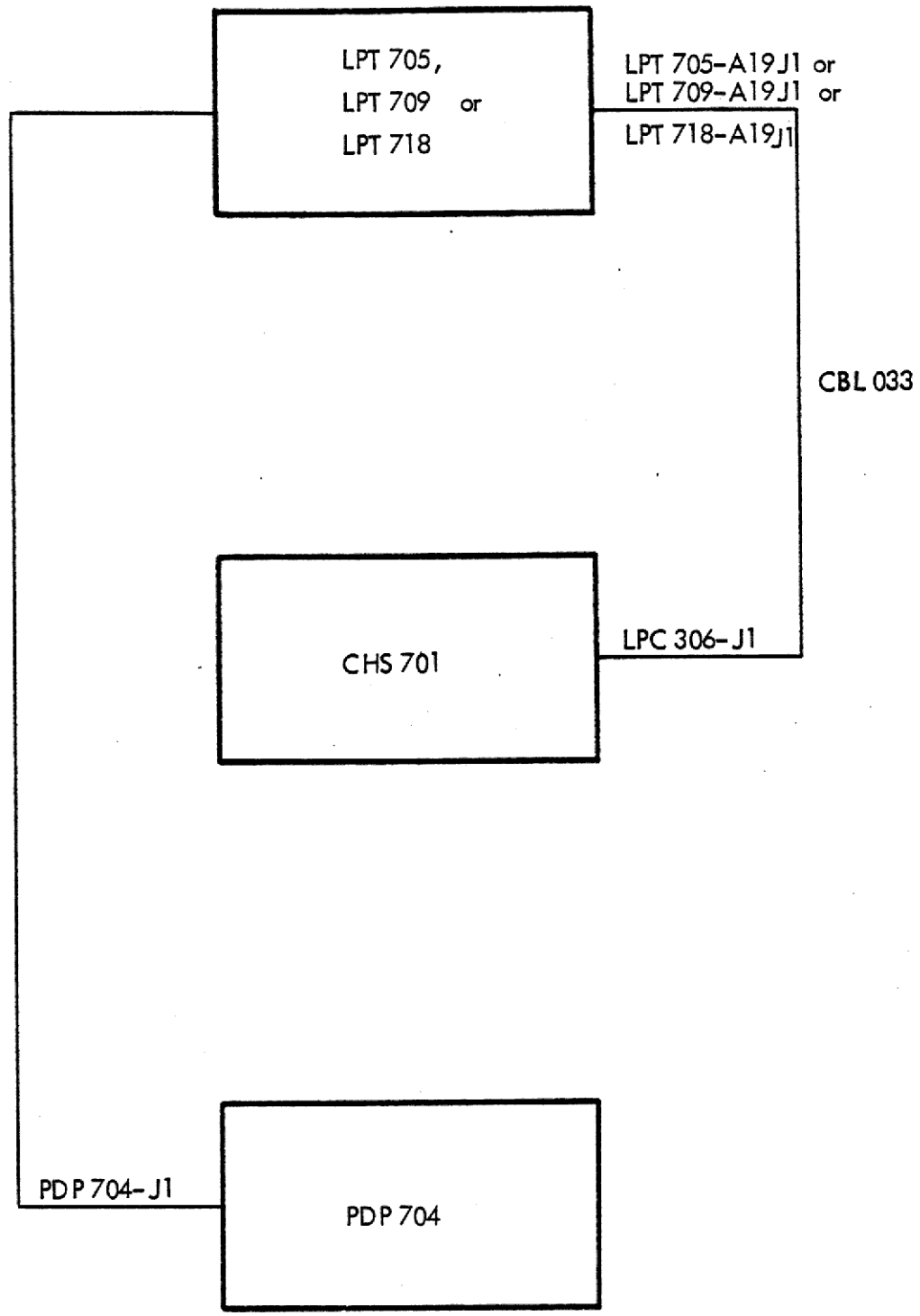
Connector I : CANNON 2DB 52 P,
Connector II = WINCHESTER MRAC 50P
Cable : HKP - S-K 25 x 2 x 0.14mm^2 + 4 x 0.50mm^2 + shield
Length : 12m

I SIGNAL NAME	I PIN	WIRE	II PIN	II SIGNAL NAME	I SIGNAL NAME	I PIN	WIRE	II PIN	II SIGNAL NAME
STROBE	1		j	DATA STROBE	0V	18	——	W	0V
0V	2		m	0V	0V	36	——	Y	0V
PAPER INST	3		p	PAPER INST	0V	37	——	a	0V
0V	4		s	0V	0V	38	——	c	0V
DEMND	5		E	DATA DEM	Chassis	51	shield	e	0V
0V	6		C	0V	Chassis	52	shield	h	0V
PAPER FAULT	7		P	PAPER FAULT					
0V	8		M	0V					
ON LINE	9		y	ON LINE					
0V	10		AA	0V					
DISCONNECTED	11		x	DISC					
0V	12		v	0V					
READY	13		CC	READY					
0V	14		EE	0V					
TAPE (7!11)	15		S	TAPE CH11					
0V	16		U	0V					
EXHAUSTED	17		z	PAPER OUT					
0V	35		BB	0V					
PRINTING	34		d	PRINTING					
0V	33		f	0V					
DT 6	32		n	INPUT 7					
0V	31		k	0V					
DT 5	30		Z	INPUT 6					
0V	29		b	0V					
DT 4	28		V	INPUT 5					
0V	27		X	0V					
DT 3	26		R	INPUT 4					
0V	25		T	0V					
DT 2	24		L	INPUT 3					
0V	23		N	0V					
DT 1	22		F	INPUT 2					
0V	21		J	0V					
DT 0	20		B	INPUT 1					
0V	19		D	0V					

761021 LMJ 761021 AOB

R 11625

CBL 033
Connecting LPT 701, 702, 703, 704, 705 or 718 to LPC 306



Replaced by Dwg. No.	
due to ECN	
Replaces Dwg. No.	
Design Check	
Dwg. Office Check	
Drawn by	770114 AOB
Designed by	760304 JEMI

A/S REGNECENTRALEN

Unit Dwg R21166	LPT 705, LPT 709 or LPT 718 Line Printers connected to LPC 306 Controller and PDP 704 Power Panel Interconnection Diagram	Page 1 of 1
~~Dwg No.~~ 44-RT 733-87		

RC doc VB 139

Replaced by Dwg. No.	due to ECN	Replaces Dwg. No.	Design Check	Dwg. Office Check	Drawn by	Designed by
						770222 JEMI

Refer to Technical Manual
Model 2230 Line Printer

DPC 241735
Volume I

Section VI

A/S REGNECENTRALEN

RC doc: VB 139

Unit	MAINTENANCE	
Dwg. No. R 21071	LINE PRINTER	