

**AMENDMENTS**

11/12/91  
C2 680nF removed from cathode ZD2 & S1A B.  
C2 100uF added in parallel to ZD2.

21/12/93  
Resistor added on to illustrate current limit required on LED1

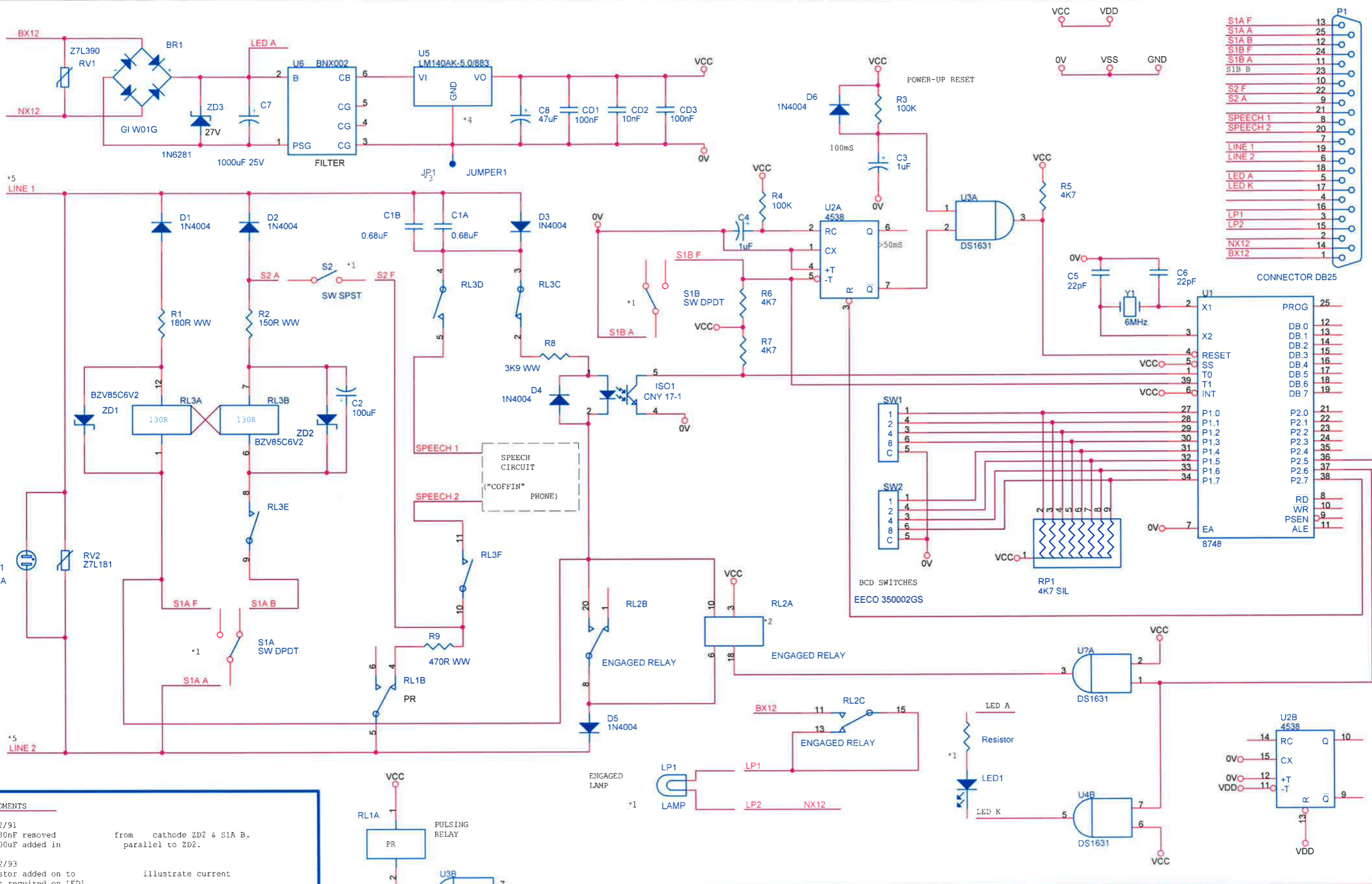
24/3/94  
Pseudo relay renamed Engaged relay  
RV2 uprated from Z7L151 to Z7L181  
ZD3 value added  
Note 2 altered to clarify which relay is preferred  
Note 5 added to explain line polarity

01/07/96  
C1 & C2 values altered to improve performance at 1200 ohm line loop impedance

- \*1 - NOT ON BOARD
- \*2 - ENGAGED RELAY IS 20 PIN DIL ALLOWING FITMENT OF DS2E OR 170-178, THE DS2E RELAY ALLOWS THE ENGAGED INDICATION TO BE EITHER A LAMP OR LED AND SHOULD BE FITTED AS STANDARD
- \*3 - JUMPER IS TO ALLOW CONNECTION OF REGULATOR CASE TO GROUND
- \*4 TRACKING SHOULD ALLOW FOR FITMENT OF LM340CS STYLE REGULATOR AS ALTERNATIVE
- \*5 - LINE 1 IS NEGATIVE WITH RESPECT TO LINE 2 UNDER 'LINES NORMAL' CONDITIONS

Produced		SYSTEMS ENGINEERING - GLASGOW	
Checked		SIGNALLING CONTROL UK - NORTHERN GROUP BUCHANAN BUILDINGS 58 PORT DUNDAS ROAD GLASGOW G4 OHG	
		Title PSEUDO SPT	
Size B	Document Number 90SES4	Rev M4	
Date: Wednesday, November 01, 2006		Sheet 1	of 3

(File No. 90SES4.M4)



**AMENDMENTS**

11/12/91  
C2 680nF removed from cathode ZD2 & S1A B.  
C2 100uF added in parallel to ZD2.

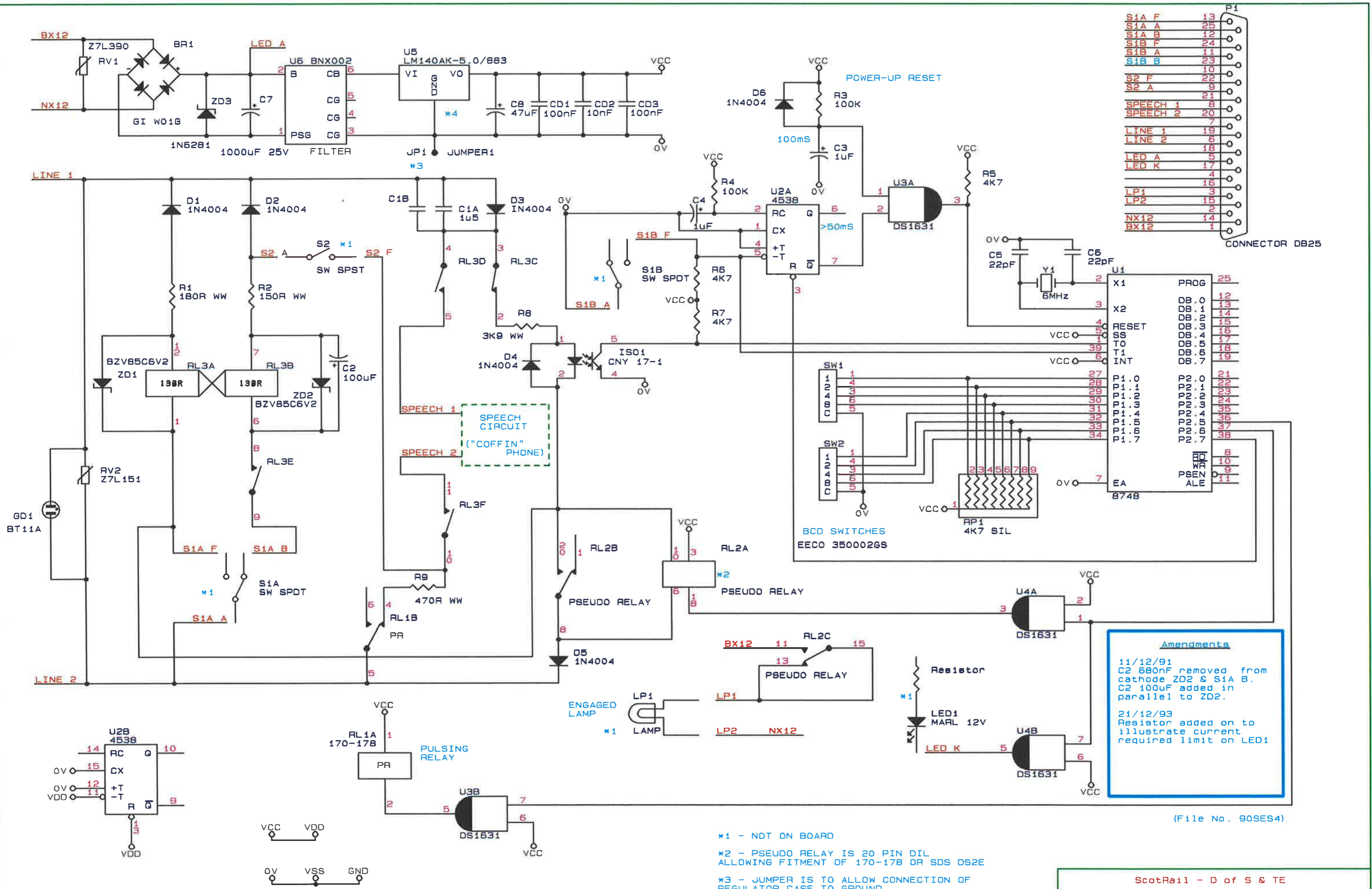
21/12/93  
Resistor added on to illustrate current limit required on LED1

24/3/94  
Pseudo relay renamed Engaged relay  
RV2 updated from 27L151 to 27L181  
ZD3 value added  
Note 2 altered to clarify which relay is preferred  
Note 5 added to explain line polarity

- \*1 - NOT ON BOARD
- \*2 - ENGAGED RELAY IS 20 PIN DIL ALLOWING FITMENT OF DS2E OR 170-178, THE DS2E RELAY ALLOWS THE ENGAGED INDICATION TO BE EITHER A LAMP OR LED AND SHOULD BE FITTED AS STANDARD
- \*3 - JUMPER IS TO ALLOW CONNECTION OF REGULATOR CASE TO GROUND
- \*4 TRACKING SHOULD ALLOW FOR FITMENT OF LM140CT5 STYLE REGULATOR AS ALTERNATIVE
- \*5 - LINE 1 IS NEGATIVE WITH RESPECT TO LINE 2 UNDER 'LINES NORMAL' CONDITIONS

SYSTEMS ENGINEERING - GLASGOW	
SIGNALLING CONTROL UK - NORTHERN GROUP	
BUCHANAN BUILDINGS	
58 PORT DUNDAS ROAD	
GLASGOW G4 OHG	
Title PSEUDO SPT	
Size B	Document Number 90SES4
Date Wednesday, November 01, 2006	Rev M3
Produced DW	Checked GW
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S1A F	13
S1A A	25
S1A B	12
S1B F	24
S1B A	11
S1B B	23
S2 F	10
S2 A	9
S2 B	21
SPEECH 1	8
SPEECH 2	20
LINE 1	19
LINE 2	6
LED A	5
LED K	17
LP1	4
LP2	15
NX12	2
BX12	14
	1

CONNECTOR DB25

Amendments

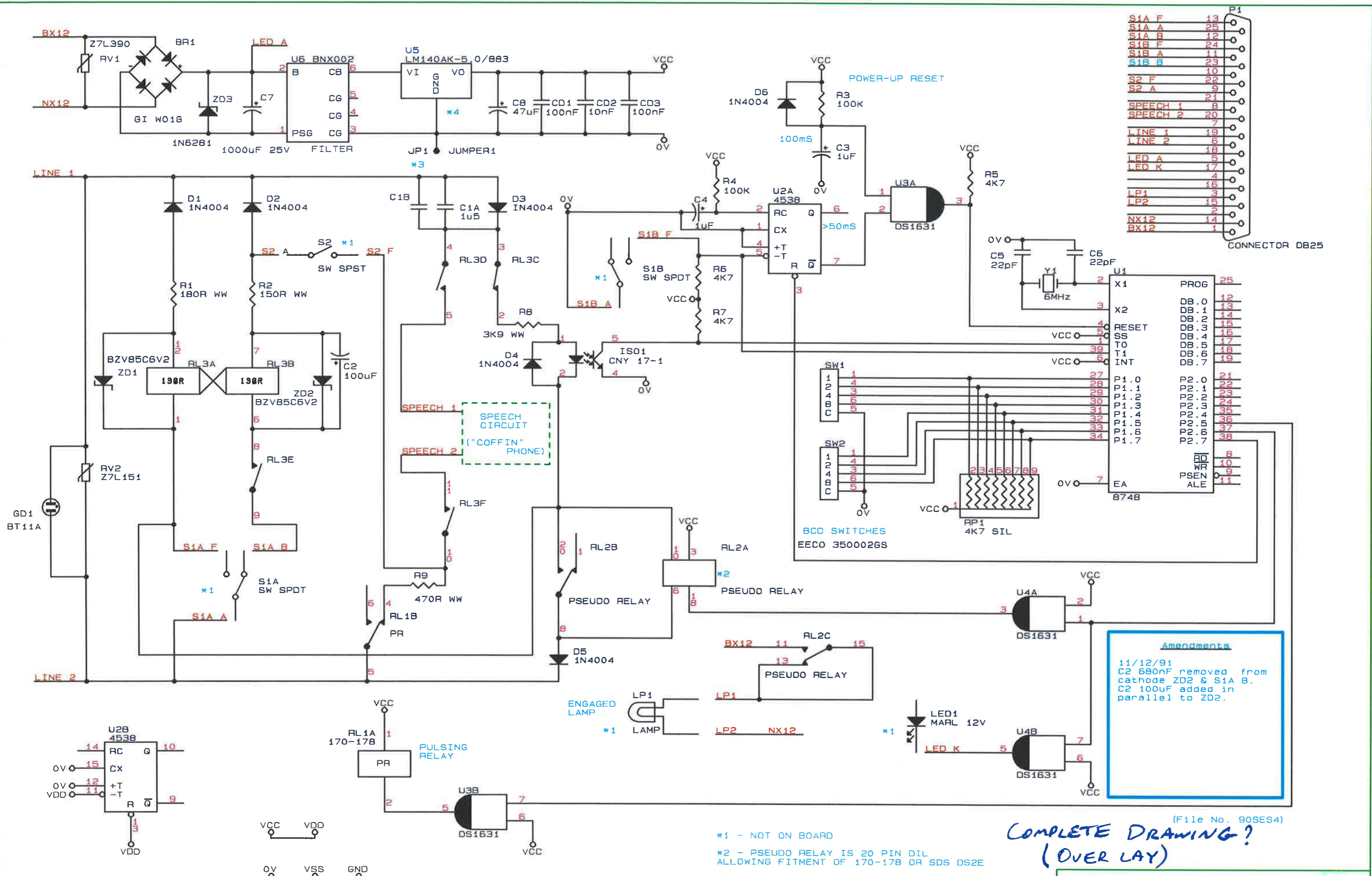
11/12/91  
C2 680nF removed from cathode ZD2 & S1A B.  
C2 100uF added in parallel to ZD2.

21/12/93  
Resistor added on to illustrate current required limit on LED1

(File No. 90SES4)

- \*1 - NOT ON BOARD
- \*2 - PSEUDO RELAY IS 20 PIN DIL ALLOWING FITMENT OF 170-178 OR SDS DS2E
- \*3 - JUMPER IS TO ALLOW CONNECTION OF REGULATOR CASE TO GROUND
- \*4 TRACKING SHOULD ALLOW FOR FITMENT OF LM340T5 STYLE REGULATOR AS ALTERNATIVE

ScotRail - D of S & TE		
SYSTEMS ENGINEERING		
Title PSEUDO SPT		
Size B	Document Number 90SES4	REV M2
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CONNECTOR DB25

S1A F	13
S1A A	25
S1A B	12
S1B F	24
S1B A	11
S1B B	23
S2 F	10
S2 A	9
S2 B	21
SPEECH 1	8
SPEECH 2	20
LINE 1	7
LINE 2	6
LED A	18
LED K	17
LP1	4
LP2	15
NX12	2
BX12	14

**Amendments**

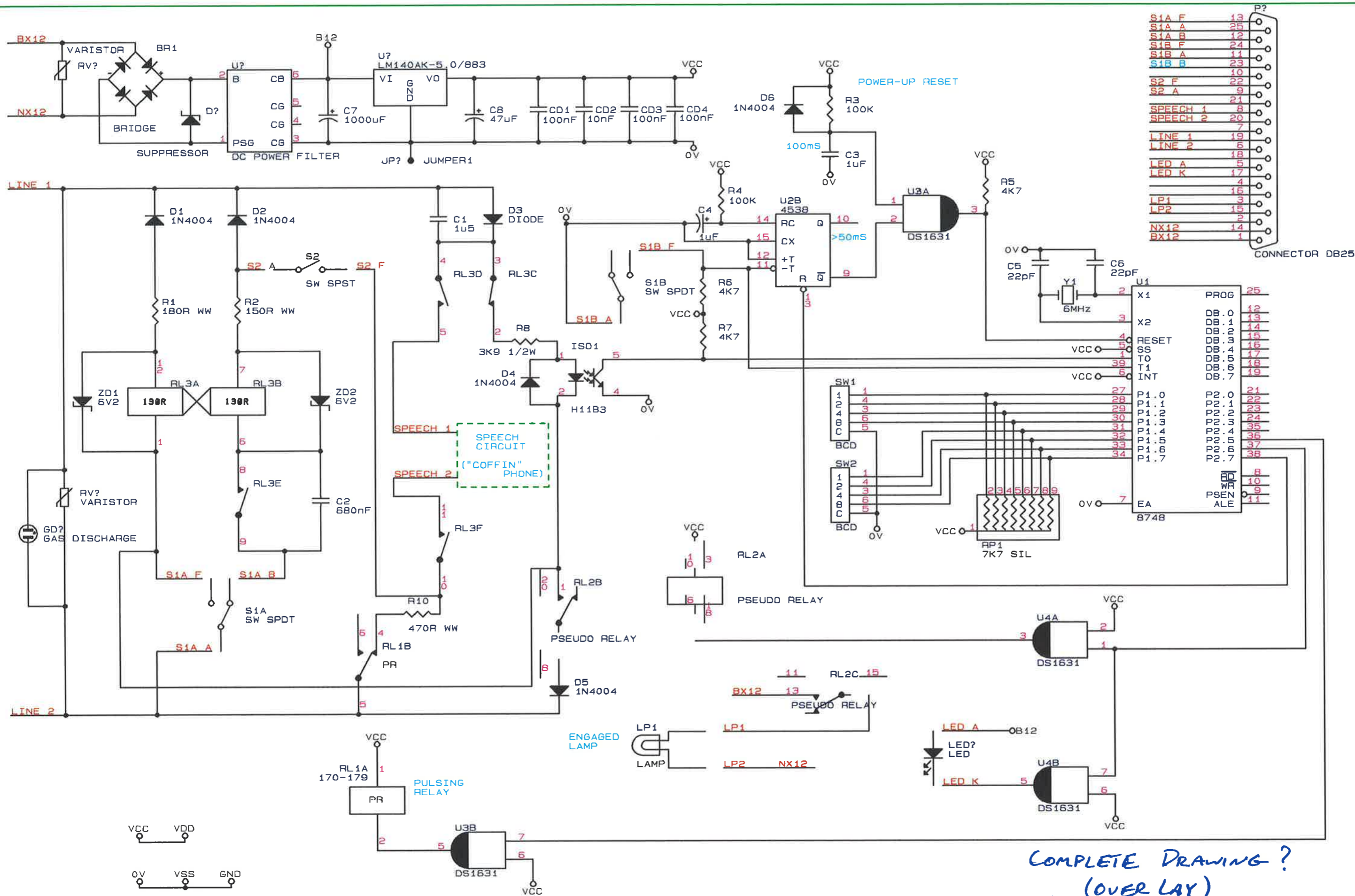
11/12/91  
 C2 680nF removed from cathode ZD2 & S1A B.  
 C2 100uF added in parallel to ZD2.

**COMPLETE DRAWING? (OVER LAY)**

- \*1 - NOT ON BOARD
- \*2 - PSEUDO RELAY IS 20 PIN DIL ALLOWING FITMENT OF 170-178 OR SDS DS2E
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- \*4 TRACKING SHOULD ALLOW FOR FITMENT OF LM340T5 STYLE REGULATOR AS ALTERNATIVE

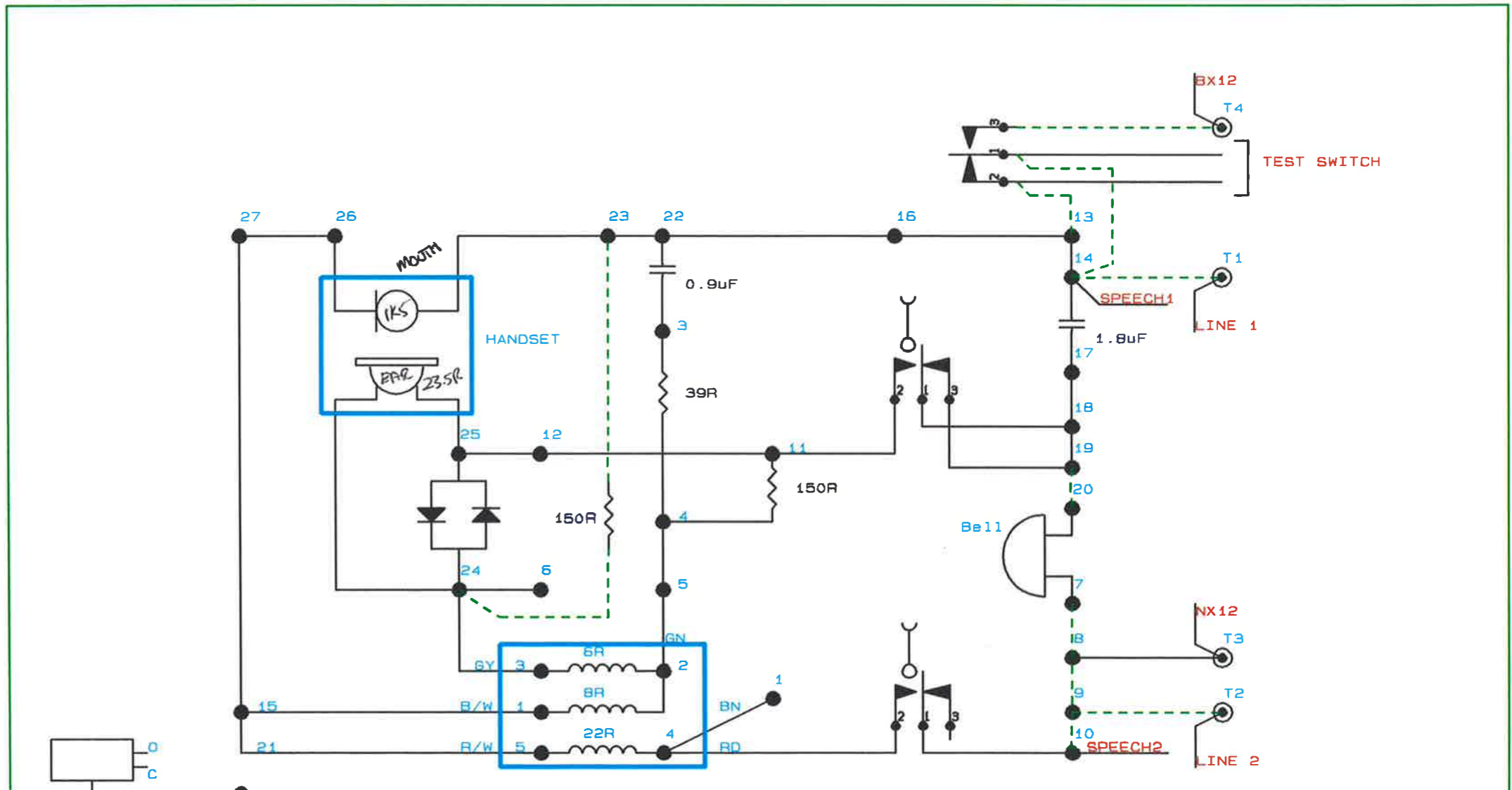
(File No. 90SES4)

ScotRail - D of S & TE	
SYSTEMS ENGINEERING	
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REV	M1

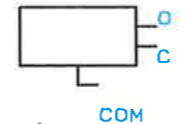


COMPLETE DRAWING?  
 (OVER LAY)  
 FILE NO!

ScotRail - D of S & TE	
SYSTEMS ENGINEERING	
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B	90SES4
Date:	April 24, 1991 Sheet of



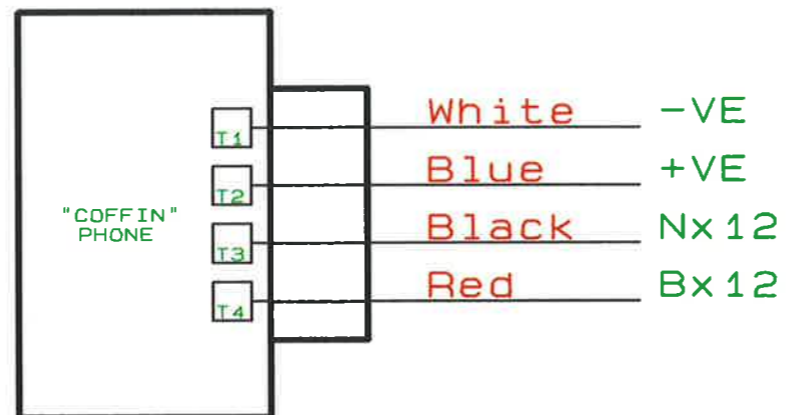
REPLACE BORDER WITH STANDARD?



**NOTE**  
 REMOVE WIRES SHOWN DOTTED  
 NEW WIRED INDICATED BY RED TEXT  
 CRADLE SWITCH POSITION SHOWN WITH HANDSET ON CRADLE

(File No 90SES4.02)

Drg. No. 90SES4		Director of S&T Engineering	BRITISH RAIL
Prod.	DW	PSEUDO SPT "COFFIN" PHONE	Signal Engineer (Works) Glasgow
Chc.			Sht. No. 2 OF 3
Date	23rd Dec 1991		



### CODE SELECTION

The permitted codes are between 1 and 24

To select code use switches 1 & 2 (SW1 & SW2)  
These are on the circuit board mounted in  
the box beneath the "COFFIN" phone.

SW1 selects the "UNITS"  
SW2 selects the "TENS"

e.g.1  
To select code 8:  
SW1 should be set to 8  
SW2 should be set to 0

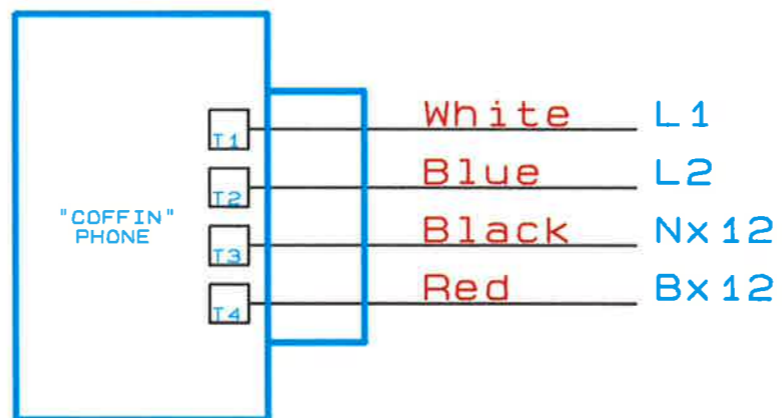
e.g.2  
To select code 23  
SW1 should be set to 3  
SW2 should be set to 2

(File No 90SES4.02)

#### AMENDMENTS

24/3/94  
Wires connected to T1 & T2 re-labeled  
to show polarity

Drg. No. 90SES4				Director of S&T Engineering	BRITISH RAIL
Prod.	AD		REV: M1	<b>PSEUDO SPT TERMINATIONS</b>	
Chec.	DW				
Date	11th Dec 1991				



### CODE SELECTION

The permitted codes are between 1 and 24  
 To select code use switches 1 & 2 (SW1 & SW2)  
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 the box beneath the "COFFIN" phone.

SW1 selects the "UNITS"  
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e.g.1  
 To select code 8:  
 SW1 should be set to 8  
 SW2 should be set to 0

e.g.2  
 To select code 23  
 SW1 should be set to 3  
 SW2 should be set to 2

REPLACE BORDER  
 WITH STANDARD

(File No 90SES4.02) <sup>3</sup>

Drg. No. 90SES4		Director of S&T Engineering		BRITISH RAIL
Prod.	AD	PSEUDO SPT TERMINATIONS		Signal Engineer (Works)
Chec.	DW			Glasgow
Date	14th Dec 1991			Sht. No. 3 OF 3