

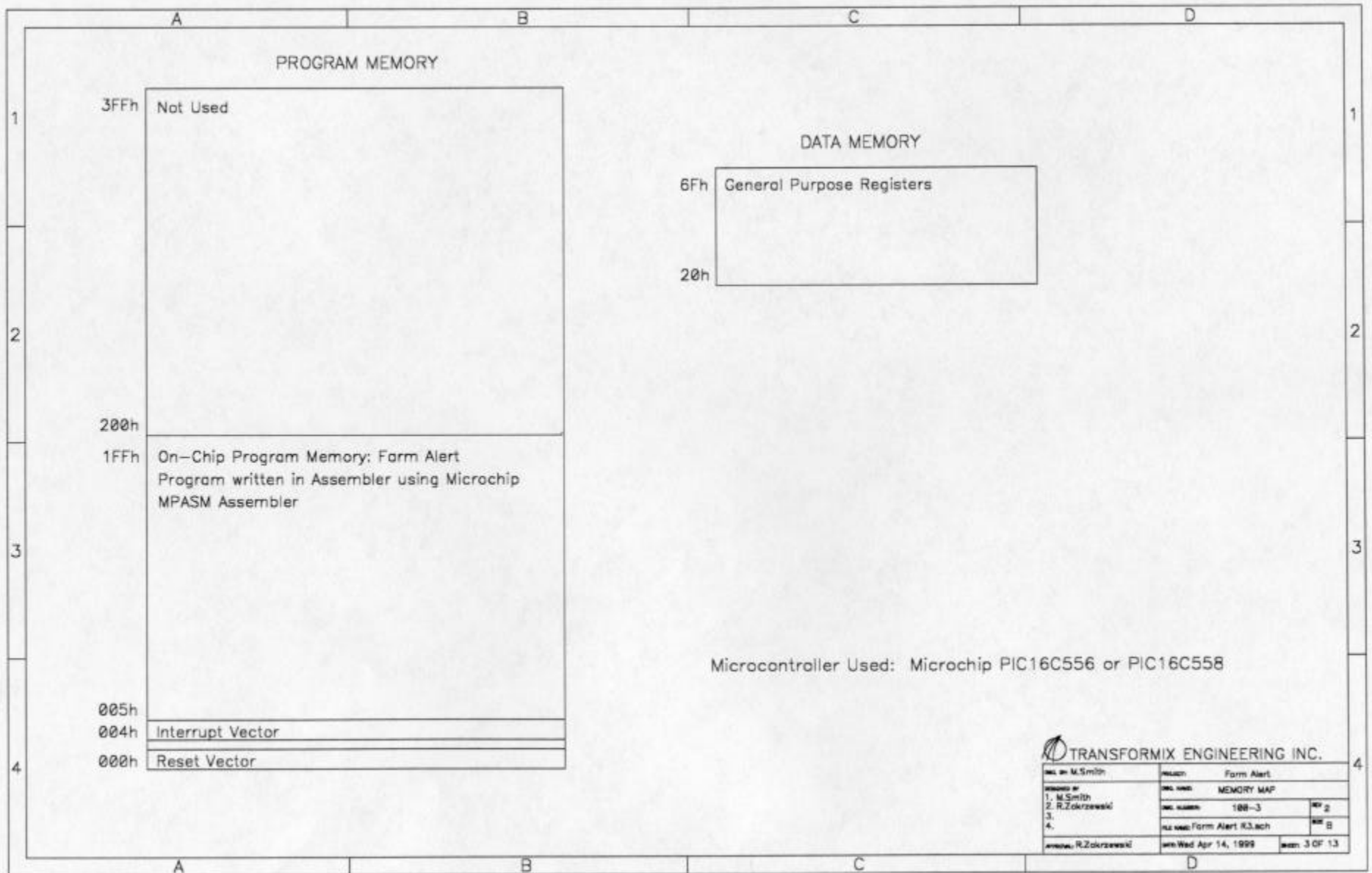
DRAWING LIST
ETM: FARM ALERT

100-1	DRAWING LIST
100-2	REVISION NOTES
100-3	MEMORY MAP
100-4	TAIL LIGHT BLOCK DIAGRAM
100-5	KEYPAD BLOCK DIAGRAM
100-6	POWER SUPPLY
100-7	MICRO CONTROLLER
100-8	LED CIRCUITS
100-9	RF TRANSMITTER
100-10	RF RECEIVER
100-11	RECEIVER INTERFACE
100-12	KEYPAD LAYOUT
100-13	PCB PANEL LAYOUT



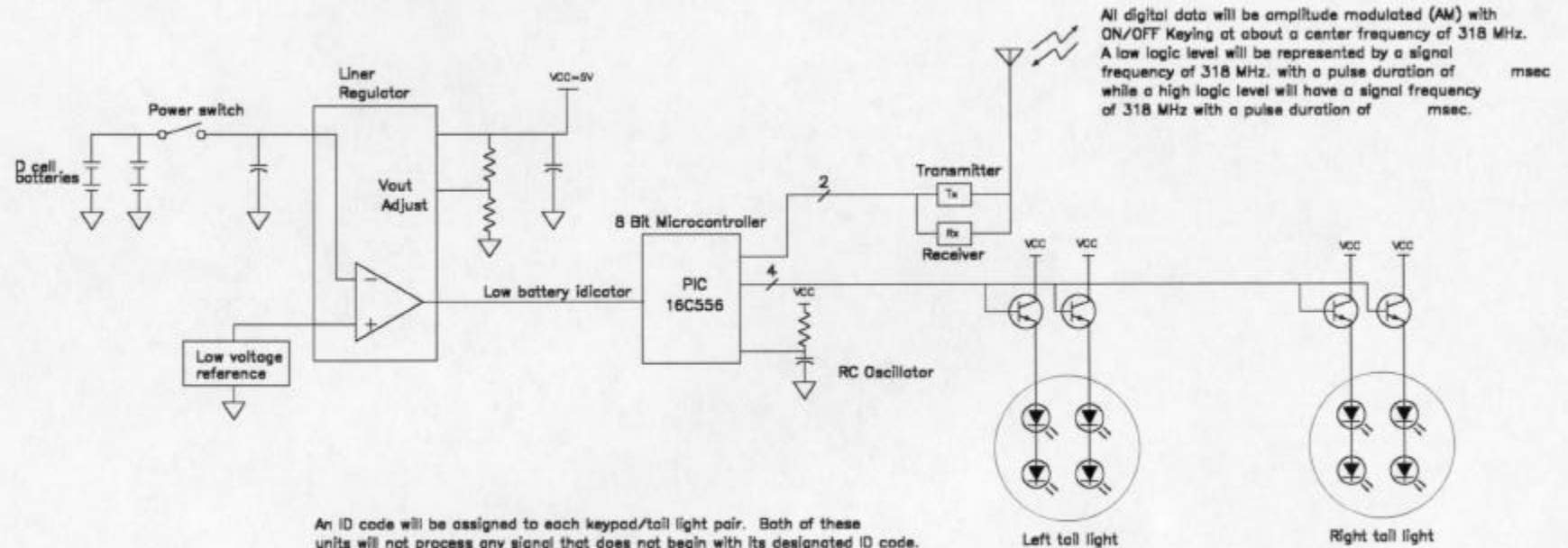
TRANSFORMIX ENGINEERING INC.

DESIGNED BY 1. M. Smith 2. R. Zolrzenski 3. 4.	PROJECT Farm Alert
	DRAWING LIST
	DRAWING NUMBER: 100-1
	REV: 2
APPROVAL: R. Zolrzenski	DATE: Wed Apr 14, 1999
	SHEET: 1 OF 13



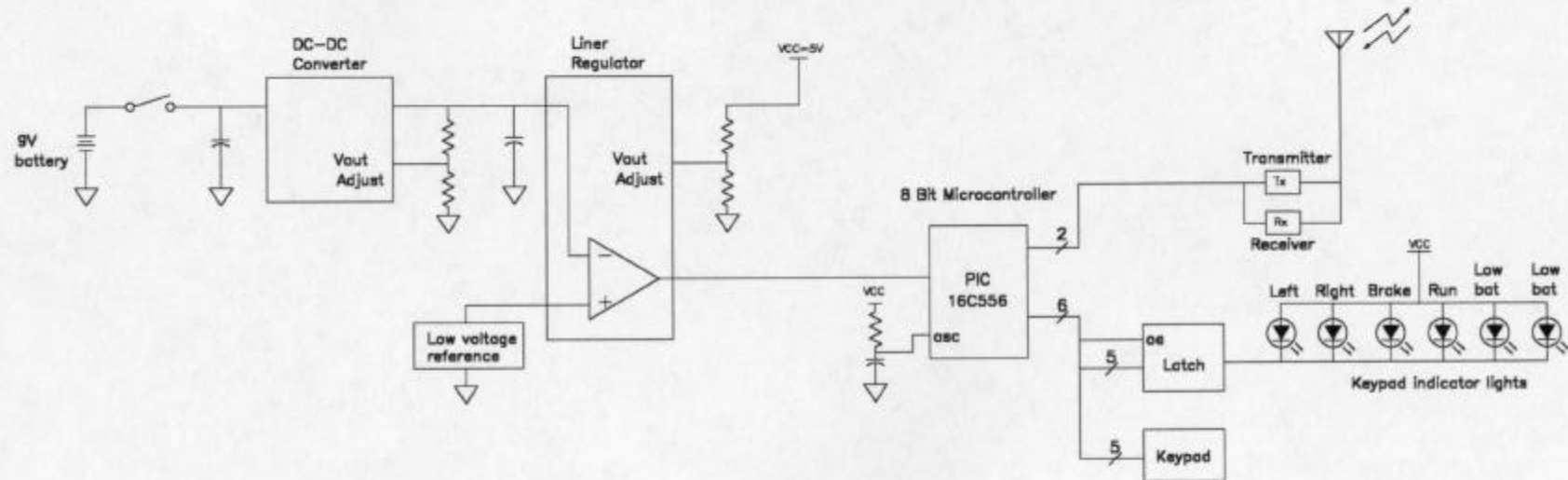
 TRANSFORMIX ENGINEERING INC.		PROJECT: Farm Alert	
		DOC. NAME: MEMORY MAP	
DESIGNED BY: 1. M.Smith 2. R.Zakrzewski 3. 4.	DOC. NUMBER: 100-3		REV: 2
	FILE NAME: Farm Alert R3.mch		REV: B
	APPROVAL: R.Zakrzewski		DATE: Wed Apr 14, 1999
			SHEET: 3 OF 13

Tail light Block Diagram



TRANSFORMIX ENGINEERING INC.			
DESIGNED BY: M.Smith	PROJECT: Farm Alert		
REVIEWED BY: 1. M.Smith	DATE: 100-4	REV: 2	
2. R.Zakrzewski	DATE: 100-4	REV: 2	
3.	DATE: 100-4	REV: 2	
4.	DATE: 100-4	REV: 2	
APPROVED: R.Zakrzewski	DATE: Wed Apr 14, 1999	PAGE: 4 OF 13	

Keypad Block Diagram



All digital data will be amplitude modulated (AM) with ON/OFF Keying at about a center frequency of 318 MHz. A low logic level will be represented by a signal frequency of 318 MHz, with a pulse duration of msec while a high logic level will have a signal frequency of 318 MHz with a pulse duration of msec.

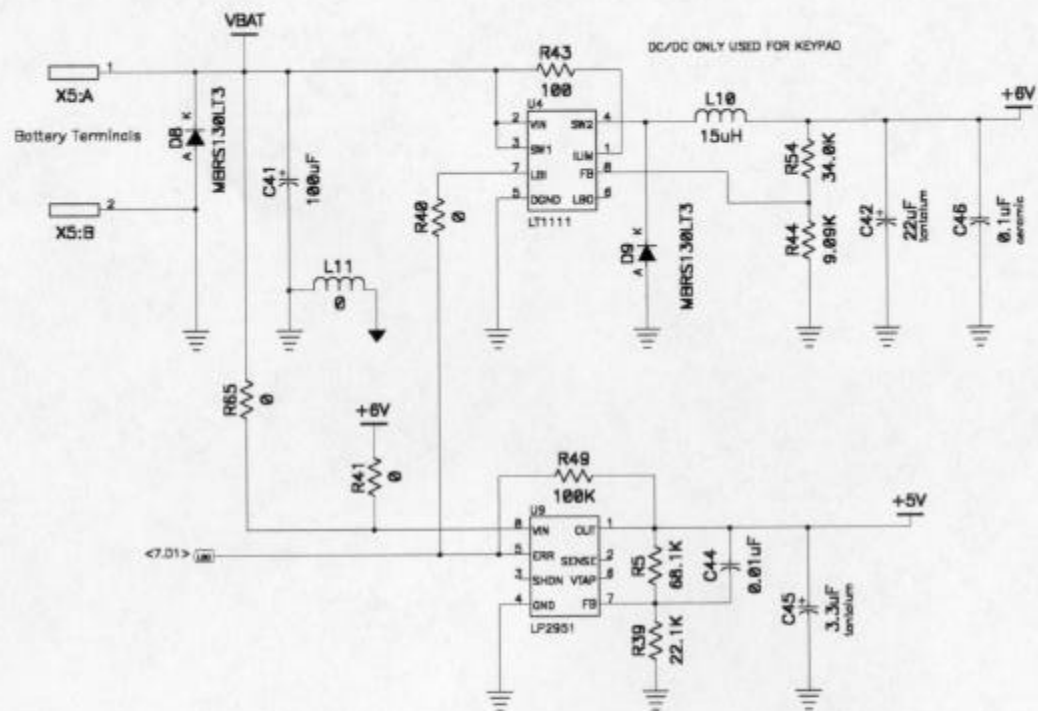
An ID code will be assigned to each keypad/tail light pair. Both of these units will not process any signal that does not begin with its designated ID code. The ID code will be represented by a serial bit stream of 4 bits. This will eliminate the need to transmit at unique frequencies. There will be a total of 5 possible ID codes.

There is a five pulse pre-ambble and a five pulse post-ambble to add energy to the beginning and end of the message.



TRANSFORMIX ENGINEERING INC.

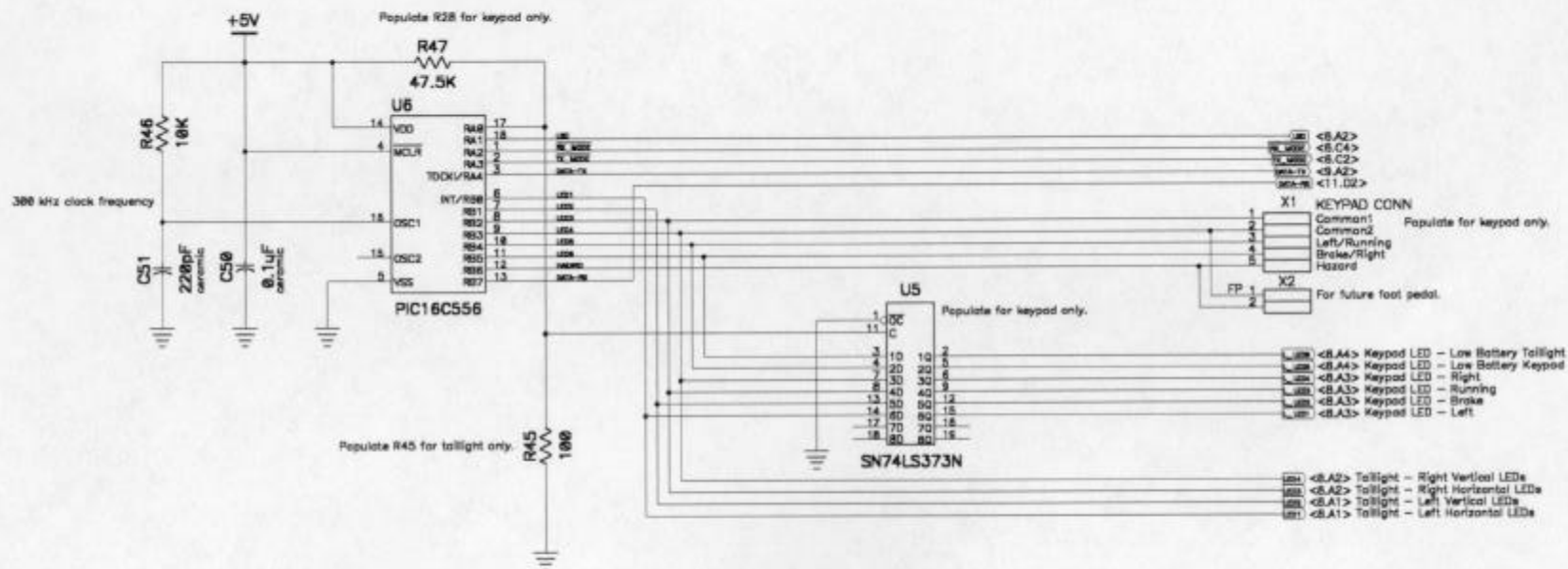
DESIGNED BY	1. M.Smith	PROJECT	Form Alert
2. R.Zakrzewski		DOC NAME	KEYPAD BLOCK DIAGRAM
3.		DOC NUMBER	100-5
4.		REV NAME	Form Alert R3.sch
DESIGNED BY	R.Zakrzewski	DATE	Wed Apr 14, 1999
		REV	5 OF 13

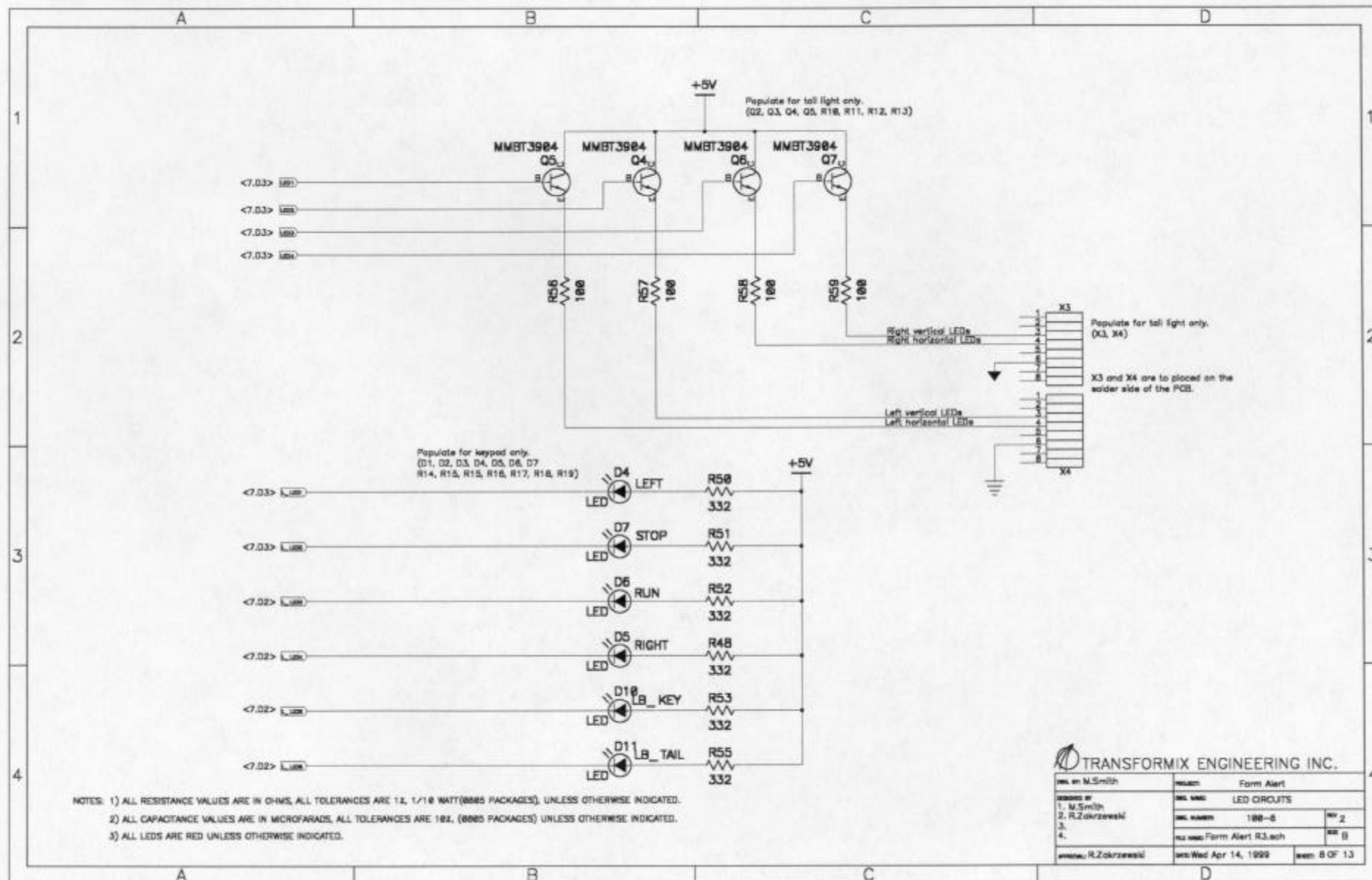


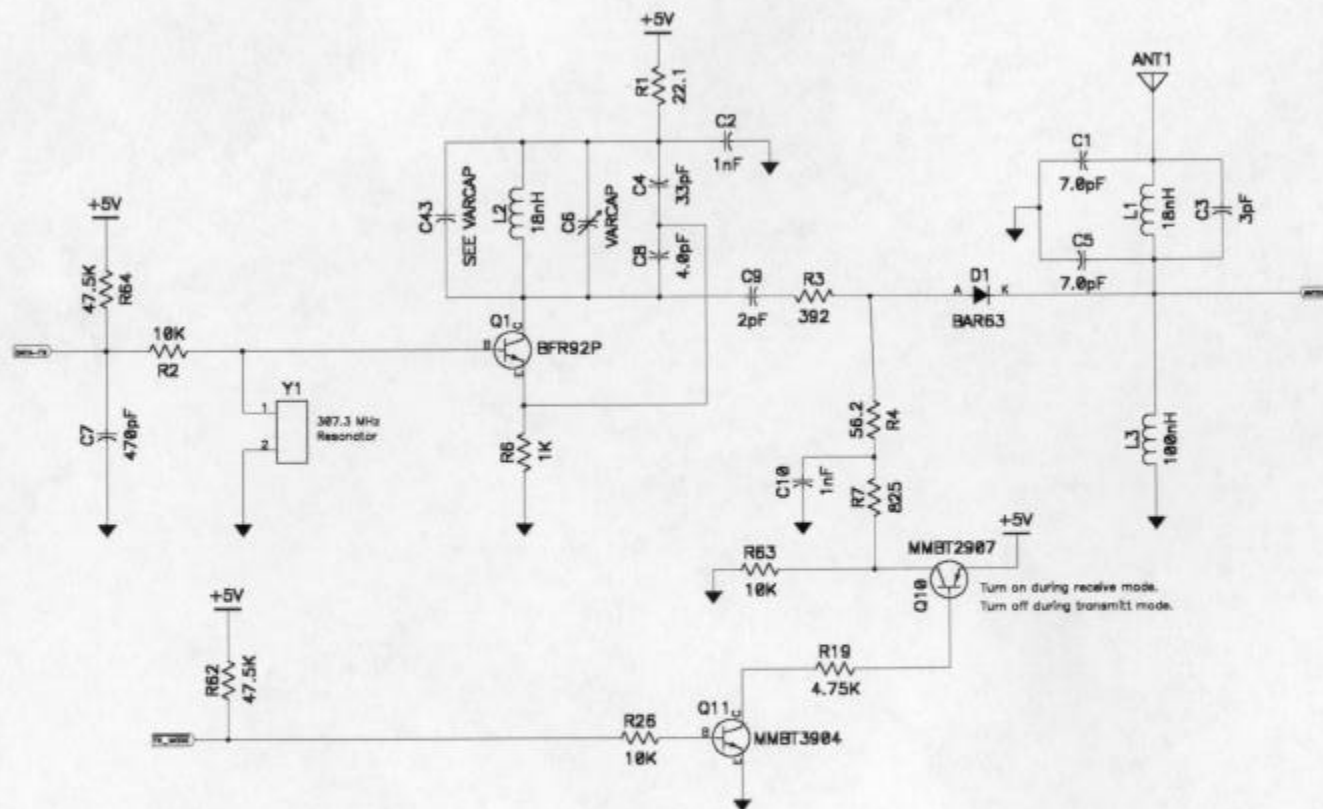
THE OUTPUT VOLTAGE FOR THE REGULATOR IS SET BY THE FOLLOWING FORMULA: $V_{out} = \left(\frac{R5}{R39} + 1 \right) \times 1.235$
 THE OUTPUT VOLTAGE FOR THE DC-DC CONVERTER IS SET BY THE FOLLOWING FORMULA: $V_{out} = \left(\frac{R54}{R44} + 1 \right) \times 1.28$
 NOTES: 1) ALL RESISTANCE VALUES ARE IN OHMS, ALL TOLERANCES ARE 1%, 1/10 WATT (8085 PACKAGES), UNLESS OTHERWISE INDICATED.
 2) ALL CAPACITANCE VALUES ARE IN MICROFARADS, ALL TOLERANCES ARE 10%, (8085 PACKAGES) UNLESS OTHERWISE INDICATED.
 3) ALL LEADS ARE RED UNLESS OTHERWISE INDICATED.

TRANSFORMIX ENGINEERING INC.

DESIGN BY: M.Smith	DESIGN: Form Alert
DESIGNED BY: 1. M.Smith	DESIGN NAME: POWER SUPPLY
2. R.Zakrzewski	DESIGN NUMBER: 100-B
3.	DESIGN NAME: Form Alert R3.ach
4.	DESIGN NAME: Form Alert R3.ach
APPROVAL: R.Zakrzewski	DATE: Wed Apr 14, 1999
	PAGE: 6 OF 13

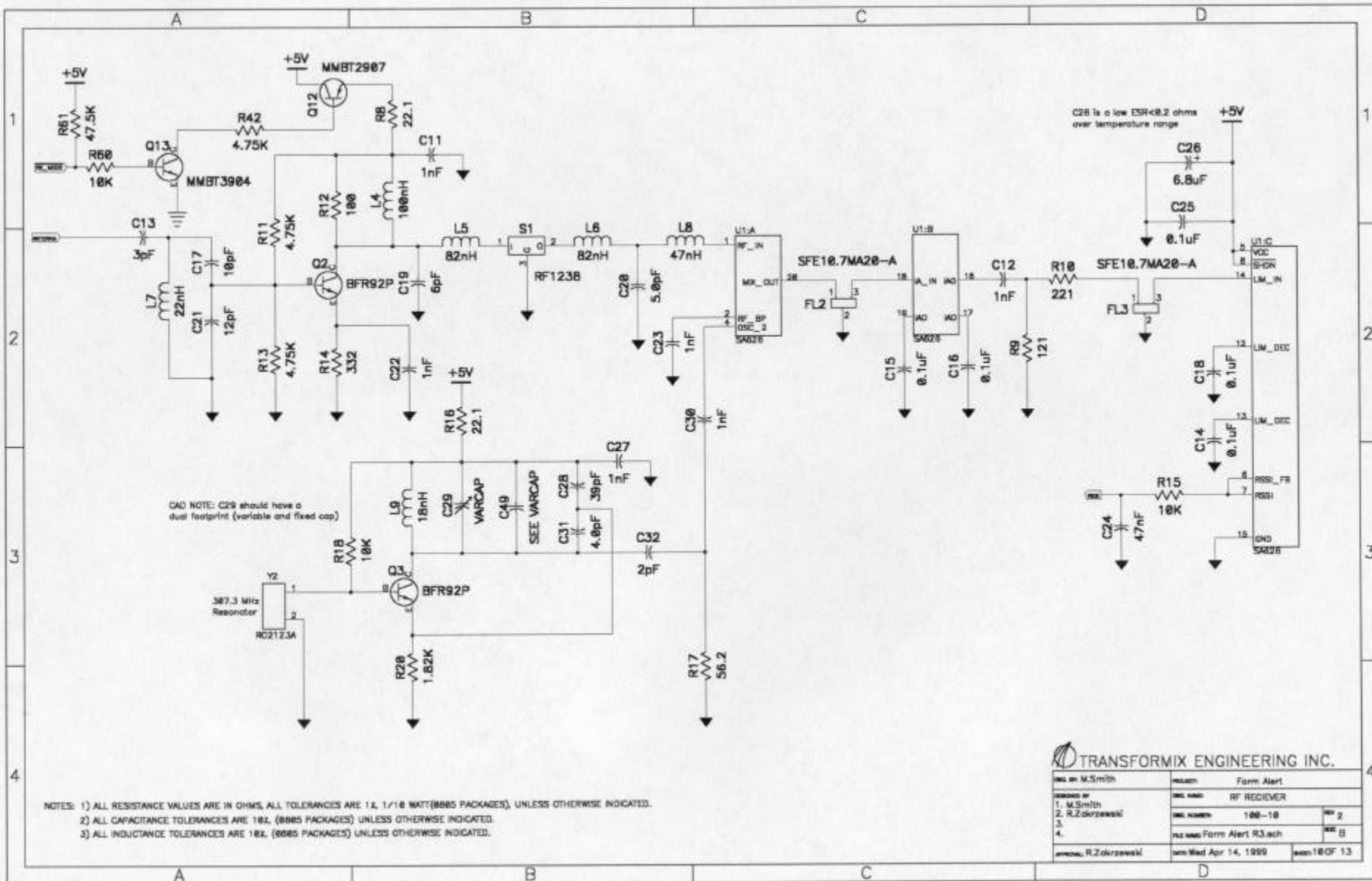






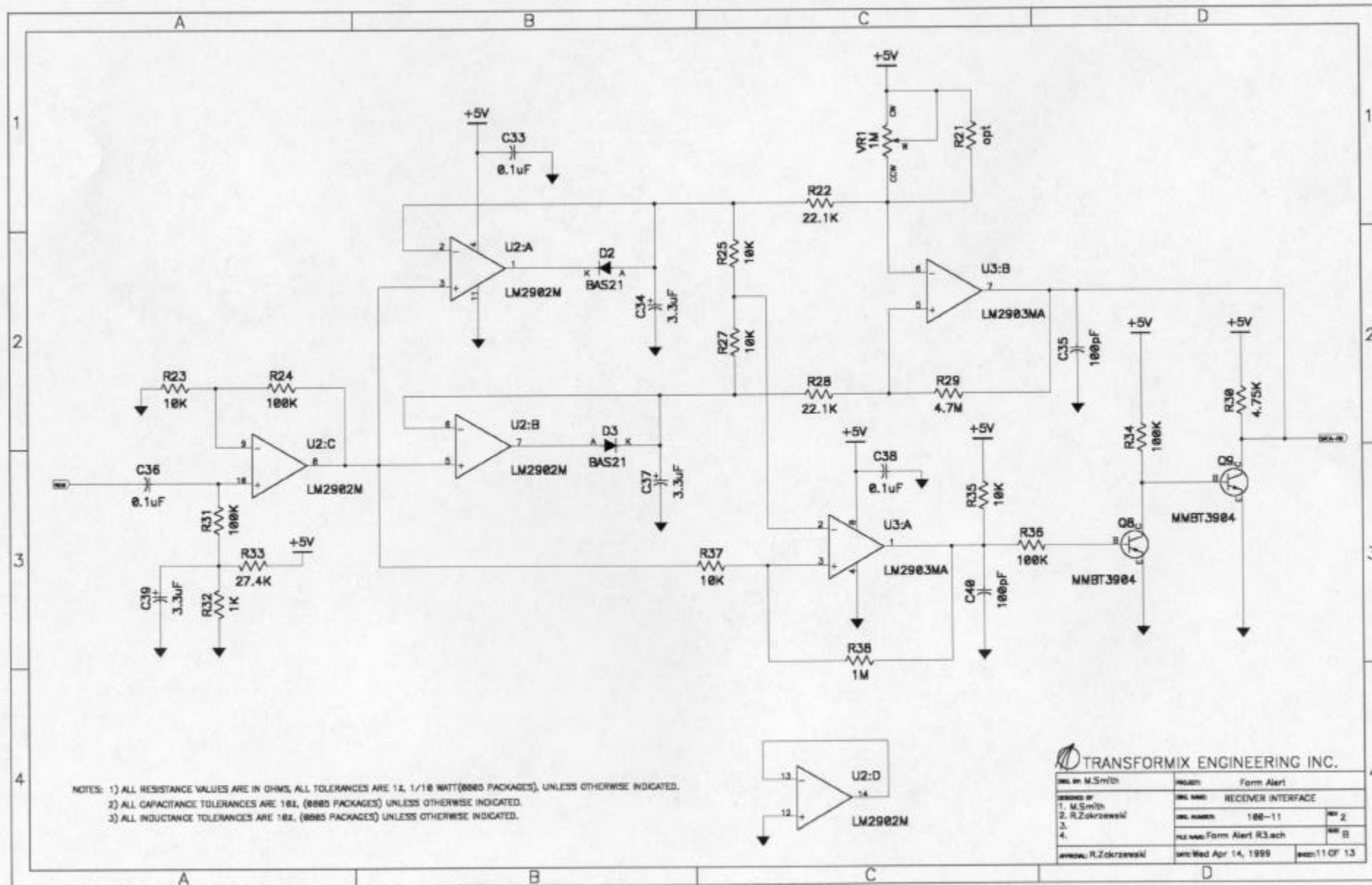
NOTES: 1) ALL RESISTANCE VALUES ARE IN OHMS, ALL TOLERANCES ARE 1%, 1/10 WATT (8885 PACKAGES), UNLESS OTHERWISE INDICATED.
 2) ALL CAPACITANCE TOLERANCES ARE 10%, (8885 PACKAGES) UNLESS OTHERWISE INDICATED.
 3) ALL INDUCTANCE TOLERANCES ARE 10%, (8885 PACKAGES) UNLESS OTHERWISE INDICATED.

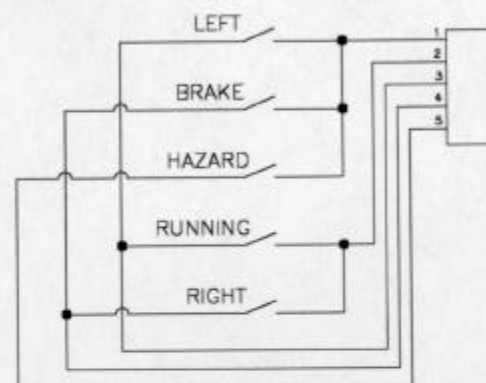
 TRANSFORMIX ENGINEERING INC.		Form Alert	
DESIGNED BY	1. M.Smith	DRAWN BY	RF TRANSMITTER
CHECKED BY	2. R.Zakrzewski	DATE	100-9
FILE NAME	Form Alert R3.sch	REV	2
DATE	Wed Apr 14, 1999	REV	B
DESIGNED BY	R.Zakrzewski	DATE	Wed Apr 14, 1999
REV	9 OF 13		



TRANSFORMIX ENGINEERING INC.

DESIGNED BY 1. M.Smith 2. R.Zakrzewski 3. 4.	PROJECT Form Alert RF RECEIVER 100-10 Form Alert R3.sch Rev 2 Rev B	DATE Wed Apr 14, 1999 Sheet 10 OF 13
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Notes: 1) Use 200g Trip Force Domes, 12.2mm Round, P/N F12200
 2) Supplier: Continental Decal

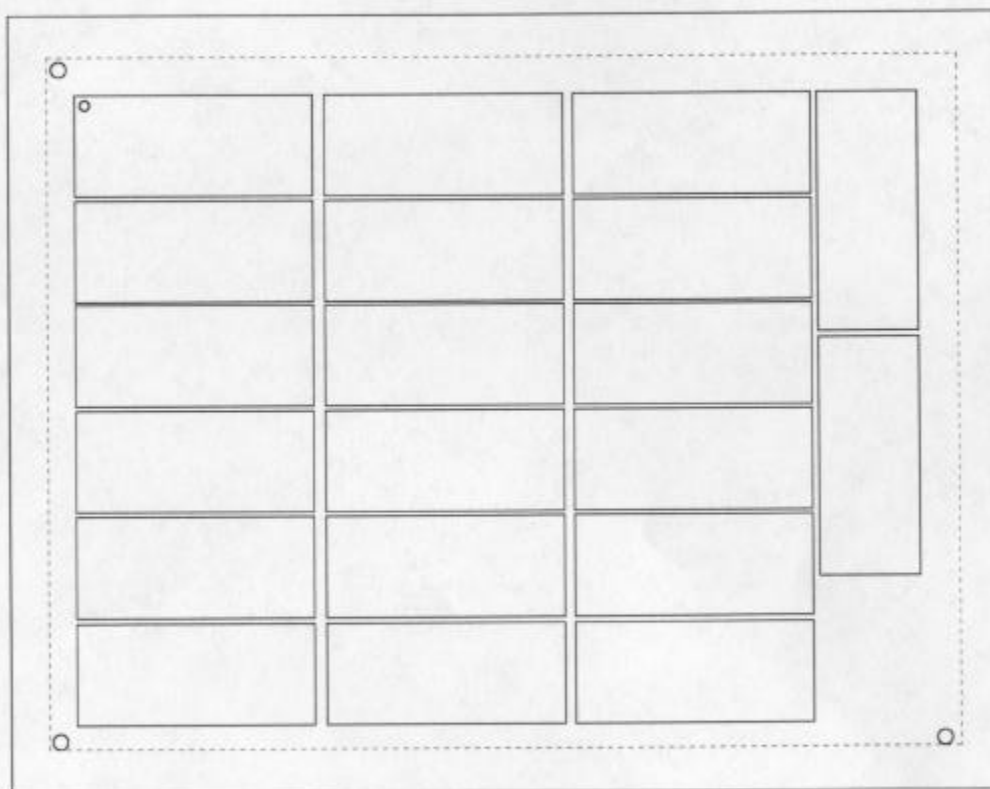


TRANSFORMIX ENGINEERING INC.

DESIGNED BY	PROJECT	Form Alert
1. M.Smith	KEYPAD LAYOUT	
2. R.Zakrzewski	100-12	REV 2
3.	Form Alert R3.ach	REV B
4.	Form Alert R3.ach	
APPROVAL: R.Zakrzewski	DATE: Wed Apr 14, 1999	Sheet: 12 OF 13

PCB PANEL LAYOUT

FOR A PANEL SIZE OF 24" X 18"



LEGEND

- O Fiducial
- Clearance

NOTES: 1) THERE IS ONE FIDUCIAL PER PCB
 2) THERE ARE THREE FIDUCIALS ON THE OUTSIDE OF THE PANEL ITSELF.
 3) THERE SHOULD BE A 1" CLEARANCE AROUND THE PANEL.

SCALE = 3 : 1

 TRANSFORMIX ENGINEERING INC.	
DESIGNED BY 1. M. Smith 2. R. Zokrzewski 3. 4.	PROJECT Farm Alert
DRAWN BY R. Zokrzewski	DRAWN BY 1000-13
DATE Wed Apr 14, 1999	DATE Farm Alert R3.sch
SCALE 13 OF 13	SCALE B