

ELECTRICAL CHARACTERISTICS

Test conditions (unless otherwise stated):

 $V_{SS} = 0V$ $V_{DD} = -16V$ $T_{amb} = +25^{\circ}C$

Characteristic	Pin	Value			Units	Conditions
		Min.	Typ.	Max.		
Current Consumption V_{DD}	1	3	4	5	mA	
Supply voltage	1	-12		-18	V	
PPM input	3					
Logic '0' level		-1		0	V	
Logic '1' level		V_{DD}		-6	V	
Input pulse width		1		$22T_{osc}$	μs	$T_{osc} = \frac{1}{f_{osc}}$
Oscillator Timing	2					
Frequency		15	3k	150k	Hz	
					Hz	Typical TC: 22 nF to V_{SS} , 100k Ω to V_{DD}
Variation w.r.t. V_{DD}			1		%/V	
Latched binary output	5, 6, 7, 8	-1.5		0V	V	$R_L = 3.0k$ to V_{DD}
Logic '0' output voltage						
Output leakage in logic '1' state				1	μA	

Note 1. R_{osc} (pin 2) is 56k-156k Ω . $f_{osc} \approx \frac{1}{0.15CR} \pm 20\%$

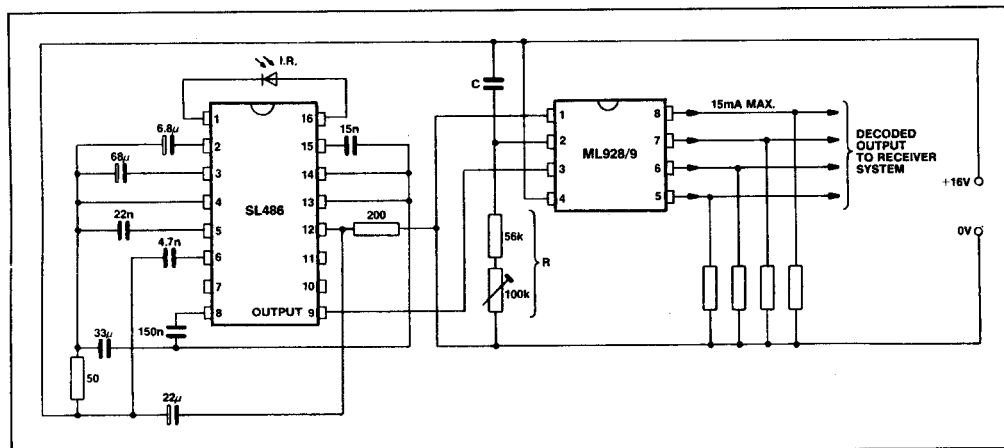


Fig.4 Typical application circuit, also shows general SL486 interface

PIN FUNCTIONS

Negative logic: '0' is 0V (V_{SS}), '1' is -12V to -18V (V_{DD})

1. V_{DD}

-12V to -18V power supply

2. Oscillator time constant

An R-C time constant at this pin defines the internal clock frequency. The clock frequency may be varied from 15Hz at 150Hz and should be set so that there are 40 periods in one ' t_p ' transmitter pulse interval.

3. PPM input

The output of the 'front end' amplifier is connected to this pin; the signal must consist of a normal low level with pulses to high level corresponding to the PPM pulses from the transmitter.

4. V_{SS}

0V (ground)

5-8. A,B,C,D

Four open-drain high power transistors give a binary coded latched output of the last valid code received.

ML928/9

Transmitter Code	Latched binary outputs	
	ML928	ML929
E D C B A	D C B A	D C B A
0 0 0 0 0	0 0 0 0	No change
0 0 0 0 1	0 0 0 1	
0 0 0 1 0	0 0 1 0	
0 0 0 1 1	0 0 1 1	
0 0 1 0 0	0 1 0 0	
0 0 1 0 1	0 1 0 1	
0 0 1 1 0	0 1 1 0	
0 0 1 1 1	0 1 1 1	
0 1 0 0 0	1 0 0 0	
0 1 0 0 1	1 0 0 1	
0 1 0 1 0	1 0 1 0	
0 1 0 1 1	1 0 1 1	
0 1 1 0 0	1 1 0 0	
0 1 1 0 1	1 1 0 1	
0 1 1 1 0	1 1 1 0	
0 1 1 1 1	1 1 1 1	
1 0 0 0 0	No change	0 0 0 0
1 0 0 0 1		0 0 0 1
1 0 0 1 0		0 0 1 0
1 0 0 1 1		0 0 1 1
1 0 1 0 0		0 1 0 0
1 0 1 0 1		0 1 0 1
1 0 1 1 0		0 1 1 0
1 0 1 1 1		0 1 1 1
1 1 0 0 0		1 0 0 0
1 1 0 0 1		1 0 0 1
1 1 0 1 0		1 0 1 0
1 1 0 1 1		1 0 1 1
1 1 1 0 0		1 1 0 0
1 1 1 0 1		1 1 0 1
1 1 1 1 0		1 1 1 0
1 1 1 1 1		1 1 1 1

Table 1 Response to SL490 codes

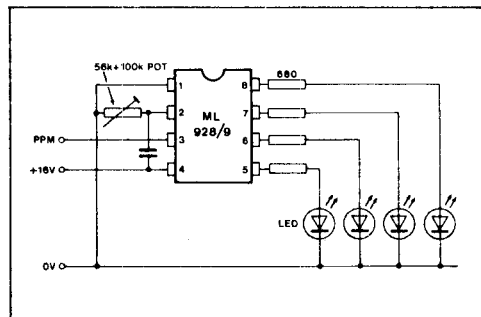


Fig. 5 Direct drive of LEDs

ABSOLUTE MAXIMUM RATINGS

V_{DD} supply and inputs w.r.t. V_{SS} +0.3V to -25V
 Storage temperature -55°C to +125°C
 Operating temperature ambient -10°C to +65°C