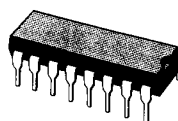


LINE OSCILLATOR COMBINATION FOR TV SET

- SYNC-PULSE SEPARATION
- OPTIONAL NOISE INVERSION
- GENERATION OF A LINE FREQUENCY VOLTAGE BY MEANS OF AN OSCILLATOR
- PHASE COMPARISON BETWEEN SYNC-PULSE AND THE OSCILLATOR WAVEFORM
- PHASE COMPARISON BETWEEN THE OSCILLATOR WAVEFORM AND THE MIDDLE OF THE LINE FLY-BACK PULSE
- AUTOMATIC SWITCHING OF THE VARIABLE TRANSCONDUCTANCE AND THE VARIABLE TIME CONSTANT TO ACHIEVE NOISE SUPPRESSION AND, BY SWITCHING OFF, POSSIBILITY OF TAPE-VIDEO-REGISTERED REPRODUCTION
- SHAPING AND AMPLIFICATION OF THE OSCILLATOR WAVEFORM TO OBTAIN PULSES FOR THE CONTROL OF DRIVING STAGES IN HORIZONTAL, DEFLECTION CIRCUITS USING EITHER TRANSISTORS OR THYRISTORS

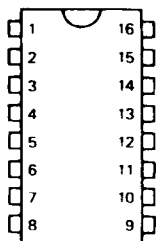
DESCRIPTION

The line oscillator combination TBA920 is a monolithic integrated circuit intended for the horizontal deflection of the black and white and colour TV sets picture tube.



TBA920-TBA920S
DIP16
(Plastic Package)

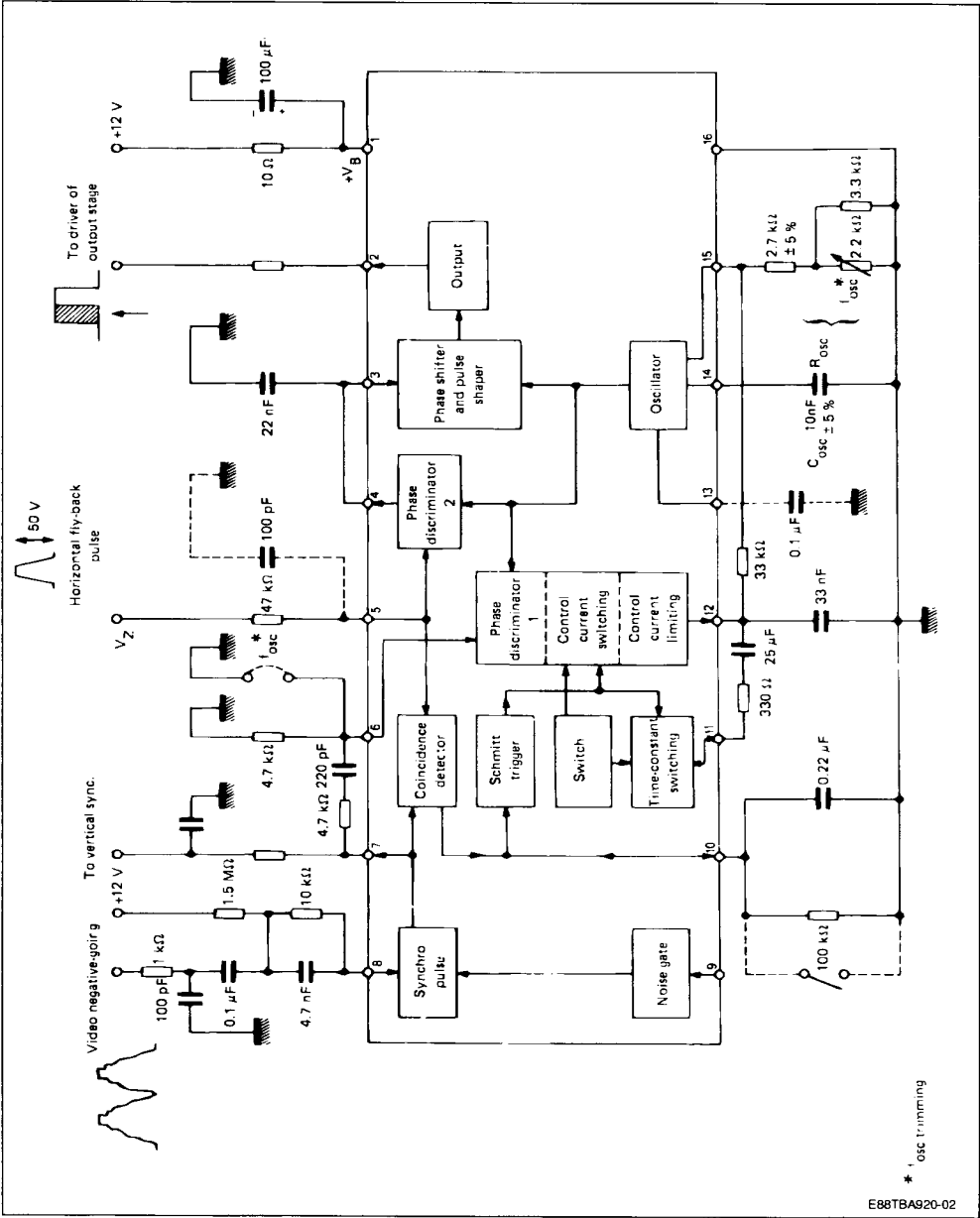
PIN CONNECTIONS



E88TBA920-01

- 1 - Positive supply
- 2 - Driver line stage pulse, driving an output stage
- 3 - Input control voltage for pulse width
- 4 - Phase discriminator output between fly-back pulse and oscillator
- 5 - Fly-back pulse input
- 6 - Synchro-pulse input
- 7 - Synchro pulse output
- 8 - Video signal input
- 9 - Noise gate input
- 10 - Switch emission-magnetoscope
- 11 - Time constant switch
- 12 - Oscillator control voltage loop
- 13 - Oscillator decoupling
- 14 - Tuning oscillator capacitor
- 15 - Oscillator control voltage
- 16 - Ground

BLOCK DIAGRAM



E88TBA920-02

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage V_{1-16}	4 to 14	V
P_{tot}	Total Power Dissipation	600	mW
T_{amb}	Ambient Temperature	- 20 to 60	°C
T_{stg}	Storage Temperature	- 55 to 150	°C

ELECTRICAL OPERATING CHARACTERISTICS

$T_{amb} = 25\text{ °C}$, $V_{CC} = 12\text{ V}$ (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
V_i	Video Signal (pin 8) Input Voltage (positive synchro-pulse)	1	3	7	V
I_i	Input Current			0.2	mA
I_i	Fly-back (pin 5) Input Current	0.1	1	2	mA
V_i	Input Voltage		± 0.8		V
Z_i	Input Resistance		0.4		k Ω
I_i	Noise Gate (pin 9) Input Current		20		μ A
V_i	Input Voltage		0.7		V
V_o	Synchro Pulse (pin 7) Output Voltage	9	10		V
Z_o	Output Impedance on Rise Time		50		Ω
Z_o	Output Impedance on Fall Time		2.2		k Ω
I_o	Line Amplifier Output Current (peak to peak)		25	200	mA
V_o	Output Voltage	9	10		V
t_P	Output Pulse Duration (adjust by V_{3-16})	12		32	μ s
	Fly-back Pulse Phase Control Delay accepted between output pulse and fly-back pulse	0		15	μ s
I_o	Output Current During Fly-back Pulse		± 0.5		mA
	Line Oscillator (no synchronized) for 625 Lines		15625 $\pm 5\%$		Hz
	At Supply Cut-off, without synchronized for 625 Lines		15625 $\pm 10\%$		Hz
	Phase Control between Oscillator and Synchro-pulse • with Emission Pull in Range		± 1		kHz
	Keep in Range		± 1		kHz
S	Sensibility • with Magnetoscope Keep in Range		3		kHz/ μ s
	Pull in Range		± 350		Hz
S	Sensibility		± 350		Hz
			± 1		kHz/ μ s
For TBA 9205 only					
ΔF_o	Oscillator (pin 14) Oscillator Frequency Spread $R_{15-6} = 3.3\text{ k}\Omega$ $C_{14-16} = 10\text{ nF}$		≤ 1.5		%
ΔF_o	Oscillator Frequency Range (figure 1 and 2)		± 5		%
Δt	Phase Position (pin 5-6) Phase spread between Front End Synch Pulse and Fly-back Pulse Center (figure 1)		$\leq \pm 0.4$		μ s

APPLICATION : EUROPEAN STANDARD 625 LINES

Figure 1.

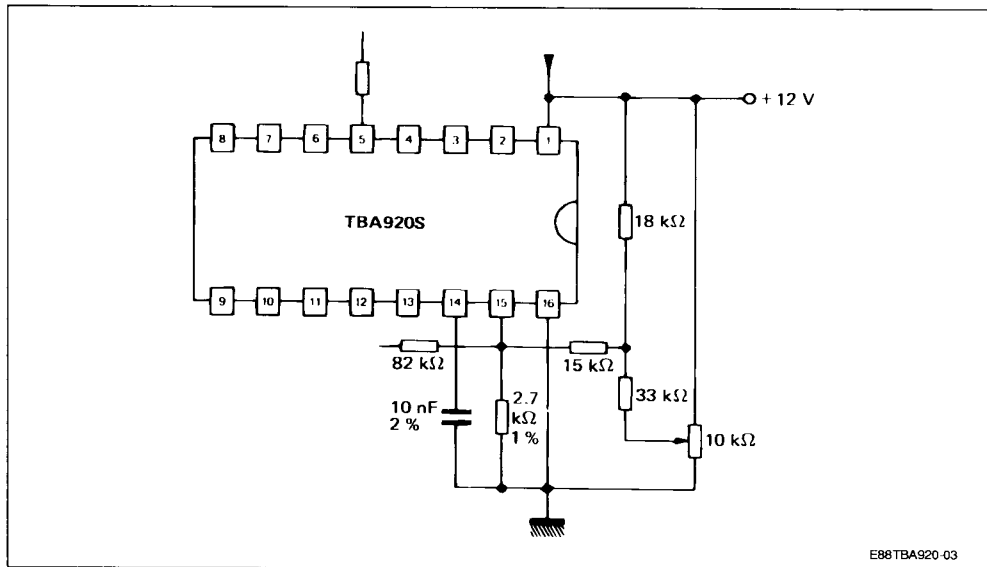
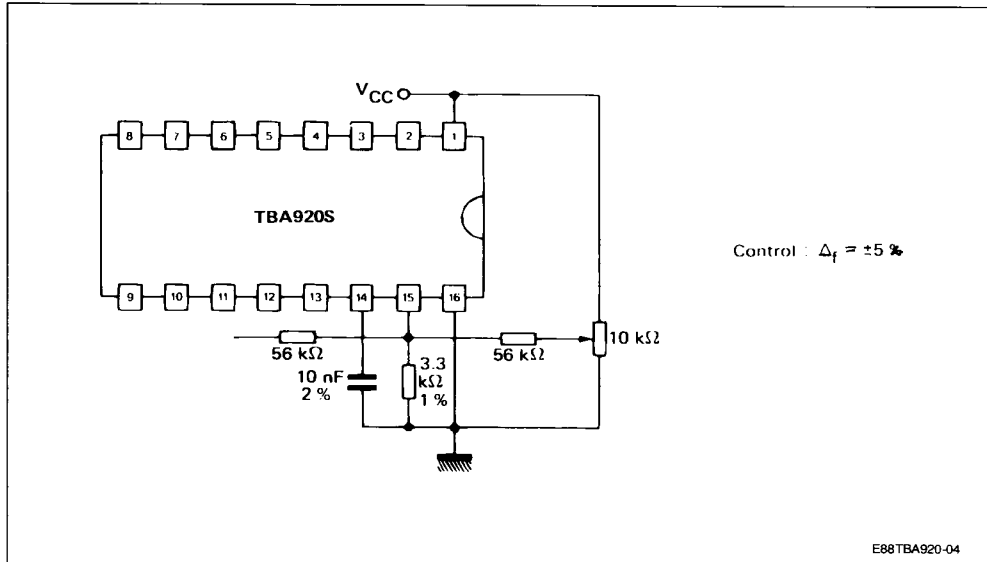


Figure 2.



PACKAGE MECHANICAL DATA

16 PINS – PLASTIC DIP

