

# LA7765

## OVERVIEW

The LA7765 decodes MTS stereo TV sound without use of external mechanical alignments.

The signal input to the IC is a wide band audio signal consisting of a (L+R) mono signal, a 15.734kHz pilot and a (L-R) subcarrier. An expander is inserted in the (L-R) path to approximately decode the dbx encoded signal.

A stereo pilot presence signal and a switch to select mono or stereo is required.

A true dbx decoder can be connected between pins 10 and 11.

The input level to the dbx processor can be controlled from an external D/A connected pin 15.

An internal switch bypasses the SAP trap which may cause the separation if using real dbx decoding.

## FEATURES

- No external mechanical alignments
- Internal Sap trap
- VCO with resonator.
- Internal 75uSec de-emphasis
- 24-pin DIP

# PIN, DESCRIPTION

Number	Name	Description
1	PILOT IN	Pilot Signal Input
2	PILOT OUT	Pilot Signal Output
3	LOOP FIL	Loop Filter of Pilot Detctor connection
4	LOOP FIL	Loop Filter of Pilot Detctor connection
5	WB IN	Wide Band Audio (Composite) Signal Input
6	GND	Ground
7	LPF TUNE	75uSec De-emphasis tuning
8	1/2 Vcc	1/2 Vcc Output
9	BYPASS	1/2 Vcc Bypass
10	L-R OUT	Demodulated L-R Singal Output
11	L-R IN	Demodulated L-R Singal Input
12	L-R GAIN	L-R Signal Amplifier Gain tuning
13	RIGHT OUT	Right Channel Signal Output
14	LEFT OUT	Left Channel Signal Output
15	DET TC	Level Detector Time Constant connection
16	DET GAIN	Level Detector Bypass
17	BPF	Band Pass Filter Upper Corner tuning
18	BPF	Band Pass Filter Lower Corner tuning
19	Vcc	Supply Voltage
20	ST PRES	Stereo Presence
21	STEREO/MONO	Forced MONO
22	RESONATOR	Resonator connection
23	PILOT DET	Pilot Detector connection
24	PILOT DET	Pilot Detector connection

# SPECIFICATIONS

## Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	Vcc max		V
Power Dissipation	Pd max		W
Operating temperature range	Topg	-10 to 70	deg.C
Storage temperature range	Tstg	-55 to 150	deg.C

## Recommended Operating Conditions

Ta = 25 deg.C

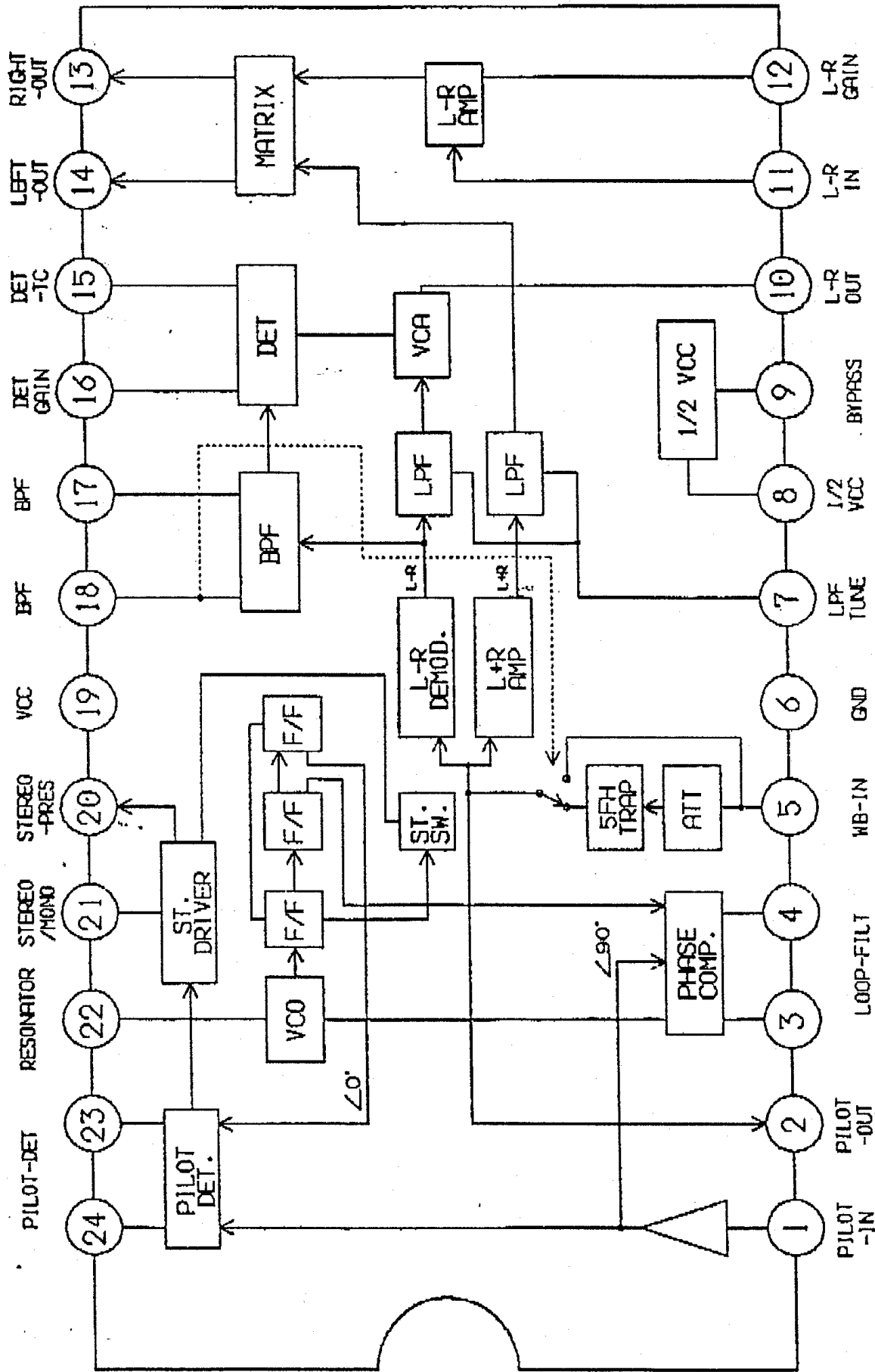
Parameter	Symbol	Rating	Unit
Supply voltage	Vcc	7.6 ~ 9.0	V
Power Dissipation	Pd		W

## Electrical Characteristics

Vcc = 7.6 V, Ta = 25 deg.C, WB input(mono 25kHz Deviation) = 424  $\mu$ Vrms

Parameter	Rating			unit
	min	typ	max	
Supply current		22		$\mu$ A
SAP reduction	-14	-22		dB
Left output level	337	424	534	$\mu$ Vrms
Right output level	337	424	534	$\mu$ Vrms
Channel balance	-1.5	0	1.5	dB
Mono S/N	60	70		dB
De-emphasis (2.12kHz)	-4.5	-3	-1.5	dB
T.H.D.		0.25	0.5	%
VCA dynamic range		33		dB
L-R amplifier gain		12.5		dB
Stereo S/N	60	70		dB
Stereo T.H.D.		0.5	1.0	%
PLL capture range	15.608		15.86	kHz
Pilot capture level	25	50	70	$\mu$ Vrms
Pilot capture hysteresis	2.5	5	7.5	dB

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