

PREAMPLIFIER FOR PLAY OR RECORDER

—YD7738

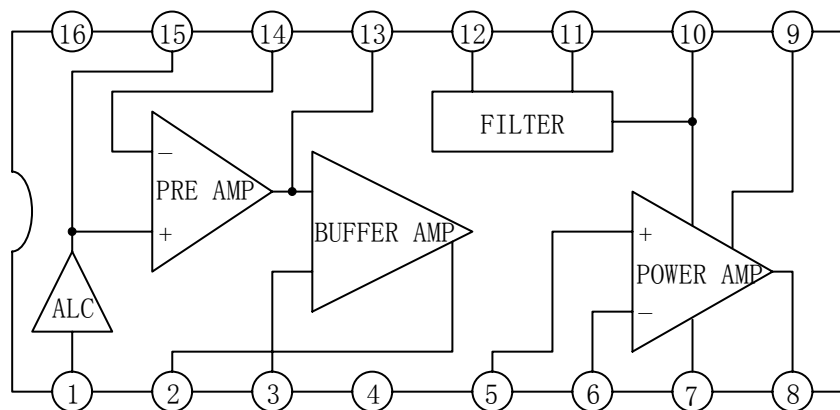
DESCRIPTION

The YD7738 is an amplifier system designed for a radio cassette recorder.

FEATURES

- *Recorder play back for Pre amplifier;
- *Buffer amplifier (Recorder amplifier);
- *Power amplifier;
- *Wide operating voltage (3.5V to 9V)。

BLOCK DIAGRAM



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PIN DESCRIPTION

PIN	Name	Description	PIN	Name	Description
1	IN _{ALC}	ALC input	9	BS	BS
2	OUT _{BUF}	Buffer amplifier input	10	V _{CC}	Supply voltage
3	NF _{BUF}	Negative feed back of Buffer amplifier	11	FIL	Filter input
4	NC	NC	12	FIL	Filter input
5	IN _P	Power amplifier input	13	OUT _{PRE}	Pre-amplifier output
6	NF _P	Negative feed back of Power amplifier	14	NF _{PRE}	Negative feed back of Pre-amplifier
7	GND _P	Power GND	15	IN _{PRE}	Pre-amplifier input
8	OUT _P	Power amplifier output	16	GND _{PRE}	Pre-GND

ABSOLUTE MAXIMUM RATINGS (T_{amb}=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V _{CC}	14	V
Output Current	I _{OP}	1.5	A
Power Dissipation	P _D	1.2	W
Operating Temperature	T _{amb}	-20 to +75	°C
Storage Temperature	T _{stg}	-55 to 150	°C

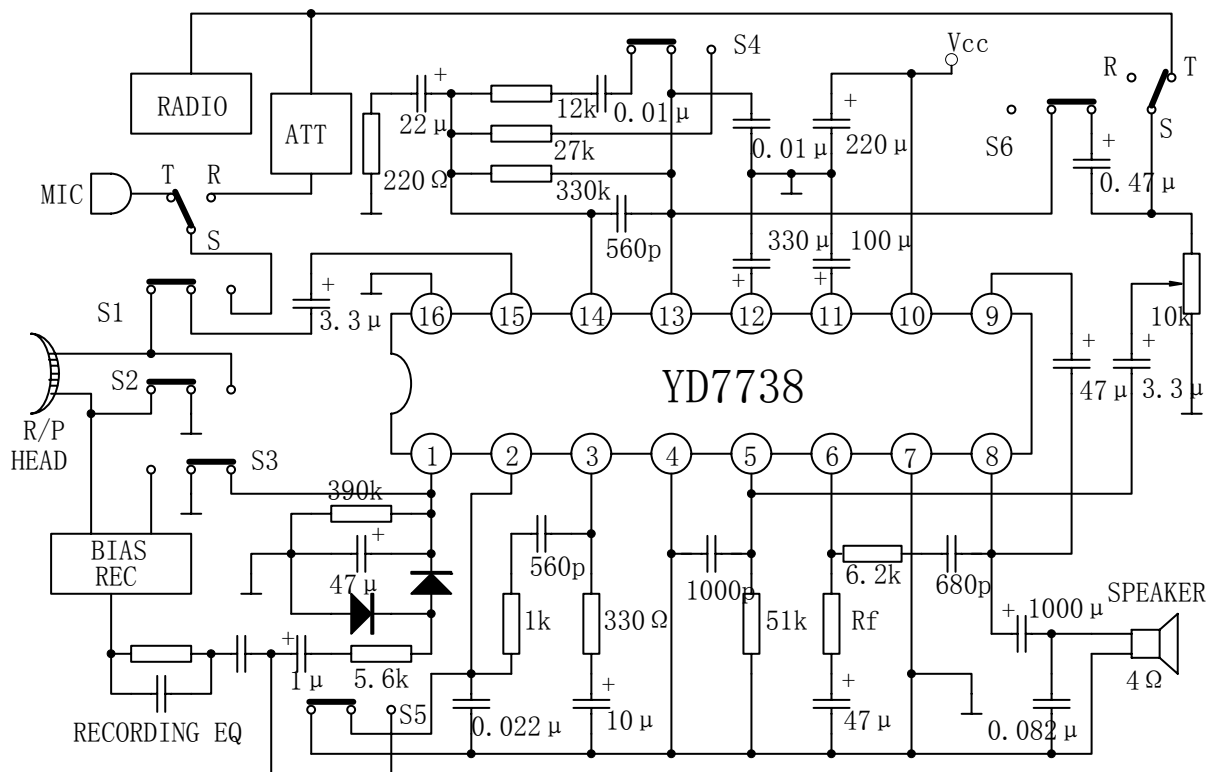
ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, V_{CC}=6V, f=1kHz, T_{amb}=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Total						
Quiescent Current	I _{CCQ}	V _{CC} =3.5V	7.5			mA
		V _{CC} =6V	11		35	mA
Pre-Amplifier						
Open Loop Voltage Gain	G _{VO1}		55	70		dB
Closed Loop Voltage Gain	G _{V1}			40		dB
Max. Output Voltage	V _{OM1}	THD ≤ 1.0%		0.7		V
Input Impedance	Z _i	V _O =0.5V _{rms}		30		kΩ
Equivalent Input Noise Voltage	V _{NO1}	R _g =0		1.4	2.5	μV

Pre Amplifier + Buffer Amplifier						
Closed Loop Voltage Gain	Gv2	Pre-Amp: Gv=40dB Buff-Amp: Gv=20dB		60		dB
Max. Output Voltage	Vo2	THD=3.0%	1.5	1.7		V
Equivalent Output Noise Voltage	VNO2	Rg=0, Gv2=60dB		1.2	2.5	mV
ALC Effect	ALC1	VIN= -60dBm~-20dBm		2		dB
ALC Range	ALC2	THD<1.0%		60		dB
Power Amplifier						
Open Loop Voltage Gain	Gvo3		60	70		dB
Closed Loop Voltage Gain	Gv3			40		dB
Maximum Out Power	POM	RL=4Ω, THD=10%	0.8	0.96		W
		Vcc=9V, RL=4Ω, THD=10%		2.0		
Output Noise voltage	VNO3	Rg=0, Gv=40dB		0.3		mV

APPLICATION CIRCUIT



1: Rf (pin6) controls the gain of power amplifier

Rf (pin6) value	180 Ω	200 Ω	220 Ω
Gain of power amplifier	42dB	40 dB	38 dB

#2: S1----S6 apply at play estate

OUTLINE DRAWING

DIP-16

unit:mm

