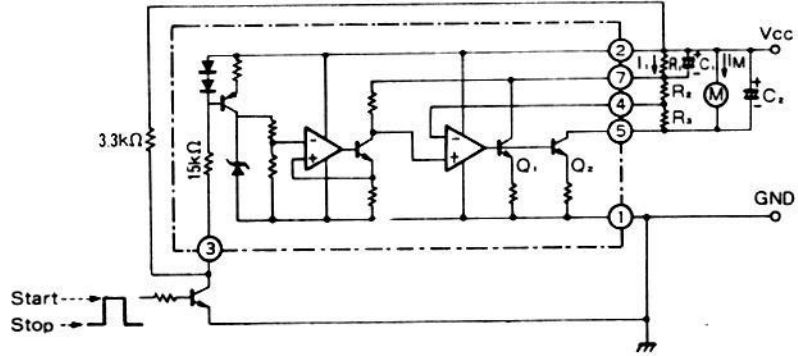
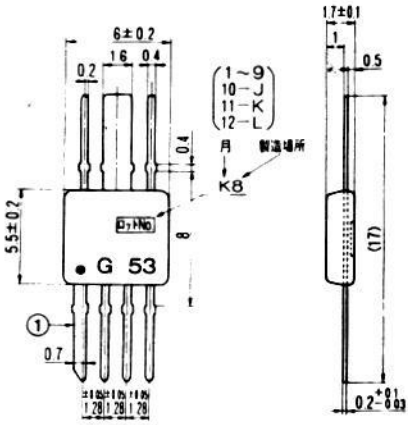


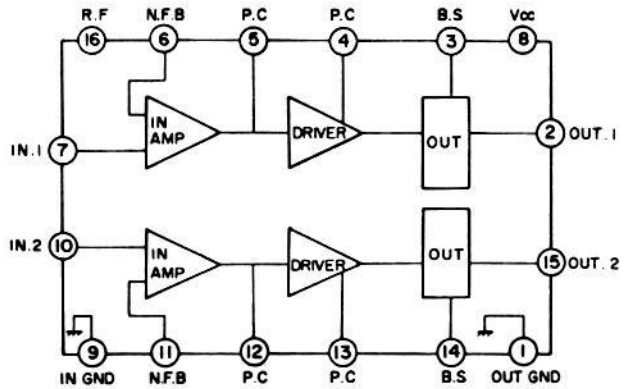
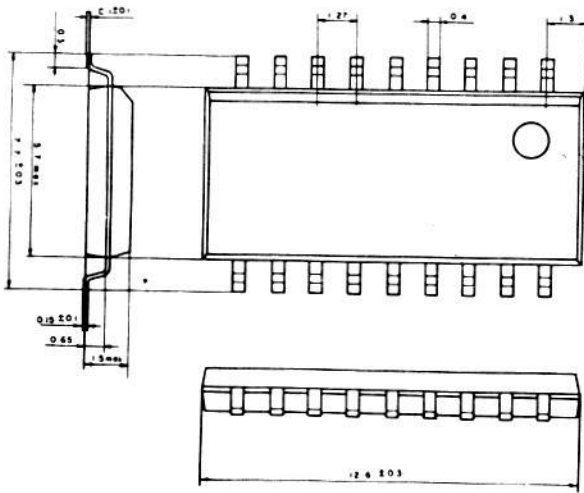
LAG553-2 PACKAGE DIMENSION

CIRCUIT DIAGRAM



AN7118S PACKAGE DIMENSION

BLOCK DIAGRAM



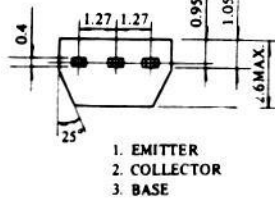
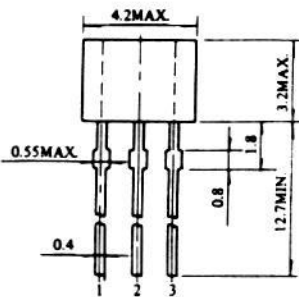
TRANSISTOR

LED

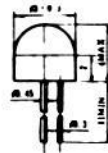
2SC3199(GR) 2SC3195(O)

KLR-102

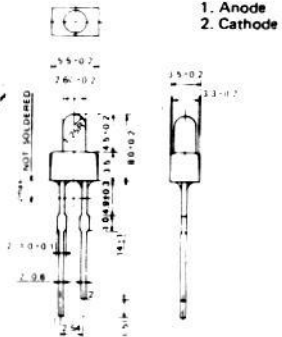
LN-221 KP



1. EMITTER  
2. COLLECTOR  
3. BASE



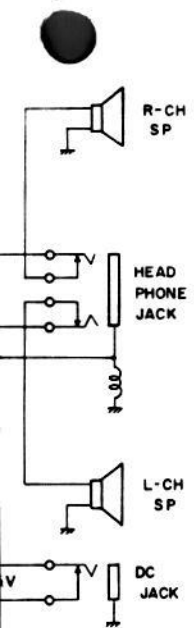
1 ANODE  
2 CATHODE



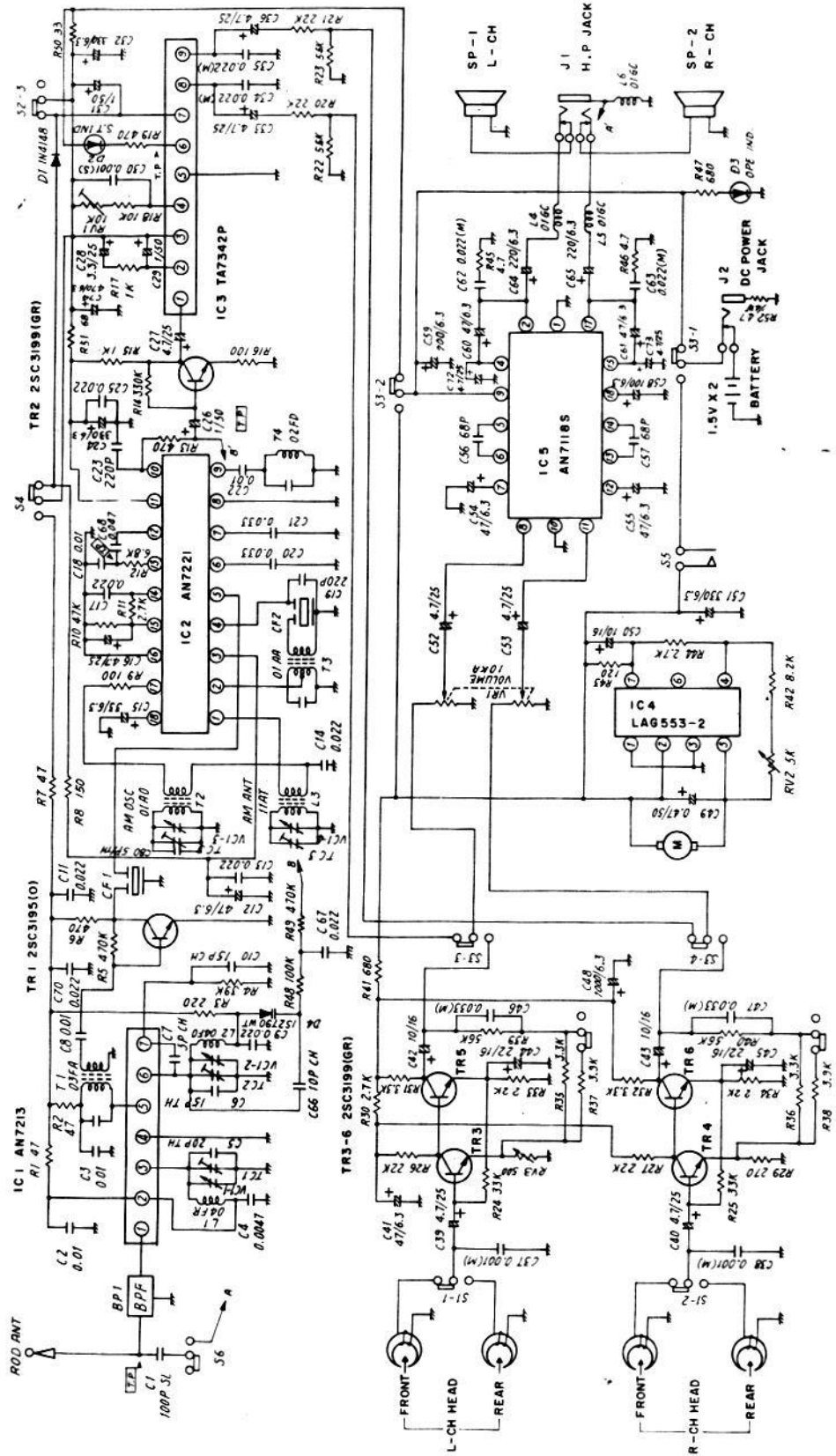
1. Anode  
2. Cathode

# 7. SCHEMATIC DIAGRAM

LAG553-2  
M898



pointer and dial  
TURN)  
ILLEY

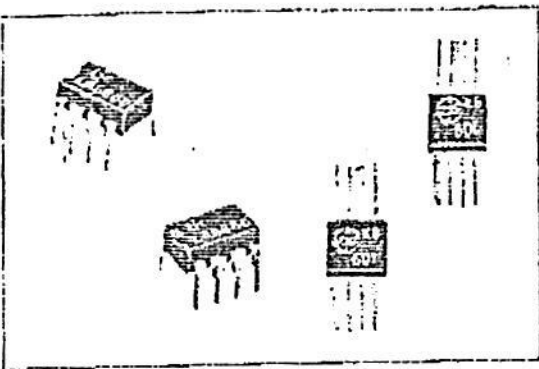




ATTN: MR SING 課長  
 FM: CHIYODA ELECTRONIC CO., LTD TOKYO JAPAN  
 直流モータ制御用/DC Motor Speed Control

# Monolithic IC LAG600-2, LAG601-2

LAG600, LAG601 は低電圧 (Vcc=0.85V min.) で動作可能なモータ速度コントロール用ICであり、簡単な外部部品で高精度なDCモータが構成できます。特に低電圧動作特性を改善した独自の回路構成により、オートリレー等のバックホルスアレー等で、モータ駆動の回路を構成し、広い電圧範囲での動作が可能であるなど、低電圧DCモータの速度制御に最適です。



LAG600, LAG601 are motor speed control IC operated with a low voltage of Vcc=0.85V min. and by using LAG600, LAG601, highly accurate electronic governor can be composed with only a few components. Especially, headphone stereos etc with an autoreverse function using LAG600 or LAG601 are comparatively free from influences of supply voltage drops at reverse, as LAG600 is composed of unique circuits improved in operation characteristics at low supply voltages. LAG600, LAG601 are most suitable for speed controls of DC motor operating at low voltages.

**特長**

1. 低電圧で動作する、動作電圧最低電圧: 0.85V typ. 最低動作電圧: 1.25V typ.
2. 動作電圧範囲が広い、Vcc=1.5~10V
3. 入力電流が少なくて、I<sub>d</sub>=2.3mA typ. (Vcc=5V)
4. 外部部品が少なく、小型パッケージ。
5. 速度変化が容易、広範囲であり、2スピード制御可能。

**適用**

1. マイクロミニ用モータスピードコントローラ。
2. その他低電圧動作用モータスピードコントローラ。

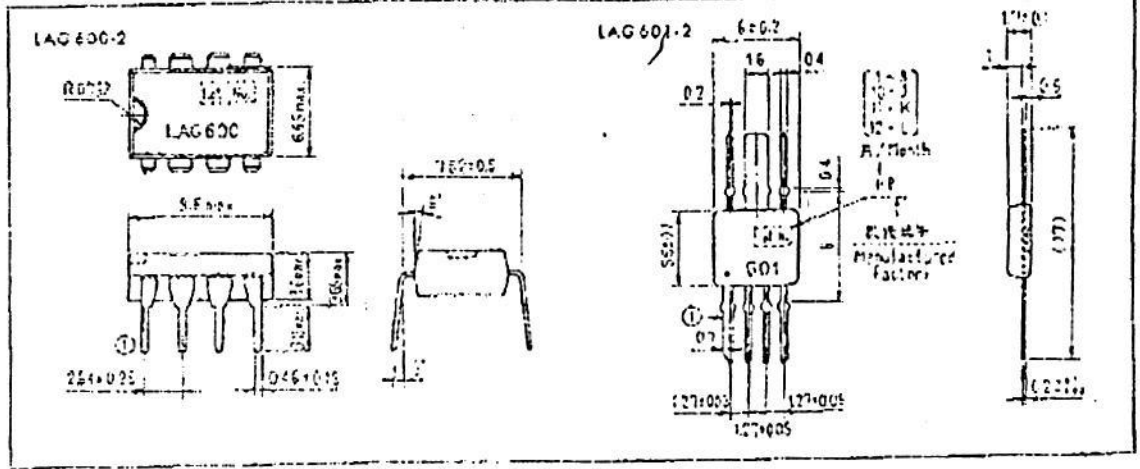
**FEATURES**

1. Operation with low supply voltage. Minimum operating supply voltage: 0.85V (typ.) Minimum power supply voltage at steady operating reference voltage: 1.25V (typ.)
2. Wide supply voltage range. (Vcc: 1.5 to 10V)
3. Low input current. (I<sub>d</sub>=2.3mA typ. Vcc=5V)
4. Small external parts, and compact package.
5. Easy and wide speed range for two speeds.

**APPLICATIONS**

1. Motor speed control for micro-miniatures.
2. Motor speed control for instruments operated with low voltages.

**外形図/DIMENSIONS**





最大定格/MAXIMUM RATINGS

項目/Item	記号/Symbol	最大定格/Max. Rating	単位/Unit
動作温度/Operating Temperature	T <sub>OP</sub>	-10 ~ +60	°C
保存温度/Storage Temperature	T <sub>STG</sub>	-30 ~ +150	°C
電源電圧/Supply Voltage	V <sub>CC</sub>	10	V
出力電流/Output Current	I <sub>L</sub>	700	mA
消費電力/Power Dissipation	P <sub>D</sub>	700 (300)	mW

( )=LAG601

電気的特性/ELECTRICAL CHARACTERISTICS

項目/Item	記号/Symbol	最小/min.	通常/typ.	最大/max.	単位/Unit
入力電流/Input Current	i <sub>i</sub>		2.3	7	mA
起動電流/Starting Current	I <sub>st</sub>	500			mA
基準電圧/Reference Voltage	V <sub>ref</sub>	0.18	0.20	0.22	V
基準電圧変動率 I /Reference Voltage Regulation <sup>①</sup>	ΔV <sub>ref1</sub>		0.1		%/V
基準電圧変動率 II /Reference Voltage Regulation <sup>②</sup>	ΔV <sub>ref2</sub>		0.00%		%/mA
基準電圧変動率 III /Reference voltage Regulation <sup>③</sup>	ΔV <sub>ref3</sub>		0.01		%/°C
出力飽和電圧/Output Saturation Voltage <sup>④</sup>	V <sub>O(sat)</sub>		0.2	0.3	V
電流係数/Current Coefficient	K	4.5	5	5.5	
電流係数変動率 I /Current Coefficient Regulation <sup>⑤</sup>	ΔK1		0.1		%/V
電流係数変動率 II /Current Coefficient Regulation <sup>⑥</sup>	ΔK2		0.05		%/mA
電流係数変動率 III /Current Coefficient Regulation <sup>⑦</sup>	ΔK3		0.01		%/°C

T<sub>a</sub>=25°C

①②③④ Measured Condition.

⑤⑥⑦ Measured Condition. V<sub>CC</sub>=10V, I<sub>CC</sub>=10mA, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

① V<sub>ref</sub>=0.2V, I<sub>CC</sub>=10mA, V<sub>O</sub>=0V, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

② V<sub>ref</sub>=0.2V, I<sub>CC</sub>=10mA, V<sub>O</sub>=0V, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

③ V<sub>ref</sub>=0.2V, I<sub>CC</sub>=10mA, V<sub>O</sub>=0V, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

④ V<sub>ref</sub>=0.2V, I<sub>CC</sub>=10mA, V<sub>O</sub>=0V, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

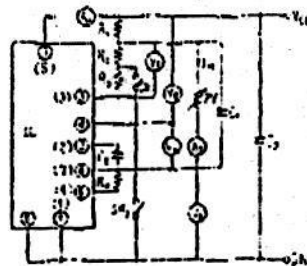
⑤ V<sub>ref</sub>=0.2V, I<sub>CC</sub>=10mA, V<sub>O</sub>=0V, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

⑥ V<sub>ref</sub>=0.2V, I<sub>CC</sub>=10mA, V<sub>O</sub>=0V, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

⑦ V<sub>ref</sub>=0.2V, I<sub>CC</sub>=10mA, V<sub>O</sub>=0V, V<sub>ref</sub>=0.2V, V<sub>O</sub>=0V

⑧ Specifications may be changed without notice.

測定回路/Measuring Circuit



V<sub>1</sub>: 0.5Ω ± 1.0%

R<sub>2</sub>: 1.0KΩ ± 0.5%

R<sub>3</sub>: 1.0KΩ ± 0.5%

R<sub>4</sub>: 2.0KΩ ± 0.5%

R<sub>V</sub>: Variable resistance

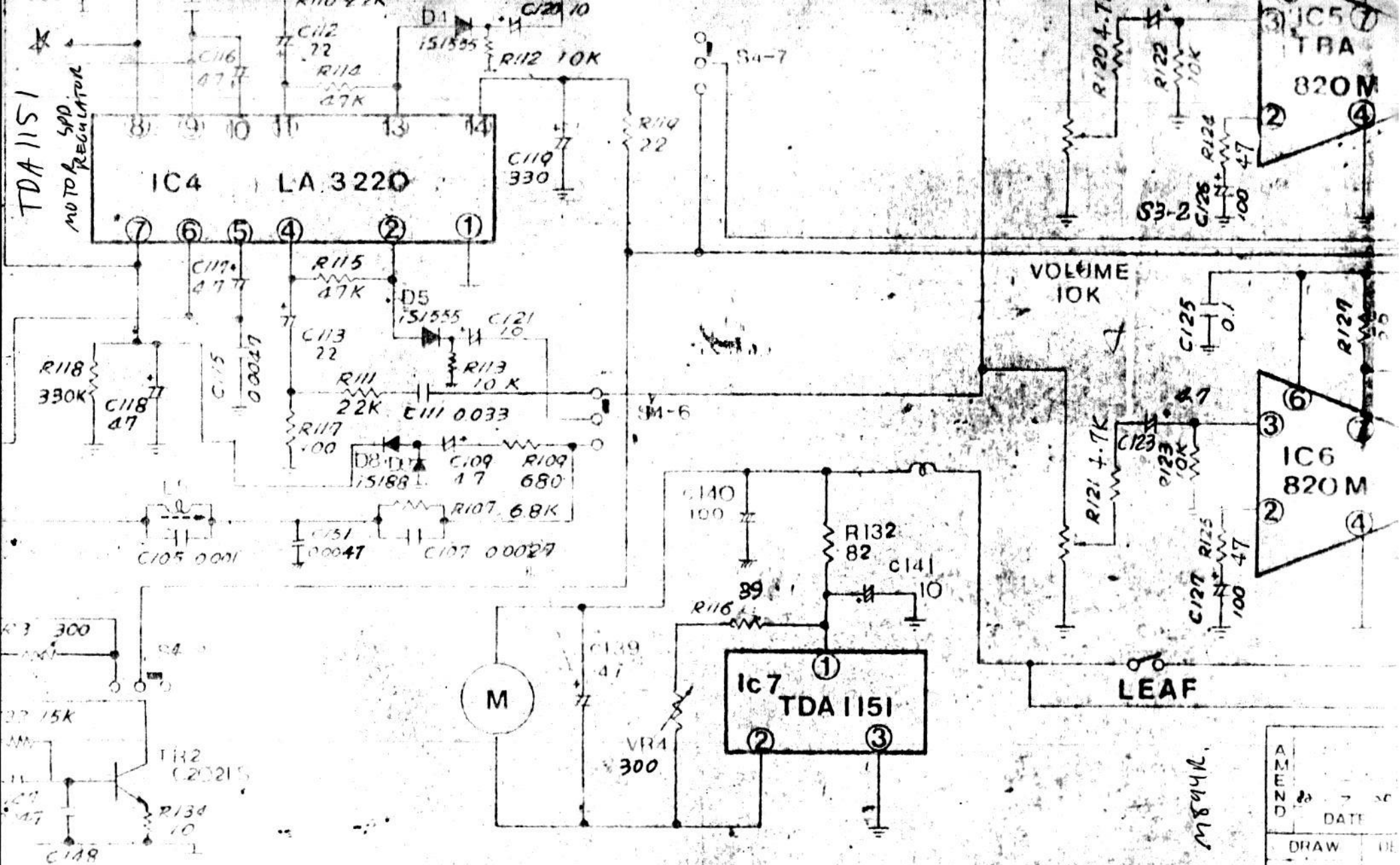
C<sub>1</sub>: 1μF Tantalum Capacitor

C<sub>2</sub>: 100μF

C<sub>3</sub>: 10μF

○ are pin No. for LAG60C

○ are pin No. for LAG601

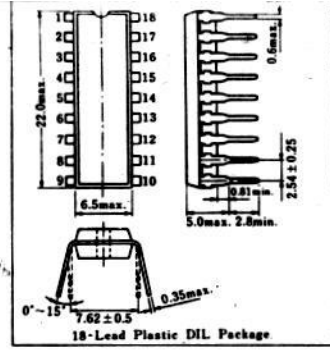
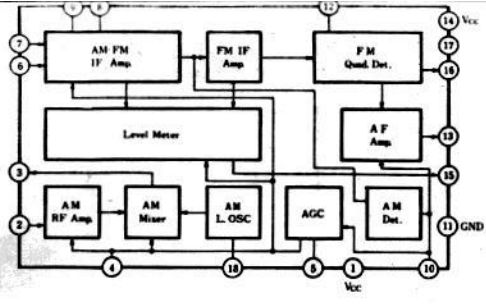


M894K

	1-4	4-16	16-63	63-200	250-1000
A	0.05	0.07	0.1	0.2	0.3
B	0.1	0.2	0.3	0.5	0.8
C	0.25	0.35	0.5	0.7	1

AMEND DATE

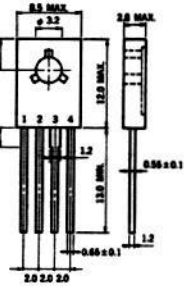
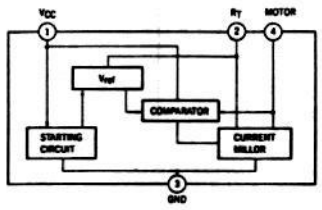
DRAW



UPC1470  
MOTOR  
SPEED  
CONTROLLER

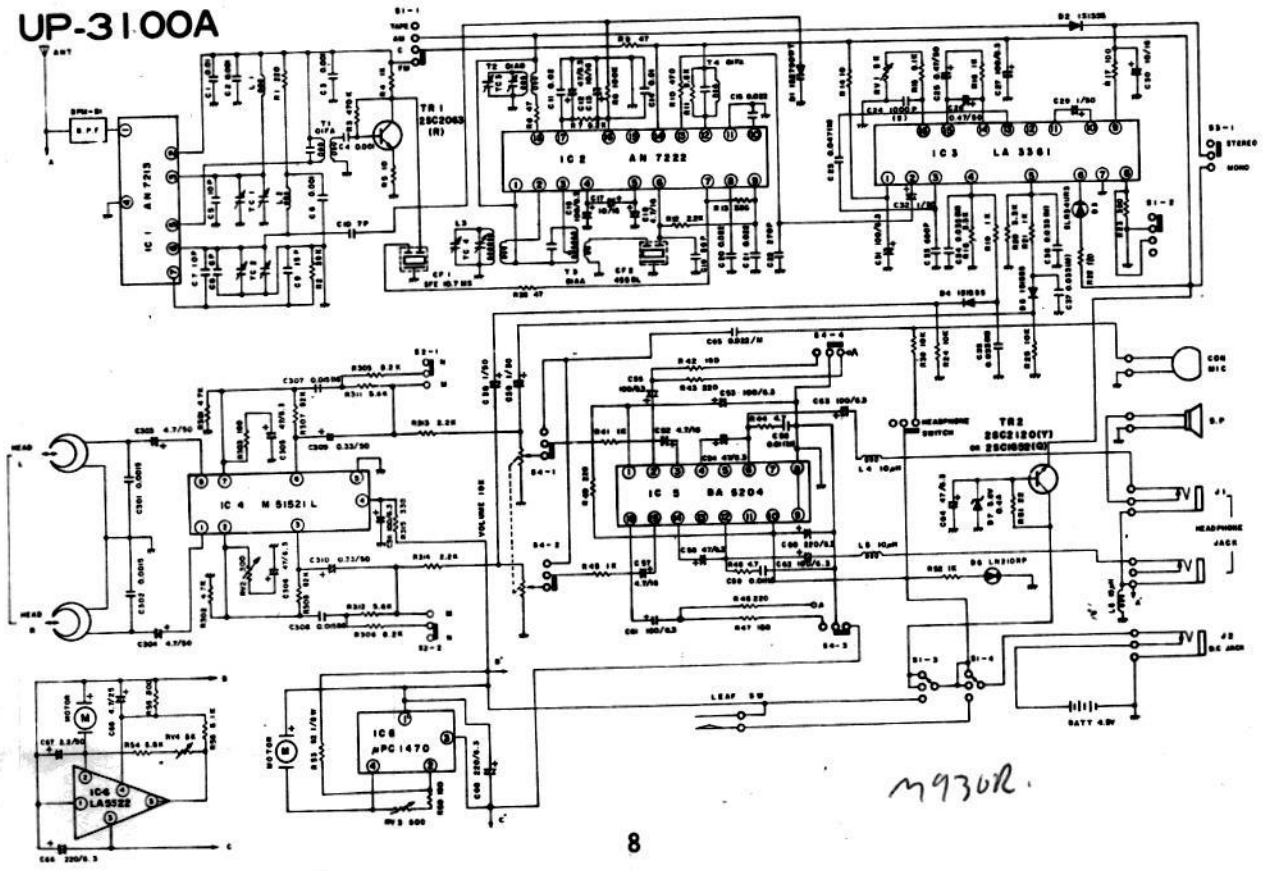
μPC1470H BLOCK DIAGRAM

PACKAGE DIMENSION

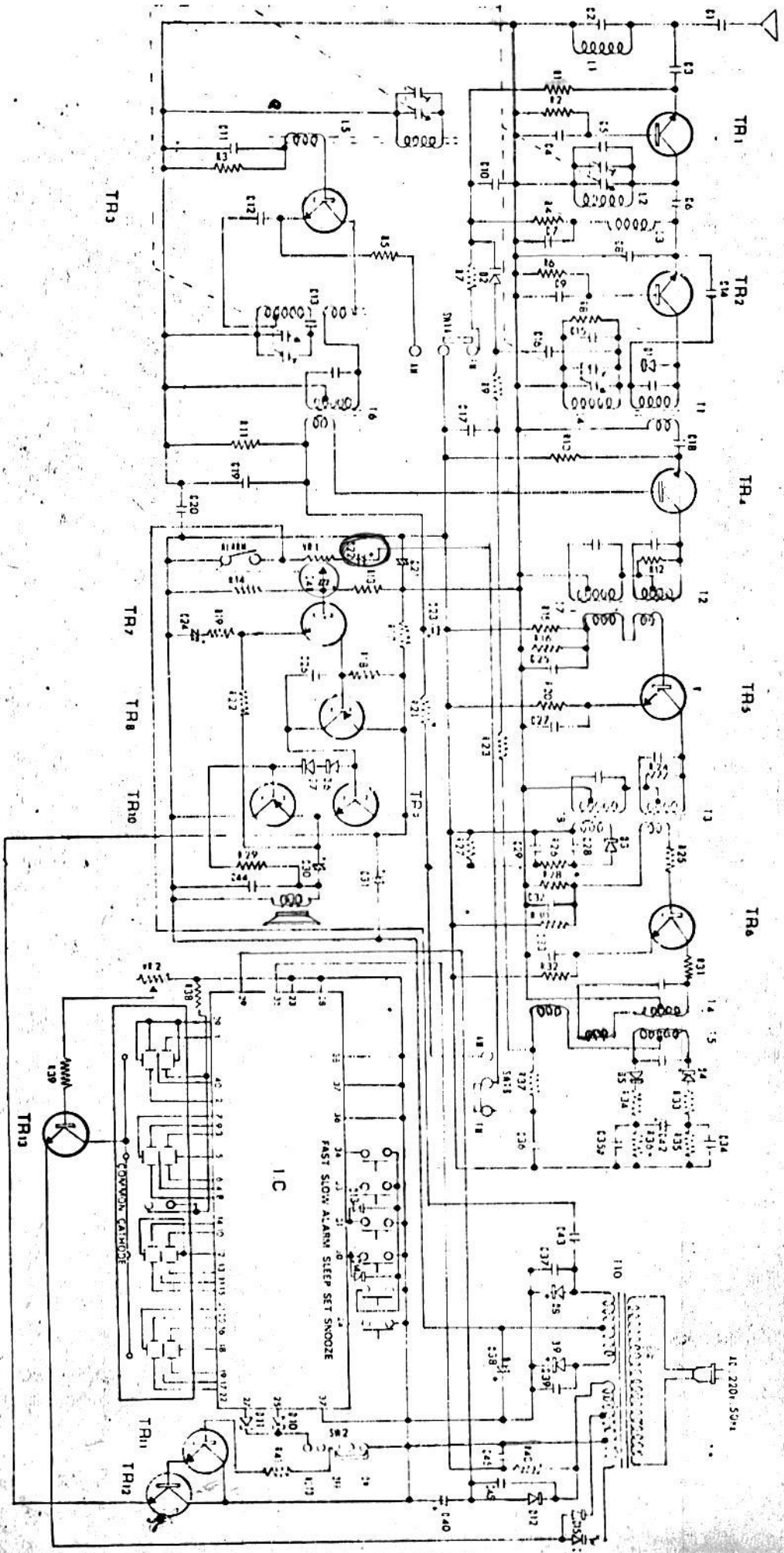


Connection Diagram  
1. VCC  
2. RY  
3. GND  
4. MOTOR

UP-3100A



m9302



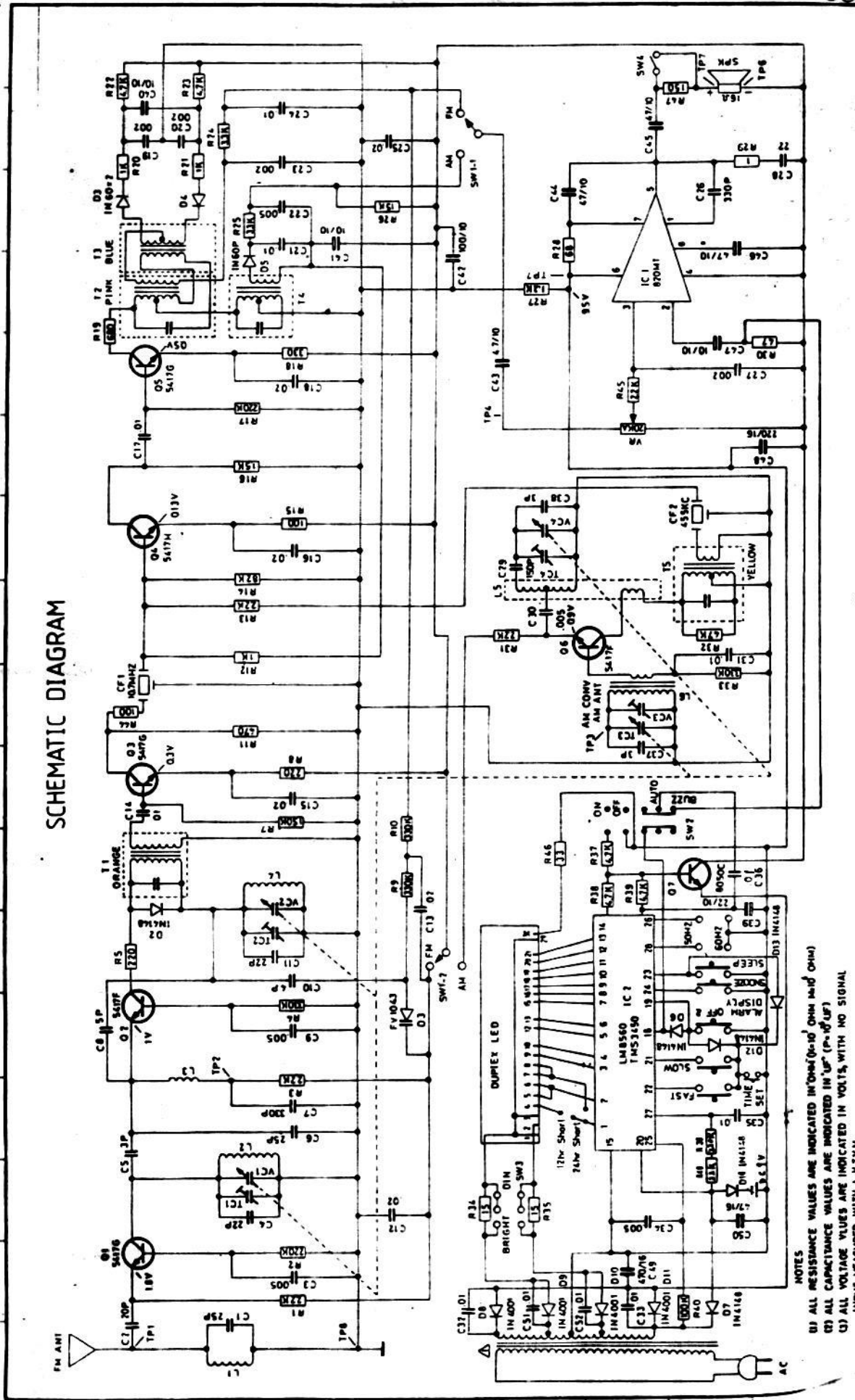
LM9361  
CLOCK I.C.

HER 814

TMS3450

CLOCK

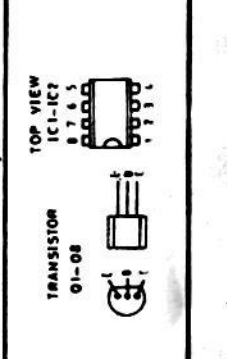
SCHEMATIC DIAGRAM



USED ON

MODEL	DATE	REVISION	DESCRIPTION

TITLE: ACN-1880 SCHEMATIC DIAGRAM  
 MATERIAL: THERMO  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 APPROVED BY: [Signature]  
 DATE: 04-10-0008  
 SIZE: 3



NOTES

- (1) ALL RESISTANCE VALUES ARE INDICATED IN OHMS (10<sup>-3</sup> OHM IN Ω, 10<sup>-6</sup> OHM IN μΩ)
- (2) ALL CAPACITANCE VALUES ARE INDICATED IN μF (P=10<sup>-6</sup> μF)
- (3) ALL VOLTAGE VALUES ARE INDICATED IN VOLTS, WITH NO SIGNAL INPUT MEASURED WITH A V.T.V.M.

MRT120

ALL DIMENSIONS ARE MEASURED IN MM EXCEPT AS NOTED OTHERWISE SIZE: 3