

Audio/Communication Basic Service Data



PROSCAN



Latin America After Sales

Indianapolis IN 46290 U.S.A.

SERVICE DATA INDEX

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CAUTION: Modification or repair of this unit by unauthorized persons is a direct violation of FCC Rules Part 68.216 and could result in risk of electric shock. You are urged to contact a qualified factory authorized service facility for repairs.

SAFETY NOTICE

USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a (Δ) on schematics and on the parts list in this Service Data and its bulletins. Before servicing this instrument, it is important that the service technician read and follow the "Safety Precautions" in the Basic Service Data.

SAFETY PRECAUTIONS

1. **Before returning the instrument to the customer**, always make a safety check of the entire instrument, including, but not limited to, the following items:

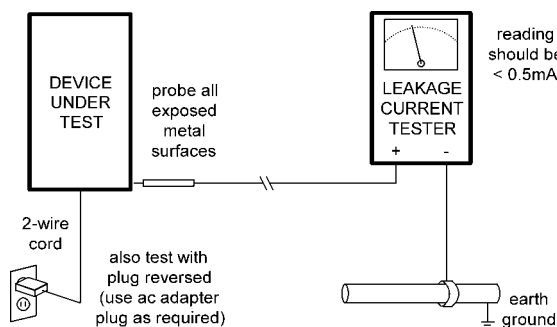
a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this instrument to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reassembling the instrument, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage, and may expose themselves and others to possible injury.**

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) excessively wide cabinet ventilation slots, and (2) improperly fitted and/or incorrectly secured cabinet covers.

c. **Leakage Cold Check** - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the *on* position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each push button/customer control, exposed metal screws, metallized overlays and to each cable connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the AC switch in the *off* position.

d. **Leakage Current Hot Check**

On completely assembled instrument, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) *C101.1 Leakage Current for Appliances* and Underwriters Laboratories (UL) *1492 (Section 67)*. Measure for current from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal or conductive parts of the instrument (antenna connections, handle bracket, metal cabinet, screwheads, metallic overlays, push-buttons, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING TO ANTENNA OR ACCESSORIES.

e. **Interconnected Equipment AC Leakage Test**

Avoid shock hazards. The instrument, accessory, or cable(s) to which this instrument is connected should have the applicable sections of the leakage resistance cold check and the leakage current hot check performed. Do not connect this instrument to an antenna, cable or accessory that exhibits excessive leakage currents.

2. Read and comply with all caution and safety-related notes on or inside the instrument cabinet, and on the chassis.

3. **Design Alteration Warning** - *Do not* alter or add to the mechanical or electrical design of this instrument. Design alterations and additions, including, but not limited to, circuit modifications and the addition of items such as auxiliary audio output connections, cables and accessories, etc., might alter the safety characteristics of this instrument and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and will make you, the servicer responsible for personal injury or property damage resulting therefrom.

4. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: (a) near sharp edges, (b) near thermally hot parts - be sure that leads and components do not touch thermally hot parts, and (c) the AC supply. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components and the printed-circuit board. Check AC power cord for damage.

5. Components, parts and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

6. **PRODUCT SAFETY NOTICE** - Many electrical and mechanical parts have special safety-related characteristics, some of which are often not evident from visual inspection, nor can the protection they give be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in this service data by a (⚠) on schematics and in the parts list. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part in this service data parts list might create shock, fire and/or other hazards. Product Safety is under review continuously and new instructions are issued whenever appropriate. For the latest information, always consult the appropriate current service literature.

RP7930A VOLTAGE CHARTS

IC VOLTAGE CHARTS

	IC101 AN 7205	IC 805 KA9258D	IC803 KA9270	IC201 AN 7312	IC202 TA 7769P	IC102	
						(FM) AN 7024	(AM)
PIN 1	1.1V	3.3V	2.5V	0V	0V	5.5V	6V
PIN 2	1.9V	2.8V	2.5V	0V	5V	5.6V	6V
PIN 3	3.5V	2.3V	3.2V	0V	10V	5.6V	6V
PIN 4	1.8V	2.5V	3.2V	2.8V	0V	5.6V	6V
PIN 5	0V	6V	3V	1.3V	0V	5.6V	6V
PIN 6	3.6V	5V	5.1V	1.2V	0.5V	5.5V	6V
PIN 7	2.9V	5V	3.2V	0V	0V	1.4V	1.7V
PIN 8	3.6V	0V	3.2V	0V	9.8V	5.7V	6V
PIN 9	3.6V	2.5V	3.2V	1.2V	0V	0.8V	0.6V
PIN 10		2.6V	6.5V	1.3V	0V	1.4V	1.4V
PIN 11		3.1V	0V	2.8V	0.5V	1V	1V
PIN 12		3V	3.2V	0V	0V	1.4V	1.4V
PIN 13		0V	3.2V	5.6V	0V	0.2V	0.6V
PIN 14		6.3V	0V	5.7V	11.3V	1.4V	4.4V
PIN 15		1.2V	0V		5V	0.6V	0V
PIN 16		1.5V	3V		11.5V	0.1V	0V
PIN 17		2.8V	3.2V			5.6V	6V
PIN18		3.5V	3.2V			0V	0V
PIN 19		2.8V	2.5V				
PIN 20		2.5V	2.5V				
PIN 21		6.8V					
PIN 22		6.8V					
PIN 23		2.5V					
PIN 24		2.5V					
PIN 25		2.5V					
PIN 26		3.1V					
PIN 27		3.1V					
PIN 28		0V					

IC 804 KS57C0104-06							
PIN 1	0V	PIN 12	2.5V	PIN 23	0V	PIN 34	0V
PIN 2	0V	PIN 13	2.5V	PIN 24	0V	PIN 35	0V
PIN 3	0V	PIN 14	2.5V	PIN 25	5V	PIN 36	2.5V
PIN 4	0V	PIN 15	2.5V	PIN 26	2.7V	PIN 37	2.5V
PIN 5	0V	PIN 16	0V	PIN 27	5V	PIN 38	2.5V
PIN 6	2.5V	PIN 17	5V	PIN 28	5V	PIN 39	5V
PIN 7	2.5V	PIN 18	0V	PIN 29	5V	PIN 40	0V
PIN 8	0V	PIN 19	0.4V	PIN 30	3.3V	PIN 41	5V
PIN 9	0V	PIN 20	5V	PIN 31	3.3V	PIN 42	5V
PIN 10	2.5V	PIN 21	5V	PIN 32	3.3V	PIN 43	5V
PIN 11	2.5V	PIN 22	5V	PIN 33	0V	PIN 44	5V

RP7930A VOLTAGE CHARTS

	IC 802 KS9282B				IC 801 KA9220B		
PIN 1	5V	PIN 41	0V	PIN 1	0V	PIN 41	2.5V
PIN 2	2.3V	PIN 42	0V	PIN 2	3.4V	PIN 42	5V
PIN 3	2.3V	PIN 43	0V	PIN 3	1.3V	PIN 43	2.5V
PIN 4	2.8V	PIN 44	0V	PIN 4	0V	PIN 44	2.9V
PIN 5	2.8V	PIN 45	0V	PIN 5	0V	PIN 45	2.5V
PIN 6	0V	PIN 46	0V	PIN 6	5V	PIN 46	2.3V
PIN 7	2.5V	PIN 47	0V	PIN 7	0.8V	PIN 47	2.5V
PIN 8	2.2V	PIN 48	0V	PIN 8	0V	PIN 48	2.5V
PIN 9	2.1V	PIN 49	0V	PIN 9	5V	PIN 49	0.3V
PIN 10	2.5V	PIN 50	0V	PIN 10	5V	PIN 50	2.5V
PIN 11	0V	PIN 51	0V	PIN 11	2.5V	PIN 51	2.5V
PIN 12	2.5V	PIN 52	0V	PIN 12	2V	PIN 52	2.5V
PIN 13	0V	PIN 53	0V	PIN 13	5V	PIN 53	2.5V
PIN 14	2.4V	PIN 54	4.8V	PIN 14	0V	PIN 54	2.4V
PIN 15	5V	PIN 55	0V	PIN 15	2.5V	PIN 55	5V
PIN 16	0.6V	PIN 56	5V	PIN 16	2.5V	PIN 56	2.5V
PIN 17	0.3V	PIN 57	0V	PIN 17	2.5V	PIN 57	2.5V
PIN 18	5V	PIN 58	1.9V	PIN 18	2.4V	PIN 58	2.4V
PIN 19	2.5V	PIN 59	0V	PIN 19	2.5V	PIN 59	5V
PIN 20	0.5V	PIN 60	0V	PIN 20	2.7V	PIN 60	2.7V
PIN 21	0V	PIN 61	0V	PIN 21	3.5V	PIN 61	2.1V
PIN 22	4.5V	PIN 62	0V	PIN 22	2.1V	PIN 62	2V
PIN 23	4.5V	PIN 63	0V	PIN 23	3.5V	PIN 63	2.5V
PIN 24	0V	PIN 64	0V	PIN 24	0.8V	PIN 64	0V
PIN 25	5V	PIN 65	0V	PIN 25	2.6V	PIN 65	2.5V
PIN 26	0V	PIN 66	0V	PIN 26	0.4V	PIN 66	3.4V
PIN 27	0V	PIN 67	0V	PIN 27	5V	PIN 67	2.5V
PIN 28	0V	PIN 68	0V	PIN 28	5V	PIN 68	2.5V
PIN 29	0V	PIN 69	0V	PIN 29	0V	PIN 69	2.5V
PIN 30	0V	PIN 70	0V	PIN 30	0V	PIN 70	3.2V
PIN 31	5V	PIN 71	0V	PIN 31	5V	PIN 71	0V
PIN 32	0V	PIN 72	0V	PIN 32	0V	PIN 72	5V
PIN 33	0V	PIN 73	0V	PIN 33	2.6V	PIN 73	0V
PIN 34	5V	PIN 74	5V	PIN 34	0V	PIN 74	2.5V
PIN 35	0V	PIN 75	2V	PIN 35	1V	PIN 75	2.5V
PIN 36	5V	PIN 76	2.8V	PIN 36	2.4V	PIN 76	2.5V
PIN 37	0V	PIN 77	0V	PIN 37	2.5V	PIN 77	2.5V
PIN 38	5V	PIN 78	2.3V	PIN 38	2.5V	PIN 78	4.7V
PIN 39	0V	PIN 79	5V	PIN 39	2.5V	PIN 79	1.5V
PIN 40	0V	PIN 80	4.2V	PIN 40	0V	PIN 80	3.8V

	TRANSISTOR	PIN E	PIN B	PIN C
Q201	9013	6.4V	7V	11.5V
Q202	9014	0V	0.6V	0V
Q203	9014	0.2V	0.5V	3.1V
Q204	9014	0V	7.4V	0V
Q205	9014	0V	0.6V	0V
Q206	D2012	6.8V	0.6V	10.4V
Q207	9015	10.3V	9.6V	10.2V
Q208	9014	0V	0.6V	0V
Q209	9014	0V	0.6V	0V
Q801	A928	6.8V	6.1V	5V
Q802	3400	0V	5V	0V
Q803	1317	3.9V	3.2V	1.9V

RP7930A ALIGNMENTS

ALIGNMENT AND ADJUSTMENT

SERVICE ADJUSTMENT

Lubrication

The mechanical parts are factory coated with a thin coat of light grease and should not require further lubrication. If a light grease is applied, be careful not to get any grease on the play/record head or erase head, hubs, pulleys, tapes reels, drive belts, or switches. Use a good lubricant such as Silicon Lube G322L or Lubricate (00).

Service Check

Before aligning the mechanism, wipe off any accumulated dirt with denatured alcohol. Wipe around parts where the tape contacts and around all rotating parts. Drive belts are specially processed. Do not clean them with alcohol.

Mechanical Torques

Use a cassette type torque gauge and check the tape mechanism.

Take-up torque	35 to 80 g-cm
Rewind torque	65 g-cm min.
Fast forward torque	65 g-cm min.

Pinchwheel Pressure

No adjustment to the pinch roller spring is necessary. It should be sufficient to give at least 40 g-cm pull force.

Tape Head Servicing

Each time the unit is serviced, the face of all heads should be thoroughly cleaned with denatured alcohol or commercial head cleaning solution. The playback head should be demagnetized with a commercial demagnetizer. Accumulation of tape oxide during normal operations can cause problems, including loss of high frequencies and wow and flutter.

Erase Head

The erase head is properly aligned when the tape rides directly between the tape guide on the head without crinkling the tape.

RP-7930A ALIGNMENTS

Play/Record and Playback Head Azimuth Adjustment

To adjust the play/record and playback head azimuth screw:

1. Connect two (2) VTVMs and a dual trace scope to the stereo headphone jack (as shown) with a 32 ohm dummy load. (See Figure 1.)

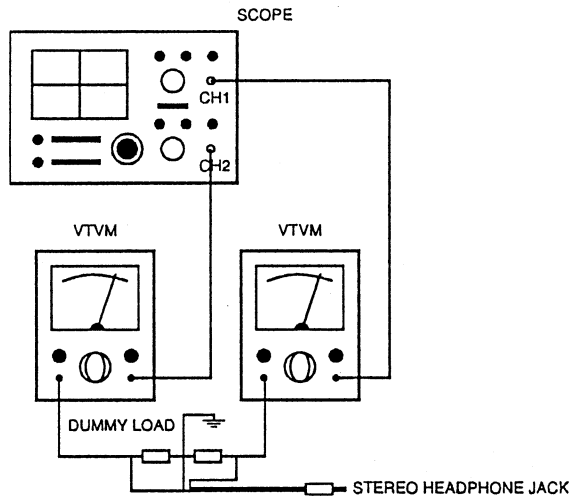


Figure 1. Azimuth Adjustment

2. Insert a 10 kHz test tape (such as TEAC MTT-113C) into the tape mechanism and play it back.
3. While playing back the test tape, slowly turn the azimuth adjusting screw until the amplitude of both channel output waveforms is maximum and inphase. (See Figure 2.)
4. Secure the azimuth screw in place with glue or paint after making the adjustment.

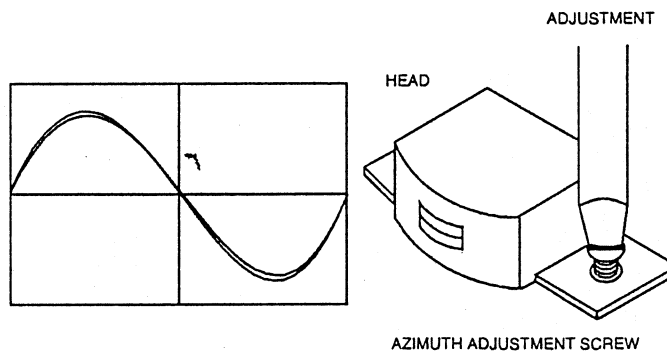


Figure 2. Head Output Signal

RP-7930A ALIGNMENTS

Tape Speed Adjustment

1. Set the function switch to TAPE.
2. Connect a frequency counter with a 32 ohm dummy load to the stereo headphone jack. (See Figure 3.)

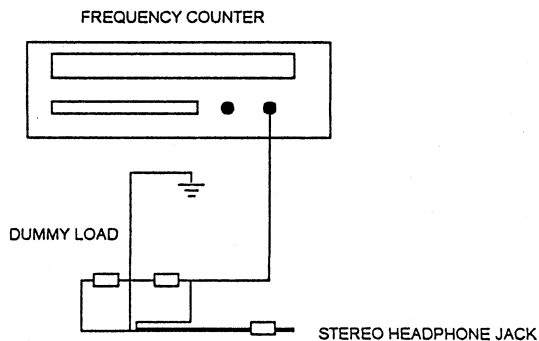


Figure 3. Tape Speed Adjustment

3. Insert and play back a 3 kHz test tape (TEAC MTT-114 or equivalent) into the tape mechanism.
4. Insert an insulated alignment tool and adjust the tape speed potentiometer (MOTOR) until the frequency counter indicates 2940 Hz to 3090 Hz.

Bias Oscillator Frequency and Level Adjustment

1. Set the function switch to TAPE and the record and play tape mechanism to RECORD.
2. Connect a VTVM and frequency counter to test point R/P HEAD.
3. Adjust bias oscillator coil L201 until the frequency counter indicates $75 \text{ kHz} \pm 3 \text{ kHz}$ (SW204 in osc2).

RP-7930A ALIGNMENTS

TUNER ALIGNMENT PROCEDURE

Equipment needed :

1. AM Signal generator
2. FM Signal generator
3. Intermediate Frequency Sweep generator
4. FM stereo signal generator
5. Marker generator
6. Oscilloscope
7. Output meter (VTVM)
8. Distortion meter
9. Frequency counter

AM Alignment : Use AM S/G and loop antenna

STEP	S/G FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1	455 kHz (1kHz 30% mod.)	600 kHz	Connect oscilloscope or VTVM to speaker jack	IFT102	Adjust for maximum output
2	515 kHz (1kHz 30% mod.)	Low end	Same as step 1	L104	Same as step 1
3	1740 kHz (1kHz 30% mod.)	High end	Same as step 1	VC3	Same as step 1
4	600 kHz (1kHz 30% mod.)	600 kHz	Same as step 1	L105	Same as step 1
5	1600 kHz (1kHz 30% mod.)	1600 kHz	Same as step 1	C4	Same as step 1
6	Repeat steps 4 and 5 to minimize tracking error				
7	1000 kHz (1kHz 30% mod.)	1000 kHz	Same as step 1		Same as step 1

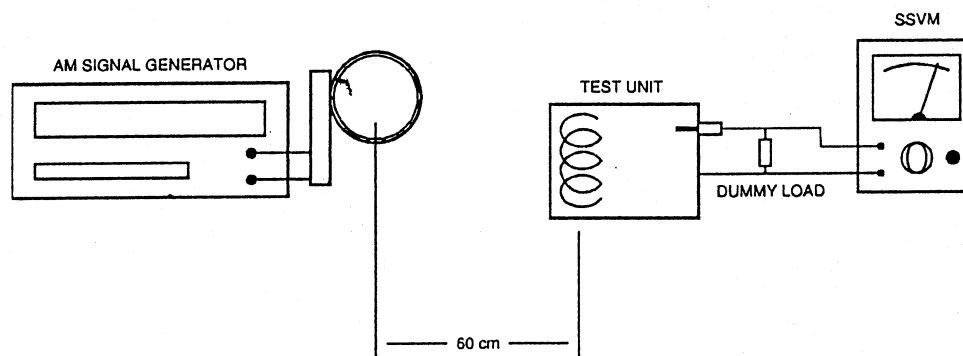


Figure 4. AM IF/RF Tracking

RP-7930A ALIGNMENTS

FM Alignment : Connect FM S/G to ANT inputs (mod 400Hz 22.5kHz dev.)

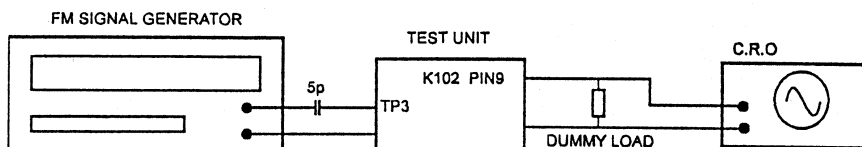


Figure 5. IF Alignment

STEP	S/G FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1	10.7 MHz 87.5 MHz (1kHz 30% mod.)	Any point low end	Connect oscilloscope or VTVM to IC102 PIN9 (TP3)	IFT101 IFT103	Adjust for maximum and center output
2	109 MHz (1kHz 30% mod.)	High end	Connect oscilloscope or VTVM to IC102 speaker jack	L103 VC1	Adjust for maximum and center output
3	90 MHz (1kHz 30% mod.)	82 MHz	Same as step 2	L102	Same as step 2
4	106 MHz (1kHz 30% mod.)	102 MHz	Same as step 2	C2	Same as step 2
5	Repeat steps 3 and 4 to minimize tracking error				
6	98 MHz (1kHz 30% mod.)	92 MHz	Same as step 2		Same as step 2

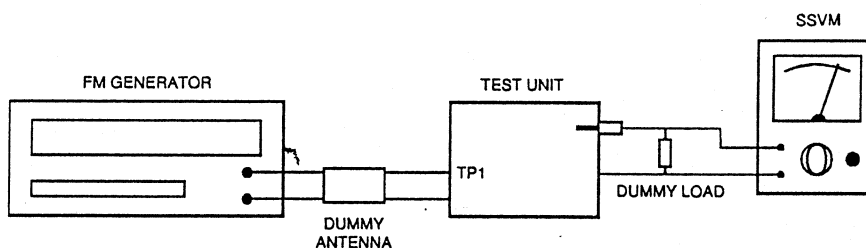


Figure 6. FM Band/Traking

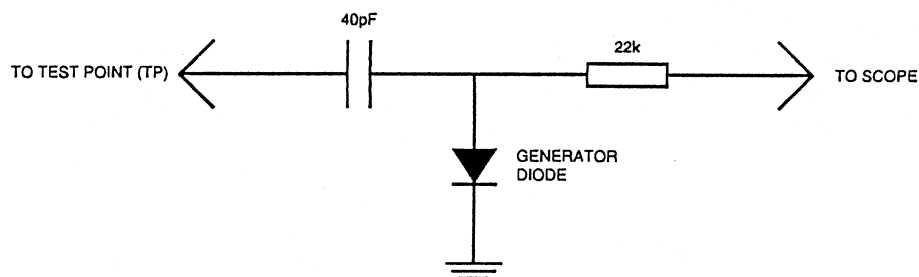


Figure 7. Alignment Pad #1

RP-7930A ALIGNMENTS

CD PLAYER ADJUSTMENT PROCEDURES

CDT10 ASSY

A) FOCUS BIAS ADJUSTMENT:

1. TURN POWER ON WITHOUT LOADING A DISC.
2. SET OSCILLOSCOPE VOLT/DIV TO DC 0.1 MV.
3. CONNECT "VREF" TO GND AND "FA" TO POSITIVE TERMINAL OF PROBE
CONNECTE TO OSCILLOSCOPE.
4. ADJUST VR801 SO THAT THE VOLTAGE IS 0MV DC ON THE OSCILLOSCOPE.

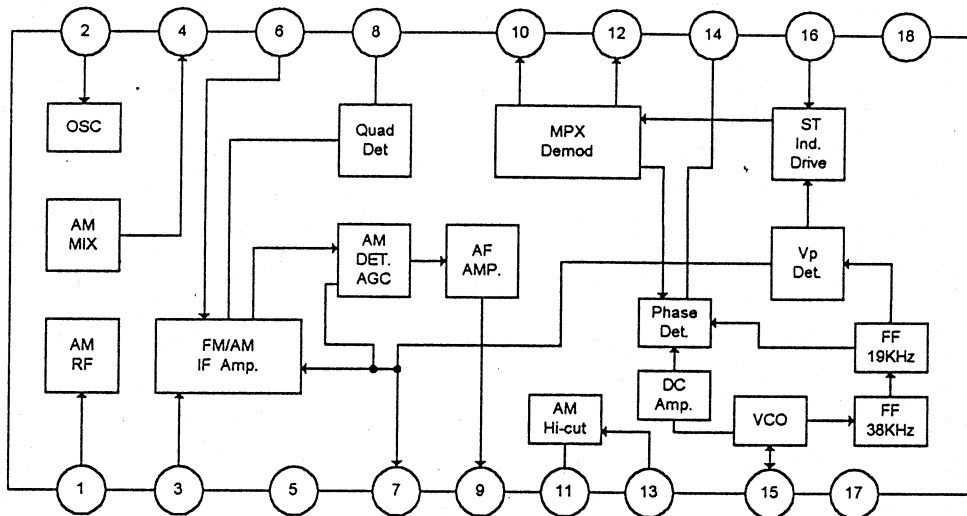
B) E/F BALANCE ADJUSTMENT:

1. TURN POWER ON WITH LOADING A DISC.
2. SET OSCILLOSCOPE VOL/DIV TO 0.5V.
3. CONNECT "VREF" TO GND AND "TB" TO POSITIVE TERMINAL OF PROBE.
4. PRESS "PLAY" KEY.
5. ADJUST VR802 SO THAT THE WAVEFORM IS EQUAILY SYMMETRICAL ABOVE
AND BELOW (A-B) THE CENTER.

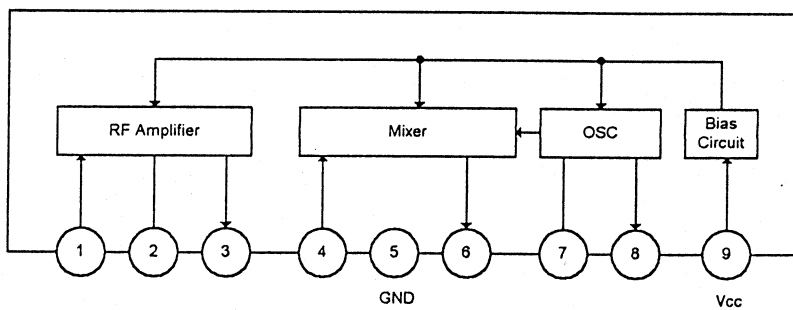
RP7930A IC LEAD IDENTIFICATIONS

IC LEAD IDENTIFICATION AND INTERNAL DIAGRAM

AN7024

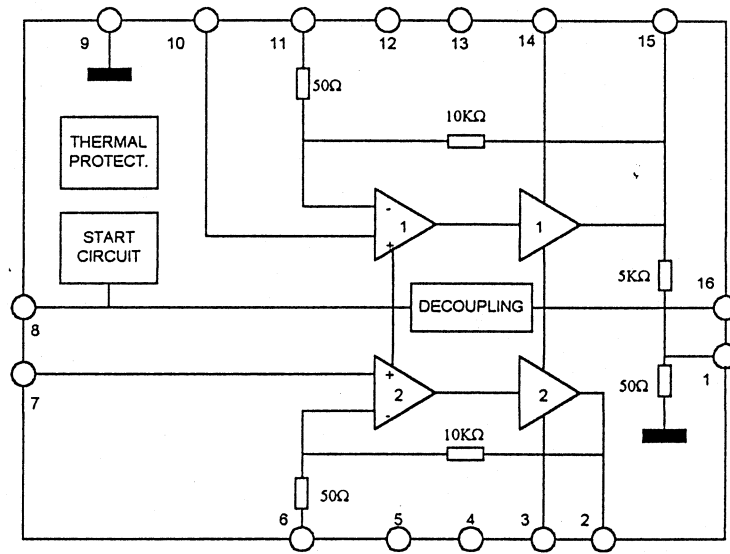


AN7205

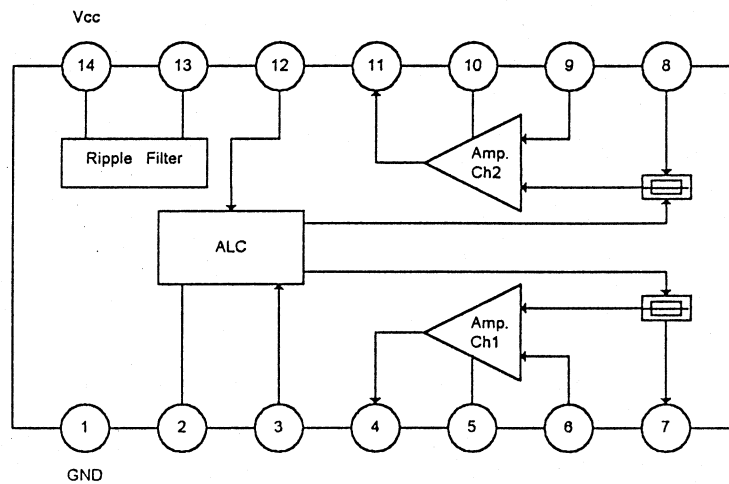


RP7930A IC LEAD IDENTIFICATIONS

TA7769P

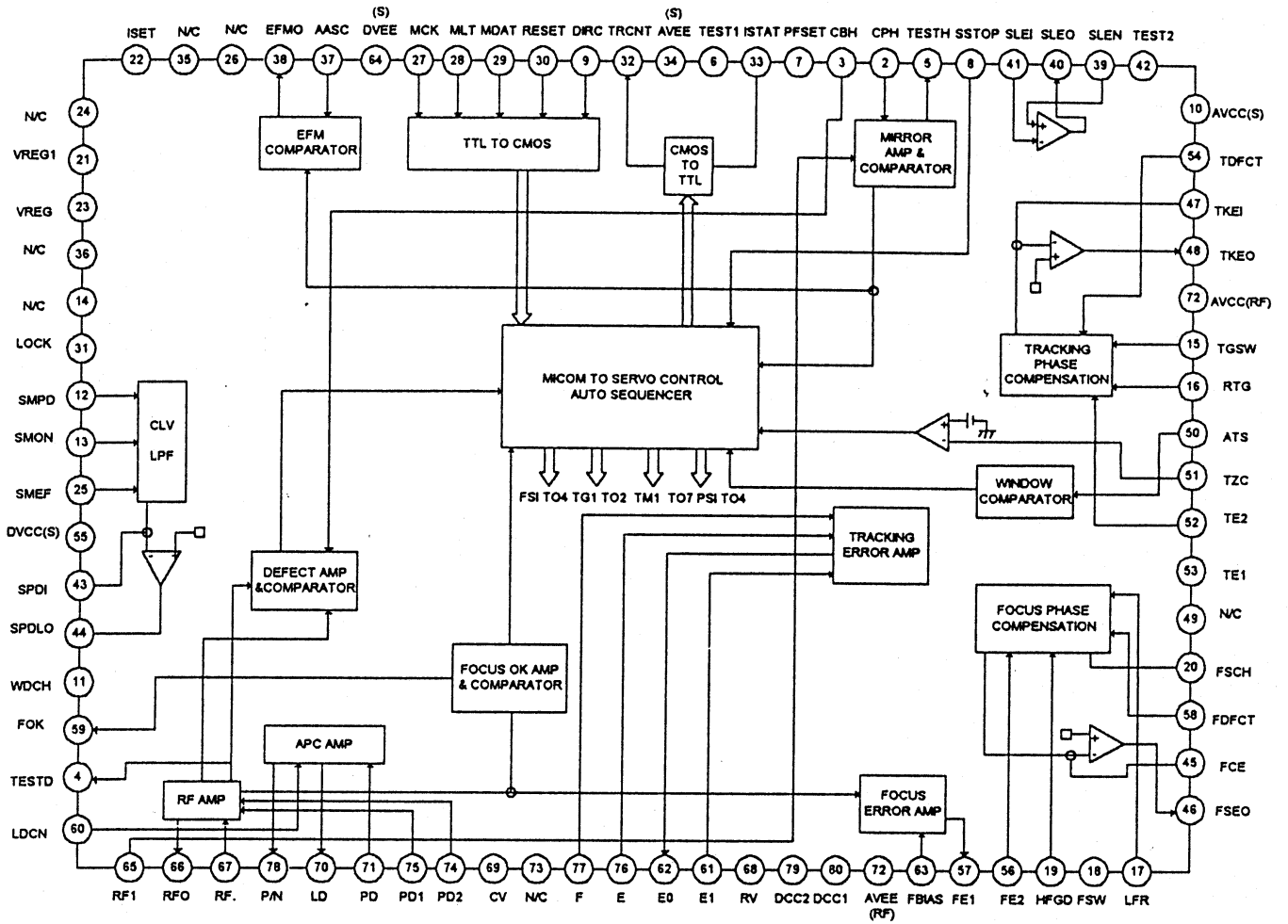


AN7312



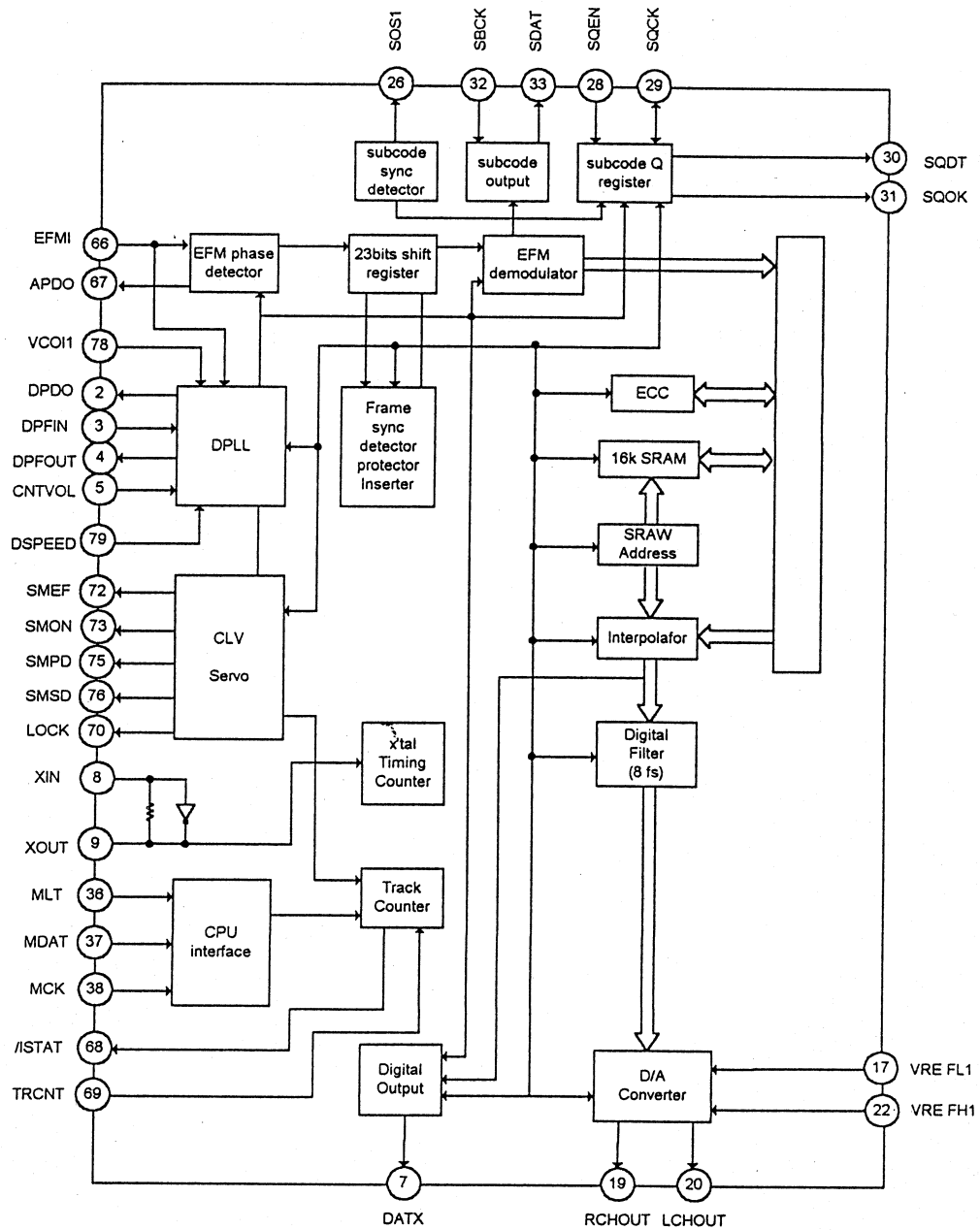
RP7930A IC LEAD IDENTIFICATIONS

KA9220C



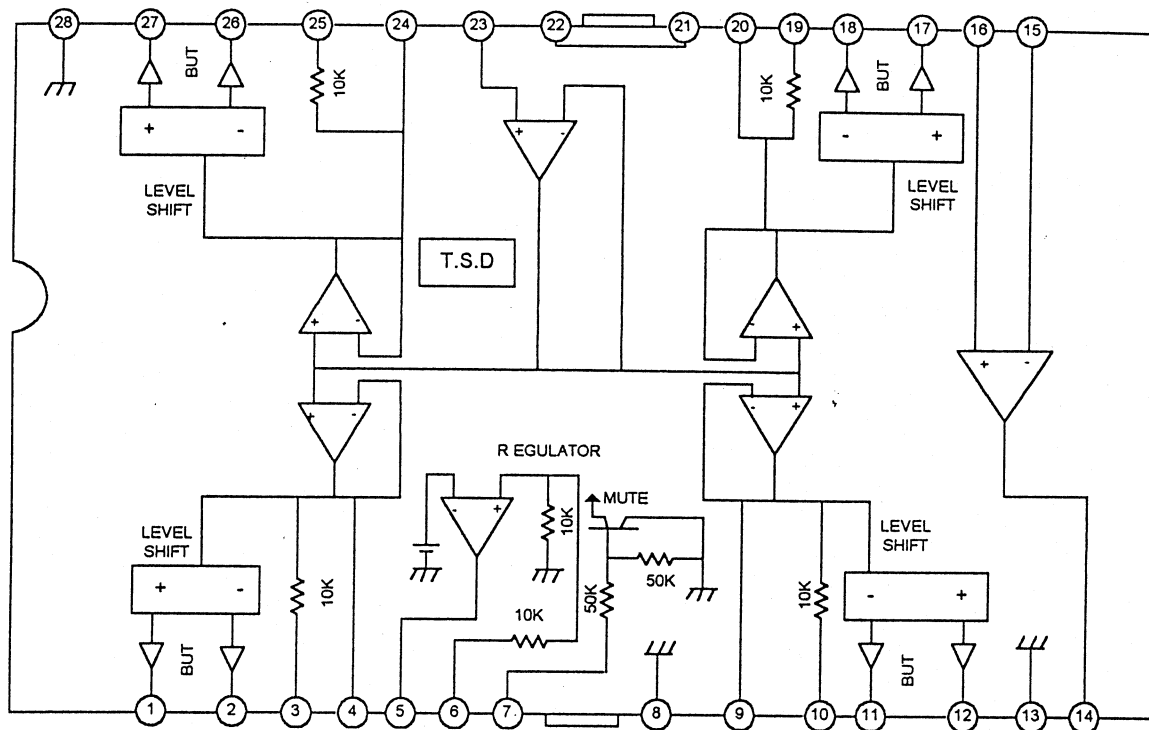
RP7930A IC LEAD IDENTIFICATIONS

KS9281

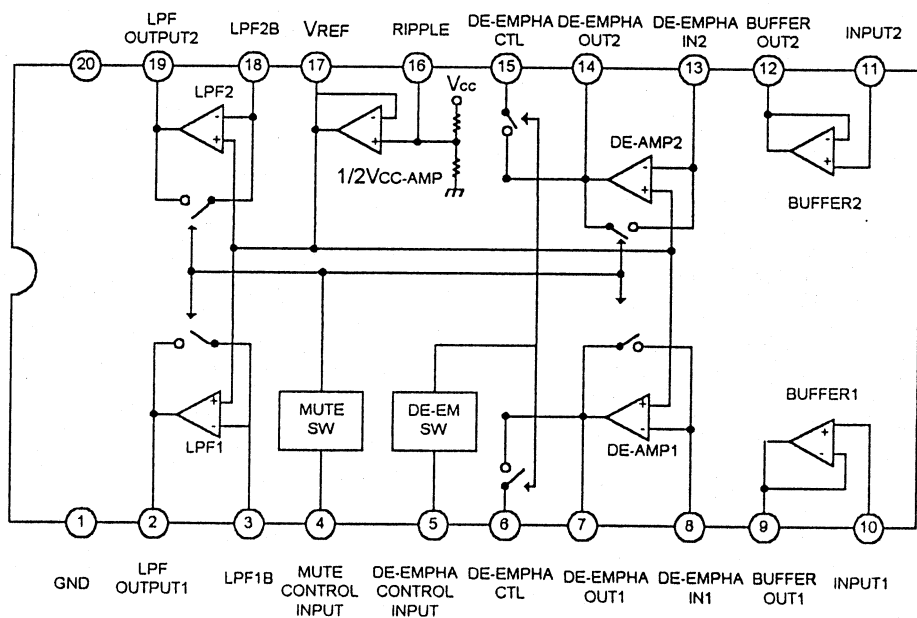


RP7930A IC LEAD IDENTIFICATIONS

KA9258D

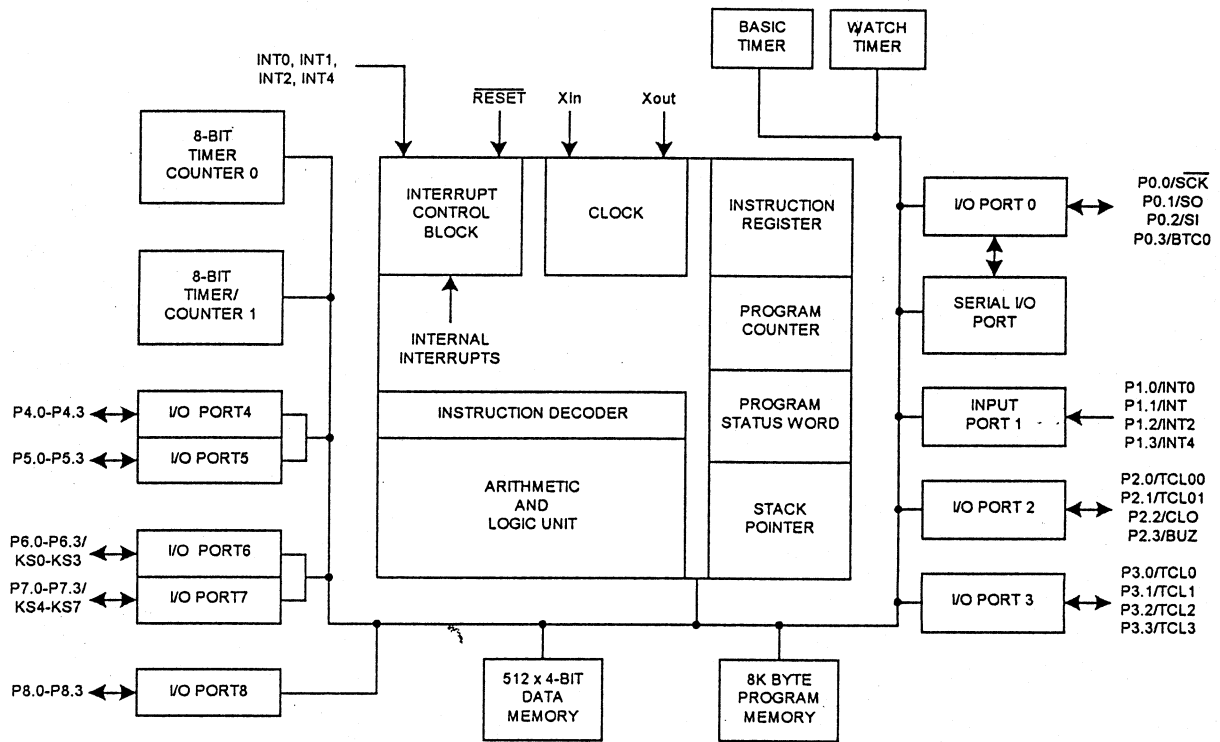


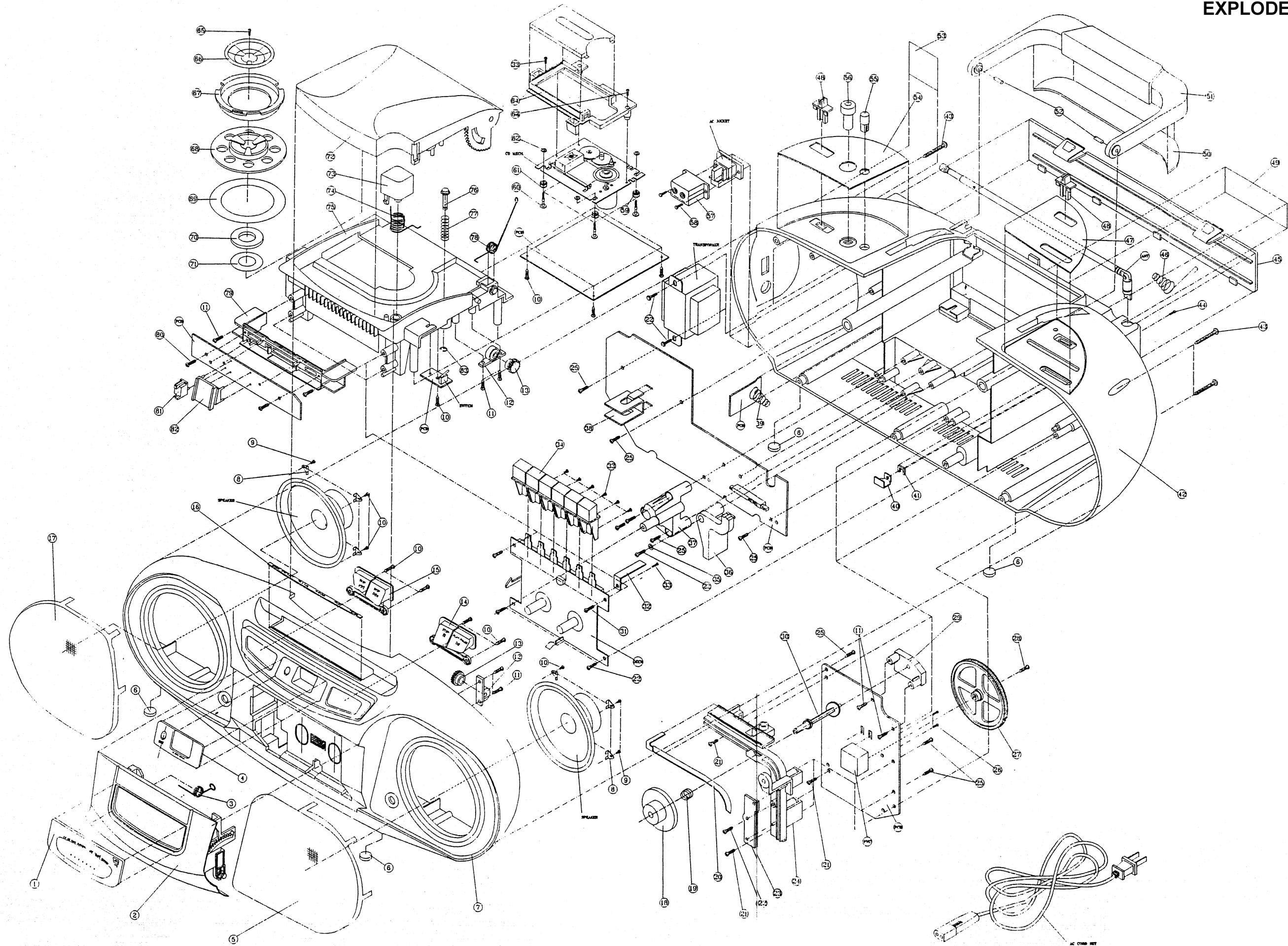
KA9270



RP7930A IC LEAD IDENTIFICATIONS

KS57C





RP7930A SPECIFICATIONS

SPECIFICATIONS

Power source	:	DC 9V "D" SIZE (1.5V X 6), AC 120V, 50Hz
Load impedance	:	8 ohm
Reference output	:	50mW
Maximum output	:	1W x 2
10% THD output	:	1W x 2
Speaker	:	3.5" , 8 ohm x 2
Recording system	:	AC Bias
Erase system	:	Magnet Erase

Band : AM, 400Hz 30% MOD.

Characteristic		Unit	Nominal	Limit
Frequency Range	Low	kHz	515	± 5
	High	kHz	1740	± 20
Intermediate Frequency		kHz	455	± 5
Usable Sensitivity (S/N 20dB)	600kHz	µV/m	630	1000
	1000kHz	µV/m	630	1000
	1600kHz	µV/m	630	1000
S/N at 5mV/m Input	600kHz	dB	28	23
	1000kHz	dB	28	23
	1600kHz	dB	28	23
Selectivity ± 10kHz		dB	20	15

BAND : FM, 400Hz 22.5kHz DEV.

Characteristic		Unit	Nominal	Limit
Frequency Range	LOW	MHz	87.5	±0.5
	HIGH	MHz	109	±0.5
Intermediate Frequency		MHz	10.7	±0.1
Usable Sensitivity (S/N 20dB)	90MHz	µV	10	18
	98MHz	µV	10	18
	106MHz	µV	10	18
S/N at 1mW Input 22.5kHz Deviation	90MHz	dB	DC (AC)	DC (AC)
	98MHz	dB	DC (AC) 50	DC (AC) 45
	106MHz	dB	DC (AC)	DC (AC)

TAPE RECORDER

Characteristic	Unit	Nominal	Limit
Play frequency response	Hz	125-10000	+ 3 / -8 dB
S/N ratio	dB	35	30
Track cross talk (w/Band Pass Filter)	dB	40	35
Tape speed	cm / sec	4.75	+ 3 / -2
Wow & Flutter (JIS R.M.S.)	%	0.3	0.4
Fast Forward time (C-60)	sec		170
Rewind time (C-60)	sec		170
Channel separation (w/Band Pass Filter)	dB	30	20

RP7930A SPECIFICATIONS

CD

Test disc : PHILIPS test disc 5A
Bass boost : Off
Functions : Play/Pause, Stop, Skip (<</>>)
Display : LCD Multi-display

Digital signal processing

Optical pick up : 3-beam laser
Error correction : Cross Interleaved Reed-solomon Code
Digital filter : 16-bit linear
Sampling rate : 2 Times

Item	Unit	Nominal	Limit
Freq. response 61Hz / 16kHz	dB		$\pm 3 / \pm 6$
S/N ratio	dB	60	50
Interruption in information layer	μm		600
Black dot	μm		600
Eccentric disc	μm		70
Commencement time	sec		5
Maximum access time	sec		17
Dynamic range	dB		60
Channel separation (w/Band Pass Filter)	dB		35

Note: Nominal specs represent the design specs. All units should be able to approximate these - some will exceed and some might drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; in no case should a unit fail to meet limit specs.

RP7930A TROUBLESHOOTING GUIDES

TROUBLESHOOTING

Circuit	Symptom	Cause and Remedy
General	No sound	<ul style="list-style-type: none"> • Speakers are not connected: Check the speaker connection. • Wrong function is selected: Set switch to the proper position. • Defective volume control: Set the volume control to a proper sound level. • Defective earphone jack: Replace the earphone jack. • Mute function is active: Release it by remote control.
AM	No sound, weak sound (Low sensitivity)	<ul style="list-style-type: none"> • Improper location of unit: Rotate or reposition the unit. • Defect in IFT102: Check resistance, voltage, and current. Replace as needed. • Defect AM antenna coil or oscilloscope coil: Replace if necessary. • Intermediate Frequency tuning faulty: Readjust (see "Alignment and Adjustment"). • RF tracking faulty: Readjust (see "Alignment and Adjustment"). • Defective IC102: Check voltages. Replace if necessary. • Poor contact in antenna circuit: Check resistance and resolder.
FM	No sound, weak sound (Low sensitivity)	<ul style="list-style-type: none"> • FM antenna not connected: Connect the built-in or external antenna. • Defective band selector switch: Replace or repair the switch. • Defective IC102: Check voltages. Replace if necessary. • Intermediate Frequency tuning faulty: Readjust (see "Alignment and Adjustment"). • Poor contact in FM antenna circuit: Resolder or repair as required.
Tape	No sound/recording, unsteady tape sound, weak sound	<ul style="list-style-type: none"> • Dirty capstan or head: Clean the capstan or head with alcohol. • Irregular cassette tape winding: Replace tape. • Defective IC201: Check voltages. Replace if necessary. • Cassette erasure prevention tabs broken out: Replace tape or cover tab openings with adhesive tape.

RP7930A TROUBLESHOOTING GUIDES



Circuit	Symptom	Cause and Remedy
CD	Cannot read the TOC, no display, no sound	<ul style="list-style-type: none">• Disc is inserted upside down: Insert disc correctly.• Disc is dirty: Wipe clean with a soft cloth.• Disc is scratched: Use a new disc.• Disc is seriously warped: Use a new disc.• A non-standard disc has been inserted: Use only a brand name disc.• Moisture has formed inside the CD deck: Wait about 20 to 30 minutes.• Defect in the servo control board: Replace or repair as required.• Defect in the CD pickup mechanism: Replace as required.

REPLACEMENT PARTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

Approved Substitute Stock Numbers - Before ordering stock numbers in the part list, look for an approved substitute stock number in the current Price Schedule. This will minimize your service time and avoid ordering parts you already have in stock.

PRODUCT SAFETY NOTE: Components marked with a critical safety symbol have special characteristics important to safety. Before replacing any of these components, carefully read the **PRODUCT SAFETY NOTICE** in the basic service data. Do not degrade the safety of the set through improper servicing. Although assemblies as a whole may not be marked with a critical safety symbol, replacement of assemblies with other assemblies not approved may result in a safety hazard.

-  Critical Safety Symbol
-  Not Eligible For Warranty

Warranty Status of Assemblies and Parts - All assemblies and components shown in this part list are eligible for warranty exchange or replacement except those with a dot shown to the left of the Description. Assemblies and components with a dot to the left of the Description are NOT eligible for warranty exchange or replacement.

Warranty replacement of cabinet parts requires the approval of a Thomson Consumer Electronics Field Service Manager.

Warranty Status and Specifications of assemblies and components are subject to change without notice. Consult the TCE Parts Pricing Microfiche for the latest warranty status information.

@NOTE: When ordering components that are listed more than once in this part list, always adhere to the serial number application guidelines given in the description column. If a serial number application guideline is not given, always select the component with a value, rating, other specification or identification marking(s) that match those of the corresponding component in the instrument you are servicing.

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
RP-7930A			
CABINET & CHASSIS ASY			
1	6A26787	43-07930-02	LENS CASS DOOR
2	9A26788	66-07930-02	DOOR CASS
3	3A26789	36-07930-00	SPRING CASS DOOR
4	6A26790	43-07941-01	LENS DISPLAY
5	89A26791	41-07930-01	GRILLE SPEAKER R
6	45A26792	81-00088-00H	FOOT RUBBER
7	98A26793	60-07930-01	CABINET FRONT
14	43A33830	53-07930-05	KNOB CD R
15	43A33831	53-07930-04	KNOB CD L
17	89A26799	41-07930-00	GRILLE SPEAKER L
18	43A25141	51-00088-00	KNOB TUNING
34	43A30712	53-07930-01	BUTTON, CASSETTE COMM
39	2A33832	74-13244-002	BATTERY TERMINAL
42	98A26800	61-07930-01	CABINET BACK
46	38A25143	74-13244-01A	TERMINAL BATTERY
48	43A26802	52-00088-00	KNOB SLIDE
50	9A30713	57-07930-02	COVER, HANDLE
51	78A26803	57-07930-01	HANDLE W/COVER
56	43A25150	51-00088-02	KNOB ROTARY
66	2A33833	39-00414-16W	PLATE CLAMPER
67	2A25164	55-00141-01	HOLDER CLAMPER
68	2A33834	55-00414-00	CLAMPER
72	9A26811	66-07930-01	DOOR CD
73	43A25160	53-00088-03	BUTTON EJECT
78	3A26814	36-07930-01	SPRING CD DOOR
COR	66A21431	30-00030-00G	 CORD AD
ELECTRICAL COMPONENTS			

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
ANT	82A33841	23-07930-00	ANTENNA WHIP
BAR	82A33837	21-10080-00T	ANTENNA BAR AM
CD	73A33843	98-00088-00	CD PICK UP TCP-110P
D101	16A31623	02-04148-00	SILICON DIODE
D102	16A31623	02-04148-00	SILICON DIODE
D103	16A11218	02-01043-00	DIODE
D104	17A25173	02-50000-02T	DIODE LED K-504HL
D201	198597	02-04001-00	DIODE
D202	198597	02-04001-00	DIODE
D203	198597	02-04001-00	DIODE
D204	16A14915	02-50068-00	DIODE ZENER 6.8V 1/2W
D205	16A31623	02-04148-00	SILICON DIOD
D207	16A24329	02-50075-00	DIODE 7.5V 1/2W
D208	16A31623	02-04148-00	SILICON DIOD
D801	16A31623	02-04148-00	SILICON DIOD
D802	16A31623	02-04148-00	SILICON DIOD
D807	16A31623	02-04148-00	SILICON DIOD
D808	16A31623	02-04148-00	SILICON DIOD
D810	16A31623	02-04148-00	SILICON DIOD
IC101	EA33X9422	03-07205-00	IC
IC102	33A25174	03-07024-00	IC AN7024
IC201	EA33X9424	03-07312-00	IC
IC202	33A31745	03-07769-00	IC TA7769P
IC801	33A26826	03-09220-01	IC KA9220B
IC802	33A26828	03-09282-00	IC KS9282B
IC803	33A26827	03-09270-00	IC KA9270
IC804	33A26829	03-57010-43	IC KS57C0104-12
IC805	33A26775	03-09258-00	IC KA9258D
J201	8A33842	12-00035-31	JACK STEREO HDPH
LCD1	63A26831	91-00088-03	DISPLAY LCD
MEC	73A33835	00-00231-01	MECHANISM CD ASY

REPLACEMENT PARTS (Continued)

<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>	<u>Symbol</u>	<u>Stock</u>	<u>Drawing</u>	<u>Description</u>
Q201	15A26816	01-09013-07	TRANSISTOR 9013G				
Q202	15A11215	01-09014-03	TRANSISTOR				
Q203	15A26816	01-09013-07	TRANSISTOR 9013G				
Q204	15A11215	01-09014-03	TRANSISTOR				
Q205	15A11215	01-09014-03	TRANSISTOR				
Q206	15A26815	01-02012-00	⚠ TRANSISTOR 2SD2012				
Q207	15A15170	01-09015-03	TRANSISTOR				
Q208	15A11215	01-09014-03	TRANSISTOR				
Q209	15A11215	01-09014-03	TRANSISTOR				
Q801	15A10368	01-00928-00	TRANSISTOR KSA928AY				
Q802	15A12584	01-00124-05	TRANSISTOR DTC124ES				
Q803	15A25193	01-01317-00	TRANSISTOR 2SA1317				
SOC	8A25151	12-00004-09	⚠ SOCKET AC POWER				
SPE	95A30705	14-03508-340	SPEAKER, 3 1/2W 80R 3W				
SW1	39A26820	16-10102-03S	SWITCH TACT				
SW101	39A26770	16-10202-44L	SWITCH SLIDE 2P2T				
SW2	39A26820	16-10102-03S	SWITCH TACT				
SW201	39A25182	16-10902-02L	SWITCH PUSH				
SW202	39A25187	16-10202-15L	SWITCH PUSH				
SW203	39A33839	16-10603-09L	SWITCH				
SW204	39A25184	16-10203-58L	SWITCH SLIDE				
SW3	39A26820	16-10102-03S	SWITCH TACT				
SW4	39A26820	16-10102-03S	SWITCH TACT				
SW5	39A26820	16-10102-03S	SWITCH TACT				
SW6	39A26820	16-10102-03S	SWITCH TACT				
SWI	39A25181	16-10101-07H	SWITCH MICRO				
TRA	88A33838	15-00088-05	⚠ TRANSFORMER POWER				
VR101	42A33836	17-31103-08	RESISTOR VAR				
VR201	49A25186	18-51503-09	RES CONTOL 50K				
VR202	42A33840	17-31501-08	RESISTOR VAR				
X801	41A26776	04-16934-41	CRYSTAL 16.9344MHZ				
MISCELLANEOUS							
LAB	4A30813	POPRP7930	LABEL POP				
USE	UCRP7930	UCRP7930	USE & CARE GUIDE				

RP7930A BLOCK DIAGRAM

