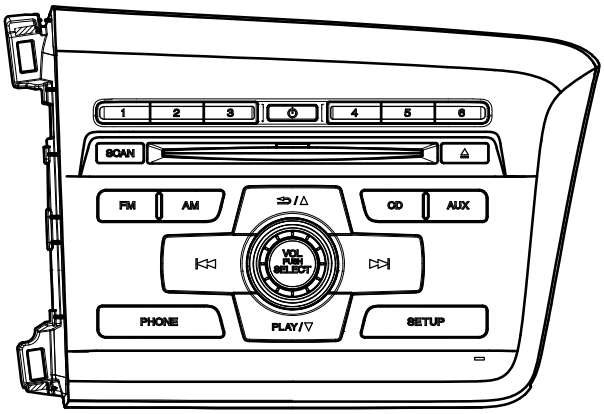
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Service Manual



HONDA Motor Genuine
AM/FM Radio Tuner
1CD Player

Model PH-3421C-A

(Genuine No. 39100-TR0-A71)
(ID No. 4BCF)
(For North America)

LF

This product is a lead free model.
Lead free solder is used in PWB stamped LF mark.
Please keep the following conditions when you repair.

1. Use lead free solder.
   * Koki's lead free solder S3X-55M 0.6mm (CLARION Parts No.642-0231-01)
   * Koki's lead free solder S3X-55M 1.0mm (CLARION Parts No.642-0231-02)
2. Use a nitrogen solder system.
3. Do not use "General solder" and "Lead free solder" together.

ORIGINAL MODEL

The original model of PH-3421C-A is PH-3312C-A.

Original model	Manual No.
PH-3312C-A	298-6866-00

The following parts are different from the original model.
* Escutcheon assy
* Setplate
* E2P-IC Audio Data(Software)

MECHANISM SERVICE MANUAL

Please refer to the following service manual for the CD mechanism.

Original model	Manual No.
929-5033-80	298-6867-00

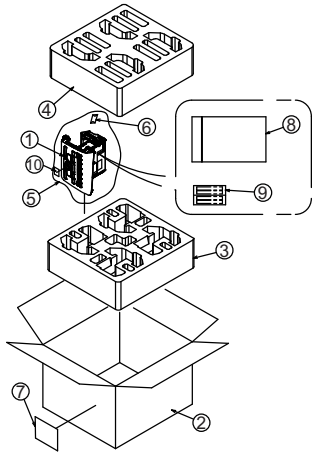
NOTES

* The tuner of this model is DSP type. The special equipment is necessary for an accurate adjustment of DSP tuner.
* This product includes technology owned by Microsoft Corporation and cannot be used or distributed without a license from MSLGP.
* Specification and design are subject to change without notice for further improvement.

COMPONENTS

PH-3421C-A

1. Main unit
2. Carton
3. Packing
4. Packing
5. Poly-bag
6. Silicagel
7. Label
8. Poly-bag
9. Setplate
10. Protector



To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.
   If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off.
   If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
5. Cautions in soldering
   Please do not spread liquid flux in soldering.
   Please do not wash the soldering point after soldering.
6. Cautions in soldering for chip capacitors
   Please solder the chip capacitors after pre-heating for replacement because they are very weak to heat.
   Please do not heat the chip capacitors with a soldering iron directly.
7. Cautions in handling for chip parts.
   Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc).
   Please make an operation test after replacement.
8. Cautions in handling flexible PWB
   Before working with a soldering iron, make sure that the iron tip temperature is around 270℃. Take care not to apply the iron tip repeatedly(more than three times)to the same patterns. Also take care not to apply the tip with force.
9. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.
10. Cautions in checking that the optical pickup lights up.
    The laser is focused on the disc reflection surface through the lens of the optical pickup. When checking that the laser optical diode lights up, keep your eyes more than 30cms away from the lens. Prolonged viewing of the laser within 30cms may damage your eyesight.
11. Cautions in handling the optical pickup
    The laser diode of the optical pickup can be damaged by electrostatic charge caused by your clothes and body. Make sure to avoid electrostatic charges on your clothes or body, or discharge static electricity before handling the optical pickup.

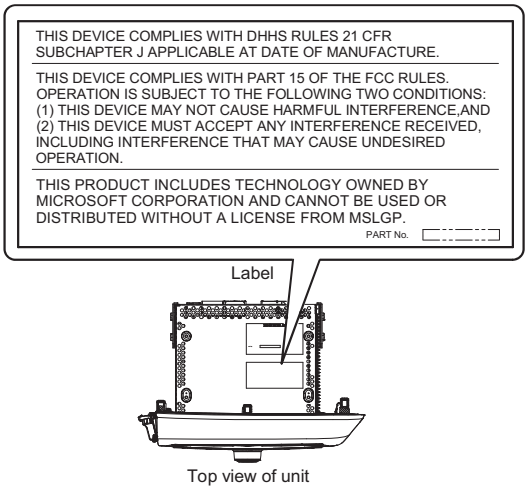
11-1. Laser diode
The laser diode terminals are shorted for transportation in order to prevent electrostatic damage. After replacement, open the shorted circuit. When removing the pickup from the mechanism, short the terminals by soldering them to prevent this damage.

11-2. Actuator
The actuator has a powerful magnetic circuit. If a magnetic material is put close to it. Its characteristics will change. Ensure that no foreign substances enter through the ventilation slots in the cover.

11-3. Cleaning the lens
Dust on the optical lens affects performance.
To clean the lens, apply a small amount of isopropyl alcohol to lens paper and wipe the lens gently.

CAUTION

Use of controls, adjustment, or performance of procedures other than those specified herein, may result in hazardous radiation exposure.
The compact disc player should not be adjusted or repaired by anyone except properly qualified service personnel.



Top view of unit

EXPLODED VIEW / PARTS LIST

The following parts are different from PH-3312C-A.
Other parts are the same as PH-3312C-A.

Escutcheon section

(Please refer to page 12 of service manual for PH-3312C-A)

NO.	PART NO.	DESCRIPTION	Q'TY
1-1	940-8593-04	ES-ASSY(for PH3421CA)	1
1-4	383-0812-01	KNOB TOP	1
1-6	380-5806-01	KNOB	1
1-21	----------	(KNOB BASE) *UNUSED	-

Main section

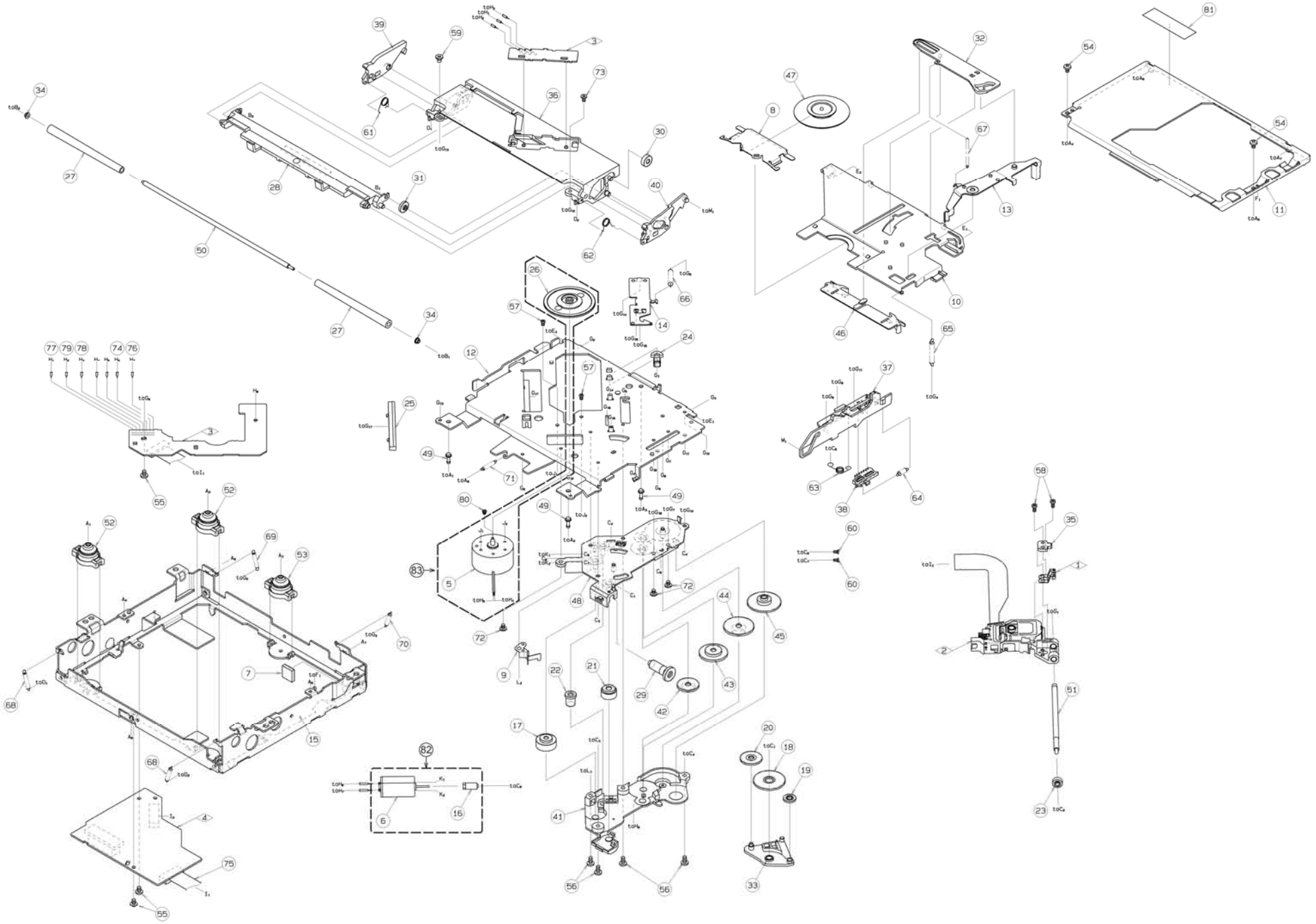
(Please refer to page 13 of service manual for PH-3312C-A)

NO.	PART NO.	DESCRIPTION	Q'TY
13	276-0866-06	SETPLATE(for PH3421CA)	1

EXPLODED VIEW / PARTS LIST

NO.	PART NO.	DESCRIPTION	Q'TY
1	966-1722-21	SH-RACK-ASSY	1
2	969-0075-31	PICKUP-ASSY	1
3	----------	SENSOR-PWB-ASSY(955010AI)	1
4	----------	MAIN-PWB-ASSY(975033BI)	1
5	----------	DC-MOTOR(SPINDLE)	1
6	----------	DC-MOTOR(SLED)	1
7	345-5476-20	CUSHION RUBBER	1
8	620-1023-23	CLAMPER PLATE	1
9	620-1026-21	SPRING PLATE	1
10	620-1596-23	CLAMPER LINK	1
11	620-1862-20	UPPER CHASSIS	1
12	620-1867-20	DRIVE PLATE	1
13	620-1752-20	SENSOR ARM	1
14	620-1753-20	ID-LOCK PLATE	1
15	620-1894-24	LOWER CHASSIS	1
16	----------	MOTOR GEAR(SLED)	1
17	621-0608-21	SECOND GEAR	1
18	621-0609-21	BASE GEAR	1
19	621-0610-21	IDLE GEAR A	1
20	621-0611-21	IDLE GEAR B	1
21	621-0612-22	ROLLER GEAR A	1
22	621-0620-20	THREAD GEAR A	1
23	621-0621-20	THREAD GEAR B	1
24	621-0623-24	LS-HOLDER	1
25	621-0624-22	GUIDE RAIL	1
26	----------	TURN TABLE(SPINDLE)	1
27	621-0711-21	LOADING ROLLER	2
28	621-0718-21	ROLLER GUIDE	1
29	621-0719-20	ROLLER GEAR	1
30	621-0720-20	ROLLER GEAR C	1
31	621-0721-20	ROLLER GEAR D	1
32	621-0728-20	STOPPER LINK	1
33	621-1719-21	IDLE CASE	1
34	621-1726-21	ROLLER SLEEVE	2
35	621-1729-21	SH-BASE	1
36	621-1742-20	UPPER GUIDE	1
37	621-1743-20	SHIFT LEVER	1
38	621-1744-20	RACK	1
39	621-1745-20	LOCK ARM L	1
40	621-1746-20	LOCK ARM R	1
41	621-1747-20	GEAR COVER	1
42	621-1748-20	POWER GEAR A	1

NO.	PART NO.	DESCRIPTION	Q'TY
43	621-1749-20	POWER GEAR B	1
44	621-1750-20	POWER GEAR C	1
45	621-1751-20	POWER GEAR D	1
46	621-1752-20	DISC STOPPER	1
47	621-1753-20	CLAMPER RING	1
48	621-1754-20	GEAR BASE	1
49	622-1570-21	DAMPER PIN	3
50	622-1571-21	ROLLER SHAFT	1
51	624-3059-00	LEAD SCREW	1
52	629-0086-20	DAMPER F	2
53	629-0087-20	DAMPER R	1
54	714-2003-8B	MACHIN SCREW	2
55	716-1507-01	SCREW	3
56	716-1670-01	SPECIAL SCREW	4
57	716-1733-01	SCREW	2
58	716-3469-01	SPECIAL SCREW	2
59	716-3473-01	SPECIAL SCREW	1
60	716-3551-00	SPECIAL SCREW	2
61	750-6797-20	ROLLER SPRING L	1
62	750-6798-20	ROLLER SPRING R	1
63	750-7865-20	SHIFT SPRING	1
64	750-7866-20	RACK SPRING	1
65	750-7867-20	CLAMPER SPRING	1
66	750-7868-20	ID-LOCK SPRING	1
67	750-7869-20	SENSOR SPRING	1
68	750-7870-20	DR-SPRING F	2
69	750-7871-20	DR-SPRING RA	1
70	750-7872-20	DR-SPRING RB	1
71	750-7873-20	DR-SPRING C	1
72	780-2025-00	SCREW	3
73	781-1730-00	SCREW	1
74	803-4906-60	VINYL-COAT-WIRE	1
75	816-2624-55	FLAT WIRE	1
76	816-2590-00	SPECIAL LEAD	1
77	816-2591-00	SPECIAL LEAD	1
78	816-2592-00	SPECIAL LEAD	1
79	816-2593-00	SPECIAL LEAD	1
80	716-3635-00	SPECIAL SCREW	1
81	293-8575-00	MECH LABEL	1
82	SMA-183-200	SLED MOTOR ASSY	1
83	SMA-200-100	SPINDLE MOTOR ASSY	1



929-5033-80

ELECTRICAL PARTS LIST

SENS PWB(B1) section

REF No.	PART No.	DESCRIPTION
D1	001-7058-90	DIODE
D2	001-7058-90	DIODE
S1	013-7414-50	DETECTOR SWITCH(SPVG22)
S2	013-7413-50	DETECTOR SWITCH(SPVG12)
Q1	060-4015-91	PHOTO-TR
Q2	060-4015-91	PHOTO-TR
J1	074-2215-60	10P
PWB	039-2675-20	PWB (WITHOUT COMPONENT)

MAIN PWB(B2) section

REF No.	PART No.	DESCRIPTION
C3	168-1052-78	16V 1uF K
C6	168-1052-78	16V 1uF K
C7	042-0560-85	6.3V 100uF
C8	168-1052-78	16V 1uF K
C10	046-1042-78	16V 0.1uF
C11	168-1042-78	16V 0.1uF K
C12	166-6801-50	68pF CH
C14	046-4722-58	4700pF K B
C17	165-1073-35	16V 100uF
C18	168-1042-78	16V 0.1uF K
C19	046-1042-78	16V 0.1uF
C20	046-1532-78	0.015uF K B
C21	046-1042-78	16V 0.1uF
C22	168-1042-78	16V 0.1uF K
C23	046-1522-58	1500pF K B
C24	046-1042-78	16V 0.1uF
C25	046-2222-58	2200pF K B
C27	168-1042-78	16V 0.1uF K
C28	043-0559-90	6.3V 22uF
C29	046-1032-78	16V 0.01uF
C30	046-4712-58	470pF K B
C31	046-4712-58	470pF K B
C32	046-3332-78	0.033uF K B
C33	168-1532-55	0.015uF K
C34	168-1042-78	16V 0.1uF K
C35	166-6801-50	68pF CH
C36	046-6822-58	6800pF K B
C37	045-4701-50	47pF CH
C38	168-1042-78	16V 0.1uF K
C39	046-1042-78	16V 0.1uF
C40	168-1042-78	16V 0.1uF K
C41	046-5622-58	5600pF K B
C42	168-1042-78	16V 0.1uF K
C43	046-4732-78	16V 0.047uF
C44	046-4732-78	16V 0.047uF
C45	168-1042-78	16V 0.1uF K
C46	043-0570-90	16V 2.2uF K
C47	166-1011-50	100pF CH
C48	165-4763-15	6.3V 47uF
C49	168-1042-78	16V 0.1uF K
C50	045-1201-50	12pFJ CH
C51	045-1201-50	12pFJ CH
C71	166-6801-50	68pF CH
C72	166-6801-50	68pF CH
C73	166-6801-50	68pF CH
C74	166-6801-50	68pF CH
C75	166-6801-50	68pF CH
C76	166-6801-50	68pF CH
C77	166-6801-50	68pF CH
C78	166-6801-50	68pF CH
ET1	073-0792-90	TERMINAL
ET2	073-0792-90	TERMINAL
IC1	051-6751-00	TC94A93MFG-201
IC2	051-6101-90	BD8226EFV
J1	074-2215-65	15P
J2	074-2215-60	10P
J3	074-3032-40	40P
L1	010-3105-69	80 ohm/100MHz
L2	010-3105-69	80 ohm/100MHz
L3	010-3105-69	80 ohm/100MHz
L4	010-3105-69	80 ohm/100MHz
Q1	190-2060-00	2SA2060
R1	033-2211-15	1/16W 220 ohm J
R2	117-6811-15	1/10W 680 ohm
R3	117-1001-15	1/8W 10 ohm
R4	033-1831-15	1/16W 18k ohm J
R5	033-1231-15	1/16W 12k ohm J
R6	033-1541-15	1/16W 150k ohm J
R7	033-1031-15	1/16W 10k ohm J
R8	033-0000-05	1/16W 0 ohm
R9	033-2211-15	1/16W 220 ohm J
R10	033-0000-05	1/16W 0 ohm
R11	033-2231-15	1/16W 22k ohm J
R12	033-4731-15	1/16W 47k ohm J
R13	033-3341-15	1/16W 330k ohm J
R15	033-4731-15	1/16W 47k ohm J
R16	033-3331-15	1/16W 33k ohm J
R17	119-0000-05	1/10W 0 ohm JW
R18	033-1051-15	1/16W 1M ohm J
R19	033-2221-15	1/16W 2.2k ohm J
R20	033-1011-15	1/16W 100 ohm J
R22	119-0000-05	1/10W 0 ohm JW
R24	119-0000-05	1/10W 0 ohm JW
R27	033-0000-05	1/16W 0 ohm
R28	033-0000-05	1/16W 0 ohm
R29	033-0000-05	1/16W 0 ohm
R30	033-0000-05	1/16W 0 ohm
R31	033-0000-05	1/16W 0 ohm
R32	033-0000-05	1/16W 0 ohm
R33	033-0000-05	1/16W 0 ohm
R34	033-0000-05	1/16W 0 ohm
R35	033-0000-05	1/16W 0 ohm
R36	033-0000-05	1/16W 0 ohm
R37	033-0000-05	1/16W 0 ohm
R38	033-0000-05	1/16W 0 ohm
R39	033-0000-05	1/16W 0 ohm
R40	033-1041-15	1/16W 100k ohm J
R41	033-1011-15	1/16W 100 ohm J
R42	033-1011-15	1/16W 100 ohm J
R44	033-0000-05	1/16W 0 ohm
R45	033-4721-15	1/16W 4.7k ohm J
R46	033-4721-15	1/16W 4.7k ohm J
R47	033-4721-15	1/16W 4.7k ohm J
R48	033-4721-15	1/16W 4.7k ohm J
VR1	001-9210-50	AVR-M1608C270MTAAD
X1	061-3572-90	16.92MHZ
PWB	039-3723-00	PWB(WITHOUT COMPONENTS)