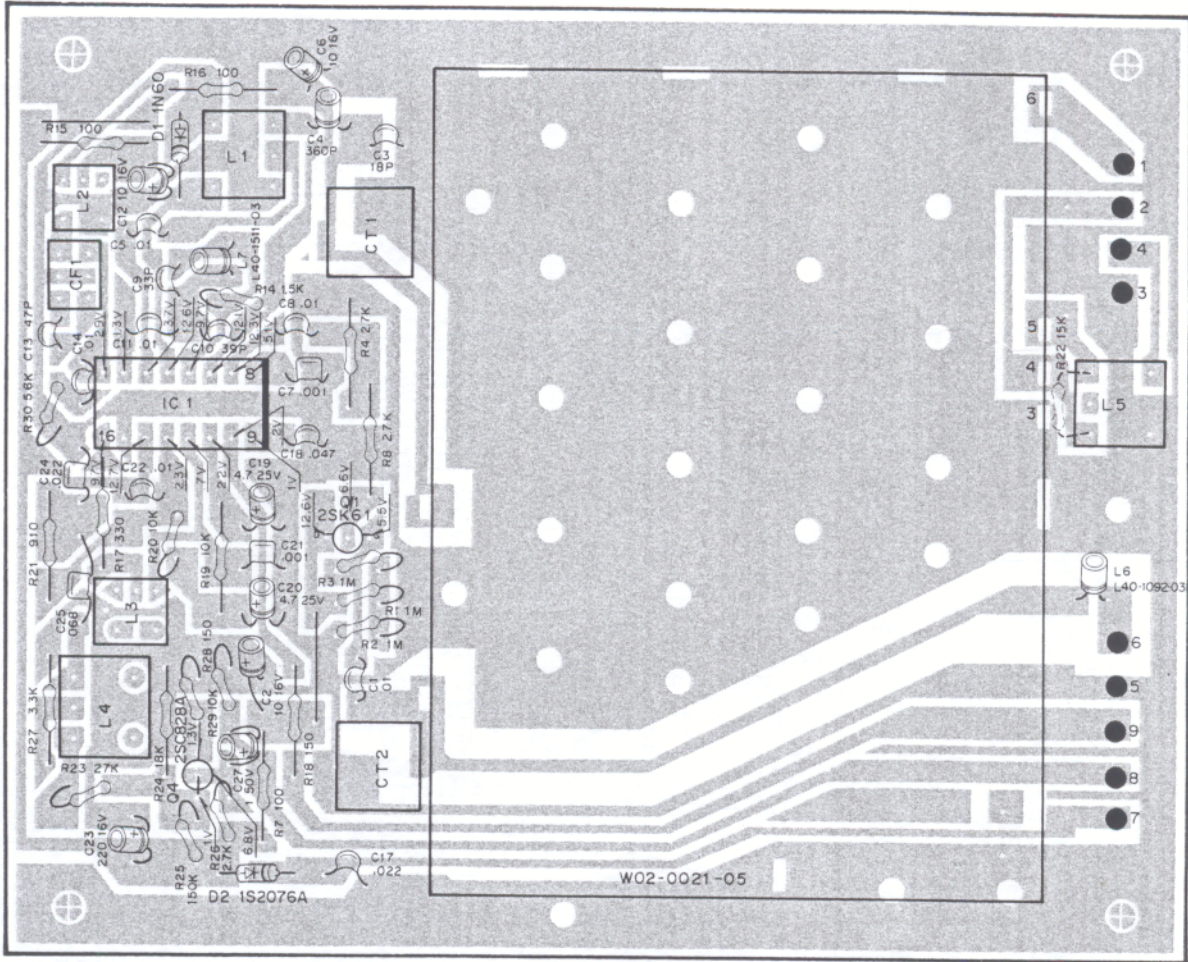
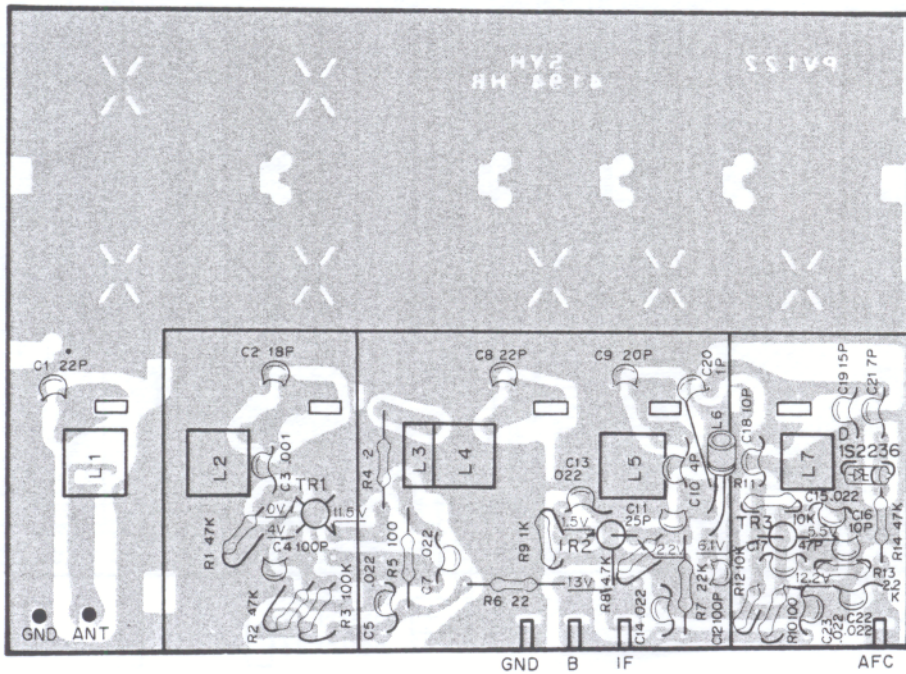


PC BOARD

RF (X05-1660-10, -11) COMPONENT SIDE



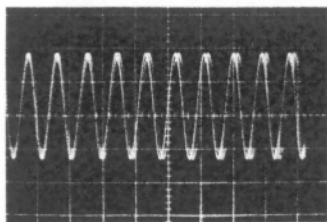
FRONT END (W02-0021-05) COMPONENT SIDE



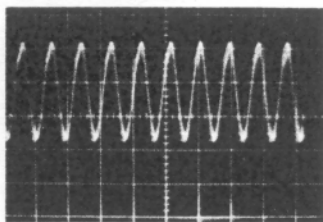
- GND ANT
- TR 1 : 3SK85B
- TR 2 : 2SC535 (C)
- TR 3 : 2SC461 (C)

# WAVEFORMS AT CHECKPOINTS

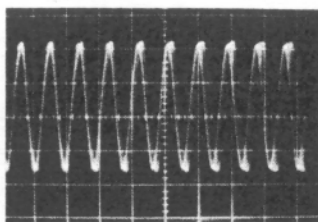
- ① ~ ⑭: FM 95 MHz, 1 kHz Mod,  $\pm 75$  kHz Dev, 60 dB (ANT INPUT)
- ⑮ ~ ⑳: FM 95 MHz, 1 kHz Mod,  $\pm 68.25$  kHz Dev, SELECTOR: L+R 60 dB (ANT INPUT)
- ㉑ ~ ㉒: AM 1000 kHz, 1 kHz, 20% Mod



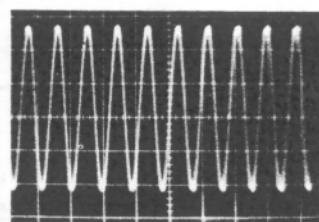
① .1 $\mu$ S/cm, 20mV/cm



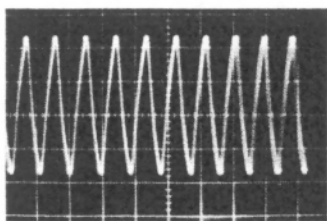
② .1 $\mu$ S/cm, .1V



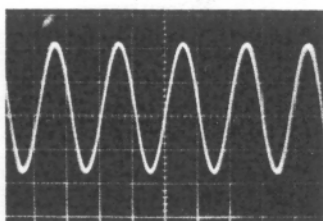
③ .1 $\mu$ S/cm, 200mV/cm



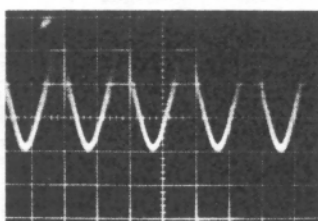
④ .1 $\mu$ S/cm, 20mV/cm



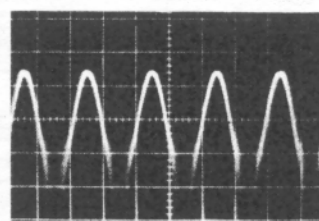
⑤ .1 $\mu$ S/cm, 20mV/cm



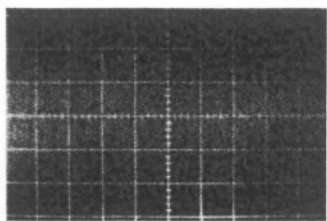
⑥ at de-tune .5mS/cm, .2V/cm



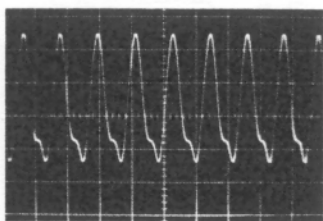
⑦ Dial pointer position:  
Slightly higher than the signal frequency.  
.5mS/cm, .2V/cm



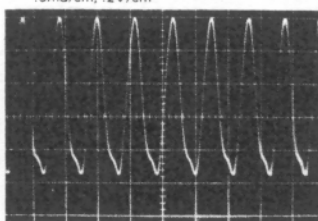
⑧ Dial pointer position:  
Slightly lower than the signal frequency.  
.5mS/cm, .2V/cm



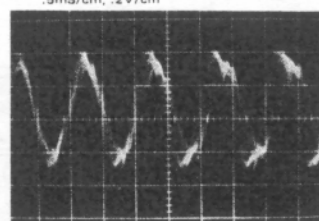
⑨ at de-tune .5m $\mu$ S/cm, .2V/cm



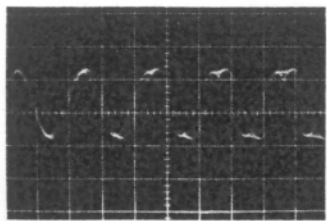
⑩ .1 $\mu$ S/cm, 50mV/cm



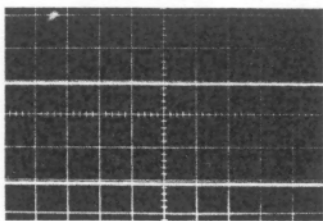
⑪ .1 $\mu$ S/cm, 50mV/cm



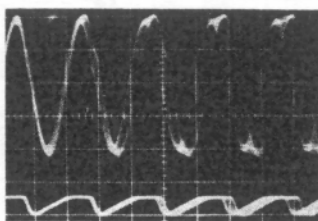
⑫ .2 $\mu$ S/cm, .2V/cm



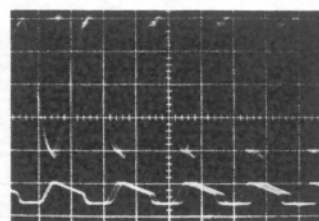
⑬ .2 $\mu$ S/cm, .2V/cm



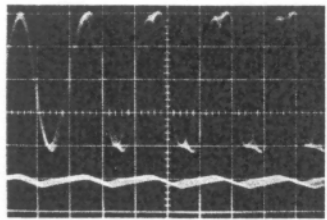
⑭ GND line of ⑬ and ⑮



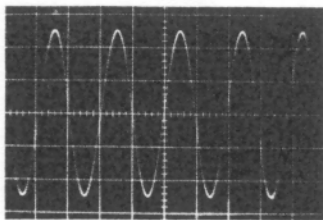
⑭ Top: FL2 output .2 $\mu$ S/cm, .1V/cm  
Bottom:  
ICB-9 .2 $\mu$ S/cm, 10V/cm



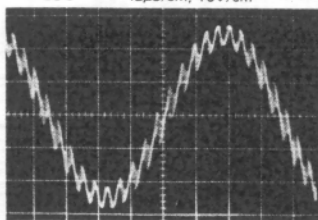
⑮ Top: FL2 output .1 $\mu$ S/cm, .1V/cm  
Bottom:  
ICB-10 .1 $\mu$ S/cm, 2V/cm



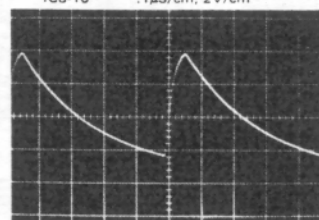
⑯ Top: FL2 output .2 $\mu$ S/cm, .1V/cm  
Bottom:  
ICB 8 (center line -4V) 2 $\mu$ S/cm, 2V/cm



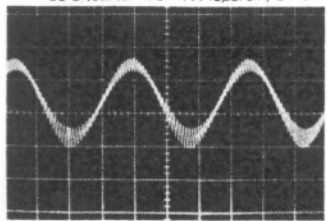
⑰ .5mS/cm, 50mV/cm  
(AC)



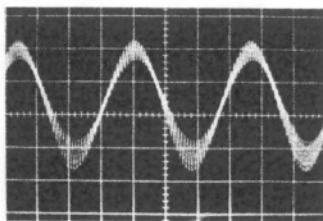
⑱ .5mS/cm, .2V/cm



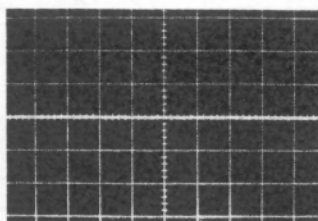
⑲ 2 $\mu$ S/cm, 1V/cm



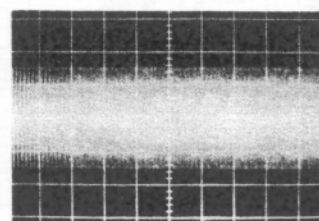
⑳ .2mS/cm, .2V/cm



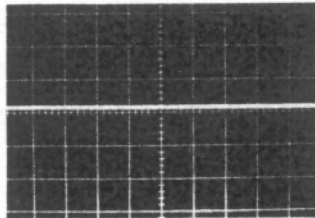
㉑ .2mS/cm, 2V/cm



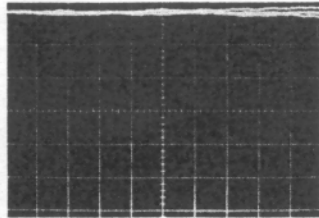
㉒ Q3-C (at tune)  
50 $\mu$ S/cm, 2V(AC)/cm



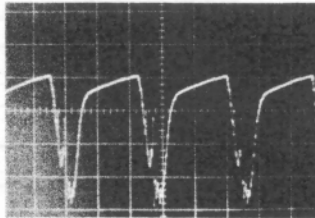
㉒ Q3-C (at de-tune)  
50 $\mu$ S/cm, 2V(AC)/cm



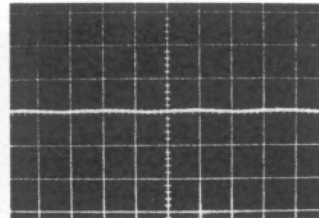
23 Q4-B at tune  
1mS/cm, 1V(DC)/cm



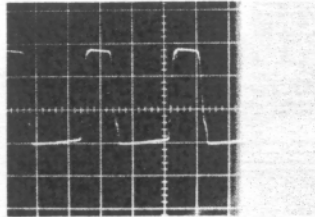
23 Q4-B at de-tune  
1mS/cm, 1V(DC)/cm



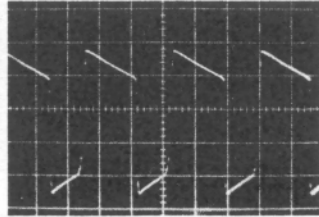
24 Q17-B (touch)  
5mS/cm  
50mV/cm



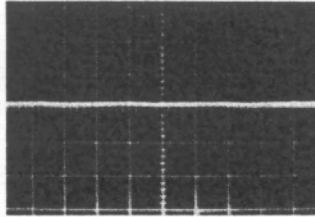
24 Q17-B (non-touch)  
5mS/cm  
20mV/cm



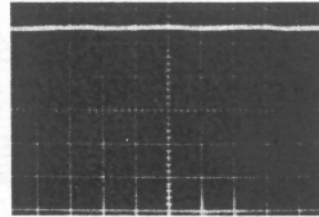
25 Q17-C (touch)  
5mS/cm  
2V/cm



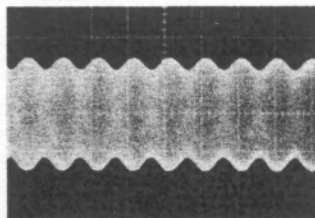
26 IC9-3 (touch)  
5mS/cm  
2V/cm



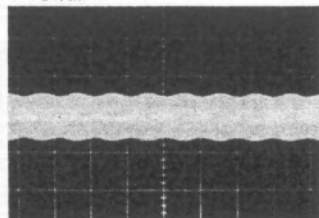
27 IC9-5 (touch)  
5mS/cm  
2V/cm



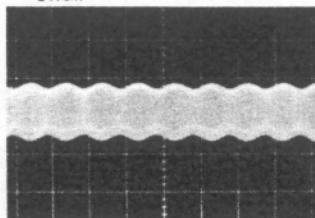
27 IC9-5 (non-touch)  
5mS/cm  
2V/cm



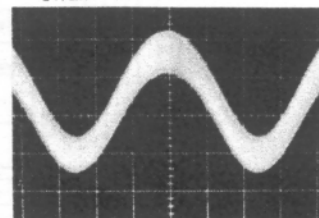
28 1mS/cm, 20mV/cm



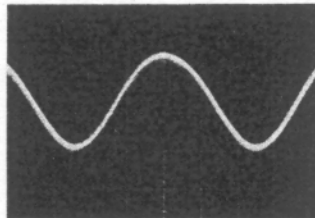
29 1mS/cm, 10mV/cm



30 1mS/cm, 10mV/cm



31 .2mS/cm, 10mV/cm



32 .2mS/cm, 10mV/cm

# PARTS LIST

See instructions at the end of the parts list.

| Ref. No.<br>参照番号     | Parts No.<br>部品番号 | Description<br>部品名 / 規格 | Re-<br>marks<br>備考 | Ref. No.<br>参照番号 | Parts No.<br>部品番号 | Description<br>部品名 / 規格 | Re-<br>marks<br>備考     |
|----------------------|-------------------|-------------------------|--------------------|------------------|-------------------|-------------------------|------------------------|
| <b>KT-815 (UNIT)</b> |                   |                         |                    |                  |                   |                         |                        |
| 1                    | 2B                | -                       |                    | 32               | 1A                | E05-0125-05             | PLUG F TYPE            |
| 2                    | 1B                | -                       |                    | 33               | 1B                | E30-0181-05             | POWER CORD             |
| 3                    | 2B                | -                       |                    | 33               | 1B                | E30-0185-05             | POWER CORD             |
| 4                    | 3A                | -                       |                    | 33               | 1B                | E30-0459-05             | POWER CORD             |
| 5                    | 1B                | -                       |                    | 33               | 1B                | E30-0545-05             | POWER CORD             |
| 6                    | 2B                | -                       |                    | 33               | 1B                | E30-0602-05             | POWER CORD             |
| 7                    | 1A                | -                       |                    | 34               | 1B                | E30-0505-05             | AUDIO CORD             |
| 8                    | 2B                | -                       |                    | 35               | 3B                | E40-0826-05             | PIN CONNECTOR 8P       |
| 9                    | 3A                | -                       |                    | 36               | 1B                | G01-0314-04             | COIL SPRING            |
| 10                   | 3B                | -                       |                    | 37               | 1B                | G13-0121-03             | CUSHION                |
| 11                   | 2A                | -                       |                    | -                |                   | H01-1890-04             | CARTON BOX             |
| 12                   | 3B                | -                       |                    | -                |                   | H01-1890-04             | CARTON BOX             |
| -                    |                   | 351-0008-04             |                    | -                |                   | H01-1890-04             | CARTON BOX             |
| -                    |                   |                         |                    | -                |                   | H01-1891-04             | CARTON BOX             |
| -                    |                   |                         |                    | -                |                   | H01-1892-04             | CARTON BOX             |
| 13                   | 1A                | A01-0349-13             |                    | -                |                   | H01-1893-04             | CARTON BOX             |
| 14                   | 3A                | A20-1390-13             | *K                 | -                |                   | H10-1524-22             | POLYSTYRENE FIXTURE X2 |
| 14                   | 3A                | A20-1390-13             | PU                 | -                |                   | H20-0448-04             | COVER                  |
| 14                   | 3A                | A20-1390-13             | MH                 | -                |                   | H20-0453-04             | COVER                  |
| 14                   | 3A                | A20-1390-13             | XE                 | -                |                   | H20-0453-04             | COVER                  |
| 14                   | 3A                | A20-1391-13             | *H                 | -                |                   | H20-0453-04             | COVER                  |
| 14                   | 3A                | A20-1417-13             | *T                 | -                |                   | H20-0453-04             | COVER                  |
| 15                   | 3A                | A21-0302-03             | *K                 | -                |                   | H20-0453-04             | COVER                  |
| 15                   | 3A                | A21-0302-03             | PU                 | -                |                   | H25-0078-04             | BAG 235X315            |
| 15                   | 3A                | A21-0302-03             | MX                 | -                |                   | H25-0096-04             | BAG 80X120             |
| 15                   | 3A                | A21-0302-03             | ET                 | -                |                   | H25-0148-04             | BAG 110X230            |
| 15                   | 3A                | A21-0303-03             | *H                 | -                |                   |                         |                        |
| 16                   | 3B                | A30-0156-03             |                    | -                |                   | J02-0097-04             | FOOT                   |
| -                    |                   | B46-0055-20             | P                  | 38               | 2B                | J02-0049-14             | FOOT X4                |
| -                    |                   | B46-0060-00             | T                  | 38               | 2B                | J02-0049-14             | FOOT X4                |
| -                    |                   | B46-0061-20             | K                  | 38               | 2B                | J02-0049-14             | FOOT X4                |
| -                    |                   | B46-0062-20             | UH                 | 38               | 2B                | J02-0049-14             | FOOT X4                |
| -                    |                   | B46-0063-00             | U                  | 38               | 2B                | J02-0073-04             | FOOT X4                |
| -                    |                   | B46-0064-00             | X                  | 39               | 1B                | J19-0507-05             | HOLDER ANTENNA         |
| -                    |                   | B50-1830-00             | *K                 | 40               | 1B                | J41-0024-15             | BUSHING POWER CORD     |
| -                    |                   | B50-1830-00             | U                  | 40               | 1B                | J41-0033-05             | BUSHING POWER CORD     |
| -                    |                   | B50-1831-00             | *P                 | 40               | 1B                | J41-0034-05             | BUSHING POWER CORD     |
| -                    |                   | B50-1831-00             | MX                 | 40               | 1B                | J41-0034-05             | BUSHING POWER CORD     |
| -                    |                   | B50-1832-00             | *H                 | 41               | 3A                | K21-0366-04             | KNOB TUNING            |
| -                    |                   | B50-1834-00             | *T                 | 42               | 3A                | K21-0367-04             | KNOB OUTPUT LEVEL      |
| 17                   | 2A, 3B            | B01-0124-04             |                    | 43               | 3A                | K27-0076-04             | KNOB POWER             |
| 18                   | 3A                | B01-0127-02             |                    | 44               | 2A                | K27-0077-04             | KNOB POWER             |
| 19                   | 3A                | B07-0252-04             |                    | 45               | 2B                | K27-0082-04             | KNOB ST. MUT. SEL      |
| 20                   | 3A                | B10-0241-04             |                    | 46               | 1A                | K27-0083-04             | KNOB MPX. MODE         |
| 21                   | 2B                | B19-0203-03             |                    | 47               | 2B                | L01-1711-05             | POWER TRANSFORMER      |
| 22                   | 3A                | B20-0441-04             | *                  | 47               | 2B                | L01-1711-05             | POWER TRANSFORMER      |
| 23                   | 3A                | B21-0030-04             |                    | 47               | 2B                | L01-1714-05             | POWER TRANSFORMER      |
| 24                   | 3B                | B30-0160-05             |                    | 47               | 2B                | L01-1714-05             | POWER TRANSFORMER      |
| 25                   | 2A, 3B            | B30-0166-05             |                    | 47               | 2B                | L01-1714-05             | POWER TRANSFORMER      |
| 26                   | 3B                | B30-0171-05             |                    | 47               | 2B                | L01-1714-05             | POWER TRANSFORMER      |
| 27                   | 3B                | B31-0298-05             | *                  | 47               | 2B                | L01-1717-05             | POWER TRANSFORMER      |
| C1                   | , C2              | C54-3310-39             | ET                 | 48               | 1A                | N08-0125-05             | DRESSED SCREW M4X8     |
| C1                   |                   | C90-0145-05             | K                  | 49               | 2A                | N09-0293-05             | SCREW PULLEY           |
| C1                   |                   | C91-0023-05             | UM                 | R1               |                   | R92-0173-05             | RC 2. 2M 2H            |
| C1                   |                   | C91-0023-05             | UM                 |                  |                   |                         |                        |
| C1                   |                   | C91-0023-05             | HX                 | 50               | 1B                | S31-2050-05             | SLIDE SWITCH           |
| C1                   |                   | C91-0025-05             | P                  | 50               | 1B                | S31-2050-05             | SLIDE SWITCH           |
| 28                   | 1B                | D15-0155-13             |                    | 50               | 1B                | S31-2050-05             | SLIDE SWITCH           |
| 29                   | 1B                | D15-0156-13             |                    | 51               | 2A                | S33-1011-05             | LEVER SWITCH POWER     |
| 30                   | 2A                | D15-0170-14             |                    | 51               | 2A                | S33-1011-05             | LEVER SWITCH POWER     |
| 31                   | 2A                | D20-0144-03             |                    |                  |                   |                         |                        |

PARTS LIST

| Ref. No.<br>参照番号     | Parts No.<br>部品番号 | Description<br>部品名 / 規格 | Re-<br>marks<br>備考 | Ref. No.<br>参照番号 | Parts No.<br>部品番号 | Description<br>部品名 / 規格 | Re-<br>marks<br>備考 |
|----------------------|-------------------|-------------------------|--------------------|------------------|-------------------|-------------------------|--------------------|
| 51 2A                | S33-1015-05       | LEVER SWITCH POWER      | KP                 | C65              | C58-1747-05       | CERAMIC 47PF J          |                    |
| 51 2A                | S33-2042-05       | LEVER SWITCH POWER      | ET                 | C66 -C68         | C91-0070-05       | CERAMIC 0.047UF Z       |                    |
| 52 1B                | T90-0096-05       | ANTENNA AM              |                    | C69              | C24-1010-71       | ELECTRO 100UF 10WV      |                    |
| 53 1B                | T90-0202-05       | ANTENNA FM              |                    | C70              | C24-1210-61       | ELECTRO 10UF 16WV       |                    |
| 54 2B                | X02-1180-10       | IF PCB ASSY             | *K                 | C71              | C24-1047-61       | ELECTRO 47UF 10WV       |                    |
| 54 2B                | X02-1180-10       | IF PCB ASSY             | P                  | C72              | C52-1727-16       | CERAMIC 270PF K         |                    |
| 54 2B                | X02-1182-71       | IF PCB ASSY             | XE                 | C73              | C24-1447-51       | ELECTRO 4.7UF 25WV      |                    |
| 54 2B                | X02-1182-71       | IF PCB ASSY             | T                  | C74              | C24-1733-51       | ELECTRO 3.3UF 50WV      |                    |
| 54 2B                | X02-1182-81       | IF PCB ASSY             | UM                 | C75              | C45-1747-36       | MYLAR 0.047UF K         |                    |
| 54 2B                | X02-1182-81       | IF PCB ASSY             |                    | C76              | C46-1722-26       | MYLAR 0.0022UF K        |                    |
| 54 2B                | X02-1182-81       | IF PCB ASSY             | H                  | C77              | C55-1747-38       | CERAMIC 0.047UF Z       |                    |
| 55 1B                | X05-1660-10       | RF/AM PCB ASSY          | *U                 | C78              | C24-1222-71       | ELECTRO 220UF 16WV      |                    |
| 55 1B                | X05-1660-10       | RF/AM PCB ASSY          | HX                 | C79              | C46-1715-26       | MYLAR 0.0015UF K        |                    |
| 55 1B                | X05-1660-10       | RF/AM PCB ASSY          | ET                 | C80              | C46-1715-34       | MYLAR 0.015UF G         | 81                 |
| 55 1B                | X05-1660-10       | RF/AM PCB ASSY          | M                  | C80              | C46-1775-24       | MYLAR 0.0075UF G        | 10                 |
| 55 1B                | X05-1660-11       | RF/AM PCB ASSY          | KP                 | C80              | C46-1775-24       | MYLAR 0.0075UF G        | 71                 |
| <b>IF (X02-1180)</b> |                   |                         |                    | C81              | C46-1715-34       | MYLAR 0.015UF G         | 10                 |
| C1                   | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C81              | C46-1775-24       | MYLAR 0.0075UF G        | 71                 |
| C2                   | C24-1210-71       | ELECTRO 100UF 16WV      |                    | C81              | C46-1775-24       | MYLAR 0.0075UF G        | 81                 |
| C3 -C14              | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C82              | C46-1715-34       | MYLAR 0.015UF G         | 81                 |
| C15                  | C25-1747-47       | LL-ELEC 0.47UF 50WV     |                    | C82              | C46-1775-24       | MYLAR 0.0075UF G        | 10                 |
| C16                  | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C82              | C46-1775-24       | MYLAR 0.0075UF G        | 71                 |
| C17                  | C54-1710-29       | CERAMIC 0.001UF P       |                    | C83              | C46-1715-34       | MYLAR 0.015UF G         | 10                 |
| C18 -C21             | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C83              | C46-1775-24       | MYLAR 0.0075UF G        | 71                 |
| C22                  | C55-1747-38       | CERAMIC 0.047UF Z       |                    | C83              | C46-1775-24       | MYLAR 0.0075UF G        | 81                 |
| C23 ,C24             | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C84              | C48-1710-25       | POLYSTY 1000PF J        |                    |
| C25                  | C71-1710-15       | CERAMIC 100PF J         |                    | C85              | C25-1747-47       | LL-ELEC 0.47UF 50WV     |                    |
| C26                  | C24-1447-51       | ELECTRO 4.7UF 25WV      |                    | C86 ,C87         | C25-1733-57       | LL-ELEC 3.3UF 50WV      |                    |
| C27                  | C55-1747-38       | CERAMIC 0.047UF Z       |                    | C88              | C24-1733-51       | ELECTRO 3.3UF 50WV      |                    |
| C28                  | C24-1247-61       | ELECTRO 47UF 16WV       |                    | C89              | C45-1710-36       | MYLAR 0.01UF K          |                    |
| C29                  | C52-1756-16       | CERAMIC 560PF K         |                    | C90 ,C91         | C25-1722-47       | LL-ELEC 0.22UF 50WV     |                    |
| C30                  | C25-6522-57       | LL-ELEC 2.2UF 35WV      |                    | C92              | C24-1247-61       | ELECTRO 47UF 16WV       |                    |
| C31                  | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C93              | C71-1710-15       | CERAMIC 100PF J         |                    |
| C32                  | C24-1210-61       | ELECTRO 10UF 16WV       |                    | C94              | C71-1710-02       | CERAMIC 10PF D          |                    |
| C33                  | C55-1747-38       | CERAMIC 0.047UF Z       |                    | C95,C96          | C24-1210-61       | ELECTRO 10UF 16WV       |                    |
| C34 ,C35             | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C97              | C71-1710-02       | CERAMIC 10PF D          |                    |
| C36 ,C37             | C24-1710-51       | ELECTRO 1UF 50WV        |                    | C98              | C71-1710-15       | CERAMIC 100PF J         |                    |
| C38                  | C24-1047-61       | ELECTRO 47UF 10WV       |                    | C99              | C24-1233-61       | ELECTRO 33UF 16WV       |                    |
| C39                  | C24-1022-71       | ELECTRO 220UF 10WV      |                    | C100,C101        | C24-1733-51       | ELECTRO 3.3UF 50WV      |                    |
| C40                  | C24-1447-51       | ELECTRO 4.7UF 25WV      |                    | C102,C103        | C24-1247-61       | ELECTRO 47UF 16WV       |                    |
| C41                  | C47-1712-15       | POLYSTY 120PF J         |                    | C104,C105        | C24-1210-61       | ELECTRO 10UF 16WV       |                    |
| C42                  | C45-1747-26       | MYLAR 0.0047UF K        |                    | C106,C107        | C24-1410-81       | ELECTRO 1000UF 25WV     |                    |
| C43                  | C24-1447-51       | ELECTRO 4.7UF 25WV      |                    | C108             | C24-1410-71       | ELECTRO 100UF 25WV      |                    |
| C44                  | C45-1722-36       | MYLAR 0.022UF K         |                    | C109             | C52-1756-16       | CERAMIC 560PF K         |                    |
| C45                  | C24-1447-51       | ELECTRO 4.7UF 25WV      |                    | C110             | C24-1010-71       | ELECTRO 100UF 10WV      |                    |
| C46                  | C25-1747-57       | LL-ELEC 4.7UF 50WV      |                    | C111             | C24-1210-61       | ELECTRO 10UF 16WV       |                    |
| C47                  | C24-1247-61       | ELECTRO 47UF 16WV       |                    | C112,C113        | C24-1210-81       | ELECTRO 1000UF 16WV     |                    |
| C48                  | C55-1747-38       | CERAMIC 0.047UF Z       |                    | C114             | C25-1733-57       | LL-ELEC 3.3UF 50WV      |                    |
| C49                  | C24-1247-61       | ELECTRO 47UF 16WV       |                    | C115             | C25-1410-67       | LL-ELEC 10UF 25WV       |                    |
| C50                  | C55-1710-38       | CERAMIC 0.01UF Z        |                    | C116             | C25-6522-57       | LL-ELEC 2.2UF 35WV      |                    |
| C51                  | C55-1747-38       | CERAMIC 0.047UF Z       |                    | C117,C118        | C55-1710-38       | CERAMIC 0.01UF Z        |                    |
| C53                  | C71-1710-15       | CERAMIC 100PF J         |                    | C119             | C46-1727-36       | MYLAR 0.027UF K         |                    |
| C54                  | C71-1722-05       | CERAMIC 22PF J          |                    | 101 2B           | E29-0112-05       | TERMINAL                | *                  |
| C55                  | C24-1233-61       | ELECTRO 33UF 16WV       |                    | CF1 -CF4         | L79-0098-05       | FILTER ASSY             | *                  |
| C56                  | C24-1222-61       | ELECTRO 22UF 16WV       |                    | FL1              | L79-0099-05       | FILTER LC               | *                  |
| C58                  | C55-1710-38       | CERAMIC 0.01UF Z        |                    | FL2              | L79-0100-05       | FILTER LC               | *                  |
| C59                  | C24-1210-61       | ELECTRO 10UF 16WV       |                    | FL5              | L79-0080-05       | FILTER LC               | *                  |
| C60                  | C26-1710-57       | NP-ELEC 1UF 50WV        |                    | FL6 ,FL7         | L79-0060-05       | FILTER LOW PASS         |                    |
| C61                  | C46-1710-47       | MYLAR 0.1UF M           |                    | L1               | L40-2292-11       | CHOKE COIL 2.2UH        |                    |
| C62                  | C25-1733-57       | LL-ELEC 3.3UF 50WV      |                    | L3               | L40-6825-64       | INDUCTOR 6.8MH          |                    |
| C63                  | C24-1247-61       | ELECTRO 47UF 16WV       |                    | L4 -L7           | L40-2292-11       | CHOKE COIL 2.2UF        |                    |
| C64                  | C24-1247-71       | ELECTRO 470UF 16WV      |                    |                  |                   |                         |                    |

PARTS LIST

| Ref. No.<br>参照番号 | Parts No.<br>部品番号 | Description<br>部品名 / 规格       | Re-<br>marks<br>備考 | Ref. No.<br>参照番号        | Parts No.<br>部品番号 | Description<br>部品名 / 规格     | Re-<br>marks<br>備考 |
|------------------|-------------------|-------------------------------|--------------------|-------------------------|-------------------|-----------------------------|--------------------|
| T1               | L30-0297-05       | IFT FM                        |                    | Q21, Q22                | V03-0270-05       | IFT Q21, Q22                |                    |
| T2               | L30-0320-05       | IFT QUADRATURE                |                    | Q23                     | V01-0733-30       | 2SA733A(R, Q), 2SA992(F, E) |                    |
| T3               | L32-0218-15       | FM OSC COIL                   |                    | Q26                     | V03-0270-05       | 2SC945(R, Q), 2SC828A(P, Q) |                    |
| T4               | L19-0009-05       | TRANSFORMER BALUN             |                    | <b>RF/AM (X05-1660)</b> |                   |                             |                    |
| R3               | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | CT1, CT2                | C05-0073-05       | TRIMMER CAPACITOR           | *                  |
| R10, R11         | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C1                      | C55-1710-38       | CERAMIC 0.01UF Z            |                    |
| R15              | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C2                      | C24-1210-61       | ELECTRO 10UF 16WV           |                    |
| R26              | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C3                      | C70-1718-05       | CERAMIC 18PF J              |                    |
| R28              | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C4                      | C48-1736-15       | POLYSTY 360PF J             |                    |
| R42, R43         | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C5                      | C55-1710-38       | CERAMIC 0.01UF Z            |                    |
| R49              | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C6                      | C24-1210-61       | ELECTRO 10UF 16WV           |                    |
| R104             | R43-1233-05       | FL-PROOF RD33 J 2E            |                    | C7                      | C46-1710-26       | MYLAR 0.001UF K             |                    |
| R105             | R49-6282-23       | RN 8.2K F 2E                  |                    | C8                      | C55-1710-38       | CERAMIC 0.01UF Z            |                    |
| R108             | R43-1222-05       | FL-PROOF RD22 J 2E            |                    | C9                      | C71-1733-05       | CERAMIC 33PF J              |                    |
| R118             | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C10                     | C71-1739-05       | CERAMIC 39PF J              |                    |
| R126             | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C11                     | C55-1710-38       | CERAMIC 0.01UF Z            |                    |
| R135             | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C12                     | C24-1210-61       | ELECTRO 10UF 16WV           |                    |
| R141             | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C13                     | C71-1747-05       | CERAMIC 47PF J              |                    |
| R157             | R47-1418-15       | FL-PROOF RS180 J 3A           |                    | C14                     | C55-1710-38       | CERAMIC 0.01UF Z            |                    |
| R165, R166       | R47-1456-95       | FL-PROOF RS5.6 J 3A           |                    | C17                     | C55-1722-38       | CERAMIC 0.022UF Z           |                    |
| R167, R168       | R43-6210-05       | FL-PROOF RD 10 J 2E           |                    | C18                     | C55-1747-38       | CERAMIC 0.047UF Z           |                    |
| R170             | R43-1210-15       | FL-PROOF RD100 J 2E           |                    | C19, C20                | C24-1447-51       | ELECTRO 4.7UF 25WV          |                    |
| VR1, VR2         | R12-0065-05       | TRIMMING POT. 470(B)          |                    | C21                     | C46-1710-26       | MYLAR 0.001UF K             |                    |
| VR3              | R12-1040-05       | TRIMMING POT. 4.7K(B)         |                    | C22                     | C55-1710-38       | CERAMIC 0.01UF Z            |                    |
| VR4              | R12-3046-05       | TRIMMING POT. 47K(B)          |                    | C23                     | C24-1222-71       | ELECTRO 220UF 16WV          |                    |
| VR5              | R12-1041-05       | TRIMMING POT. 3.3K(B)         |                    | C24                     | C46-1722-36       | MYLAR 0.022UF K             |                    |
| VR6 -VR8         | R12-5030-05       | TRIMMING POT. 100K(B)         |                    | C25                     | C46-1768-36       | MYLAR 0.068UF K             |                    |
| VR9              | R12-1039-05       | TRIMMING POT. 2.2K(B)         |                    | C27                     | C24-1710-51       | ELECTRO 1UF 50WV            |                    |
| VR10             | R12-8009-05       | TRIMMING POT. 1M(B)           |                    | CF1                     | L72-0054-05       | CERAMIC FILTER              |                    |
| VR11             | R06-2011-05       | POTENTIOMETER <b>FIG. 105</b> |                    | L1                      | L32-0205-15       | OSCILLATING COIL AM         |                    |
| -                | S51-2037-05       | REED RELAY                    |                    | L2                      | L30-0307-05       | IFT AM                      |                    |
| S1 -S3           | S42-3027-05       | PUSH SWITCH <b>FIG. 102</b>   | *                  | L3                      | L30-0284-05       | IFT                         |                    |
| S4, S5           | S42-2023-05       | PUSH SWITCH <b>FIG. 103</b>   |                    | L4                      | L72-0054-05       | LC FILTER                   | 10                 |
| D1 -D3           | V11-0273-05       | 1S2076A                       |                    | L5                      | L30-0326-05       | IFT FM                      | *                  |
| D2 -D22          | V11-0076-05       | 1S1555, 1S2076                |                    | L6                      | L40-1092-03       | INDUCTOR                    |                    |
| D24, D25         | V11-0076-05       | 1S1555, 1S2076                |                    | L7                      | L40-1511-03       | INDUCTOR                    |                    |
| D26              | V11-4101-50       | XZ-062 ZENER                  |                    | R7                      | R43-1210-15       | FL-PROOF RD100 J 2E         |                    |
| D27              | V11-0254-05       | YZ-140 ZENER                  |                    | R15, R16                | R43-1210-15       | FL-PROOF RD100 J 2E         |                    |
| D28              | V11-0076-05       | 1S1555, 1S2076                |                    | D1                      | V11-0051-05       | 1N60                        |                    |
| D29              | V11-5100-60       | RB-151 <b>50V 1.5A</b>        |                    | D2                      | V11-0273-05       | 1S2076A                     |                    |
| D30, D31         | V11-0076-05       | 1S1555, 1S2076                |                    | IC1                     | V30-0196-05       | HA1197                      |                    |
| D33              | V11-0076-05       | 1S1555, 1S2076                |                    | Q1                      | V09-0124-20       | 2SK61(Y)                    |                    |
| IC1              | V30-0215-05       | LA1222                        |                    | Q4                      | V03-0345-05       | 2SC828A(Q, R), 2SC945(Q, P) |                    |
| IC2              | V30-0087-05       | TA7060P                       |                    | 104 1B                  | W02-0021-05       | FRONT END PCB ASSY          | *                  |
| IC3              | V30-0133-05       | HA1137W                       |                    |                         |                   |                             |                    |
| IC4              | V30-0264-10       | HA1457                        |                    |                         |                   |                             |                    |
| IC5              | V30-0268-20       | MC1496N                       |                    |                         |                   |                             |                    |
| IC6              | V30-0297-20       | TC4069UEP                     |                    |                         |                   |                             |                    |
| IC7              | V30-0296-20       | TR4010A                       |                    |                         |                   |                             |                    |
| IC8              | V30-0266-20       | HA11223W                      |                    |                         |                   |                             |                    |
| IC9, IC10        | V30-0264-10       | HA1457                        |                    |                         |                   |                             |                    |
| Q1, Q2           | V03-0402-05       | 2SC535(B, C)                  |                    |                         |                   |                             |                    |
| Q3               | V09-0127-10       | 2SK105(F, H), 2SK68(L, M)     |                    |                         |                   |                             |                    |
| Q4 -Q7           | V03-0270-05       | 2SC945(R, Q), 2SC828A(P, Q)   |                    |                         |                   |                             |                    |
| Q8               | V03-0405-05       | 2SC945(F), 2SC828A(R)         |                    |                         |                   |                             |                    |
| Q9 -Q14          | V03-0270-05       | 2SC945(R, Q), 2SC828A(P, Q)   |                    |                         |                   |                             |                    |
| Q15              | V03-0405-05       | 2SC945(F), 2SC828A(R)         |                    |                         |                   |                             |                    |
| Q16              | V01-1029-10       | 2SA1029(C)                    |                    |                         |                   |                             |                    |
| Q17              | V09-0127-10       | 2SK105(F, H), 2SK68(L, M)     |                    |                         |                   |                             |                    |
| Q18, Q19         | V03-1775-00       | 2SC1980(T, U), 2SC1775        |                    |                         |                   |                             |                    |
| Q20              | V04-0330-40       | 2SD330(E)                     |                    |                         |                   |                             |                    |

## FRONT END (W02-0021-05)

| Ref. No. | Parts No.   | Description       | Re-<br>marks |
|----------|-------------|-------------------|--------------|
| C1       | C71-1722-06 | Ceramic 22pF K    |              |
| C2       | C71-1718-06 | Ceramic 18pF K    |              |
| C3       | C71-2710-25 | Ceramic 0.001μF J |              |
| C4       | C71-1710-16 | Ceramic 100pF K   |              |
| C5       | C55-1722-38 | Ceramic 0.022μF Z |              |
| C6       | C71-1702-02 | Ceramic 2pF D     |              |
| C7       | C55-1722-38 | Ceramic 0.022μF Z |              |
| C8       | C63-1722-05 | Ceramic 22pF J    |              |
| C9       | C63-1720-05 | Ceramic 20pF J    |              |
| C10      | C71-1704-02 | Ceramic 4pF D     |              |
| C11      | C71-1725-06 | Ceramic 25pF K    |              |
| C12      | C71-1710-16 | Ceramic 100pF K   |              |
| C13~15   | C55-1722-38 | Ceramic 0.022μF Z |              |
| C16      | C63-1710-05 | Ceramic 10pF J    |              |
| C17      | C63-1747-05 | Ceramic 47pF J    |              |
| C18      | C66-1710-02 | Ceramic 10pF D    |              |
| C19      | C66-1715-02 | Ceramic 15pF D    |              |
| C20      | C71-1701-02 | Ceramic 1pF D     |              |
| C21      | C63-1707-02 | Ceramic 7pF D     |              |
| C22,23   | C55-1722-38 | Ceramic 22pF Z    |              |
| TR1      | V09-0150-10 | 3SK85             |              |
| TR2      | V03-0065-05 | 2SC535            |              |
| TR3      | V03-0170-05 | 2SC461            |              |
| D        | V11-3100-50 | 1S2236            |              |

| Ref. No. | Parts No. | Description | Re-<br>marks            |
|----------|-----------|-------------|-------------------------|
| 参照番号     | 部品番号      | 部品名 / 規格    | 備考                      |
| ②        |           |             |                         |
| ①        | 14 3A     | A20-1391-13 | FRONT PANEL PANEL       |
|          | 14 3A     | A20-1417-13 | FRONT PANEL ASSY        |
|          | 15 3A     | A21-0302-03 | DRESSING PANEL          |
|          | 15 3A     | A21-0302-03 | DRESSING PANEL          |
|          | 15 3A     | A21-0302-03 | DRESSING PANEL          |
|          |           |             | *H                      |
|          |           |             | *T                      |
|          |           |             | *K                      |
|          |           |             | PU                      |
|          |           |             | MX                      |
| ⑤        | C1, C2    | C54-3310-39 | CERAMIC 0.01UF P        |
|          | C1        | C90-0145-05 | POLYESTER 0.01UF AC125V |
|          | C1        | C91-0023-05 | CERAMIC 0.01UF AC250V   |
|          | C1        | C91-0023-05 | CERAMIC 0.01UF AC250V   |
|          | C1        | C91-0025-05 | CERAMIC 0.01UF AC125V   |
|          |           |             | ET                      |
|          |           |             | K                       |
|          |           |             | UM                      |
|          |           |             | HX                      |
|          |           |             | P                       |
|          | 28 1B     | D15-0155-13 | PULLEY                  |
|          | 29 1B     | D15-0156-13 | PULLEY                  |
|          | 30 2A     | D15-0170-14 | PULLEY                  |
|          | 31 2A     | D20-0144-03 | DIAL SHAFT              |
|          |           |             | ⑥                       |

- ① Exploded view drawing No.
- ② Position in exploded view.
- ③ Symbol of new parts.
- ④ Area to which parts are shipped. Example: A20-1390-13 is the part No. of FRONT PANEL ASS'Y for the "K" type products (for USA).  
When this column is blank, it means that the same type of parts (same parts No.) are used for the products shipped to all areas.
- ⑤ Reference No. in schematic diagram.
- ⑥ Abbreviation of "ceramic capacitor".  
All capacitors and resistors are listed using abbreviations.
- ⑦ Abbreviations

\* Abbreviations of capacitors (Parts No. with initial letter "C")  
 ELECTRO . . . . . Electrolytic capacitor  
 LL-ELEC . . . . . Low leak electrolytic capacitor

NP-ELEC . . . . . Non-pole electrolytic capacitor  
 MICA . . . . . Mica capacitor  
 POLYSTY . . . . . Polystyrene capacitor  
 MYLAR . . . . . Mylar capacitor  
 CERAMIC . . . . . Ceramic capacitor  
 TANTAL . . . . . Tantalum capacitor  
 MF . . . . . Metallized film capacitor  
 OIL . . . . . Oil capacitor  
 The unit "UF" is used in lieu of "μF"

\* Abbreviations of resistors (Parts No. with initial letters "R")

RC . . . . . Carbon composition resistor  
 RD . . . . . Carbon film resistor  
 FL-PROOF RD . . . . . Flame-proof carbon film resistor  
 RW . . . . . Wire wound power resistor  
 FL-PROOF RS . . . . . Flame-proof metal oxide film resistor  
 RN . . . . . Metal film resistor

2B . . . . . Rated wattage 1/8W  
 2E . . . . . Rated wattage 1/4W  
 2H . . . . . Rated wattage 1/2W  
 3A . . . . . Rated wattage 1W  
 3D . . . . . Rated wattage 2W  
 3F . . . . . Rated wattage 3W  
 3G . . . . . Rated wattage 4W  
 3H . . . . . Rated wattage 5W

All resistor values are indicated with the unit (Ω) omitted.

\* Abbreviations common to capacitors and resistors

C . . . . . ±0.25pF (Used for capacitors only)  
 D . . . . . ±0.5pF (Used for capacitors only)  
 F . . . . . ±1%  
 G . . . . . ±2%  
 J . . . . . ±5%  
 K . . . . . ±10%  
 M . . . . . ±20%  
 Z . . . . . +80%, -20% (Used for capacitors only)  
 P . . . . . +100%, -0% (Used for capacitors only)

⑧ Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

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