



# **M-760 Plus**

# **Service Manual**

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# Model No: M760 Plus

Customer: INTEK

Rev No: A



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SPECIFICATIONS

1. GENERAL

Channels.....400 Ch AM/FM 4W
Frequency Range.....25.615 to 30.105 MHz
FrequencyControl.....PLL
Operating Temperature Range.....-10° / +55°C
DC Input Voltage.....13.2 V DC ±15%
Size.....180(L) X 35(H) X 140(D) mm
Weight.....0.850 kg

2. RECEIVER

Receiving System.....Dual Conversion Super Heterodyne Intermediate
Frequency.....1st IF: 10.695 MHz, 2nd IF: 455 MHz
Sensitivity.....0.5 µV for 20 db SINAD in FM mode Audio
Distortion.....Less Than 8% @ 1 KHz
ImageRejection.....65 dB
Adjacent ChannelRejection.....65 dB
Signal/ Noise Ratio.....45 dB
Current Drain at standby.....325 mA

3. TRANSMITTER

Output Power.....4W @ 13.2 V DC
Modulation.....FM: 1.8 KHz ±0.2 KHz
Frequency response.....From 400 Hz to 2.5 KHz
Output impedance.....RF 50 ohm
Unbalance Signal/ Noise Ratio.....40 dB
MIN Current Drain.....1300 mA



## OPERATION INSTRUCTIONS

Having properly installed your batteries and hooked-up the antenna, you are now ready to operate your radio for optimum reception and voice transmission.

Turn the power "ON" with ON/OFF switch.

Set the desired channel.

Adjust the squelch control knob to reduce any undesirable background noise when no signal is being received. To do this, select a channel where no signal are present, or wait until signals cease on your channel. Then, rotate the squelch control knob clockwise to a point where the background noise disappears.

**Note:** When the squelch is set properly, the speaker will remain quiet until a signal is received. In order to receive weak signals, do not set the squelch too high.

Adjust the volume to the desired listening level.

### To Transmit

Press and hold the push-to-talk button. Speak slowly and clearly in a normal voice two to three inches from the microphone. A built-in modulation control circuit will automatically adjust the microphone input level. There is no need to speak loudly.

### To Receive

Release the push-to-talk button.



## THEORY OF OPERATIONS

### TRANSMITTER

#### A. RF Amplification

The output of double AMP Q14 is fed through tuning IFT L8 to the base of pre driver AMP Q15. The output is then supplied through tuning circuit L9 to RF driver AMP Q16. The output of Q16 is supplied with tuning circuit L10 and C116,C67,C95 and goes to the base of final RF AMP Q17. The output of Q17 is supplied to the antenna through L-C tuning circuit.

#### B. Circuit for Suppression of Spurious Radiation

The tuning circuit between the output of final AMP Q17 and antenna, 4-stage "PHI" network L13, C142,C71,C72,L14,C74,C75,L15,C77,C78,L16,C79,C80,L24 serves as a spurious radiation suppressor . This network also serves to match the impedance between TX power AMP Q17 and the antenna.

#### C. Circuit for Limiting Power

After finished all alignment, the constant voltage supply circuit limits the available power 4 W or slightly less. RV4 and corresponding three transistors control supply voltage of RF amplifier and other circuits.

Tune all the trimmer parts for maximum indication of RF power meter and adjust RV4 to make 4 w indication of RF power meter.

The tuning is adjusted so that the actual power is from 3.5 to 4.0 W. There are no other additional controls for adjusting the TX output power.

#### D. Modulation Control

##### a. FM

The mic input is fed to mic audio amplifier IC KIA324 which drives modulation varicap diode D403 in the VCO circuit. RV1 limits the incoming modulation audio levels to inhibit over modulation. While reading the modulation factor on the modulation analyzing equipment, adjust RV1 shall not exceed  $\pm 1.7$  KHz/Dev. After 20 dB up from 1.25 KHz/1.2 KHz/Dev. Audio level

##### b. AM

Modulation signals are filtered with RC network and goes to the audio power AMP IC IC103 to make nominal signal level to achieve wanted modulation. To control incoming audio signal, diode D7 and corresponding ALC circuit limits the modulation shall not exceed  $\pm 90\%$  adjust RV3  $\pm 90\%$  modulation under 1.0 KHz AF 60% mod plus 20 dB of audio signal.



E. Receiver

CB receiver is dual conversion super-heterodyne type with the first IF 10.695 MHz and second IF 455 KHz. Receiver is separated two blocks, 1<sup>st</sup> IF section and 2<sup>nd</sup> IF section. The PLL synthesizer supplies first local frequency 16.270 ~ 16.710 MHz.(for EU) and 16.90625 MHz ~ 17.29625 MHz (for UK) With the provided first local frequencies to Q2,Q3 mixes the incoming RF signal to generate first IF signal. Mixed signals were filtered with the XF1 (10.695 MHz) crystal filter and other tuning circuits. Output signal of mixer is filtered with CF1(455 KHz ceramic filter). The 455 KHz signal from the 2<sup>nd</sup> IF filter was amplified and limits internally. After amplification the signals fed the quadrature detector loop L20. Then we can see the recovered audio signals on Pin 9 for FM of IC7. With the amplitude of recovered signals, Q10 serves as an audio amplifier. For AM signal Will be pass filter CF1 and induced to Q6, Q7 respective and detected to voice signal by D5.

**TROUBLESHOOTING HINTS**

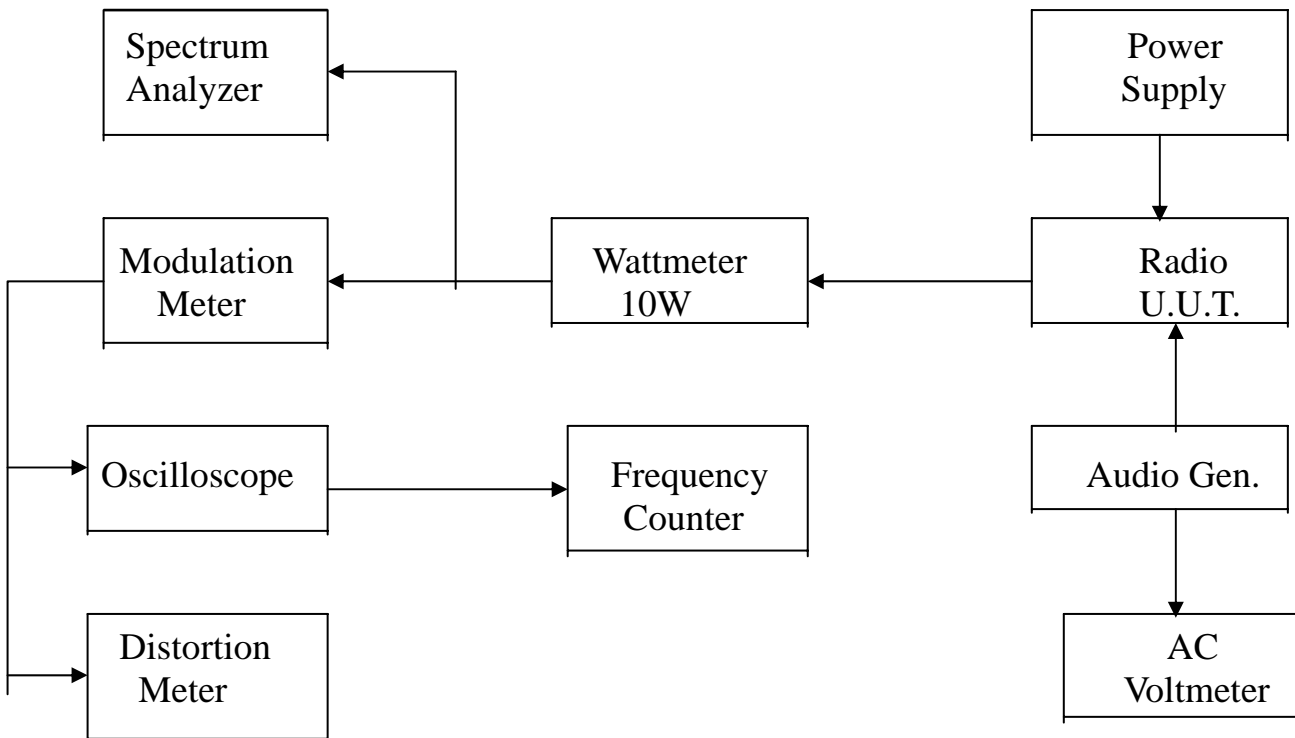
| <i>Symptom</i>                | <b>Probable Cause</b>  | <b>Remedy</b>   |
|-------------------------------|--|---|
| Unit does not work at all     | <ul style="list-style-type: none"> <li>Defective power switch VR1.</li> <li>Blown fuse.</li> <li>Broken DC power cord.</li> <li>Defective IC5.</li> </ul>  | <ul style="list-style-type: none"> <li>Replace</li> <li>Replace</li> <li>Replace</li> <li>Replace</li> </ul>  |
| No output from speaker at all | <ul style="list-style-type: none"> <li>Defective external speaker jack.</li> <li>Poor connection on microphone connector</li> <li>Defective push switch on microphone.</li> <li>Defective internal speaker.</li> <li>Defective VR1, IC8 other components.</li> </ul> | <ul style="list-style-type: none"> <li>Repair or replace</li> <li>Repair or replace</li> <li>Repair or replace</li> <li>Replace</li> <li>Replace the defective components.</li> </ul> |
| No noise on speaker           | <ul style="list-style-type: none"> <li>Measure all the voltage of IC7 with voltage chart</li> <li>Defective squelch circuit components (RV5,RV7,VR2 IC7)</li> </ul>  | <ul style="list-style-type: none"> <li>Replace</li> <li>Replace</li> </ul>  |
| Squelch does not work         | <ul style="list-style-type: none"> <li>Defective VR2, RV5,RV7, IC3-D.</li> </ul>   | <ul style="list-style-type: none"> <li>Replace the defective components.</li> <li>Re-adjust</li> </ul>  |



|                                |   |  |
|--------------------------------|---|--|
| No modulation                  | <ul style="list-style-type: none"> <li>Defective microphone.</li> <li>Poor audio output and defective modulation microphone amplifier components (IC3).</li> <li>Defective microphone connector components.</li> <li>Defective ALC circuit D8,D9</li> </ul> | <ul style="list-style-type: none"> <li>Replace</li> <li>Replace the defective components.</li> <li>Replace</li> <li>Replace the defective components.</li> </ul> |
| LCD meter does not work        | <ul style="list-style-type: none"> <li>Defective D11,D22</li> <li>Defective IC5.</li> <li>Defective RV2.RV6</li> </ul>  | <ul style="list-style-type: none"> <li>Replace</li> <li>Replace</li> <li>Replace</li> </ul>  |
| LCD display does not work      | <ul style="list-style-type: none"> <li>Defective RED wire fuse.</li> <li>Defective IC5, .</li> </ul>  | <ul style="list-style-type: none"> <li>Replace</li> <li>Replace</li> </ul>   |
| Channel selector does not work | <ul style="list-style-type: none"> <li>Defective IC5.</li> </ul>  | <ul style="list-style-type: none"> <li>Replace</li> </ul>  |
| EMG CH9.19 does not work       | <ul style="list-style-type: none"> <li>Defective EMG SW.</li> <li>Defective IC5.</li> </ul>   | <ul style="list-style-type: none"> <li>Replace</li> <li>Replace</li> </ul>   |

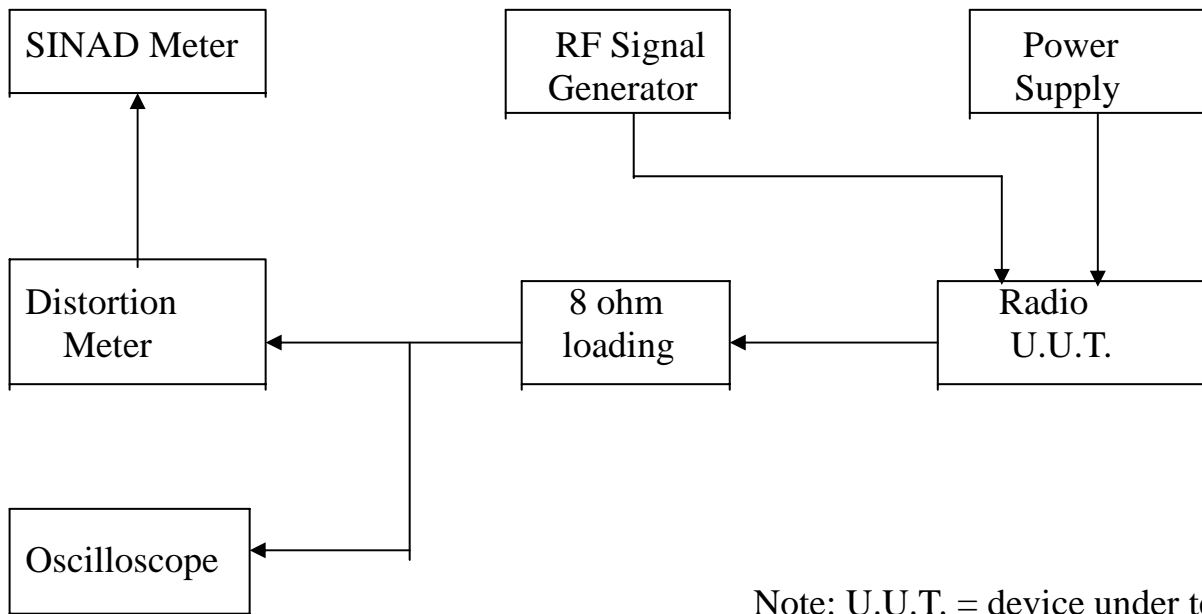
**TEST EQUIPMENT SETUP**

A. TX test equipment setup:





B. RX test equipment setup:



## Alignment Procedure.

### 4.1 VCO Adjust.

#### 4.1.1 VCO Voltage Adjust:

Test point TP1 connect to the multi-meter, set UUT enter test mode. Press channel “UP” key to select CH01A of Poland Band in FM mode.

1. Adjust IFT L17 for  $1.0 \pm 0.1V$  on the Multi-meter read, and then checking CH40L of RU Band should be less than 3.8V, and then check AM mode **CH01A  $\geq 0.8V$ , CH40L  $\leq 3.8V$**
2. Set UUT for TX MODE: Check **CH01A  $\geq 0.8V$ , CH14D  $\leq 3.8V$ ; CH15D  $\geq 0.8V$ , CH21G  $\leq 3.8V$ ; CH22G  $\geq 0.8V$ , CH40L  $\leq 3.8V$ .**
3. Turn to AM mode and repeat above item 2.

### 4.2 RX Section Alignment . ( FM and AM )

#### 4.2.1 Audio Distortion Adjust:

1. UUT set to FM mode CH19, output of RF signal generator connect to **TP2**. Audio dummy load connect to **EXT. Speaker**. (@8Ω load)
2. Set RF S.S.G Freq.: 10.695MHz, Mod.:  $\pm 1.2KHz$ , Fmod.: 1KHz, Output level: 1mV.
3. Squelch Volume set to minimum position, volume control set to around middle position.
4. Adjust IFT L20 for maximum audio output and minimum distortion at the distortion meter. ( distortion less than 5%).
5. Set volume control to maximum position, audio output power shall be more than 3 Watts.
6. **UUT set to AM mode CH19, output of RF signal generator connect to TP2. Audio dummy load connect to EXT. Speaker. (@8Ω load)**





7. Set RF S.S.G Freq.: 10.695MHz, Mod.: 60%, Fmod.: 1KHz, Output level:1mV.
8. Squelch Volume set to minimum position, volume control set to around middle position.
9. Adjust IFT L5 for maximum audio output and minimum distortion at the distortion meter. ( distortion less than 5%).
10. Set volume control to maximum position, audio output power shall be more than 3 Watts.

#### 4.2.2 Sensitivity Adjust:

1. RX RF bandwidth alignment: Apply Spectrum analyzer's Track Gen. Output connect to the UUT antenna terminal and input connect to the UUT TP3 (Q26 Emitter), center frequency set 27MHz, span set 30MHz, adjust IFT L4, L21 & L22 refer to attached table curve, then short TP3 & TP4.
2. UUT set to FM mode CH22, output of RF signal generator connect to **TP5 (Antenna)**.
3. Set RF S.S.G Freq.: 27.225MHz, Mod.:  $\pm 1.2$ KHz, Fmod.: 1KHz, Output level:0.5uV.
4. Adjust the volume control for 2V output on distortion meter read.
5. Adjust L2 & L3 for more than 12dB at SINAD meter.
6. Repeat as needed. Check all channels sensitivity must met the D.T.S. specifications.
7. UUT set to AM mode CH22, output of RF signal generator connect to **TP5 (Antenna)**.
8. Set RF S.S.G Freq.: 27.185MHz, Mod.: 60%, Fmod.: 1KHz, Output level:0.5uV.
9. Adjust the volume control for 2V output on distortion meter read.
10. Adjust L2 & L3 for more than 12dB at SINAD meter.
11. Repeat as needed. Check all channels sensitivity must met the D.T.S. specifications.

#### 4.2.3 T- Squelch Sensitivity Adjust:

1. UUT set to AM CH22, output of RF signal generator to the antenna input terminal.
2. Set RF S.S.G Freq.: 27.225MHz, Mod.: 60%, Fmod.: 1KHz, Output level: -47dBm.
3. Volume control and Squelch control set to maximum position, (Full C.W)
4. Adjust the **RV5** to mute the speaker, then turn the RF S.S.G output level to -47dBm.
5. Slowly turn **RV5** to a position that the audio output on the speaker just appears from no output. Turn the RF S.S.G output level to -57dBm, the audio must be off from the speaker.

#### Auto Squelch Adjust:

6. UUT set to AM CH22, output of RF signal generator to the antenna input terminal.
7. Set RF S.S.G Freq.: 27.225MHz, Mod.: 60%, Fmod.: 1KHz, Output level: -104dBm.
8. Squelch volume control set to minimum and Off position (Full C.C.W).
9. Adjust the **RV7** to mute the speaker, Slowly turn **RV7** to a position that the audio output on the speaker just appears from no output. Turn the RF S.S.G output level to -107dBm, the audio must be off from the speaker.

#### 4.2.4 RX Signal Meter Display Adjust: (For M-760 Only)

1. UUT set to AM CH22, output of RF signal generator to antenna input terminal. RF Gain volume at maximum. Power switch turn on.



2. Turn the RF S.S.G output for 100uV without modulation.
3. Adjust RV6 for 9 characters displayed at the RX signal strength of the LCD.
4. Turn the RF S.S.G level output increase 30dB, the RX signal strength should up to +30 position.

#### **4.2.5 Maximum S/N Detector & ANL detection:**

1. UUT set to FM CH22, output of RF signal generator to antenna input terminal. RF Gain set to maximum, Squelch set to minimum, compander set off. (M-150 W/O Compander)
2. Set RF S.S.G Freq.: 27.225MHz, Mod.:  $\pm 1.2$ KHz, Fmod.: 1KHz, Output level: 1mV.
3. The Volume control turn to 0.5 watts audio output for reference A dB.
4. Then off the Modulation, here the audio output for reference B dB. A-B for S/N  $\geq 35$ dB.
5. Compander set to On, repeat above item 3 and 4, A-B for S/N  $\geq 50$ dB. (M-760 only)
6. UUT set to AM CH22, set RF S.S.G Mod. for 60%. Compander set Off. Repeat above item 3 and 4, A-B for S/N  $\geq 35$ dB; Compander set to On, repeat above item 3 and 4, A-B for S/N  $\geq 50$ dB. (M-760 only)
7. UUT set to AM CH22, set RF S.S.G mod for 30%. RF level set 5.0uV. ESP set off. RF Gain set to maximum, Squelch set to minimum. ANL set off, Noise generator (pulse 1us; width 100ms; output level 1.0Vrms) set to on and connect to the antenna socket with network combinator.
8. Set audio output level for 0.8Vrms for 0dB reference, RF S.S.G MOD. turn off, set ANL to ON, the audio output should be drop 6dB or below.

### **4.3 TX Section Alignment.**

#### **4.3.1 TX output power and Frequency Alignment:**

1. UUT set to FM EU CH19, Antenna connect to the RF power-meter input terminal.
2. Set UUT to TX mode, adjust the IFT L8 and L9 for TX power output maximum, and then adjust the RV4 check the output TX power for 4.0W.
3. Set UUT turn to AM mode, check the TX power output for 0.7 to 1.3W.
4. Change to channel to UK band "U40" (27.99125MHz), Adjust the trimmer capacitor CT1 to 27.99125MHz  $\pm 50$ Hz on frequency counter. The UUT turn to EU CH19, check the TX carrier frequency should 27.185000 +/- 300Hz.
5. TX harmonics adjust and checking, turn to FM CH19, adjust L24 for 2<sup>nd</sup> harmonic -36dBm below.

#### **4.3.2 TX Signal Meter Indicator Alignment.**

1. UUT set to AM CH19, input of power-meter to antenna input terminal.
2. Set UUT to TX mode, adjust the RV2 for "4" characters displayed at the TX signal strength of the LCD display.

#### **4.3.3 TX modulation Deviation Alignment:**



1. UUT set to FM I2 CH19, input of power-meter to antenna input terminal. Input of MIC socket to the audio frequency signal generator output terminal. Mic Gain set to maximum. Comander set to Off.
2. Set audio frequency signal generator @ FREQ.: 1000Hz Output level: 50mVrms. Note: Should be add one 10uF capacitor in series between the AF signal O/P and UUT input.
3. Set UUT to TX mode, adjust RV1 for 1.6KHz deviation on modulation meter.
4. Decrease the AF output level. Check the 1.2KHz deviation modulation sensitivity should be between 8 -15 mV; Comander set On, Check the 1.2KHz deviation modulation sensitivity should be between 3-8 mV.
5. Turn the AF output level for 1.2KHz deviation on modulation meter, check the modulation distortion must be less than 5.0% on the audio distortion meter for Comander On and Off..
6. Set UUT to AM mode; Set audio frequency signal generator @ FREQ.: 1000Hz Output level: 50mVrms.
7. Set UUT to TX mode, adjust RV3 for 90% deviation on modulation meter.
8. Decrease the AF output level. Check the 50% deviation modulation sensitivity should be between 8-15 mV; Comander set On, Check the 50% deviation modulation sensitivity should be between 3-8 mV.
9. Turn the AF output level for 60% deviation on modulation meter, check the modulation distortion must be less than 5.0% on the audio distortion meter for Comander On and Off..

#### 4.3.4 PA audio output checking:

1. The UUT enter PA mode after long press the “ANL” key, Volume set maximum position for M-150, and the MIC gain set maximum position for M-760. 1KHz audio input.
2. Turn to TX mode, the PA output must meet the DTS.

### 5.0 TEST MODE DESCRIPTION, Model Selection and International Band Select:

1. For M-760, Press both keys of “ANL” & “Scan” synchronously, then turn on the DC power enter test mode. Press the “ENG” key for Software version checking, press the Channel “Down” key for LCD segments scanning checking.
2. For M-150, Press both keys of “ANL” & “DN” synchronously, then turn on the DC power enter test mode. Press the “ENG” key for Software version checking, press the Channel “Down” key for LED segments scanning checking.
3. RX & TX parameter test: Press the “channel up” key can select Germany CH41 (26.565MHz), CH19(27.185MHz), EU CH22(27.225MHz) and UK CHU40(27.99125MHz), PO CH01A and RU CH40L.
4. EEPROM control for VCO alignment for Channel RU 14D, RU 15D, RU 21G and RU 22G.
5. VCO Alignment Channel: PO band CH01A(25.610MHz) ---- Low channel; RU band channel CH40L(30.105MHz) ---- High channel.
6. Model selection and European band and International band selection.

Model select: M-150 R146 = N/A and R145 = 10K; M-760 R146 = 47K and R145 = N/A. (CPU PIN64 pull high for M-150; CPU PIN64 pull low for M-760)

International Band select: “IB” pad open for European band only, International band disable; “IB” PAD shorting that the International band enable and the European band enable also. (CPU pin 21 pull high for International Band)



7. BAND SELECTION:

- M-150: 1) switch ON radio while pressing the UP key  
 2) display will show the current band ID code (blinking)  
 3) select band using the UP or DN keys  
 4) shortly press the DN key to confirm  
 5) display will show the selected band ID code for 2-3 seconds, then it will show the channel number

- M-760: 1) switch ON radio while pressing the EMG key  
 2) display will show the current band ID code (blinking)  
 3) select band using the UP or DN keys  
 4) shortly press the EMG key to confirm  
 5) display will show the selected band ID code for 2-3 seconds, then it will show the channel number

**6.0 Factory Setting of Band for Shipment**

**FACTORY SETTING**

All radios must be shipped from factory set as follows :

BAND SETTING : EUROPEAN BANDS ONLY

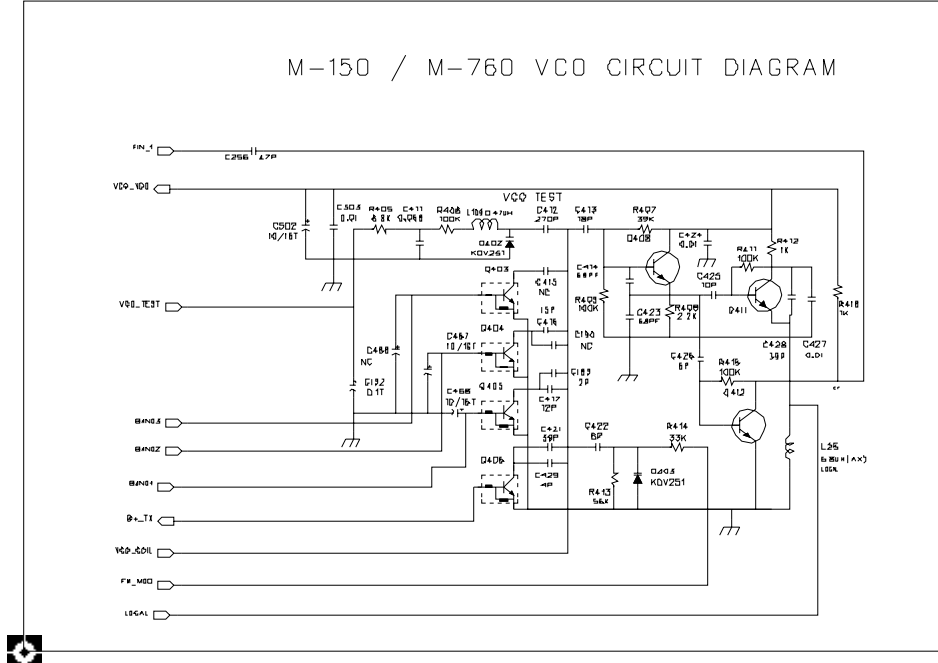
RADIO SWITCH ON : **CE BAND**

| Step | Setting   | Connection  | Adjuster | Adjust for      |
|------|---|---|----------|-----------------|
| 1    | Frequency adjustment<br>MIC : Receive Volume :<br>optional Squelch :<br>optional CH selector :<br>19 EU CH9 : off   | Frequency counter<br>to dummy load<br>(Figure 1).                   | CT1      | 27.185MHz±300Hz |
| 2    | VCO Voltage<br>adjustment MIC :<br>Receive Volume :<br>optional Squelch :<br>optional CH selector :<br>1A CH9 : OFF | Connect DC<br>voltmeter between<br>R97, C112and<br>GND. (Figure 2). | L17      | 1V at RX.       |



# Schematic Diagram

## VCO CIRCUIT DIAGRAM



COMPANDOR CIRCUIT DIAGRAM



**PLL CIRCUIT BLOCK DIAGRAM**

**1. INTRODUCTION**

The frequencies for transmitter and receiver first local frequencies are all derived from a single 4.0 MHz crystal by means of a phase locked loop. The first local oscillator frequencies are 26.965 MHz (CH 1) to 27.405MHz (CH 40) for EU and 27.60125 MHz (CH 1) to 27.99125 MHz (CH 40) for UK . The second local frequency is fixed at 10.240 MHz to generate second IF 455 KHz.

The VCO operating frequency for the receiver is 37.660 MHz (CH 1) to 37.560 MHz (CH 40) as the first local oscillator, injected through the buffer AMP Q411 into the first fed balanced mixer Q2 and Q3.

**2. BASIC SYNTHESIZER SCHEME**

The crystal frequency (4.000 MHz) is divided by 800 times to make 5 KHz which is fed to one side of the phase detector. The VCO output is divided by a programmable divider, and fed to other side of the phase detector of IC4. The feedback loop is closed by passing the phase detector output through an active low pass filter and using the output to control the VCO frequency through varicap diode D402,D403

Under locked conditions, both of phase detector input signal must be indential at 5 KHz. The VCO frequency is then given by:

$$FVCO / N = 0.005 \text{ MHz or } FVCO = 0.005 \times N \text{ MHz}$$

Since “N” is an integer, the VCO frequency can be stepped up with 5 KHz increments. By suitable choice of “N” the desired output frequency can be obtained.

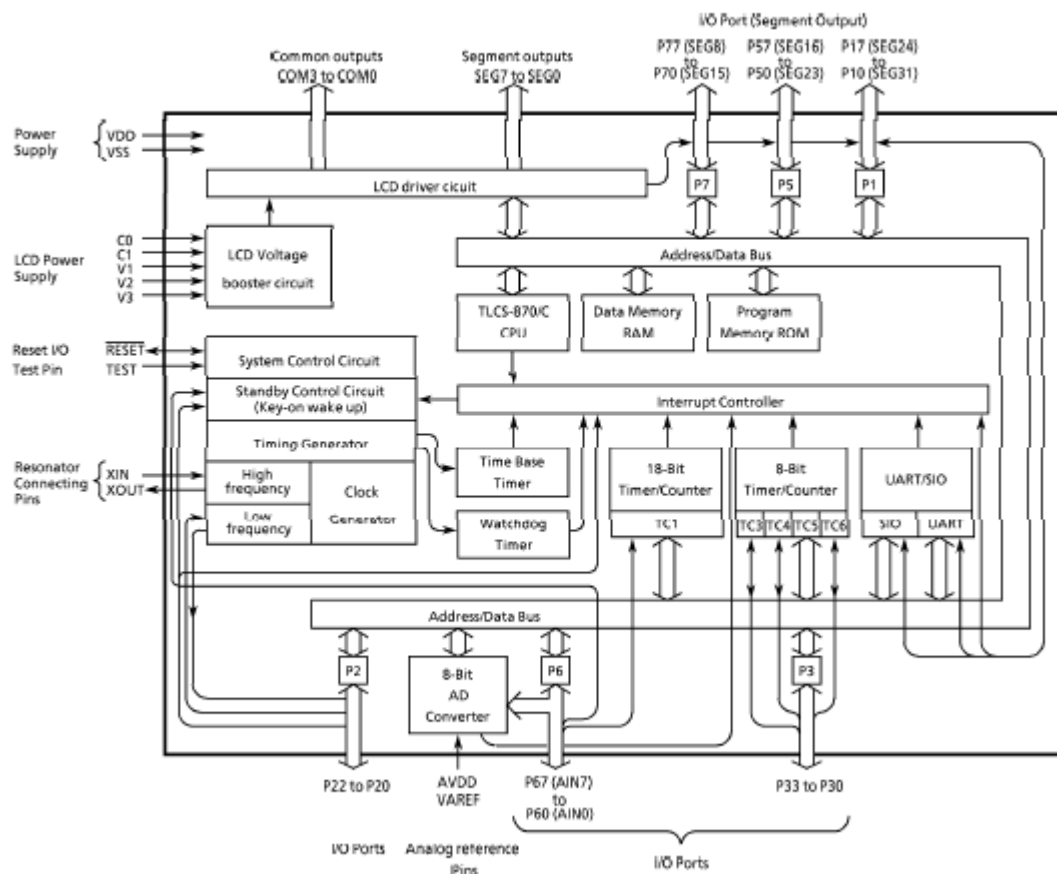
|          | Channel 1 |          | Channel 40 |          | FUNCTION |
|----------|-----------|----------|------------|----------|----------|
|          | N         | FVCO     | N          | FVCO     |          |
| Transmit | 5393      | 26.965   | 5481       | 27.405   | EU       |
| Receive  | 7532      | 37.660   | 7620       | 38.100   |          |
| Transmit | 5520.25   | 27.60125 | 5598.25    | 27.99125 | UK       |
| Receive  | 7659.2    | 38.296   | 7737.25    | 38.68625 |          |

Since all frequencies are obtained from the crystal controlled PLL oscillator, all outputs are coherent with the crystal oscillator frequency and maintaining the same percentage accuracy.



## INTERNAL BLOCK DIAGRAM

Block Diagram



### 3. DESCRIPTIONS OF EACH BLOCK

#### A. Introduction

The synthesizer is implemented with the following

Components:

- PLL IC (IC4)
- X-TAL (X2)



IC5 is a cmos LSI that includes most of PLL block and driver, the Q403-Q406,Q408, C412, C421, C416, C417 and L17, Varicap diode D402,D403 are clapp oscillator circuit to operate as a VCO. Q406 is a switching transistor to connect or disconnect the tuning capacitor in the VCO oscillator tank circuit for transmitter or receiver. Q411 works as a buffer AMP for RX local frequencies (38MHz) and TX generating frequencies (26 MHz).

## B. Reference frequency

The crystal, X2 (4.000 MHz) and other components at IC4 can make a reference frequency oscillator with internal amplifier.

## C. VCO

Q408 and surrounding parts are consisting a clapp oscillator works as a VCO . the VCO can be oscillate over the required of 25.610MHz to 41.115 MHz

## D. Phase detector and VCO control

The detector is a digital phase comparator which compares the phase of the reference signal with programmable divider output square waves and develops a series of pulses whose DC level depends on the phase error of each signal.

## E. Transmitter/Receiver buffer AMP

Output signal of Q408 is fed into buffer AMP Q411,

## F. Switching of tuning capacitor in VCO

The VCO circuit must tune with a wide rang of frequencies 25.610MHz to 30.15MHz for transmitter and 36.305~41.115 MHz for receiver. To comply above rang of VCO, the tuning capacitance should switched for transmission or reception.

## G. Receiver local oscillator outputs

### First Mixer:

The secondary output signals is injected to the sources of 1<sup>st</sup> mixer Q2,Q3 in the 1<sup>st</sup> IF mixer section

### Second Mixer:

The output of 10.24 MHz oscillator circuit with XF1 is injected into the IF IC internally. Incoming IF signal and 10.24 MHz are mixed inside the IF IC to extract 2<sup>nd</sup> IF signal 455 KHz. FM,AM audio signals are recovered with the way of quadrature detector, AM signals are recovered with envelope



detector.



#### 4. FREQUENCY STABILITY

LET :  $F_o$  = Crystal oscillator frequency  
 $F_r$  = Phase detector reference frequency  
 $F_{vco}$  = VCO frequency  
 $F_t$  = Transmit frequency  
Then :  $F_r = F_o/800$   
And under locked conditions :  $F_r = F_{vco} / N$

WHERE, "N" is the programmable divider divide ratio.

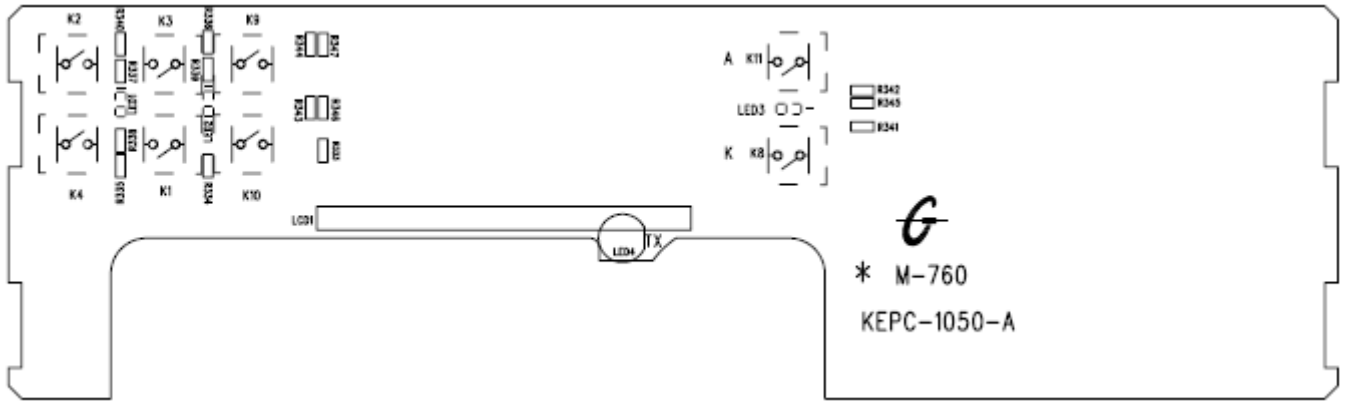
THEN :  $F_{vco} = N \times F_r$

From which it can be seen, the percentage error in  $F_t$  is the same as the percentage error in  $F_o$ . The stability of the crystal oscillator is determined primarily by the crystal itself and having lesser deviation by the active and passive components of the oscillator. The choice of crystal and component is such that the required frequency stability is maintained over the required voltage and temperature rang.

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## Frequencies Tables for M-760 Plus

| Specification   | LCD Display |
|---|-------------|
| <b>Legal Bands</b>  |             |
| Italy 40CH AM / FM 4W                                       | <b>EI</b>   |
| Italy 36CH AM / FM 4W                                       | <b>I2</b>   |
| Germany 80CH FM 4W 12CH AM 1W                               | <b>DE</b>   |
| Germany 40CH FM 4W 12CH AM 1W                               | <b>D2</b>   |
| Europe 40CH FM 4W 40CH AM 1W                                | <b>EU</b>   |
| CEPT 40CH FM 4W   | <b>CE</b>   |
| England 40CH FM 4W English Frequencies + EC 40CH FM 4W CEPT | <b>U</b>    |
| Poland 40CH AM / FM 4W Polish Frequencies -5kHz             | <b>PL</b>   |
| <b>Illegal Bands</b>  |             |
| Russia 400CH AM / FM 4W                                     | <b>RU</b>   |
| Poland 400CH AM / FM 4W Polish Frequencies -5kHz            | <b>PO</b>   |
| Private Channels AM / FM 4W                                 | <b>PC</b>   |

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## Frequencies for EI band (Italy 40CH AM / FM 4W)

| CH | Frequency (MHz) | Modulation |
|----|-----------------|------------|
| 1  | 26.965          | AM / FM    |
| 2  | 26.975          | AM / FM    |
| 3  | 26.985          | AM / FM    |
| 4  | 27.005          | AM / FM    |
| 5  | 27.015          | AM / FM    |
| 6  | 27.025          | AM / FM    |
| 7  | 27.035          | AM / FM    |
| 8  | 27.055          | AM / FM    |
| 9  | 27.065          | AM / FM    |
| 10 | 27.075          | AM / FM    |
| 11 | 27.085          | AM / FM    |
| 12 | 27.105          | AM / FM    |
| 13 | 27.115          | AM / FM    |
| 14 | 27.125          | AM / FM    |
| 15 | 27.135          | AM / FM    |
| 16 | 27.155          | AM / FM    |
| 17 | 27.165          | AM / FM    |
| 18 | 27.175          | AM / FM    |
| 19 | 27.185          | AM / FM    |
| 20 | 27.205          | AM / FM    |
| 21 | 27.215          | AM / FM    |
| 22 | 27.225          | AM / FM    |
| 23 | 27.255          | AM / FM    |
| 24 | 27.235          | AM / FM    |
| 25 | 27.245          | AM / FM    |
| 26 | 27.265          | AM / FM    |
| 27 | 27.275          | AM / FM    |
| 28 | 27.285          | AM / FM    |
| 29 | 27.295          | AM / FM    |
| 30 | 27.305          | AM / FM    |
| 31 | 27.315          | AM / FM    |
| 32 | 27.325          | AM / FM    |
| 33 | 27.335          | AM / FM    |
| 34 | 27.345          | AM / FM    |
| 35 | 27.355          | AM / FM    |
| 36 | 27.365          | AM / FM    |
| 37 | 27.375          | AM / FM    |
| 38 | 27.385          | AM / FM    |
| 39 | 27.395          | AM / FM    |
| 40 | 27.405          | AM / FM    |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



## Frequencies for I2 band (Italy 34CH AM / FM 4W)

| CH | Frequency (MHz) | Modulation |
|----|-----------------|------------|
| 1  | 26.965          | AM / FM    |
| 2  | 26.975          | AM / FM    |
| 3  | 26.985          | AM / FM    |
| 4  | 27.005          | AM / FM    |
| 5  | 27.015          | AM / FM    |
| 6  | 27.025          | AM / FM    |
| 7  | 27.035          | AM / FM    |
| 8  | 27.055          | AM / FM    |
| 9  | 27.065          | AM / FM    |
| 10 | 27.075          | AM / FM    |
| 11 | 27.085          | AM / FM    |
| 12 | 27.105          | AM / FM    |
| 13 | 27.115          | AM / FM    |
| 14 | 27.125          | AM / FM    |
| 15 | 27.135          | AM / FM    |
| 16 | 27.155          | AM / FM    |
| 17 | 27.165          | AM / FM    |
| 18 | 27.175          | AM / FM    |
| 19 | 27.185          | AM / FM    |
| 20 | 27.205          | AM / FM    |
| 21 | 27.215          | AM / FM    |
| 22 | 27.225          | AM / FM    |
| 23 | 27.255          | AM / FM    |
| 24 | 27.245          | AM / FM    |
| 25 | 27.265          | AM / FM    |
| 26 | 26.875          | AM / FM    |
| 27 | 26.885          | AM / FM    |
| 28 | 26.895          | AM / FM    |
| 29 | 26.905          | AM / FM    |
| 30 | 26.915          | AM / FM    |
| 31 | 26.925          | AM / FM    |
| 32 | 26.935          | AM / FM    |
| 33 | 26.945          | AM / FM    |
| 34 | 26.955          | AM / FM    |
| 35 | 26.855          | AM / FM    |
| 36 | 26.865          | AM / FM    |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



## Frequencies for DE band (Germany 80CH FM 4W 12CH AM 1W)

| CH | Frequency (MHz) | Modulation | CH | Frequency (MHz) | Modulation |
|----|-----------------|------------|----|-----------------|------------|
| 1  | 26.965          | FM         | 41 | 26.565          | FM         |
| 2  | 26.975          | FM         | 42 | 26.575          | FM         |
| 3  | 26.985          | FM         | 43 | 26.585          | FM         |
| 4  | 27.005          | AM / FM    | 44 | 26.595          | FM         |
| 5  | 27.015          | AM / FM    | 45 | 26.605          | FM         |
| 6  | 27.025          | AM / FM    | 46 | 26.615          | FM         |
| 7  | 27.035          | AM / FM    | 47 | 26.625          | FM         |
| 8  | 27.055          | AM / FM    | 48 | 26.635          | FM         |
| 9  | 27.065          | AM / FM    | 49 | 26.645          | FM         |
| 10 | 27.075          | AM / FM    | 50 | 26.655          | FM         |
| 11 | 27.085          | AM / FM    | 51 | 26.665          | FM         |
| 12 | 27.105          | AM / FM    | 52 | 26.675          | FM         |
| 13 | 27.115          | AM / FM    | 53 | 26.685          | FM         |
| 14 | 27.125          | AM / FM    | 54 | 26.695          | FM         |
| 15 | 27.135          | AM / FM    | 55 | 26.705          | FM         |
| 16 | 27.155          | FM         | 56 | 26.715          | FM         |
| 17 | 27.165          | FM         | 57 | 26.725          | FM         |
| 18 | 27.175          | FM         | 58 | 26.735          | FM         |
| 19 | 27.185          | FM         | 59 | 26.745          | FM         |
| 20 | 27.205          | FM         | 60 | 26.755          | FM         |
| 21 | 27.215          | FM         | 61 | 26.765          | FM         |
| 22 | 27.225          | FM         | 62 | 26.775          | FM         |
| 23 | 27.255          | FM         | 63 | 26.785          | FM         |
| 24 | 27.235          | FM         | 64 | 26.795          | FM         |
| 25 | 27.245          | FM         | 65 | 26.805          | FM         |
| 26 | 27.265          | FM         | 66 | 26.815          | FM         |
| 27 | 27.275          | FM         | 67 | 26.825          | FM         |
| 28 | 27.285          | FM         | 68 | 26.835          | FM         |
| 29 | 27.295          | FM         | 69 | 26.845          | FM         |
| 30 | 27.305          | FM         | 70 | 26.855          | FM         |
| 31 | 27.315          | FM         | 71 | 26.865          | FM         |
| 32 | 27.325          | FM         | 72 | 26.875          | FM         |
| 33 | 27.335          | FM         | 73 | 26.885          | FM         |
| 34 | 27.345          | FM         | 74 | 26.895          | FM         |
| 35 | 27.355          | FM         | 75 | 26.905          | FM         |
| 36 | 27.365          | FM         | 76 | 26.915          | FM         |
| 37 | 27.375          | FM         | 77 | 26.925          | FM         |
| 38 | 27.385          | FM         | 78 | 26.935          | FM         |
| 39 | 27.395          | FM         | 79 | 26.945          | FM         |
| 40 | 27.405          | FM         | 80 | 26.955          | FM         |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



Frequencies for D2 band (Germany 40CH FM 4W 12CH AM 1W)

| CH | Frequency (MHz) | Modulation |
|----|-----------------|------------|
| 1  | 26.965          | FM         |
| 2  | 26.975          | FM         |
| 3  | 26.985          | FM         |
| 4  | 27.005          | AM / FM    |
| 5  | 27.015          | AM / FM    |
| 6  | 27.025          | AM / FM    |
| 7  | 27.035          | AM / FM    |
| 8  | 27.055          | AM / FM    |
| 9  | 27.065          | AM / FM    |
| 10 | 27.075          | AM / FM    |
| 11 | 27.085          | AM / FM    |
| 12 | 27.105          | AM / FM    |
| 13 | 27.115          | AM / FM    |
| 14 | 27.125          | AM / FM    |
| 15 | 27.135          | AM / FM    |
| 16 | 27.155          | FM         |
| 17 | 27.165          | FM         |
| 18 | 27.175          | FM         |
| 19 | 27.185          | FM         |
| 20 | 27.205          | FM         |
| 21 | 27.215          | FM         |
| 22 | 27.225          | FM         |
| 23 | 27.255          | FM         |
| 24 | 27.235          | FM         |
| 25 | 27.245          | FM         |
| 26 | 27.265          | FM         |
| 27 | 27.275          | FM         |
| 28 | 27.285          | FM         |
| 29 | 27.295          | FM         |
| 30 | 27.305          | FM         |
| 31 | 27.315          | FM         |
| 32 | 27.325          | FM         |
| 33 | 27.335          | FM         |
| 34 | 27.345          | FM         |
| 35 | 27.355          | FM         |
| 36 | 27.365          | FM         |
| 37 | 27.375          | FM         |
| 38 | 27.385          | FM         |
| 39 | 27.395          | FM         |
| 40 | 27.405          | FM         |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



Frequencies for EU band (Europe 40CH FM 4W 40CH AM 1W)

| CH | Frequency (MHz) | Modulation |
|----|-----------------|------------|
| 1  | 26.965          | AM / FM    |
| 2  | 26.975          | AM / FM    |
| 3  | 26.985          | AM / FM    |
| 4  | 27.005          | AM / FM    |
| 5  | 27.015          | AM / FM    |
| 6  | 27.025          | AM / FM    |
| 7  | 27.035          | AM / FM    |
| 8  | 27.055          | AM / FM    |
| 9  | 27.065          | AM / FM    |
| 10 | 27.075          | AM / FM    |
| 11 | 27.085          | AM / FM    |
| 12 | 27.105          | AM / FM    |
| 13 | 27.115          | AM / FM    |
| 14 | 27.125          | AM / FM    |
| 15 | 27.135          | AM / FM    |
| 16 | 27.155          | AM / FM    |
| 17 | 27.165          | AM / FM    |
| 18 | 27.175          | AM / FM    |
| 19 | 27.185          | AM / FM    |
| 20 | 27.205          | AM / FM    |
| 21 | 27.215          | AM / FM    |
| 22 | 27.225          | AM / FM    |
| 23 | 27.255          | AM / FM    |
| 24 | 27.235          | AM / FM    |
| 25 | 27.245          | AM / FM    |
| 26 | 27.265          | AM / FM    |
| 27 | 27.275          | AM / FM    |
| 28 | 27.285          | AM / FM    |
| 29 | 27.295          | AM / FM    |
| 30 | 27.305          | AM / FM    |
| 31 | 27.315          | AM / FM    |
| 32 | 27.325          | AM / FM    |
| 33 | 27.335          | AM / FM    |
| 34 | 27.345          | AM / FM    |
| 35 | 27.355          | AM / FM    |
| 36 | 27.365          | AM / FM    |
| 37 | 27.375          | AM / FM    |
| 38 | 27.385          | AM / FM    |
| 39 | 27.395          | AM / FM    |
| 40 | 27.405          | AM / FM    |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



## Frequencies for CE band (CEPT 40CH FM 4W)

| CH | Frequency (MHz) | Modulation |
|----|-----------------|------------|
| 1  | 26.965          | FM         |
| 2  | 26.975          | FM         |
| 3  | 26.985          | FM         |
| 4  | 27.005          | FM         |
| 5  | 27.015          | FM         |
| 6  | 27.025          | FM         |
| 7  | 27.035          | FM         |
| 8  | 27.055          | FM         |
| 9  | 27.065          | FM         |
| 10 | 27.075          | FM         |
| 11 | 27.085          | FM         |
| 12 | 27.105          | FM         |
| 13 | 27.115          | FM         |
| 14 | 27.125          | FM         |
| 15 | 27.135          | FM         |
| 16 | 27.155          | FM         |
| 17 | 27.165          | FM         |
| 18 | 27.175          | FM         |
| 19 | 27.185          | FM         |
| 20 | 27.205          | FM         |
| 21 | 27.215          | FM         |
| 22 | 27.225          | FM         |
| 23 | 27.255          | FM         |
| 24 | 27.235          | FM         |
| 25 | 27.245          | FM         |
| 26 | 27.265          | FM         |
| 27 | 27.275          | FM         |
| 28 | 27.285          | FM         |
| 29 | 27.295          | FM         |
| 30 | 27.305          | FM         |
| 31 | 27.315          | FM         |
| 32 | 27.325          | FM         |
| 33 | 27.335          | FM         |
| 34 | 27.345          | FM         |
| 35 | 27.355          | FM         |
| 36 | 27.365          | FM         |
| 37 | 27.375          | FM         |
| 38 | 27.385          | FM         |
| 39 | 27.395          | FM         |
| 40 | 27.405          | FM         |



# Model No: M760 Plus

Customer: INTEK

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## Frequency For UK Band(England 40CH FM 4W + CEPT 40CH 4W)

| England Frequency |                 |            | CEPT Frequency |                 |            |
|-------------------|-----------------|------------|----------------|-----------------|------------|
| CH                | Frequency (MHz) | Modulation | CH             | Frequency (MHz) | Modulation |
| 1                 | 27.60125        | FM         | 1              | 26.965          | FM         |
| 2                 | 27.61125        | FM         | 2              | 26.975          | FM         |
| 3                 | 27.62125        | FM         | 3              | 26.985          | FM         |
| 4                 | 27.63125        | FM         | 4              | 27.005          | FM         |
| 5                 | 27.64125        | FM         | 5              | 27.015          | FM         |
| 6                 | 27.65125        | FM         | 6              | 27.025          | FM         |
| 7                 | 27.66125        | FM         | 7              | 27.035          | FM         |
| 8                 | 27.67125        | FM         | 8              | 27.055          | FM         |
| 9                 | 27.68125        | FM         | 9              | 27.065          | FM         |
| 10                | 27.69125        | FM         | 10             | 27.075          | FM         |
| 11                | 27.70125        | FM         | 11             | 27.085          | FM         |
| 12                | 27.71125        | FM         | 12             | 27.105          | FM         |
| 13                | 27.72125        | FM         | 13             | 27.115          | FM         |
| 14                | 27.73125        | FM         | 14             | 27.125          | FM         |
| 15                | 27.74125        | FM         | 15             | 27.135          | FM         |
| 16                | 27.75125        | FM         | 16             | 27.155          | FM         |
| 17                | 27.76125        | FM         | 17             | 27.165          | FM         |
| 18                | 27.77125        | FM         | 18             | 27.175          | FM         |
| 19                | 27.78125        | FM         | 19             | 27.185          | FM         |
| 20                | 27.79125        | FM         | 20             | 27.205          | FM         |
| 21                | 27.80125        | FM         | 21             | 27.215          | FM         |
| 22                | 27.81125        | FM         | 22             | 27.225          | FM         |
| 23                | 27.82125        | FM         | 23             | 27.255          | FM         |
| 24                | 27.83125        | FM         | 24             | 27.235          | FM         |
| 25                | 27.84125        | FM         | 25             | 27.245          | FM         |
| 26                | 27.85125        | FM         | 26             | 27.265          | FM         |
| 27                | 27.86125        | FM         | 27             | 27.275          | FM         |
| 28                | 27.87125        | FM         | 28             | 27.285          | FM         |
| 29                | 27.88125        | FM         | 29             | 27.295          | FM         |
| 30                | 27.89125        | FM         | 30             | 27.305          | FM         |
| 31                | 27.90125        | FM         | 31             | 27.315          | FM         |
| 32                | 27.91125        | FM         | 32             | 27.325          | FM         |
| 33                | 27.92125        | FM         | 33             | 27.335          | FM         |
| 34                | 27.93125        | FM         | 34             | 27.345          | FM         |
| 35                | 27.94125        | FM         | 35             | 27.355          | FM         |
| 36                | 27.95125        | FM         | 36             | 27.365          | FM         |
| 37                | 27.96125        | FM         | 37             | 27.375          | FM         |
| 38                | 27.97125        | FM         | 38             | 27.385          | FM         |
| 39                | 27.98125        | FM         | 39             | 27.395          | FM         |
| 40                | 27.99125        | FM         | 40             | 27.405          | FM         |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



## Frequencies for PL band (Poland 40CH AM / FM 4W Polish Frequencies –5kHz)

| CH | Frequency (MHz) | Modulation |
|----|-----------------|------------|
| 1  | 26.960          | AM / FM    |
| 2  | 26.970          | AM / FM    |
| 3  | 26.980          | AM / FM    |
| 4  | 27.000          | AM / FM    |
| 5  | 27.010          | AM / FM    |
| 6  | 27.020          | AM / FM    |
| 7  | 27.030          | AM / FM    |
| 8  | 27.050          | AM / FM    |
| 9  | 27.060          | AM / FM    |
| 10 | 27.070          | AM / FM    |
| 11 | 27.080          | AM / FM    |
| 12 | 27.100          | AM / FM    |
| 13 | 27.110          | AM / FM    |
| 14 | 27.120          | AM / FM    |
| 15 | 27.130          | AM / FM    |
| 16 | 27.150          | AM / FM    |
| 17 | 27.160          | AM / FM    |
| 18 | 27.170          | AM / FM    |
| 19 | 27.180          | AM / FM    |
| 20 | 27.200          | AM / FM    |
| 21 | 27.210          | AM / FM    |
| 22 | 27.220          | AM / FM    |
| 23 | 27.250          | AM / FM    |
| 24 | 27.230          | AM / FM    |
| 25 | 27.240          | AM / FM    |
| 26 | 27.260          | AM / FM    |
| 27 | 27.270          | AM / FM    |
| 28 | 27.280          | AM / FM    |
| 29 | 27.290          | AM / FM    |
| 30 | 27.300          | AM / FM    |
| 31 | 27.310          | AM / FM    |
| 32 | 27.320          | AM / FM    |
| 33 | 27.330          | AM / FM    |
| 34 | 27.340          | AM / FM    |
| 35 | 27.350          | AM / FM    |
| 36 | 27.360          | AM / FM    |
| 37 | 27.370          | AM / FM    |
| 38 | 27.380          | AM / FM    |
| 39 | 27.390          | AM / FM    |
| 40 | 27.400          | AM / FM    |



**PART LIST**

| Item | Part Number    | Description                          | QTY | Ref  |
|------|----------------|--------------------------------------|-----|--|
| 1    | KEJ-010        | ANTENNA RECEPTACLE 89713-0013        | 1   |  |
| 2    | KEJ-512        | MIC SOCKET 6PIN N- 16-6R QIINGXI NG  | 1   |  |
| 3    | KEJW-TA24BK    | TINNED WIRE UL1007 #24 BLACK         | 1   | SPMIC (L=0.11), VR1, VR2<br>VR3, VR4SW         |
| 4    | KEJW-TA24BL    | TINNED WIRE UL1007 #24 BLUE          | 0.2 | MIC (L=0.16), VR1 (L=0.08)                     |
| 5    | KEJW-TA24GR    | TINNED WIRE UL1007 #24 GREEN         | 0.5 | MIC, VR1, VR2, VR3<br>VR4 (L=0.1), SW (L=0.03) |
| 6    | KEJW-TA24RD    | TINNED WIRE UL1007 #24 RED           | 0.4 | VR1, VR2, VR4, MIC                             |
| 7    | KEJW-TA24WE    | TINNED WIRE UL1007 #24 WHITE         | 0.5 | MIC, VR1, VR2, VR3                             |
| 8    | KEOE-0T513     | DC POWER CORD UL10 15 20AWG          | 1   |  |
| 9    | KESP-253       | 80HM 2W L3050AE-8- 7B05R ASAHI       | 1   | SPEAKER1                                       |
| 10   | KET-C2078D     | TRANSISTOR NPN 2SC 2078(D)           | 1   | Q17  |
| 11   | KEC-E104HRMU   | CAP. ELECT. 50V M 0.1UF              | 3   | C107, C141, C168                               |
| 12   | KEC-E105HRMU   | CAP. ELECT. 50V M% 1UF               | 3   | C29, C50, C51                                  |
| 13   | KEC-E106ERMU   | CAP. ELECT. 16V M% 10UF              | 3   | C16, C90, C152                                 |
| 14   | KEC-E107ERMU   | CAP. ELECT. 16V M% 100UF             | 3   | C35, C85, C181                                 |
| 15   | KEC-E108FRMU   | CAP. ELECT. 25V M% 1000UF            | 4   | C31, C113, C154, C11A                          |
| 16   | KEC-E226ERMU   | CAP. ELECT. 16V M% 22UF              | 2   | C134, C158                                     |
| 17   | KEC-E227ERMU   | CAP. ELECT. 16V M% 220UF             | 3   | C120, C155, C60                                |
| 18   | KEC-E227FRMU   | CAP. ELECT. 25V M% 220UF             | 1   | C102   |
| 19   | KEC-E476ERMKS  | CAP. ELECT. 16V M% 47UF              | 1   | C157   |
| 20   | KEC-E476ERMU   | CAP. ELECT. 16V M% 47UF              | 2   | C59, C144                                      |
| 21   | KEC-E477ERMU   | CAP. ELECT. 16V M% 470UF             | 2   | C94, C185                                      |
| 22   | KEC-TR031-A    | CAP. TRIMMER JTC06 E300 30PF         | 1   | CT1  |
| 23   | KECF-0070-A    | CRYSTAL FILTER 10. 695MHZ QUARTZ     | 1   | XF1  |
| 24   | KECF-0216      | CERAMIC FILTER LT4 55HTW FRONTER     | 1   | CF1  |
| 25   | KED-ZS8V2BSCST | 8V2BSCST SEMTECH Z ENER DIODE        | 1   | DZ1  |
| 26   | KED-1K261      | DIODE GERMANIUM 1K261                | 1   | D5   |
| 27   | KED-4004-A     | DIODE IN4004                         | 2   | D6, D10  |
| 28   | KEI-061LH      | IFT 7X7MM 27MHZ KS 2295R             | 2   | L22, L21                                       |
| 29   | KEI-265LH      | 5840 LAIHENG IFT                     | 1   | L5   |
| 30   | KEI-266LH      | KS2641 LIKHANG LH                    | 1   | L17  |
| 31   | KEI-267LH      | 2762 CAIHENG IFT                     | 1   | L20  |
| 32   | KEI-268LH      | 320-5763 LAIHENG IFT                 | 1   | L3   |
| 33   | KEI-269LH      | 73C-359 LAIHENG IFT                  | 1   | L8   |
| 34   | KEI-270LH      | 321-0952 LAIHENG I FT                | 1   | L2   |
| 35   | KEI-271LH      | 320-5774 LAIHENG I ET                | 1   | L9   |
| 36   | KEI-272LH      | 3205851Z LAIHENG I FT                | 1   | L4   |
| 37   | KEIC-TDA2003   | IC TDA2003 10W AUD IO AMP YD         | 1   | IC8  |
| 38   | KEJ-012        | SPEAKER JACK JC-30 4B                | 2   | J1, J6   |
| 39   | KEL-S147       | 0.8X6.0X5.5 TS-P                     | 4   | L13, L14, L15, L16                             |
| 40   | KEL-S148       | 0.8*2.5*7TS-P-B AI R CORE COIL       | 1   | L10  |
| 41   | KEL-S149       | 0.6*5.0*13.5TS-P-B AIR CORE COIL WFD | 1   | L12  |

## Model No: M760 Plus

Customer: INTEK

Rev No: A

|    |                 |                    |                |    |   |
|----|-----------------|--------------------|----------------|----|---|
| 42 | KEL-V208AD      | COIL VARIABLE 0.20 | UH 20%         | 1  | L24   |
| 43 | KEL-V308WFD     | COIL VARIABLE 0.3U | H 20%          | 1  | L24   |
| 44 | KEL-101MA-1     | COIL FIXED 100UH   | 10%            | 1  | L23   |
| 45 | KEL-102K-LF     | FIXED COIL 1MH 10% | AL0307-102K-LF | 1  | L19   |
| 46 | KEL-159CL-4     | COIL FIXED 1.5UH A | 70704029       | 1  | L1  |
| 47 | KEL-689CL-4     | COIL FIXED 6.8UH   |                | 1  | L25   |
| 48 | KEL-689MA-2     | COIL FIXED 6.8UH   |                | 1  | L11   |
| 49 | KEL-752WF       | INDUCTOR LGA0415#7 | R5M-B 7.5UH    | 2  | L6, L18   |
| 50 | KER-MX120FBB    | RES MX-FILM 2W 5%  | 12 OHM         | 1  | R75   |
| 51 | KER-MX471EBB    | RES. MX-FILM 1W 5% | S 470 OHM      | 1  | R138  |
| 52 | KER-100DBB      | RES. C-FILM 1/2W 5 | % S 10 OHM     | 1  | R70   |
| 53 | KER-102KVSF637A | RES. SEMI KVSF637A | 1KOHM          | 1  | RV3   |
| 54 | KER-103KVSF637A | RES. SEMI. KVSF637 | A 10K          | 2  | RV1, RV4  |
| 55 | KER-104KVSF637A | RES. SEMI. KVSF637 | A 100K         | 1  | RV2   |
| 56 | KER-223KVSF637A | RES. SEMI. KVSF637 | A 22KOHM       | 1  | RV7   |
| 57 | KER-229CBB      | RES. C-FILM 1/4W 5 | % S 2.2 OHM    | 1  | R107  |
| 58 | KER-302CBB      | RES. C-FILM 1/4W 5 | % S 3K         | 1  | R71   |
| 59 | KER-471CFB      | RES. C-FILM 1/4W 5 | % F 470 OHM    | 1  | R8  |
| 60 | KER-473KVSF637A | RES. SEMI. KVSF637 | A 47K          | 2  | RV6, RV5  |
| 61 | KER-479DBB      | RES. C-FILM 1/2W 5 | % S 4.7 OHM    | 1  | R64   |
| 62 | KER-751DBB      | RES C-FILM 1/2W 5% | 750 OHM        | 1  | R66   |
| 63 | KERY-039        | RELAY TRKM(78F) D- | 12VDC-S-Z      | 2  | K12, K13  |
| 64 | KET-2SC2314F    | TRANSISTOR 2SL2314 | (F) NPN        | 1  | Q16   |
| 65 | KETR-011-A      | TRANSFORMER CHOKE  | EI19KY-226     | 1  | CH1   |
| 66 | KETR-067        | BW-0903 BAN WO TRA | NSFORMER       | 1  | T1  |
| 67 | KEX-0318        | CRYSTAL 10.24DMHZ  | CL=30PF        | 1  | X1  |
| 68 | KEX-0474        | CRTAL 4MZ-20PPM-HC |                | 1  | X2  |
| 69 | M-760B1S        | BASE MAIN PCB SMT  |                | 1  |   |
| 70 | M-760B1SB       | BASE MAIN PCB SMT  | BOTTOM         | 1  |   |
| 71 | KCC-102FRJNPOB  | CAP. CER CHIP 50V  | CH J 0.001UF   | 1  | C67   |
| 72 | KCC-103FRKBB    | CAP. CER. CHIP 50V | B K% 0.01UF    | 11 | C3, C61, C83, C99, C126, C140, C8, C32, C82, C100, C132 |
| 73 | KCC-104DRKBB    | CAP. CER. CHIP 16V | B K% 0.1uF     | 2  | C114, C156  |
| 74 | KCC-120FRJNPOB  | CAP. CER. CHIP 50V | CH J% 12PF     | 2  | C164, C163  |
| 75 | KCC-122FRKBB    | CAP. CER. CHIP 50V | B K% 0.0012UF  | 1  | C73   |
| 76 | KCC-150FRJNPOB  | CAP. CER. CHIP 50V | CH J% 15PF     | 2  | C165, C183  |
| 77 | KCC-151FRJNPOB  | CAP. CER. CHIP 50V | CH J% 150PF    | 3  | C124, C116, C75   |
| 78 | KCC-200FRJNPOB  | CAP. CER. CHIP 50V | CH J% 20PF     | 1  | C43   |
| 79 | KCC-201FRJNPOB  | CAP. CER. CHIP 50V | NPO J% 200P    | 1  | C77   |
| 80 | KCC-271FRJNPOB  | CAP. CER. CHIP 50V | CH J% 270PF    | 2  | C79, C78  |
| 81 | KCC-333DRKBB    | CAP. CER. CHIP 16V | B K% 0.033UF   | 1  | C159  |
| 82 | KCC-390FRJNPOB  | CAP. CER. CHIP 50V | CH J% 39PF     | 2  | C92, C122   |
| 83 | KCC-409FRCNPOB  | CAP. CER. CHIP 50V | CH C% 4PF      | 1  | C101  |
| 84 | KCC-470FRJNPOB  | CAP. CER. CHIP 50V | CH J% 47PF     | 7  | C44, C142, C80, C76, C66, C95, C71                      |
| 85 | KCC-473DRKBB    | CAP. CER. CHIP 16V | B K% 0.047uF   | 1  | C88   |
| 86 | KCC-473FRKBB    | CAP. CER. CHIP 50V | B K% 0.047uF   | 2  | C69, C70  |
| 87 | KCC-509FRCNPOB  | CAP. CER. CHIP 50V | CH C 5PF       | 1  | C143  |
| 88 | KCC-680FRJNPOB  | CAP. CER. CHIP 50V | CH J% 68PF     | 3  | C1, C2, C74   |
| 89 | KCD-KDS160      | DIODE CHIP KDS160  | KEC            | 8  | D3, D4, D11, D12, D13, D22, D23, D24                    |
| 90 | KCR-000B        | RES. CHIP 1/16W 0  | OHM            | 1  | R149  |

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| 91  | KCR-101B        | RES. CHIP 1/16W 100   |                | 2  | R88, R5  |
| 92  | KCR-102B        | RES. CHIP 1/16W 1K    |                | 1  | R1   |
| 93  | KCR-103B        | RES. CHIP 1/16W 10K   |                | 5  | R72, R147, R153, R155, R161  |
| 94  | KCR-151B        | RES. CHIP 1/16W 150   |                | 1  | R62  |
| 95  | KCR-152B        | RES. CHIP 1/16W       | 1. 5K          | 1  | R94  |
| 96  | KCR-154B        | RES. CHIP 1/16W       | 150K           | 1  | R55  |
| 97  | KCR-183B        | RES. CHIP 1/16W 18K   |                | 1  | R6   |
| 98  | KCR-221B        | RES. CHIP 1/16W 220   |                | 1  | R56  |
| 99  | KCR-222B        | RES. CHIP 1/16W 2. 2K |                | 3  | R73, R151, R160  |
| 100 | KCR-273B        | RES. CHIP 1/16W 27K   |                | 1  | R2   |
| 101 | KCR-471B        | RES. CHIP 1/16W 470   |                | 1  | R104   |
| 102 | KCR-474B        | RES. CHIP 1/16W       | 470K           | 1  | R135   |
| 103 | KCR-563B        | RES. CHIP 1/16W 56K   |                | 1  | R87  |
| 104 | KCT-KTC3875S    | TR. CHIP NPN KTC38    | 75S (GR)       | 3  | Q44, Q45, Q46  |
| 105 | KCT-KTC3880S    | TR. CHIP NPN KTC38    | 80S SOT-23     | 2  | Q14, Q26   |
| 106 | KCT-MMBTSC3265Y | TRANSISTOR MMBTSC3    | 265Y SOT23     | 2  | Q29, Q34   |
| 107 | M-760B1ST       | BASE MAIN PCB SMT     | TOP            | 1  |  |
| 108 | KCC-T105EAM     | CAP. TANT. CHIP 16    | V M% 1uF       | 1  | C112   |
| 109 | KCC-T335DK3216  | CAP TANTALUM 3. 3U    | 10V 10% A      | 2  | C6, C7   |
| 110 | KCC-100FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 10PF     | 2  | C9, C425   |
| 111 | KCC-101FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 100PF    | 7  | C40, C41, C42, C133, C171, C38, C81  |
| 112 | KCC-102FRJNPOB  | CAP. CER CHIP 50V     | CH J 0. 001UF  | 3  | C10, C182, C121  |
| 113 | KCC-102FRKBB    | CAP. CER. CHIP 50V    | B K% 0. 001UF  | 8  | C25, C45, C47, C91, C106, C167C170,  |
| 114 | KCC-103FRKBB    | CAP. CER. CHIP 50V    | B K% 0. 01UF   | 27 | C19, C20, C24, C27, C34, C36, C58,<br>C110, C135, C145, C146, C120A<br>C173, C203, C212, C39, C149<br>C503, C175, C119, C86, C89, C97<br>C63, , C424, C174, C427, C84, |
| 115 | KCC-104DRKBB    | CAP. CER. CHIP 16V    | B K% 0. 1uF    | 24 | C15, C21, C26, C28, C49, C55, C57,<br>C136, C147, C153, C166, C169, C148<br>C172, C180, C192, C127, C130<br>C118, C207, C21, C131, C208, C209                          |
| 116 | KCC-105BRZFB    | CAP. CER. CHIP 10V    | Y5V Z% 1UF     | 6  | C93, C161, C200, C201, C202, C210  |
| 117 | KCC-106BRZFF    | CAP CER CHIP 10V F    | Z 10UF         | 16 | C87, C103, C104, C109, C138, C139,<br>C466, C467, C468, C502, C213<br>C150, C151, C125, C56, C214  |
| 118 | KCC-120FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 12PF     | 1  | C417   |
| 119 | KCC-121FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 120PF    | 2  | C13, C62   |
| 120 | KCC-150FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 15PF     | 1  | C416   |
| 121 | KCC-151FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 150PF    | 1  | C65  |
| 122 | KCC-153DRKBB    | CAP. CER. CHIP 16V    | B K 0. 015UF   | 1  | C14  |
| 123 | KCC-180FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 18PF     | 1  | C413   |
| 124 | KCC-222FRKBB    | CAP. CER. CHIP 50V    | B K% 0. 0022UF | 1  | C160   |
| 125 | KCC-223DRKBB    | CAP. CER. CHIP 16V    | B K% 0. 022uF  | 1  | C46  |
| 126 | KCC-223FRKBB    | CAP. CER. CHIP 50V    | B K% 0. 022UF  | 1  | C64  |
| 127 | KCC-225BKBMUM   | CAP. CHIP 10V +/-10   | % X7R 2. 2UF   | 3  | C215, C204, C216   |
| 128 | KCC-270FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 27PF     | 1  | C176   |
| 129 | KCC-271FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 270PF    | 1  | C412   |
| 130 | KCC-390FRJNPOB  | CAP. CER. CHIP 50V    | CH J% 39PF     | 2  | C428, C421   |
| 131 | KCC-409FRCNPOB  | CAP. CER. CHIP 50V    | CH C% 4PF      | 1  | C429   |

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| 132 | KCC-470FRJNPOB | CAP. CER. CHIP 50V   | CH J% 47PF    | 3  | C256, C39, C12  |
| 133 | KCC-472FRKBB   | CAP. CER. CHIP 50V   | B K% 0.0047UF | 1  | C23   |
| 134 | KCC-473DRKBB   | CAP. CER. CHIP 16V   | B K% 0.047uF  | 6  | C17, C18, C22, C30, C105, C129  |
| 135 | KCC-473FRKBB   | CAP. CER. CHIP 50V   | B K% 0.047uF  | 4  | C33, C54, C96, C108   |
| 136 | KCC-561FRJNPOB | CAP. CER. CHIP 50V   | CH J% 560PF   | 1  | C53   |
| 137 | KCC-609FRDNPOB | CAP CER CHIP 50V C   | H D 6PF       | 2  | C422, C426  |
| 138 | KCC-680FRJNPOB | CAP. CER. CHIP 50V   | CH J% 68PF    | 2  | C414, C423  |
| 139 | KCC-682FRKBB   | CAP. CER. CHIP 50V   | B K% 0.0068UF | 1  | C52   |
| 140 | KCC-683FRKBB   | CAP. CER. CHIP 50V   | B K% 0.068UF  | 1  | C411  |
| 141 | KCC-820FRJNPOB | CAP. CER. CHIP 50V   | CH J% 82PF    | 2  | C48, C115   |
| 142 | KCD-KDS160     | DIODE CHIP KDS160    | KEC           | 13 | D1, D2, D7, D8, D9, D14, D15, D16,<br>D17, D18, D19, D20, D25   |
| 143 | KCD-KDV251S    | DIODE VARICAP CHIP   | KDV251S 12V   | 2  | D402, D403  |
| 144 | KCL-478TD      | TND CHIP 0.47uH      |               | 1  | L109  |
| 145 | KCR-T018       | NTC THERMISTORS NC   | P18X471J03RB  | 1  | TH2   |
| 146 | KCR-T019       | NTC THERMISTOR NCP   | 18X221J03 RB  | 3  | TH1, TH3, TH4   |
| 147 | KCR-000B       | RES. CHIP 1/16W 0    | OHM           | 4  | D21, R128, R203, C205   |
| 148 | KCR-101B       | RES. CHIP 1/16W 100  |               | 5  | R19, R54, R205, R213, R178  |
| 149 | KCR-101D       | RES. CHIP 1/4W 100   |               | 4  | R171, R172, R175, R176  |
| 150 | KCR-102B       | RES. CHIP 1/16W 1K   |               | 16 | R3, R4, R35, R69, R80, R99, R114,<br>R412, R416, R207, R91, R163<br>R156, R157, R197, R129  |
| 151 | KCR-103B       | RES. CHIP 1/16W 10K  |               | 22 | R9, R23, R53, R82, R124, R134,<br>R211, R182, R184, R185, R193<br>R187, R165, R166, R41, R192, R191<br>R137, R173, R208, R132, R177 |
| 152 | KCR-104B       | RES. CHIP 1/16W      | 100K          | 15 | R46, R77, R78, R79, R90, R96, R118<br>R148, R32, R103, R210, R409, R411<br>R406, R415   |
| 153 | KCR-106B       | RES. CHIP 1/16W 10   | M             | 1  | R121  |
| 154 | KCR-122B       | RES. CHIP 1/16W 1K2  |               | 1  | R206  |
| 155 | KCR-123B       | RES. CHIP 1/16W 12K  |               | 1  | R188  |
| 156 | KCR-124B       | RES. CHIP 1/16W 12   | OK            | 1  | R112  |
| 157 | KCR-151B       | RES. CHIP 1/16W 150  |               | 1  | R68   |
| 158 | KCR-152B       | RES. CHIP 1/16W 1.5K |               | 4  | R36, R81, R92, R101   |
| 159 | KCR-153B       | RES. CHIP 1/16W 15   | K             | 5  | R18, R37, R51, R130, R164   |
| 160 | KCR-156B       | RES CHIP 1/16W 15M   |               | 1  | R123  |
| 161 | KCR-181B       | RES. CHIP 1/16W 180  |               | 1  | R142  |
| 162 | KCR-182B       | RES. CHIP 1/16W 1.8K |               | 1  | R113  |
| 163 | KCR-183B       | RES. CHIP 1/16W 18   | K             | 5  | R26, R83, R84, R85, R86   |
| 164 | KCR-184B       | RES. CHIP 1/16W 18   | OK            | 1  | R119  |
| 165 | KCR-202B       | RES. CHIP 1/16W 2K   |               | 3  | R199, R200, R152  |
| 166 | KCR-203B       | RES. CHIP 1/16W 20   | K             | 2  | R52, R125   |
| 167 | KCR-221B       | RES. CHIP 1/16W 220  |               | 2  | R20, R169   |
| 168 | KCR-222B       | RES. CHIP 1/16W 2.2K |               | 7  | R33, R67, R93, R102, R168, R28A1<br>R408  |
| 169 | KCR-223B       | RES. CHIP 1/16W 22   | K             | 6  | R21, R27, R38, R39, R158, R140  |
| 170 | KCR-225B       | RES. CHIP 1/16W 2M2  |               | 1  | R11   |
| 171 | KCR-229B       | RES. CHIP 1/16W 2R   | 2 0603        | 1  | R159  |
| 172 | KCR-272B       | RES. CHIP 1/16W 2.   | 7K            | 3  | R12, R16, R117  |

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| 173 | KCR-273B        | RES. CHIP 1/16W 27  | K             | 2  | R13, R44   |
| 174 | KCR-303B        | RES. CHIP 1/16W 30  | K             | 1  | R45  |
| 175 | KCR-332B        | RES. CHIP 1/16W 3.  | 3K            | 3  | R34, R133, R97   |
| 176 | KCR-333B        | RES. CHIP 1/16W 33  | K             | 4  | R15, R141, R414, R30   |
| 177 | KCR-334B        | RES. CHIP 1/16W 33  | OK            | 1  | R170   |
| 178 | KCR-391B        | RES. CHIP 1/16W 390 |               | 1  | R111   |
| 179 | KCR-392B        | RES. CHIP 1/16W 3.  | 9K            | 5  | R40, R116, R65, R179, R174                                       |
| 180 | KCR-393B        | RES. CHIP 1/16W 39  | K             | 4  | R29, R47, R48, R407  |
| 181 | KCR-470B        | RES. CHIP 1/16W 47  | R             | 3  | R59, R198, R27A1   |
| 182 | KCR-471B        | RES. CHIP 1/16W 470 |               | 5  | R7, R74, R95, R143, R24  |
| 183 | KCR-472B        | RES. CHIP 1/16W 4.  | 7K            | 8  | R10, R17, R22, R58, R60, R106,<br>R122, R127                     |
| 184 | KCR-473B        | RES. CHIP 1/16W 47  | K             | 12 | R49, R50, R89, R139, R98, R189,<br>R194, R195, R196, R146, R190, |
| 185 | KCR-474B        | RES. CHIP 1/16W 47  | OK            | 6  | R43, R201, R212, R105, R26A1, R28                                |
| 186 | KCR-479B        | RES. CHIP 1/16W 4.7 |               | 1  | R61  |
| 187 | KCR-561B        | RES. CHIP 1/16W 560 |               | 2  | R14, R214  |
| 188 | KCR-562B        | RES. CHIP 1/16W 5K6 |               | 1  | R126   |
| 189 | KCR-563B        | RES. CHIP 1/16W 56  | K             | 3  | R100, R120, R413   |
| 190 | KCR-681B        | RES. CHIP 1/16W 680 |               | 1  | R202   |
| 191 | KCR-682B        | RES. CHIP 1/16W 6.  | 8K            | 3  | R57, R405, R433  |
| 192 | KCR-683B        | RES. CHIP 1/16W 68  | K             | 1  | R144   |
| 193 | KCR-821B        | RES. CHIP 1/16W 820 |               | 1  | R136   |
| 194 | KCR-822B        | RES. CHIP 1/16W 8.  | 2K            | 2  | R76, R209  |
| 195 | KCR-823B        | RES. CHIP 1/16W 82  | K             | 2  | R31, R167  |
| 196 | KCR-824B        | RES. CHIP 1/16W 82  | OK            | 1  | R25  |
| 197 | KCT-KTA1504S    | TR. CHIP PNP KTA15  | 04S SOT-23    | 6  | Q8, Q11, Q13, Q19, Q22, Q40                                      |
| 198 | KCT-KTC3875S    | TR. CHIP NPN KTC38  | 75S (GR)      | 5  | Q1, Q54, Q55, Q56, Q47   |
| 199 | KCT-KTC3880S    | TR. CHIP NPN KTC38  | 80S SOT-23    | 7  | Q6, Q7, Q15, Q43, Q408, Q411, Q412                               |
| 200 | KCT-MMBTRC101SS | TRANSISTOR MMBTRC1  | 01SS SOT23    | 3  | Q404, Q405, Q406   |
| 201 | KCT-MMBTRC102SS | TRANSISTOR MMBTRC1  | 02SS SOT23    | 2  | Q12, Q23   |
| 202 | KCT-MMBTRC104SS | TRANSISTOR MMBTRC1  | 04SS SOT23    | 9  | Q9, Q31, Q32, Q37, Q38, Q39, Q52,<br>Q53, Q25                    |
| 203 | KCT-MMBTRC111SS | TRANSISTOR MMBTRC1  | 11SS SOT23    | 1  | Q30  |
| 204 | KCT-MMBTRC112SS | TRANSISTOR MMBTRC1  | 12SS SOT23    | 1  | Q36  |
| 205 | KCT-MMBTSC3265Y | TRANSISTOR MMBTSC3  | 265Y SOT23 SE | 9  | Q10, Q18, Q20, Q24, Q27, Q28, Q35,<br>Q41, Q42                   |
| 206 | KCT-2SK211-Y    | FET 2SK211-Y TOSHI  | BA            | 2  | Q2, Q3   |
| 207 | KED-ZSMM5Z6V8   | MM5Z6V8 SEMTECH ZE  | NER DIODE     | 2  | DZ4, DZ5   |
| 208 | KEIC-AT24C04    | IC AT24C04N-10SI-2  | .7 EEPROM 4K  | 1  | IC1  |
| 209 | KEIC-AZ324M     | IC AZ324 SOIC-14 Q  | UAD OP AMP    | 1  | IC3  |
| 210 | KEIC-DBL5020V   | IC DBL5020V COMPAN  | DOR SOP       | 1  | IC9  |
| 211 | KEIC-KIA7042F   | IC KIA7042F VOLTAGE | E DETECTOR    | 1  | IC2  |
| 212 | KEIC-KIA78L05F  | IC KIA78L05F REGUL  | ATOR SOT-89   | 1  | IC6  |
| 213 | KEIC-SL5019     | IC SL5019 IF SYSTE  | M             | 1  | IC7  |
| 214 | KEIC-TB31202FN  | IC TB31202FN PLL    |               | 1  | IC4  |
| 215 | KEIC-TC4066BF   | IC TC4066BF-EL ANA  | SW            | 1  | U1   |
| 216 | KEIC-385        | MCU TMP86CH21AUG-6  | UK2           | 1  | IC5  |
| 217 | KEPC-1062-A1    | PCB 151.5*145.5*1.  | 6MM DS FR-4   | 1  |  |
| 218 | KED-LC124       | LCD SDM8B4359B-HPB  |               | 1  |  |

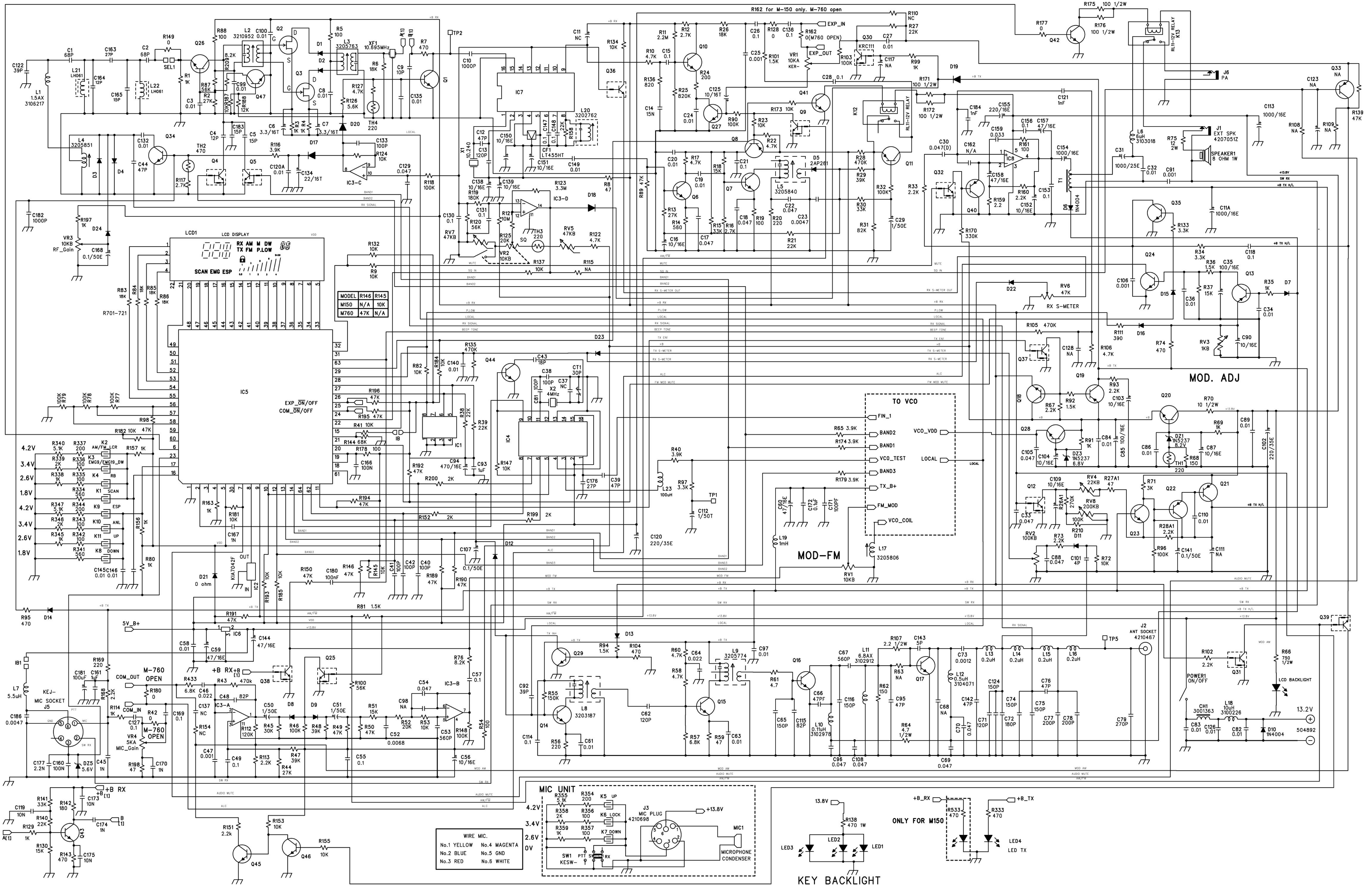
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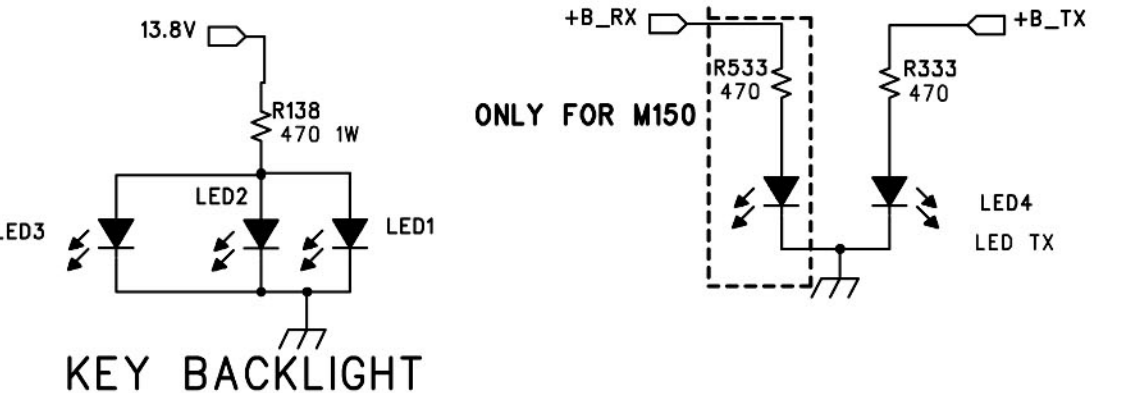
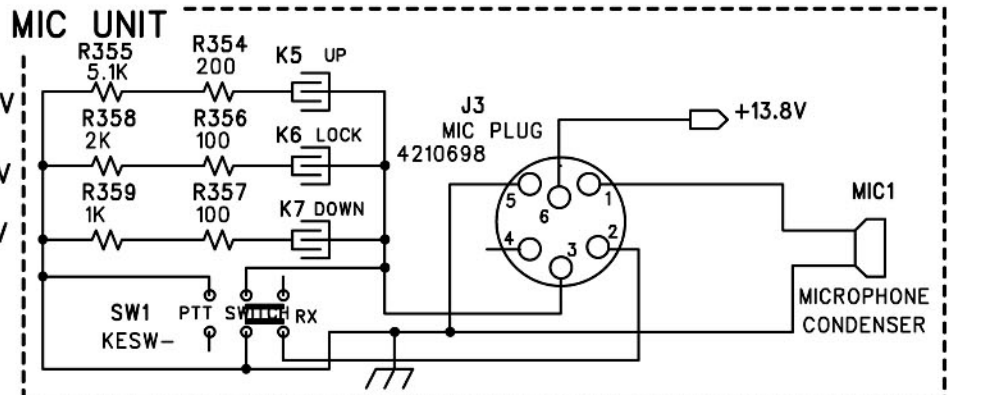
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|-----|----------------|-----------------------|----------------|---|----------------------------------|
| 219 | KED-L111A      | CTTL-0201A-48X21-L    | D CTT AMBER    | 1 |                                  |
| 220 | KED-L204R      | DIODE LED EL204HD     | RED            | 1 | LED4                             |
| 221 | KESW-015       | SWITCH TACT EVQ-JA    | C-04M          | 8 | K1, K2, K3, K4, K8, K9, K10, K11 |
| 222 | M-760B2S       | FRONT PCB SMT         |                | 1 |                                  |
| 223 | KCD-L23A-LT    | LED CHIP AMBER LT8    | AA2-54-UR91-T5 | 3 | LED1, LED2, LED3                 |
| 224 | KCR-101B       | RES. CHIP 1/16W 100   |                | 4 | R335, R336, R342, R343           |
| 225 | KCR-102B       | RES. CHIP 1/16W 1K    |                | 2 | R345, R338                       |
| 226 | KCR-201B       | RES. CHIP 1/16W 200   |                | 2 | R337, R344                       |
| 227 | KCR-202B       | RES. CHIP 1/16W 2K    |                | 2 | R339, R346                       |
| 228 | KCR-512B       | RES. CHIP 1/16W 5. 1K |                | 2 | R340, R347                       |
| 229 | KCR-561B       | RES. CHIP 1/16W 560   |                | 3 | R333, R334, R341                 |
| 230 | KEPC-1050-A    | PCB 149*44*1.6MM D    | S FR-4         | 1 |                                  |
| 231 | KEPC-1054-A    | PCB 65*25*1.6MM SS    | 94V-0          | 1 |                                  |
| 232 | KER-D103B502A  | RD12BF-20C2-38.5K-    | 042-1 ALPHA    | 1 |                                  |
| 233 | KER-103RD123SF | RD123SF-20BC-29K-B    | 10K-1002 ALP   | 1 |                                  |
| 234 | KER-503RD123SF | RD123SF-20BC-29K-A    | 50K-1002 ALPH  | 1 |                                  |
| 235 | KEJ-513        | MIC PLUG 6PIN N-16    | -6P QIINGXING  | 1 |                                  |
| 236 | KESP-041-C     | MIC ELEC CI034        |                | 1 |                                  |
| 237 | KESW-018-1     | SWITCH PUSH 2P2T P    | S-22I01-RP     | 1 | SW1                              |
| 238 | KETC-159       | PVC 6C ROUND COIL     | 000 BLK 50R    | 1 |                                  |
| 239 | KEPC-1058-A    | PCB 35*17*1.6MM SS    | 94V-0          | 1 |                                  |
| 240 | KER-101JBB     | RES. C-FILM 1/8W 5    | % S 100        | 2 | R357, R356                       |
| 241 | KER-102JBB     | RES. C-FILM 1/8W 5    | % S 1K         | 1 | R359                             |
| 242 | KER-201DBB     | RES. C-FILM 1/2W 5    | % S 200        | 1 | R354                             |
| 243 | KER-202JBB     | RES. C-FILM 1/8W 5    | % S 2K         | 1 | R358                             |
| 244 | KER-512JBB     | RES. C-FILM 1/8W 5    | % S 5.1K       | 1 | R355                             |
| 245 | KESW-015       | SWITCH TACT EVQ-JA    | C-04M          | 3 | K18, K19, K20                    |

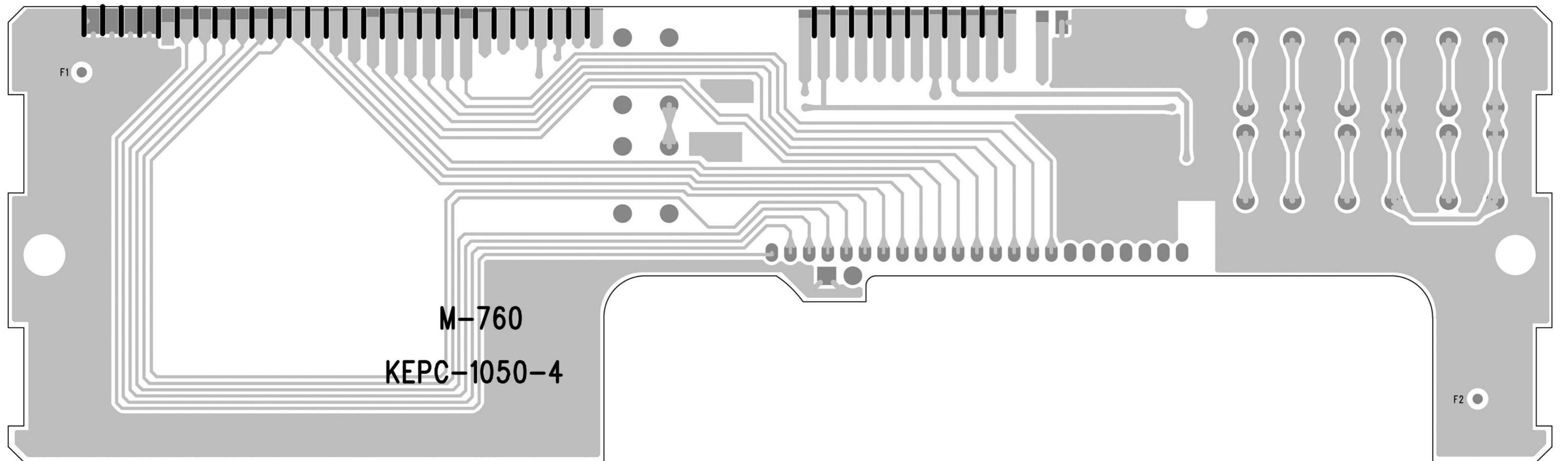


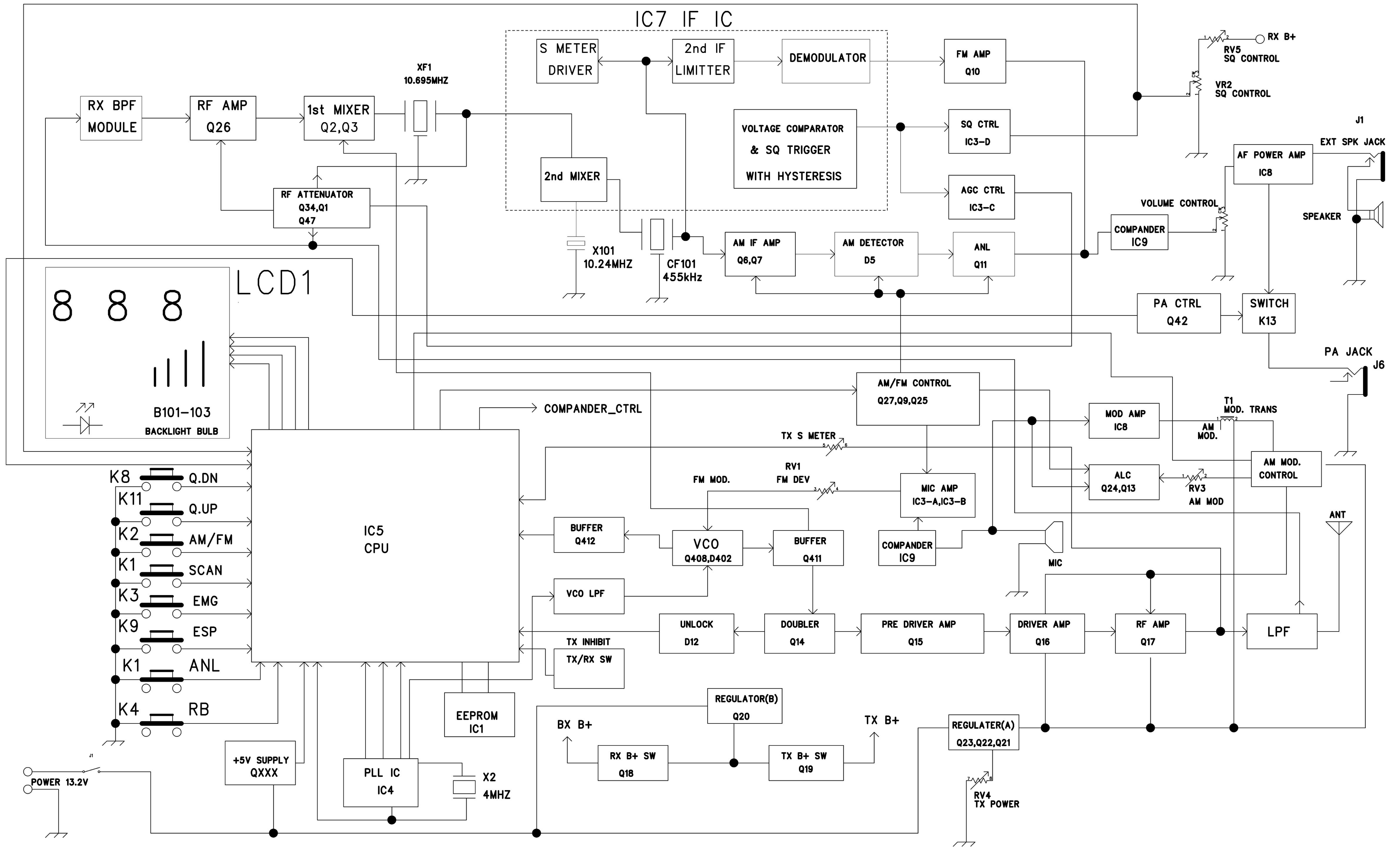


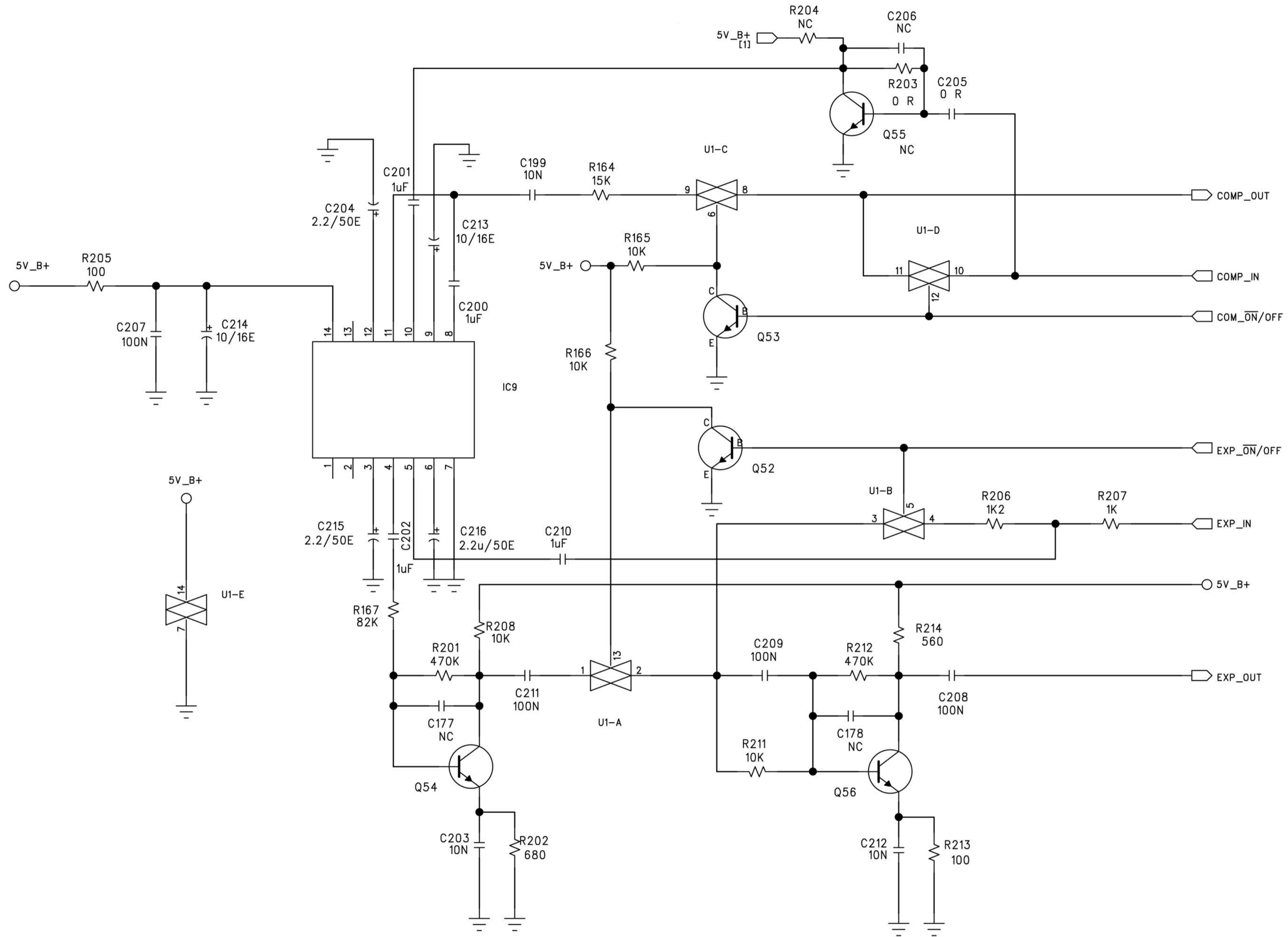
WIRE MIC.

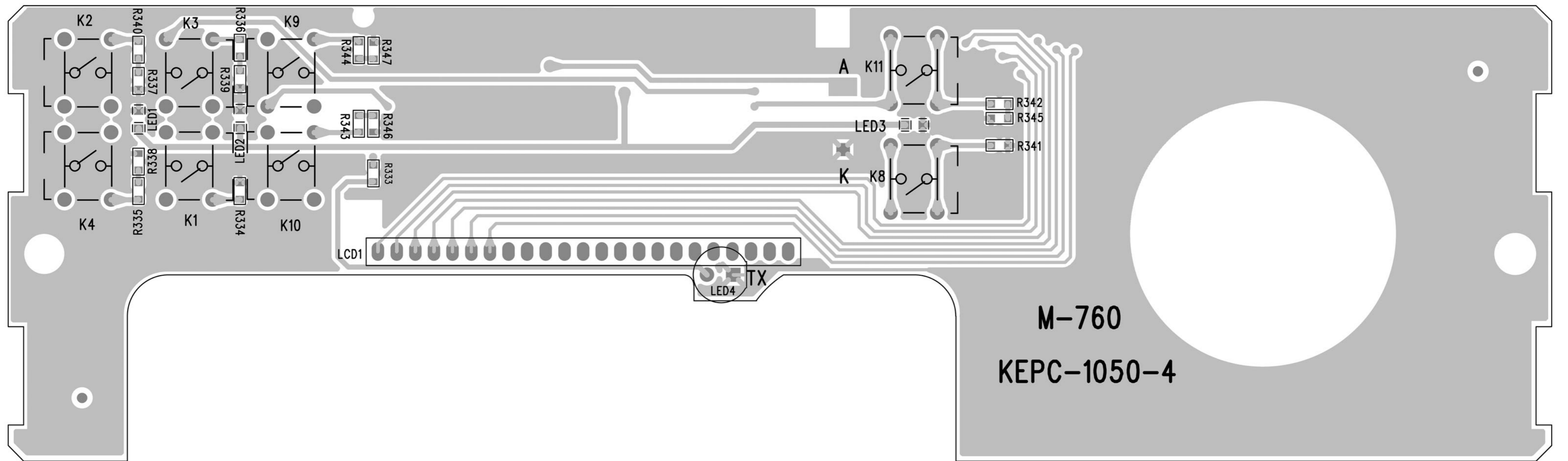
|             |              |
|-------------|--------------|
| No.1 YELLOW | No.4 MAGENTA |
| No.2 BLUE   | No.5 GND     |
| No.3 RED    | No.6 WHITE   |



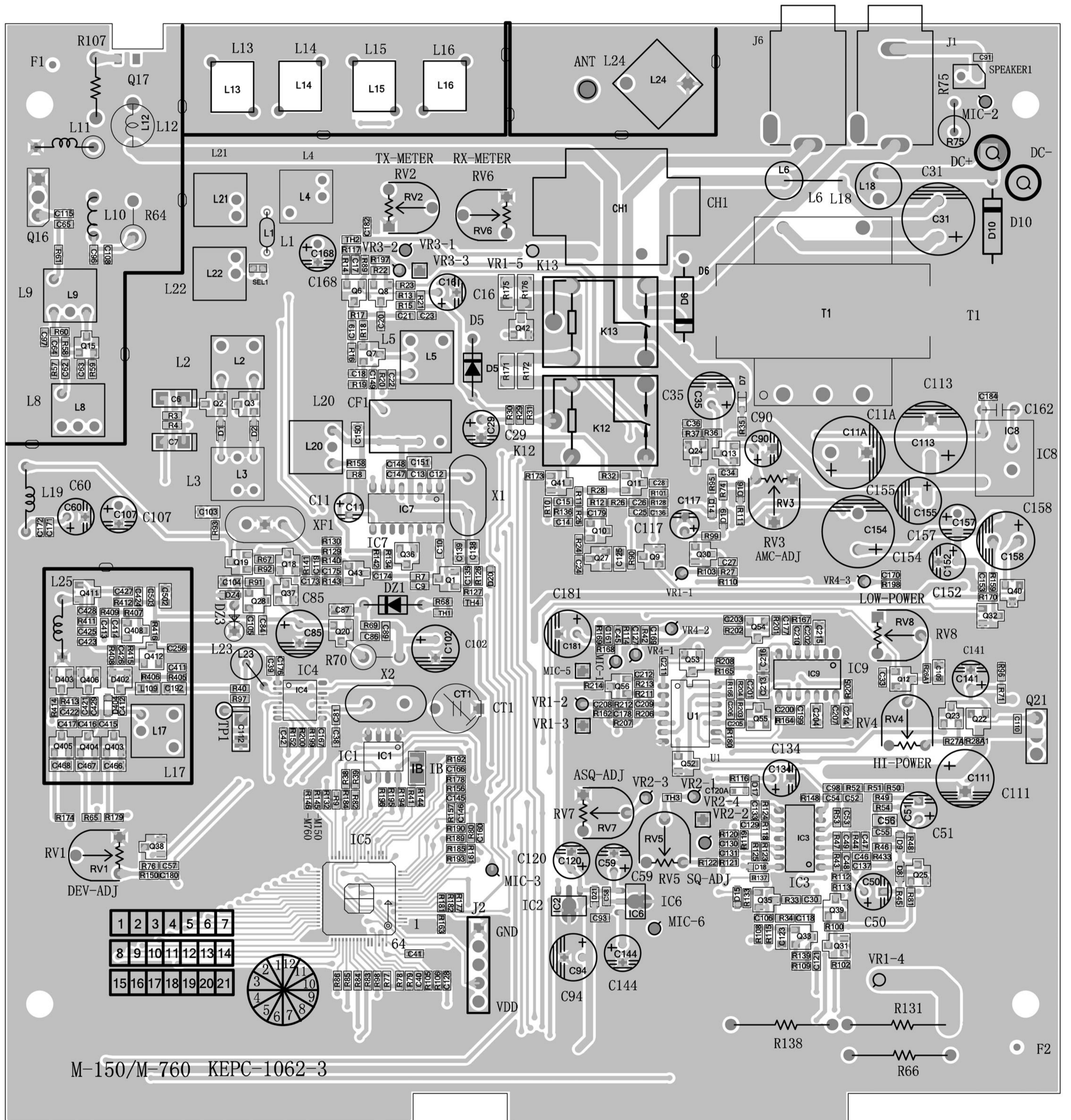






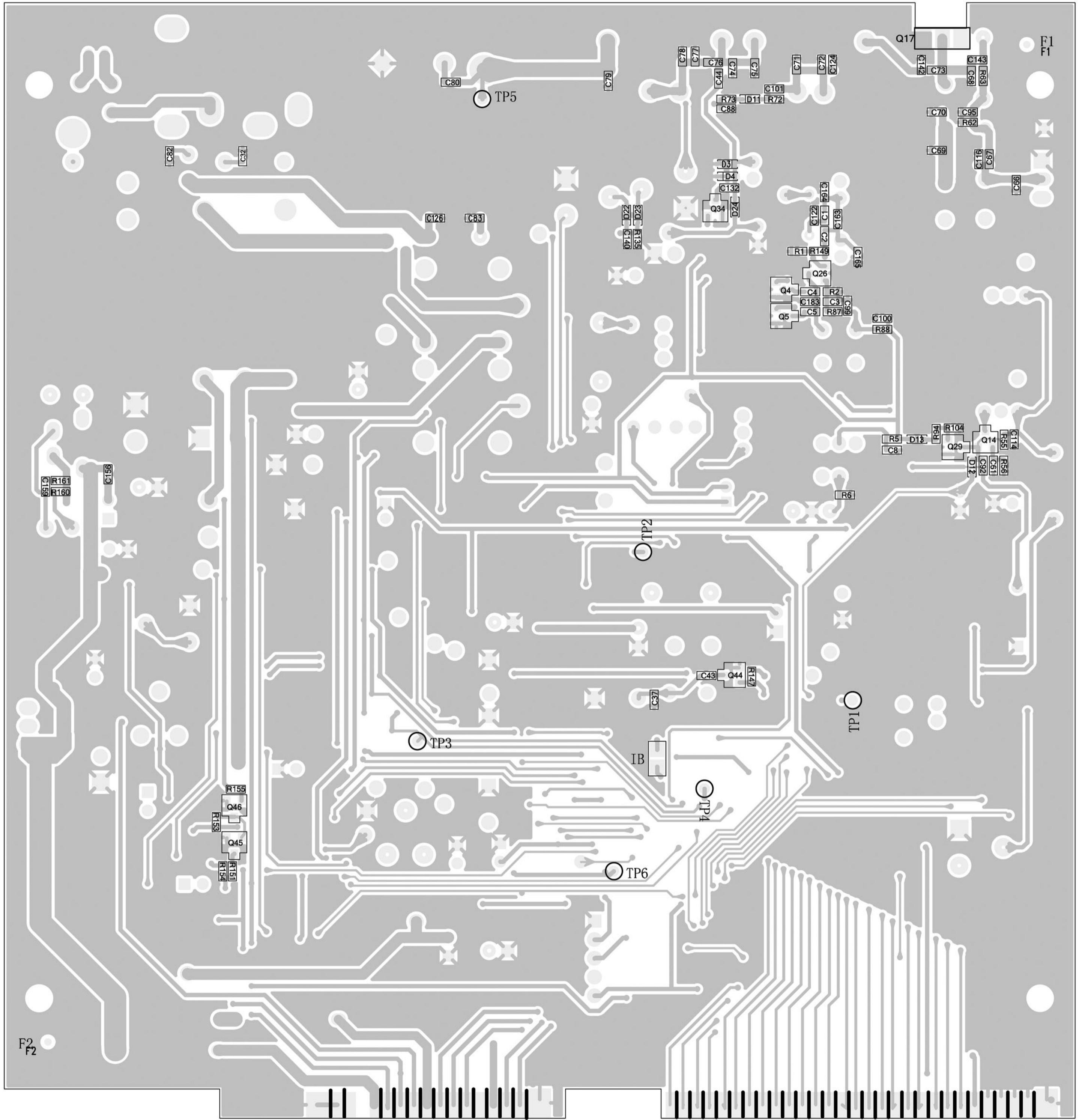


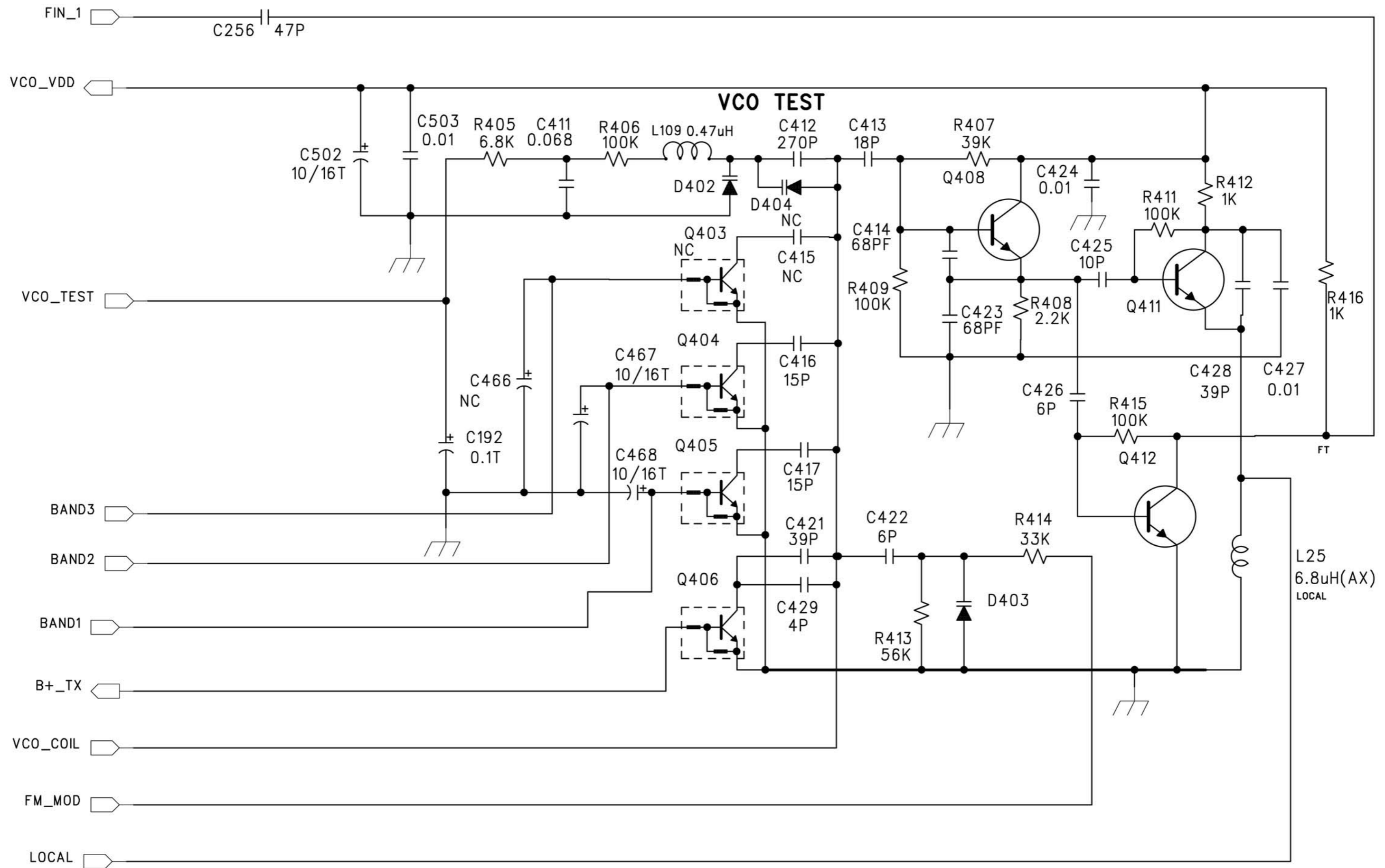
M-760  
KEPC-1050-4



M-150/M-760 KEPC-1062-3

F2









## Voltage Chart

### TRANSISTOR

| Ref.        | Pin | TX   | RX   | Ref.        | Pin | TX  | RX  |
|-------------|-----|------|------|-------------|-----|-----|-----|
| Q2          | E   | 0    | 0    | Q32         | E   | 0   | 0   |
| 2SK211-Y    | C   | 0    | 0.8  | MMBTRC104SS | C   | 0   | 6.0 |
|             | B   | 0    | 6.7  |             | B   | 3.5 | 0   |
| Q2          | E   | 0    | 0    | Q37         | G   | 0   | 0   |
| 2SK211-Y    | C   | 0    | 0.8  | MMBTRC104SS | S   | 0.5 | 7.9 |
|             | B   | 0    | 6.7  |             | D   | 2.8 | 0   |
| Q14         | E   | 1.2  | 0    | Q40         | G   | 0.7 | 0.9 |
| KCT3880S    | C   | 8.0  | 0    | KTA1504S    | S   | 0   | 0   |
|             | B   | 2.0  | 0    |             | D   | 0   | 6.1 |
| Q16         | E   | 0    | 0    |             | E   |     |     |
| 2SC2314F    | C   | 8.5  | 3.0  |             | C   |     |     |
|             | B   | 1.0  | 0    |             | B   |     |     |
| Q17         | E   | 0    | 0    |             | E   |     |     |
| C2078       | C   | 13.2 | 2.0  |             | C   |     |     |
|             | B   | 13.0 | 0    |             | B   |     |     |
| Q18         | E   | 0    | 7.3  |             | E   |     |     |
| MMBTSC3265Y | C   | 0    | 0    |             | C   |     |     |
|             | B   | 0.5  | 7.9  |             | B   |     |     |
| Q19         | E   | 8.1  | 8.10 |             | E   |     |     |
| KTA1504S    | C   | 7.9  | 0    |             | C   |     |     |
|             | B   | 7.3  | 7.9  |             | B   |     |     |
| Q28         | E   | 6.1  | 6.1  |             | E   |     |     |
| MMBTSC3265Y | C   | 8.1  | 8.1  |             | C   |     |     |
|             | B   | 6.8  | 6.8  |             | B   |     |     |

## Model No: M760 Plus

Customer: INTEK

Rev No: A



### DIODE

| Ref.   | Pin | TX   | RX   | Ref.     | Pin | TX  | RX  |
|--------|-----|------|------|----------|-----|-----|-----|
| D1     | A   | 0.5  | 7.1  | DZ1      | A   | 0.4 | 0.4 |
| KDS160 | K   | 0    | 6.1  | 8V2BSCST | K   | 8.7 | 8.7 |
| D2     | A   | 0.5  | 7.1  |          | A   |     |     |
| KDS160 | K   | 0    | 6.1  |          | K   |     |     |
| D5     | A   | 0    | 0    |          | A   |     |     |
| 1K261  | K   | 0    | 0    |          | K   |     |     |
| D6     | A   | 10.6 | 2.8  |          | A   |     |     |
| 1N4004 | K   | 9.7  | 2.8  |          | K   |     |     |
| D10    | A   | 0    | 0    |          | A   |     |     |
| 1N4004 | K   | 12.8 | 13.2 |          | K   |     |     |
| D14    | A   | 7.9  | 0    |          | A   |     |     |
| KDS160 | K   | 7.2  | 0.6  |          | K   |     |     |
| D16    | A   | 2.5  | 0    |          | A   |     |     |
| KDS160 | K   | 2.2  | 2.2  |          | K   |     |     |
| D19    | A   | 7.9  | 0    |          | A   |     |     |
| KDS160 | K   | 7.3  | 0    |          | K   |     |     |

### IC4 TB31202F

| PIN | TX  | RX  | PIN | TX  | RX  |
|-----|-----|-----|-----|-----|-----|
| 1   | 4.2 | 4.2 | 9   | 3.6 | 3.6 |
| 2   | 4.7 | 4.7 | 10  | 4.0 | 4.0 |
| 3   | 1.0 | 1.7 | 11  | 4.5 | 4.5 |
| 4   | 0   | 0   | 12  | 0.7 | 0.7 |
| 5   | 5.0 | 5.0 | 13  | 0   | 0   |
| 6   | 0   | 0   | 14  | 0   | 0   |
| 7   | 0   | 0   | 15  | 4.7 | 4.7 |
| 8   | 0   | 0   | 16  | 4.1 | 4.1 |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



## IC3 AZ324M

| PIN | TX  | RX  | PIN | TX | RX  |
|-----|-----|-----|-----|----|-----|
| 1   | 3.2 | 3.2 | 8   | 0  | 1.8 |
| 2   | 3.2 | 3.2 | 9   | 0  | 1.8 |
| 3   | 3.2 | 3.2 | 10  | 0  | 1.8 |
| 4   | 7.9 | 7.9 | 11  | 0  | 0   |
| 5   | 3.7 | 3.7 | 12  | 0  | 0   |
| 6   | 3.9 | 3.9 | 13  | 0  | 1.7 |
| 7   | 3.9 | 3.9 | 14  | 0  | 0   |

## IC8 TDA2003

| PIN | TX  | RX  | PIN | TX   | RX   |
|-----|-----|-----|-----|------|------|
| 1   | 1.0 | 1.0 | 4   | 6.3  | 6.3  |
| 2   | 0.8 | 0.8 | 5   | 13.2 | 13.2 |
| 3   | 0   | 0   |     |      |      |

## IC6 KIA78L05F

| PIN | TX | RX | PIN | TX   | RX   |
|-----|----|----|-----|------|------|
| 1   | 5  | 5  | 3   | 13.2 | 13.2 |
| 2   | 0  | 0  | -   | -    | -    |

## IC7 SL5019

| PIN | TX | RX  | PIN | TX | RX  |
|-----|----|-----|-----|----|-----|
| 1   | 0  | 5.0 | 9   | 0  | 1.6 |
| 2   | 0  | 4.5 | 10  | 0  | 0   |
| 3   | 0  | 4.5 | 11  | 0  | 5.0 |
| 4   | 0  | 4.5 | 12  | 0  | 0   |
| 5   | 0  | 4.0 | 13  | 0  | 1.8 |
| 6   | 0  | 4.0 | 14  | 0  | 0   |
| 7   | 0  | 4.0 | 15  | 0  | 0   |
| 8   | 0  | 5.0 | 16  | 0  | 1.8 |

# Model No: M760 Plus

Customer: INTEK

Rev No: A



## IC5 TMP86CH21

| PIN | TX   | RX  | PIN | TX  | RX  |
|-----|------|-----|-----|-----|-----|
| 1   | 0    | 0   | 33  | 3.0 | 3.0 |
| 2   | 1.4  | 1.4 | 34  | 3.5 | 3.5 |
| 3   | 2.3  | 2.3 | 35  | 3.5 | 3.5 |
| 4   | 0    | 0   | 36  | 0   | 0   |
| 5   | 4.9  | 4.9 | 37  | 1.2 | 1.2 |
| 6   | 0.1  | 0.1 | 38  | 1.2 | 1.2 |
| 7   | 0    | 0   | 39  | 0   | 0   |
| 8   | 4.2  | 4.2 | 40  | 1.2 | 1.2 |
| 9   | 3.2  | 3.2 | 41  | 1.5 | 1.5 |
| 10  | 5.00 | 5.0 | 42  | 1.5 | 1.5 |
| 11  | 0    | 0   | 43  | 1.5 | 1.5 |
| 12  | 0    | 0   | 44  | 2.6 | 2.6 |
| 13  | 0    | 0   | 45  | 2.6 | 2.6 |
| 14  | 4.9  | 0   | 46  | 2.6 | 2.6 |
| 15  | 0    | 0   | 47  | 2.6 | 2.6 |
| 16  | 5.0  | 5.0 | 48  | 2.6 | 2.6 |
| 17  | 5.0  | 5.0 | 49  | 2.6 | 2.6 |
| 18  | 5.0  | 5.0 | 50  | 2.6 | 2.6 |
| 19  | 5.0  | 5.0 | 51  | 2.6 | 2.6 |
| 20  | 0    | 0   | 52  | 2.6 | 2.6 |
| 21  | 0    | 0   | 53  | 2.6 | 2.6 |
| 22  | 5.0  | 5.0 | 54  | 2.6 | 2.6 |
| 23  | 2.0  | 0   | 55  | 2.6 | 2.6 |
| 24  | 0    | 0   | 56  | 4.5 | 4.5 |
| 25  | 0    | 0   | 57  | 3.2 | 3.2 |
| 26  | 4.8  | 4.8 | 58  | 1.8 | 1.8 |
| 27  | 0.3  | 4.8 | 59  | 1.8 | 1.8 |
| 28  | 0.4  | 0   | 60  | 2.6 | 2.6 |
| 29  | 0    | 0   | 61  | 0.1 | 0.1 |
| 30  | 0    | 0   | 62  | 0   | 0   |
| 31  | 3.5  | 0   | 63  | 0   | 0   |
| 32  | 3.5  | 3.5 | 64  | 0   | 0   |