

# **Honeywell**

***MAINTENANCE MANUAL***

***BENDIX/KING<sup>®</sup>***

***KI 203, KI 204***

***NAVIGATION INDICATORS***

***MANUAL NUMBER 006-15636-0005***

***Revision 5, August 2002***

**WARNING**

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MAINTENANCE MANUAL

*BENDIX/KING*

KI 203, KI 204

Navigation Indicators

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## SECTION IV THEORY OF OPERATION

### 4.1 GENERAL

This section contains theory of operation for the KI 203 and KI 204 VOR/LOC Converter/ Indicators. Block diagram theory is presented first, followed by detailed circuit theory. The KI 203 and KI 204 contain the same VOR/LOC converter. The KI 204 also contains a GS indicator.

#### 4.1.1 Principles of VOR System

##### 4.1.1.1 General

The basic function of VOR is to provide a means to determine an aircraft's position with reference to a VOR ground station and also to follow a certain path toward or away from the station. This is accomplished by indicating when the aircraft is on a selected VOR station radial or by determining which radial the aircraft is on. A means to differentiate between radials and identify them is necessary. For this purpose, advantage is taken of the fact that the phase difference between two signals can be accurately determined. The phase difference between two signals which are generated by the VOR station is varied as the direction relative to the station changes so that a particular radial is represented by a particular phase difference. Refer to Figure 4-1. One non-directional reference signal is generated with a phase that at any instant is the same in all directions. A second signal is generated with a phase that at any instant is different in different directions. The phase of the variable phase signal is the same as the phase of the reference signal only at the 0° radial (north). As the angle measured from the 0° radial increases, the phase of the variable phase signal lags the phase of the reference signal by the number of degrees of the angle from 0°. The reference and variable phase signals, which are 30 Hz voltages, are carried by RF to make radio transmission and reception possible. The VOR receiving equipment must separate the 30 Hz reference and variable phase signals from the RF carrier and compare the phase of the two signals. The phase difference is indicated on a course indicator or RMI.

##### 4.1.1.2 VOR Generation (Conventional Non-Doppler VOR System)

Refer to ICAO Annex 10 for a full description of conventional and doppler VOR systems.

The VOR electromagnetic field is composed of radiation from two ground based antennas radiating at the same carrier frequency. The first is a non-directional antenna radiating an amplitude modulated carrier. The frequency of the modulating signal varies from 9,480 Hz to 10,440 Hz back to 9,480 Hz 30 times per second. That is, a 9,960 Hz sub-carrier amplitude modulates the RF carrier and is frequency modulated by 30 Hz.

The second antenna is a horizontal dipole which rotates at the rate of 30 revolutions per second. The dipole produces a figure 8 field pattern. The RF voltages within the two lobes are 180° out of phase with each other. The RF within one of the lobes is

exactly in phase with the RF radiated from the non-directional field and the RF within the other lobe is 180° out of phase with the non-directional field. The rotating figure 8 pattern reinforces the non-directional pattern on the in phase side and subtracts from the non-directional pattern on the out of phase side. See [Figure 4-1](#). This results in a cardioid field pattern which rotates at the rate of 30 revolutions per second, the rate at which the dipole antenna rotates.

The signal at an aircraft within radio range of the VOR station is an RF carrier with amplitude varying at the rate of 30 Hz because of rotation of the cardioid pattern. The carrier is also amplitude modulated at the station by the 9,960 Hz signal which is, in turn, frequency modulated on a sub-carrier so that it may be separated from the 30 Hz variable phase signal.

#### 4.1.2 PRINCIPLES OF LOCALIZER SYSTEM

The localizer facility provides a visual display of the aircraft's position relative to a straight approach line to the runway. The ground based localizer antenna system generates two patterns. Refer to [Figure 4-2](#). One pattern is directed toward the right side of the runway, the second to the left. The two patterns have the same carrier frequency but different audio modulating signals. The pattern to the left of the runway (in normal approach) is 90 Hz amplitude modulated while the pattern to the right is 150 Hz amplitude modulated.

The ratio of 90 Hz to 150 Hz audio, after demodulation, is dependent only upon the position of the aircraft within the patterns. The patterns are adjusted so they are of equal strength on a vertical plane extending out from the runway centerline. When the aircraft is on this plane, the 90 Hz and 150 Hz voltages will be equal.

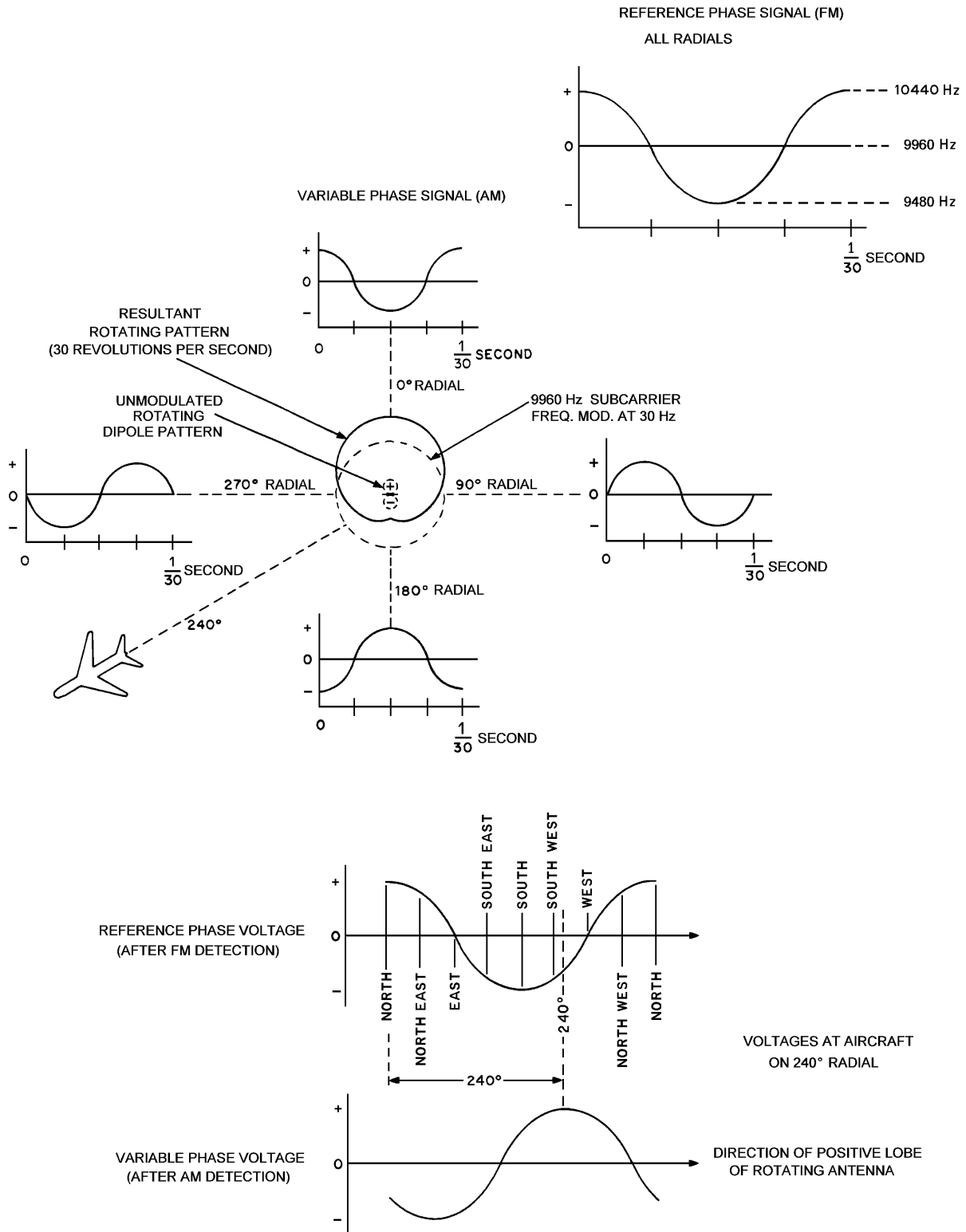


FIGURE 4-1 VOR Signal Generation (Conventional Non-Doppler VOR System)

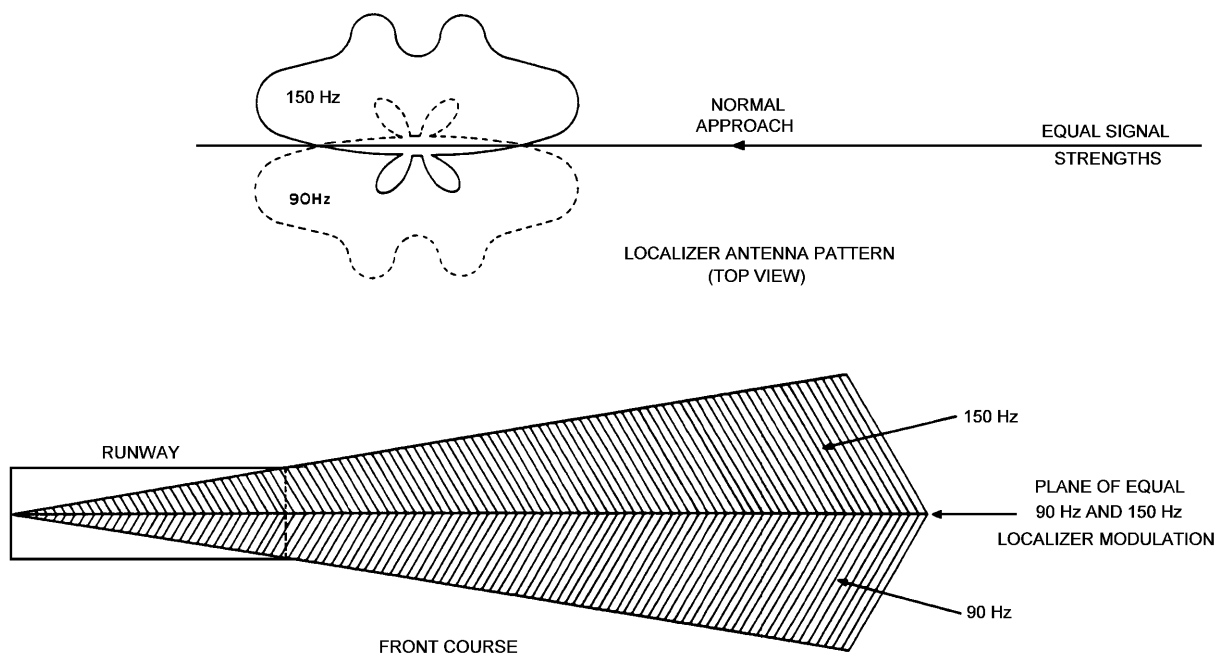


FIGURE 4-2 Localizer Signal Generation

### 4.1.3 Principles of Glideslope System

The glideslope signal is radiated by a directional antenna array located near the approach end of the runway. The signal consists of two intersecting lobes of RF energy. The upper lobe contains 90 Hz modulation and the lower lobe contains 150 Hz modulation. The equal tone amplitude intersection of these two lobes forms the glide path. A typical glide angle is 2.5 degrees. If the aircraft is on the glide path, equal amplitudes of both tones will be received and the deviation bar will be centered. If the aircraft is above the glide path, 90 Hz modulation predominates and the visual display is displaced downward. If below the glide path, 150 Hz predominates and the display is displaced upward.

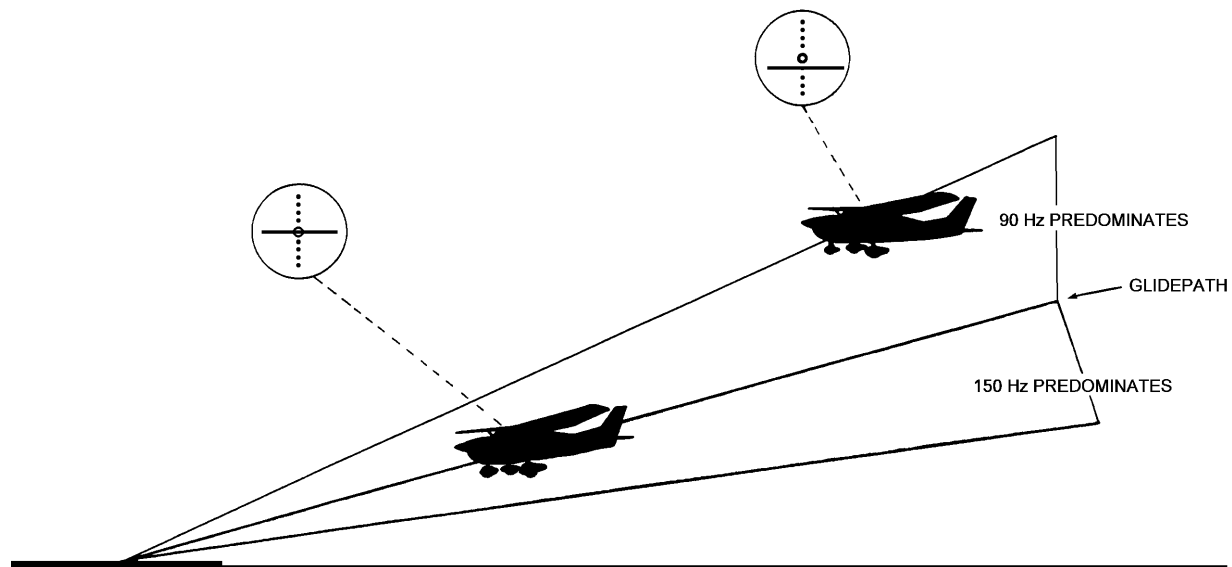


FIGURE 4-3 Glideslope Signal Generation

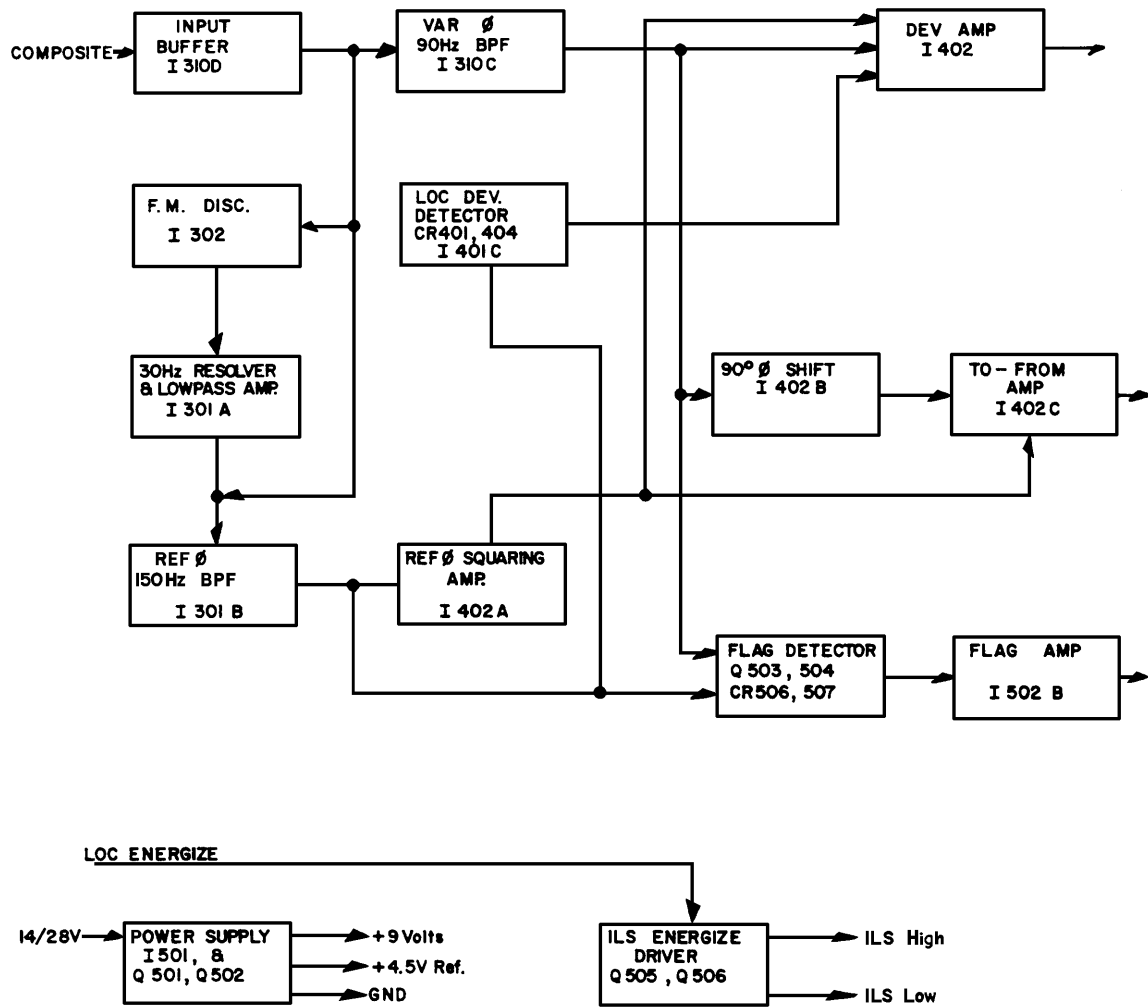


FIGURE 4-4 Block Diagram KI 203, KI 204

## 4.2 BLOCK DIAGRAM THEORY OF OPERATION

The navigation receiver used in conjunction with the KI 203, KI 204 receives the radio frequency energy transmitted by a VOR or ILS ground station. This radio frequency energy is demodulated and the modulation information is sent to the KI 203, KI 204. The VOR/LOC composite signal from the navigation receiver consists of the 9960 Hz frequency modulated reference phase signal and the 30 Hz variable phase signal if a VOR frequency is selected for the navigation receiver, or 90 Hz and 150 Hz audio if an ILS frequency is selected.

The VOR/LOC composite is buffered by an operational amplifier, I301D, connected as an inverting amplifier. Gain of the input buffer is adjustable to compensate for different levels of VOR/LOC composite input.

### 4.2.1 VOR Operation

If a VOR frequency is selected by the navigation receiver, the KI 203, KI 204 separates the variable phase 30 Hz signal from the 9960 frequency modulated reference by passing the buffered VOR/LOC composite through a 30 Hz band pass filter, I301C and associated components. This variable phase filter removes all the reference phase modulation from the variable phase signal.

The buffered VOR/LOC composite is also fed to the FM discriminator, I302, which recovers the 30 Hz reference phase signal from the frequency modulated 9960 Hz signal. The 30 Hz reference phase signal output from I302 is fed to the rotor winding of the OBS resolver, B101.

By turning the OBS knob, the pilot also turns the azimuth card and the rotor of the resolver. Output of the stator windings of the resolver is amplitude dependent upon the mechanical position of the resolver rotor. By connecting both stator windings to an R-C network, R319, R320 and C314, an output voltage that is constant amplitude but phase dependent upon the position of the resolver rotor is derived. This constant amplitude variable phase signal is amplified by a low pass amplifier, I301A and then again by a 30 Hz band pass filter, I301B. Output of the reference phase band pass filter is squared by I402A.

Output from the squaring amplifier is phase compared with the output of the variable phase band pass filter. The difference in phase of the two signals is converted to a DC voltage by the deviation amplifier, I402D, which drives the course deviation indicator, M104.

To compare the phase of the two band pass filter outputs, the reference phase band pass filter output is squared and used to drive a field effect transistor switch, I401D, which is connected from the output of the variable band pass filter to an AC (signal) ground. When the output of the squaring amplifier is a large positive voltage, the switch is closed and the variable phase band pass filter output is shorted to the AC ground. As the output voltage of the squaring amplifier approaches zero, the switch opens and the voltage output of the variable band pass filter is integrated by a resistor and capacitor. For zero voltage out of the integrator circuit, the phase difference be-

tween the variable phase band pass filter output and the reference phase band pass filter must be ninety degrees. Voltage from the integrator is fed to the deviation amplifier, I402D, which in VOR mode is connected as a voltage follower and drives the course deviation indicator.

In order to provide TO-FROM information to the pilot, the two band pass filter outputs are again phase compared. However, the variable phase band pass filter output is passed through an additional ninety degree phase shift network, so that when minimum voltage is present on the deviation amplifier output, output voltage of the TO-FROM phase comparator will be maximum. Integration of the TO-FROM phase comparator output is accomplished by the TO-FROM amplifier, I402C, which functions as an integrator for 30 Hz signals.

Output voltages from both band pass filters are monitored for usable signal levels by the flag detector circuit. As long as the output voltage of each band pass filter is above the threshold set by the flag detector circuit, the flag amplifier will provide enough voltage to pull the VOR/LOC warning flag from view. When the output of either band pass filter falls below the threshold, the flag amplifier output decreases and the VOR/LOC warning flag appears in the window.

#### 4.2.2 Localizer Operation

When an ILS frequency is selected by the navigation receiver, the ILS energize line from the receiver will be a low impedance to ground. This control line switches the KI 203, KI 204 from the configuration for VOR operation to the configuration required for localizer operation.

Output LOC composite from the input buffer amplifier passes to the variable phase band pass filter as in VOR operation. The center frequency of the filter is now 90 Hz. Changing the center frequency is accomplished by sensing the ILS energize input from the navigation receiver. The FM discriminator, I302, is disabled so there is no output to the resolver rotor.

In localizer configuration, buffered composite is input directly to the reference phase band pass filter. By sensing the ILS energize input, center frequency of the reference phase band pass filter is switched to 150 Hz.

Proper steering information in localizer mode is obtained by comparing the difference in output levels of the two band pass filters. The difference in amplitude of the two filters is detected by the localizer detector circuit CR401, CR404, and I401C. Output from the localizer detector is connected to I401C, a field effect transistor switch that is controlled by the ILS energize input from the navigation receiver. In localizer operation the control input to I401C causes the switch to be closed, which results in the output of the localizer detector being applied to the deviation amplifier. For localizer operation the deviation amplifier integrates the output of the localizer detector. Thus, a DC voltage proportional to the ratio of 90 Hz and 150 Hz in the input LOC composite is formed.



Output of both band pass filters is summed together in localizer operation to provide voltage to pull the VOR/LOC warning flag from view. If the summed voltage from the band pass filters falls below a usable level, output voltage of the flag amplifier will not be great enough to pull the warning flag from view.

The squaring amplifier and the TO-FROM amplifier are both disabled in localizer operation by the ILS energize input.

**4.2.3 Power Supply**

An integrated circuit voltage regulator I501, in conjunction with external pass transistor Q502, provides a regulated 9.0 Vdc for input voltages ranging from 10 to 35 volts. Current limiting is provided by Q501 and R502. An operational amplifier I502A, connected as a voltage follower, provides a 4.5 volt reference voltage used as an AC (signal) ground within the KI 203, KI 204.

**4.3 DETAILED CIRCUIT THEORY**

The KI 203, KI 204 utilize mother board type construction with all electronic circuitry being contained on three plug in circuit modules. All components bearing designators from 100 to 199 are located on the front gear plate assembly. Components numbered from 200 to 299 are located on the mother board itself. Components on the converter #1 board are numbered from 300 to 399. Components numbered from 400 to 499 are located on the converter #2 board while components on the power supply and flag board are numbered from 500 to 599.

TABLE 4-1 Subassemblies KI 203, KI 204

SUBASSEMBLY	COMPONENT SERIES
Front Gear Plate Assembly	100-199
Mother Board	200-299
Converter #1 Board	300-399
Converter #2 Board	400-499
Power Supply and Flag Board	500-599

**4.3.1 Input Buffer**

VOR/LOC composite from the navigation receiver is capacitively coupled through C302 to the input buffer I301D. Resistor R302 in series with variable resistor R303 controls the gain of the amplifier. R301 sets the input impedance. R304 provides bias for the non-inverting input of the amplifier from the 4.5 volt line. R305 minimizes cross-over distortion of the amplifier.

**4.3.2 Band Pass Filter**

The band pass filters utilized in the KI 203, KI 204 are of the multiple feedback type. Figure 4-5 shows a typical multiple feedback band pass filter. In VOR operation Q1 is turned off and looks like a high impedance, which effectively removes R2 from the circuit. Center frequency of the circuit is dependent upon the parallel combination of R1 and R3 along with R4, C1, and C2. Center frequency is set to 30 Hz by varying R3. Gain of the filter is set by the ratio of R4 to R1. In localizer operation Q1 will be saturated and places R2 in parallel with R3 to change the center frequency of the filter.

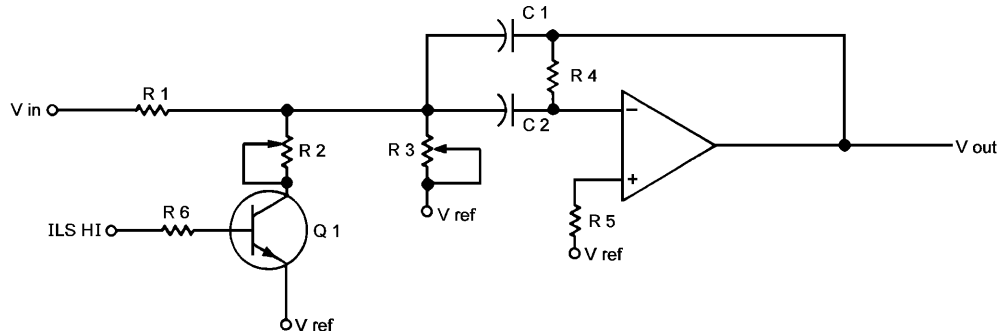


FIGURE 4-5 Band Pass Filter

Both the variable phase/90 Hz and the reference phase/150 Hz filters use the same configuration and method for switching center frequency. In the reference phase/150 Hz filter Q303 and R334 are required to provide equal filter "Qs" in localizer mode. Diode CR302 is reverse biased in VOR mode through the LOC center pot R327, and the ILS ENG HI line which is almost at ground. Input to the filter for VOR is from I301A through R325. In LOC mode CR302 is forward biased by the ILS ENG HI line, which is at approximately 9 volts in LOC mode, R327, and the ILS centering pot. By biasing CR302 in this manner, it acts as a voltage follower. Thus, for LOC mode, output of the input buffer flows through CR302 and the ILS center pot and R326 to the reference/150 Hz filter.

#### 4.3.3 FM Discriminator

The 9960 Hz FM is coupled to I302 through a 30 Hz trap, C305 and L301. I302 operates with an internal limiter amplifier and detector multiplier connected to an external phase shifter network. Figure 4-6 shows a block diagram of the FM discriminator.

R314 is a bias resistor for the limiter amp and C309, R315, and L302 provide the external phase shift network. C307 prevents 30 Hz variation of the detector multiplier input reference. R316 and C312 provide decoupling from the 9 volt line. R317 increases the maximum AC load current into C313, R318 and the resolver rotor. CR301 disables the output in localizer mode by pulling pin 14 down.

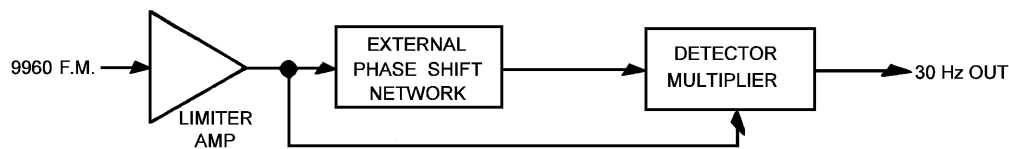


FIGURE 4-6 FM Discriminator

#### 4.3.4 30 Hz Resolver and Low Pass Amp (I301A)

The 30 Hz resolver couples a signal from rotor to stators by transformer action. The stators by physical placement will have signals phase shifted by 90 degrees from each other, the amplitudes of which are dependent on the mechanical position of the resolver rotor. By varying the resolver rotor position, the amount of coupling between the rotor winding and both stator windings is varied. When one stator winding is at maximum coupling, the other stator will be at minimum coupling. These signals from the two stator windings are applied to the constant amplitude phase shifter network R319, R320, and C314. In this network one signal is shifted 45° leading while the other is shifted 45° lagging. The vector addition of these signals results in a constant amplitude signal with a phase dependent on the rotor position. Adjustments of R320 will balance the phase shift of the two signals. The output of this network will ideally be shifted 45° from the input. However, driving into other than an infinite impedance may affect this phase shift.

The low pass amp receives the signal from the phase shift network and amplifies it to a usable signal level while removing much of the noise picked up at the resolver. The amp, I301A also corrects for some of the phase shift from the resolver and phase network. R322 and C315 determine the cut off frequency and phase shift at 30 Hz. The ratio of the impedance of C315 in parallel with R322 to R321 sets the gain for 30 Hz signals. R323 provides DC bias for the amplifier from the 4.5 volt line. R324 and C315 are decoupling for the 9 volt line. R339 reduces crossover distortion of the low pass amplifier.

#### 4.3.5 Reference Phase Squaring Amp (I402A)

The reference signal from I301B is capacitively coupled through C411 to I402A. Since the amp is operated essentially open loop (with no feedback), the output will switch from +9 volts to ground as the input crosses the reference voltage level. The resistive voltage divider comprised of R428 and R429 sets the minimum output level of the reference band pass filter required to cause the squaring amplifier to switch. This helps prevent an active D-bar while the warning flag is in view. This square wave drives the field effect transistor switches used in the deviation and TO-FROM phase detectors. R430 and C412 decouple I402 from the 9 volt line. CR412 is turned on in LOC mode to disable I402A and drive its output high.

In LOC mode the ILS ENG (Low) line is pulled nearly to ground when Q506 saturates. This causes the cathode of CR412 to be pulled nearly to ground also. Since the cathode of CR412 is grounded, pin 2 of I402A is pulled within 0.6 volts of ground. By pulling the non-inverting input toward ground, the output of the amplifier increases toward the positive supply until the amplifier output stage saturates. In VOR mode CR412 is reverse biased and normal DC bias for the amplifier is provided by R428 and R429.

#### 4.3.6 Localizer Deviation Detector (CR401, CR404, I401C)

In LOC mode the difference in signal levels between the 90 and 150 Hz filters is detected by the currents through CR401, R407, R408, and CR404. The center of this network is connected to the deviation amplifier by I401C. CR401 and CR404 are both reverse biased in VOR mode by CR402, R406, R409 and CR403, the ILS ENG (low) line which is approximately +8.7 volts in VOR mode and the ILS ENG (Hi) line which is approximately 0.6 volts in VOR mode.

#### 4.3.7 90° Phase Shift Network (I402B)

The variable phase signal from I301C is capacitively coupled by C407 to the low pass amplifier consisting of R421, R422, C408, and I402B. The phase shift of the filter for 30 Hz signals and cut off frequency is controlled by R422 and C408. Phase shift at 30 Hz is approximately 87 degrees. Gain of the amplifier is controlled by the ratio of the impedance of C408 in parallel with R422 to R421.

#### 4.3.8 TO-FROM Amp (I402C)

The signal from I402B is coupled through C409 and R423 to I401A. I401A is driven by the square wave from I402A to chop the signal input to I402C. Since this signal is phase shifted 87° from the deviation signal, the TO-FROM signal is maximum with a centered course deviation indicator.

The chopped waveform at the junction of R423 and R424 is integrated by the circuit consisting of I402C, C410, R425, R427, and R424. The ratio of R425 to R424 sets the DC gain of the integrator. Since R427 is inside the feedback loop, it does not affect circuit performance except to provide short circuit protection for the amplifier and current limit for the TO-FROM meter. Diodes CR410 and CR411 provide overvoltage protection for the TO-FROM meter. R426 provides DC bias for the amplifier from the +4.5 volt line.

#### 4.3.9 Deviation Amplifier

##### 4.3.9.1 VOR Operation

Output from the variable phase band pass filter is capacitively coupled by C401 to the phase detector consisting of R401, R402, C402, C403, and I401D. The output of the variable phase filter is chopped by I401D, a field effect transistor switch that shorts the junction of R401 and R402 to the +4.5 volt line when the squaring amplifier output is positive. R401 limits the current through the switch. The combination of R402 and C402 is used to integrate the chopped waveform. R403 and C403 further integrate the chopped waveform. This two section low pass filter provides superior rejection to high

frequency VOR scalloping signals than a single section filter. This filter also sets the response time of the VOR deviation indicator.

When the variable phase band pass filter output and squaring amplifier output are exactly ninety degrees out of phase, the average voltage of the chopped wave form at the input of the two section filter will be zero. If the phase shift between the variable phase filter and the squaring amplifier is not ninety degrees, the average voltage of the chopped waveform will not be zero. The average voltage of the chopped waveform is directly related to the phase difference between the variable phase filter output and the squaring amplifier output. [Figure 4-7](#) illustrates operation of the phase detector.

Output from the chopper is referenced to the +4.5 volt line when the switch is closed. If the average voltage of the chopped waveform is zero, the output of the integrating low pass filter at the junction of R403 and C403 will be 4.5 volts. If the average of the chopped waveform is not zero, the output of the low pass filter will be 4.5 volts plus or minus the average voltage of the chopped waveform.

Amplifier I402D is connected as a voltage follower in VOR mode. I401C is open circuit so components R410 and C404 do not affect circuit performance. R404 makes the amplifier a voltage follower. R405 provides current limit protection for the external meter while CR407 and CR408 provide overvoltage protection. Diodes CR405 and CR406 temperature compensate the deviation time constant switch circuit.

Purpose of the deviation time constant switch is to allow the pilot to more rapidly center the course deviation indicator by turning the OBS knob. The output voltage of the deviation amplifier is sensed by transistors Q401 and Q402. If the deviation output voltage exceeds the voltage established on the emitter of Q401 (by the resistive divider comprised of R414 and R415), the transistor starts to conduct. If the deviation output voltage is large enough to saturate Q401, Q403 is also saturated. This causes I401B to effectively short circuit R403. With R403 shorted out, the time constant of the deviation filter is greatly reduced. Capacitor C405 discharges through R419 to keep the filter time constant shortened after the deviation amplifier output is reduced below the threshold of Q401. Q402 is turned on for negative output of the deviation amplifier. Threshold voltage for Q402 is established by R416 and R417. When the output voltage of the deviation amplifier decreases below the reference voltage established on the base of Q402, the transistor begins to conduct and will eventually turn on Q402. Resistors R412 and R413 protect Q401 and Q402.

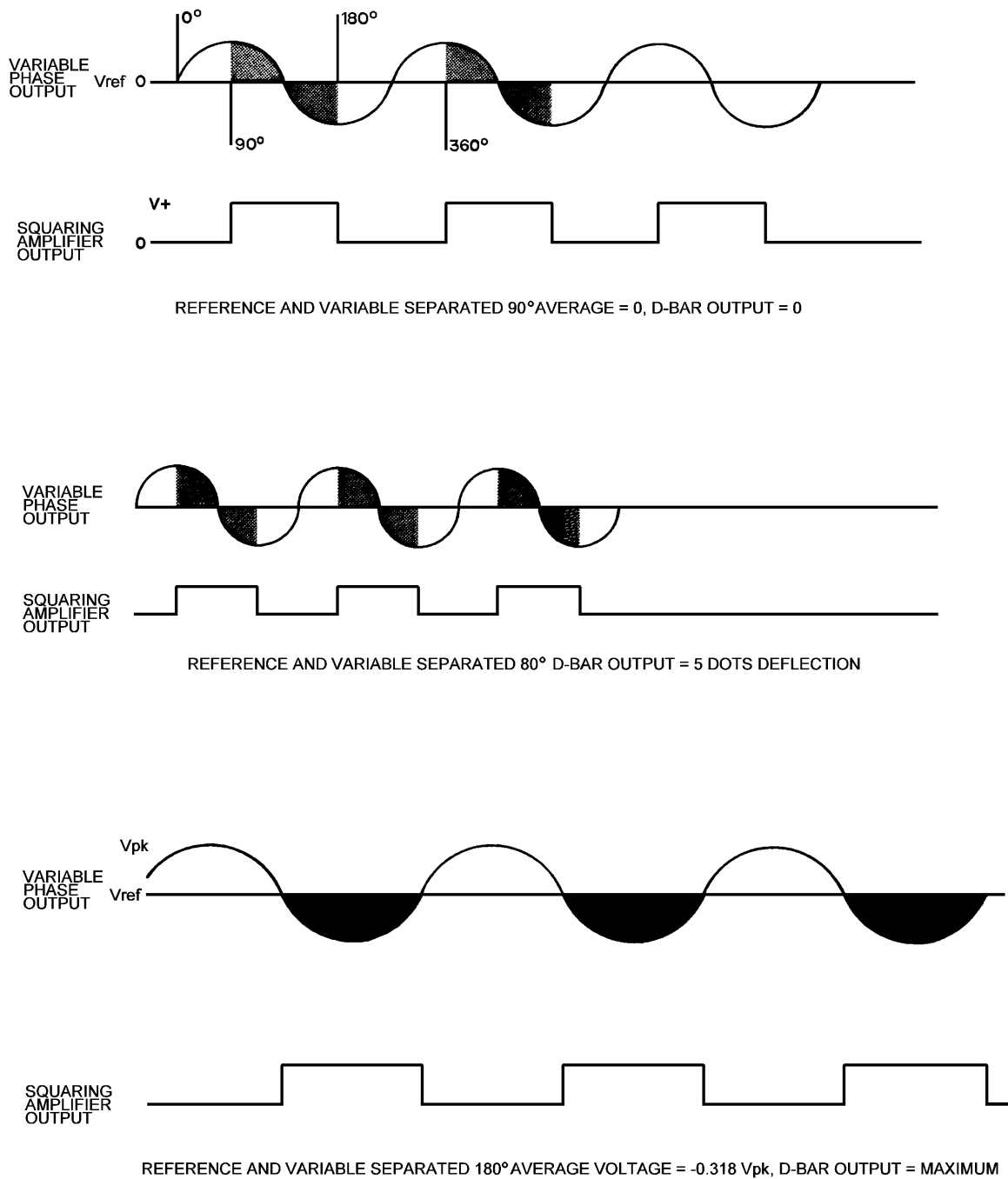


FIGURE 4-7 VOR Phase Comparator Output

#### 4.3.9.2 Localizer Operation

In localizer mode, I401D is turned on continuously by the squaring amplifier. This effectively shorts one end of R402 to the 4.5 volt line. DC bias from the 4.5 volt line through R402 and R403 is provided to I402D. I401B is switched off through CR409 and the ILS ENG (LOW) line to minimize the offset voltage of the amplifier.

Field effect transistor switch I401C is turned on in localizer mode. Outputs of the two band pass filters are halfwave rectified by CR401 and CR404. The connections of CR401, CR402, R407, and R408 are arranged so that the output of the 90 Hz filter is subtracted from the output of the 150 Hz filter. This AC voltage difference is integrated by I402D along with R410, R404, and C404. Gain of the amplifier is set by R410 while the combination of R404 and C404 set the response time of the VOR/LOC course deviation indicator in the localizer mode.

#### 4.3.10 Flag Detector

##### 4.3.10.1 VOR Operation

In VOR mode the outputs of both band pass filters are DC coupled to R515 and R516. Diode CR508 along with C507 detects the negative peak voltage of the variable phase band pass filter output. As long as the negative peak voltage at the base of the Q503 is less than the reference voltage produced on the emitters of Q503 and Q504, Q503 will not conduct. If the negative peak voltage on the base of Q504 is enough to keep it turned off also, current flows through R519 into the inverting input of I502B. This causes the output voltage of I502B to go negative which puts a voltage across the warning flag and keeps it concealed. Resistors R517 and R518 will turn on Q503 and Q504 if there is no signal output from the band pass filters. This causes Q503 and Q504 to saturate and reverse bias CR510. Output voltage of I502B now becomes the same as the voltage on the positive input and no voltage is present across the warning flag, so it is revealed in the window. C509 and R522 set the response time of the flag amplifier while R523 provides DC bias. CR513 and CR512 along with R524 provide protection for the flag meter.

##### 4.3.10.2 Localizer Operation

In localizer mode the output of the band pass filters is connected through CR504 and CR505 to CR506 and CR507. Resistors R511 and R512 bias CR504 and CR505 as voltage followers in localizer mode. These diodes temperature compensate the rectifier diodes CR506 and CR507. The output from the rectifier diodes is current summed by R513 and R514. Amplifier I502B integrates the half wave rectified signals from CR506 and CR507. If the signals are large enough, the output of the flag amplifier will be negative enough to conceal the warning flag. CR504 and CR505 provide temperature compensation for CR506 and CR507 and allow the localizer flag circuit to be disabled in VOR mode.

#### 4.3.11 ILS Energize Driver

When an ILS station is selected by the navigation receiver, the cathode of CR514 is grounded. This causes Q505 to saturate which in turn causes Q506 to saturate. Voltage of the ILS ENG (hi) line is within one transistor's  $V_{ce\ sat}$  of the +9 volt line while

the ILS ENG LOW line is within one transistor's  $V_{ce\ sat}$  of ground. R527 is a pull down resistor for Q505 and keeps Q506 turned off in VOR mode. R525 and R528 limit base current into Q505 and Q506. R526 keeps Q505 turned off in VOR mode. R529 is a pull up resistor for Q506.

#### 4.3.12 Power Supply

Input voltage from the aircraft is current limited by R501, filtered by C501 and over-voltage protected by CR501. If the input voltage exceeds 39 volts CR501 acts as a zener diode to clamp the voltage at 39 volts.

Generation of the regulated 9.0 volt line is accomplished by I501 and associated components. The output of Q502, the series pass element, is compared with a 1.4 volt internal reference of the integrated circuit. The voltage divider of R503, R504, and R505 sets the output voltage. The integrated circuit output at pin 2 tries to keep the voltage between pin 5 (the 1.4 volt reference) and pin 6 (a sample of the output voltage) equal. If the output voltage at the collector of Q502 increases, the voltage at pin 6 of I501 increases above the reference voltage on pin 5. The output voltage on pin 2 of I501 also increases, which reduces the collector current through Q502 and lowers the output voltage. If the output voltage at the collector of Q502 decreases, the voltage at pin 6 of I501 will be lower than the internal reference, which causes pin 2 to decrease, which turns on Q502 harder and causes more collector current to flow, which raises the output voltage through the load. By adjusting the voltage divider ratio with R505, the output voltage can be set to 9.0 volts.

C502 filters the reference voltage while C503 provides frequency compensation to prevent high frequency oscillation. Current limit for I501 is provided by R506. If the current through R506 becomes large enough, enough voltage will be produced to turn off output drive to the series pass element. R507, along with CR502 and CR503 enable the integrated circuit to stay in regulation for low input voltage levels.

Current limit protection for the series pass element is provided by Q501 and R502. When the load current through R502 becomes large enough, the voltage across R502 causes Q501 to conduct, which removes base drive to Q502, and hence reduces the load current.

The +4.5 volt line is provided by the voltage divider comprised of R508 and R509 along with voltage follower I502A. R510 provides short circuit protection for the amplifier output while C506 and C505 provide filtering. R530 provides short circuit protection for the input of I502A.

#### 4.3.13 Course Datum Synchro

Heading information is fed from a synchro transmitter located within the slaved directional gyro system to the course datum synchro B102 as shown in [Figure 4-8](#). A synchro control transformer (often referred to as a C.T.) does not have AC power supplied to its rotor, but the rotor is designed to supply control voltages which reach a null (zero volts) when the control transformer rotor is in effective (actually 90 degrees displaced) alignment with the transmitter rotor. Upon moving the transmitter rotor so as to disturb



this alignment, the voltage appearing across the rotor of the control transformer varies as the sine of the angle of displacement. The control voltage shown in Figure 4-8 represents the amplitude envelope of the 400 Hz input. The  $+\theta$  indicates the voltage of the rotor is in phase with the X, Y, Z input, while  $-\theta$  indicates the rotor voltage is out of phase with the X, Y, Z input. Scale factor of the course datum output is 393 mV/degree course error with 11.8 Vrms input.

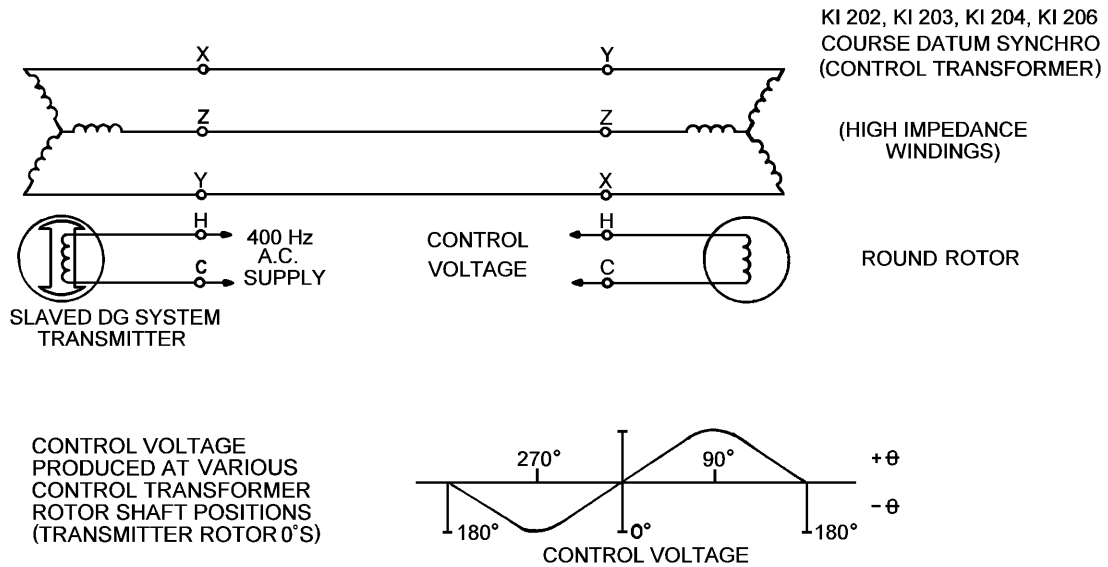


FIGURE 4-8 Course Datum Synchro Operation

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## SECTION V MAINTENANCE

### 5.1 GENERAL

This section contains maintenance information relating to the KI 203, KI 204 Navigation Indicators. A troubleshooting flow chart, alignment procedures, performance specifications and disassembly/reassembly instructions are included.

### 5.2 TEST EQUIPMENT REQUIRED

The following test equipment is required to test and align the KI 203, KI 204.

TABLE 5-1 Required Test Equipment

TYPE	CHARACTERISTICS	REPRESENTATIVE MODELS
Regulated DC Supply	13-18 volts at 500 mA.	
VOR/ILS Signal Generator		Collins 479S-3 or equivalent accuracy equipment.
AC Voltmeter		Ballantine 310 or equivalent.
Digital Voltmeter		Fluke 8000 or equivalent.
Oscilloscope		
AC Signal Generator	400 Hz at 11.8 Vrms.	
DC Voltage Supply	0-600 mV	
Bench Test Set	Contact, Female Solder Hood, Connector 24P Shell, Connector 41P Board Extractor Tool Extender Board	P/N 050-01551-0000 Includes: (30) P/N 030-01077-0000 (1) P/N 030-02154-0000 (1) P/N 030-02272-0000 (1) P/N 047-01277-0000 (1) P/N 200-05872-0000

Connect test equipment according to Figure 5-1.

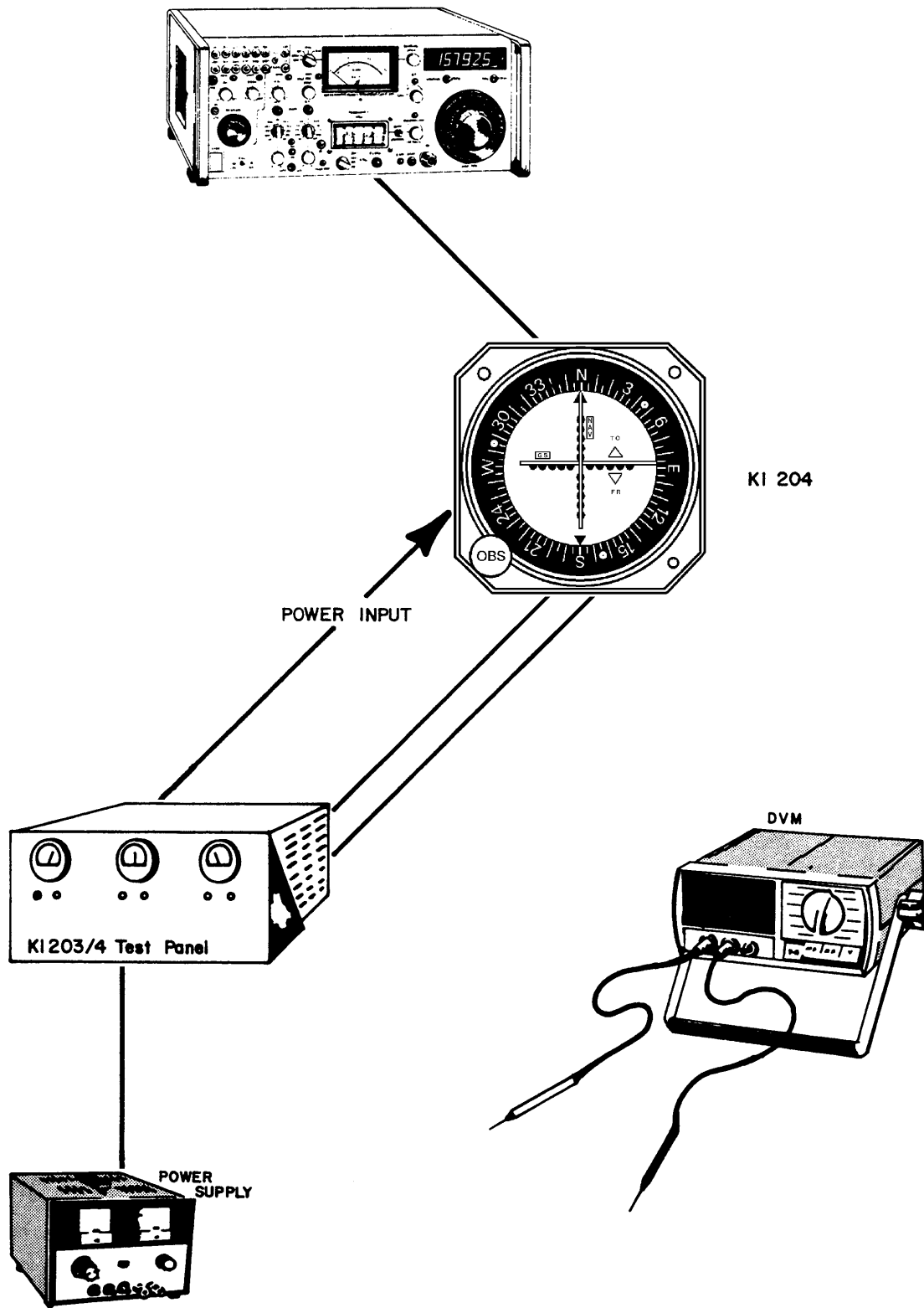


FIGURE 5-1 Test Setup

J203/J204

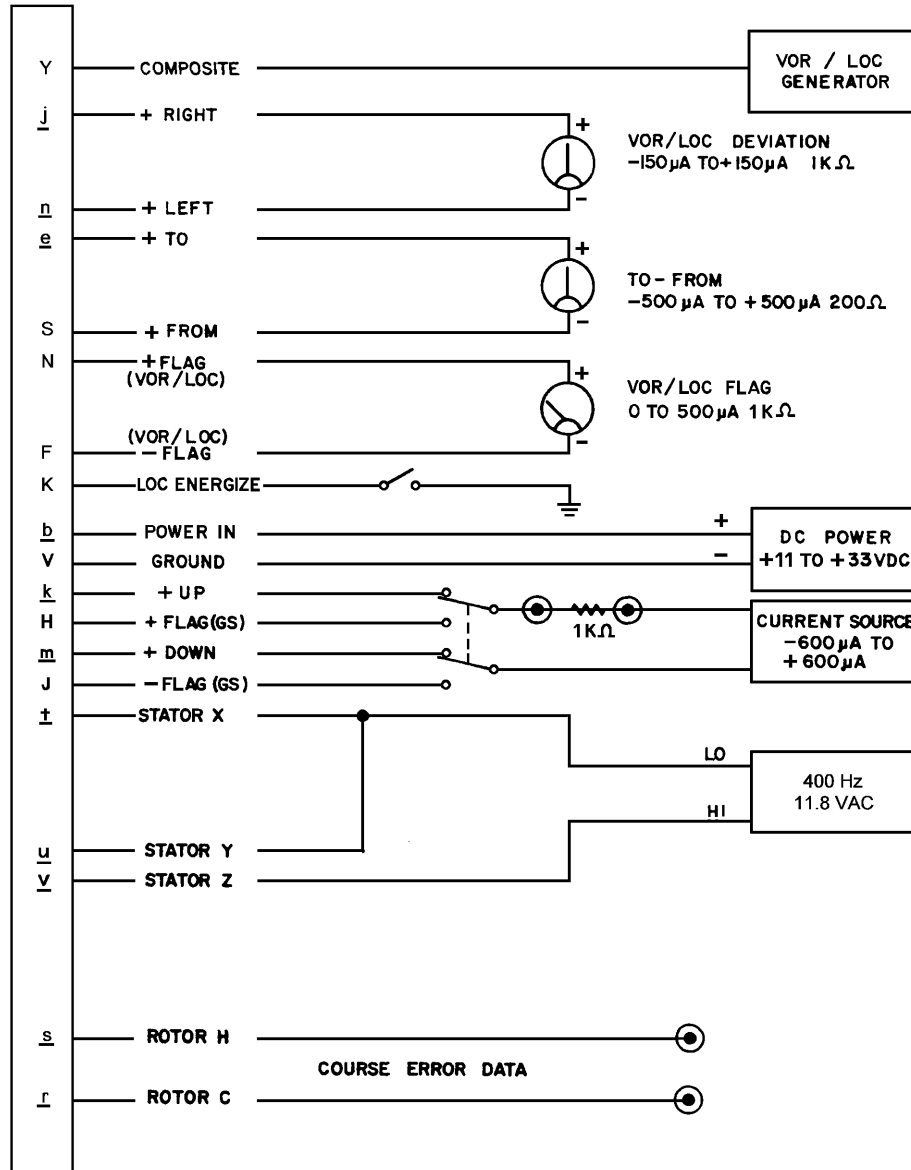


FIGURE 5-2 Test Panel Schematic

### 5.3 TEST PROCEDURE

This section is a cover on minimum performance test. Set up test equipment according to [section 5.2](#).

#### NOTE

Standard Viewing Angle is used for all meter adjustments. This is an angle 15° above the horizontal centerline of the indicator.

#### 5.3.1 MECHANICAL

##### 5.3.1.1 OBS Knob Rotation

The OBS knob shall rotate smoothly in both directions. The azimuth card shall follow smoothly with no jerky or erratic movements.

##### 5.3.1.2 Meter Centering

With no power applied and the unit resting horizontally with the OBS knob in the lower left hand corner, the VOR/LOC course deviation pointer and glideslope deviation pointers (if provided) shall be centered over the vertical and horizontal course deviation reference marks within half the width of the pointers when viewed from the standard viewing angle. The TO-FROM indicator shall be centered behind its shield and the VOR/LOC and glideslope (if provided) warning flag shall be fully revealed.

##### 5.3.1.3 Meter Interference

All flags, pointers and indicators shall not contact any other flags, meters, indicators, the warning flag housing, or the azimuth card when moved throughout their range of movement.

##### 5.3.1.4 Meter Deflection Range

When viewed from a standard viewing angle, minimum deflection range for the VOR/LOC pointer and glideslope (if provided) pointers shall be 0.630 inches either side of the centered meter position (each reference mark on the warning flag housing corresponds to 0.125 inch of deflection).

#### 5.3.2 CURRENT DRAIN

Current drain shall be less than 50 mA for input voltages from 10 to 33 Vdc.

#### 5.3.3 PANEL LIGHTING

When  $28 \pm 10\%$  Vdc is applied between pins B and E of J203, J204 both panel lamps shall light and current drain shall be  $100 \pm 25$  mA.

When  $14 \pm 10\%$  Vdc is applied between pins D and E and pin B is jumpered to pin E of J203, J204 both panel lamps shall light and current drain shall be  $200 \pm 60$  mA.

When  $5 \pm 10\%$  Vdc is applied between pins D and E and pin B is jumpered to pin E of J203, J204 both panel lamps shall light and current drain shall be  $400 \pm 120$  mA.

**5.3.4 VOR CONVERTER AND INDICATOR REQUIREMENTS**

**5.3.4.1 VOR Bearing Accuracy**

Maximum VOR centering error shall be  $1.3^\circ$  for any radial in both TO and FROM conditions.

**5.3.4.2 VOR Course Deviation Indication**

**5.3.4.2.1 Sensitivity**

With a  $+10^\circ$  difference in the selected course and radial output from the VOR generator, the VOR/LOC course deviation indicator shall deflect 5 reference marks  $\pm 1/2$  mark.

**5.3.4.2.2 Deflection Linearity and Polarity**

For the following course errors in Table 5-2, VOR/LOC deflection and electrical deviation output shall be as noted. Measurements are made on FROM radials. Electrical deviation output is measured as a voltage across a 1,000 ohm load connected between pins j and n of J203, J204 with a positive voltage meaning the DC voltage at pin j is greater than the DC voltage on pin n.

**TABLE 5-2 VOR Course Deviation**

Course Error	Pointer Deflection	Direction	Electrical Deviation
$+10^\circ$	$5 \pm 0.5$ Ref Marks	Right	+121 to +181 mV
$+5^\circ$	$2.5 \pm 0.5$ Ref Marks	Right	+60 to +90 mV
$+2^\circ$	$1 \pm 0.5$ Ref Mark	Right	+24 to +36 mV
$-2^\circ$	$1 \pm 0.5$ Ref Mark	Left	-24 to -35 mV
$-5^\circ$	$2.5 \pm 0.5$ Ref Marks	Left	-60 to -90 mV
$-10^\circ$	$5 \pm 0.5$ Ref Marks	Left	-121 to -181 mV

**5.3.4.2.3 VOR Deviation Time Constant**

For a step change in VOR course error of  $10^\circ$ , time for the VOR/LOC course deviation indicator to reach 70% of its final deflection shall not exceed 3 seconds.

For a step change in VOR course error of  $20^\circ$ , time for the VOR/LOC course deviation indicator to reach 70% of its final deflection shall not exceed two seconds.

**5.3.4.3 VOR Alarm Signal**

With a standard VOR test signal applied and the level varied from 0.35 to 0.50 Vrms, the VOR/LOC warning flag shall remain at least half concealed. Flag voltage output shall not be less than 150 mV. With an input level of 0.5 Vrms or greater, the flag shall be fully concealed and flag voltage into a design value load shall be 250 to 425 mV. Flag voltage is measured from pin N (+) to F (-) of J203, J204.

The VOR/LOC warning flag shall be fully revealed and flag voltage shall be less than 125 mV with the following VOR/LOC composite inputs:

Only 9960 Hz FM signal present on composite input.

Only 30 Hz AM signal present on composite input.

#### 5.3.4.4 TO-FROM Indicator

##### 5.3.4.4.1 Polarity and Level

With the selected course and VOR generator radial the same and the TO-FROM switch in the TO position, the TO-FROM indicator shall be visible in the TO (upward) position. The TO-FROM output on pin e of J203, J204 will be  $+320 \pm 60$  mV with respect to pin s of J203, J204. When the FROM radial is selected from the VOR generator, the TO-FROM indicator shall be visible in the FROM (downward) position and the voltage on pin e of J203, J204 will be  $-320 \pm 60$  mV with respect to pin s of J203, J204.

##### 5.3.4.4.2 TO-FROM Generator Change Over

The TO-FROM indicator shall remain fully visible until a VOR course error greater than  $75^\circ$  is generated by rotating the azimuth card. For VOR course errors from  $75^\circ$  to  $105^\circ$ , the TO-FROM indicator may be less than fully revealed in either TO or FROM position. As the VOR course error exceeds  $105^\circ$ , the TO-FROM indicator shall be fully visible in the opposite position.

#### 5.3.5 LOCALIZER CONVERTER AND INDICATOR PERFORMANCE

##### 5.3.5.1 Localizer Centering

When a standard localizer test signal having equal amplitude components of 90 Hz and 150 Hz modulation (0.00 db tone ratio) is applied to the composite input and the ILS energize line (pin K of J203, J204) is grounded, the VOR/LOC course deviation indicator shall be centered within 1/2 pointer's width. The electrical deviation output voltage between pins j and n shall be less than 3 mV.

##### 5.3.5.2 Localizer Deflection Linearity, Polarity and Balance

When a standard localizer test signal having the tone ratios as [Table 5-3](#) is applied at the composite input, the VOR/LOC deflection and electrical deviation output shall be as noted. Polarity of the electrical deviation output as positive means the voltage on pin j is greater than the voltage on pin n of J203, J204.



TABLE 5-3 Localizer Deflection

Predominate Tone	Tone (db)	Ratio (ddm)	Pointer Deflection	Direction	Electrical Deviation
150 Hz	4	0.091	3 ±0.5 Marks	Left	-72 to -108 mV
150 Hz	2	0.046	1.5 ±0.5 Marks	Left	-36 to -54 mV
	0				-3 to +3 mV
90 Hz	2	0.046	1.5 ±0.5 Marks	Right	+36 to +54 mV
90 Hz	4	0.091	3 ±0.5 Marks	Right	+72 to +108 mV

### 5.3.5.3 Localizer Deviation Time Constant

For a step change in the localizer composite tone ratio from 0.00 ddm (0 db) to any value less than 0.155 ddm (5db) the time required for the course deviation indicator to reach 67% of its final value shall not exceed 2 seconds and pointer overshoot shall not exceed 5%. The electrical deviation output shall reach 67% of its final value within 0.6 seconds and the overshoot shall not exceed 2% for the same step change in tone ratio.

### 5.3.5.4 Localizer Warning Flag

With a standard localizer test signal with a 0 ddm tone ratio applied, and the level varied from 0.263 to 0.333 Vrms, the VOR/LOC warning flag shall be at least half revealed and the flag voltage shall be at least 150 mV. Flag voltage is measured from pin N (+) to F (-) of J203, J204. With a composite input level of 0.333 to 0.415 Vrms, the VOR/LOC warning flag shall be fully concealed and the flag voltage shall be between 250 and 425 mV.

The VOR/LOC warning flag shall begin to be revealed and the flag voltage shall be less than 175 mV with the following composite inputs:

Only 90 Hz modulation at a level less than or equal to 0.256 Vrms.

Only 150 Hz modulation at a level less than or equal to 0.256 Vrms.

### 5.3.6 GLIDESLOPE INDICATOR REQUIREMENTS (APPLICABLE TO KI 204 ONLY)

Standard Viewing Angle is used for all glideslope measurements.

#### 5.3.6.1 Glideslope Centering Voltage

Voltage required to center the glideslope deviation indicator shall be 0 ±3 mV.

#### 5.3.6.2 Glideslope Deviation

When a voltage of  $75 \pm 1$  mV is applied from pin k (+) to pin m (-) of J204, the glideslope deviation indicator shall deflect up ( $2 \frac{1}{2} \pm 1/2$  reference marks). When the polarity of voltage is reversed, the glideslope deviation indicator shall deflect down  $2 \frac{1}{2} \pm 1/2$  marks.

When a voltage of  $150 \pm 1.5$  mV is applied from pin k (+) to pin m (-) of J204, the glideslope deviation indicator shall deflect up ( $5 \pm 1/2$  reference marks). When the polarity of voltage is reversed, the glideslope deviation indicator shall deflect down  $5 \pm 1/2$  marks.

TABLE 5-4 Glideslope Deflection

VOLTAGE (Pin <u>k</u> )	DEFLECTION	DIRECTION
+75 $\pm 1$ mV	2.5 $\pm 0.5$ Reference Marks	Up
-75 $\pm 1$ mV	2.5 $\pm 0.5$ Reference Marks	Down
+150 $\pm 1.5$ mV	5 $\pm 0.5$ Reference Marks	Up
-150 $\pm 1.5$ mV	5 $\pm 0.5$ Reference Marks	Down

### 5.3.6.3 Glideslope Alarm Signal

With a DC voltage greater than 260 mV applied from pin H (+) to J (-) of J204, the glideslope flag shall be fully concealed.

With a DC voltage less than 125 mV applied from pin H (+) to J (-) of J204, the glideslope flag shall be fully revealed.

## 5.3.7 COURSE DATUM SYNCHRO PERFORMANCE

### 5.3.7.1 Course Datum Null Voltage

With an  $11.8 \pm 1\%$   $V_{rms}$ ,  $400 \pm 2\%$  Hz signal applied from pin v (high) to pin u (low) and pins u and t of J203, J204 are shorted, the voltage from pin s (high) to pin r (low) shall be 0.030  $V_{rms}$  maximum with a selected heading of 0 degrees.

### 5.3.7.2 Course Datum Polarity

With the same input voltage as step 1 above, output voltage from pin s (high) to pin r (low) shall be  $3.93 \pm 5\%$   $V_{rms}$  and shall be in phase with the input voltage with a selected heading of 10 degrees.

With a selected heading of 350 degrees, the output voltage shall be  $3.93 \pm 5\%$   $V_{rms}$  and out of phase with the input.

5.3.8 TEST DATA KI 203, KI 204

I. MECHANICAL REQUIREMENTS

A. OBS knob rotation \_\_\_\_\_

B. Meter Center

VOR/LOC DBAR \_\_\_\_\_ VOR/LOC FLAG \_\_\_\_\_

TO/FROM \_\_\_\_\_ G/S BAR \_\_\_\_\_ G/S FLAG \_\_\_\_\_

C. Meter Interference \_\_\_\_\_

D. Meter Deflection Range \_\_\_\_\_

II. CURRENT DRAIN \_\_\_\_\_ mA (less than 50 mA)

III. PANEL LIGHTING

14 volt operation \_\_\_\_\_ 28 volt operation \_\_\_\_\_

IV. VOR SECTION

A. VOR Bearing Accuracy 1.3° error maximum

RADIAL	Bearing Error		RADIAL	Bearing Error	
0°	To _____	From _____	180°	To _____	From _____
30°	To _____	From _____	210°	To _____	From _____
60°	To _____	From _____	240°	To _____	From _____
90°	To _____	From _____	270°	To _____	From _____
120°	To _____	From _____	300°	To _____	From _____
150°	To _____	From _____	330°	To _____	From _____

B. VOR Deflection Sensitivity \_\_\_\_\_ OK

C. VOR Deflection Linearity and Polarity

Course Error	Pointer Deflection and Polarity	Electrical Deviation
+10°	_____ OK	_____ mV
+5°	_____ OK	_____ mV
+2°	_____ OK	_____ mV
-2°	_____ OK	_____ mV
-5°	_____ OK	_____ mV
-10°	_____ OK	_____ mV

D. VOR Deflection Time Constant  
 10° Error \_\_\_\_\_ sec (less than 3)      20° Error \_\_\_\_\_ sec (less than 2)

E. VOR Alarm Signal  
 Flag Voltage with 0.500 Vrms composite \_\_\_\_\_  
 Proper Operation \_\_\_\_\_

F. TO-FROM Indicator  
 TO Voltage \_\_\_\_\_ mV      FROM Voltage \_\_\_\_\_ mV

**V. LOCALIZER SECTION**

A. Localizer Centering \_\_\_\_\_ pointer OK. Centering Voltage \_\_\_\_\_ OK

B. Localizer Deflection Linearity, Polarity, and Balance

Tone Ratio	Pointer Deflection	Polarity	Electrical Deviation
150Hz 4db 0.091ddm	_____	OK	_____ mV
150Hz 2db 0.046ddm	_____	OK	_____ mV
0	_____	OK	_____ mV
90Hz 2db 0.046ddm	_____	OK	_____ mV
90Hz 4db 0.091ddm	_____	OK	_____ mV

C. Localizer Time Constant \_\_\_\_\_ sec (less than 0.6 seconds)

D. Localizer Alarm Signal Flag Voltage with 0.333 Vrms centering signal \_\_\_\_\_ mV  
 Proper Operation \_\_\_\_\_

**VI. GLIDESLOPE SECTION**

- A. Glideslope Centering \_\_\_\_\_ OK
- B. Half Deflection \_\_\_\_\_ OK
- C. Full Deflection \_\_\_\_\_ OK
- D. Glideslope Alarm Signal Proper Operation \_\_\_\_\_ OK

**VII. COURSE DATUM SYNCHRO SECTION**

- A. Null Voltage \_\_\_\_\_ Vrms (less than 0.030)
- B. Course Datum Polarity \_\_\_\_\_ OK

## 5.4 ALIGNMENT PROCEDURES

### 5.4.1 STATIC METER ALIGNMENT

- 5.4.1.1 Treat the plastic lighting wedge with an anti-static compound.
- 5.4.1.2 Reinstall the static treated light wedge and bezel assembly.
- 5.4.1.3 Place the unit in a horizontal position with the OBS knob in the lower left hand corner.
- 5.4.1.4 Loosen the socket head capscrews that hold the VOR/LOC deviation meter to the rear gear plate.
- 5.4.1.5 Move the meter assembly until the needle is centered and perpendicular to the base of the indicator. Tighten the mounting screws.
- 5.4.1.6 Loosen the socket head capscrews that hold the glideslope deviation meter to the rear plate.
- 5.4.1.7 Move the meter assembly until the needle is positioned 0.033 inches above the center line of the VOR/LOC reference marks. Tighten the mounting screws.
- 5.4.1.8 Rotate the indicator into a vertical plane, with the bezel facing up.
- 5.4.1.9 If either deviation needle deflects, adjust the counterweight until no needle deflection is noticed as the indicator is rotated from a horizontal to a vertical plane.
- 5.4.1.10 Place the indicator in a horizontal plane with the OBS knob in the lower left hand corner.
- 5.4.1.11 Rotate the unit so that the OBS knob is in the upper left hand corner.
- 5.4.1.12 If either needle moves from its centered position, adjust the counterweight until no needle deflection is noted as the indicator is oriented in any vertical or horizontal plane.
- 5.4.1.13 Check that each needle deflects at least 5 dots either side of the centered position. Bend the meter stops until proper deflection range is obtained.
- 5.4.1.14 Adjust the warning flags and TO-FROM indicator by adjusting the meter stops to set deflection range or by carefully adjusting the meter arms.
- 5.4.1.15 Check that all wiring harnesses are positioned and secured in such a manner to not interfere with any pointers, meters, or movable components.

### 5.4.2 COURSE DATUM SYNCHRO ALIGNMENT

- 5.4.2.1 Apply an  $11.8 \pm 1\%$   $V_{rms}$ ,  $400 \pm 2\%$  Hz signal from pin v (high) to pin u (low).
- 5.4.2.2 Short pins u and t together with an external jumper wire.

- 5.4.2.3 Monitor the heading output pins  $\underline{s}$  (high) and  $\underline{r}$  (low) with an AC voltmeter.
- 5.4.2.4 Rotate the OBS knob until a heading of zero degrees is established.
- 5.4.2.5 Loosen the mounting screws of the course datum synchro and rotate it until a minimum voltage is noted on the AC voltmeter.
- 5.4.2.6 Tighten the mounting screws.
- 5.4.2.7 Increase the heading to 10 degrees.
- 5.4.2.8 Monitor the voltage from pin  $\underline{s}$  (high) to  $\underline{r}$  (low) with an oscilloscope.
- 5.4.2.9 The voltage should be in phase  $\pm 20$  degrees with the 400 Hz input.
- 5.4.2.10 If the voltage is not in phase, return the heading to zero degrees.
- 5.4.2.11 Again loosen the course datum synchro mounting screws and rotate the synchro one half revolution.
- 5.4.2.12 Reconnect the AC voltmeter from pin  $\underline{s}$  (high) to  $\underline{r}$  (low) and again rotate the synchro for a minimum AC voltage.
- 5.4.2.13 Tighten the mounting screws.
- 5.4.2.14 Increase the heading to 10 degrees.
- 5.4.2.15 Monitor the voltage from pin  $\underline{s}$  to  $\underline{r}$  with an oscilloscope.
- 5.4.2.16 The voltage should be in phase  $\pm 20$  degrees with the 400 Hz input.
- 5.4.2.17 Decrease the heading from ten degrees to 0 degrees. The voltage should decrease.
- 5.4.2.18 As the heading is decreased to 350 degrees, the voltage should increase in level and be out of phase with the 400 Hz input.
- 5.4.3 POWER SUPPLY ALIGNMENT
  - 5.4.3.1 Apply 13.75  $\pm 2\%$  Vdc to the indicator.
  - 5.4.3.2 Monitor pin Z of J203, J204 with a digital voltmeter.
  - 5.4.3.3 Adjust R505 for 9.00 Vdc at pin Z.
  - 5.4.3.4 Decrease the input voltage to 11.0 volts. The output voltage at pin Z should not change more than 0.01 volts.
  - 5.4.3.5 Increase the input voltage to 33.0 volts. The output voltage at pin Z should not change more than 0.05 volts.
  - 5.4.3.6 Monitor pin S of J203, J204 with a digital voltmeter. With an input voltage of 13.75 volts, the voltage on pin S should be 4.5  $\pm 2\%$  Vdc.

- 5.4.3.7 Monitor pin Z with an oscilloscope. Ripple on the 9 volts line should not exceed 10 millivolts.
- 5.4.3.8 Monitor pin S with an oscilloscope. Ripple on the 4.5 volt line should not exceed 10 millivolts.

#### 5.4.4 VOR CONVERTER ALIGNMENT

This alignment must be completed prior to localizer converter alignment.

- 5.4.4.1 Check that the ILS ENG input to the indicator is not grounded.
- 5.4.4.2 Connect the output of a VOR/ILS signal generator to the composite input of the indicator. With a standard VOR test signal applied, set the level at 0.500  $\pm 2\%$  Vrms.
- 5.4.4.3 Monitor pin 8 of I301 or pin c of J203, J204 with an AC voltmeter. Adjust R311 for maximum voltage output. This sets the center frequency of the variable phase band pass filter.
- 5.4.4.4 Monitor TP302 with an oscilloscope. Adjust L302 for maximum 30 Hz peak to peak voltage.
- 5.4.4.5 Adjust the VOR centering pot, R101 (which is accessible from the front of the indicator in the upper left hand mounting hole above the OBS knob), for a maximum AC voltage at I301 pin 7 or pin f of J203, J204. This sets the center frequency of the reference phase band pass filter.
- 5.4.4.6 Adjust the VOR/ILS generator output for the 90° FROM radial.
- 5.4.4.7 Rotate the OBS knob until 90° is the selected course.
- 5.4.4.8 Loosen the resolver mounting screws and rotate the resolver until the course deviation needle is centered.
- 5.4.4.9 If the TO-FROM indicator is in the FROM position, tighten the resolver mounting screws.
- 5.4.4.10 If the TO-FROM indicator is in the TO position, rotate the resolver one half revolution and again adjust its position for a centered deviation needle. Tighten the resolver mounting screws.
- 5.4.4.11 Change the VOR/ILS generator output to 0° FROM. Rotate the OBS knob to give a selected course of 0°.
- 5.4.4.12 Allow the pointer to stabilize, then adjust R320 (the resolver roundness adjustment) to move the needle half the distance to a centered position.
- 5.4.4.13 Adjust the VOR/ILS generator output to 90° FROM. Rotate the OBS knob to a selected course of 90°.
- 5.4.4.14 Allow the pointer to stabilize, then adjust R101 (VOR centering) to move the needle half the distance to a centered position.

- 5.4.4.15 Repeat steps 11 through 14 until the deviation needle is centered on both the 0° and 90° radials.
- 5.4.4.16 Return the OBS to a course of 0°. Set the VOR/ILS generator for the 10° FROM radial. Adjust R303 for 5 dots of deflection.
- 5.4.4.17 Check bearing accuracy for every 30°.
- 5.4.4.18 By adjusting the R101 (VOR centering) balance the error between TO and FROM radials.

#### 5.4.5 LOCALIZER CONVERTER ALIGNMENT

This alignment must not be attempted until VOR converter alignment is completed.

- 5.4.5.1 Check that the ILS ENG input to the indicator is grounded.
- 5.4.5.2 Monitor pin 8 of I301 or pin c of J203, J204 with an AC voltmeter.
- 5.4.5.3 Apply a 90 Hz signal to the composite input of the indicator. Set the level to 0.250 Vrms.
- 5.4.5.4 Adjust R308 for maximum voltage on the AC voltmeter. This sets the center frequency of the 90 Hz filter.
- 5.4.5.5 Apply a 150 Hz signal to the composite input of the indicator. Set the level to 0.250 Vrms.
- 5.4.5.6 Monitor pin 7 of I301 or pin f of J203, J204 with an AC voltmeter.
- 5.4.5.7 Adjust R330 for a maximum voltage reading on the AC voltmeter.
- 5.4.5.8 Apply a standard localizer centering signal to the composite input. Set the level of the centering signal to  $0.333 \pm 2\%$  Vrms.
- 5.4.5.9 Adjust R102, the ILS centering pot, which is accessible through the upper right hand mounting screw hole at the front of the indicator, for a centered course deviation needle.
- 5.4.5.10 Set the tone ratio of the localizer test signal to 4 db (0.091 ddm) with 90 Hz predominate.
- 5.4.5.11 Adjust R410 for three fifths full scale deflection (three reference marks) to the right of the center.
- 5.4.5.12 Adjust the tone ratio of the VOR/ILS generator for a 0 db (0.00 ddm) tone ratio. Readjust R102 to center the needle, if necessary
- 5.4.5.13 Adjust the tone ratio of the VOR/ILS generator for a 4 db (0.091 ddm) tone ratio with 150 Hz predominate.
- 5.4.5.14 If the needle does not deflect as least three reference marks to the left, adjust R410 for a deflection of three reference marks.



- 5.4.5.15 Adjust the VOR/ILS generator for a 0 db (0.000 ddm) tone ratio and recheck localizer centering.

## 5.5 OVERHAUL

Maintenance information contained in this section includes inspection procedures, cleaning, semiconductor replacement, and troubleshooting procedures.

### 5.5.1 VISUAL INSPECTION

The following visual inspection procedures should be performed during the course of maintenance operations.

- 5.5.1.1 Inspect all wiring for frayed, loose, or burned wires.
- 5.5.1.2 Check cable connections, making sure the plugs are free from corrosion and are properly secured.
- 5.5.1.3 Check all components for evidence of overheating, breakage, vibration, corrosion, or loose connections.
- 5.5.1.4 Check all capacitors and transformers for leaks, bulges, or loose connections.
- 5.5.1.5 Inspect relay and switch contacts for pits or arcing.

### 5.5.2 CLEANING

- 5.5.2.1 Using a clean-lint free cloth, lightly moistened with an approved cleaning solvent, remove the foreign matter from the equipment case and unit front panels. Wipe dry using a clean, dry lint-free cloth.
- 5.5.2.2 Using a hand controlled dry air jet (not more than 15 psi), blow the dust from inaccessible areas. Care should be taken to prevent damage by the air blast.
- 5.5.2.3 Clean electrical contacts with a burnishing tool or cloth lightly moistened with an approved contact cleaner.
- 5.5.2.4 Clean the receptacles and plugs with a hand controlled dry air jet (not more than 25 psi) and a clean lint-free cloth lightly moistened with an approved cleaning solvent. Wipe dry with a clean, dry, lint-free cloth.
- 5.5.2.5 Apply an antistatic solution to the plastic lighting wedge. Refer to applicable field service bulletins for detailed information.

### 5.5.3 DISASSEMBLY PROCEDURES

The following instructions include procedures that are necessary to remove and disassemble the subassemblies of the KI 203, KI 204. Before disassembly, verify that the power is removed and disassemble only to the extent necessary to effect test, alignment and repair. Tag or in some means identify all disconnected wires.

Overall performance tests can be completed without any disassembly of the unit. In order to carry out the alignment procedures of the converter subassemblies, only the upper rear dust cover need be removed. Do not remove the bottom dust cover or front half of the top dust cover except in an instrument shop clean environment.

#### 5.5.3.1 Top and Bottom Cover

The back half of the two piece top cover is held in place by two #2-56x1/8 flathead screws (P/N 089-06004-0002) and two #2-28x1/4 panhead screws (P/N 089-06414-0004). When this section of the top cover is removed, it will reveal only the printed circuit board area of the unit.

### CAUTION

NEXT OPERATION TO BE DONE IN A CLEAN ENVIRONMENT ONLY.

The front half of the top cover and the bottom cover are held in place by six #2-56x1/8 flathead screws (P/N 089-06004-0002) and two #2-28x1/4 panhead screws (P/N 089-06414-0004).

#### 5.5.3.2 Printed Circuit Boards

The KI 203 and KI 204 both contain three printed circuit boards. To remove Board "C" (the power supply/ flag board), it is necessary to first remove the #4-40x1/4 flathead screw (P/N 089-06299-0004) that holds the heatsink, which is attached to the board, to the side rail.

All three PC boards may now be removed, using card extractor (P/N 047-01277-0000).

#### 5.5.3.3 Converter Assembly

This assembly, with or without the PC boards, may be separated from the meter assembly by removing four #2-28x1/4 flathead screws (P/N 089-06484-0004).

#### 5.5.3.4 Bezel and Front Gear Plate Assemblies

Remove OBS knob (P/N 088-00696-0002) by loosening set screw (P/N 089-06218-0006). To remove the remaining front end assembly, which consists of the bezel assembly (P/N 200-01924-XXXX) and front gear plate assembly (P/N 200-01925-XXXX), remove four #4-40x5/16 panhead screws (P/N 089-05903-0005) and four lock washers (P/N 089-08109-0034).

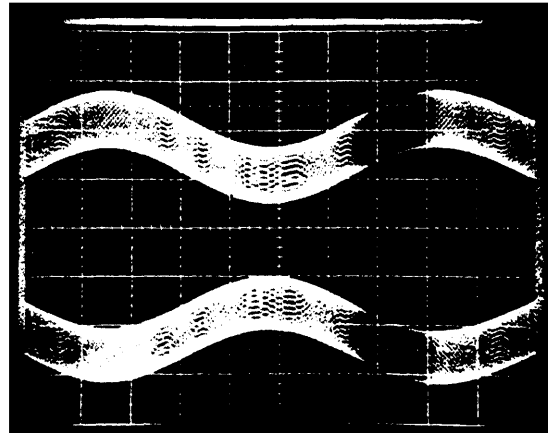
#### 5.5.4 REASSEMBLY PROCEDURES

For reassembly in general, reverse the disassembly procedures. If the bezel assembly has been removed, apply an antistatic solution to the plastic lighting wedge.

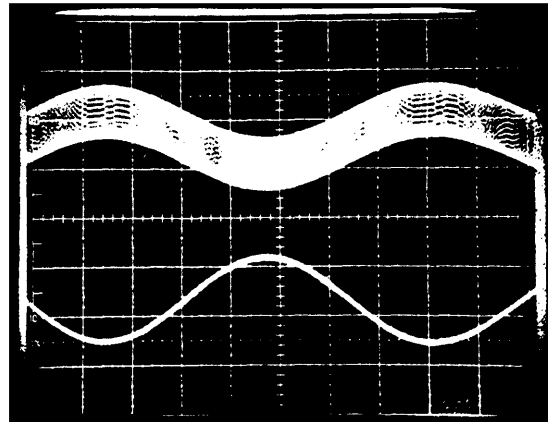
### 5.6 TROUBLESHOOTING

For troubleshooting information consult [Figure 5-3 Waveforms](#) and [Figure 5-4 Troubleshooting Flow Chart](#).

TP: P301 Pin 15  
 VERT: 1V/Div  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1 Trigger  
 DESC: VOR Composite

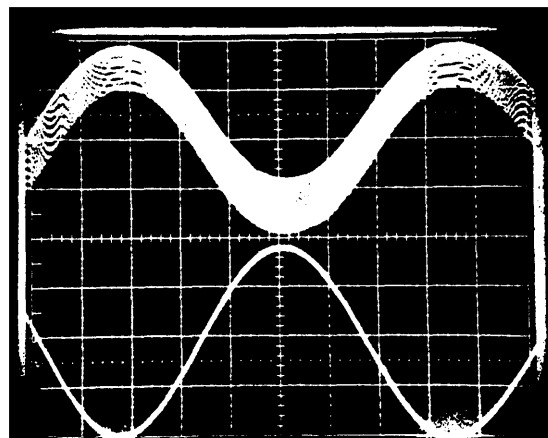


TP: 301  
 VERT: 1V/Div  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: Buffer Output



TP: 301  
 VERT: 1V/Div  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: Buffer Output

TP: I301 Pin 8  
 VERT: 2V/Div  
 HORIZ: 5ms  
 COUPL: DC, Baseline Ground  
 SYNC: Ch 1  
 DESC: VAR Phase BPF Output

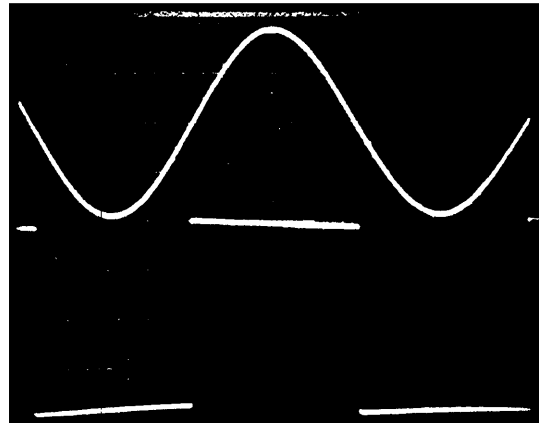


TP: 302  
 VERT: 1V/Div  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: FM Discriminator Output

TP: I301 Pin 7  
 VERT: 1V/Div  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: REF Phase BPF Output

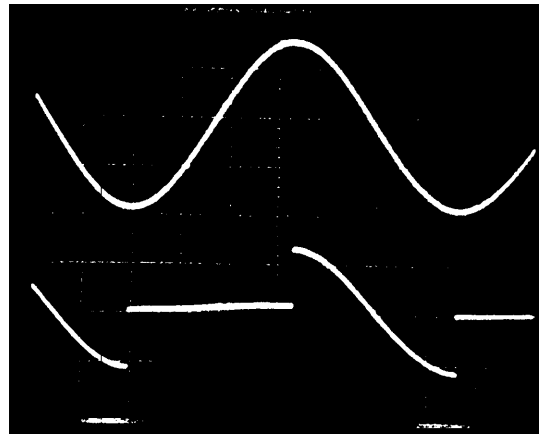
FIGURE 5-3 Waveforms KI 203, KI 204 (Sheet 1 of 3)

TP: P401 Pin 8  
 VERT: 1V/Div  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: REF Phase to Squaring Amp



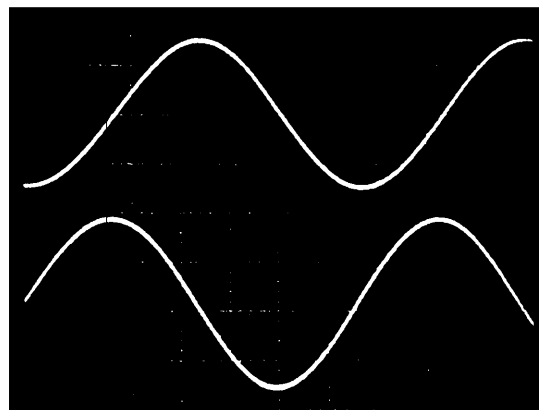
TP: 403  
 VERT: 2V/Div  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: Squaring Amp Output

TP: P 401 Pin 7  
 VERT: 1V  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: VAR Phase Signal



TP: I401 Pin 10  
 VERT: 1V  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: Chopped VAR Phase, D-Bar Centered.

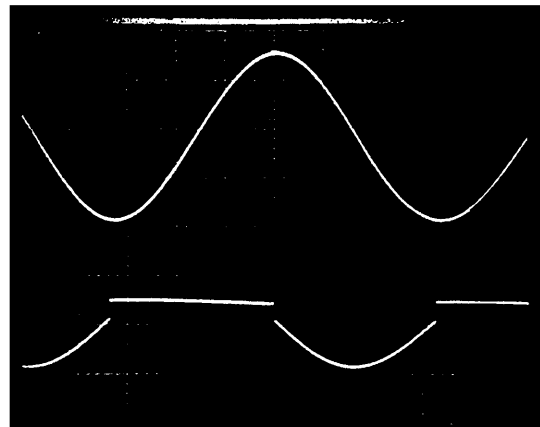
TP: P401 Pin 7  
 VERT: 1V  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: VAR Phase Signal



TP: 402  
 VERT: 1V  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: 90° Phase Shifter Output

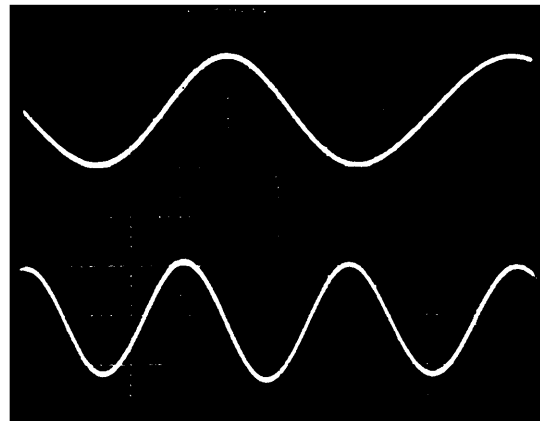
FIGURE 5-3 Waveforms KI 203, KI 204 (Sheet 2 of 3)

TP: P401 Pin 7  
 VERT: 1V  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: VAR Phase Signal



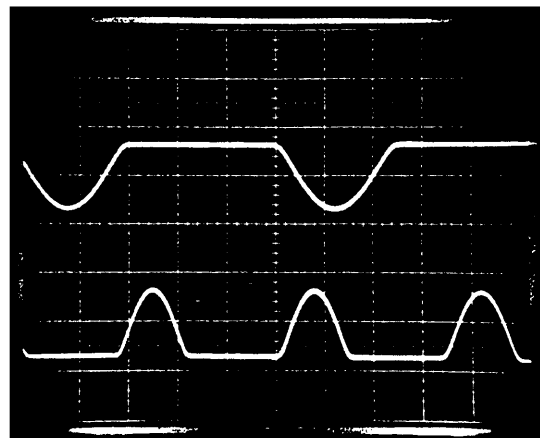
TP: I401 Pin 1  
 VERT: 1V  
 HORIZ: 5ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: Chopped To-From Signal

TP: I301 Pin 8  
 VERT: 1V  
 HORIZ: 2ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: 90Hz BPF Output



TP: I301 Pin 7  
 VERT: 1V  
 HORIZ: 2ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: 150Hz BPF Output

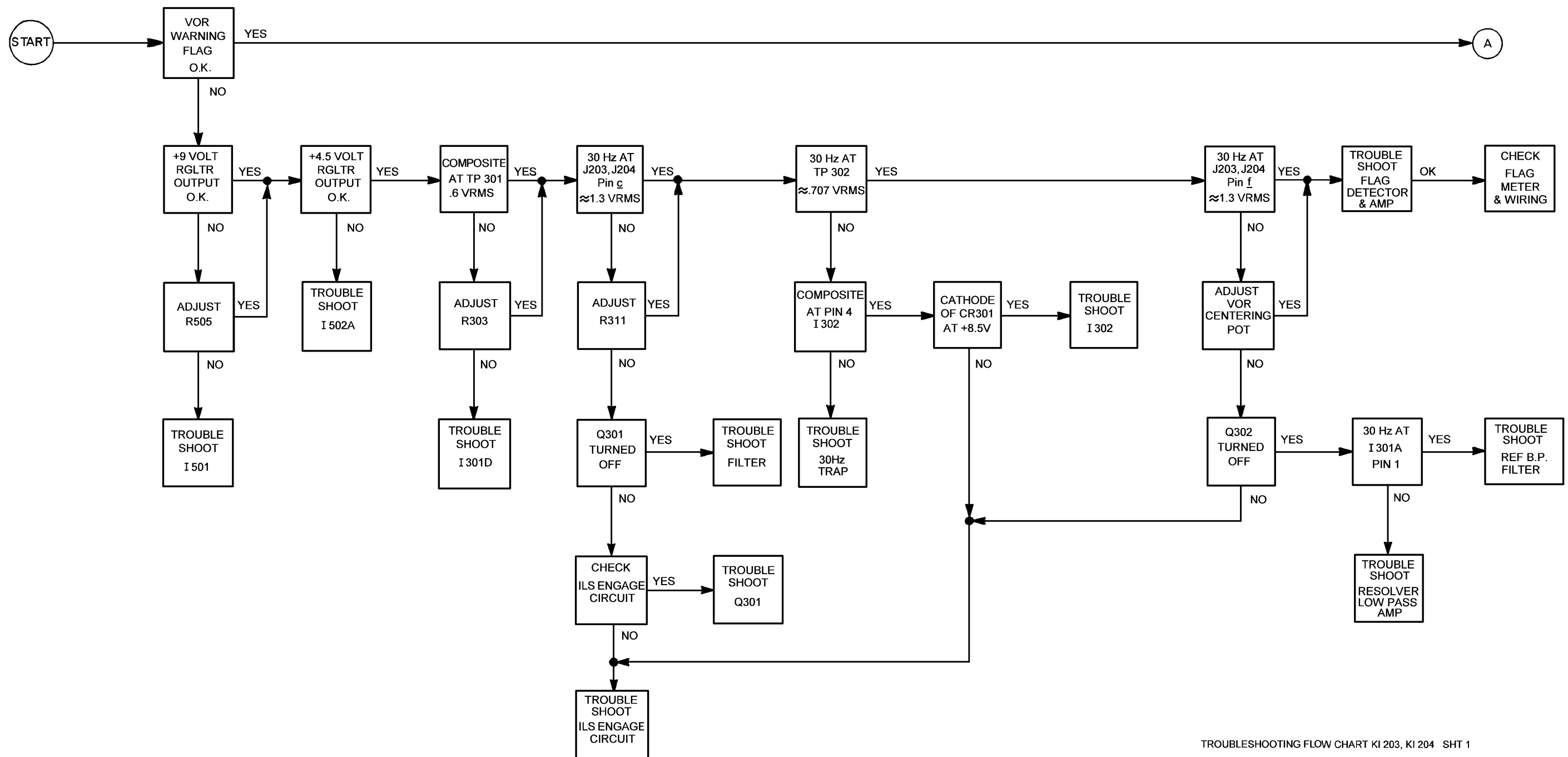
TP: CR401 Anode  
 VERT: .5V  
 HORIZ: 2ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: LOC Deviation Detector  
 90Hz signal only



TP: CR404 Cathode  
 VERT: .5V  
 HORIZ: 2ms  
 COUPL: AC  
 SYNC: Ch 1  
 DESC: LOC Deviation Detector  
 150Hz Signal only

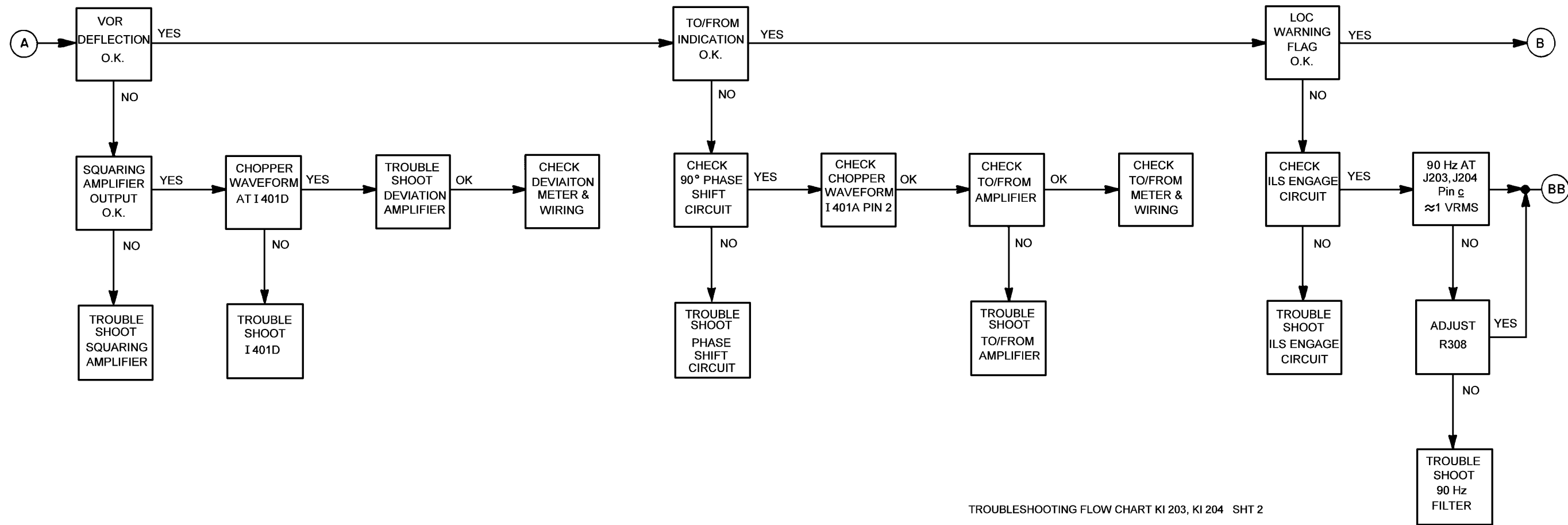
FIGURE 5-3 Waveforms KI 203, KI 204 (Sheet 3 of 3)

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TROUBLESHOOTING FLOW CHART KI 203, KI 204 SHT 1

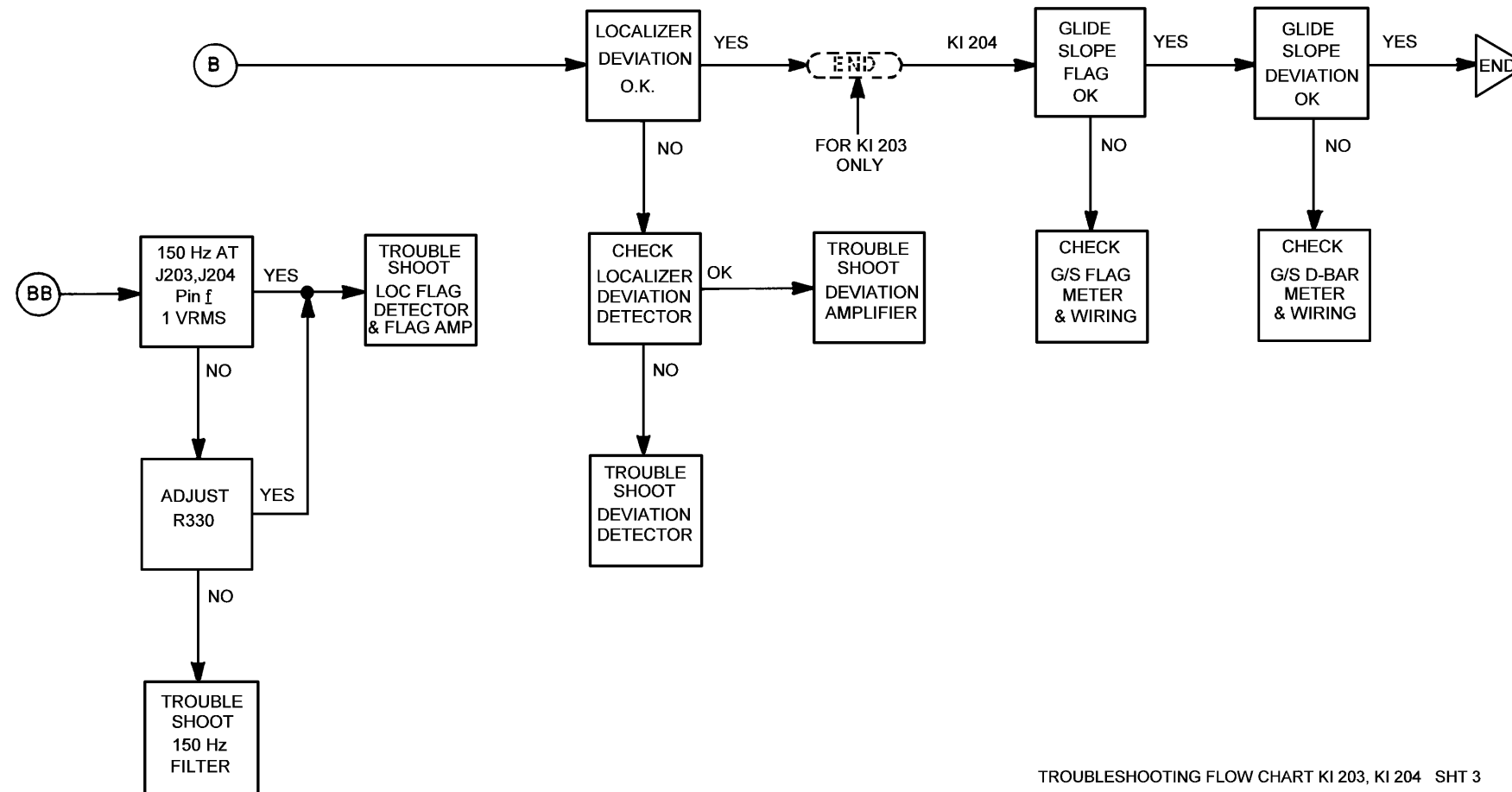
FIGURE 5-4 Troubleshooting Flow Chart KI 203, KI 204 (Sheet 1 of 3)



TROUBLESHOOTING FLOW CHART KI 203, KI 204 SHT 2

FIGURE 5-4 Troubleshooting Flow Chart KI 203, KI 204 (Sheet 2 of 3)





TROUBLESHOOTING FLOW CHART KI 203, KI 204 SHT 3

FIGURE 5-4 Troubleshooting Flow Chart KI 203, KI 204 (Sheet 3 of 3)

## SECTION VI ILLUSTRATED PARTS LIST

### 6.1 INTRODUCTION

The Illustrated Parts List (IPL) contains parts lists of assemblies and discrete components required for the unit. The IPL provides the proper identification and part number of each replacement part. The IPL starts with the top assembly and continues in sequence with the sub-assembly parts lists. Mechanical parts are grouped separately from electrical parts on each sub-assembly parts list. Each parts list is followed by the assembly drawing for that assembly. Parts lists may also be called “bills of material” or “BOM.” Parts identified in this IPL meet design specifications for this equipment and are recommended replacement parts. Warranty information concerning replacement parts is contained in Service Memo #1, P/N 600-08001-00XX.

### 6.2 BILL OF MATERIAL DESCRIPTION

This section describes the various items that may appear on parts lists. Refer to [figure 6-0](#) for the parts list format.

#### 6.2.1 PARTS LIST (ASSEMBLY) NUMBER

Each parts list is labeled with the assembly part number at the top of the list. The assembly number is followed by the assembly description and the revision level of the parts list.

#### 6.2.2 SYMBOL COLUMN

The symbol column contains the reference designators of electrical components on the assembly. Some mechanical parts and assembly supplies may be assigned the ITM designator. Reference documents may be assigned the REF designator. The reference designator contains a letter abbreviation to indicate the type of component, and the sequence number assigned to that part (C101, Q101, etc.). Common reference designator abbreviations are listed in table 6-1.

Table 6-1: Reference Designator Abbreviations

B	Motor, Synchro
C	Capacitor
CF	Capacitor Filter
CJ	Circuit Jumper
CQ	Capacitor
CR	Diode
D	Diode
DS	Lamp
E	Terminal, Connect Point
F	Fuse

Table 6-1: Reference Designator Abbreviations

FB	Ferrite Bead
FL	Filter
FT	Feedthru
I	Integrated Circuit
ITM	Item (Non-electrical)
J	Jack, Fixed Connector
K	Relay
L	Inductor
M	Meter, Transistor
MX	Mixer
P	Plug, Removable Connector
Q	Transistor
R	Resistor
REF	Reference Document
RP	Resistor Network
RT	Thermistor
RV	Varistor
S	Switch
SK	Socket
SW	Switch
T	Transformer
TJ	Terminal Jack
TP	Test Point
U	Integrated Circuit, Circuit Assembly, Component Network (Resistor, Capacitor, Inductor, Transistor, Diode)
V	Photocell, Vacuum Tube, Varistor
WG	Waveguide
Y	Crystal

6.2.3 PART NUMBER COLUMN

The part number column contains the Honeywell part number for each part. Special purpose part number series may appear in the parts list and are described below.

6.2.3.1 U401 122-XXXXX-9999 PLACE HOLDER

Circuit U401 is a programmed device with a -9999 place holder. Its true part number is contained on the next higher 125- P/N or 126- P/N software configuration. Refer to [Section 6.3](#), Software Documentation, in this introduction, for a description of the software documentation system.

6.2.3.2 U402 999-09999-0090 REF SFTWARE SET

Circuit U402 is a programmed device. Its true part number is contained on the next higher 125- P/N or 126- P/N software configuration. Refer to [Section 6.3](#), Software Documentation, in this introduction, for a description of the software documentation system.

6.2.3.3 CR401 999-09999-0096 RESERVED

Reference designator CR401 has been reserved for future use. The assembly does not currently include a CR401.

6.2.3.4 CR401 999-09999-0097 SEE NEXT ASSEMBLY

Diode CR401 is a part of the electrical circuit, but due to assembly or testing requirements, is actually assigned to the next assembly.

6.2.3.5 CR401 999-09999-0098 NOT USED

Reference designator CR401 is available for future assignment. The assembly does not currently include a CR401.

6.2.3.6 CR401 999-09999-0099 DO NOT USE

Reference designator CR401 has been previously used on this assembly and later deleted. It may not be reassigned on this assembly.

6.2.4 FIND\_NO COLUMN

This column lists the find (item) number of a part. Find numbers of mechanical parts may appear on the assembly drawing. Find numbers of electrical parts do not appear on the assembly drawing. Find numbers are not assigned to every part and missing information in this column is not an error.

6.2.5 DESCRIPTION COLUMN

This column describes each part in the assembly. Common abbreviations in the description column are listed in table 6-2.

Table 6-2: Description Abbreviations

A	Ampere
ADC	Analog to Digital Converter
ADJ	Adjustable
AL, ALUM	Aluminum

Table 6-2: Description Abbreviations

AMP	Ampere, Amplifier
ANT	Antenna
ASSY	Assembly
BD	Board
BI	Two
BIFLR	Bifilar
BLK	Black
BLU	Blue
BOM	Bill of Material (= Parts List)
BRN	Brown
CA	Cable
CC	Carbon Composite
CF	Carbon Film
CH	Chip, Choke
CAP	Capacitor
CER, CR	Ceramic
CKT	Circuit
CNTCT	Contact
CONN	Connector
CVR	Cover
DAC	Digital to Analog Converter
DBL	Double
DC	Disc Ceramic
DIO	Diode
DPDT	Double Pole Double Throw
DPST	Double Pole Single Throw
DUAL, DUO	Two
DWG	Drawing
EL	Electrolytic
EW	Eighth Watt

Table 6-2: Description Abbreviations

FC	Fixed Composition
FERR	Ferrite
FET	Field Effect Transistor
FHP	Flat Head Phillips
FLTR	Filter
FREQ	Frequency
FT	Feedthru
GHZ	Gigahertz
GND	Ground
GRN	Green
GRY	Gray
HDR	Header
HDW	Hardware
HEX	Six
HF	High Frequency
HV	High Voltage
HW	Half Watt
H/W	Hardware
IC	Integrated Circuit
ID, IDT	Identification
IF	Intermediate Frequency
IND	Inductor
INTER	Interconnect
INTL	Internal
I/O	In/Out
ITM	Item
KHZ	Kilohertz
LCK, LK	Lock
LED	Light Emitting Diode
LSI	Large Scale Integrated Circuit

Table 6-2: Description Abbreviations

MA	Milliamp
MC	Monolithic Ceramic
MF	Microfarad
MH	Millihenry
MHZ	Megahertz
MOD	Modification
MOS	Metal Oxide Semiconductor
MPS	Minimum Performance Specification
MY	Mylar
NF	Nanofarad
NPN	Negative-Positive-Negative transistor type
OCTAL	Eight
OP AMP	Operational Amplifier
ORG, ORN	Orange
OSC	Oscillator
PA	Power Amplifier
PC	Polycarbonate, Printed Circuit
PCB, PCBD	Printed Circuit Board
PENTA	Five
PF	Precision Film, Picofarad
PHP	Pan Head Phillips
PKG	Package
P/L	Parts List
PLD	Programmable Logic Device
PLL	Phase-Locked Loop
PLT	Plate
P/N	Part Number
PNP	Positive-Negative-Positive transistor type
POS	Positive, Position
PP	Paper

Table 6-2: Description Abbreviations

PRGA	Programmable Gate Array
PROM	Programmable Read Only Memory
PS	Polystyrene, Power Supply
PWR	Power
QUAD	Four
QW	Quarter Watt
RAM	Random Access Memory
RCVR	Receiver
RECPT	Receptacle
REF	Reference
REG	Regulator
RES	Resistor
RF	Radio Frequency
ROM	Read Only Memory
RX	Receive, Receiver
S	Silicon
SCH	Schematic
SCR	Screw
SFTWR	Software
SM	Silver Mica, Surface Mount
SMD	Surface Mount Device
SMT	Surface Mount Technology
S/N	Serial Number
SO, SOT	Small Outline
SPDT	Single Pole Double Throw
SPST	Single Pole Single Throw
SRAM	Synchronous Random Access Memory
STDF	Standoff
SW	Switch
S/W	Software



Table 6-2: Description Abbreviations

SYN	Synthesizer
SYNC	Synchronizer
SYS	System
TCXO	Temperature Controlled Crystal Oscillator
TERM	Terminal
TN	Tantalum
TP	Test Point
TRI	Three
TRML	Terminal
TRNSB	Tranorber
TST PT	Test Point
TURR	Turret
TW	Tenth Watt
TX	Transmit, Transmitter
U	Integrated Circuit
UA	Microamp
UF	Microfarad
UH	Microhenry
UHF	Ultra High Frequency
UP	Microprocessor
V	Volt
VA, VAR	Variable
VCO	Voltage Controlled Oscillator
VIO	Violet
VHF	Very High Frequency
VLT	Voltage
W	Watt
W/	With, Width
WHT	White
WW	Wire Wound

Table 6-2: Description Abbreviations

WX	Weather
XFMR	Transformer
XMIT	Transmit, Transmitter
XSTR	Transistor
XTAL	Crystal
YEL	Yellow
Z	Zener

### 6.2.6 ASSEMBLY (A) COLUMN

An "A" in this column indicates that the part is a sub-assembly. Each sub-assembly has a separate parts lists following the parent assembly. If the sub-assembly is a "COMMON BOM" with a -9900, -0099, or -9999 suffix, the parts for that common assembly are included in the parent assembly parts list as a separate column.

### 6.2.7 UNIT OF MEASURE (UM) COLUMN

This column indicates the unit of measure for each part. Common abbreviations found in this column are listed in table 6-3.

Table 6-3: Unit of Measure Abbreviations

AR	As Required
EA	Each
FT	Foot
IN	Inch
RF	Reference Only

### 6.2.8 VERSION AND QUANTITY COLUMN

Individual versions of an assembly are identified by the last four digits of the P/N. The quantity of parts for individual versions are listed in separate version columns -0000 through -9999. The parts indicated in -0099, -9900, or -9999 version columns are common to all versions of the assembly and constitute the "COMMON BOM." Versions may also be called "flavors" in parts lists. The terms are interchangeable.

## 6.3 SOFTWARE DOCUMENTATION

Not Applicable.

Figure 6-0, while closely related to a specific product, does not represent an exact configuration in use by that product. The example has been modified to clarify certain points.

Assy: 066-04020-0203 SG464 HSI W/O WX						
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm
	016-01008-0004	3	GLYPTAL 7526 BL	AR	1.00	
	016-01131-0000	1	CNTCT CMT BND 1055	AR	1.00	
	047-02579-0002	2	HANDLE ASSEMBLY	EA	1.00	
	" "	"	" " " "	"	"	"
	047-09392-0001	0	SPACER RT W/FIN	EA	1.00	
	057-02203-0002	3	FLAVOR STCKR	EA	1.00	
	057-02203-0003	3	FLAVOR STCKR	EA	1.00	
	057-05286-0000	0	SERIAL TAG SG 464	EA	1.00	
	075-05082-0002	0	GUIDE PLATE TOP	EA	1.00	
	" "	"	" " " "	"	"	"
	090-00277-0000	1	HOLD DOWN BRACKET	EA	1.00	
	155-02536-0001	1	CABLE ASSY	EA	1.00	
	200-07703-0000	2	DPX CONN BD ASSY	EA	1.00	
	200-07704-0000	8	LV PS BD ASSY	EA	1.00	
	206-00118-0301	0	EFS40/50 HSI SET	EA	1.00	<--- A
Assy: 206-00118-0301 EFS40/50 HSI SET						
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm
	057-05287-0301	0	SW MOD TAG	EA	1.00	
	205-00564-0002	0	EFIS 40/50 I/O PBS	EA	1.00	
	205-00565-0004	0	E40/50 HSI P/D PBS	EA	1.00	<--- B
Assy: 205-00565-0004 E40/50 HSI P/D PBS						
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm
	057-02241-0016	1	IDENT LABEL	EA	1.00	
	057-05252-0565	1	IDT 205-00565-0000	EA	1.00	
	125-00602-0004	0	EFIS 40/50 NAV SDS	EA	1.00	<--- C1
	125-00603-0002	0	EFIS40/50 DSPL SDS	EA	1.00	<--- C2
	126-00019-0000	1	EFS40/50 CLIPPER	EA	1.00	<--- C3
	200-07706-0000	1	PRCSR/DSPL BD ASSY	EA	1.00	

Figure 6-0 Sample Parts List  
(Sheet 1 of 4)

Assy: 200-07706-0000 PRCSR/DSPL BD ASSY							
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm	
	009-07706-0000	0	PC BD PRCSR/DSPL	EA	1.00		
	" "	"	" " " "	"	"		
	150-00004-0010	3	TUBING TFLN 22AWG	IN	2.00		
	200-04969-0000	0	EXT BD PRCSR/ADI A	RF	0.00		
	126-00005-0000	1	EFS40/50 INT LOGIC	EA	1.00	<--- D1	
	126-00006-0000	1	EFS40/50 VIDEO MUX	EA	1.00	<--- D2	
	126-00017-0000	1	EFS40/50 SM SET	EA	1.00	<--- D3	
	126-00018-0000	1	EFS40/50 SINE SET	EA	1.00	<--- D4	
C 5001	111-02104-0042	26	CAP MC100KPF50V20%	EA	1.00		
	" "	"	" " " "	"	"		
I 5005	122-30001-9999	0	EFS40/50 VIDEO MUX	RF	0.00	<--- D5	
I 5008	122-30002-9999	0	EFS40/50 INT LOGIC	RF	0.00	<--- D6	
	" "	"	" " " "	"	"		
I 5036	122-30003-9999	0	EFS40/50 SM HIGH	RF	0.00	<--- D7	
I 5037	122-30004-9999	0	EFS40/50 SM LOW	RF	0.00	<--- D8	
I 5038	122-30005-9999	0	EFS40/50 SINE HIGH	RF	0.00	<--- D9	
I 5039	122-30006-9999	0	EFS40/50 SINE LOW	RF	0.00	<--- D10	
	" "	"	" " " "	"	"		
I 5075	122-00958-9999	0	EFS40/50 CLIPPER	RF	0.00	<--- D11	
	" "	"	" " " "	"	"		
I 5138	122-00918-9999	0	EFS40/50 HSI NAV-E	RF	0.00	<--- D12	
I 5139	122-00919-9999	0	EFS40/50 HSI NAV-O	RF	0.00	<--- D13	
	" "	"	" " " "	"	"		
I 5158	122-00920-9999	0	EFS40/50 HSI DSP-E	RF	0.00	<--- D14	
I 5159	122-00921-9999	0	EFS40/50 HSI DSP-O	RF	0.00	<--- D15	
	" "	"	" " " "	"	"		
Assy: 126-00005-0000 EFS40/50 INT LOGIC							
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm	
	122-30002-0000	0	EFS40/50 INT LOGIC	EA	1.00		
Assy: 122-30002-0000 EFS40/50 INT LOGIC							
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm	
	120-02376-0000	1	EPLD EP320 (OTP)	EA	1.00		
Assy: 125-00602-0004 EFIS 40/50 NAV SDS							
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm	
	122-00918-0004	0	EFS40/50 HSI NAV-E	EA	1.00		
	122-00919-0004	0	EFS40/50 HSI NAV-O	EA	1.00		
Assy: 125-00603-0002 EFIS40/50 DSPL SDS							
Symbol	Part Number	Rev	Description	UM	Quantity	BxItm	
	122-00920-0002	0	EFS40/50 HSI DSP-E	EA	1.00		
	122-00921-0002	0	EFS40/50 HSI DSP-O	EA	1.00		

Figure 6-0 Sample Parts List  
(Sheet 2 of 4)

BOM NUMBER		200-08366-0000 MST67 IOP/DLP R: 2 MST0067A		200-08366-0000 MST67 IOP/DLP R: 2 MST0067A		ASSEMBLY VERSION	
SYMBOL	PART NUMBER	DESCRIPTION	A	UM	0000	9900	
	009-08366-0000	PC BD IOP/DLP	A	EA	1.00	1.00	
	016-01040-0000	COATING TYPE AR		AR	1.00	1.00	
	033-00114-0021	SOCKET IC DIP 28C	A	EA	3.00	3.00	
	047-09680-0001	KEYING BRACKET	A	EA	3.00	3.00	
	090-00087-0000	CLIP CRYSTAL		EA	1.00	1.00	
PROGRAMMABLE DEVICE SET	092-05003-0015	EYELET .049		EA	2.00	2.00	
	126-00030-0000	MST67A ASIC SFTWR	A	EA	1.00	1.00	
C 9001	106-04104-0047	CH 100KX7R/50V		EA	1.00	1.00	
C 9002	106-04104-0047	CH 100KX7R/50V		EA	1.00	1.00	
C 9003	106-04104-0047	CH 100KX7R/50V		EA	1.00	1.00	
CR 9001	007-06180-0000	DIO SW MMBD6050		EA	1.00	1.00	
CR 9002	007-08092-0000	QUAD SD DIODE		EA	1.00	1.00	
CR 9003	007-08092-0000	QUAD SD DIODE		EA	1.00	1.00	
DS 9001	007-06408-0000	CDM CATH 7 SEG LED		EA	1.00	1.00	
J 9002	030-02174-0000	PIN CONT		EA	50.00	1.00	
P 9003	155-02688-0003	RIBBON CABLE ASSY	A	EA	1.00	1.00	UNIT OF MEASURE
Q 9003	007-00065-0001	XSTR 2N3906 (SDT)		EA	1.00	1.00	
Q 9006	007-00383-0004	SDT-23 2N2222A XST		EA	1.00	1.00	
Q 9011	007-00530-0000	XSTR NPN MMBT3903	A	EA	1.00	1.00	
R 9001	130-05104-0023	RES CH 100K EW 5%		EA	1.00	1.00	QUANTITY
R 9002	015-00207-0020	OCTAL SD RESISTOR		EA	1.00	1.00	
R 9003	130-05472-0023	RES CHIP 4.7KEW5%		EA	1.00	1.00	
R 9004	130-05471-0023	RES CHIP 470EW5%		EA	1.00	1.00	
R 9005	130-05104-0023	RES CH 100K EW 5%		EA	1.00	1.00	
R 9006	130-05104-0023	RES CH 100K EW 5%		EA	1.00	1.00	
R 9007	130-05000-0025	RES CHIP 0 EW CJ		EA	1.00	1.00	
TP 9001	008-00096-0001	TERMINAL TEST PNT		EA	1.00	1.00	
TP 9002	008-00096-0001	TERMINAL TEST PNT		EA	1.00	1.00	
U 9001	120-02208-0004	UPRGSSR 10MHZ16B.T	A	EA	1.00	1.00	
U 9002	120-06129-0009	6264-15 8K X 8 RAM		EA	1.00	1.00	
U 9003	120-06129-0009	6264-15 8K X 8 RAM		EA	1.00	1.00	
U 9004	122-01195-9999	*MST67 PRGMD ODD	A	RF	X.		
U 9005	122-01194-9999	*MST67 PRGMD EVEN	A	RF	X.		
U 9006	124-00574-0003	IC 74HC1574		EA	1.00	1.00	
U 9007	123-00138-0003	74HC138 SD PKG		EA	1.00	1.00	
Y 9001	044-00009-0019	XTAL 14.75MHZ		EA	1.00	1.00	
Y 9002	044-00293-0000	20 MHZ OSC		EA	1.00	1.00	

Figure 6-0 Sample Parts List  
(Sheet 3 of 4)

BOM NUMBER/DESCRIPTION/REVISION

DESCRIPTION

ASSEMBLY VERSION

200-09229-0000 GP BOARD, FPD500 REV 4

SYMBOL	PART NUMBER	FIND NO	DESCRIPTION	UM	Q000
C2001	106-04224-0047		CAP CHIP .22UF X7R	EA	1.00
C2002	106-04224-0047		CAP CHIP .22UF X7R	EA	1.00
C2003	106-04224-0047		CAP CHIP .22UF X7R	EA	1.00
R2038	139-03241-0000		RES CH 3.25K EW 1%	EA	1.00
R2039	139-02430-0000		RES CH 243 EW 1%	EA	1.00
R2040	139-00750-0000		RES CH 75.0 EW 1%	EA	1.00
TP2001	008-00309-0000		TEST POINT SURF MN	EA	1.00
TP2002	008-00309-0000		TEST POINT SURF MN	EA	1.00
U2005	12051354-0001		PP-IC,UPD482234G5-	EA	1.00
U2006	12051354-0001		PP-IC,UPD482234G5-	EA	1.00
U2021	12061010-0001		SI-IC,MEMORY CNTLR	EA	1.00
U2022	12061014-0001		SI-IC,DSP.CONTROLL	EA	1.00
Y2001	04416054-0015		XTAL OSC,36.000MHZ	EA	1.00
Y2002	04416054-0014		XTAL OSC,20.000MHZ	EA	1.00
	002-09229-0000		GP BOARD	RF	0.00
	009-09229-0000	1	GP BOARD	EA	1.00
	01243055-0001	2	INSULATOR,THERMAL	EA	3.00
	01250068-0001	3	SPACER, HEADER	EA	6.00
	016-01040-0000		COATING TYPE AR	AR	1.00
	016-01442-0000	4	E-6000 CLEAR SEALA	AR	1.00
	192-09229-0000		GP BOARD	RF	0.00
	300-09229-0000		GP BOARD, FPD500	RF	0.00
	34050-0084	6	SPACER,THD'D	EA	2.00
	46086-0007	5	SCREW,CAPTIVE,4-40	EA	3.00

UNIT OF MEASURE

QUANTITY

REFEERENCE DESIGNATOR

PART NUMBER

FIND NUMBER

Figure 6-0 Sample Parts List  
(Sheet 4 of 4)

THIS PAGE RESERVED

6.4 ILLUSTRATED PARTS LIST

BOM 1: KI 203, KI 204 Navigation Indicator

066-3034-00	KI203 OBI BLK	REV 30
066-3034-01	KI203 OBI BLK SYNC	REV 30
066-3034-02	KI204 OBI BLK GS	REV 30
066-3034-03	KI204 OBI BLK GS/SYNC	REV 30
066-3034-18	KI204 OBI BLK GS/5V	REV 2
066-3034-19	KI204 OBI BLK GS/5V/SYNC	REV 2
066-3034-20	KI204 OBI GRY GS	REV 2
066-3034-21	KI204 OBI GRY GS/SYNC	REV 2
066-3034-22	KI204 OBI GRY GS/5V	REV 2
066-3034-23	KI204 OBI GRY GS/5V/SYNC	REV 2

				KI203	KI203	KI204	KI204	KI204	KI204	KI204	KI204	KI204	KI204	KI204
SYMBOL	PART NUMBER	FIND_NO	DESCRIPTION	UM	-00	-01	-02	-03	-18	-19	-20	-21	-22	-23
	195-00006-0000		KI203 ASSY	EA	1	-	-	-	-	-	-	-	-	-
	195-00006-0001		KI203 ASSY/SYNC	EA	-	1	-	-	-	-	-	-	-	-
	195-00006-0002		KI204 ASSY	EA	-	-	1	-	-	-	-	-	-	-
	195-00006-0003		KI204 ASSY/SYNC	EA	-	-	-	1	-	-	-	-	-	-
	195-00006-0018		KI204 ASSY/BLK/5V	EA	-	-	-	-	1	-	-	-	-	-
	195-00006-0019		KI204 ASY/SYNC/B/5V	EA	-	-	-	-	-	1	-	-	-	-
	195-00006-0020		KI204 ASSY/GRY	EA	-	-	-	-	-	-	1	-	-	-
	195-00006-0021		KI204 ASSY/SYNC/GRY	EA	-	-	-	-	-	-	-	1	-	-
	195-00006-0022		KI204 ASSY/GRY/5V	EA	-	-	-	-	-	-	-	-	1	-
	195-00006-0023		KI204 ASY/SYNC/GRY/5V	EA	-	-	-	-	-	-	-	-	-	1
REF1	155-05225-0000		INSTALL KI202/3/4/6/7	RF	X	X	X	X	X	X	X	X	X	X
REF2	002-00360-0000		INTERNAL WIRING SET	RF	X	X	X	X	X	X	X	X	X	X



THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY

NAME: FINAL ASSY SN 10,000 & UP UNIT: KI 0202,203,204, ASSY NO: 066-3034-00/08  
0206,207

SYMBOL	PART NUMBER	DESCRIPTION	CODE	QUANTITY									
				-00	-01	-02	-03	-04	-05	-06	-07	-08	
	066-3034-00	KI 203 ASSEMBLY		X									
	066-3034-01	KI 203 ASSY/SYNCHRO			X								
	066-3034-02	KI 204 ASSEMBLY				X							
	066-3034-03	KI 204 ASSY/SYNCHRO					X						
	066-3034-04	KI 206 ASSEMBLY						X					
	066-3034-05	KI 206 ASSY/SYNCHRO							X				
	066-3034-06	KI 207 ASSEMBLY								X			
	066-3034-07	KI 202 ASSEMBLY									X		
	066-3034-08	KI 202 ASSY/SYNCHRO										X	
	012-1005-02	MYLAR TAPE TRANS		.17	.17	.17	.17	0	0	0	0	0	0
	012-1005-05	MYLAR TAPE TRANS		.12	.12	.12	.12	0	0	0	0	0	0
	012-1006-00	NYLON LAC TAPE NAT		AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
	016-1096-00	LOCKTITE SUPERBOND		AR	AR	AR	AR	AR	AR	0	AR	AR	AR
	023-0128-00	5 METER PKG		0	0	1	1	1	1	1	0	0	0
	023-0130-00	3 METER PKG		1	1	0	0	0	0	0	1	1	1
	025-0018-89	WIRE 26AWG GRY/WHT		.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
	025-0018-69	WIRE 26AWG BLU/WHT		.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
	025-0018-79	WIRE 26AWG VIO/WHT		.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
	025-0018-91	WIRE 26AWG WHT/BRN		.7	.7	.7	.7	0	0	0	0	0	0
	025-0018-93	WIRE 26AWG WHT/ORN		.5	.5	.5	.5	0	0	0	0	0	0
	025-0018-94	WIRE 26AWG WHT/YEL		.7	.7	.7	.7	0	0	0	0	0	0
	025-0018-97	WIRE 26AWG WHT/VIO		.5	.5	.5	.5	0	0	0	0	0	0
	029-0387-01	GEAR 110T (.090)		0	1	0	1	0	1	0	0	1	1
	029-0387-02	GEAR 110T (.120)		1	1	1	1	1	1	0	1	1	1
	029-0388-00	GEAR IDLER TRANSFR		1	1	1	1	1	1	0	1	1	1
J206/7	030-2271-01	CONN (W/HARDWARE)		0	0	0	0	1	1	1	1	1	1
	047-4809-01	CHAS R KI206/7/2		0	0	0	0	1	1	1	1	1	1
	047-3798-01	COV DST KI206/7/2		0	0	0	0	1	1	1	1	1	1
	047-3799-01	COV DST KI203/204		1	1	1	1	0	0	0	0	0	0
	047-3805-01	CHAS L KI206/7/2		0	0	0	0	1	1	1	1	1	1

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NAME: FINAL ASSY SN 10,000 & UP UNIT: KI 0202,203,204, ASSY NO: 066-3034-00/08  
0206,207

SYMBOL	PART NUMBER	DESCRIPTION	CODE	QUANTITY										
				-00	-01	-02	-03	-04	-05	-06	-07	-08		
	047-3870-01	COVER DUST		1	1	1	1	0	0	0	0	0	0	0
	047-3871-01	COVER DUST		1	1	1	1	0	0	0	0	0	0	0
	047-3872-01	COVER DUST		0	0	0	0	1	1	1	1	1	1	1
	057-1831-00	CAUTION TAG		1	1	1	1	1	1	1	1	1	1	1
	057-2293-02	ID TAG(KI202)		0	0	0	0	0	0	0	0	1	1	1
	057-1755-02	ID TAG(KI203)		1	1	0	0	0	0	0	0	0	0	0
	057-1756-02	ID TAG (KI204)		0	0	1	1	0	0	0	0	0	0	0
	057-1757-02	ID TAG (KI206)		0	0	0	0	1	1	0	0	0	0	0
	057-1766-02	ID TAG (KI207)		0	0	0	0	0	0	1	0	0	0	0
	073-0034-00	MOUNTING LUG		0	2	0	2	0	2	0	0	0	2	2
	073-0034-01	MOUNTING LUG		3	3	3	3	3	2	2	2	2	2	2
	076-0760-01	SPACER		1	1	1	1	0	0	0	0	0	0	0
	088-0697-01	KNOB (OBS)		1	1	1	1	1	1	0	1	1	1	1
	088-0630-00	PLATE REAR MTG		0	0	0	0	1	1	1	1	1	1	1
	088-0637-00	BUSHING RESOLVER		1	1	1	1	0	0	0	0	0	0	0
	088-0676-00	RETAINER		2	2	2	2	0	0	0	0	0	0	0
	088-0804-02	FRAME		1	1	1	1	1	1	1	1	1	1	1
	089-5903-05	SCR PHP 4-40X5/16		4	4	4	4	4	4	4	4	4	4	4
	089-6004-02	SCR FHP 2-56X1/8		7	7	7	7	2	2	2	2	2	2	2
	089-6004-04	SCR FHP 2-56X1/4		1	1	1	1	0	0	0	0	0	0	0
	089-6024-05	SCR SHC 4-40X5/16		0	0	0	0	2	2	0	2	2	2	2
	089-6024-07	SCR SHC 4-40X7/16		3	3	3	3	0	0	0	0	0	0	0
	089-6141-06	SCR SET 4-40X3/16		2	4	2	4	2	4	0	2	4	4	4
	089-6167-12	SCR FHP 6-32X3/4		3	3	3	3	3	3	3	3	3	3	3
	089-6218-06	SCR SET 4-40X3/16		2	2	2	2	2	2	0	2	2	2	2
	089-6024-04	SCR SHC 4-40X1/4		0	2	0	2	0	2	0	0	0	2	2
	089-6484-04	SCR FHP 2-28X1/4		2	2	2	2	4	4	4	4	4	4	4
	089-6299-04	SCR FHP 4-40X1/4TT		0	0	0	0	2	2	2	2	2	2	2
	089-6414-04	SCR PHP 2-28X1/4		9	9	9	9	9	9	9	9	9	9	9
	089-6414-06	SCR PHP 2-28X3/8		2	2	2	2	0	0	0	0	0	0	0
	089-8023-30	WASHER FLAT		2	2	2	2	0	0	0	0	0	0	0
	089-8109-34	WASHER LOCK #4		7	9	7	9	6	8	4	6	8	8	8
	150-0018-10	TUBING SHRINK		.1	.1	.1	.1	0	0	0	0	0	0	0
	150-0020-10	TUBING SHRINK		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	187-1129-00	P C BD DAMPER		1	1	1	1	0	0	0	0	0	0	0

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY

NAME: FINAL ASSY SN 10,000 & UP UNIT: KI 0202,203,204, ASSY NO: 066-3034-00/08  
0206,207

SYMBOL	PART NUMBER	DESCRIPTION	CODE	QUANTITY								
				-00	-01	-02	-03	-04	-05	-06	-07	-08
	200-1924-00	BEZEL ASSEMBLY		1	1	1	1	1	1	0	1	1
	200-1924-01	BEZEL ASSY (KI207)		0	0	0	0	0	0	1	0	0
	200-1925-00	F GR PLT KI203/204		1	1	1	1	0	0	0	0	0
	200-1925-01	F GR PLT KI206/202		0	0	0	0	1	1	0	1	1
	200-1925-02	F GR PLT KI207		0	0	0	0	0	0	1	0	0
	200-1928-01	CONV BD (KI203/204)		1	1	1	1	0	0	0	0	0
R101	133-0096-31	RES VARI 5K OHM VOR		2	2	2	2	0	0	0	0	0
	300-1965-00	ABOVE VOR RES ASSY		AR	AR	AR	AR	0	0	0	0	0
	300-1965-01	ABOVE LOC RES ASSY		AR	AR	AR	AR	0	0	0	0	0
B101	148-0003-00	RESOLVER		1	1	1	1	0	0	0	0	0
B102	148-0026-00	SYNCHRO CONT X FORM		0	1	0	1	0	1	0	0	1
B103	148-0005-00	RESOLVER		0	0	0	0	1	1	0	1	1

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NAME: FINAL ASSY SN 10,000 & UP  
 ASSY DWG: 300-1923-00/03  
 ENGR APPROVAL: MARK PEAVY  
 ASSY NO: 066-3034-00/08  
 UNIT: KI 0202,203,204, USED ON: 000-0175-00  
 KI 0206,207

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
7				
8				
9				
10				
KI203/204/206/207 MAINTENANCE MANUAL REVISION 0, APRIL 1976				
11			089-6004-02 089-6004-04 089-5115-12	QTY CHG FROM 8 ON FIRST 4 FLAVORS TO 7 ON EACH ADDED TO B/M ADDED TO B/M
12			088-0696-02 088-0697-01 089-6218-06	DELETED FROM B/M DESC CHG FROM INSERT (OBS) TO KNOB (OBS) QTY CHG FROM 1 ON EACH TO 2 ON EACH
13			089-6414-06 089-6414-04	ADDED TO B/M QTYS CHG FROM 6 ON -00 THRU -03 FLAVOR TO 4 ON EACH
14			089-6024-05 089-6024-07	QTY DELETED IN -00, -01, -02,-03 FLAVOR ADDED TO B/M
15			025-0018-89 029-0387-02	P/N CHG FROM 025-0018-09 QTY DELETED FROM -06 FLAVOR

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME: FINAL ASSY SN 10,000 & UP  
 ASSY DWG: 300-1923-00/03  
 ENGR APPROVAL: MARK PEAVY  
 ASSY NO: 066-3034-00/08  
 UNIT: KI 0202,203,204, USED ON: 000-0175-00  
 KI 0206,207

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
			029-0388-00	QTY DELETED FROM -06 FLAVOR
			057-1831-00	QTY DELETED FROM -04, 05,06 FLAVORS
16			057-1831-00	QTY ADDEED ON -04,05,06 FLAVORS
17			012-1005-05	ADDED TO B/M
18				-10/16 ADDED TO B/M
			047-4809-01	ADDED TO B/M
			200-1928-01	ADDED TO B/M
			023-0128-00	ADDED TO B/M
			023-0130-00	ADDED TO B/M
			088-0804-02	ADDED TO B/M
			076-0760-01	ADDED TO B/M
19			066-3034-00 THRU 066-3034-06	-10/16 FLAVORS CHG TO "ALTERNATE CONSTRUCTION S/N 10000+ -00/06", OLD -00/06 TITLED "UNITS PRIOR TO S/N 10000"
			057-1755-02	ADDED TO B/M
			057-1756-02	ADDED TO B/M
			057-1757-02	ADDED TO B/M
			057-1766-02	ADDED TO B/M
			089-6484-04	CHG ALT CONTS QTYS FROM 4,4,4,4,6,6,6, TO 2,2,2,2,4,4,4
			089-6414-04	CHG ALT CONTS QTYS FROM 4 TO 9 ON -00 THRU -06
20			089-6167-12	P/N CHG FROM 089-5115-12
21				202 ADDED TO UNIT
			066-3034-07	ADDED TO B/M
			066-3034-08	ADDED TO B/M
			057-2293-00	ADDED TO B/M, SN BELOW 10,000
			057-2293-02	ADDED TO B/M
				-07 AND -08 FLAVORS ADDED TO B/M
			089-6004-04	QTY ON -04,-05,-06 CHG FROM - TO 0
			089-6024-05	QTY ON -00,-01,-02,-03 CHG FROM - TO 0
				DELETED ASSY SN100,00 & UNDER FROM B/M
			047-3806-01	DELETED FROM B/M
			057-1755-00	DELETED FROM B/M
			057-1756-00	DELETED FROM B/M
			057-1757-00	DELETED FROM B/M
			057-1766-01	DELETED FROM B/M
			200-1926-00	DELETED FROM B/M
			200-1926-01	DELETED FROM B/M TWICE
			200-1928-00	DELETED FROM B/M
			133-0096-31	DELETED FROM B/M
				TYPED ON WORD PROCESSOR

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NAME: FINAL ASSY SN 10,000 & UP  
ASSY DWG: 300-1923-00/03

ENGR APPROVAL: MARK PEAVY  
ASSY NO: 066-3034-00/08  
UNIT: KI 0202,203,204, USED ON: 000-0175-00  
KI 0206,207

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
22				ASSY DWG NO CHG TO 300-1923-00/03
				KI 202/203/204/206/207 MAINTENANCE MANUAL REV. 1, SEPT., 1979

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NAME		ASSY. NO.																															
Final Assembly (S/N Below 10,000)		066-3034-00/06																															
KING RADIO CORP PARTS LISTING			CODE	QUANTITY																													
SYMBOL	PART NUMBER	DESCRIPTION		-00	01	-02	-03	-04	-05	-06	-07	-08	-09	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28	-29
	066-3034-00	KI 203 Assembly	X																														
	066-3034-01	KI 203 With Synchro		X																													
	066-3034-02	KI 204 Assembly			X																												
	066-3034-03	KI 204 With Synchro				X																											
	066-3034-04	KI 206 Assembly					X																										
	066-3034-05	KI 206 With Synchro						X																									
	066-3034-06	KI 207 Assembly							X																								
	012-1005-02	Mylar Tape, Transparent	.17	.17	.17	.17																											
	012-1006-00	Nylon Lacing Tape Nat.	AR	AR	AR	AR	AR	AR	AR	AR																							
	016-1096-00	Loctite SuperBonder 150	AR	AR	AR	AR	AR	AR	AR																								
	025-0018-09	Wire 26 AWG Blk/Wht	.7	.7	.7	.7	.7	.7	.7	.7																							
	025-0018-69	Wire 26 AWG Blu/Wht	.7	.7	.7	.7	.7	.7	.7	.7																							
	025-0018-79	Wire 26 AWG Vio/Wht	.7	.7	.7	.7	.7	.7	.7	.7																							
	029-0387-01	Gear 110T (.090)		1		1		1																									
	029-0387-02	Gear 110T (.120)	1	1	1	1	1	1	1	1																							
	029-0388-00	Gear Idler Transfer	1	1	1	1	1	1	1	1																							
206/7	030-2271-01	Conn (W/Hardware)					1	1	1																								
	047-3798-01	Cover Dust (KI 206, 207)					1	1	1																								
	047-3799-01	Cover Dust (KI 203, 204)	1	1	1	1																											
	047-3805-01	Chassis Left (KI 206, 207)					1	1	1																								
	047-3806-01	Chas Right (KI 206, 207)					1	1	1																								
	057-1831-00	Caution Tag	1	1	1	1	1	1	1	1																							
	057-1755-00	ID Tag (KI 203)	1	1																													
	057-1756-00	ID Tag (KI 204)			1	1																											
	057-1757-00	ID Tag (KI 206)					1	1																									
	057-1766-01	ID Tag (KI 207)								1																							
	073-0034-00	Mounting Lug		2		2		2																									
	073-0034-01	Mounting Lug	3	3	3	3	2	2																									
	088-0696-02	Knob	1	1	1	1	1	1	1																								
	088-0697-01	Insert (OBS)	1	1	1	1	1	1	1																								
	088-0630-00	Plate Rear Mtg.					1	1	1																								
	088-0637-00	Bushing, Resolver	1	1	1	1																											
	088-0676-00	Retainer	2	2	2	2																											
	089-5903-05	Screw PHP #4-40x5/16	4	4	4	4	4	4	4	4																							
	089-6004-02	Screw FHP #2-56x1/8	8	8	8	8	2	2	2																								
	089-6024-05	Screw SHC #4-40x5/16	3	3	3	3	2	2																									
	089-6141-06	Screw Set #4-40x3/16	2	4	2	4	2	4																									
	089-6218-06	Screw Set #4-40x3/16	1	1	1	1	1	1	1																								
	089-6024-04	Screw SHC #4-40x5/16		2		2		2																									



THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY

NAME			ASSY NO.																												
Final Assembly (S/N 10,000 & Below)			066-3034-00/06																												
KING RADIO CORP PARIS LISTING			QUANTITY																												
SYMBOL	PART NUMBER	DESCRIPTION	-01	-02	-03	-04	-05	-06	-07	-08	-09	-10	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	-21	-22	-23	-24	-25	-26	-27	-28	-29
	089-6484-04	Screw PHP #2-28x <sup>1</sup> / <sub>4</sub>	4	4	4	4	6	6	6																						
	089-6299-04	Screw PHP #4-40x <sup>1</sup> / <sub>4</sub> T. T.				2	2	2																							
	089-6414-04	Screw PHP #2-28x <sup>1</sup> / <sub>4</sub>	6	6	6	6	4	4	4																						
	089-8023-30	Washer Flat	2	2	2	2																									
	089-8109-34	Washer Lock #4	7	9	7	9	6	8	4																						
	150-0018-10	Tubing Shrink	.1	.1	.1	.1																									
	150-0020-10	Tubing Shrink	1.0	1.0	1.0	1.0	1.0	1.0	1.0																						
	200-1924-00	Bezel Assembly	1	1	1	1	1	1																							
	200-1924-01	Bezel Assembly (KI 207)						1																							
	200-1925-00	Frt Gear Plt (KI 203, 204)	1	1	1	1																									
	200-1925-01	Frt Gear Plt (KI 206)					1	1																							
	200-1925-02	Frt Gear Plt (KI 207)							1																						
	200-1926-00	Meter Assy (KI 203)	1	1																											
	200-1926-01	Meter Assy (KI 204, 206 207)				1	1	1	1																						
	200-1928-00	Conv Bd Assy (KI 203, 204)	1	1	1	1																									
R101	133-0096-31	Res Vari 5K ohm (VOR)	2	2	2	2																									
	300-1965-00	(Above VOR Resistor Assy)	Ref	Ref	Ref	Ref																									
R102	133-0096-31	Res Vari 5K ohm (LOC)	-	-	-	-																									
	300-1965-01	(Above LOC Resistor Assy)	Ref	Ref	Ref	Ref																									
B101	148-0003-00	Resolver	1	1	1	1																									
B102	148-0026-00	Synchro Cont. X Form		1		1		1																							
B103	148-0005-00	Resolver					1	1																							
	047-3870-01	Cover, Dust	1	1	1	1																									
	047-3871-01	Cover, Dust	1	1	1	1																									
	047-3872-01	Cover, Dust					1	1	1																						
	187 -1129-00	P. C. Board Damper	1	1	1	1																									
	025-0018-91	Wire 26 AWG Wht/Brn	.7	.7	.7	.7																									
	025-0018-93	Wire 26 AWG Wht/Orn	.5	.5	.5	.5																									
	025-0018-94	Wire 26 AWG Wht/Yel	.7	.7	.7	.7																									
	025-0018-97	Wire 26 AWG Wht/Vio	.5	.5	.5	.5																									

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PARTS LIST REVISION HISTORY				ENGR. APPROVAL
NAME			ASS'Y. NO.	
Final Assembly (S/N Below 10,000)			066-3034-00/06	
ASS'Y. DWG.		UNIT	USED ON	
300-1923-00/04		KI 203, 204, 206, 207	000-0175-00	
REV	CHANGE	SYMBOL	PART NUMBER	DESCRIPTION
8				
9				
10				
				KI 203/204/206/207 Maintenance Manual Revision 0, April 1976
				KI 202/203/204/206/207 Maintenance Manual, Rev. 1, September, 1979

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TABLE 6-4 Reference Assembly 195-00006-00XX

UNIT	UNIT PART NO.	REFERENCE ASSEMBLY	S/N 10,000 AND ABOVE	S/N 9,999 AND BELOW
KI 203	066-3034-00	195-00006-0000	200-01923-0000	200-01923-0050
KI 203	066-3034-01	195-00006-0001	200-01923-0001	200-01923-0051
KI 204	066-3034-02	195-00006-0002	200-01923-0002	200-01923-0052
KI 204	066-3034-03	195-00006-0003	200-01923-0003	200-01923-0053
KI 206	066-3034-04	195-00006-0004	200-01923-0004	200-01923-0054
KI 206	066-3034-05	195-00006-0005	200-01923-0005	200-01923-0055
KI 207	066-3034-06	195-00006-0006	200-01923-0006	200-01923-0056
KI 202	066-3034-07	195-00006-0007	200-01923-0007	200-01923-0057
KI 202	066-3034-08	195-00006-0008	200-01923-0008	200-01923-0058
KI 202	066-3034-09	195-00006-0009	200-01923-0009	200-01923-0059
KI 206	066-3034-10	195-00006-0010	200-01923-0010	200-01923-0060
KI 202	066-3034-11	195-00006-0011	200-01923-0011	200-01923-0061
KI 206	066-3034-12	195-00006-0012	200-01923-0012	200-01923-0062
KI 206	066-3034-13	195-00006-0013	200-01923-0013	200-01923-0063
KI 206	066-3034-14	195-00006-0014	200-01923-0014	200-01923-0064
KI 206	066-3034-15	195-00006-0015	200-01923-0015	200-01923-0065
KI 206	066-3034-16	195-00006-0016	200-01923-0016	200-01923-0066
KI 207	066-3034-17	195-00006-0017	200-01923-0017	200-01923-0067
KI 204	066-3034-18	195-00006-0018	200-01923-0018	200-01923-0068
KI 204	066-3034-19	195-00006-0019	200-01923-0019	200-01923-0069
KI 204	066-3034-20	195-00006-0020	200-01923-0020	200-01923-0070
KI 204	066-3034-21	195-00006-0021	200-01923-0021	200-01923-0071
KI 204	066-3034-22	195-00006-0022	200-01923-0022	200-01923-0072
KI 204	066-3034-23	195-00006-0023	200-01923-0023	200-01923-0073
KI 206	066-3034-24	195-00006-0024	200-01923-0024	200-01923-0074
KI 207	066-3034-25	195-00006-0025	200-01923-0025	N/A
KI 202	066-3034-26	195-00006-0026	200-01923-0026	200-01923-0061

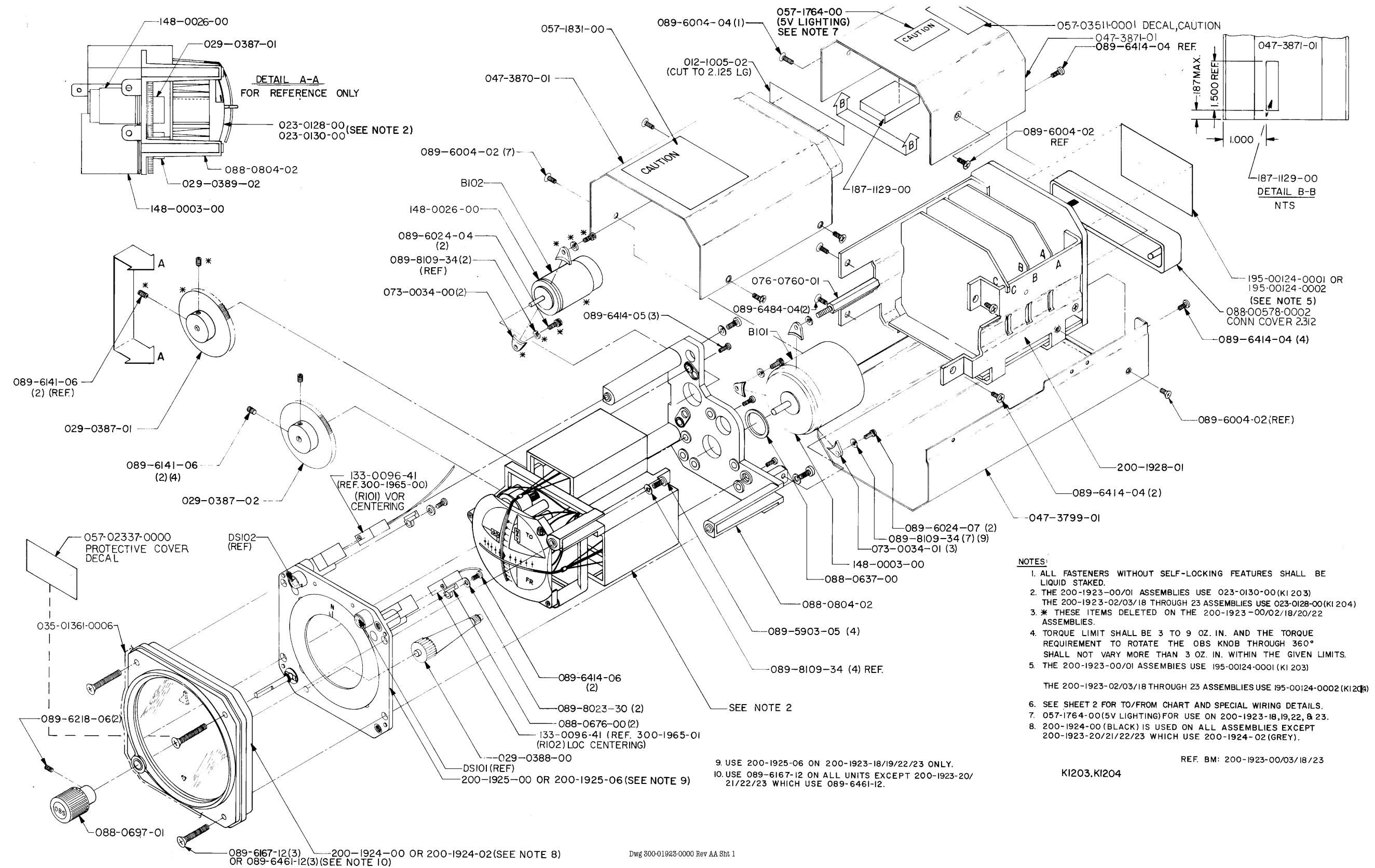
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BOM 2: Final Assembly KI 203, KI 204 (S/N 10,000 and Above)

200-01923-0000	KI203 IND 3 MTR	REV AB
200-01923-0001	KI203 IND 3 MTR SYN	REV AB
200-01923-0002	KI204 IND 5 MTR	REV AB
200-01923-0003	KI204 IND 5 MTR SYN	REV AB
200-01923-0018	KI204 IND 5 MTR 5V	REV AB
200-01923-0019	KI204 IND 5 MTR 5V SYN	REV AA
200-01923-0020	KI204 IND 5 MTR GRY	REV AA
200-01923-0021	KI204 IND 5 MTR GRY SYN	REV AA
200-01923-0022	KI204 IND 5 MTR GRY 5V	REV AB
200-01923-0023	KI204 IND 5 MTR GRY 5V SYN	REV AA

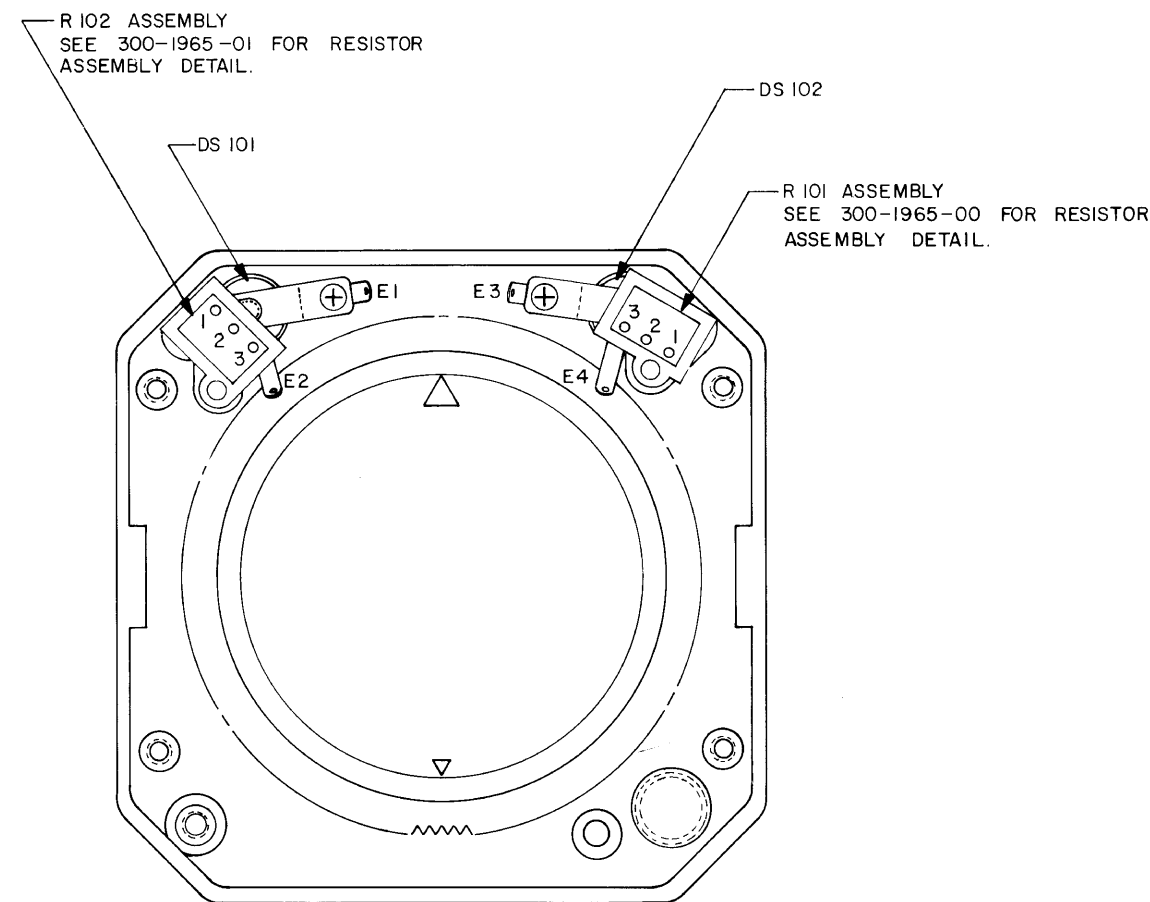
SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	KI203 -0000	KI203 -0001	KI204 -0002	KI204 -0003	KI204 -0018	KI204 -0019	KI204 -0020	KI204 -0021	KI204 -0022	KI204 -0023
	012-01005-0002		TAPE MYLAR .500 W	IN	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
	012-01006-0000		LACING CORD 18DR	AR	0	0	0	0	0	0	0	0	0	0
	016-01096-0000		SUPERBONDER 150	AR	-	-	-	-	0	0	0	0	-	0
	016-01140-0000		SUPERBONDER 415	AR	1	1	1	1	-	-	-	-	1	-
	023-00128-0000		5 METER PKG	EA	-	-	1	1	1	1	1	1	1	1
	023-00130-0000		3 METER PKG	EA	1	1	-	-	-	-	-	-	-	-
	025-00018-0069		WIRE 26 BU/WH	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
	025-00018-0079		WIRE 26 VI/WH	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
	025-00018-0089		WIRE 26 GY/WH	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
	025-00018-0091		WIRE 26 WH/BN	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
	025-00018-0093		WIRE 26 WH/OR	IN	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	025-00018-0094		WIRE 26 WH/YL	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
	025-00018-0097		WIRE 26 WH/VI	IN	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	029-00387-0001		GEAR ASSY 110T	EA	-	1	-	1	-	1	-	1	-	1
	029-00387-0002		GEAR ASSY 110T	EA	1	1	1	1	1	1	1	1	1	1
	029-00388-0000		GEAR IDLER XFR	EA	1	1	1	1	1	1	1	1	1	1
	035-01361-0006		PROTECTIVE CVR	EA	1	1	1	1	1	1	1	1	1	1
	047-03799-0001		CVR DUST BTM W/NUT	EA	1	1	1	1	1	1	1	1	1	1
	047-03870-0001		CVR TOP	EA	1	1	1	1	1	1	1	1	1	1
	047-03871-0001		CVR DUST TOP	EA	1	1	1	1	1	1	1	1	1	1
	057-01764-0000		WRN TAG 5V LGT	EA	-	-	-	-	1	1	-	-	1	1
	057-01831-0000		CAUTION TAG	EA	1	1	1	1	1	1	1	1	1	1
	057-02203-0000		FLAVOR STCKR	EA	1	-	-	-	-	-	-	-	-	-
	057-02203-0001		FLAVOR STCKR	EA	-	1	-	-	-	-	-	-	-	-
	057-02203-0002		FLAVOR STCKR	EA	-	-	1	-	-	-	-	-	-	-
	057-02203-0003		FLAVOR STCKR	EA	-	-	-	1	-	-	-	-	-	-
	057-02203-0018		FLAVOR STCKR	EA	-	-	-	-	1	-	-	-	-	-
	057-02203-0019		FLAVOR STCKR	EA	-	-	-	-	-	1	-	-	-	-
	057-02203-0020		FLAVOR STCKR	EA	-	-	-	-	-	-	1	-	-	-
	057-02203-0021		FLAVOR STCKR	EA	-	-	-	-	-	-	-	1	-	-
	057-02203-0022		FLAVOR STCKR	EA	-	-	-	-	-	-	-	-	1	-
	057-02203-0023		FLAVOR STCKR	EA	-	-	-	-	-	-	-	-	-	1
	057-02337-0000		PRTCTV CVR DECAL	EA	1	1	1	1	1	-	-	-	1	-
	057-03511-0001		DECAL, CAUTION	EA	1	1	1	1	1	-	-	-	1	-
	073-00034-0000		MOUNTING LUG	EA	-	2	-	2	-	2	-	2	-	2
	073-00034-0001		MOUNTING LUG	EA	3	3	3	3	3	3	3	3	3	3
	076-00760-0001		SPACER 1.250	EA	1	1	1	1	1	1	1	1	1	1
	088-00637-0000		BUSHING RESOLVER	EA	1	1	1	1	1	1	1	1	1	1
	088-00676-0000		RETAINER	EA	2	2	2	2	2	2	2	2	2	2
	088-00697-0001		KNOB W/F - OBS	EA	1	1	1	1	1	1	1	1	1	1
	088-00804-0002		FRAME 2/NUTS	EA	1	1	1	1	1	1	1	1	1	1
	089-05903-0005		SCR PHP 4-40X5/16	EA	4	4	4	4	4	4	4	4	4	4
	089-06004-0002		SCR FHP 2-56X1/8	EA	7	7	7	7	7	7	7	7	7	7
	089-06004-0004		SCR FHP 2-56X1/4	EA	1	1	1	1	1	1	1	1	1	1
	089-06024-0004		SCR SHC 4-40X1/4	EA	-	2	-	2	-	2	-	2	-	2
	089-06024-0007		SCR SHC 4-40X7/16	EA	2	2	2	2	2	2	2	2	2	2
	089-06141-0006		SCR SET 4-40X3/16	EA	2	4	2	4	2	4	2	4	2	4
	089-06167-0012		SCR FHP 6-32X3/4	EA	3	3	3	3	3	3	3	3	3	3
	089-06218-0006		SCR SET 4-40X3/32	EA	2	2	2	2	2	2	2	2	2	2

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	KI203	KI203	KI204	KI204	KI204	KI204	KI204	KI204	KI204	KI204
					-0000	-0001	-0002	-0003	-0018	-0019	-0020	-0021	-0022	-0023
	089-06414-0004		SCR PHP 2-28X1/4	EA	6	6	6	6	6	9	9	9	6	9
	089-06414-0005		SCR PHP 2-28X5/16	EA	3	3	3	3	3	-	-	-	3	-
	089-06414-0006		SCR PHP 2-28X3/8	EA	2	2	2	2	2	2	2	2	2	2
	089-06484-0004		SCR FHP 2-28X1/4	EA	2	2	2	2	2	2	2	2	2	2
	089-08023-0030		WSHR FLT STD #2	EA	2	2	2	2	2	2	2	2	2	2
	089-08109-0034		WSHR SPLT LK #4	EA	4	4	4	4	4	4	4	4	4	4
	150-00018-0010		TUBING SHRINK WHT	IN	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
	150-00020-0010		TUBING SHRINK 18G	IN	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
	187-01129-0000		PC BOARD DAMPER	EA	1	1	1	1	1	1	1	1	1	1
	195-00124-0001		KI203 S/N TAG OPT	EA	1	1	-	-	-	-	-	-	-	-
	195-00124-0002		KI204 S/N TAG OPT	EA	-	-	1	1	1	1	1	1	1	1
	200-01924-0000		BEZEL ASSY	EA	1	1	1	1	1	1	-	-	-	-
	200-01924-0002		BEZEL ASSY	EA	-	-	-	-	-	-	1	1	1	1
	200-01925-0000		KI203/4 FRT GR PLT	EA	1	1	1	1	-	-	1	1	-	-
	200-01925-0006		FRNT GEAR PLT ASSY	EA	-	-	-	-	1	1	-	-	1	1
	200-01928-0011		CONVERTER ASSEMBLY KI2	EA	1	1	1	1	1	1	1	1	1	1
B101	148-00003-0000		RESOLVER 30CPS	EA	1	1	1	1	1	1	1	1	1	1
B102	148-00026-0000		SYNCHRO CONT XFMR	EA	-	1	-	1	-	1	-	1	-	1
R101	133-00096-0029		RES VA 1K HW 10%	EA	1	1	1	1	1	1	1	1	1	1
R102	133-00096-0029		RES VA 1K HW 10%	EA	1	1	1	1	1	1	1	1	1	1
REF1	300-01923-0000		FINAL ASSY DWG	EA	X	X	X	X	X	X	X	X	X	X



**FIGURE 6-1 Final Assembly KI 203, KI 204 (S/N 10,000 and Above) (Sht 1 of 2)**  
**(Dwg No 300-01923-0000, Rev AA, Sht 1)**





BEZEL ASSEMBLY  
(REAR VIEW)

Dwg 300-01923-0000 Rev AA Sht 2

WIRING INFORMATION					
FROM	TO	PART NO.	DESCRIPTION	LENGTH	REMARKS
E 1	E 3	025-0018-79	*26 VIOLET/ WHITE	.20 FT.	+14 V LIGHTS HIGH
	E 3	150-0020-10	SHRINK TUBING	.20	INSULATE E 3
E 1	E 121	025-0018-79	*26 VIOLET/ WHITE	.50	+14 V LIGHTS HIGH
	E 1	150-0020-10	SHRINK TUBING	.20	INSULATE E 1
E 2	E 122	025-0018-89	*26 GRAY/ WHITE	.70	LIGHTS LOW
	E 2	150-0020-10	SHRINK TUBING	.20	INSULATE E 2
E 4	E 101	025-0018-69	*26 BLUE/ WHITE	.70	+28 V LIGHTS HIGH
	E 4	150-0020-10	SHRINK TUBING	.20	INSULATE E 3
R 101-1	E 125	025-0018-94	*26 WHITE/ YELLOW	.70	VOR CENTERING POT HIGH
	R 101-1	150-0018-10	SHRINK TUBING	.20	INSULATE R 101-1
R 101-2	R 101-3	NONE	COMPONENT LEAD		BEND LEAD AROUND R 101-3 AND SOLDER
R 101-3	E 105	025-0018-91	*26 WHITE/ BROWN	.70	VOR CENTERING POT LOW
	R 101-3	150-0018-10	SHRINK TUBING	.20	INSULATE R 101-3
R 102-1	E 126	025-0018-93	*26 WHITE/ ORANGE	.50	I L S CENTERING POT HIGH
	R 102-1	150-0018-10	SHRINK TUBING	.20	INSULATE R 102-1
R 102-2	R 102-3	NONE	COMPONENT LEAD		BEND LEAD AROUND R 102-3 AND SOLDER
R 102-3	E 107	025-0018-97	*26 WHITE/ VIOLET	.50	I L S CENTERING POT LOW
	R 102-3	150-0018-10	SHRINK TUBING	.20	INSULATE R 102-3
B 101	E 114	COMPONENT WIRE	GREEN	.75	RESOLVER ROTOR HIGH
B 101	E 115	" "	BLACK	.75	RESOLVER ROTOR LOW
B 101	E 106	" "	YELLOW	.75	RESOLVER "STATOR D" OUT
B 101	E 128	" "	BLUE	.75	RESOLVER "STATOR F" OUT
B 101	E 113	" "	BROWN	.75	RESOLVER "STATOR COMMON"
B 102	E 108	" "	RED / WHITE	.75	COURSE DATUM OUTPUT HIGH
B 102	E 109	" "	BLACK/ WHITE	.75	COURSE DATUM OUTPUT LOW
B 102	E 110	" "	YELLOW	.75	COMPASS HEADING INPUT "X"
B 102	E 130	" "	BLUE	.75	COMPASS HEADING INPUT "Y"
B 102	E 129	" "	BLACK	.75	COMPASS HEADING INPUT "Z"
M 101	E 124	" "	GREEN / WHITE	.75	TO/ FROM METER NEGATIVE
M 101	E 104	" "	YELLOW/ WHITE	.75	TO/ FROM METER POSITIVE
M 102	E 123	" "	GRAY	.75	VOR/ LOC WARNING FLAG POSITIVE
M 102	E 116	" "	WHITE	.75	VOR/ LOC WARNING FLAG NEGATIVE
M 103	E 111	" "	BROWN/ WHITE	.75	GLIDE SLOPE WARNING FLAG POSITIVE
M 103	E 112	" "	ORANGE / WHITE	.75	GLIDE SLOPE WARNING FLAG NEGATIVE
M 104	E 127	" "	ORANGE / RED	.75	VOR/ LOC DEVIATION METER +
M 104	E 117	" "	ORANGE / BLACK	.75	VOR/ LOC DEVIATION METER -
M 105	E 119	" "	ORANGE / RED	.75	GLIDE SLOPE DEVIATION METER +
M 105	E 118	" "	ORANGE / BLACK	.75	GLIDE SLOPE DEVIATION METER -

TWIST THESE COMPONENT WIRES TOGETHER BEFORE BUNDLING THEM INTO A WIRING HARNESS.

TWIST THESE COMPONENT WIRES TOGETHER BEFORE BUNDLING THEM INTO A WIRING HARNESS.

REF. B/M 200-1923 -00/03

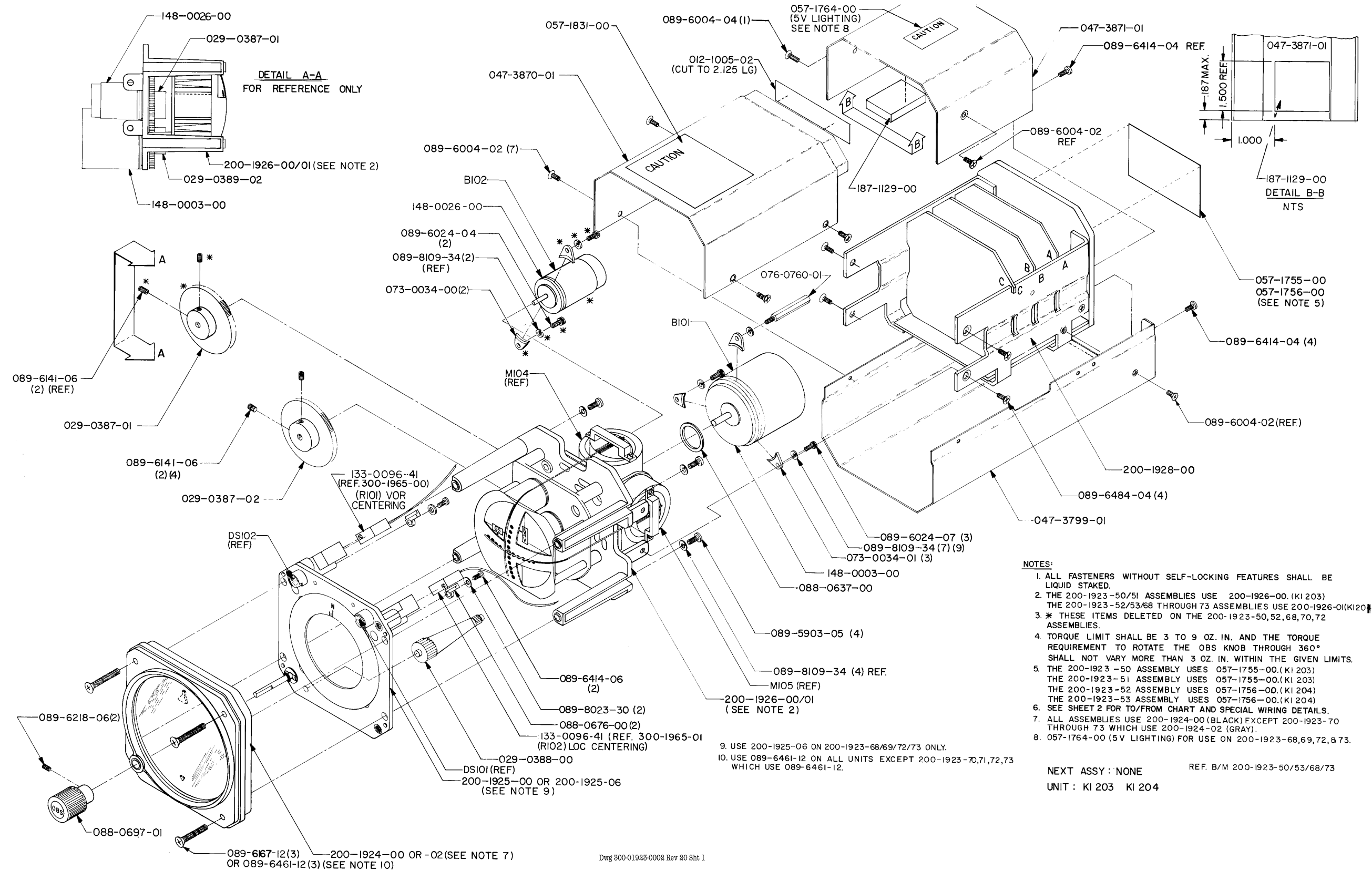
FIGURE 6-1 Final Assembly KI 203, KI 204 (S/N 10,000 and Above) (Sht 2 of 2)  
(Dwg No 300-01923-0000, Rev AA, Sht 2)

BOM 3: Final Assembly KI 203, KI 204 (S/N 9,999 and Below)

200-01923-0050	KI203 IND 3 IDL	REV AA
200-01923-0051	KI203 IND 3 IDL SYN	REV AA
200-01923-0052	KI204 IND 5 IDL	REV AA
200-01923-0053	KI204 IND 5 IDL SYN	REV AA
200-01923-0068	KI204 IND 5 IDL 5V	REV AA
200-01923-0069	KI204 IND 5 IDL 5V SYN	REV AA
200-01923-0070	KI204 IND 5 IDL GRY	REV AA
200-01923-0071	KI204 IND 5 IDL GRY SYN	REV AA
200-01923-0072	KI204 IND 5 IDL GRY 5V	REV AA
200-01923-0073	KI204 IND 5 IDL GRY 5V SYN	REV AA

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	KI203	KI203	KI204	KI204	KI204	KI204	KI204	KI204	KI204	KI204
					-0050	-0051	-0052	-0053	-0068	-0069	-0070	-0071	-0072	-0073
--	012-01005-0002		TAPE MYLAR .500 W	IN	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
--	012-01006-0000		LACING CORD 18DR	AR	0	0	0	0	0	0	0	0	0	0
--	016-01096-0000		SUPERBONDER 150	AR	-	-	-	-	0	0	0	0	0	0
--	016-01140-0000		SUPERBONDER 415	AR	1	1	1	1	-	-	-	-	-	-
--	025-00018-0069		WIRE 26 BU/WH	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
--	025-00018-0079		WIRE 26 VI/WH	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
--	025-00018-0089		WIRE 26 GY/WH	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
--	025-00018-0091		WIRE 26 WH/BN	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
--	025-00018-0093		WIRE 26 WH/OR	IN	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
--	025-00018-0094		WIRE 26 WH/YL	IN	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
--	025-00018-0097		WIRE 26 WH/VI	IN	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
--	029-00387-0001		GEAR ASSY 110T	EA	-	1	-	1	-	1	-	1	-	1
--	029-00387-0002		GEAR ASSY 110T	EA	1	1	1	1	1	1	1	1	1	1
--	029-00388-0000		GEAR IDLER XFR	EA	1	1	1	1	1	1	1	1	1	1
--	035-01361-0006		PROTECTIVE CVR	EA	1	1	1	1	1	1	1	1	1	1
--	047-03799-0001		CVR DUST BTM W/NUT	EA	1	1	1	1	1	1	1	1	1	1
--	047-03870-0001		CVR TOP	EA	1	1	1	1	1	1	1	1	1	1
--	047-03871-0001		CVR DUST TOP	EA	1	1	1	1	1	1	1	1	1	1
--	057-01755-0000		S/N TAG	EA	1	1	-	-	-	-	-	-	-	-
--	057-01756-0000		S/N TAG	EA	-	-	1	1	1	1	1	1	1	1
--	057-01764-0000		WRN TAG 5V LGT	EA	-	-	-	-	1	1	-	-	1	1
--	057-01831-0000		CAUTION TAG	EA	1	1	1	1	1	1	1	1	1	1
--	073-00034-0000		MOUNTING LUG	EA	-	2	-	2	-	2	-	2	-	2
--	073-00034-0001		MOUNTING LUG	EA	2	2	2	2	2	2	2	2	2	2
--	076-00760-0001		SPACER 1.250	EA	1	1	1	1	1	1	1	1	1	1
--	088-00637-0000		BUSHING RESOLVER	EA	1	1	1	1	1	1	1	1	1	1
--	088-00676-0000		RETAINER	EA	2	2	2	2	2	2	2	2	2	2
--	088-00697-0001		KNOB W/F - OBS	EA	1	1	1	1	1	1	1	1	1	1
--	089-05903-0005		SCR PHP 4-40X5/16	EA	4	4	4	4	4	4	4	4	4	4
--	089-06004-0002		SCR FHP 2-56X1/8	EA	2	2	2	2	2	2	2	2	2	2
--	089-06004-0004		SCR FHP 2-56X1/4	EA	1	1	1	1	1	1	1	1	1	1
--	089-06024-0004		SCR SHC 4-40X1/4	EA	-	2	-	2	-	2	-	2	-	2
--	089-06024-0007		SCR SHC 4-40X7/16	EA	2	2	2	2	2	2	2	2	2	2
--	089-06141-0006		SCR SET 4-40X3/16	EA	2	4	2	4	2	4	2	4	2	4
--	089-06167-0012		SCR FHP 6-32X3/4	EA	3	3	3	3	3	3	3	3	3	3
--	089-06218-0006		SCR SET 4-40X3/32	EA	2	2	2	2	2	2	2	2	2	2
--	089-06414-0004		SCR PHP 2-28X1/4	EA	9	9	9	9	9	9	9	9	9	9
--	089-06414-0006		SCR PHP 2-28X3/8	EA	2	2	2	2	2	2	2	2	2	2
--	089-06484-0004		SCR FHP 2-28X1/4	EA	2	2	2	2	2	2	2	2	2	2
--	089-08023-0030		WSHR FLT STD #2	EA	2	2	2	2	2	2	2	2	2	2
--	089-08109-0034		WSHR SPLT LK #4	EA	4	4	4	4	4	4	4	4	4	4
--	150-00018-0010		TUBING SHRINK WHT	IN	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
--	150-00020-0010		TUBING SHRINK 18G	IN	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
--	187-01129-0000		PC BOARD DAMPER	EA	1	1	1	1	1	1	1	1	1	1
--	200-01924-0000		BEZEL ASSY	EA	1	1	1	1	1	-	-	-	-	-
--	200-01924-0002		BEZEL ASSY	EA	-	-	-	-	-	1	1	1	1	1
--	200-01925-0000		KI203/4 FRT GR PLT	EA	1	1	1	1	-	1	1	-	-	-
--	200-01925-0006		FRNT GEAR PLT ASSY	EA	-	-	-	-	1	-	-	-	1	1
--	200-01926-0000		METER ASSY	EA	1	1	-	-	-	-	-	-	-	-

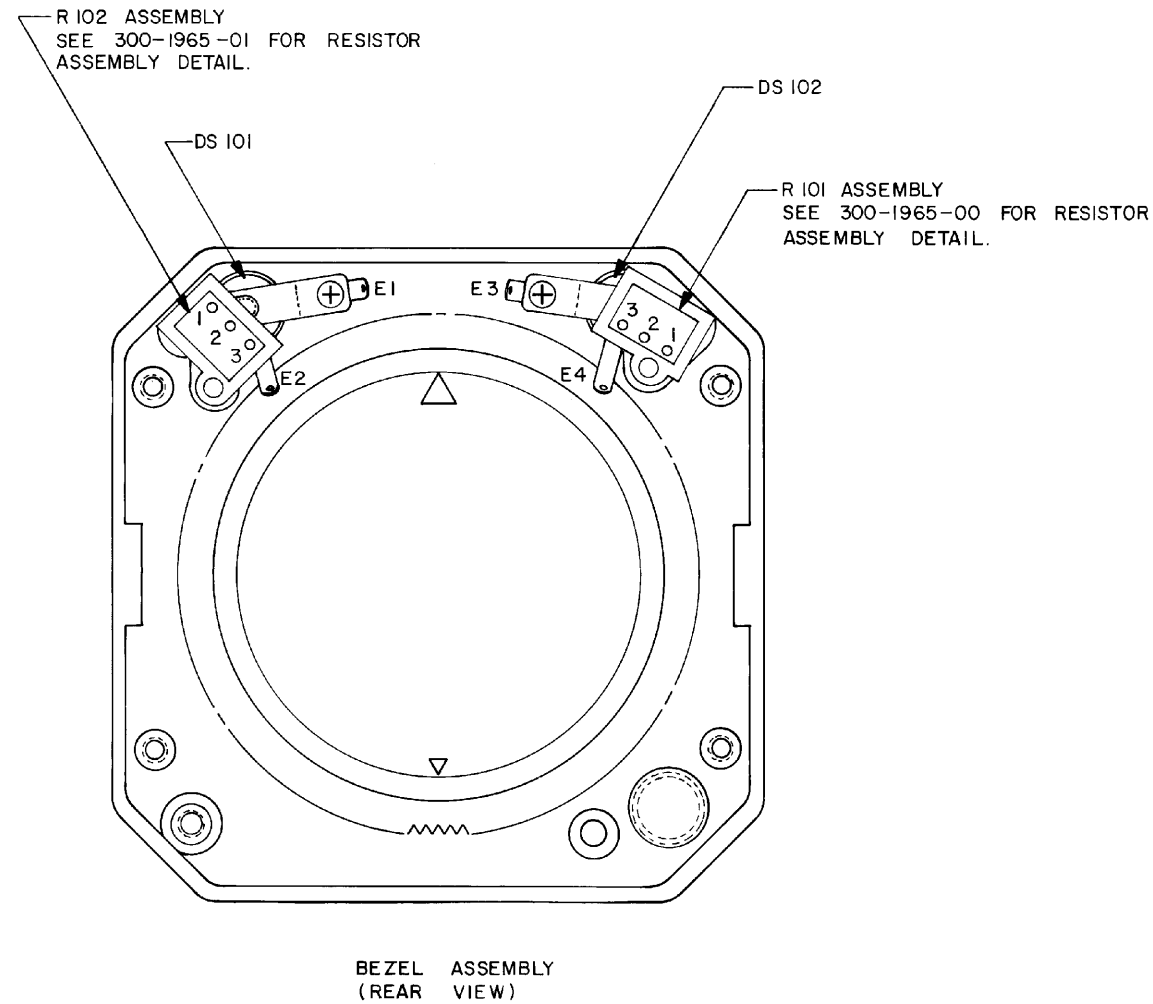
SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	KI203	KI203	KI204	KI204	KI204	KI204	KI204	KI204	KI204	KI204
					-0050	-0051	-0052	-0053	-0068	-0069	-0070	-0071	-0072	-0073
-	200-01926-0001		METER ASSY	EA	-	-	1	1	1	1	1	1	1	1
-	200-01928-0010		KI203/KI204 CONVERTER	EA	1	1	1	1	1	1	1	1	1	1
B101	148-00003-0000		RESOLVER 30CPS	EA	1	1	1	1	1	1	1	1	1	1
B102	148-00026-0000		SYNCHRO CONT XFMR	EA	-	1	-	1	-	1	-	1	-	1
R101	133-00096-0029		RES VA 1K HW 10%	EA	1	1	1	1	1	1	1	1	1	1
R102	133-00096-0029		RES VA 1K HW 10%	EA	1	1	1	1	1	1	1	1	1	1
REF1	300-01923-0002		FINAL ASSY DWG	EA	X	X	X	X	X	X	X	X	X	X



- NOTES:**
1. ALL FASTENERS WITHOUT SELF-LOCKING FEATURES SHALL BE LIQUID STAKED.
  2. THE 200-1923-50/51 ASSEMBLIES USE 200-1926-00.(KI 203) THE 200-1923-52/53/68 THROUGH 73 ASSEMBLIES USE 200-1926-01(KI 204)
  3. \* THESE ITEMS DELETED ON THE 200-1923-50,52,68,70,72 ASSEMBLIES.
  4. TORQUE LIMIT SHALL BE 3 TO 9 OZ. IN. AND THE TORQUE REQUIREMENT TO ROTATE THE OBS KNOB THROUGH 360° SHALL NOT VARY MORE THAN 3 OZ. IN. WITHIN THE GIVEN LIMITS.
  5. THE 200-1923-50 ASSEMBLY USES 057-1755-00.(KI 203) THE 200-1923-51 ASSEMBLY USES 057-1755-00.(KI 203) THE 200-1923-52 ASSEMBLY USES 057-1756-00.(KI 204) THE 200-1923-53 ASSEMBLY USES 057-1756-00.(KI 204)
  6. SEE SHEET 2 FOR TO/FROM CHART AND SPECIAL WIRING DETAILS.
  7. ALL ASSEMBLIES USE 200-1924-00 (BLACK) EXCEPT 200-1923-70 THROUGH 73 WHICH USE 200-1924-02 (GRAY).
  8. 057-1764-00 (5V LIGHTING) FOR USE ON 200-1923-68,69,72, & 73.

NEXT ASSY : NONE      REF. B/M 200-1923-50/53/68/73  
 UNIT : KI 203 KI 204

**FIGURE 6-2 Final Assembly KI 203, KI 204 (S/N 9,999 and Below) (Sht 1 of 2) (Dwg No 300-01923-0002, Rev 20, Sht 1)**



Dwg 300-01923-0002 Rev 20 Sht 2

WIRING INFORMATION					
FROM	TO	PART NO.	DESCRIPTION	LENGTH	REMARKS
E 1	E 3	025-0018-79	*26 VIOLET/ WHITE	.20	+14 V LIGHTS HIGH
	E 3	150-0020-10	SHRINK TUBING	.20	INSULATE E 3
E 1	E 121	025-0018-79	*26 VIOLET/ WHITE	.50	+14 V LIGHTS HIGH
	E 1	150-0020-10	SHRINK TUBING	.20	INSULATE E 1
E 2	E 122	025-0018-89	*26 GRAY/ WHITE	.70	LIGHTS LOW
	E 2	150-0020-10	SHRINK TUBING	.20	INSULATE E 2
E 4	E 101	025-0018-69	*26 BLUE/ WHITE	.70	+28 V LIGHTS HIGH
	E 4	150-0020-10	SHRINK TUBING	.20	INSULATE E 3
R 101-1	E 125	025-0018-94	*26 WHITE/ YELLOW	.70	VOR CENTERING POT HIGH
	R 101-1	150-0018-10	SHRINK TUBING	.20	INSULATE R 101-1
R 101-2	R 101-3	NONE	COMPONENT LEAD		BEND LEAD AROUND R 101-3 AND SOLDER
R 101-3	E 105	025-0018-91	*26 WHITE/ BROWN	.70	VOR CENTERING POT LOW
	R 101-3	150-0018-10	SHRINK TUBING	.20	INSULATE R 101-3
R 102-1	E 126	025-0018-93	*26 WHITE/ ORANGE	.50	ILS CENTERING POT HIGH
	R 102-1	150-0018-10	SHRINK TUBING	.20	INSULATE R 102-1
R 102-2	R 102-3	NONE	COMPONENT LEAD		BEND LEAD AROUND R 102-3 AND SOLDER
R 102-3	E 107	025-0018-97	*26 WHITE/ VIOLET	.50	ILS CENTERING POT LOW
	R 102-3	150-0018-10	SHRINK TUBING	.20	INSULATE R 102-3
B 101	E 114	COMPONENT WIRE	GREEN	.75	RESOLVER ROTOR HIGH
B 101	E 115	" "	BLACK	.75	RESOLVER ROTOR LOW
B 101	E 106	" "	YELLOW	.75	RESOLVER "STATOR D" OUT
B 101	E 128	" "	BLUE	.75	RESOLVER "STATOR F" OUT
B 101	E 113	" "	BROWN	.75	RESOLVER "STATOR COMMON"
B 102	E 108	" "	RED / WHITE	.75	COURSE DATUM OUTPUT HIGH
B 102	E 109	" "	BLACK/ WHITE	.75	COURSE DATUM OUTPUT LOW
B 102	E 110	" "	YELLOW	.75	COMPASS HEADING INPUT "X"
B 102	E 130	" "	BLUE	.75	COMPASS HEADING INPUT "Y"
B 102	E 129	" "	BLACK	.75	COMPASS HEADING INPUT "Z"
M 101	E 124	" "	GREEN / WHITE	.75	TO/ FROM METER NEGATIVE
M 101	E 104	" "	YELLOW/ WHITE	.75	TO/ FROM METER POSITIVE
M 102	E 123	" "	GRAY	.75	VOR/ LOC WARNING FLAG POSITIVE
M 102	E 116	" "	WHITE	.75	VOR/ LOC WARNING FLAG NEGATIVE
M 103	E 111	" "	BROWN/ WHITE	.75	GLIDE SLOPE WARNING FLAG POSITIVE
M 103	E 112	" "	ORANGE / WHITE	.75	GLIDE SLOPE WARNING FLAG NEGATIVE
M 104	E 127	" "	ORANGE / RED	.75	VOR/ LOC DEVIATION METER +
M 104	E 117	" "	ORANGE / BLACK	.75	VOR/ LOC DEVIATION METER -
M 105	E 119	" "	ORANGE / RED	.75	GLIDE SLOPE DEVIATION METER +
M 105	E 118	" "	ORANGE / BLACK	.75	GLIDE SLOPE DEVIATION METER -

TWIST THESE COMPONENT WIRES TOGETHER BEFORE BUNDLING THEM INTO A WIRING HARNESS.

TWIST THESE COMPONENT WIRES TOGETHER BEFORE BUNDLING THEM INTO A WIRING HARNESS.

REF. B/M 200-1923-50/53

FIGURE 6-2 Final Assembly KI 203, KI 204 (S/N 9,999 and Below) (Sht 2 of 2)  
(Dwg No 300-01923-0002, Rev 20, Sht 2)

**BOM 4: Bezel Assembly**

200-01924-0000 BEZEL ASSY BLK REV AA  
 200-01924-0002 BEZEL ASSY GRY REV AA

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000	-0002
-	012-05004-0000		LENS	EA	1	1
-	073-00411-0003		BEZEL W/H BLACK	EA	1	-
-	073-00411-0005		BEZEL W/H GRAY	EA	-	1
-	088-00622-0001		LIGHTING WEDGE	EA	1	1
-	088-00622-0003		WEDGE	EA	-	-
-	088-00764-0002		BEZEL	EA	-	-
-	089-06077-0003		SCR PHP 2-56X3/16	EA	3	3
-	091-00166-0000		RETAINER	EA	3	3
-	187-01023-0002		GSKT FIBER	EA	1	1
REF	300-01924-0000		BEZEL ASSY DWG	RF	X	-

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THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME. BEZEL ASSEMBLY UNIT: KI 0202,203,204 ASSY NO: 200-1924-00/01  
206,207

SYMBOL	PART NUMBER	DESCRIPTION	QUANTITY	
			CODE	-00 -01

	200-1924-00	KI202,203,204-206	X	
	200-1924-01	KI 207		X
	012-5004-00	LENS	1	1
	088-0764-02	BEZEL	-	1
	088-0621-03	BEZEL	1	-
	088-0622-01	WEDGE, LIGHTING	1	-
	088-0622-03	WEDGE, LIGHTING	-	1
	089-6077-03	SCR PHP #2-56 BLK	3	3
	091-0166-00	RETAINER	3	3



THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME: BEZEL ASSEMBLY  
 ASSY DWG: 300-1924-00/01  
 UNIT: KI 0202, 203, 204, 206, 207  
 ENGR APPROVAL: ELMER W. HUBENER  
 ASSY NO: 200-1924-00/01  
 USED ON: 066-3034-00/06

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
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1

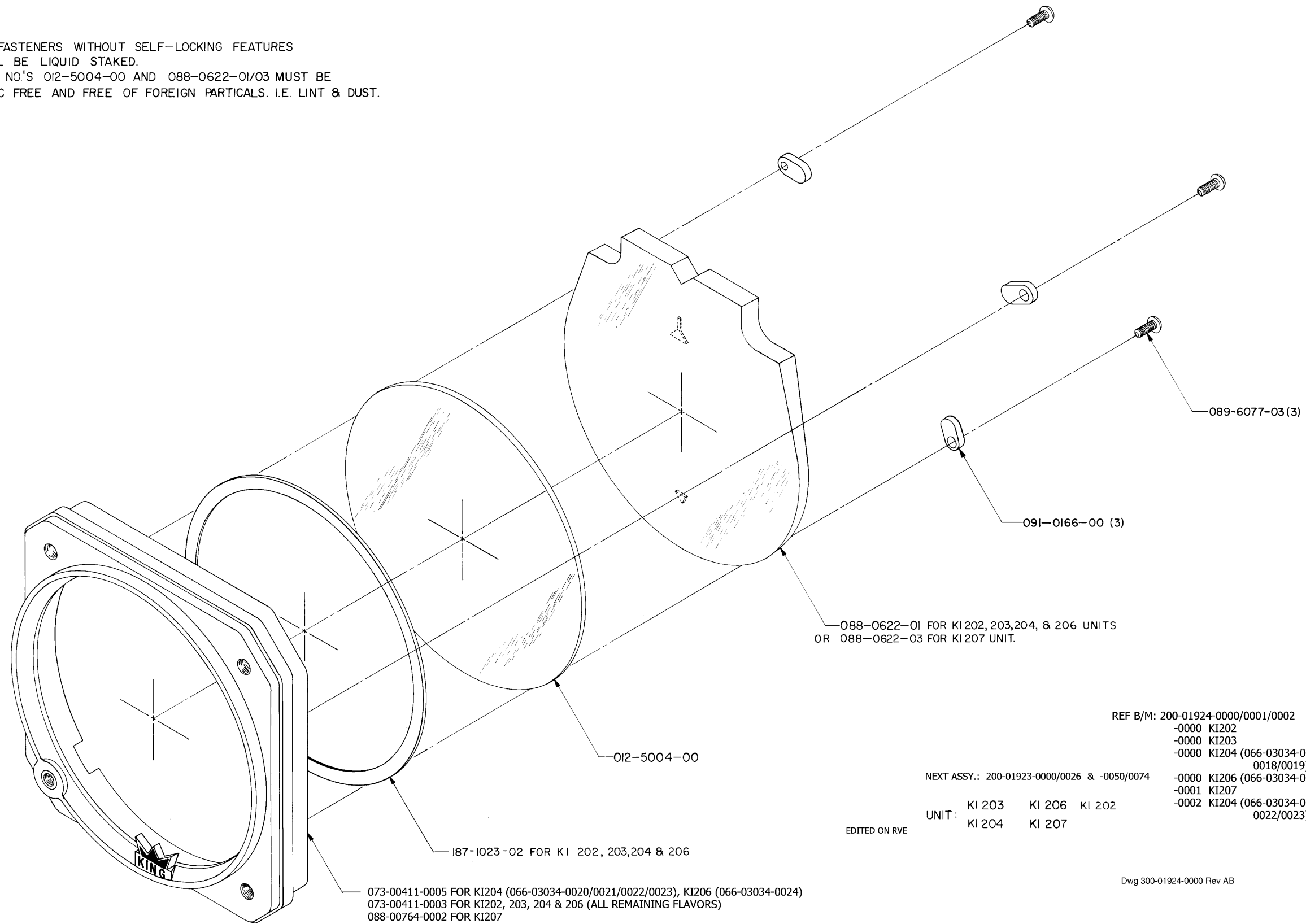
KI 203/204/206/207 MAINTENANCE MANUAL  
 REVISION 0, APRIL, 1976

2			089-6077-03	P/N CHG FROM 091-0055-00
3			200-1924-00 200-1924-01 088-0764-02	P/N ADDED TO B/M P/N ADDED TO B/M P/N ADDED TO B/M QTY'S ADDED ON -01 FLAVOR
4			088-0622-01 088-0622-03	QTY IN -01 CHG FROM 1 TO - P/N ADDED TO B/M
5			200-1924-00	ADDED KI 202 TO UNIT LISTING TYPED ON WORD PROCESSOR

KI 202/203/204/206/207 MAINTENANCE MANUAL  
 REV. 1, SEPT., 1979

NOTES:

- 1.) ALL FASTENERS WITHOUT SELF-LOCKING FEATURES SHALL BE LIQUID STAKED.
- 2.) PART NO.'S 012-5004-00 AND 088-0622-01/03 MUST BE STATIC FREE AND FREE OF FOREIGN PARTICALS. I.E. LINT & DUST.



**FIGURE 6-3 Bezel Assembly**  
**(Dwg No 300-01924-0000, Rev AB)**

**BOM 5: Gear Plate Assembly**

200-01925-0000 KI203/KI204 FRNT GR PLT REV AA  
 200-01925-0006 KI204 FRNT GR PLT 5V LGT REV AC

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000	-0006
-	008-00075-0000		LAMP CONTACT	EA	2	2
-	029-00287-0004		GEAR RING 64P	EA	1	1
-	029-00386-0001		GEAR 24T DR	EA	1	1
-	047-03794-0001		CNTCT LAMP W/F	EA	2	2
-	088-00193-0008		FLTR LMP BL/WHT	EA	2	-
-	088-00624-0000		FRONT GEAR PLT	EA	1	1
-	088-00625-0000		A VARI RES MTG	EA	1	1
-	088-00626-0000		B VARI RES MTG	EA	1	1
-	088-00695-0002		AZIMUTH DIAL	EA	1	1
-	088-03291-0001		FILTER, LAMP	EA	-	2
-	089-06414-0004		SCR PHP 2-28X1/4	EA	4	4
-	089-08025-0030		WSHR FLT STD #4	EA	1	1
-	089-08076-0030		WSHR FLT STD .130	EA	1	1
-	089-08105-0005		WASHER	A	1	1
-	089-08205-0001		WSHR FELT .125	A	1	1
-	090-00019-0000		RING RTNR .125	EA	1	1
-	090-00033-0003		SPRING WASHER	EA	1	1
-	091-00203-0003		SCR FHS 0-80X.187	EA	3	3
DS101	037-00007-0001		LMP 8918 T1-3/4 14	EA	1	-
DS101	037-00199-0000		DUAL BULB ASSY	EA	-	1
DS102	037-00007-0001		LMP 8918 T1-3/4 14	EA	1	-
DS102	037-00199-0000		DUAL BULB ASSY	EA	-	1
REF	300-01925-0000		FRONT GEAR PLATE ASSYRF	-	-	X

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THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME: FRONT GEAR PLATE ASSEMBLY UNIT: KI 0202,203,204, ASSY NO: 200-1925-00/02  
206,207

SYMBOL	PART NUMBER	DESCRIPTION	QUANTITY			
			CODE	-00	-01	-02
	200-1925-00	KI 203, KI 204		X		
	200-1925-01	KI 206, KI 202			X	
	200-1925-02	KI 207				X
	008-0075-00	CONTACT, LAMP		2	2	2
	029-0287-04	GEAR, RING 165T		1	1	1
	029-0386-01	GEAR, 24 TOOTH DR		1	1	-
	047-3794-01	CONTACT, LAMP SPR		2	2	2
	088-0193-04	FILTER, LAMP		2	2	2
	088-0695-02	CARD, AZIMUTH DIAL		1	1	-
	088-0624-01	PLATE, FRONT GEAR		1	1	1
	088-0625-00	FIX-A-VAR RES MTG		1	-	-
	088-0626-00	FIX-B-VAR RES MTG		1	-	-
	088-0638-01	DIAL CARD		-	-	1
	089-6416-04	SCR PHP #2-28		4	2	2
	089-8105-05	WASHER, FELT		1	1	1
	089-8076-30	WASHER, FLAT		1	1	-
	089-8025-30	WASHER, FLAT		1	1	-
	089-8205-01	WASHER, FELT		1	1	-
	090-0019-00	RETAINER		1	1	-
	090-0033-03	WASHER, WAVE		1	1	-
	091-0203-03	SCR FHS #0-8GX1/8		3	3	3
DS101	037-0007-01	LAMP, T-1 3/4 14V		2	2	2
DS102	037-0007-01	LAMP, T-1 3/4 14V		-	-	-

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ENGR APPROVAL: ELMER W. HUBENER

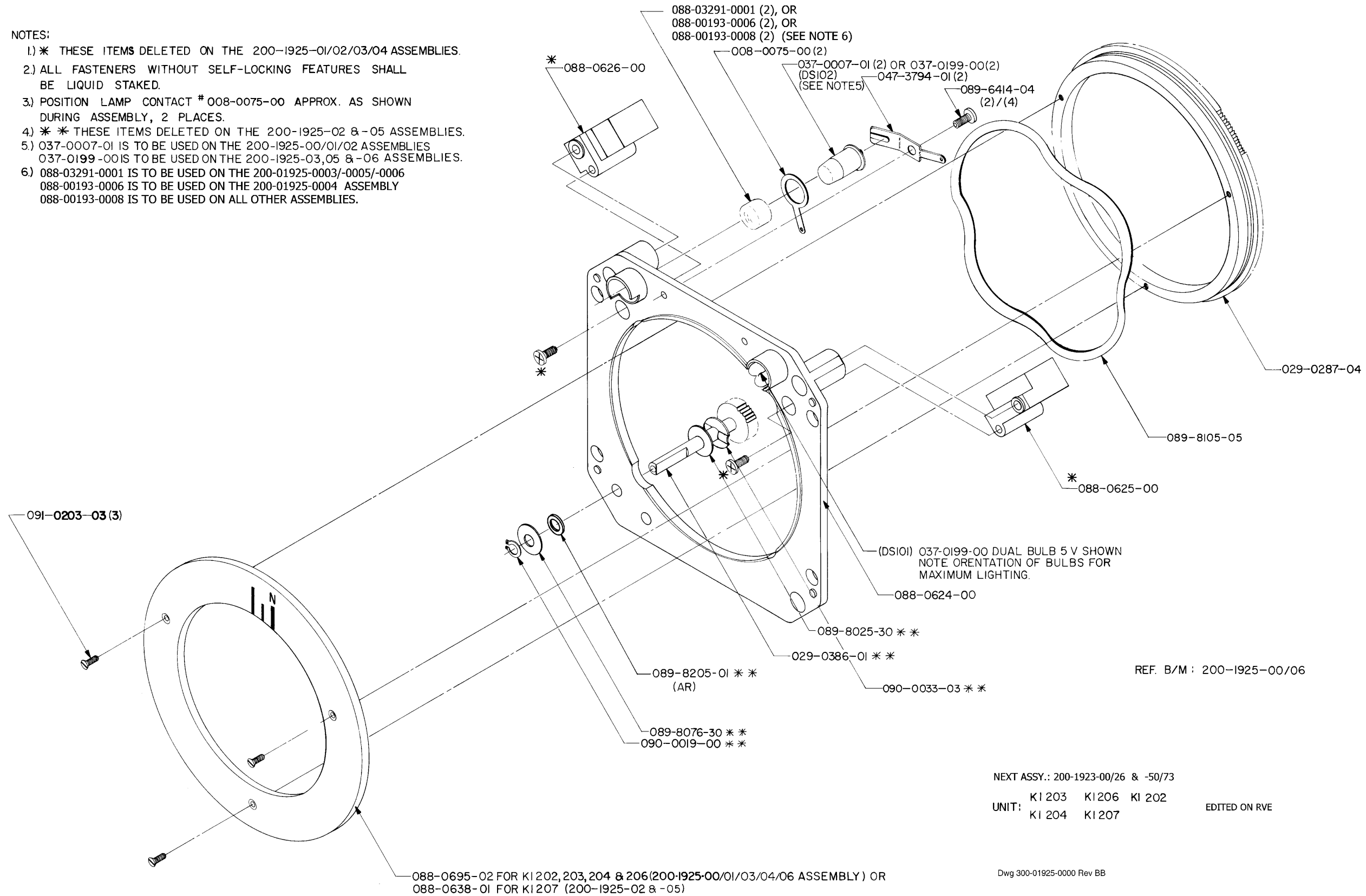
NAME: FRONT GEAR PLATE ASSEMBLY  
 ASSY DWG: 300-1925-00/02

ASSY NO: 200-1925-00/02  
 UNIT: KI 0202,203,204, USED ON: 060-3034-00/06  
 206,207

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
1				
2				
3				
4				
5				
6				
KI 203/204/206/207 MAINTENANCE MANUAL REVISION 0, APRIL 1976				
7			089-8205-01	ADDED TO B/M
8			089-8105-05	P/N CHG FROM 089-8105-04
9			029-0287-04	P/N CHG FROM 029-0287-01
10			200-1925-00	ADDED TO B/M
			200-1925-01	ADDED TO B/M
			200-1925-02	ADDED TO B/M
			088-0638-01	ADDED TO B/M
11			200-1925-01	ADDED KI 202 TO UNIT LISTING TYPED ON WORD PROCESSOR
12			091-0203-03	P/N CHG FROM 091-0203-02
KI 202/203/204/206/207 MAINTENANCE MANUAL REV. 1, SEPTEMBER, 1979				

NOTES:

- 1.) \* THESE ITEMS DELETED ON THE 200-1925-01/02/03/04 ASSEMBLIES.
- 2.) ALL FASTENERS WITHOUT SELF-LOCKING FEATURES SHALL BE LIQUID STAKED.
- 3.) POSITION LAMP CONTACT # 008-0075-00 APPROX. AS SHOWN DURING ASSEMBLY, 2 PLACES.
- 4.) \* \* THESE ITEMS DELETED ON THE 200-1925-02 & -05 ASSEMBLIES.
- 5.) 037-0007-01 IS TO BE USED ON THE 200-1925-00/01/02 ASSEMBLIES  
037-0199-00 IS TO BE USED ON THE 200-1925-03,05 & -06 ASSEMBLIES.
- 6.) 088-03291-0001 IS TO BE USED ON THE 200-1925-0003/-0005/-0006  
088-00193-0006 IS TO BE USED ON THE 200-1925-0004 ASSEMBLY  
088-00193-0008 IS TO BE USED ON ALL OTHER ASSEMBLIES.



NEXT ASSY.: 200-1923-00/26 & -50/73

UNIT: KI 203 KI 206 KI 202  
KI 204 KI 207

EDITED ON RVE

Dwg 300-01925-0000 Rev BB

**FIGURE 6-4 Gear Plate Assembly  
(Dwg No 300-01925-0000, Rev BB)**

**BOM 6: Meter Assembly**

200-01926-0000 3 METER ASSY REV 8  
 200-01926-0001 5 METER ASSY REV 9

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000	-0001
-	088-00629-0002		REAR GEAR PLT	EA	1	1
-	089-06022-0004		SCR SHC 2-56X1/4	EA	-	2
-	089-06022-0005		SCR SHC 2-56X5/16	EA	4	4
-	089-06022-0006		SCR SHC 2-56X3/8	EA	1	1
-	089-06414-0004		SCR PHP 2-28X1/4	EA	4	4
-	089-08023-0030		WSHR FLT STD #2	EA	2	4
-	091-00282-0000		SHIM	EA	1	2
-	091-00282-0001		SHIM .010	EA	2	2
-	091-00282-0002		SHIM .020	EA	2	2
-	091-00282-0003		SHIM .030	EA	2	2
-	200-01927-0000		FLAG ASSY	EA	1	-
-	200-01927-0001		FLAG ASSY	EA	-	1
M104	023-00129-0000		METER VOR HGA VIB	EA	1	1
M105	023-00120-0000		IND GSI VOR/LOC	EA	-	1



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NAME: METER ASSEMBLY

UNIT: KI 0203,204,  
206,207

ASSY NO: 200-1926-00/01

SYMBOL	PART NUMBER	DESCRIPTION	QUANTITY	
			CODE -00	-01
	200-1926-00	USED IN KI 203	X	
	200-1926-01	USED IN KI204,206/7		X
	200-1927-00	FLAG ASSY (KI203)	1	0
	200-1927-01	FLAG ASSEMBLY	0	1
	088-0629-02	PLATE REAR GEAR	1	1
	089-6022-04	SCR SHC #2056X1/4	0	2
	089-6022-05	SCR SHC #2-56X5/16	4	4
	089-6022-06	SCR SHC #2-56X3/8	1	1
	089-6414-04	SCR PHP #2-28X1/4	4	4
	089-8023-30	WASHER FLAT	2	4
	091-0282-00	SHIM .010 THK	1	2
	091-0282-01	SHIM .010 THK	2	2
	091-0282-02	SHIM .020 THK	2	2
	091-0282-03	SHIM .030 THK	2	2
M104	023-0129-00	INDICATOR VOR	1	1
M102	023-0120-00	INDICATOR GS	0	1

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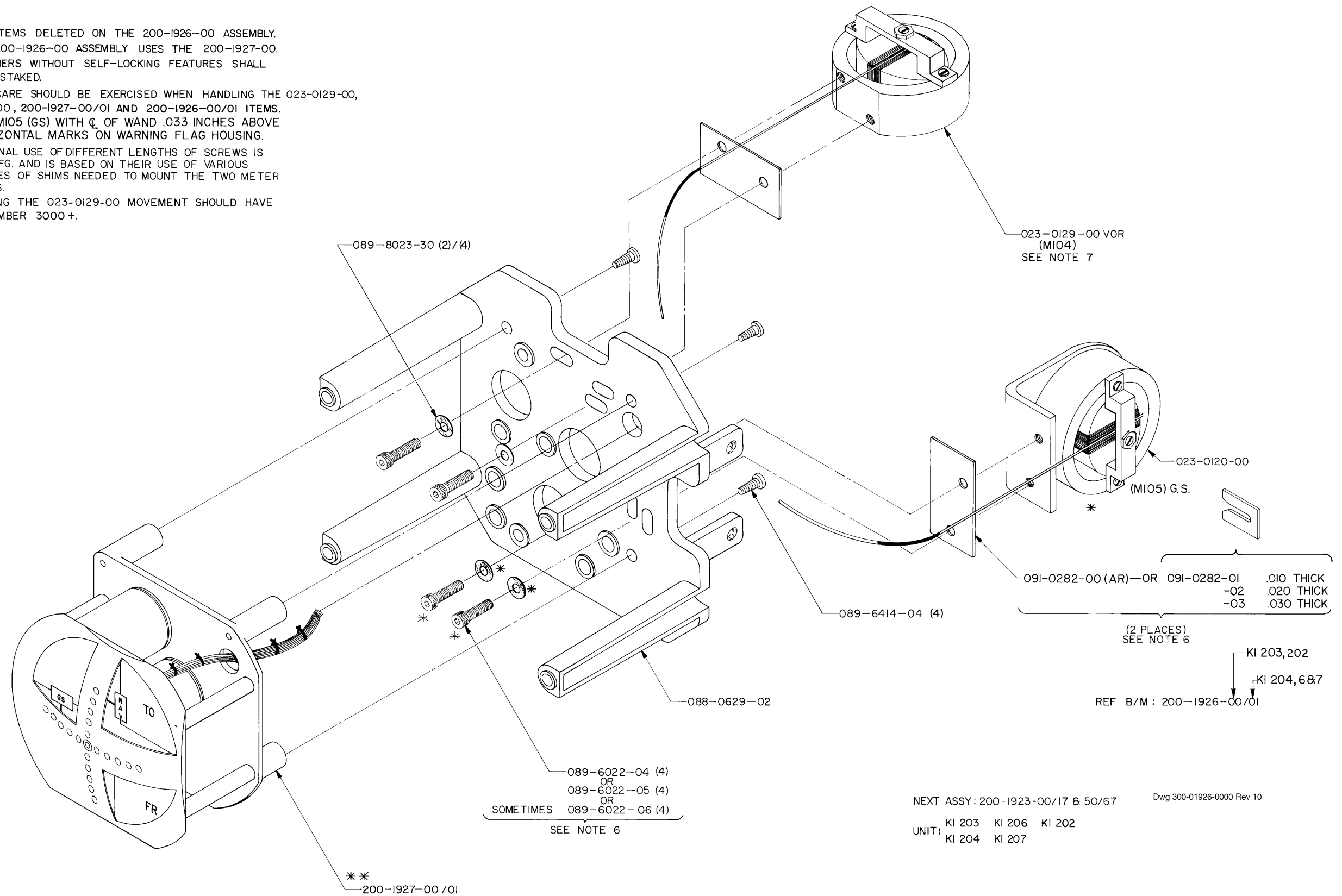
NAME: METER ASSEMBLY  
 ASSY DWG: 300-1926-00/01

ENGR APPROVAL:  
 ASSY NO: 200-1926-00/01  
 UNIT: KI 0203,204, 206,207  
 USED ON: 066-3034-00/01

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
1				
2				
KI 203/204/206/207 MAINTENANCE MANUAL REVISION 0, APRIL, 1976				
3			091-0282-00 091-0282-01 091-0282-02 091-0282-03 200-1926-00 200-1926-01	DESC ADDED TO B/M P/N ADDED TO B/M P/N ADDED TO B/M P/N ADDED TO B/M P/N ADDED TO B/M P/N ADDED TO B/M
4			089-6022-06 089-6022-05 091-0282-00 091-0282-01 THRU 091-0282-03	P/N ADDED TO B/M QTY CHG FROM 2 ON EACH TO 4 ON EACH QTY CHG FROM AR TO 1 & 2 ON EACH QTY CHG FROM AR TO 2 ON EACH
5	M104 M105		023-0129-00 023-0120-00	P/N CHG FROM 023-0120-00 QTY CHG FROM - TO 1, DESC CHG FROM INDICATOR GS & VOR TO INDICATOR GS
6				UNITS SHOULD NOT BE MARKED AS MOD. 2 AS DESIGNATED IN E.C.O. 24061 BUT RATHER HAS S/N 3000+
7			200-1926-00	ADDED KI 202 TO UNIT LISTING TYPED ON WORD PROCESSOR
8			200-1926-00	KI 202 DELETED FROM HEADING KI 202 DELETED FROM DESC
KI 202/203/204/206/207 MAINTENANCE MANUAL REVISION 1, SEPTEMBER, 1979				

NOTES:

- 1) \* THESE ITEMS DELETED ON THE 200-1926-00 ASSEMBLY.
- 2) \*\* THE 200-1926-00 ASSEMBLY USES THE 200-1927-00.
- 3) ALL FASTENERS WITHOUT SELF-LOCKING FEATURES SHALL BE LIQUID STAKED.
- 4) EXTREME CARE SHOULD BE EXERCISED WHEN HANDLING THE 023-0129-00, 023-0120-00, 200-1927-00/01 AND 200-1926-00/01 ITEMS.
- 5) POSITION M105 (GS) WITH  $\phi$  OF WAND .033 INCHES ABOVE  $\phi$  OF HORIZONTAL MARKS ON WARNING FLAG HOUSING.
- 6) THIS OPTIONAL USE OF DIFFERENT LENGTHS OF SCREWS IS LEFT TO MFG. AND IS BASED ON THEIR USE OF VARIOUS THICKNESSES OF SHIMS NEEDED TO MOUNT THE TWO METER MOVEMENTS.
- 7) UNITS USING THE 023-0129-00 MOVEMENT SHOULD HAVE SERIAL NUMBER 3000+.



**FIGURE 6-5 Meter Assembly**  
 (Dwg No 300-01926-0000, Rev 10)

**BOM 7: Flag Assembly**

200-01927-0000 FLAG ASSY REV 6  
 200-01927-0001 FLAG ASSY REV 6

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000	-0001
-	088-00627-0002		WARN HOUSING	EA	1	-
-	088-00627-0003		WARN HOUSING	EA	-	1
-	088-00628-0000		METER MTG PLT	EA	1	1
-	089-05898-0003		SCR PHP 2-64X3/16	EA	4	6
-	089-06292-0004		SCR PHP 2-56X1/4	EA	4	4
-	091-00279-0000		METER SPACER	AR	0	0
M101	023-00023-0001		FLAG TO/FROM	EA	1	1
M102	023-00121-0000		FLAG WARN VOR/LOC	EA	1	1
M103	023-00122-0000		FLAG WARN GS	EA	-	1

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NAME: FLAG ASSEMBLY  
 ASSY DWG: 300-1927-00/01  
 ENGR APPROVAL:  
 ASSY NO: 200-1927-00/01  
 UNIT: KI 0203,204, 206,207  
 USED ON: 200-1926-00/02

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
1				
KI 203/204/206/207 MAINTENANCE MANUAL REVISION 0, APRIL, 1976				
2			089-5898-03 089-6292-04	P/N CHG FROM 089-5899-03 P/N CHG FROM 089-6414-04
3		M101	023-0023-01	P/N CHG FROM 023-0023-00
4			200-1927-00/01	ADDED KI 202 TO UNIT LISTING TYPED ON WORD PROCESSOR
5				ASSY DWG NO CHG TO 300-1927-00/01
6				DELETED KI 202 FROM UNIT HEADING
KI 202/203/204/206/207 MAINTENANCE MANUAL REVISION 1, SEPTEMBER, 1979				

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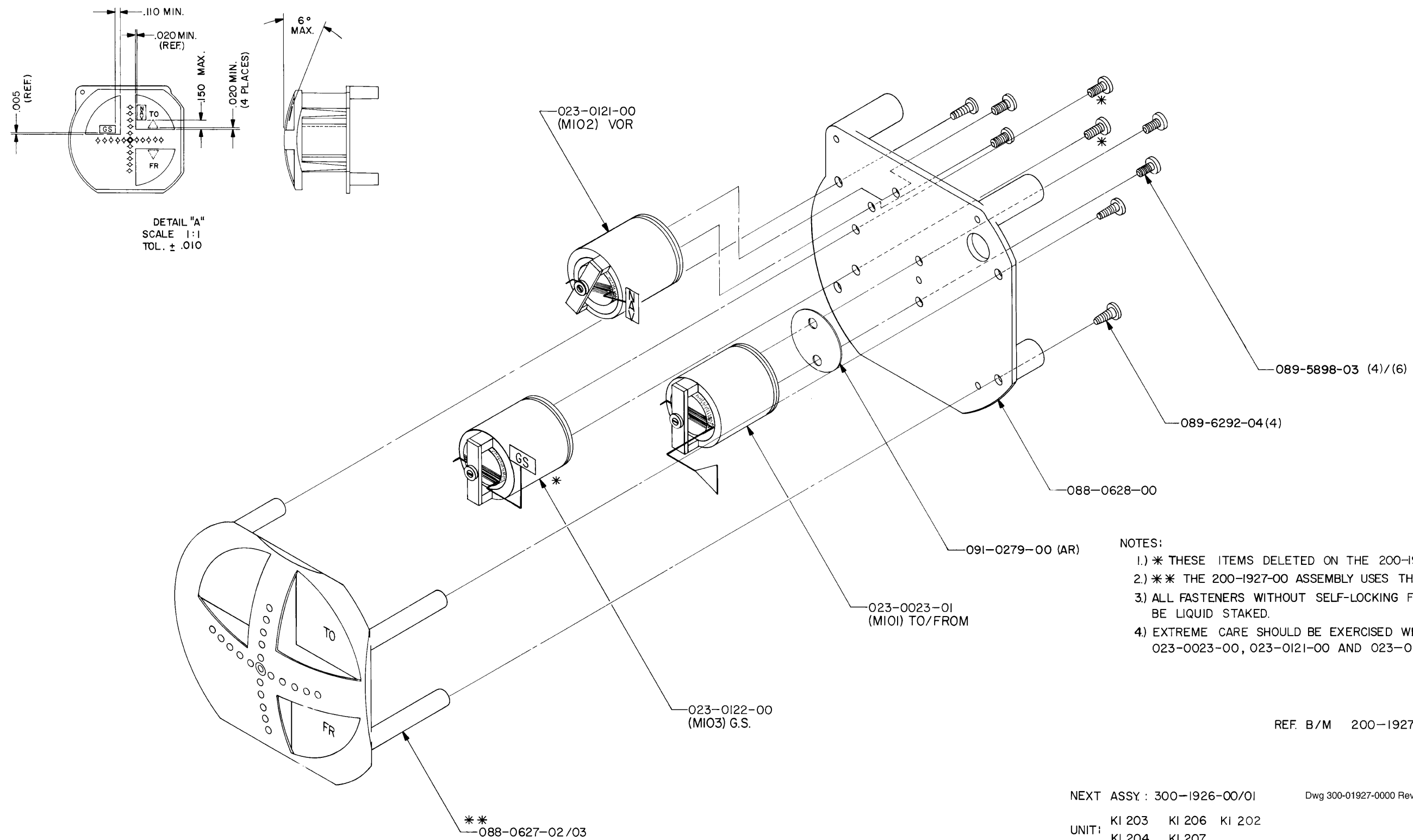


FIGURE 6-6 Flag Assembly  
(Dwg No 300-01927-0000, Rev 7)

**BOM 8: Converter Assembly**

200-01928-0000 CONVERTER ASSY REV 8  
 200-01928-0001 CONVERTER ASSY REV 8

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000	-0001
-	047-03796-0001		CHAS LEFT W/FNSH	EA	1	1
-	047-03797-0001		RIGHT CHASSIS	EA	1	-
-	047-04810-0001		CHSS R/SIDE	EA	-	1
-	088-00578-0002		CONN COVER 2.312	EA	1	1
-	088-00630-0001		REAR MTG PLT	EA	1	1
-	089-05436-0004		SCR,MACH,4-40,FH82,PH	EA	2	2
-	089-06294-0004		SCR PHP 4-4X1/4	EA	4	4
-	089-06484-0004		SCR PHP 2-28X1/4	EA	2	2
-	200-05798-0000		MOTHER BD ASSY	EA	1	1
-	200-05799-0000		CONV #1 BD ASSY	EA	1	1
-	200-05800-0000		CONV #2 BD ASSY	EA	1	1
-	200-05801-0000		P/S & FLAG BD ASSY	EA	1	1
-	300-01928-0000		CONVERTER ASSY DWG	RF	X	X

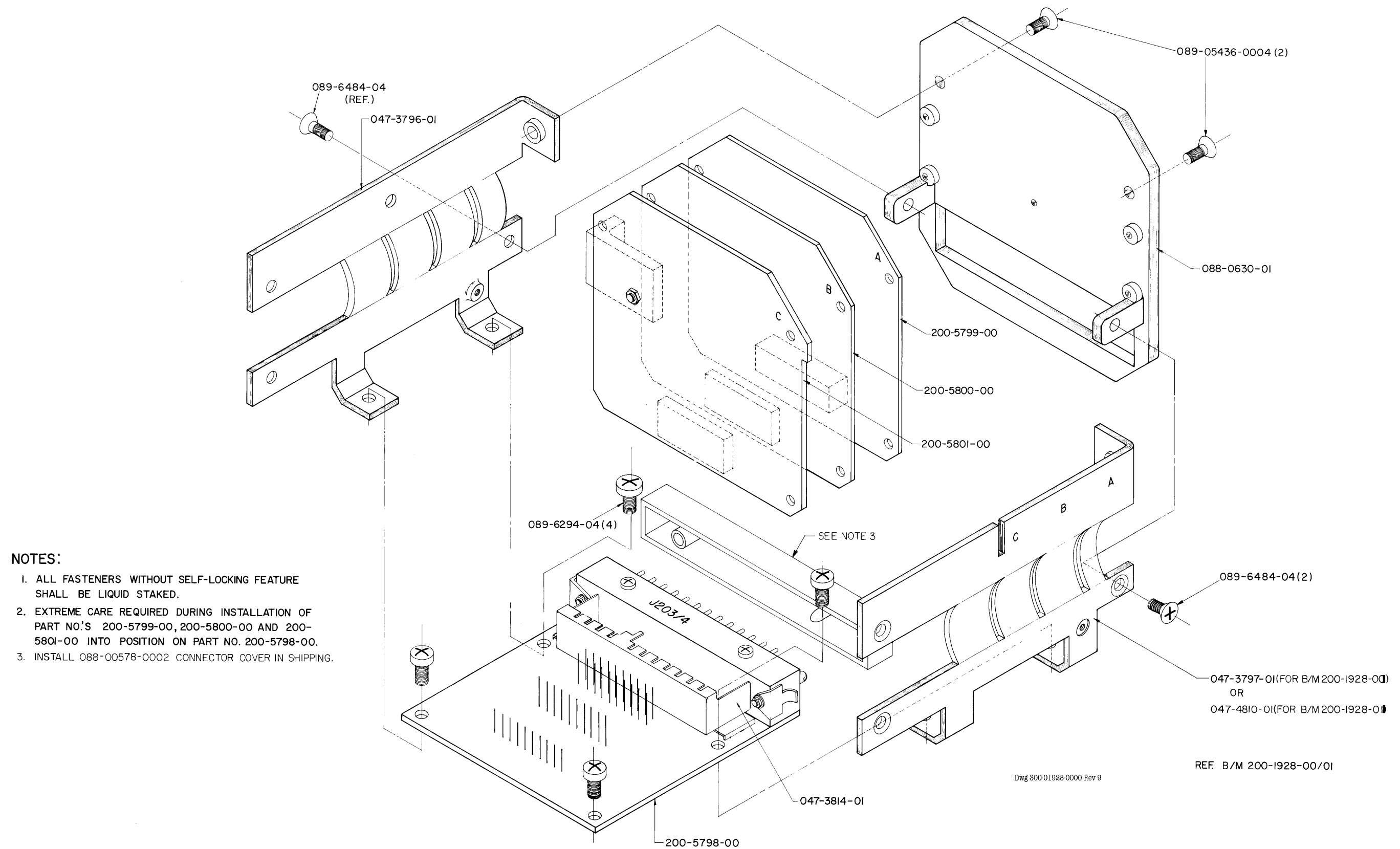
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NAME		ASS'Y. NO.						
Converter Assembly		200-1928-00/01						
KING RADIO CORP. PARTS LISTING			CODE	QUANTITY				
SYMBOL	PART NUMBER	DESCRIPTION		-00	-01	-02	-03	-04
	047-3796-01	Chassis Left	1	1				
	047-3797-01	Chassis Right	1	-				
	047-4810-01	Chassis Right	-	1				
	088-0630-01	Plate Rear Mounting	1	1				
	089-6294-04	Screw PHP #4-40x $\frac{1}{4}$ T. T	4	4				
	089-6299-04	Screw FHP #4-40x $\frac{1}{4}$ T.T.	2	2				
	089-6484-04	Screw FHP #2-28 x $\frac{1}{4}$	2	2				
	200-5798-00	Mother Board Assy	1	1				
	200-5799-00	Converter Board #1 Assy	1	1				
	200-5800-00	Converter Board #2 Assy	1	1				
	200-5801-00	Power Sup & Flag Bd Assy	1	1				

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

PARTS LIST REVISION HISTORY				ENGR. APPROVAL <i>Elmer W. Halpin</i>	
NAME Converter Assembly			ASS'Y. NO. 200-1928-00/01		
ASS'Y. DWG. 300-1928-00		UNIT KI 203,204		USED ON 066-3034-00/03	
REV	CHANGE	SYMBOL	PART NUMBER	DESCRIPTION	
1					
2					
				KI 203/204 Maintenance Manual Revision 0, April 1976	
3			089-6299-04	Qty. changed from 3 to 2	
4				-01 added to P/N.	
5			047-4810-01 047-3796-01 088-0630-01 089-6294-04 089-6299-04 089-6484-04 200-5798-00 200-5799-00 200-5800-00 200-5801-00	Added to B/M. Added to -01 Added to -01 Added to -01 Added to -01 Added to -01 Added to -01 Added to -01 Added to -01 Added to -01	
				KI 203/204 MAINTENANCE MANUAL REV. 1, SEPT., 1979	



**NOTES:**

1. ALL FASTENERS WITHOUT SELF-LOCKING FEATURE SHALL BE LIQUID STAKED.
2. EXTREME CARE REQUIRED DURING INSTALLATION OF PART NO.'S 200-5799-00, 200-5800-00 AND 200-5801-00 INTO POSITION ON PART NO. 200-5798-00.
3. INSTALL 088-00578-0002 CONNECTOR COVER IN SHIPPING.

**FIGURE 6-7 Converter Assembly  
(Dwg No 300-01928-0000, Rev 9)**

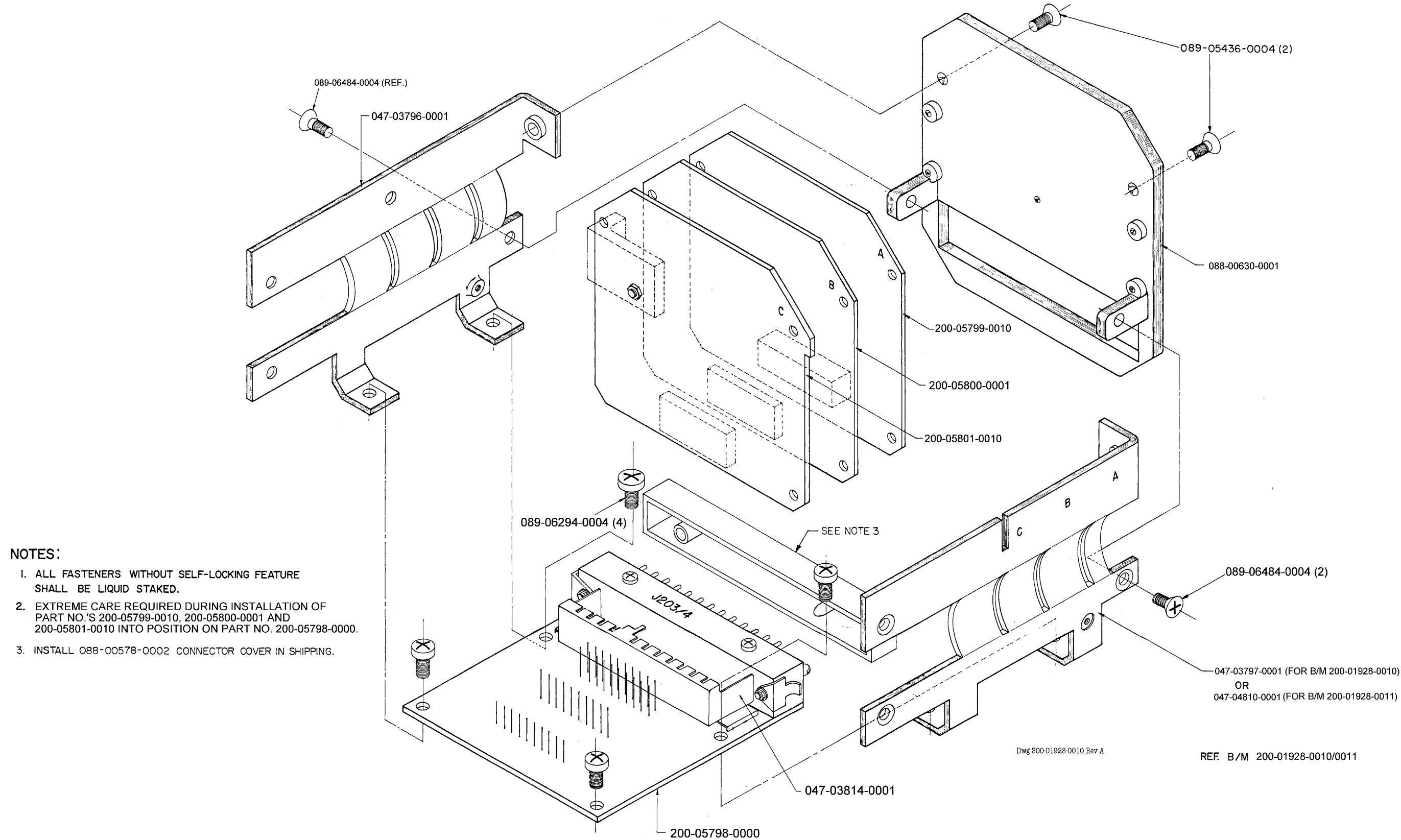
**BOM 9: Converter Assembly**

200-01928-0010 CONVERTER ASSY REV A  
 200-01928-0011 CONVERTER ASSY REV A

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0010	-0011
-	047-03796-0001		CHAS LEFT W/FNSH	EA	1	1
-	047-03797-0001		RIGHT CHASSIS	EA	1	-
-	047-04810-0001		CHSS R/SIDE	EA	-	1
-	088-00578-0002		CONN COVER 2.312	EA	1	1
-	088-00630-0001		REAR MTG PLT	EA	1	1
-	089-05436-0004		SCR,MACH,4-40,FH82,PH	EA	2	2
-	089-06294-0004		SCR PHP 4-4X1/4	EA	4	4
-	089-06484-0004		SCR PHP 2-28X1/4	EA	2	2
-	200-05798-0000		MOTHER BD ASSY	EA	1	1
-	200-05799-0010		CONVERTER #1 BOARD	EA	1	1
-	200-05800-0001		CONVERTER #2 BOARD	EA	1	1
-	200-05801-0010		POWR SUPPLY AND FLAGEA	EA	1	1
-	300-01928-0010		CONVERTER ASSY DWG	RF	X	X

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**NOTES:**

1. ALL FASTENERS WITHOUT SELF-LOCKING FEATURE SHALL BE LIQUID STAKED.
2. EXTREME CARE REQUIRED DURING INSTALLATION OF PART NO.'S 200-05799-0010, 200-05800-0001 AND 200-05801-0010 INTO POSITION ON PART NO. 200-05798-0000.
3. INSTALL 088-00578-0002 CONNECTOR COVER IN SHIPPING.

Dwg 300-01928-0010 Rev A

REF. B/M 200-01928-0010/0011

**FIGURE 6-8 Converter Assembly  
(Dwg No 300-01928-0010, Rev A)**

**BOM 10: Mother Board Assembly**

200-05798-0000 MOTHER BD ASSY REV 11

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000
-	009-05798-0001		PC BD MTHR	EA	1
-	013-00006-0004		FERR BEAD	EA	25
-	016-01071-0000		DC RTV 3140	AR	0
-	030-02270-0001		CONN 30P W/BUTTON	EA	1
-	047-03814-0001		CONN CVR RF SHLD	EA	1
-	089-02005-0037		NUT STD HEX 2-56 SS	EA	2
-	089-05899-0010		SCR PHP 2-56X5/8	EA	2
-	089-08001-0034		WSHER PLT LK #2	EA	2
-	113-03121-0000		CAP DC 120PF 500V	EA	9
R201	026-00018-0000		WIRE CKTJMPR 22AWG	EA	0.16
R201	131-00101-0023		RES CF 100 QW 5%	EA	0.16
R201	131-00201-0023		RES CF 200 QW 5%	EA	0.16
R201	131-00241-0023		RES CF 240 QW 5%	EA	0.16
R201	131-00301-0023		RES CF 300 QW 5%	EA	0.16
R201	131-00361-0023		RES CF 360 QW 5%	EA	0.16

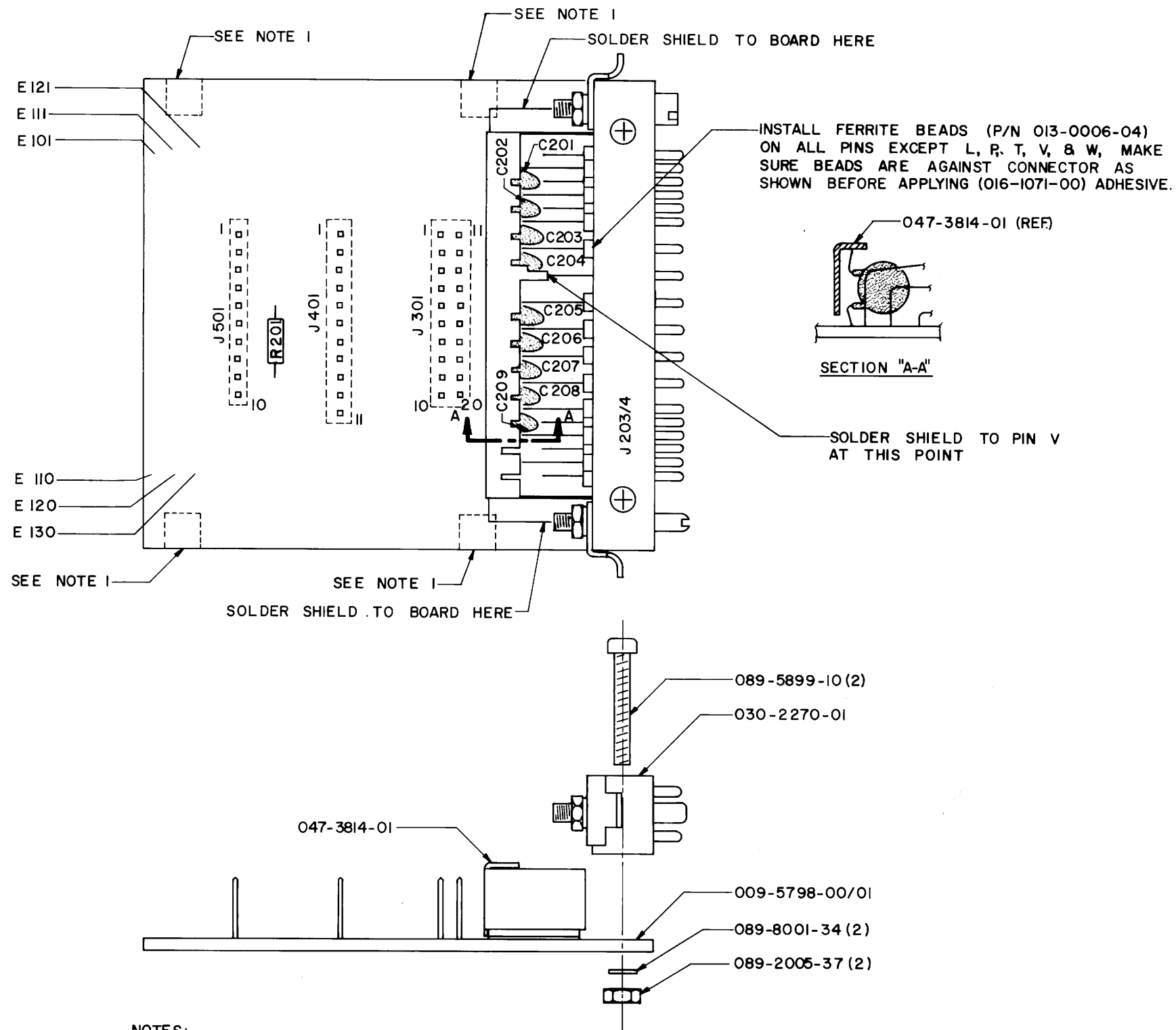
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NAME		ASS'Y. NO.						
Mother Board Assembly		200-5798-00						
KING RADIO CORP. PARTS LISTING			CODE	QUANTITY				
SYMBOL	PART NUMBER	DESCRIPTION		-00	-01	-02	-03	-04
	016-1071-00	RTV Adhesive #3140	AR					
	009-5798-01	P/C Board	1					
	089-5899-10	Screw PHP 2-56x5/8	2					
	089-2005-37	Nut Hex #2-56	2					
	089-8001-34	Washer Lock #2	2					
	013-0006-04	Beads Ferrite	25					
L201/L225	047-3814-01	Conn Cover RF Shield	1					
J2 03/4	030-2270-01	Connector 30 Pin	1					
C201	113-3121-00	Cap 120pf D/C	9					
C202	113-3121-00	Cap 120pf D/C	-					
C203	113-3121-00	Cap 120 pf D/C	-					
C204	113-3121-00	Cap 120 pf D/C	-					
C205	113-3121-00	Cap 120pf D/C	-					
C206	113-3121-00	Cap 120pf D/C	-					
C207	113-3121-00	Cap 120pf D/C	-					
C208	113-3121-00	Cap 120pf D/C	-					
C209	113-3121-00	Cap 120pf D/C	-					
R201	130-0101-25	Res F/C 100Ω QW 10%	1					
	130-0201-23	Res F/C 200Ω QW 5%	1					
	026-0018-00	Circuit Jumper	1					
	130-0241-23	Res F/C 240Ω QW 5%	1					
	130-0301-23	Res F/C 300Ω QW 5%	1					
	130-0361-23	Res F/C 360Ω QW 5%	1					

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

PARTS LIST REVISION HISTORY				ENGR. APPROVAL
NAME			ASS'Y. NO.	
ASS'Y. DWG.		UNIT	USED ON	
REV	CHANGE	SYMBOL	PART NUMBER	DESCRIPTION
1				
2				
3				
4				
				KI 203/204 Maintenance Manual Revision 0, April 1976
5			016-1071-00	Added to B/M
6			009-5798-01	P/N changed from 009-5798-00
			030-2174-01	Deleted from B/M
7		R201	130-0101-25	Added to B/M
8		R201	130-0201-25	Added to B/M
		R201	026-0018-00	Added to B/M
9		R201	130-0201-23	P/N changed from 130-0201-25
10		R201	130-0241-23	Added to B/M
			130-0301-23	Added to B/M
			130-0361-23	Added to B/M
				KI 203/204 MAINTENANCE MANUAL REV. 1, SEPT., 1979

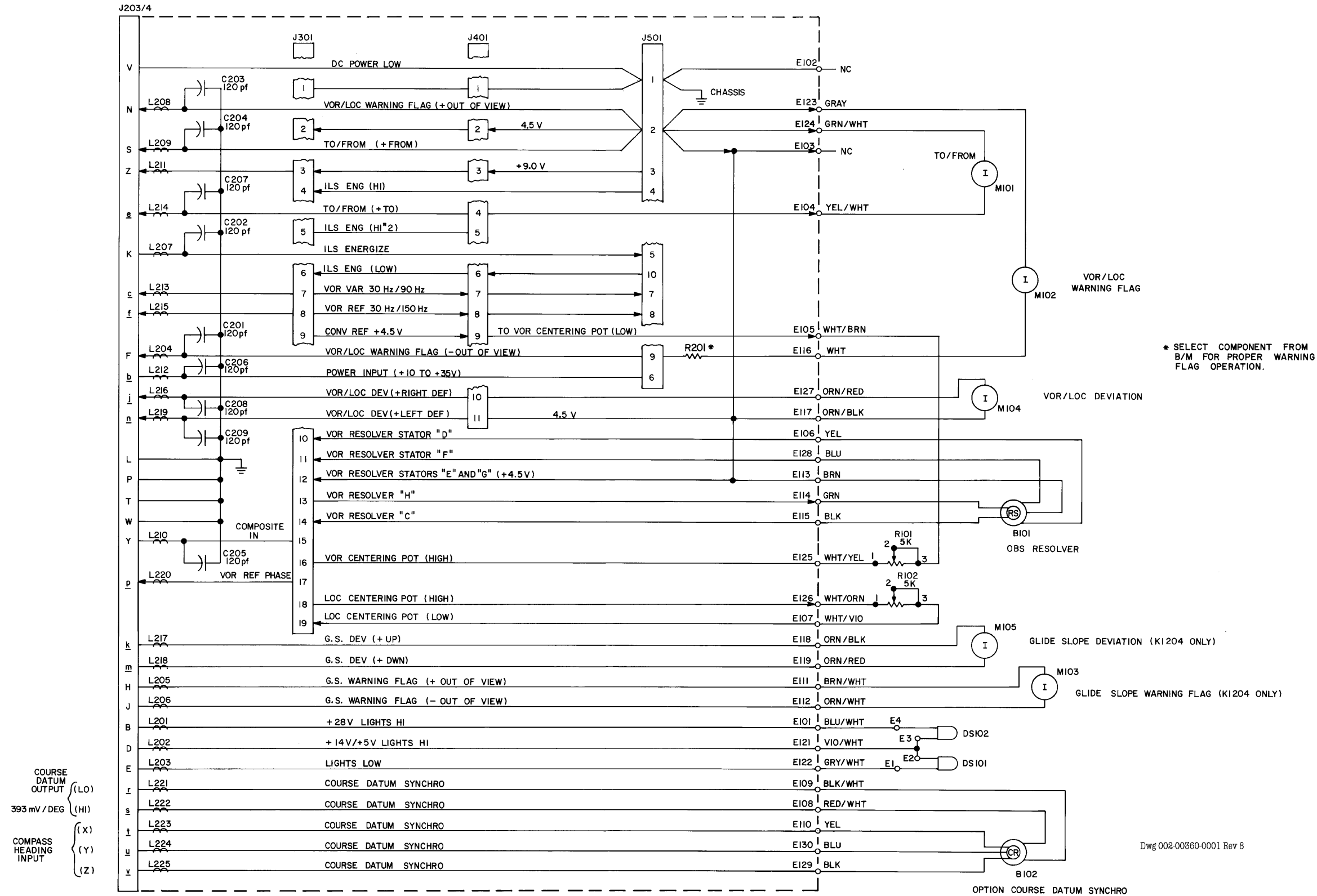


NOTES:

- I. MASK OFF J 203/4, J 301, J 401, J 501, E 101 THRU E 130 & FOUR MOUNTING SURFACES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).

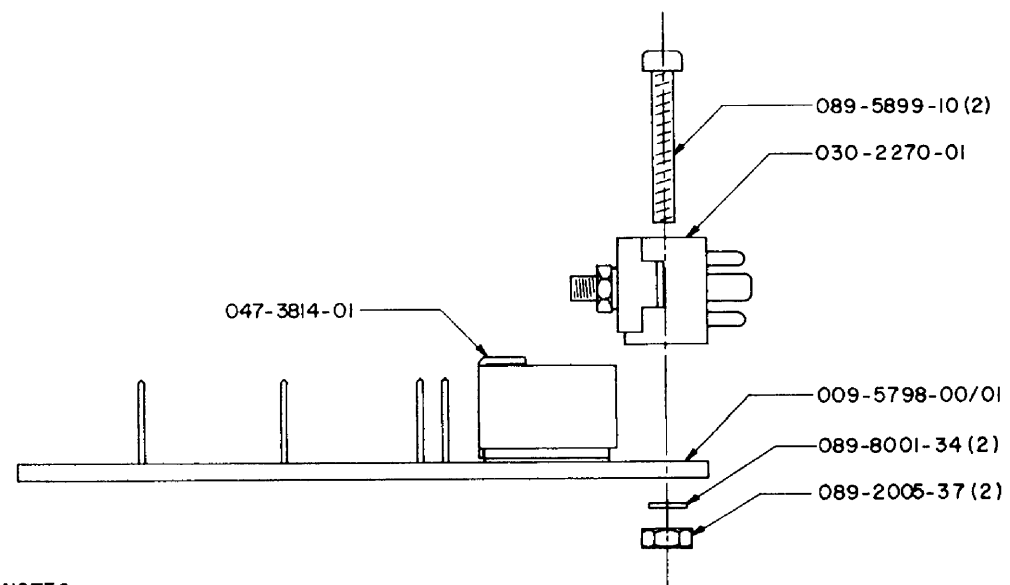
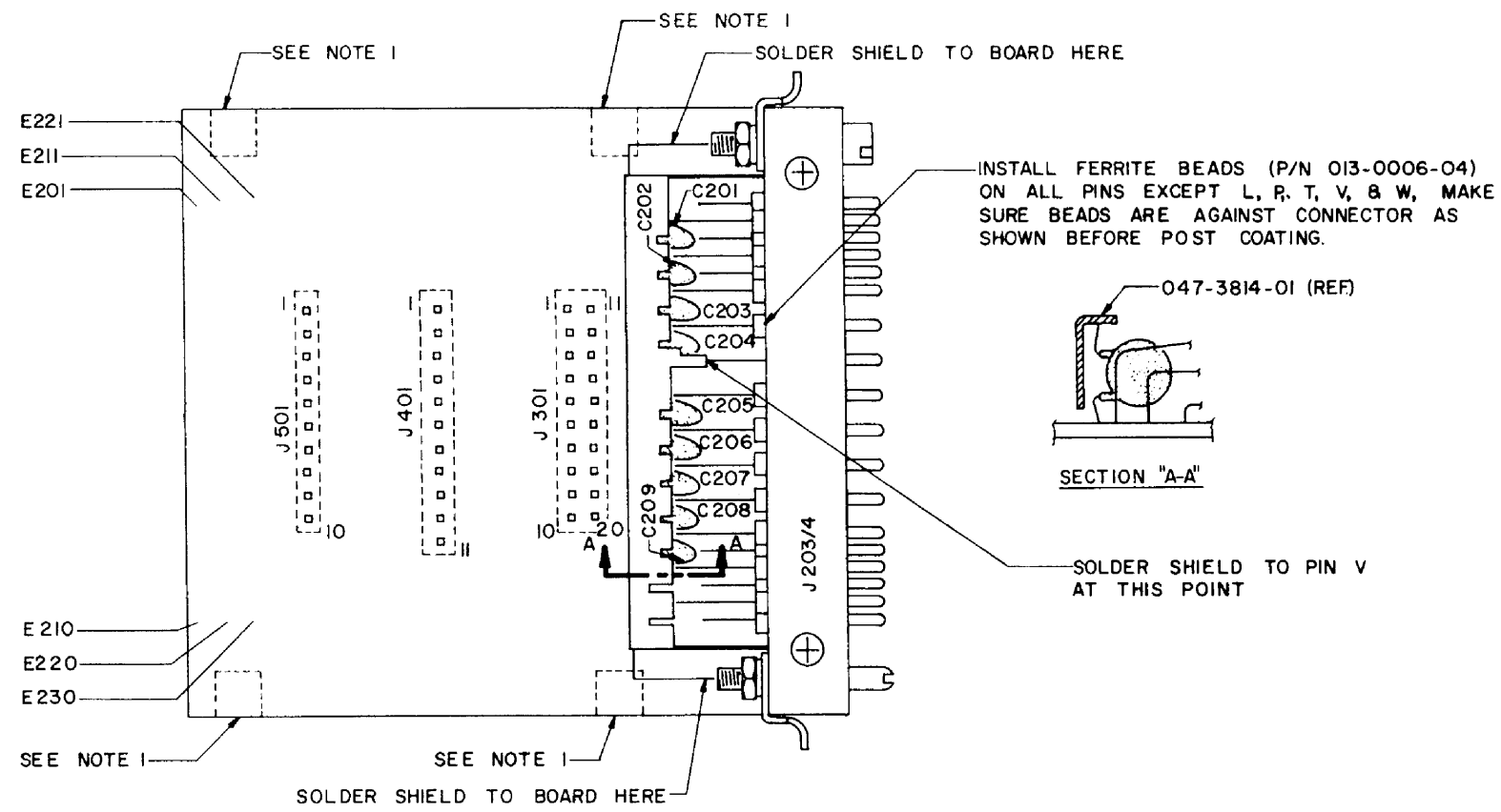
Dwg 300-05798-0000 Rev 4

**FIGURE 6-9 Mother Board Assembly**  
(Dwg No 300-05798-0000, Rev 4)



NOTE: 5 V LIGHTING USED ON KI 204 066-3034-18/19/22/23 FLAVORS ONLY.

FIGURE 6-10 Internal Wiring Schematic KI 203, KI 204  
(Dwg No 002-00360-0001, Rev 8)



NOTES:

- I. MASK OFF J203/4, J301, J401, J501, E201 THRU E230 & FOUR MOUNTING SURFACES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).

Dwg 300-05798-0000 Rev 1

**FIGURE 6-11 Mother Board Assembly**  
(Dwg No 300-05798-0000, Rev 1)



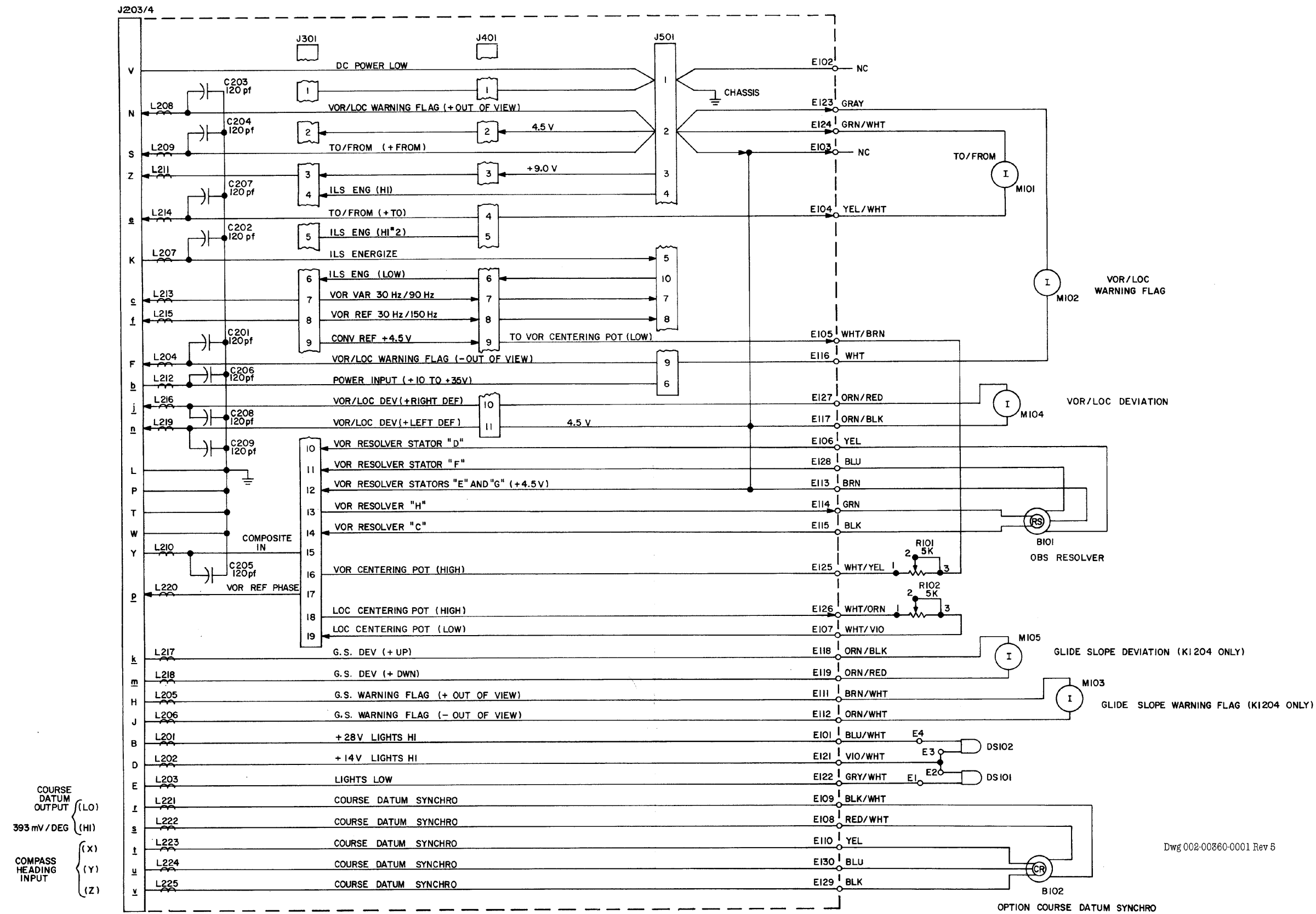


FIGURE 6-12 Internal Wiring Schematic KI 203, KI 204  
(Dwg No 002-00360-0001, Rev 5)

## BOM 11: Converter #1 Board

200-05799-0000 CONV #1 BD ASSY REV 20

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000
-	009-05799-0000		PC BD CONV #1	EA	1
-	030-02170-0010		CONN CARD 20C	EA	1
C302	096-01014-0000		CAP TN 40UF 10V	EA	1
C303	108-06005-0012		CAP TRKG SET/4 MATCH	EA	1
C304	108-06005-0012		CAP TRKG SET/4 MATCH	EA	1
C305	109-00007-0000		CAP DC .01UF 25V	EA	1
C306	114-07104-0000		CAP DC .1UF 16V	EA	1
C307	096-01030-0043		CAP TN 100UF20%6V	EA	1
C308	115-05502-0000		CAP DC 5KPF 100V	EA	1
C309	105-00013-0000		CAP MY .01UF 100V	EA	1
C310	114-07104-0000		CAP DC .1UF 16V	EA	1
C311	105-00013-0000		CAP MY .01UF 100V	EA	1
C312	114-07104-0000		CAP DC .1UF 16V	EA	1
C313	096-01030-0038		CAP TN 100UF10%15V	EA	1
C314	108-05016-0086		CAP PC .22UF 50V	EA	1
C315	108-05016-0062		CAP PC .047UF 50V	EA	1
C316	114-07104-0000		CAP DC .1UF 16V	EA	1
C317	108-06005-0012		CAP TRKG SET/4 MATCH	EA	1
C318	108-06005-0012		CAP TRKG SET/4 MATCH	EA	1
C319	114-07104-0000		CAP DC .1UF 16V	EA	1
C320	113-03121-0000		CAP DC 120PF 500V	EA	1
C321	113-03121-0000		CAP DC 120PF 500V	EA	1
CR301	007-06016-0000		DIO S 1N4154	EA	1
CR302	007-06016-0000		DIO S 1N4154	EA	1
CR303	007-06016-0000		DIO S 1N4154	EA	1
CR304	007-06016-0000		DIO S 1N4154	EA	1
I301	120-03052-0000		IC LM324N	EA	1
I302	120-03082-0001		IC FM DTCTR & LMTR	EA	1
L301	019-02129-0024		COIL RF 27000MH 10%	EA	1
L302	019-02109-0000		FIL NOISE 22MH	EA	1
Q301	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q302	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q303	007-00078-0000		XSTR S NPN 2N3415	EA	1
R301	131-00104-0023		RES CF 100K QW 5%	EA	1
R302	131-00473-0023		RES CF 47K QW 5%	EA	1
R303	133-00113-0025		RES VA 100K 20% B	EA	1
R304	131-00104-0013		RES CF 100K EW 5%	EA	1
R305	131-00222-0013		RES CF 2.2K EW 5%	EA	1
R306	136-08252-0072		RES PF 82.5K QW 1%	EA	1
R307	136-05760-0072		RES PF 576 QW 1%	EA	1
R308	133-00113-0009		RES VA 200 20% B	EA	1
R309	131-00472-0013		RES CF 4.7K EW 5%	EA	1
R310	136-05111-0072		RES PF 5.11K QW 1%	EA	1
R311	133-00096-0029		RES VA 1K HW 10%	EA	1
R312	136-05363-0072		RES PF 536K QW 1%	EA	1
R313	131-00564-0013		RES CF 560K EW 5%	EA	1
R314	131-00102-0023		RES CF 1K QW 5%	EA	1
R315	131-00153-0023		RES CF 15K QW 5%	EA	1
R316	131-00047-0023		RES CF 4.7 QW 5%	EA	1
R317	131-00222-0023		RES CF 2.2K QW 5%	EA	1
R318	136-02001-0072		RES PF 2.0K QW 1%	EA	1
R319	136-02152-0072		RES PF 21.5K QW 1%	EA	1
R320	133-00113-0017		RES VA 5K 20% B	EA	1
R321	131-00333-0013		RES CF 33K EW 5%	EA	1

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000
R322	136-08063-0072		RES PF 806K QW 1%	EA	1
R323	131-00333-0023		RES CF 33K QW 5%	EA	1
R324	131-00470-0013		RES CF 47 EW 5%	EA	1
R325	136-02322-0072		RES PF 23.2K QW 1%	EA	1
R326	136-03322-0072		RES PF 33.2K QW 1%	EA	1
R327	136-07501-0072		RES PF 7.5K QW 1%	EA	1
R328	131-00392-0023		RES CF 3.9K QW 5%	EA	1
R329	136-03320-0072		RES PF 332 QW 1%	EA	1
R330	133-00113-0007		RES VA 100 20% B	EA	1
R331	131-00472-0013		RES CF 4.7K EW 5%	EA	1
R332	136-06341-0072		RES PF 6.34K QW 1%	EA	1
R333	136-05363-0072		RES PF 536K QW 1%	EA	1
R334	136-08063-0072		RES PF 806K QW 1%	EA	1
R335	131-00153-0013		RES CF 15K EW 5%	EA	1
R336	131-00334-0013		RES CF 330K EW 5%	EA	1
R337	131-00392-0013		RES CF 3.9K EW 5%	EA	1
R338	131-00104-0013		RES CF 100K EW 5%	EA	1
R339	131-00103-0023		RES CF 10K QW 5%	EA	1
TP301	008-00096-0001		TERMINAL TEST PNT	EA	1
TP302	008-00096-0001		TERMINAL TEST PNT	EA	1
TP303	008-00096-0001		TERMINAL TEST PNT	EA	1
TP304	008-00096-0001		TERMINAL TEST PNT	EA	1

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME		ASS'Y. NO.						
Converter #1 Bd. Assy.		200-5799-00						
KING RADIO CORP. PARTS LISTING			CODE	QUANTITY				
SYMBOL	PART NUMBER	DESCRIPTION		-00	-01	-02	-03	-04
	009-5799-00	P/C Board		1				
	030-2170-10	Edge Conn 20 Pin		1				
Q301	007-0078-00	Tstr 2N3415 NPN		3				
Q302	007-0078-00	Tstr 2N3415 NPN		-				
Q303	007-0078-00	Tstr 2N3415 NPN		-				
CR301	007-6016-00	Diode 1N4154 Si		4				
CR302	007-6016-00	Diode 1N4154 Si		-				
CR303	007-6016-00	Diode 1N4154 Si		-				
CR304	007-6016-00	Diode 1N4154 Si		-				
L301	019-2129-24	Coil 27mh		1				
L302	019-2109-00	Coil Var 22mh		1				
C302	096-1014-00	Cap 40uf 10V Tant		1				
C303/C304	108-6003-00	Cap .1uf PC		4				
C317/C318	109-0007-00	Cap .01uf D/C X5R		1				
C305	114-7104-00	Cap .1 D/C x 5R		5				
C306	096-1030-43	Cap 100uf 6V Tant		1				
C307	115-5502-00	Cap .005 D/C X5F		1				
C308	105-0013-00	Cap .01 Poly		2				
C309	114-7104-00	Cap .1 D/C X5R		-				
C310	105-0013-00	Cap .01 Poly		-				
C311	114-7104-00	Cap .1 D/C X5R		-				
C312	096-1030-38	Cap 100uf 15V		1				
C313	108-5016-86	Cap .22uf Poly		1				
C314	108-5016-62	Cap .047uf Poly 5%		1				
C315	114-7104-00	Cap .1 D/C X5R		-				
C316	113-3121-00	Cap. D/C 120pf		2				
C320	113-3121-00	Cap. D/C 120pf		-				
C321	113-3121-00	Cap. D/C 120pf		-				
C319	114-7104-00	Cap .1 D/C X5R		-				
I301	120-3052-00	IC LM324N Quad		1				
I302	120-3061-00	IC ULN2113A		1				
R301	130-0104-25	Res 100K 1/4W		1				
R302	130-0473 -25	Res 47 K 1/4W		1				
R303	133-0113-24	Res 100K Pot		1				
R304	130-0104 -13	Res 100K 1/8W		2				
R305	130-0222-13	Res 2.2K 1/8W		1				
R306	136-8252-72	Res 82.5K 1%		1				
R307	136-5760-72	Res 576 ohm 1%		1				
R308	133-0113-08	Res 200 ohm Pot		1				

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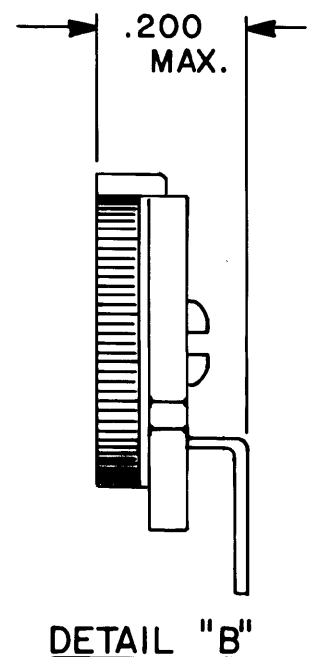
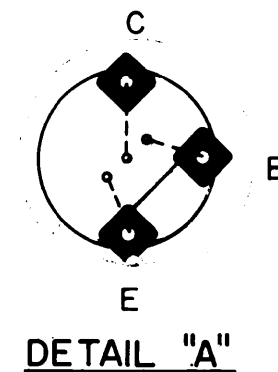
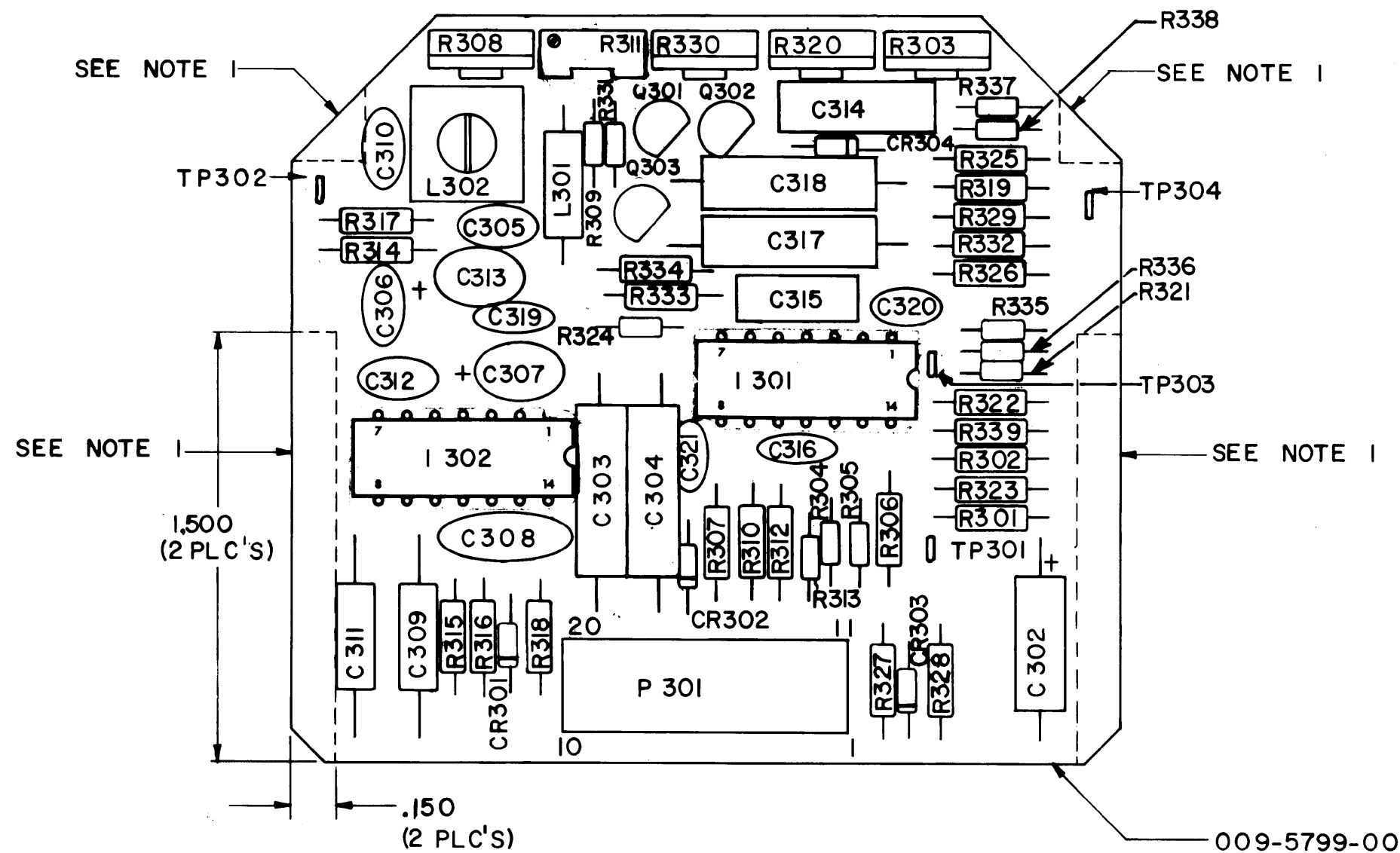
NAME		ASS'Y. NO.						
Converter #1 Board Assy.		200-5799-00						
KING RADIO CORP. PARTS LISTING			CODE	QUANTITY				
SYMBOL	PART NUMBER	DESCRIPTION		-00	-01	-02	-03	-04
R309	130-0472-13	Res 4.7K 1/8W		2				
R310	136-4871 -72	Res 4.87K 1%		1				
R311	133-0113-14	Res 2K Pot		1				
R312	136-5363-72	Res 536K 1%		2				
R313	130-0564-13	Res 560K 5%		1				
R314	130-0102-23	Res 1K ohm 1/4W 5%		1				
R315	130-0113-23	Res 11K 1/4W 5%		1				
R316	130-0047-25	Res 4.7 ohm 1/4W		1				
R317	130-0222-25	Res 2.2K 1/4W		-				
R318	136-2001-72	Res 2K 1%		1				
R319	136-2152-72	Res 21.5K 1%		1				
R320	133-0113-16	Res 5K Pot		1				
R321	130-0333-13	Res 33K 1/8W		1				
R322	136-8063-72	Res 806K 1%		2				
R323	130-0333-23	Res 33K 1/4W 5%		1				
R324	130-0470-13	Res 47 ohm 1/8W		1				
R325	136-2322-72	Res 23.2K 1%		1				
R326	136-3322-72	Res 33.2K 1%		1				
R327	136-7501-72	Res 7.50K 1%		1				
R328	130-0392-25	Res 3.9K 1/4W		1				
R329	136-3320-72	Res 332 ohm 1%		1				
R330	133-0113-07	Res 100 ohm Pot		1				
R331	130-0472-13	Res 4.7K 1/8W		-				
R332	136-6341 -72	Res 6.34K 1%		1				
R333	136-5363-72	Res 536K 1%		-				
R334	136-8063-72	Res 806K 1%		-				
R335	130-0153-13	Res 15K 1/8W		1				
R336	130-0334-13	Res 330K 1/8W 5%		1				
R337	130-0392-13	Res 3.9K 1/8W		1				
R338	130-0104-13	Res 100K 1/8W		-				
R339	130-0103-25	Res 10K 1/4W		-				

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PARTS LIST REVISION HISTORY				ENGR. APPROVAL
REV	CHANGE	SYMBOL	PART NUMBER	DESCRIPTION
NAME			ASS'Y. NO.	
Converter #1 Bd. Assy.			200-5799-00	
ASS'Y. DWG.		UNIT	USED ON	
300-5799-00		KI 203/204	200-1928-00	
1				
2				
3				
4				
5				
6				
				KI 203/204 Maintenance Manual Revision 0, April 1976

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

PARTS LIST REVISION HISTORY				ENGR. APPROVAL
NAME			ASS'Y. NO.	
ASS'Y. DWG.			UNIT	USED ON
REV	CHANGE	SYMBOL	PART NUMBER	DESCRIPTION
				Converter #1 Bd. Assy.
				200-5799-00
			KI 203/204	200-1928-00
7		C320/321	113-3121-00	Added to B/M
8		R303	133-0113-24	P/N changed from 133-0113-25
		R308	133-0113-08	P/N changed from 133-0113-40
		R311	133-0113-14	P/N changed from 133-0113-41
		R320	133-0113-16	P/N changed from 133-0113-42
9		R330	133-0113-07	P/N changed from 133-0113-39
		C303, 304, 317, 318	108-6003-00	P/N changed from 108-5022-10, deleted (set of 4) from description Qty from 1 to 4.
10		R301	130-0104-25	Qty from 3 to 1
		R304	130-0104-13	P/N changed from 130-0104-25, desc. from 1/4W to 1/8W, qty from - to 2
		R305	130-0222-13	P/N changed from 130-0222-25, desc. from 1/4W to 1/8W, qty from 2 to 1
		R309	130-0472-13	P/N changed from 130-0472-25, desc. from 1/4W to 1/8W
		R313	130-0564-13	P/N changed from 130-0564-23
		R321	130-0333-13	P/N changed from 130-0333-23, desc. from 1/4W to 1/8W, qty from 2 to 1
		R323	130-0333-23	Qty from - to 1
		R324	130-0470-13	P/N changed from 130-0470-25, desc. from 1/4W to 1/8W
		R328	130-0392-25	Qty from 2 to 1
		R331	130-0472-13	P/N changed from 130-0472-25, desc. from 1/4W to 1/8W
		R335	130-0153-13	P/N changed from 130-0153-25, desc. from 1/4W to 1/8W
		R336	130-0334-13	P/N changed from 130-0334-23, desc. from 1/4W to 1/8W
		R337	130-0392-13	P/N changed from 130-0392-25, desc. from 1/4W to 1/8W, qty from - to 1
		R338	130-0104-13	P/N changed from 130-0104-25, desc. from 1/4W to 1/8W
				KI 203/204 MAINTENANCE MANUAL REV. 1, SEPT., 1979



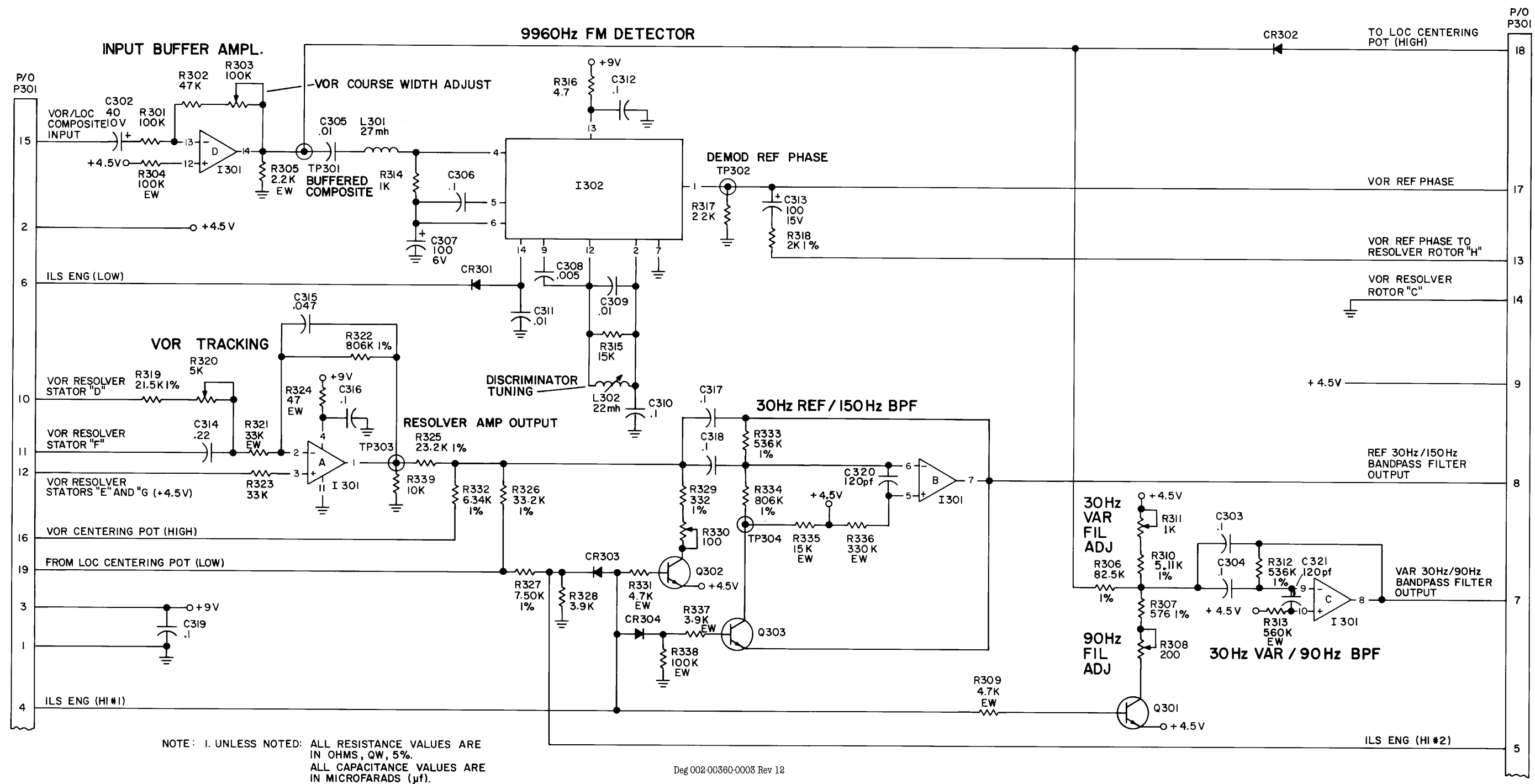
NOTES:-

1. MASK OFF P 301, TP301 THRU TP304, L 302, R 303, R 308, R 311, R 320, R 330, TWO AREAS FOR CARD GUIDES, & TWO AREAS AROUND CARD PULLER HOLES, THEN POST COAT BOTH SIDES OF ASSY WITH UNDILUTED CLEAR URETHANE POST COATING (016-01040-0000).
2. TRANSISTORS Q 301, Q 302, & Q 303, SEE DETAIL "A"

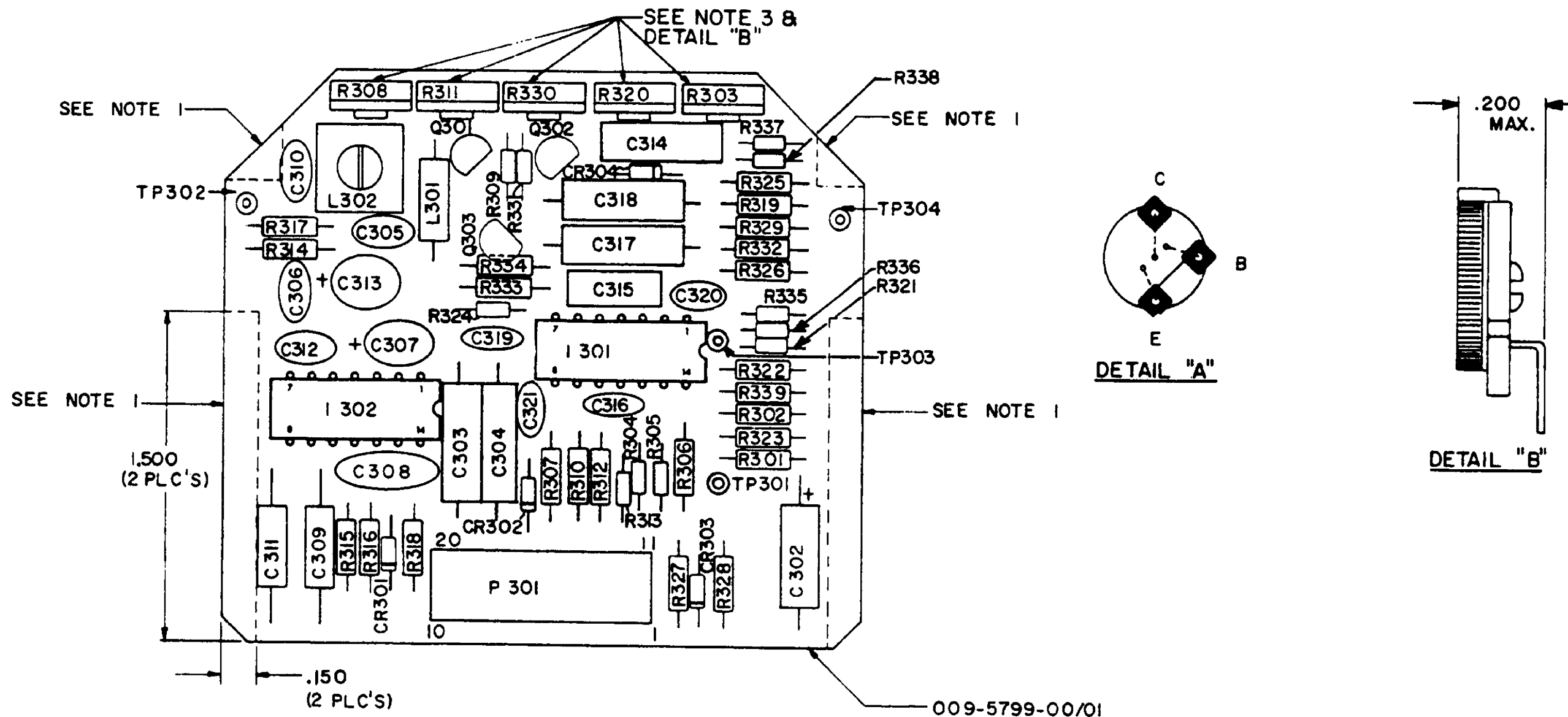
Dwg 300-05799-0000 Rev AA

FIGURE 6-13 Converter #1 Board Assembly  
(Dwg No 300-05799-0000, Rev AA)





**FIGURE 6-14 Converter #1 Board Schematic**  
(Dwg No 002-00360-0003, Rev 12)



NOTES:

1. MASK OFF P 301, TP301 THRU TP304, L 302, R 303, R 308, R 311, R 320, R 330, TWO AREAS FOR CARD GUIDES, & TWO AREAS AROUND CARD PULLER HOLES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).
2. TRANSISTORS Q 301, Q 302, & Q 303, SEE DETAIL "A".
3. POT LEADS MUST BE PREFORMED AS IN DETAIL "B".

Dwg 300-05799-0000 Rev 4

FIGURE 6-15 Converter #1 Board Assembly  
(Dwg No 300-05799-0000, Rev 4)

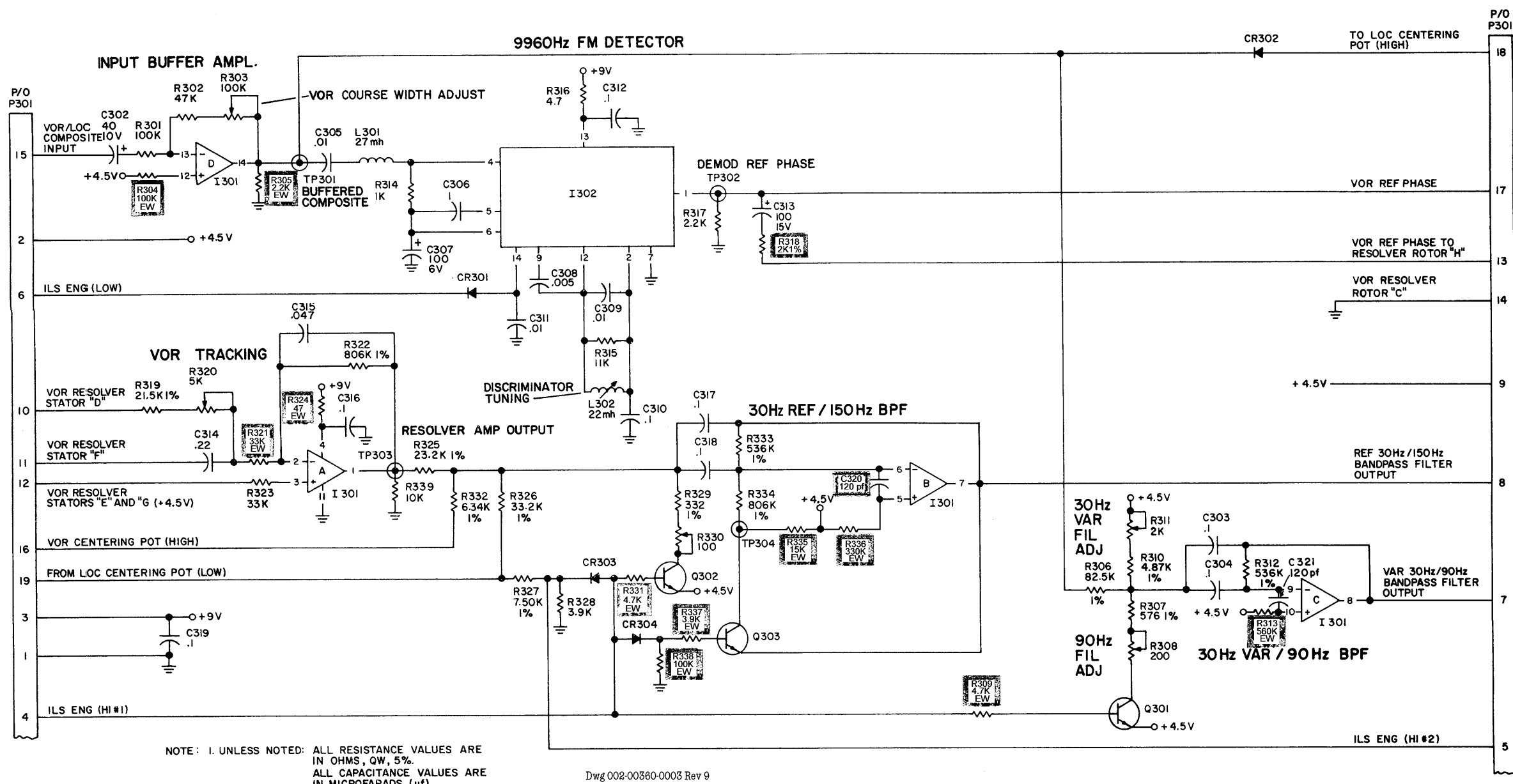
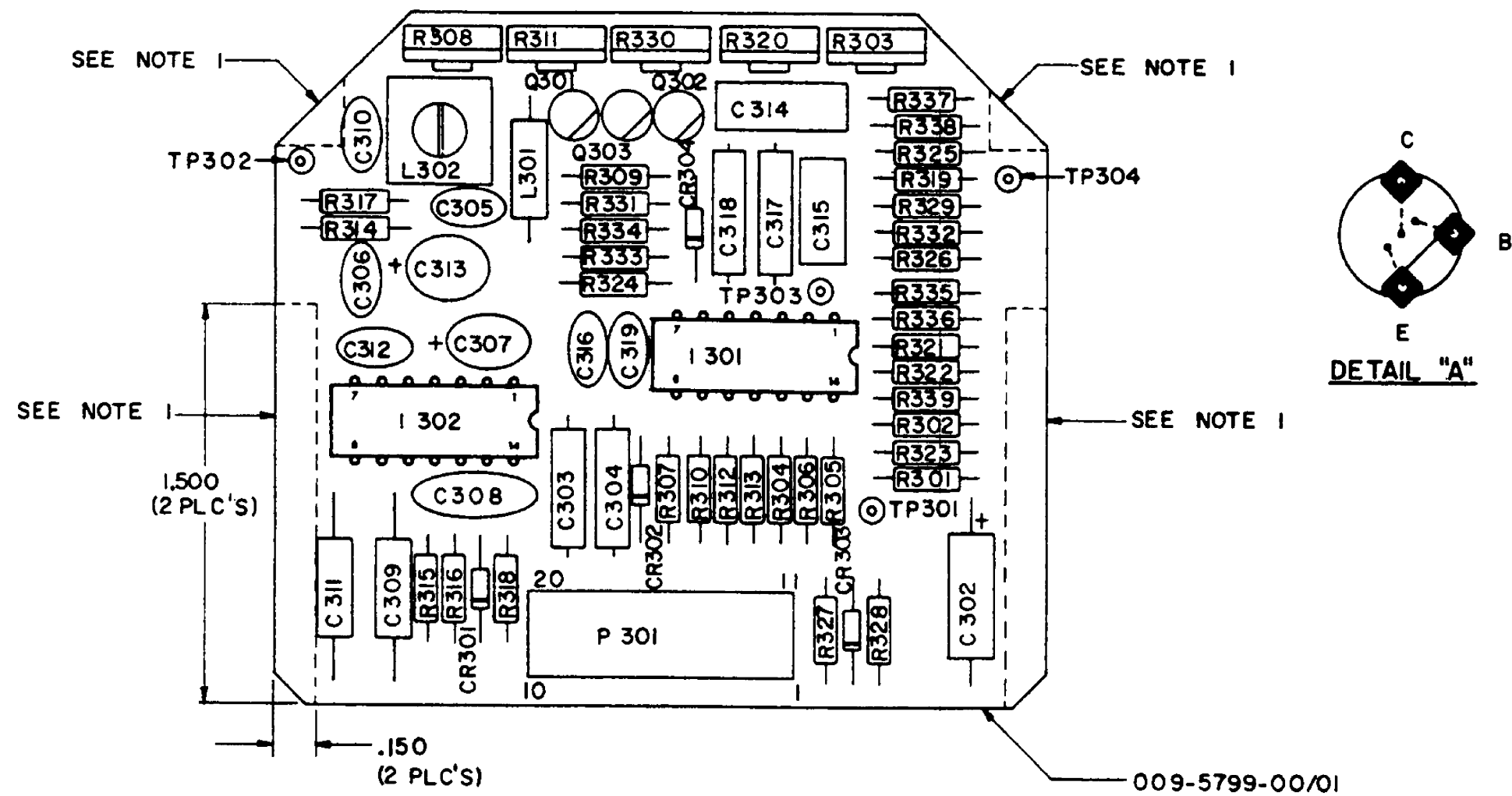


FIGURE 6-16 Converter #1 Board Schematic  
(Dwg No 002-00360-0003, Rev 9)



NOTES:-

1. MASK OFF P 301, TP301 THRU TP304, L 302, R 303, R 308, R 311, R 320, R 330, TWO AREAS FOR CARD GUIDES, & TWO AREAS AROUND CARD PULLER HOLES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).
2. TRANSISTORS Q 301, Q 302, & Q 303, SEE DETAIL "A"

Dwg 300-05799-0000 Rev 1

FIGURE 6-17 Converter #1 Board Assembly  
(Dwg No 300-05799-0000, Rev 1)

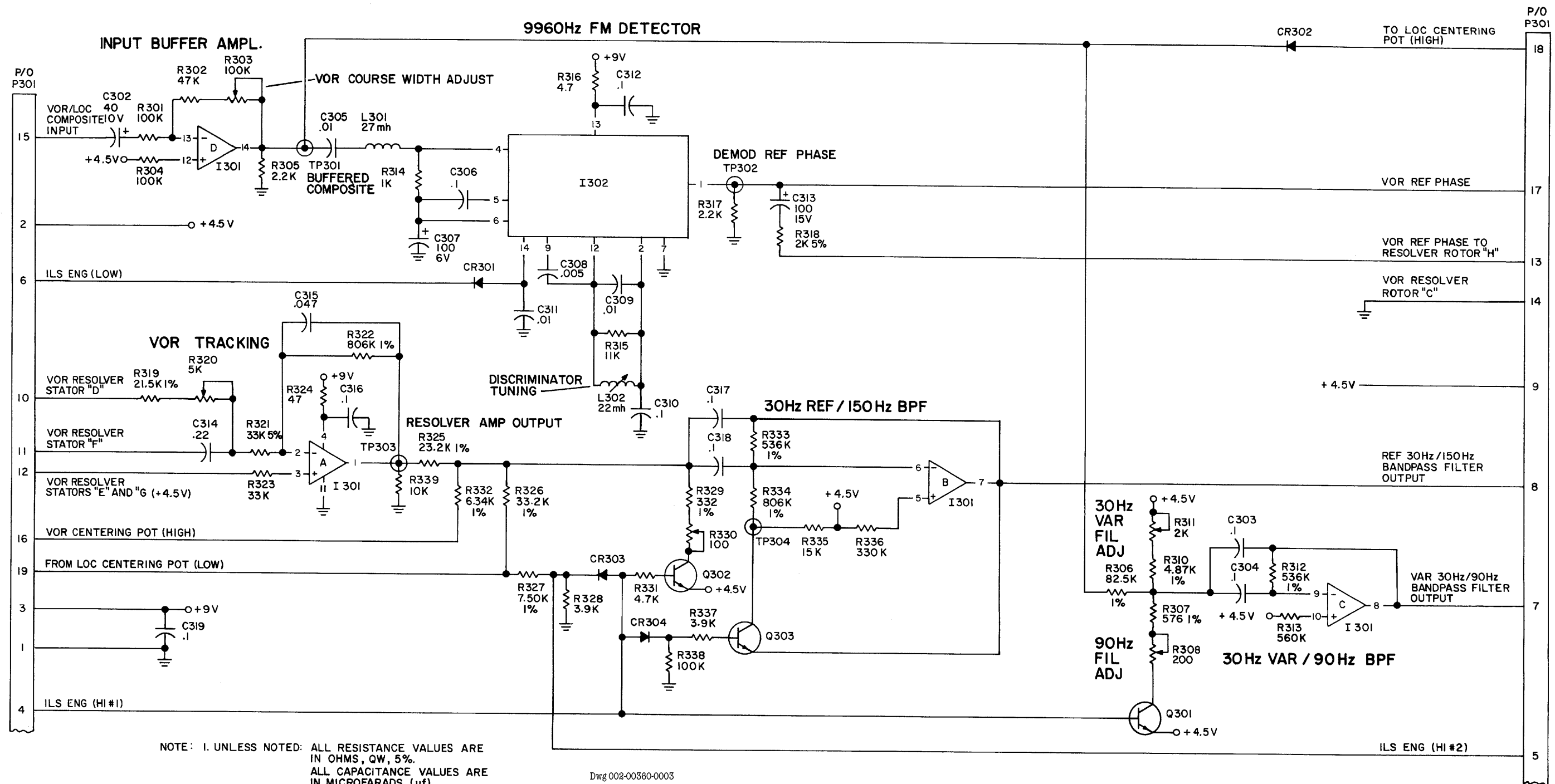


FIGURE 6-18 Converter #1 Board Schematic (Dwg No 002-00360-0003)

## BOM 12: Converter #1 Board

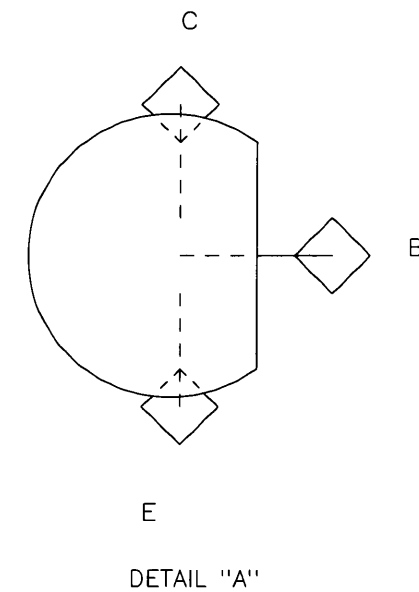
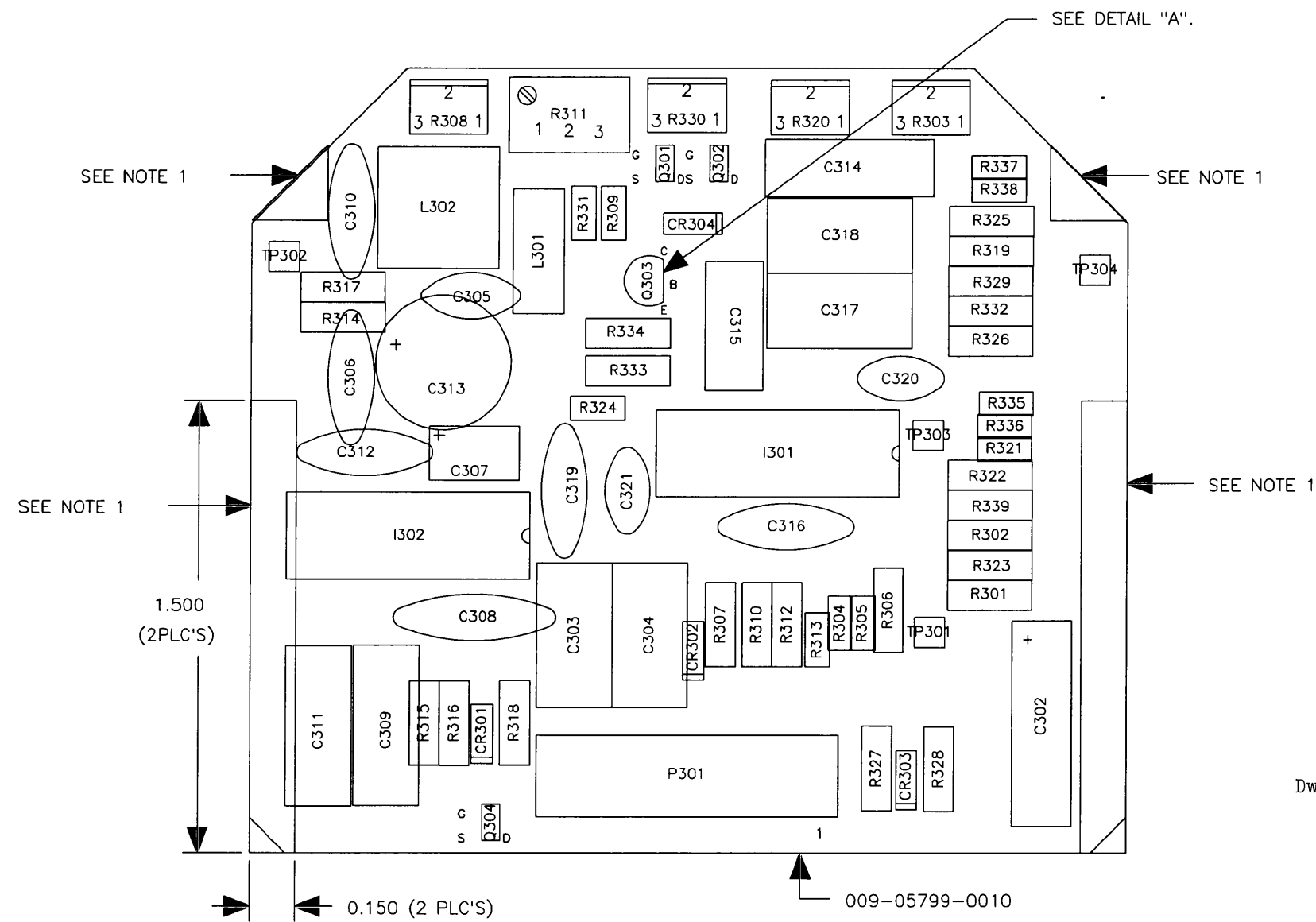
200-05799-0010 CONVERTER #1 BOARD REV -

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0010
-	009-05799-0010		CONVERTER #1 BOARD	EA	1
C302	096-01014-0000		CAP TN 40UF 10V	EA	1
C303	105-00172-0001		CAP FM PE .56UF 50V	EA	1
C304	105-00172-0001		CAP FM PE .56UF 50V	EA	1
C305	109-00007-0000		CAP DC .01UF 25V	EA	1
C306	114-07104-0000		CAP DC .1UF 16V	EA	1
C307	096-01030-0043		CAP TN 100UF20%6V	EA	1
C308	115-05502-0000		CAP DC 5KPF 100V	EA	1
C309	105-00013-0000		CAP MY .01UF 100V	EA	1
C310	114-07104-0000		CAP DC .1UF 16V	EA	1
C311	105-00013-0000		CAP MY .01UF 100V	EA	1
C312	114-07104-0000		CAP DC .1UF 16V	EA	1
C313	096-01030-0038		CAP TN 100UF10%15V	EA	1
C314	108-05016-0086		CAP PC .22UF 50V	EA	1
C315	108-05016-0062		CAP PC .047UF 50V	EA	1
C316	114-07104-0000		CAP DC .1UF 16V	EA	1
C317	105-00172-0001		CAP FM PE .56UF 50V	EA	1
C318	105-00172-0001		CAP FM PE .56UF 50V	EA	1
C319	114-07104-0000		CAP DC .1UF 16V	EA	1
C320	113-03121-0000		CAP DC 120PF 500V	EA	1
C321	113-03121-0000		CAP DC 120PF 500V	EA	1
CR301	007-06016-0000		DIO S 1N4154	EA	1
CR302	007-06016-0000		DIO S 1N4154	EA	1
CR303	007-06016-0000		DIO S 1N4154	EA	1
CR304	007-06016-0000		DIO S 1N4154	EA	1
I301	120-03052-0000		IC LM324N	EA	1
I302	120-03082-0001		IC FM DTCTR & LMTR	EA	1
L301	019-02129-0024		COIL RF 27000MH 10%	EA	1
L302	019-02109-0000		FIL NOISE 22MH	EA	1
P301	030-02170-0010		CONN CARD 20C	EA	1
Q301	007-01090-0001		N-CHANNEL MOSFET	EA	1
Q302	007-01090-0001		N-CHANNEL MOSFET	EA	1
Q303	007-00179-0000		XSTR S NPN 2N3904	EA	1
Q304	007-01090-0001		N-CHANNEL MOSFET	EA	1
R301	136-04992-0072		RES PF 49.9K QW 1%	EA	1
R302	136-02492-0072		RES PF 24.9K QW 1%	EA	1
R303	133-00110-0041		RES VA 50K HW	EA	1
R304	131-00473-0013		RES CF 47K EW 5%	EA	1
R305	131-00222-0013		RES CF 2.2K EW 5%	EA	1
R306	136-01472-0072		RES PF 14.7K QW 1%	EA	1
R307	136-01000-0072		RES PF 100 QW 1%	EA	1
R308	133-00110-0031		RES VA 50 HW	EA	1
R309	131-00472-0013		RES CF 4.7K EW 5%	EA	1
R310	136-09090-0072		RES PF 909 QW 1%	EA	1
R311	133-00096-0027		RES VA 200 HW 10%	EA	1
R312	136-09532-0072		RES PF 95.3K QW 1%	EA	1
R313	131-00823-0013		RES CF 82K EW 5%	EA	1
R314	131-00102-0023		RES CF 1K QW 5%	EA	1
R315	131-00153-0023		RES CF 15K QW 5%	EA	1
R316	131-00047-0023		RES CF 4.7 QW 5%	EA	1
R317	131-00222-0023		RES CF 2.2K QW 5%	EA	1
R318	136-02001-0072		RES PF 2.0K QW 1%	EA	1
R319	136-02152-0072		RES PF 21.5K QW 1%	EA	1
R320	133-00110-0037		RES VA 5K HW	EA	1

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0010
R321	131-00333-0013		RES CF 33K EW 5%	EA	1
R322	136-08063-0072		RES PF 806K QW 1%	EA	1
R323	131-00333-0023		RES CF 33K QW 5%	EA	1
R324	131-00470-0013		RES CF 47 EW 5%	EA	1
R325	136-04121-0072		RES PF 4.12K QW 1%	EA	1
R326	136-05901-0072		RES PF 5.9K QW 1%	EA	1
R327	136-01331-0072		RES PF 1.33K QW 1%	EA	1
R328	131-00103-0023		RES CF 10K QW 5%	EA	1
R329	136-00511-0072		RES PF 51.1 QW 1%	EA	1
R330	133-00110-0031		RES VA 50 HW	EA	1
R331	131-00472-0013		RES CF 4.7K EW 5%	EA	1
R332	136-01001-0072		RES PF 1K QW 1%	EA	1
R333	136-09532-0072		RES PF 95.3K QW 1%	EA	1
R334	136-01433-0072		RES PF 143K QW 1%	EA	1
R335	131-00153-0013		RES CF 15K EW 5%	EA	1
R336	131-00823-0013		RES CF 82K EW 5%	EA	1
R337	131-00392-0013		RES CF 3.9K EW 5%	EA	1
R338	131-00104-0013		RES CF 100K EW 5%	EA	1
R339	131-00103-0023		RES CF 10K QW 5%	EA	1
TP301	008-00096-0001		TERMINAL TEST PNT	EA	1
TP302	008-00096-0001		TERMINAL TEST PNT	EA	1
TP303	008-00096-0001		TERMINAL TEST PNT	EA	1
TP304	008-00096-0001		TERMINAL TEST PNT	EA	1

NOTES:

1. MASK OFF P301,TP301 THRU TP304, L302, R303, R308, R311, R320, R330, TWO AREAS FOR CARD GUIDES AND TWO AREAS AROUND CARD PULLER HOLES, THEN POST COAT BOTH SIDES OF ASSY WITH CLEAR URETHANE (016-01040-0000).
2. PRINTED CIRCUIT ASSEMBLY IDENTIFICATION MUST BE IN ACCORDANCE WITH SPEC 001-01101-0000.



Dwg 300-05799-0010 Rev A Sht 1

REF. B/M: 200-05799-0010

**FIGURE 6-19 Converter #1 Board Assembly  
(Dwg No 300-05799-0010, Rev A, Sht 1)**



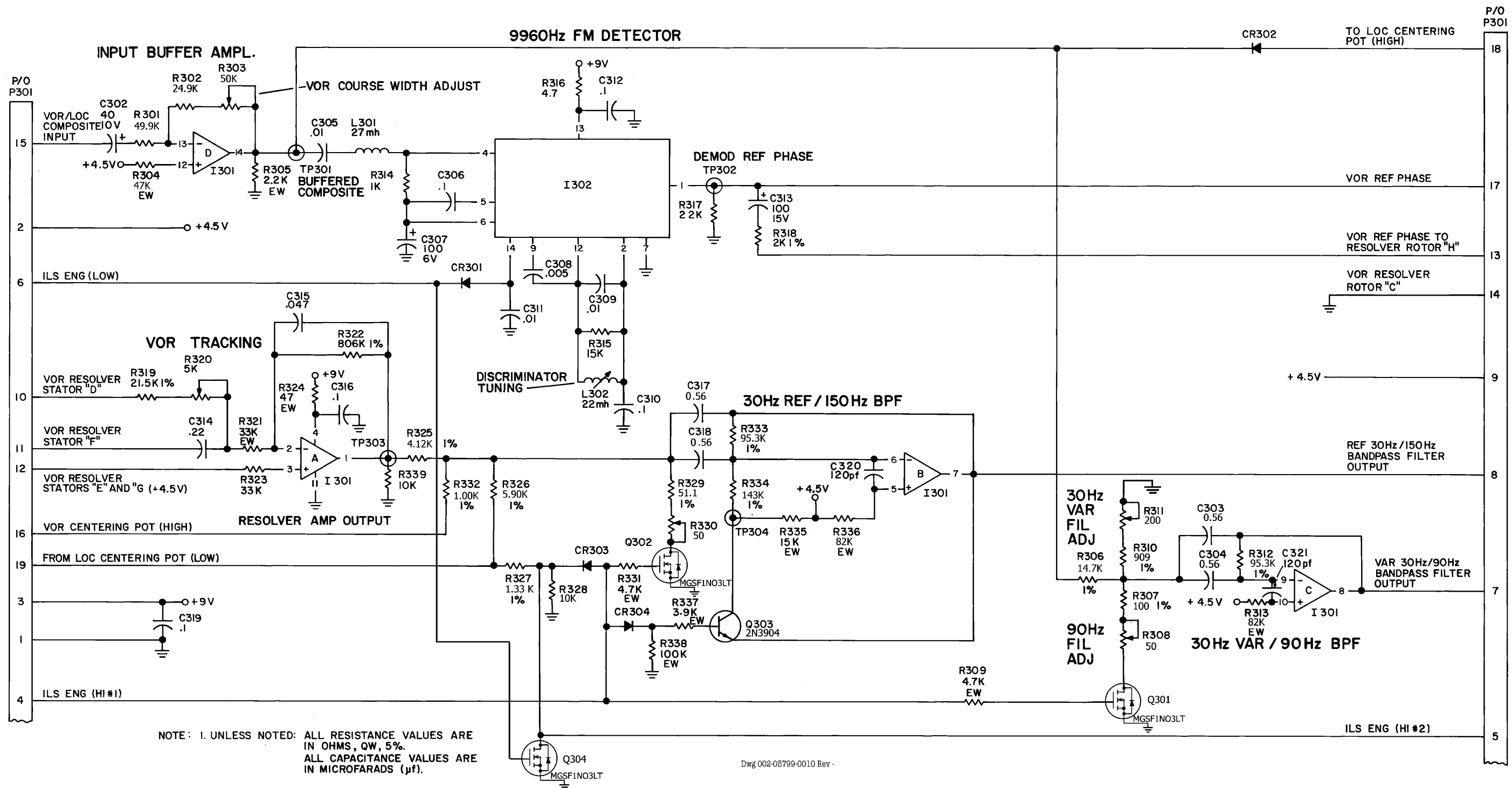


FIGURE 6-20 Converter #1 Board Schematic  
(Dwg No 002-05799-0010, Rev -)

## BOM 13: Converter #2 Board

200-05800-0000 CONV #2 BD ASSY REV 20

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000
-	009-05800-0000		PC BD CONV #2	EA	1
-	030-02171-0011		CONN CARD 11 CONT	EA	1
C401	096-01014-0000		CAP TN 40UF 10V	EA	1
C402	096-01030-0042		CAP TN 33UF10%15V	EA	1
C403	096-01030-0005		CAP TN 10UF 10%20V	EA	1
C404	096-01030-0012		CAP TN 3.3UF10%15V	EA	1
C405	096-01030-0027		CAP TN 15UF20%15V	EA	1
C407	096-01030-0027		CAP TN 15UF20%15V	EA	1
C408	105-00031-0074		CAP MY .15UF 80V	EA	1
C409	096-01030-0027		CAP TN 15UF20%15V	EA	1
C410	096-01030-0027		CAP TN 15UF20%15V	EA	1
C411	096-01014-0000		CAP TN 40UF 10V	EA	1
C412	111-00002-0000		CAP CR .1UF 50V	EA	1
C413	111-00002-0000		CAP CR .1UF 50V	EA	1
C414	113-03121-0000		CAP DC 120PF 500V	EA	1
C415	113-03121-0000		CAP DC 120PF 500V	EA	1
C416	113-03121-0000		CAP DC 120PF 500V	EA	1
C417	096-01082-0028		CAP TN 47UF 20V	EA	1
CR401	007-06016-0000		DIO S 1N4154	EA	1
CR402	007-06016-0000		DIO S 1N4154	EA	1
CR403	007-06016-0000		DIO S 1N4154	EA	1
CR405	007-06016-0000		DIO S 1N4154	EA	1
CR406	007-06016-0000		DIO S 1N4154	EA	1
CR407	007-06016-0000		DIO S 1N4154	EA	1
CR408	007-06016-0000		DIO S 1N4154	EA	1
CR409	007-06016-0000		DIO S 1N4154	EA	1
CR410	007-06016-0000		DIO S 1N4154	EA	1
CR411	007-06016-0000		DIO S 1N4154	EA	1
CR412	007-06016-0000		DIO S 1N4154	EA	1
I401	120-06083-0001		IC SCL4066BC	EA	1
I402	120-03052-0000		IC LM324N	EA	1
Q401	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q402	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q403	007-00065-0000		XSTR S PNP 2N3906	EA	1
Q404	007-00267-0001		XSTR FET J113	EA	1
Q405	007-00179-0000		XSTR S NPN 2N3904	EA	1
Q406	007-00179-0000		XSTR S NPN 2N3904	EA	1
R401	131-00682-0023		RES CF 6.8K QW 5%	EA	1
R402	131-00183-0023		RES CF 18K QW 5%	EA	1
R403	131-00104-0023		RES CF 100K QW 5%	EA	1
R404	131-00124-0023		RES CF 120K QW 5%	EA	1
R405	131-00102-0023		RES CF 1K QW 5%	EA	1
R406	131-00753-0023		RES CF 75K QW 5%	EA	1
R407	136-01003-0072		RES PF 100K QW 1%	EA	1
R408	136-01003-0072		RES PF 100K QW 1%	EA	1
R409	131-00753-0023		RES CF 75K QW 5%	EA	1
R410	133-00113-0027		RES VA 200K 20% B	EA	1
R411	131-00104-0023		RES CF 100K QW 5%	EA	1
R412	131-00302-0023		RES CF 3K QW 5%	EA	1
R413	131-00302-0023		RES CF 3K QW 5%	EA	1
R414	131-00393-0023		RES CF 39K QW 5%	EA	1
R415	131-00302-0023		RES CF 3K QW 5%	EA	1
R416	131-00302-0023		RES CF 3K QW 5%	EA	1
R417	131-00393-0023		RES CF 39K QW 5%	EA	1

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000
R418	131-00104-0023		RES CF 100K QW 5%	EA	1
R419	131-00105-0023		RES CF 1M QW 5%	EA	1
R420	131-00103-0023		RES CF 10K QW 5%	EA	1
R421	131-00433-0023		RES CF 43K QW 5%	EA	1
R422	131-00824-0023		RES CF 820K QW 5%	EA	1
R423	131-00203-0023		RES CF 20K QW 5%	EA	1
R424	131-00393-0023		RES CF 39K QW 5%	EA	1
R425	131-00243-0023		RES CF 24K QW 5%	EA	1
R426	131-00153-0023		RES CF 15K QW 5%	EA	1
R427	131-00271-0023		RES CF 270 QW 5%	EA	1
R428	131-00682-0023		RES CF 6.8K QW 5%	EA	1
R429	131-00104-0023		RES CF 100K QW 5%	EA	1
R430	131-00470-0023		RES CF 47 QW 5%	EA	1
R431	131-00682-0023		RES CF 6.8K QW 5%	EA	1
R432	131-00105-0023		RES CF 1M QW 5%	EA	1
R433	131-00103-0023		RES CF 10K QW 5%	EA	1
R434	131-00103-0023		RES CF 10K QW 5%	EA	1
TP401	008-00096-0001		TERMINAL TEST PNT	EA	1
TP402	008-00096-0001		TERMINAL TEST PNT	EA	1
TP403	008-00096-0001		TERMINAL TEST PNT	EA	1

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME: CONVERTER #2 BD ASSY      UNIT: KI 0203/0204      ASSY NO: 200-5800-00

SYMBOL	PART NUMBER	DESCRIPTION	CODE	QUANTITY -00
	009-5800-00	P C BOARD		1
	030-2171-11	EDGE CONN 11 PIN		1
Q401	007-0078-00	TSTR 2N3415 NPN		2
Q402	007-0078-00	TSTR 2N3415 NPN		-
Q403	007-0065-00	TSTR 2N3906 PNP		1
Q404	007-0267-01	TSTS J113 FET		1
CR401	007-6016-00	DIODE 1N4154 SI		12
CR402	007-6016-00	DIODE 1N4154 SI		-
CR403	007-6016-00	DIODE 1N4154 SI		-
CR404	007-6016-00	DIODE 1N4154 SI		-
CR405	007-6016-00	DIODE 1N4154 SI		-
CR406	007-6016-00	DIODE 1N4154 SI		-
CR407	007-6016-00	DIODE 1N4154 SI		-
CR408	007-6016-00	DIODE 1N4154 SI		-
CR409	007-6016-00	DIODE 1N4154 SI		-
CR410	007-6016-00	DIODE 1N4154 SI		-
CR411	007-6016-00	DIODE 1N4154 SI		-
CR412	007-6016-00	DIODE 1N4154 SI		-
C401	096-1014-00	CAP 40UF 10V TANT		2
C402	096-1030-42	CAP 33UF 15V TANT		1
C403	096-1030-05	CAP 10UF 20V TANT		1
C404	096-1030-12	CAP 3.3UF 15V T		1
C405	096-1030-27	CAP 15UF 15V TANT		4
C407	096-1030-27	CAP 15UF 15V TANT		-
C408	105-0031-74	CAP .15UF MYLAR		1
C409	096-1030-27	CAP 15UF 15V TANT		-
C410	096-1030-27	CAP 15UF 15V TANT		-
C411	096-1014-00	CAP 40UF		-
C412	114-7104-00	CAP .1 DC X5R		2
C413	114-7104-00	CAP .1 DC X5R		-
C414	113-3121-00	CAP 120PF DC		3
C415	113-3121-00	CAP 120PF DC		-
C416	113-3121-00	CAP 120PF DC		-
I401	120-6012-01	IC CD4016QUAD GATE		1
I402	120-3052-00	IC LM324N QUAD OP		1
R401	130-0682-23	RES 6.8K 1/4W 5%		3
R402	130-0183-23	RES 18K 1/4W 5%		1

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME: CONVERTER #2 BD ASSY      UNIT: KI 0203/0204      ASSY NO: 200-5800-00

SYMBOL	PART NUMBER	DESCRIPTION	CODE	QUANTITY
				-00
R403	130-0104-23	RES 100K 1/4W 5%		1
R404	130-0124-23	RES 120K 1/4W 5%		1
R405	130-0102-25	RES 1K 1/4W		1
R406	130-0753-23	RES 75K 1/4W 5%		2
R407	136-1003-72	RES 100K 1%		2
R408	136-1003-72	RES 100K 1%		-
R409	130-0753-23	RES 75K 1/4W 5%		-
R410	133-0016-00	RES 150K POT		1
R411	130-0104-25	RES 100K 1/4W		3
R412	130-0302-23	RES 3K 1/4W 5%		4
R413	130-0302-23	RES 3K 1/4W 5%		-
R414	130-0393-23	RES 39K 1/4W 5%		2
R415	130-0302-23	RES 3K 1/4W 5%		-
R416	130-0302-23	RES 3K 1/4W 5%		-
R417	130-0393-23	RES 39K 1/4W 5%		-
R418	130-0104-25	RES 100K 1/4W		-
R419	130-0335-25	RES 3.3M 1/4W		1
R420	130-0103-25	RES 10K 1/4W		2
R421	130-0433-23	RES 43K 1/4W 5%		1
R422	130-0824-23	RES 820K 1/4W 5%		1
R423	130-0203-23	RES 20K 1/4W 5%		1
R424	130-0393-25	RES 39K 1/4W		1
R425	130-0243-23	RES 24K 1/4W		1
R426	130-0153-25	RES 15K 1/4W		1
R427	130-0271-25	RES 270 OHM		-
R428	130-0682-23	RES 6.8K 1/4W 5%		-
R429	130-0104-25	RES 100K 1/4W		-
R430	130-0470-25	RES 47 OHM 1/4W		1
R431	130-0682-23	RES 6.8K 1/4W 5%		-
R432	130-0105-25	RES 1MEG 1/4W		1

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME: CONVERTER #2 BD ASSY  
 ASSY DWG: 300-5800-00  
 ENGR APPROVAL: JOHN CAROCARI  
 ASSY NO: 200-5800-00  
 UNIT: KI 0203/204  
 USED ON: 200-1928-00

REV	CO NO	SYMBOL	PART NUMBER	DESCRIPTION
-----	-------	--------	-------------	-------------

1

2

3

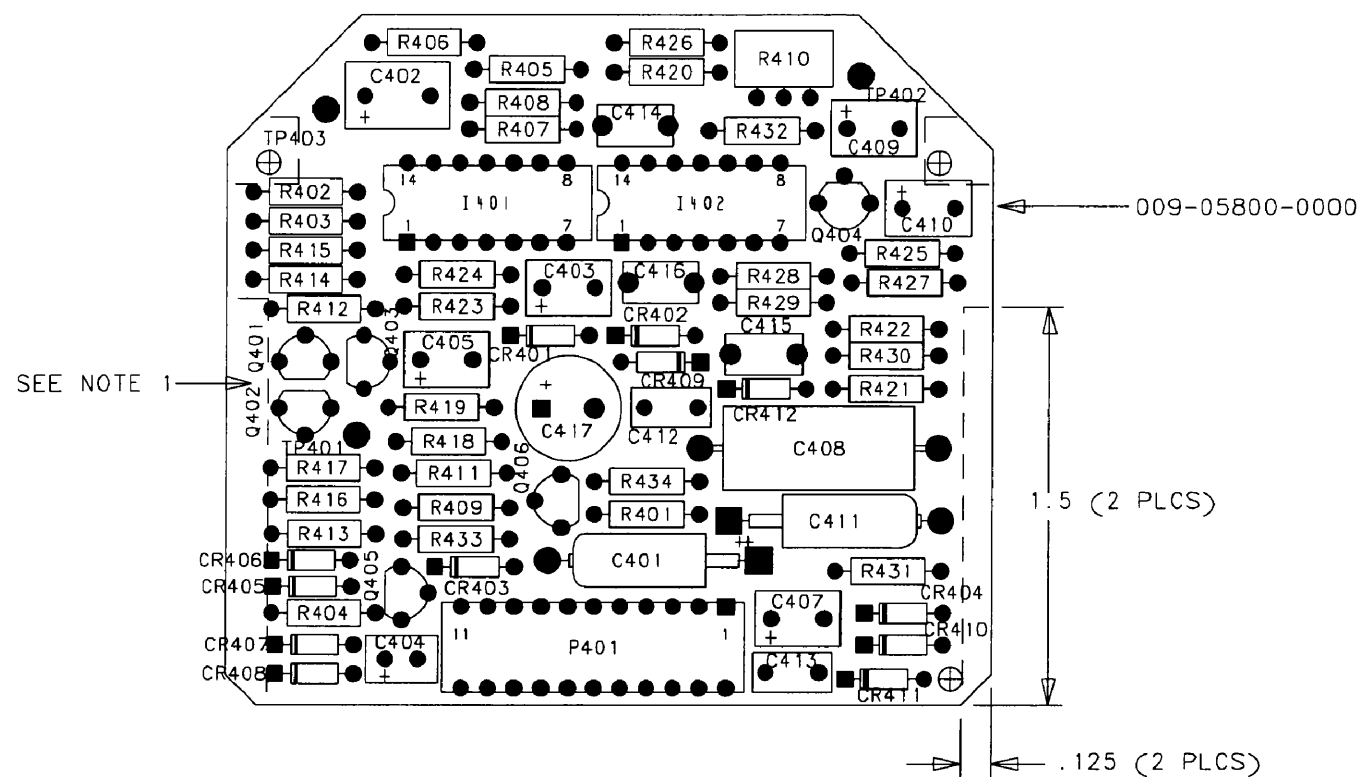
4

KI 203/304 MAINTENANCE MANUAL  
 REVISION 0, APRIL 1976

5		R405 R427	130-0102-25 130-0271-25	QTY CHG FROM 2 TO 1 P/N CHG FROM 130-0102-25
6		Q404 R432	007-0267-00 130-0105-25	ADDED TO B/M ADDED TO B/M
7		C414 C415 C416	113-3121-00 113-3121-00 113-3121-00	ADDED TO B/M ADDED TO B/M ADDED TO B/M
8		Q404	007-0267-01	P/N CHG FROM 007-0267-00, DESC FROM E113 TO J113 TYPED ON WORD PROCESSOR

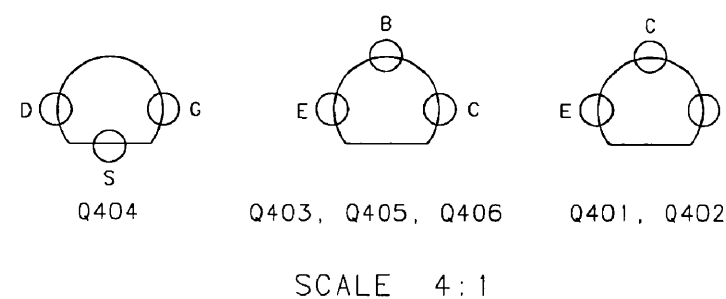
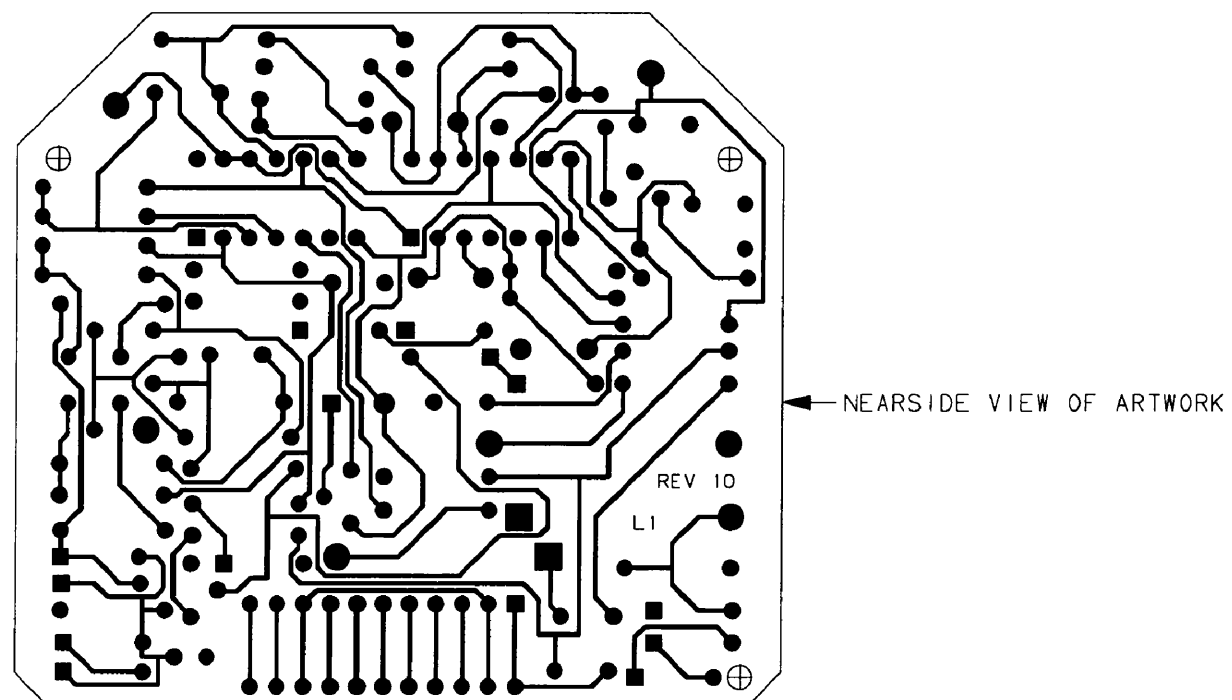
KI 203/204 MAINTENANCE MANUAL  
 REV. 1, SEPT., 1979

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NOTES:

1. PRIOR TO POST COATING BOTH SIDES OF P.C. BOARD WITH UNDILUTED CLEAR URETHANE POSTCOATING P/N 016-01040-0000, MASK OFF THE FOLLOWING:  
ALL MOUNTING AREAS, ALL TEST POINTS, P401, R410, AND ALL DASHED-IN AREAS.
2. INSERT R410 FULLY INTO BOARD.

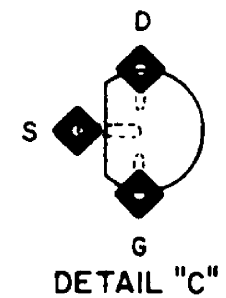
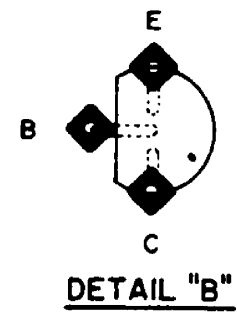
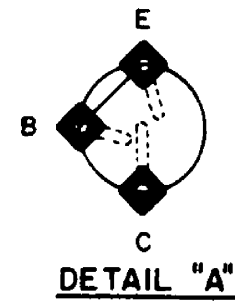
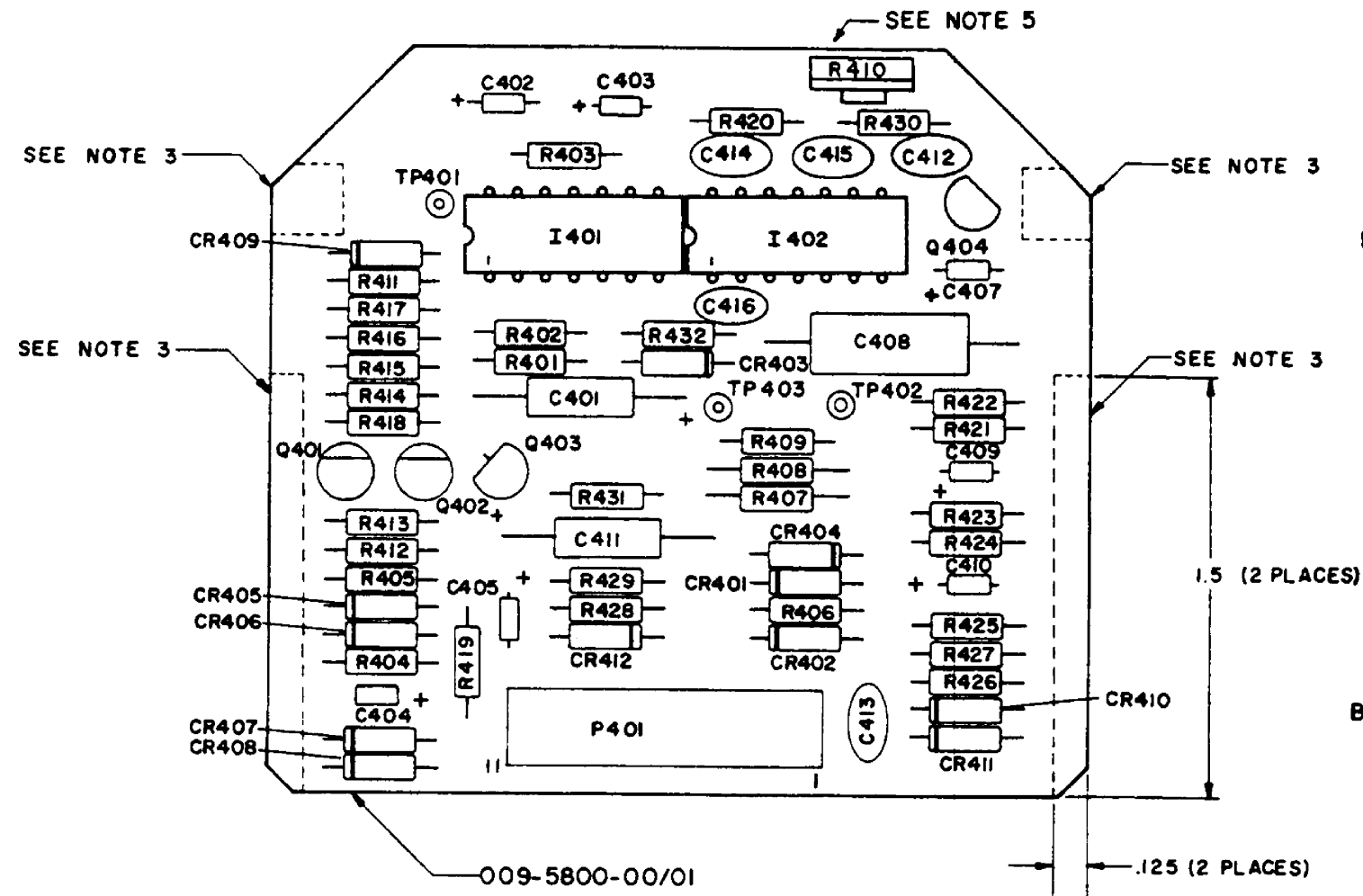


Dwg 300-05800-0000 Rev AA

FIGURE 6-21 Converter #2 Board Assembly  
(Dwg No 300-05800-0000, Rev AA)





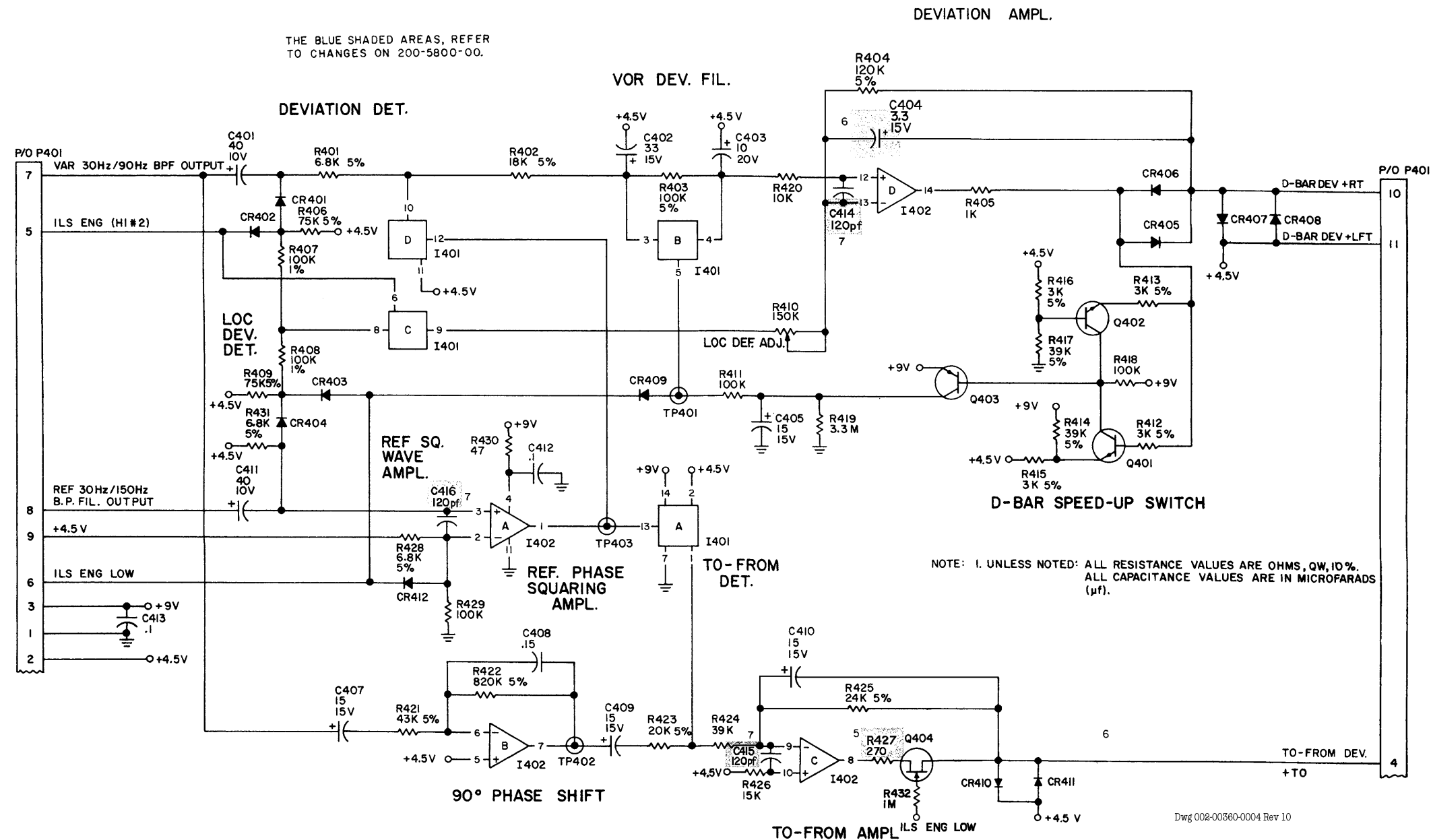


NOTES:

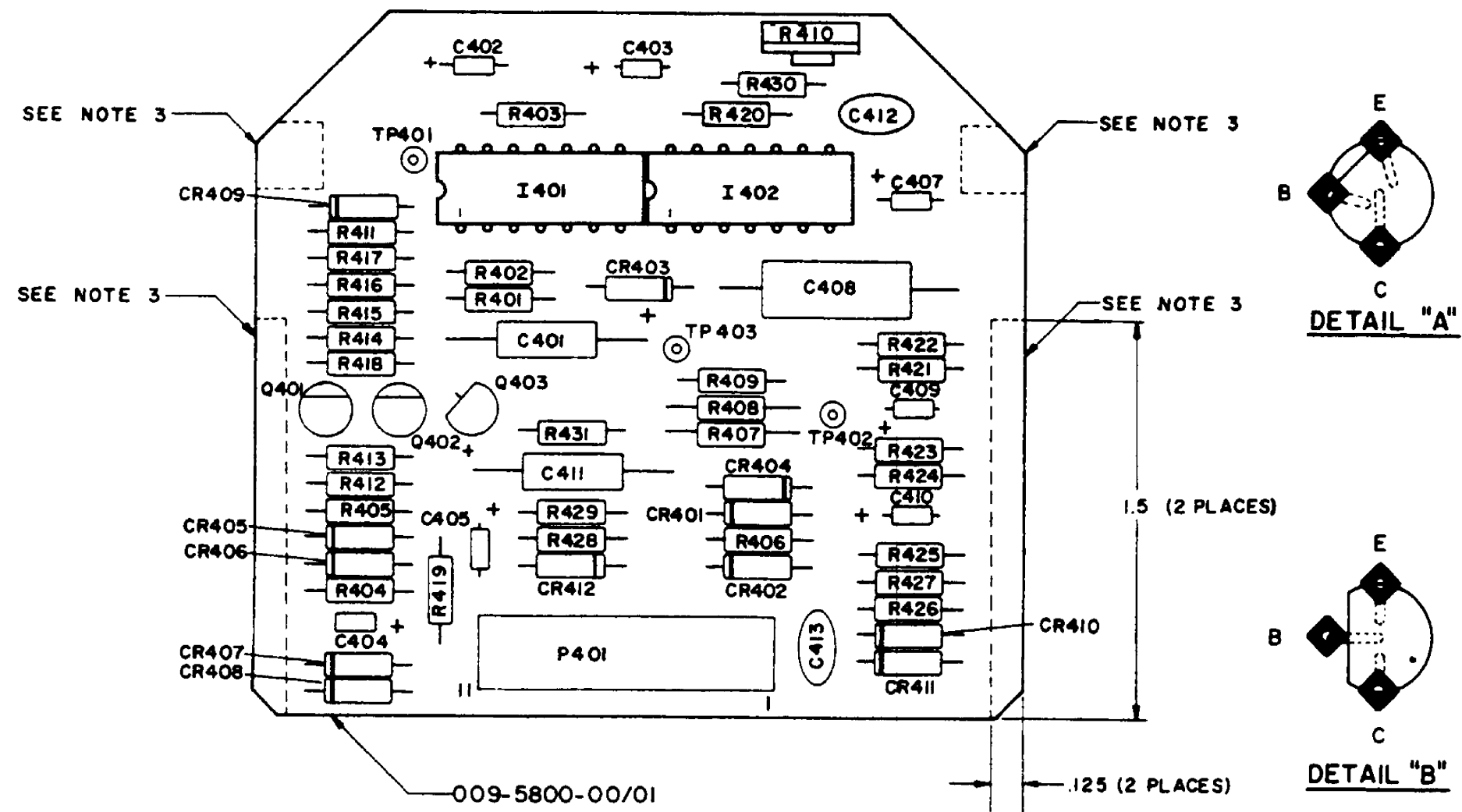
1. Q401 & Q402, SEE DETAIL "A".
2. Q403, SEE DETAIL "B".
3. MASK OFF TEST POINTS, CONTACTS OF P401, R410, TWO AREAS FOR CARD GUIDES & TWO AREAS AROUND CARD PULLER HOLES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).
4. Q404, SEE DETAIL "C".
5. INSERT POT FULLY INTO BOARD.

Dwg 300-05800-0000 Rev 5

FIGURE 6-23 Converter #2 Board Assembly  
(Dwg No 300-05800-0000, Rev 5)



**FIGURE 6-24 Converter #2 Board Schematic**  
(Dwg No 002-00360-0004, Rev 10)



NOTES:

1. Q401 & Q402, SEE DETAIL "A".
2. Q403, SEE DETAIL "B".
3. MASK OFF TEST POINTS, CONTACTS OF P401, R410, TWO AREAS FOR CARD GUIDES & TWO AREAS AROUND CARD PULLER HOLES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).

Dwg 300-05800-0000 Rev 1

FIGURE 6-25 Converter #2 Board Assembly  
(Dwg No 300-05800-0000, Rev 1)

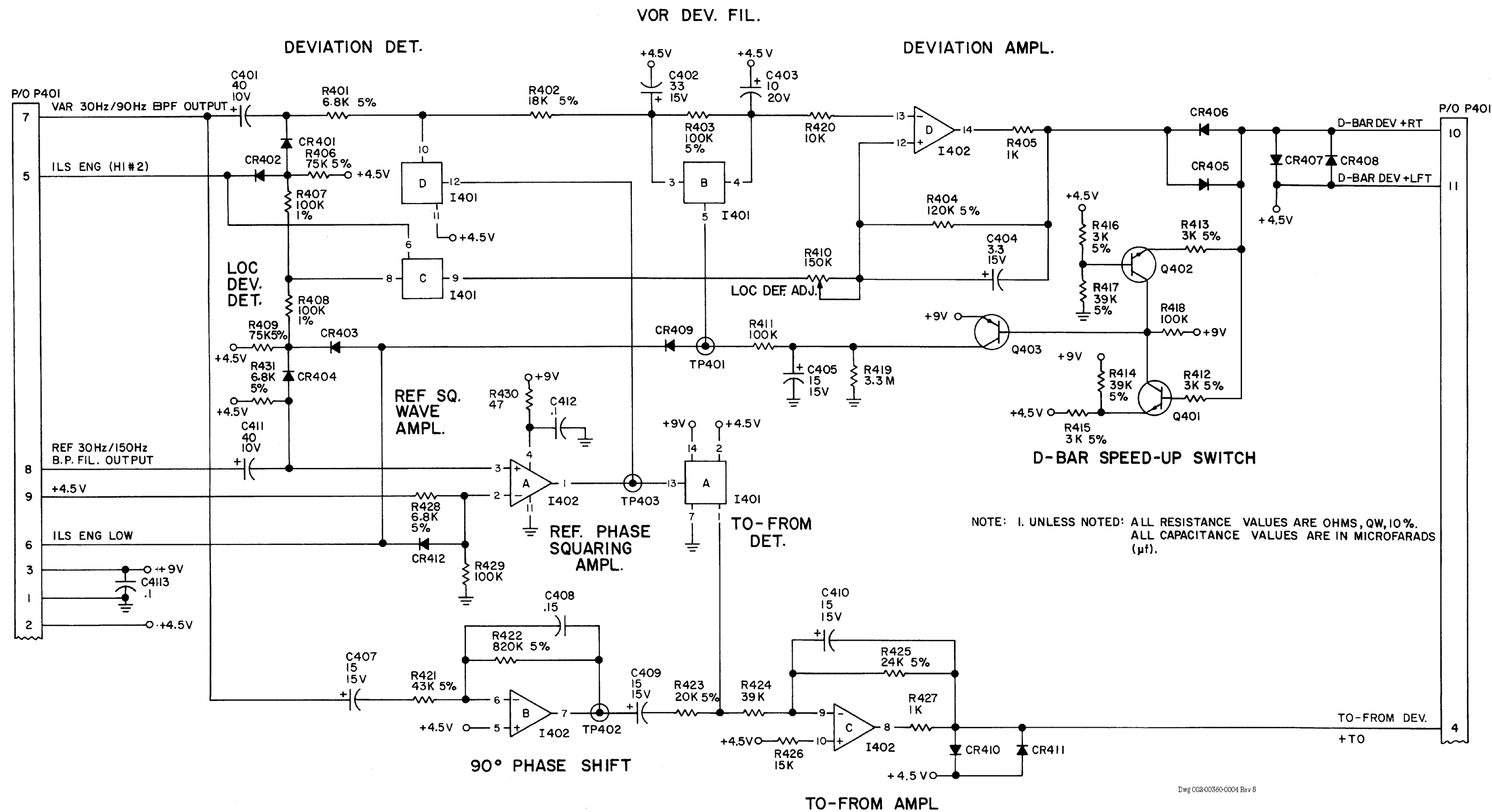


FIGURE 6-26 Converter #2 Board Schematic  
(Dwg No 002-00360-0004, Rev 5)

## BOM 14: Converter #2 Board

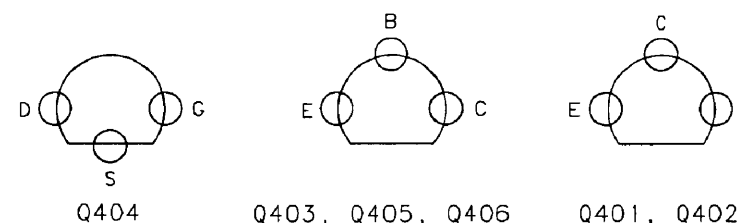
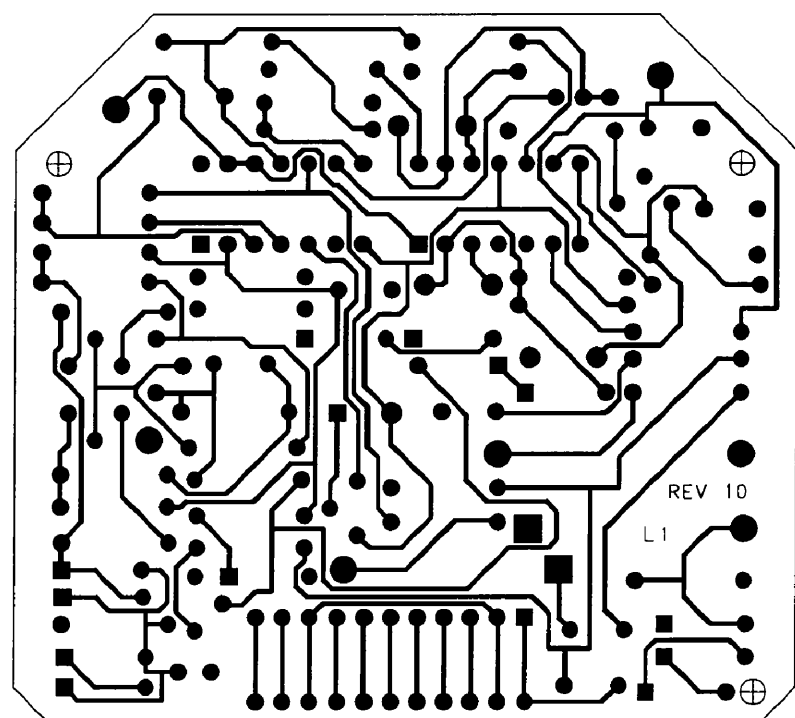
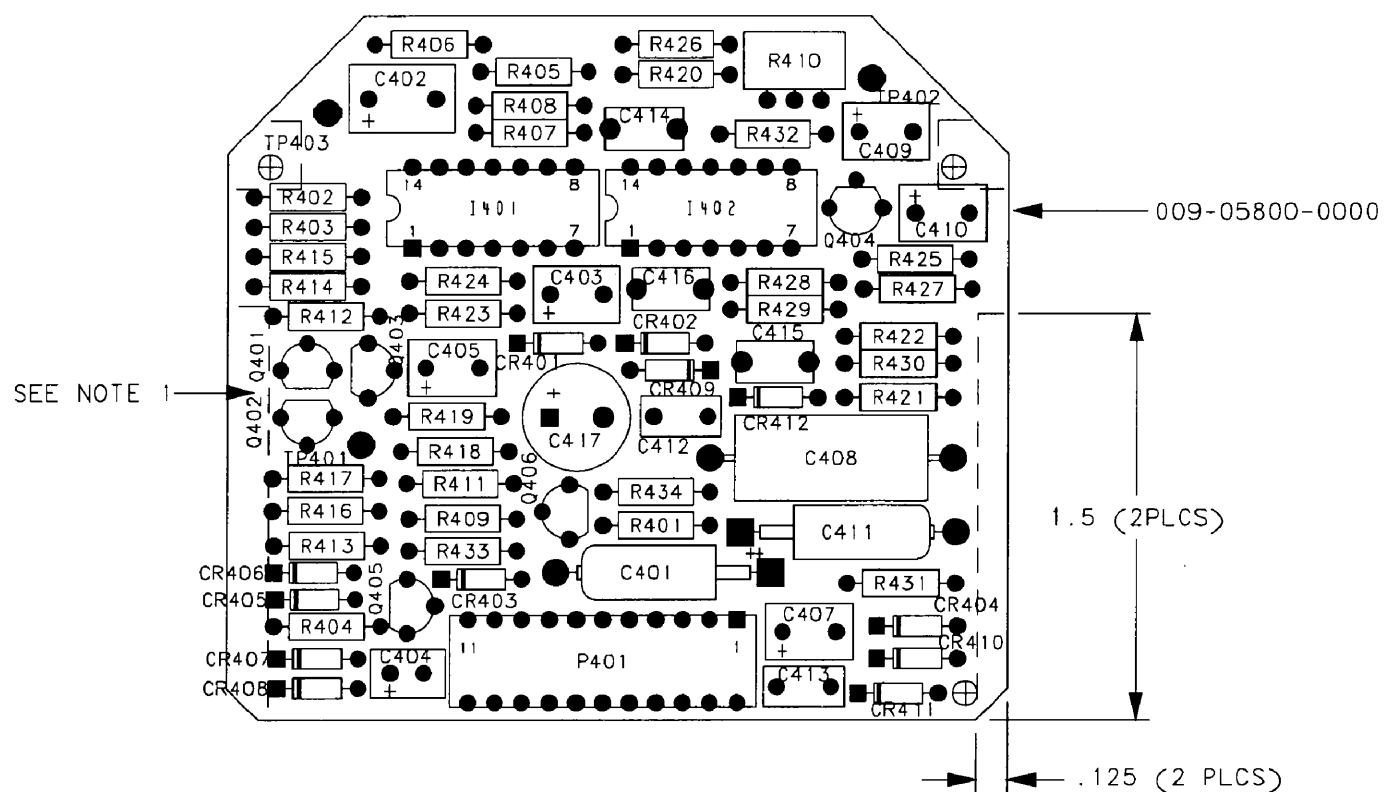
200-05800-0001 CONVERTER #2 BOARD REV -

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0001
-	009-05800-0000		PC BD CONV #2	EA	1
-	030-02171-0011		CONN CARD 11 CONT	EA	1
C401	096-01014-0000		CAP TN 40UF 10V	EA	1
C402	096-01030-0042		CAP TN 33UF10%15V	EA	1
C403	096-01082-0005		CAP TN 10UF 20V	EA	1
C404	096-01082-0005		CAP TN 10UF 20V	EA	1
C405	096-01030-0027		CAP TN 15UF20%15V	EA	1
C407	096-01030-0027		CAP TN 15UF20%15V	EA	1
C408	105-00031-0074		CAP MY .15UF 80V	EA	1
C409	096-01030-0027		CAP TN 15UF20%15V	EA	1
C410	096-01030-0027		CAP TN 15UF20%15V	EA	1
C411	096-01014-0000		CAP TN 40UF 10V	EA	1
C412	111-00002-0000		CAP CR .1UF 50V	EA	1
C413	111-00002-0000		CAP CR .1UF 50V	EA	1
C414	113-03121-0000		CAP DC 120PF 500V	EA	1
C415	113-03121-0000		CAP DC 120PF 500V	EA	1
C416	113-03121-0000		CAP DC 120PF 500V	EA	1
C417	096-01082-0028		CAP TN 47UF 20V	EA	1
CR401	007-06016-0000		DIO S 1N4154	EA	1
CR402	007-06016-0000		DIO S 1N4154	EA	1
CR403	007-06016-0000		DIO S 1N4154	EA	1
CR405	007-06016-0000		DIO S 1N4154	EA	1
CR406	007-06016-0000		DIO S 1N4154	EA	1
CR407	007-06016-0000		DIO S 1N4154	EA	1
CR408	007-06016-0000		DIO S 1N4154	EA	1
CR409	007-06016-0000		DIO S 1N4154	EA	1
CR410	007-06016-0000		DIO S 1N4154	EA	1
CR411	007-06016-0000		DIO S 1N4154	EA	1
CR412	007-06016-0000		DIO S 1N4154	EA	1
I401	120-06083-0001		IC SCL4066BC	EA	1
I402	120-03052-0000		IC LM324N	EA	1
Q401	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q402	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q403	007-00065-0000		XSTR S PNP 2N3906	EA	1
Q404	007-00267-0001		XSTR FET J113	EA	1
Q405	007-00179-0000		XSTR S NPN 2N3904	EA	1
Q406	007-00179-0000		XSTR S NPN 2N3904	EA	1
R401	131-00682-0023		RES CF 6.8K QW 5%	EA	1
R402	131-00183-0023		RES CF 18K QW 5%	EA	1
R403	131-00104-0023		RES CF 100K QW 5%	EA	1
R404	136-03922-0072		RES PF 39.2K QW 1%	EA	1
R405	131-00102-0023		RES CF 1K QW 5%	EA	1
R406	131-00753-0023		RES CF 75K QW 5%	EA	1
R407	136-03922-0072		RES PF 39.2K QW 1%	EA	1
R408	136-03922-0072		RES PF 39.2K QW 1%	EA	1
R409	131-00753-0023		RES CF 75K QW 5%	EA	1
R410	133-00110-0010		RES VA 50K HW	EA	1
R411	131-00104-0023		RES CF 100K QW 5%	EA	1
R412	131-00302-0023		RES CF 3K QW 5%	EA	1
R413	131-00302-0023		RES CF 3K QW 5%	EA	1
R414	131-00393-0023		RES CF 39K QW 5%	EA	1
R415	131-00302-0023		RES CF 3K QW 5%	EA	1
R416	131-00302-0023		RES CF 3K QW 5%	EA	1
R417	131-00393-0023		RES CF 39K QW 5%	EA	1

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0001
R418	131-00104-0023		RES CF 100K QW 5%	EA	1
R419	131-00105-0023		RES CF 1M QW 5%	EA	1
R420	131-00103-0023		RES CF 10K QW 5%	EA	1
R421	131-00433-0023		RES CF 43K QW 5%	EA	1
R422	131-00824-0023		RES CF 820K QW 5%	EA	1
R423	131-00203-0023		RES CF 20K QW 5%	EA	1
R424	131-00393-0023		RES CF 39K QW 5%	EA	1
R425	131-00243-0023		RES CF 24K QW 5%	EA	1
R426	131-00153-0023		RES CF 15K QW 5%	EA	1
R427	131-00271-0023		RES CF 270 QW 5%	EA	1
R428	131-00682-0023		RES CF 6.8K QW 5%	EA	1
R429	131-00104-0023		RES CF 100K QW 5%	EA	1
R430	131-00470-0023		RES CF 47 QW 5%	EA	1
R431	131-00682-0023		RES CF 6.8K QW 5%	EA	1
R432	131-00105-0023		RES CF 1M QW 5%	EA	1
R433	131-00103-0023		RES CF 10K QW 5%	EA	1
R434	131-00103-0023		RES CF 10K QW 5%	EA	1
TP401	008-00096-0001		TERMINAL TEST PNT	EA	1
TP402	008-00096-0001		TERMINAL TEST PNT	EA	1
TP403	008-00096-0001		TERMINAL TEST PNT	EA	1

NOTES:

1. PRIOR TO POST COATING BOTH SIDES OF P.C. BOARD WITH CLEAR URETHANE POSTCOATING P/N 016-01040-0000, MASK OFF THE FOLLOWING:  
ALL MOUNTING AREAS, ALL TEST POINTS, P401, R410, AND ALL DASHED-IN AREAS.



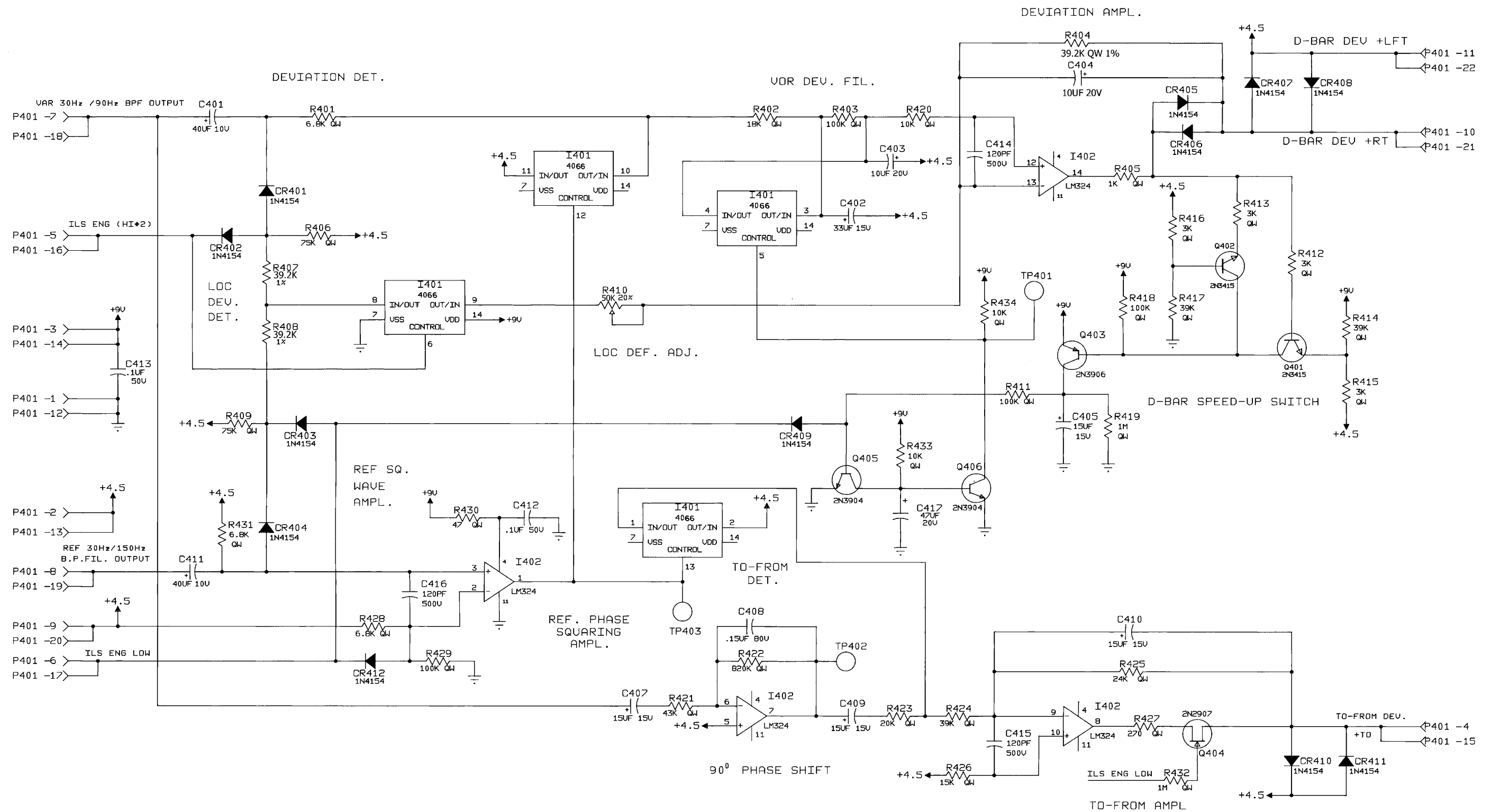
SCALE 4:1

THIS DRAWING IS NOT COMPLETE WITHOUT PARTS LIST 200-05800-0001

Dwg 300-05800-0001 Rev -

FIGURE 6-27 Converter #2 Board Assembly  
(Dwg No 300-05800-0001, Rev -)





NOTES:  
 1. UNLESS NOTED: ALL RESISTANCE VALUES ARE OHMS, QW, 10x  
 2. UNLESS NOTED: ALL CAPACITANCE VALUES ARE IN MICROFARADS.

Dwg 002-05800-0001 Rev-

FIGURE 6-28 Converter #2 Board Schematic  
 (Dwg No 002-05800-0001, Rev -)

## BOM 15: Power Supply and Flag Board

200-05801-0000 POWER SUPPLY &amp; FLAG BOARD ASSY REV 13

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000
-	009-05801-0000		PC BD PWR SPLY	EA	1
-	030-02171-0010		CONN CARD 10 CONT	EA	1
-	047-03815-0001		HEAT SINK XSTR W/F	EA	1
-	089-02076-0030		NUT FLAT 4-40	EA	1
-	089-05903-0006		SCR PHP 4-40X3/8	EA	1
-	091-00156-0000		BUSHING	EA	1
-	091-00286-0002		INSUL XSTR .687	EA	1
C501	097-00056-0065		CAP AL 47UF 63V	EA	1
C502	096-01014-0000		CAP TN 40UF 10V	EA	1
C503	109-00007-0000		CAP DC .01UF 25V	EA	1
C504	097-00056-0033		CAP AL 150UF 16V	EA	1
C505	096-01030-0027		CAP TN 15UF20% 15V	EA	1
C506	096-01030-0027		CAP TN 15UF20% 15V	EA	1
C507	096-01030-0011		CAP TN 4.7UF20% 20V	EA	1
C508	096-01030-0011		CAP TN 4.7UF20% 20V	EA	1
C509	096-01030-0011		CAP TN 4.7UF20% 20V	EA	1
C510	113-03121-0000		CAP DC 120PF 500V	EA	1
C511	111-00001-0008		CAP CR 100PF 200V	EA	1
CR501	007-05039-0000		DIO Z 33.3V	EA	1
CR502	007-06016-0000		DIO S 1N4154	EA	1
CR503	007-06016-0000		DIO S 1N4154	EA	1
CR504	007-06033-0000		DIO G 1N270	EA	1
CR505	007-06033-0000		DIO G 1N270	EA	1
CR506	007-06016-0000		DIO S 1N4154	EA	1
CR507	007-06016-0000		DIO S 1N4154	EA	1
CR508	007-06016-0000		DIO S 1N4154	EA	1
CR509	007-06016-0000		DIO S 1N4154	EA	1
CR510	007-06016-0000		DIO S 1N4154	EA	1
CR511	007-06016-0000		DIO S 1N4154	EA	1
CR512	007-06016-0000		DIO S 1N4154	EA	1
CR513	007-06016-0000		DIO S 1N4154	EA	1
CR514	007-06016-0000		DIO S 1N4154	EA	1
I501	120-03060-0000		IC CA3085AE	EA	1
I502	120-03053-0000		IC LM358N	EA	1
Q501	007-00065-0000		XSTR S PNP 2N3906	EA	1
Q502	007-00930-0000		XSTR S PNP MJE15029	EA	1
Q503	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q504	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q505	007-00065-0000		XSTR S PNP 2N3906	EA	1
Q506	007-00078-0000		XSTR S NPN 2N3415	EA	1
R501	131-00047-0023		RES CF 4.7 QW 5%	EA	1
R502	131-00047-0023		RES CF 4.7 QW 5%	EA	1
R503	136-01002-0072		RES PF 10K QW 1%	EA	1
R504	136-01651-0072		RES PF 1.65K QW 1%	EA	1
R505	133-00113-0013		RES VA 1K 20% B	EA	1
R506	131-00470-0023		RES CF 47 QW 5%	EA	1
R507	131-00103-0023		RES CF 10K QW 5%	EA	1
R508	136-04751-0072		RES PF 4.75K QW 1%	EA	1
R509	136-04751-0072		RES PF 4.75K QW 1%	EA	1
R510	131-00470-0023		RES CF 47 QW 5%	EA	1
R511	131-00473-0023		RES CF 47K QW 5%	EA	1
R512	131-00473-0023		RES CF 47K QW 5%	EA	1
R513	136-06812-0072		RES PF 68.1K QW 1%	EA	1
R514	136-06812-0072		RES PF 68.1K QW 1%	EA	1

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0000
R515	131-00202-0023		RES CF 2K QW 5%	EA	1
R516	131-00202-0023		RES CF 2K QW 5%	EA	1
R517	131-00105-0023		RES CF 1M QW 5%	EA	1
R519	131-00434-0023		RES CF 430K QW 5%	EA	1
R520	136-01821-0072		RES PF 1.82K QW 1%	EA	1
R521	136-05491-0072		RES PF 5.49K QW 1%	EA	1
R522	136-03572-0072		RES PF 35.7K QW 1%	EA	1
R523	131-00333-0013		RES CF 33K EW 5%	EA	1
R524	131-00102-0013		RES CF 1K EW 5%	EA	1
R525	131-00103-0023		RES CF 10K QW 5%	EA	1
R526	131-00103-0013		RES CF 10K EW 5%	EA	1
R527	131-00392-0023		RES CF 3.9K QW 5%	EA	1
R528	131-00103-0023		RES CF 10K QW 5%	EA	1
R529	131-00392-0013		RES CF 3.9K EW 5%	EA	1
R530	131-00272-0023		RES CF 2.7K QW 5%	EA	1
TP501	008-00096-0001		TERMINAL TEST PNT	EA	1
TP502	008-00096-0001		TERMINAL TEST PNT	EA	1
TP503	008-00096-0001		TERMINAL TEST PNT	EA	1

THIS PAGE CONTAINS OLD REVISION BOMS, FOR REFERENCE ONLY.

NAME		ASS'Y. NO.						
Power Supply & Flag Bd. Assy		200-5801-00						
KING RADIO CORP. PARTS LISTING			CODE	QUANTITY				
SYMBOL	PART NUMBER	DESCRIPTION		-00	-01	-02	-03	-04
	009-5801-00	P/C Board		1				
	030-2171-10	Edge Conn 10 Pin		1				
	047-3815-01	Heat Sink		1				
	089-2076-30	Nut Hex #4-40		1				
	089-5903-06	Screw PHP 4-40 x 3/8		1				
	091-0156-00	Shoulder Washer Nylon		1				
	091-0286-02	Insulator, Cho-Therm		1				
Q501	007-0065-00	Tstr 2N3906 PNP		2				
Q502	007-0296-00	Tstr D45C5 PNP		1				
Q503	007-0078-00	Tstr 2N3415 NPN		3				
Q504	007-0078-00	Tstr 2N3415 NPN		-				
Q505	007-0065-00	Tstr 2N3906 PNP		-				
Q506	007-0078-00	Tstr 2N3415 NPN		-				
CR501	007-5039-00	39V Transient Zener		1				
CR502	007-6016-00	Diode 1N4154 Si		11				
CR503	007-6016-00	Diode 1N4154 Si		-				
CR504	007-6033-00	Diode 1N270 Ge		2				
CR505	007-6033-00	Diode 1N270 Ge		-				
CR506	007-6016-00	Diode 1N4154 Si		-				
CR507	007-6016-00	Diode 1N4154 Si		-				
CR508	007-6016-00	Diode 1N4154 Si		-				
CR509	007-6016-00	Diode 1N4154 Si		-				
CR510	007-6016-00	Diode 1N4154 Si		-				
CR511	007-6016-00	Diode 1N4154 Si		-				
CR512	007-6016-00	Diode 1N4154 Si		-				
CR513	007-6016-00	Diode 1N4154 Si		-				
CR514	007-6016-00	Diode 1N4154 Si		-				
C501	097-0056-65	Cap 47uf 63V EL		1				
C502	096-1014-00	Cap 40uf 10V Tant		1				
C503	109-0007-00	Cap .01 D/C		1				
C504	097-0056-33	Cap 150uf 16V EL		1				
C505	096-1030-27	Cap 15uf 15V Tant		2				
C506	096-1030-27	Cap 15uf 15V Tant		-				
C507	096-1030-11	Cap 4.7uf 20V Tant		3				
C508	096-1030-11	Cap 4.7uf 20V Tant		-				
C509	096-1030-11	Cap 4.7uf 20V Tant		-				
C510	113-3121-00	Cap 120pf D/C		1				
I501	120-3060-00	Voltage Reg RCA3085A		1				
I502	120-3053-00	IC LM358 Dual OP		1				
R501	130-0047-25	Res 4.7 ohm 1/4W		2				
R502	130-0047-25	Res 4.7 ohm 1/4W		-				
R503	136-1002-72	Res 10K 1%		1				

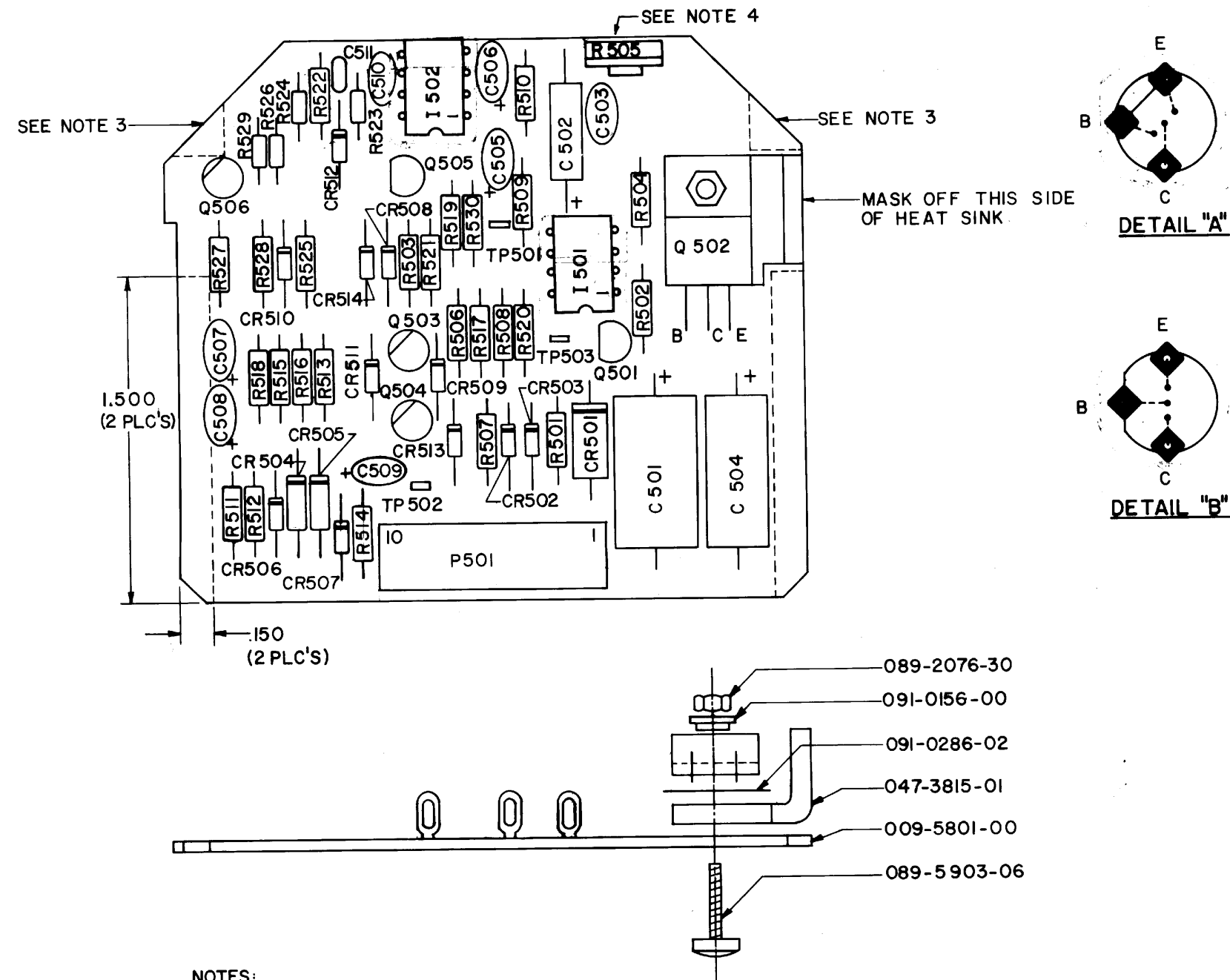
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NAME			ASS'Y. NO.					
Power Supply & Flag Bd. Assy.			200-5801-00					
KING RADIO CORP. PARTS LISTING			CODE	QUANTITY				
SYMBOL	PART NUMBER	DESCRIPTION		-00	-01	-02	-03	-04
R504	136-1651-72	Res. 1.65K 1%	1					
R505	133-0016-02	Res 1K Pot	1					
R506	130-0470-25	Res 47 ohm 1/4W	1					
R507	130-0103-25	Res 10K 1/4W	4					
R508	136-4751-72	Res 4.75K 1%	2					
R509	136-4751-72	Res 4.75K 1%	-					
R510	130-0470-23	Res 47 ohm 1/4W 5%	1					
R511	130-0473-23	Res 47K 1/4W 5%	2					
R512	130-0473-23	Res 47K 1/4W 5%	-					
R513	136-6812-72	Res 68.1K 1%	2					
R514	136-6812-72	Res 68.1K 1%	-					
R515	130-0202-23	Res 2K 1/4W 5%	2					
R516	130-0202-23	Res 2K 1/4W 5%	-					
R517	130-0105-25	Res 1M 1/4W	2					
R518	130-0105-25	Res 1M 1/4W	-					
R519	130-0434-23	Res 430K 1/4W 5%	1					
R520	136-1821-72	Res 1.82K 1%	1					
R521	136-5491-72	Res 5.49K 1%	1					
R522	136-3572-72	Res 35.7K 1%	1					
R523	130-0333-25	Res 33K 1/4W	1					
R524	130-0102-25	Res 1K 1/4W	1					
R525	130-0103-25	Res 10K 1/4W	-					
R526	130-0103-25	Res 10K 1/4W	-					
R527	130-0392-25	Res 3.9K 1/4W	2					
R528	130-0103-25	Res 10K 1/4W	-					
R529	130-0392-25	Res 3.9K 1/4W	-					
R530	130-0272-25	Res 2.7K 1/4W	1					

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PARTS LIST REVISION HISTORY				ENGR. APPROVAL
NAME Power Supply & Flag Bd. Assy.			ASS'Y. NO. 200-5801-00	
ASS'Y. DWG. 300-5801-00		UNIT KI 203/204	USED ON 200-1928-00	
REV	CHANGE	SYMBOL	PART NUMBER	DESCRIPTION
1				
2				
				KI 203/204 Maintenance Manual Revision 0, April 1976
3		C510	113-3121-00	Added to B/M
4		R510	130-0470-23	P/N changed from 130-0201-23, desc. from 200 ohm to 47 ohm
5			091-0286-02	P/N changed from 091-0275-00
				KI 203/204 MAINTENANCE MANUAL REV. 1, SEPT., 1979

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NOTES:

1. TRANSISTORS Q503, Q504, & Q506, SEE DETAIL "A"
2. TRANSISTORS Q501 & Q505, SEE DETAIL "B"
3. MASK OFF TEST POINTS, P501, R505, HEAT SINK AS NOTED, TWO AREAS AROUND CARD PULLER HOLES, & TWO AREAS FOR CARD GUIDES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).
4. INSERT POT FULLY INTO BOARD.

Dwg 300-05801-0000 Rev 6

**FIGURE 6-29 Power Supply and Flag Board Assembly**  
(Dwg No 300-05801-0000, Rev 6)



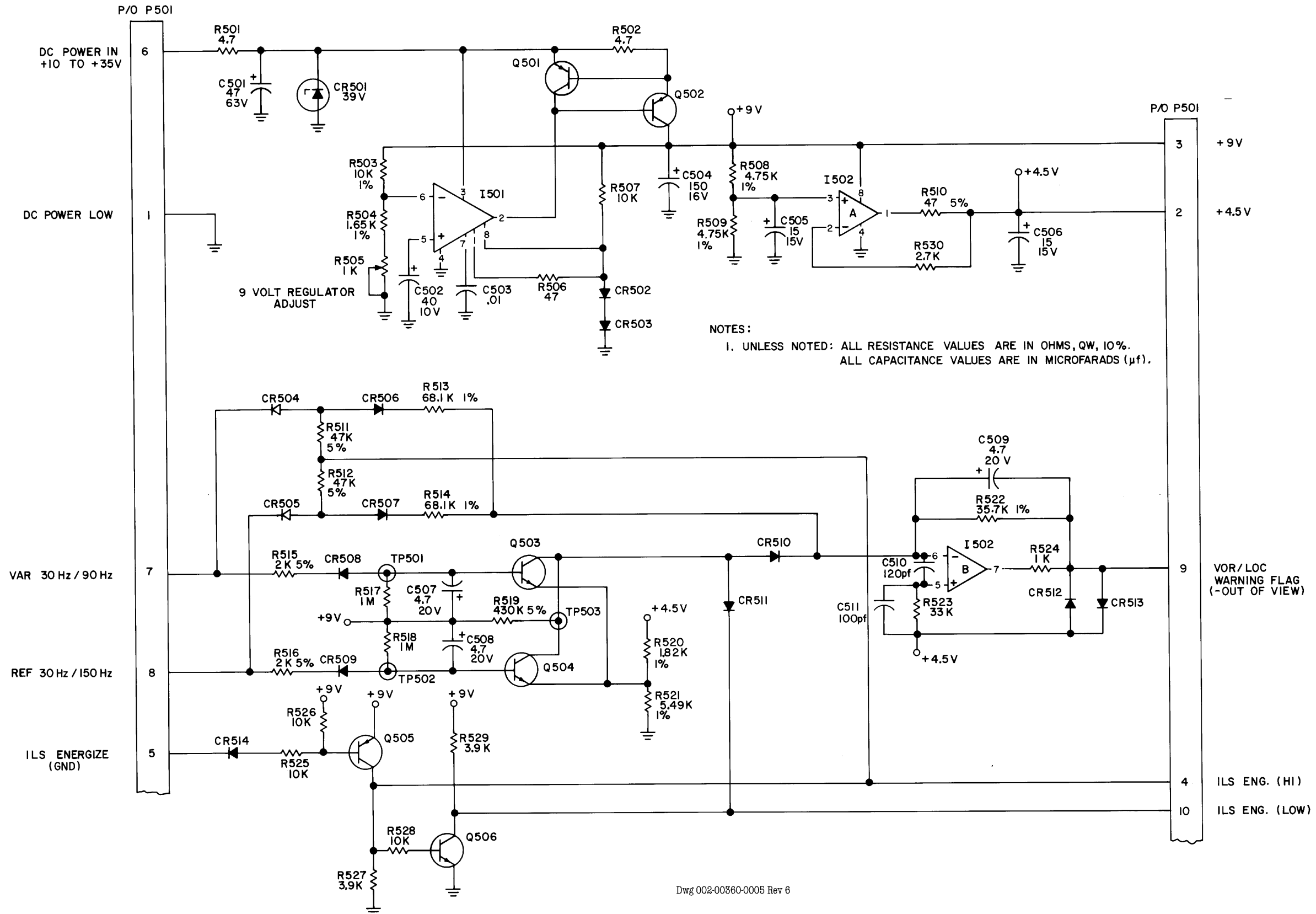
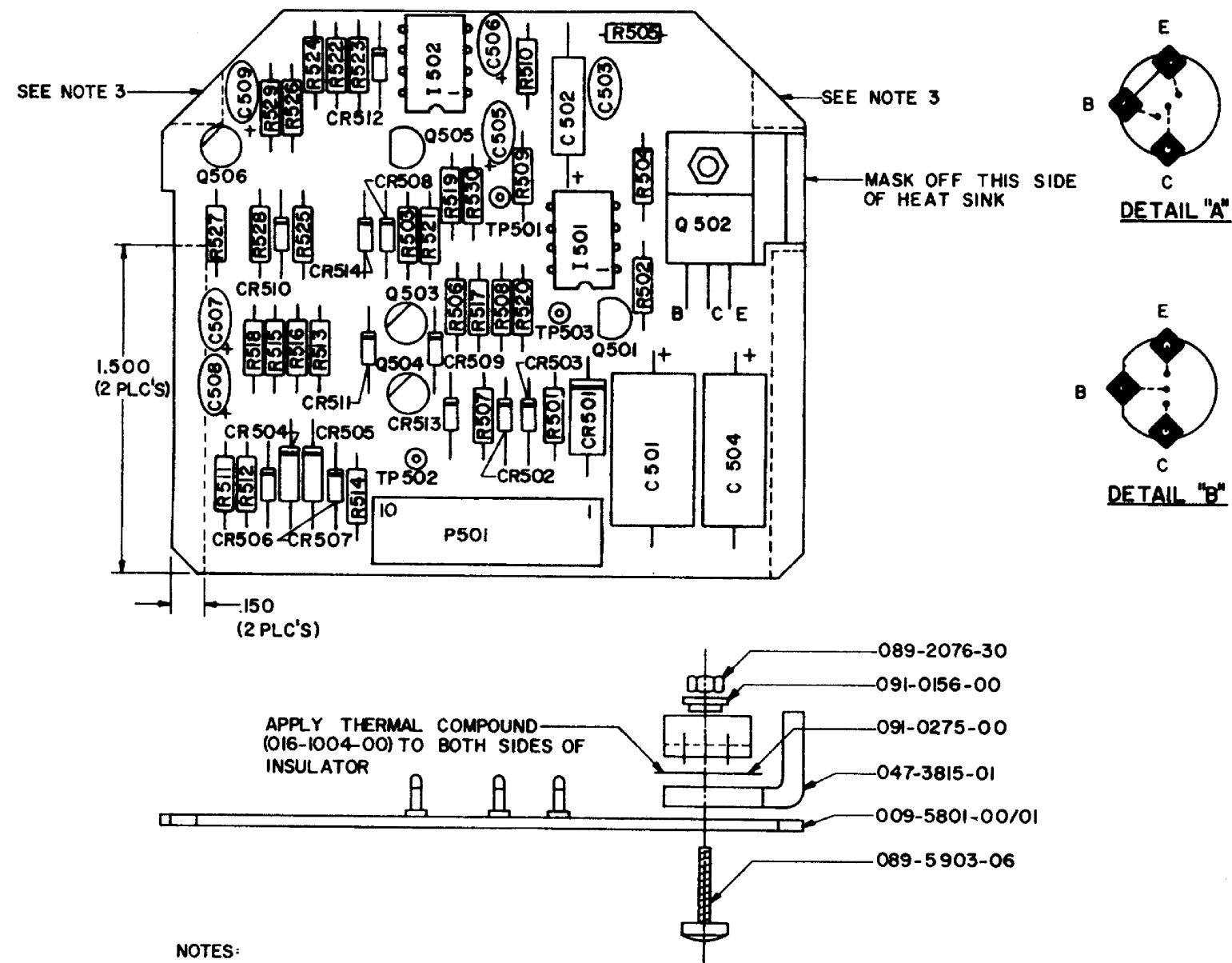


FIGURE 6-30 Power Supply and Flag Board Schematic  
(Dwg No 002-00360-0005, Rev 6)



NOTES:

1. TRANSISTORS Q503, Q504, & Q506, SEE DETAIL "A"
2. TRANSISTORS Q501 & Q505, SEE DETAIL "B"
3. MASK OFF TEST POINTS, P501, R505, HEAT SINK AS NOTED, TWO AREAS AROUND CARD PULLER HOLES, & TWO AREAS FOR CARD GUIDES, THEN POST COAT BOTH SIDES OF ASSEMBLY WITH CLEAR URETHANE COATING (P/N 016-1040-00).

Dwg 300-05801-0000 Rev 1

FIGURE 6-31 Power Supply and Flag Board Assembly  
(Dwg No 300-05801-0000, Rev 1)

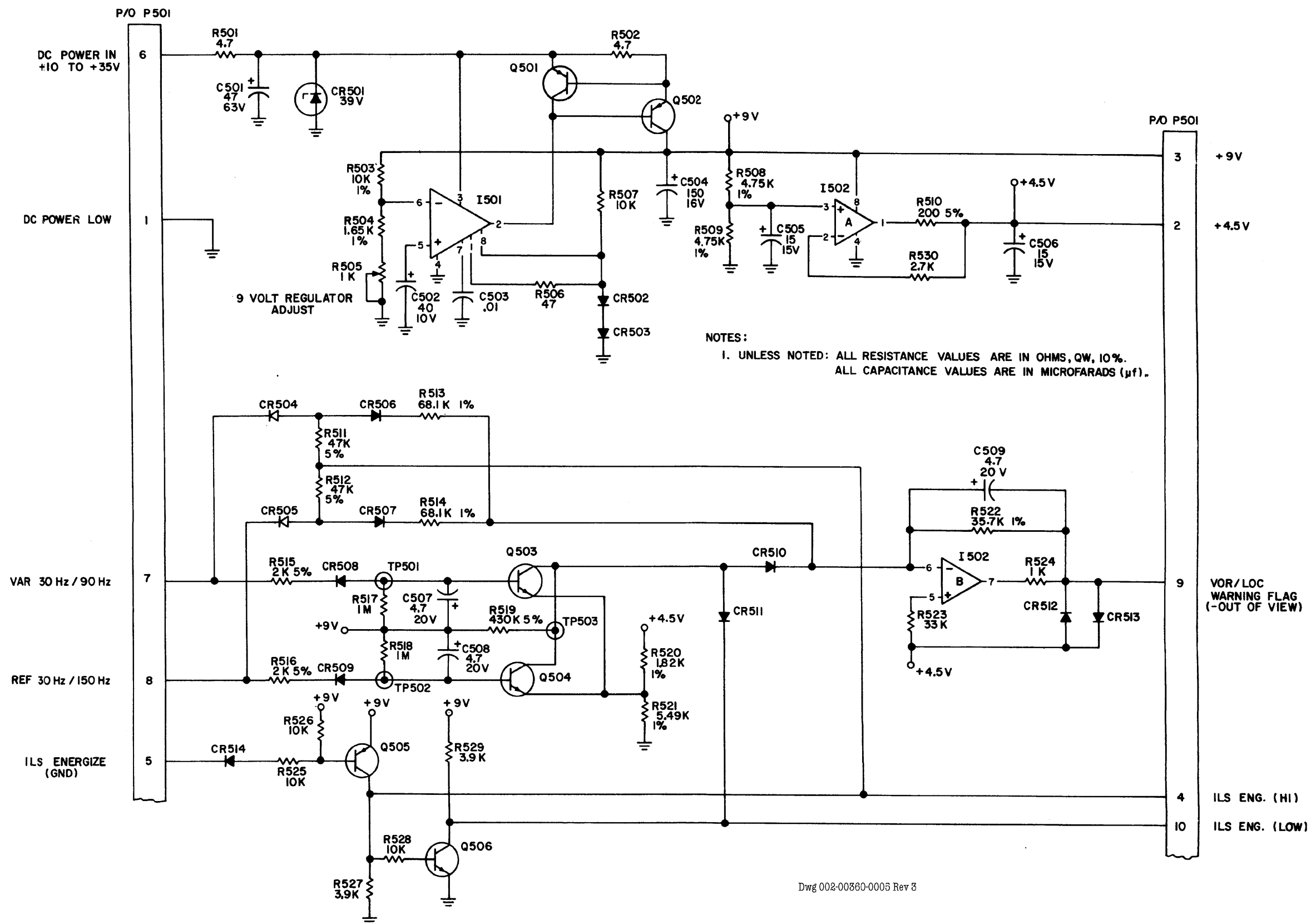


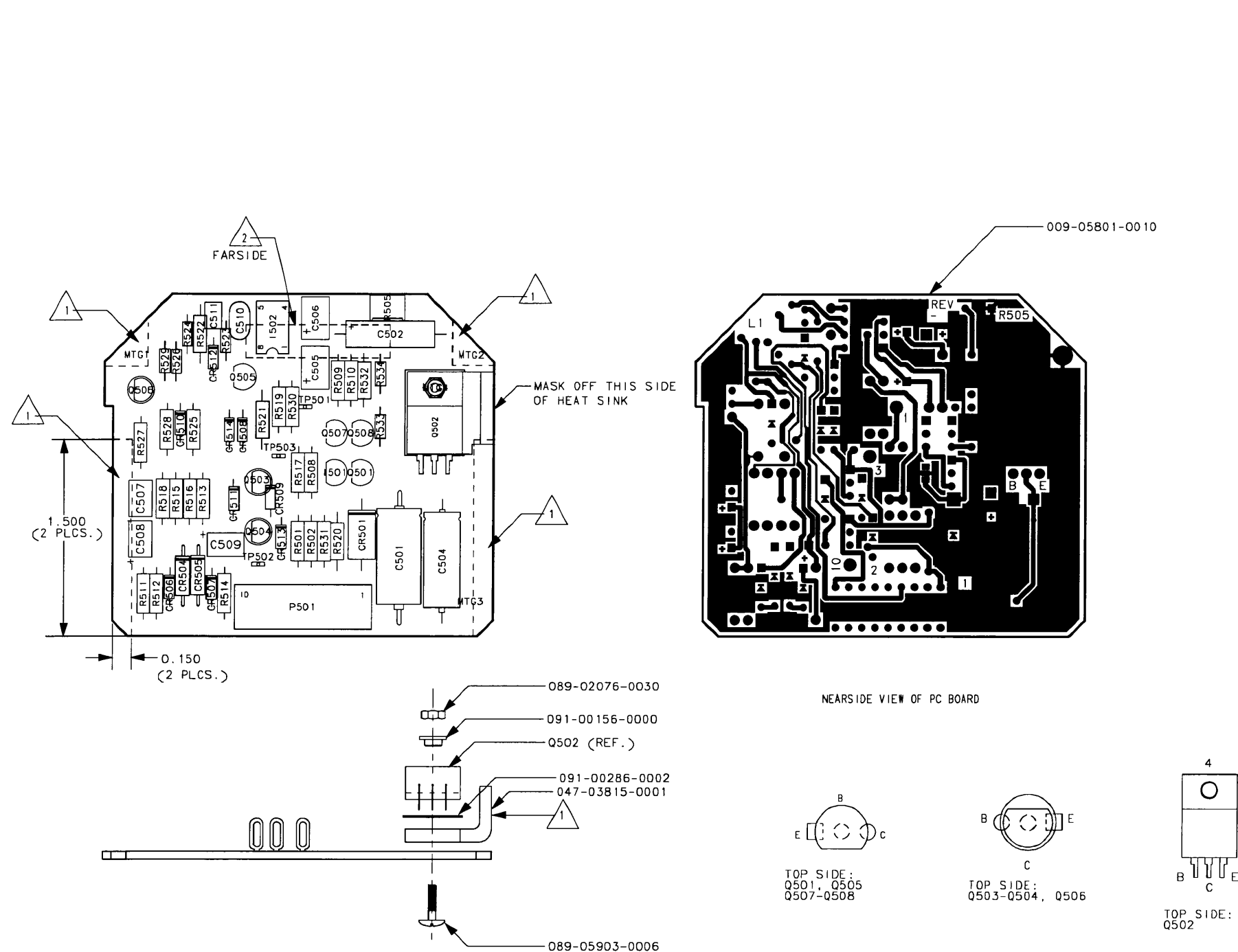
FIGURE 6-32 Power Supply and Flag Board Schematic  
 (Dwg No 002-00360-0005, Rev 3)

## BOM 16: Power Supply and Flag Board

200-05801-0010 POWER SUPPLY &amp; FLAG BOARD ASSY REV -

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0010
-	009-05801-0010		PWR SUPPLY AND FLAG	EA	1
-	047-03815-0001		HEAT SINK XSTR W/F	EA	1
-	089-02076-0030		NUT FLAT 4-40	EA	1
-	089-05903-0006		SCR PHP 4-40X3/8	EA	1
-	091-00156-0000		BUSHING	EA	1
-	091-00286-0002		INSUL XSTR .687	EA	1
C501	097-00056-0065		CAP AL 47UF 63V	EA	1
C502	096-01014-0000		CAP TN 40UF 10V	EA	1
C504	097-00056-0033		CAP AL 150UF 16V	EA	1
C505	096-01030-0027		CAP TN 15UF20%15V	EA	1
C506	096-01030-0027		CAP TN 15UF20%15V	EA	1
C507	096-01030-0011		CAP TN 4.7UF20%20V	EA	1
C508	096-01030-0011		CAP TN 4.7UF20%20V	EA	1
C509	096-01030-0011		CAP TN 4.7UF20%20V	EA	1
C510	113-03121-0000		CAP DC 120PF 500V	EA	1
C511	111-00001-0008		CAP CR 100PF 200V	EA	1
CR501	007-05039-0000		DIO Z 33.3V	EA	1
CR504	007-06033-0000		DIO G 1N270	EA	1
CR505	007-06033-0000		DIO G 1N270	EA	1
CR506	007-06016-0000		DIO S 1N4154	EA	1
CR507	007-06016-0000		DIO S 1N4154	EA	1
CR508	007-06016-0000		DIO S 1N4154	EA	1
CR509	007-06016-0000		DIO S 1N4154	EA	1
CR510	007-06016-0000		DIO S 1N4154	EA	1
CR511	007-06016-0000		DIO S 1N4154	EA	1
CR512	007-06016-0000		DIO S 1N4154	EA	1
CR513	007-06016-0000		DIO S 1N4154	EA	1
CR514	007-06016-0000		DIO S 1N4154	EA	1
I501	120-03744-0001		REGULATOR, 5V, TO-92	EA	1
I502	120-03053-0000		IC LM358N	EA	1
P501	030-02171-0010		CONN CARD 10 CONT	EA	1
Q501	007-00065-0000		XSTR S PNP 2N3906	EA	1
Q502	007-00930-0000		XSTR S PNP MJE15029	EA	1
Q503	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q504	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q505	007-00065-0000		XSTR S PNP 2N3906	EA	1
Q506	007-00078-0000		XSTR S NPN 2N3415	EA	1
Q507	007-00243-0000		XSTR S NPN MPSA06	EA	1
Q508	007-00243-0000		XSTR S NPN MPSA06	EA	1
R501	131-00047-0023		RES CF 4.7 QW 5%	EA	1
R502	131-00047-0023		RES CF 4.7 QW 5%	EA	1
R505	133-00110-0002		RES VA 200 HW	EA	1
R508	136-04751-0072		RES PF 4.75K QW 1%	EA	1
R509	136-04751-0072		RES PF 4.75K QW 1%	EA	1
R510	131-00470-0023		RES CF 47 QW 5%	EA	1
R511	131-00473-0023		RES CF 47K QW 5%	EA	1
R512	131-00473-0023		RES CF 47K QW 5%	EA	1
R513	136-06812-0072		RES PF 68.1K QW 1%	EA	1
R514	136-06812-0072		RES PF 68.1K QW 1%	EA	1
R515	131-00202-0023		RES CF 2K QW 5%	EA	1
R516	131-00202-0023		RES CF 2K QW 5%	EA	1
R517	131-00105-0023		RES CF 1M QW 5%	EA	1
R519	131-00434-0023		RES CF 430K QW 5%	EA	1
R520	136-01821-0072		RES PF 1.82K QW 1%	EA	1

SYMBOL	PART_NUMBER	FIND_NO	DESCRIPTION	UM	-0010
R521	136-05491-0072		RES PF 5.49K QW 1%	EA	1
R522	136-03572-0072		RES PF 35.7K QW 1%	EA	1
R523	131-00333-0013		RES CF 33K EW 5%	EA	1
R524	131-00102-0013		RES CF 1K EW 5%	EA	1
R525	131-00103-0023		RES CF 10K QW 5%	EA	1
R526	131-00103-0013		RES CF 10K EW 5%	EA	1
R527	131-00392-0023		RES CF 3.9K QW 5%	EA	1
R528	131-00103-0023		RES CF 10K QW 5%	EA	1
R529	131-00392-0013		RES CF 3.9K EW 5%	EA	1
R530	131-00272-0023		RES CF 2.7K QW 5%	EA	1
R531	131-00104-0023		RES CF 100K QW 5%	EA	1
R532	131-00911-0023		RES CF 910 QW 5%	EA	1
R533	136-07500-0062		RES PF 750 EW 1%	EA	1
R534	136-08250-0062		RES PF 825 EW 1%	EA	1
REF1	300-05801-0010		PWR SUPP AND FLAG BD	RF	X
REF2	002-05801-0010		PWR SUPP BD KI203/4	RF	X
TP501	008-00096-0001		TERMINAL TEST PNT	EA	1
TP502	008-00096-0001		TERMINAL TEST PNT	EA	1
TP503	008-00096-0001		TERMINAL TEST PNT	EA	1

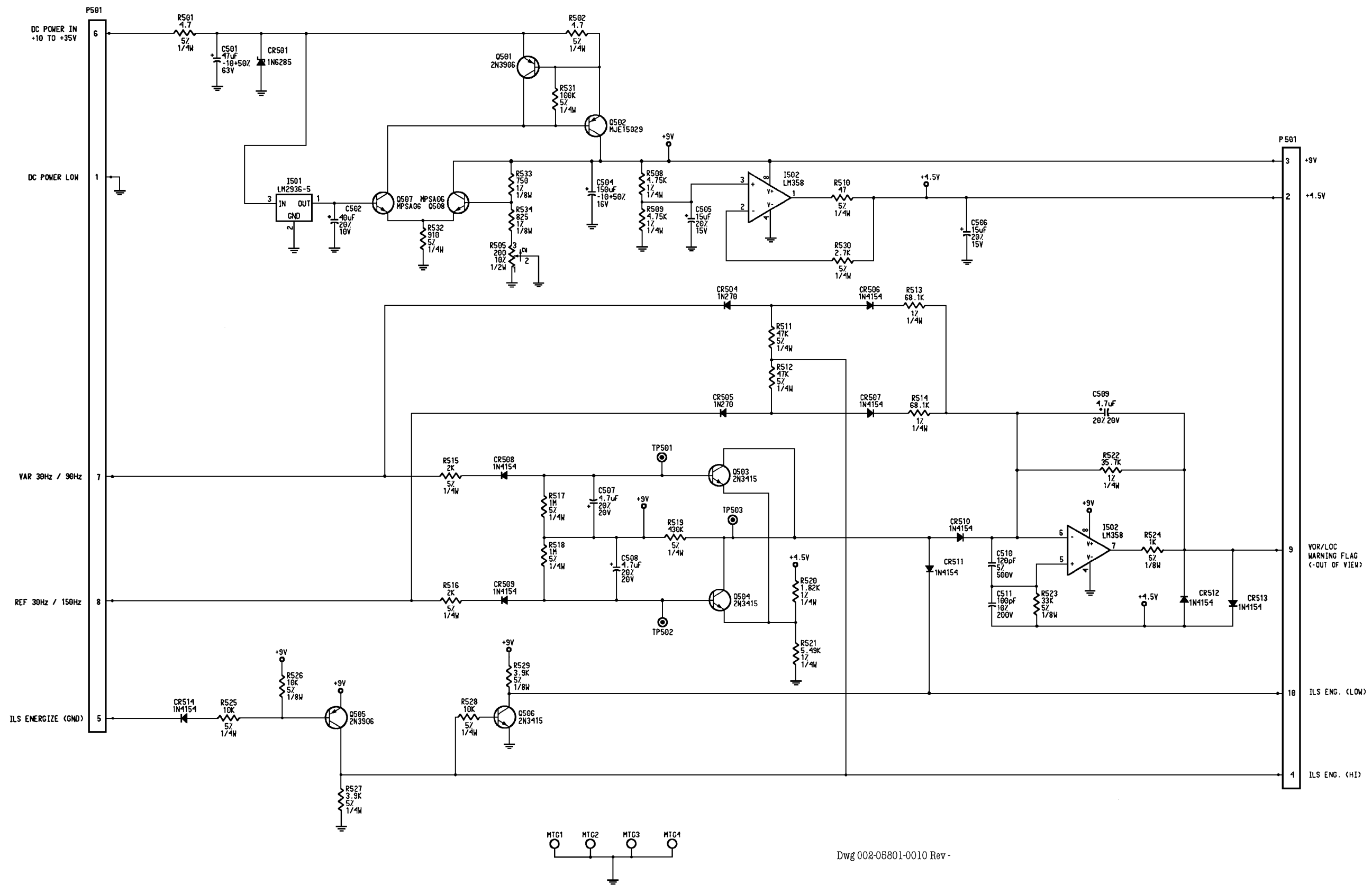


NOTES:

1. PRIOR TO POST COATING BOTH SIDES OF P.C. BOARD WITH PN 016-01040-0000, MASK OFF ALL MOUNTING AREAS AND REFERENCE DESIGNATORS: MTG1-MTG4, P501, R505, TP501 THRU TP503, HEAT SINK AS NOTED, TWO AREAS AROUND CARD PULLER HOLES, TWO AREAS FOR CARD GUIDES.
2. PRINTED CIRCUIT ASSEMBLY IDENTIFICATION MUST BE IN ACCORDANCE WITH SPEC. 001-01101-0000.
3. WHERE APPLICABLE, LIQUID STAKE ALL FASTENERS PER SPEC. 001-01080-0000.

Dwg 300-05801-0010 Rev -

**FIGURE 6-33 Power Supply and Flag Board Assembly**  
(Dwg No 300-05801-0010, Rev -)



Dwg 002-05801-0010 Rev -

FIGURE 6-34 Power Supply and Flag Board Schematic  
(Dwg No 002-05801-0010, Rev -)