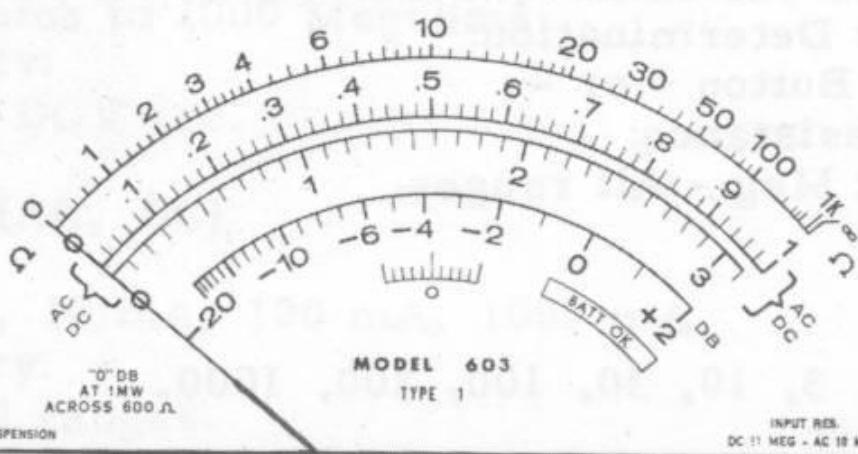


TRIPPLETT

LP OHMS
AUTO POLARITY

MICRO POWER
V-O-M

MADE IN BLUFFTON, OHIO, U.S.A. BY THE TRIPPLETT CORP.

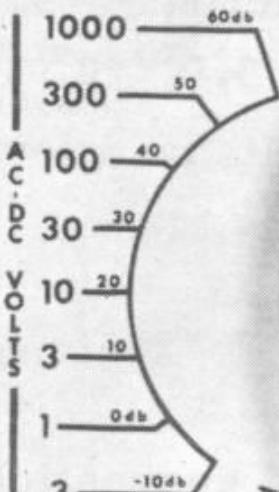


(\oplus) ZERO

AP
DEPRESS
+ AND -

LP Ω

AC

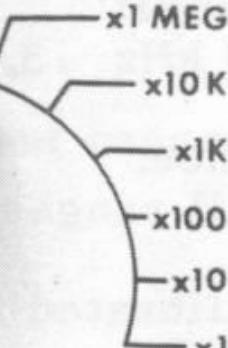


BATT CHECK



AC - DC MA

OFF

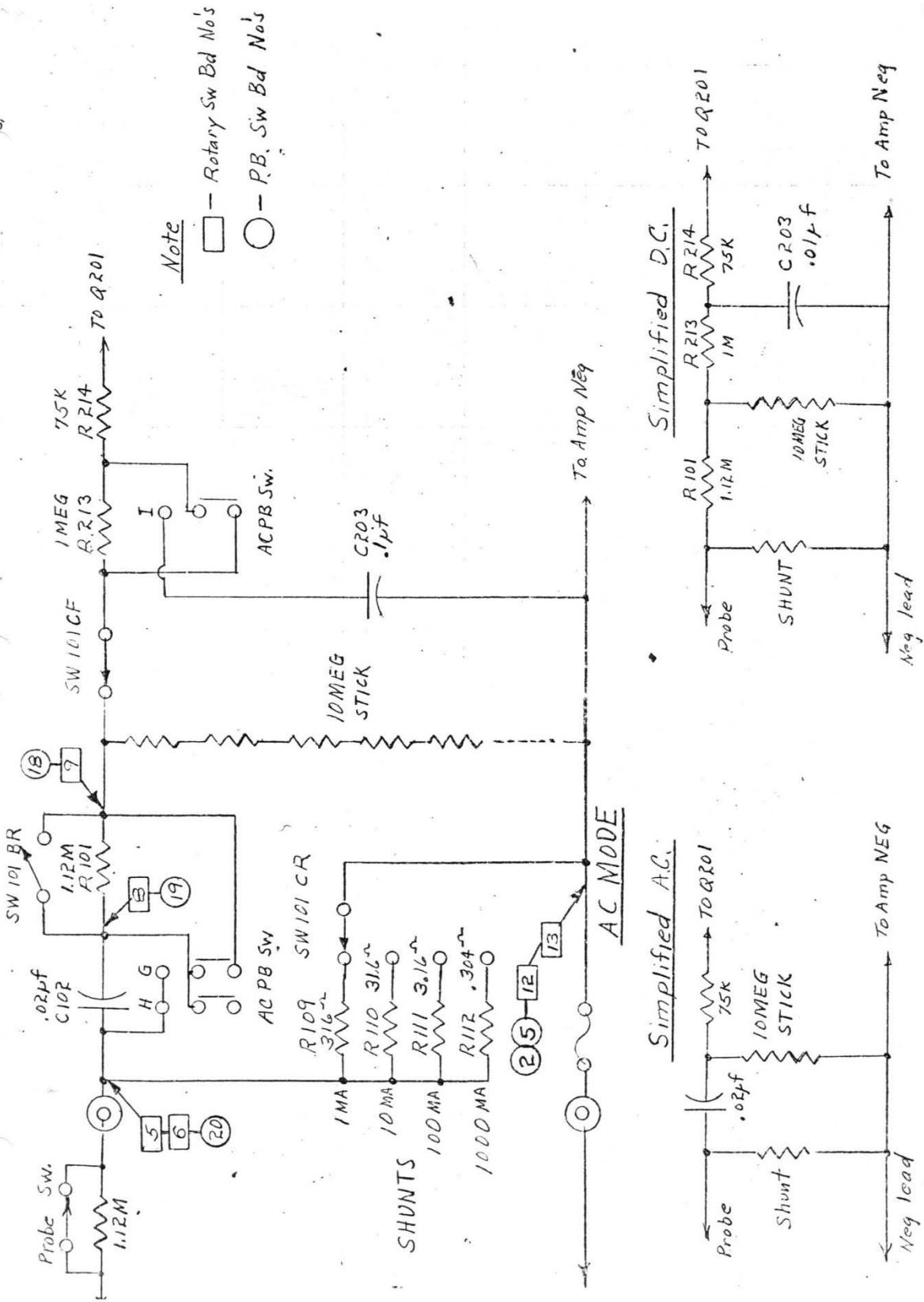


Ω

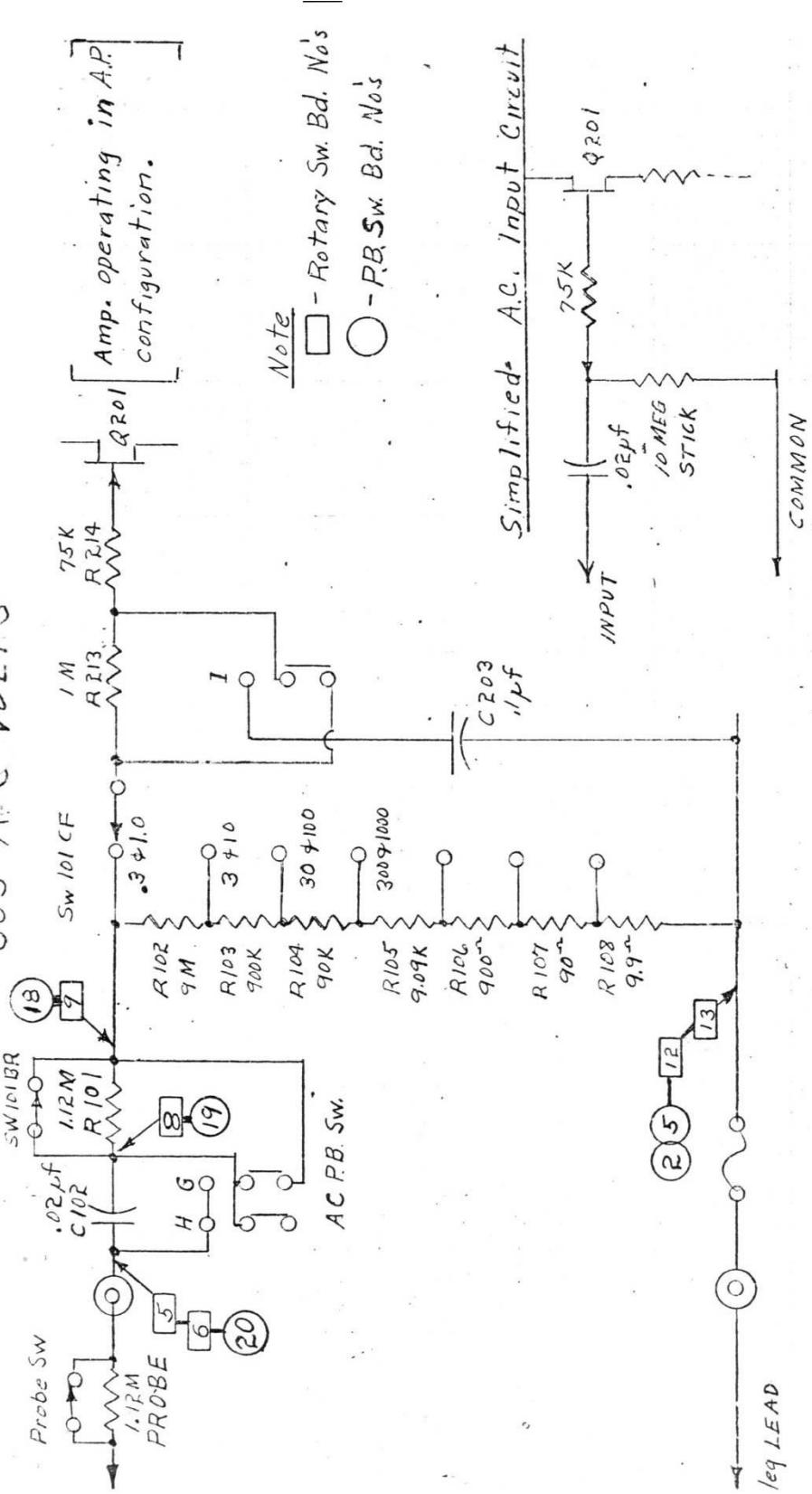


9-21-72

603 CURRENT AC and DC



603 A.C. VOLTS

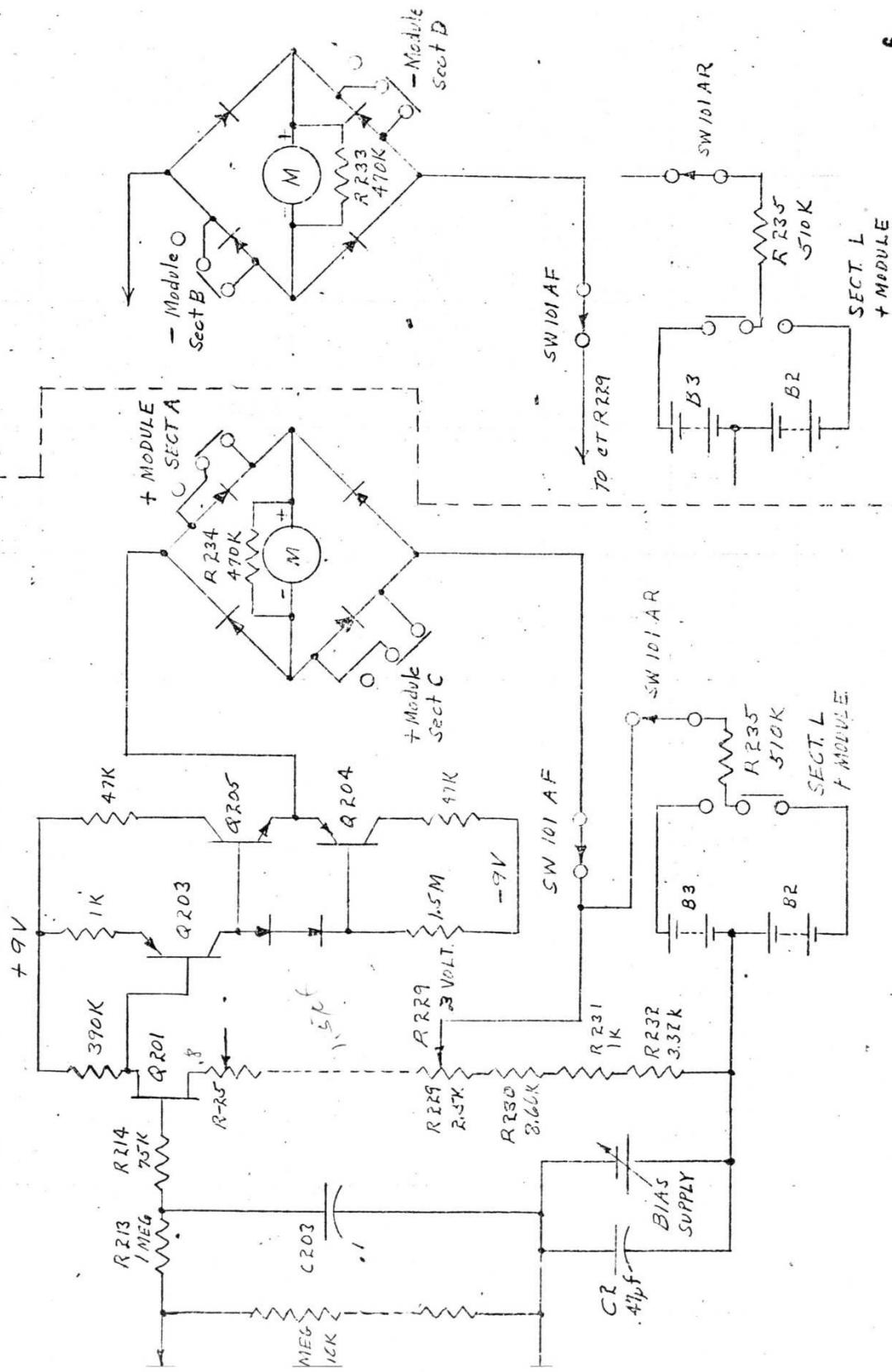


B 2 BATTERY CHECK (+ SW DEPRESSED)

603 BAT TRY CHECK

7-25-72
A.S.

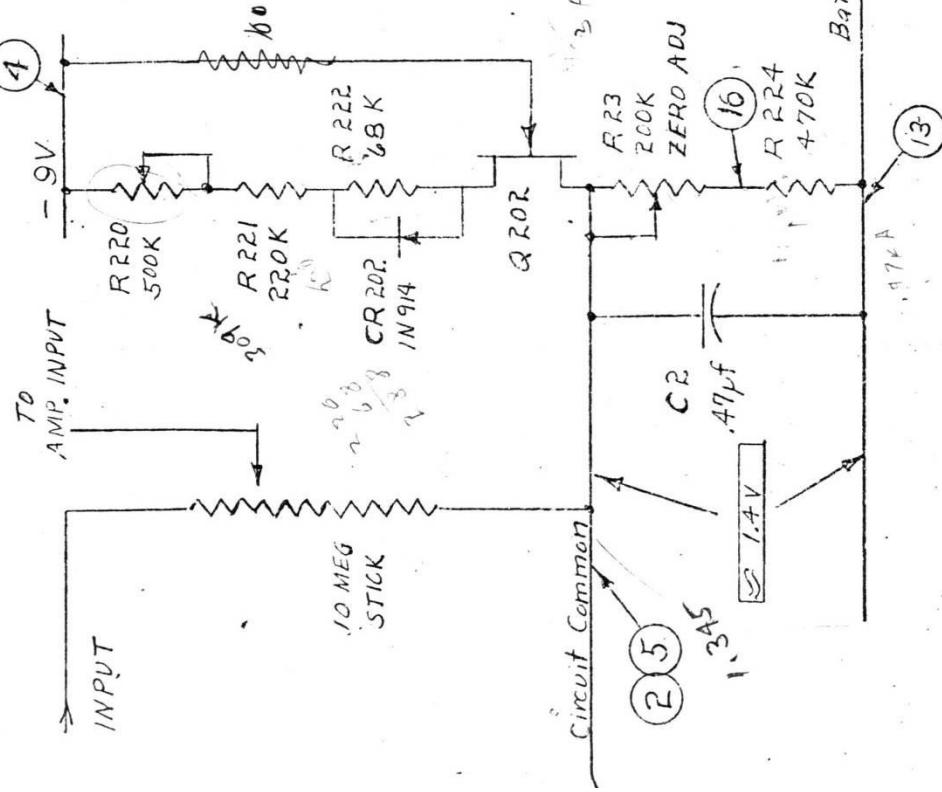
| B 3 BATTERY CHECK (+ " SW Depressed,



9-21-12

603 BIAS SUPPLY

CONSTANT CURRENT BIAS SUPPLY



- Notes -

二
一

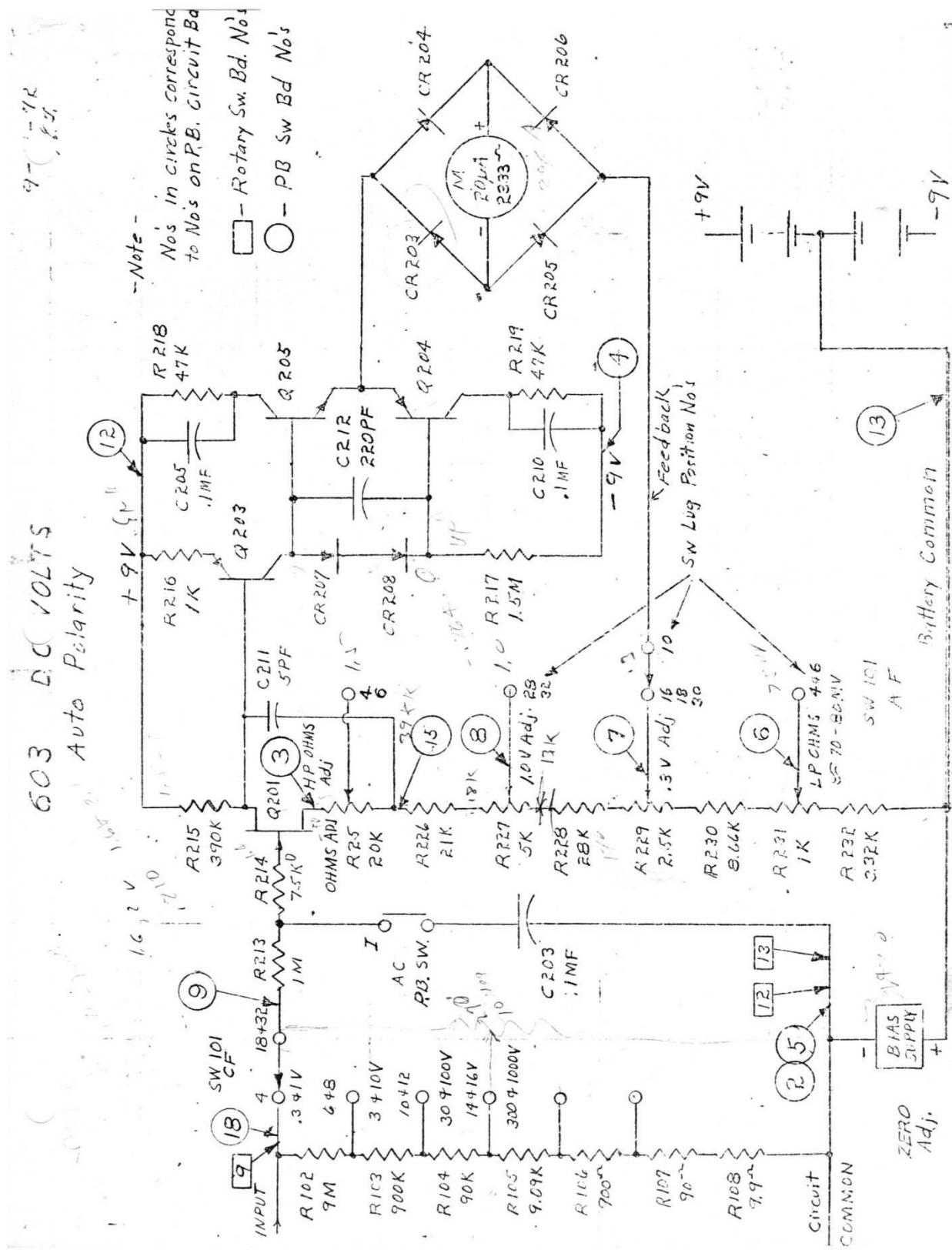
5

channel junctions, Pinch off 1.6-2.0 μ \otimes 1CNA chain C

Current in Constant Current Circuit Approx. $R-3\mu A$

Current in #201 for zero indication on Tester Meter is 1.5 mA

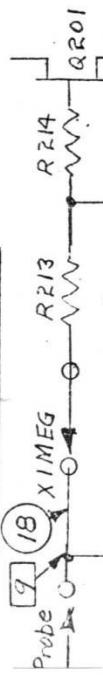
603 E.C. VOLTS
Auto Polarity



27-72

603 OHMS

High Power Ohms



R105 9K

R106 9.9M

R107 9.9M

R108 9.9M

R103 9MΩ

R104 90K

R202 20K

R203 203

R204 204

R205 205

R213 213

R214 214

R215 215

C203

C204

C205

Q201

Q202

Q203

Q204

Q205

Q206

Q207

Q208

Q209

Q210

Q211

Q212

Q213

Q214

Q215

Q216

Q217

Q218

Q219

Q220

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Q469

Q470

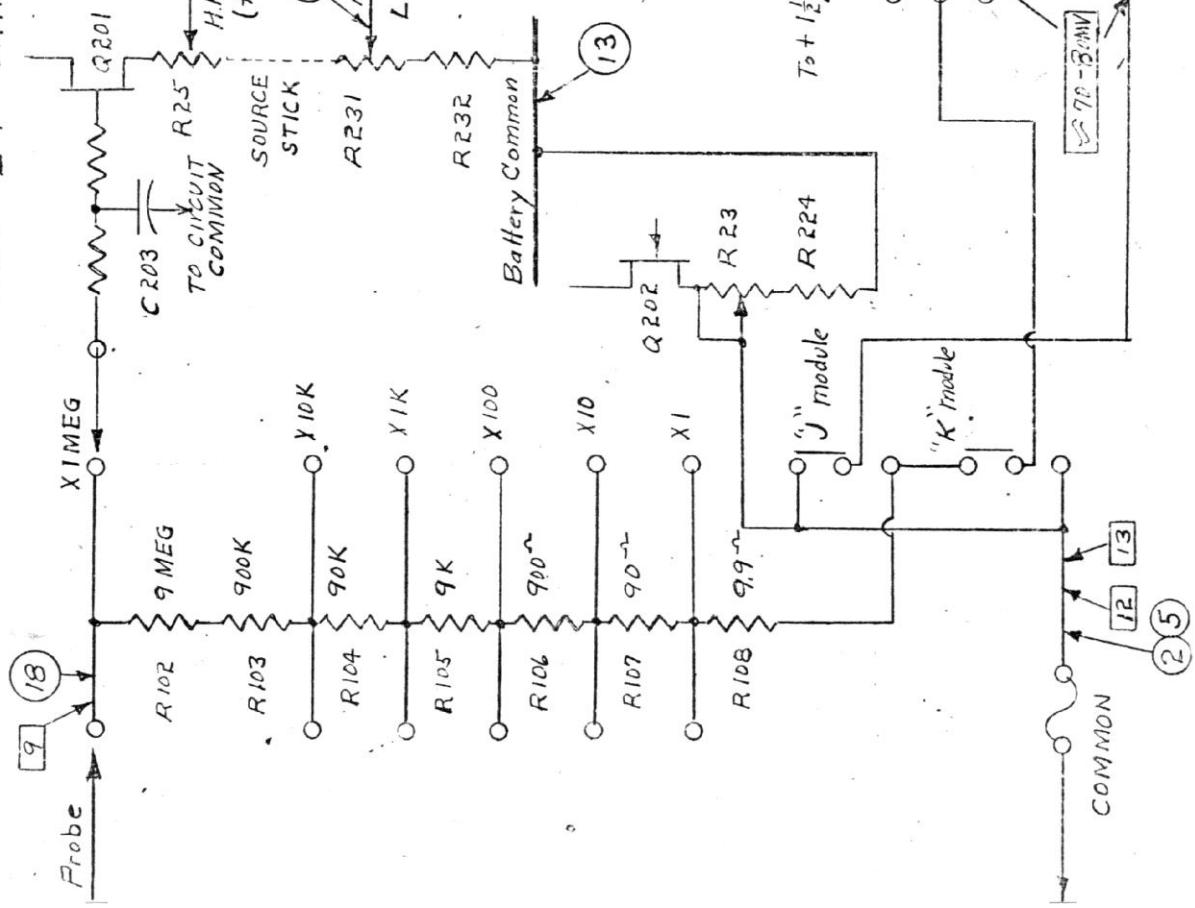
Q471

Q472

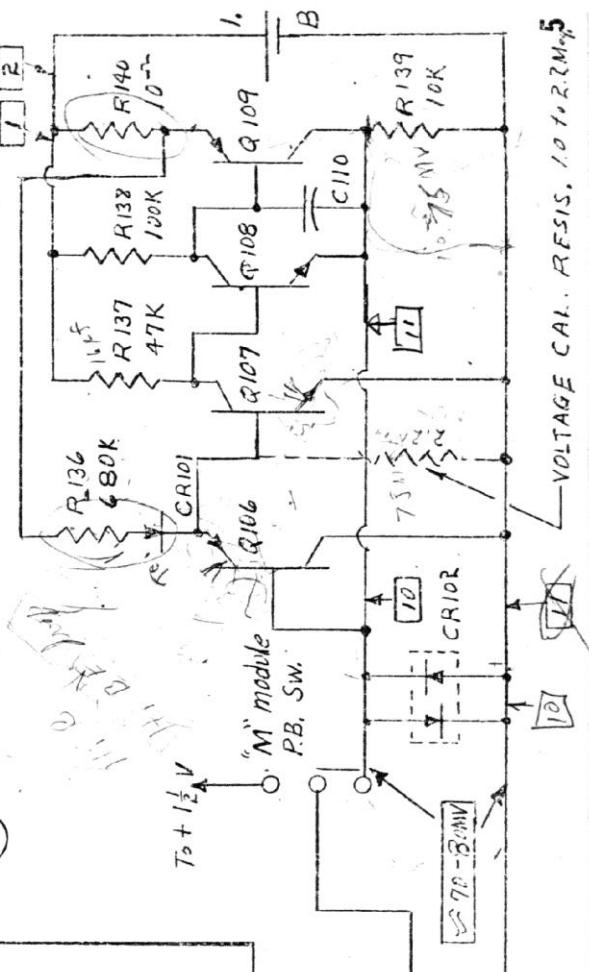
Q473

Q474

603 L P JHMS



correct voltage output for L.R ohms supply.



-VOLTAGE CAL. RESIS. 1.0 to 2.2 Mo_H⁵

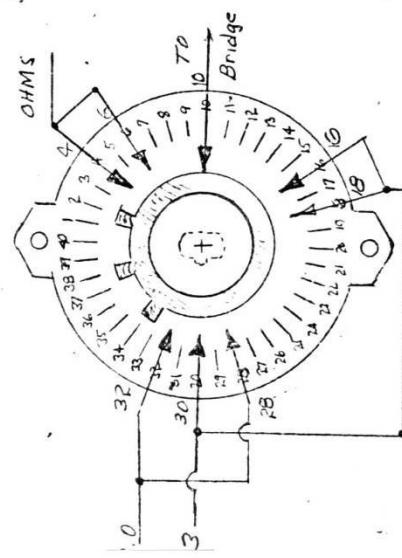
SPL. M.S. 2.93

622

101 AF

101 C.F.

101 BE



This technical drawing shows a circular component with several labeled parts and dimensions:

- Outer Dimensions:** The outer diameter is indicated as $+9\frac{1}{4}$ inches.
- Inner Hole:** The inner hole has a diameter of $9\frac{1}{2}$ inches.
- Central Hole:** The central hole has a diameter of $1\frac{1}{2}$ inches.
- Radial Features:** There are two sets of radial features, each consisting of a large slot and a smaller slot. The outer set is labeled with dimension 11 and the inner set with dimension 13.
- Side Features:** On the left side, there is a vertical slot labeled 39 and a horizontal slot labeled 1. On the right side, there is a vertical slot labeled 23 and a horizontal slot labeled 25.
- Bottom Feature:** At the bottom, there is a slot labeled 31.
- Top Feature:** At the top, there is a slot labeled 10.
- Vertical Dimension:** A vertical dimension of $1\frac{1}{4}$ inches is shown between the top and bottom slots.

- L P O H M S

*Note - ON SOME TESTERS LUGS MAY BE
ROTATED WITH RESPECT TO STRUCTURE
BOLTS.
(Battery Sw. Deck)*

101AR

1018

Amicitiam *ad* *modum* *modum* *modum*

The diagram shows a circular dial with two concentric rings of numbers. The inner ring has 16 segments labeled 1 through 16 clockwise. The outer ring has 16 segments labeled 1 through 16 clockwise. Arrows point from specific numbers to labels: 'Shunt on' points to number 9, 'Shifter in' points to number 12, and 'Travel Mode' points to number 14. There are also arrows pointing to numbers 3, 13, and 15.

Note -

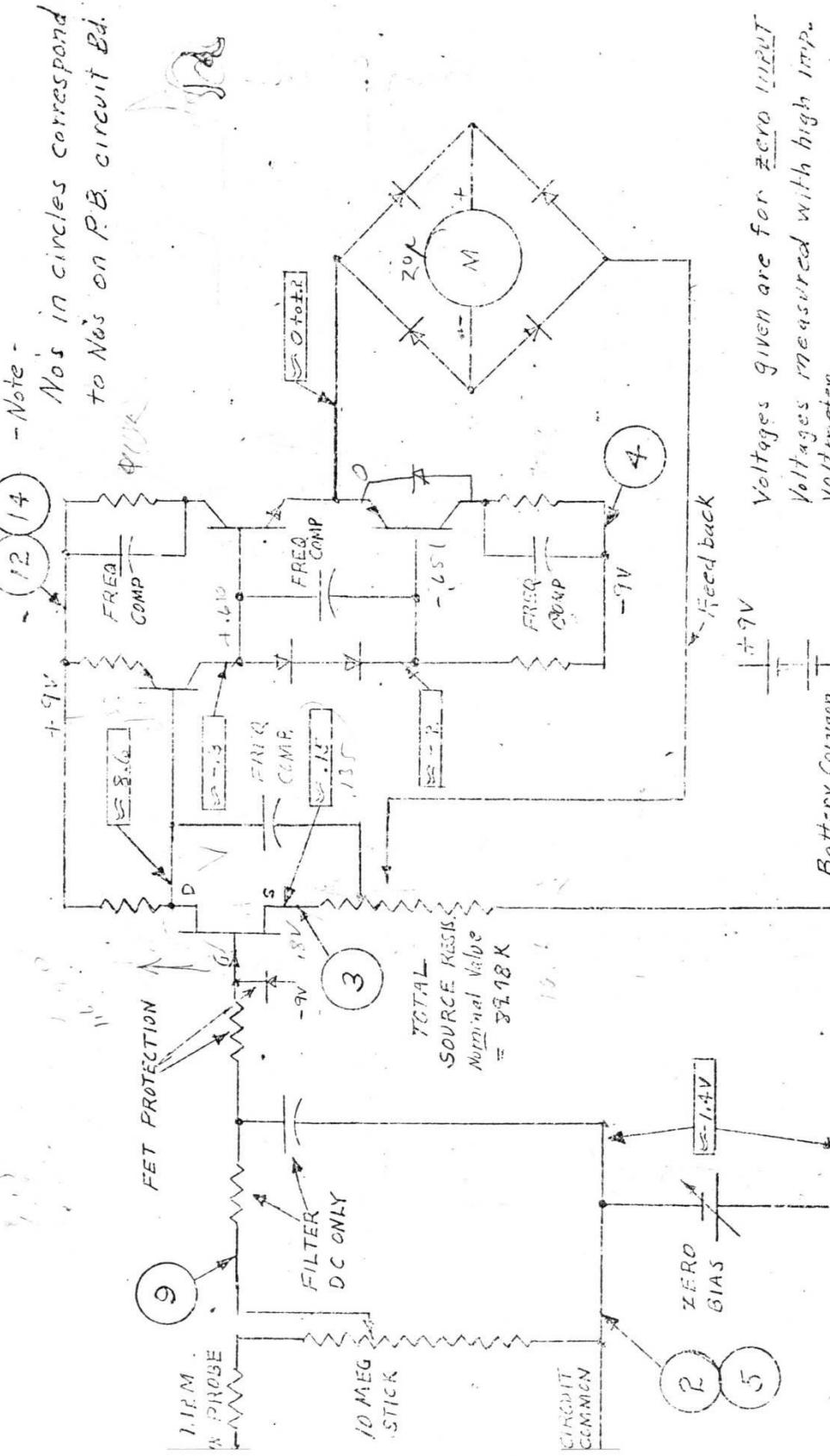
SW. Shown in off position.
All Decks shown locking from front
off center

Marker Front

8
CHMS BATT CONN

603

SIMPLIFIED SCHEMATIC



9-21-72
A.I.T

Note -
Nos in circles correspond
to Nos on P.B. circuit Bd.

12/14

Voltages given are for zero INPUT
of batteries and position of zero
setting and are to be used only
as a guide line for correct Amps
conditions.

+12V

-12V

+12V

-1.4V

-1.8V

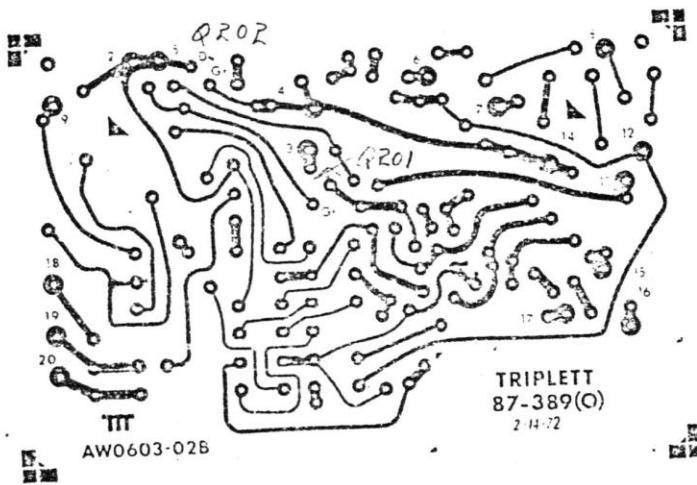
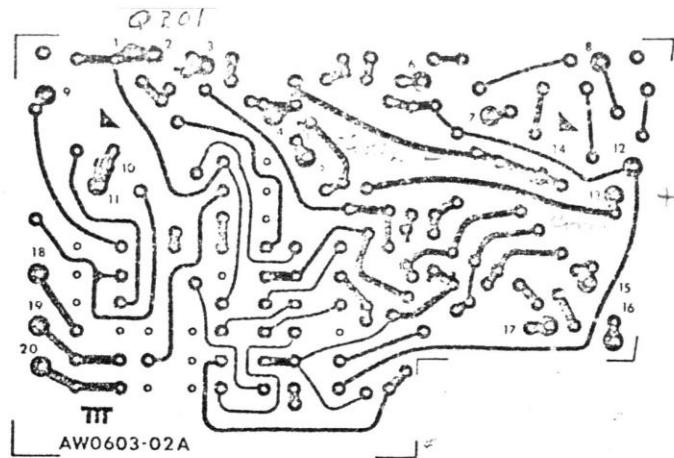
-9V

-9V

Battery Column

13

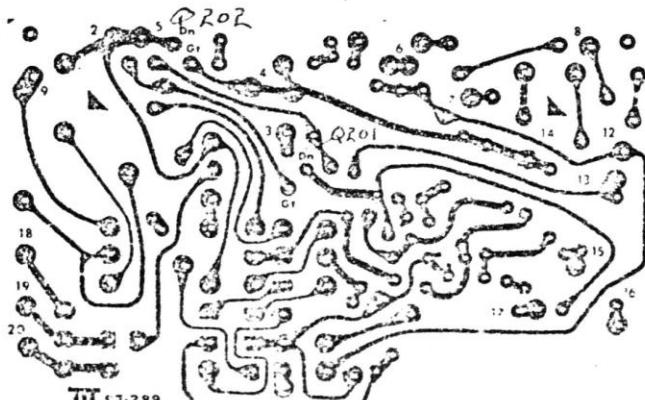
IMP - Volt readings will vary with conditio
n of batteries and position of zero
setting and are to be used only
voltmeter.



Note - Boards A, B & C are the same electrically and are interchangeable.

Board A differs from B & C in the physical location of the input FET and the constant current FET.

Test Point Nos. are the same.



SUBJECT: 603 LP OHMS SUPPLY

DESCRIPTION

The power supply is a direct coupled amplifier with 100% voltage feedback.

The function of the amplifier is to produce a constant voltage the load resistor R-139 (10K). This voltage is determined by the difference in base-emitter voltage drops of Q106 and Q107, which in the 603 should be between 70 to 80 MV. To the ohms circuit and outside world, for all conditions encountered from shorted probes to open circuit, this looks like a constant voltage source with zero impedance.

SELECTION OF TRANSISTORS

The base-emitter voltage drops of Q106 and Q107 is a function of the transistor construction and the current thru the junction. The current thru the junction is the only parameter over which we have control and this is related to the Beta. Selection is thus made on the basis of Beta.

Selection is made in plant by insertion of the transistors into the actual circuit and measuring the actual output voltage.

An alternate method is to select by Beta which works almost as well. When using this method a collector to emitter voltage of 1.5V is used and a base drive of .1 μ A to 1 μ A.

Q106	Beta of 400 and above
Q107	Beta of 400 or below

Both transistors are temperature sensitive and compensate for each other in the actual circuit, however, they should be allowed to stabilize after handling during the selection process -

Q106	2N5087 Selected
Q107	2N5089 Selected

R141 is a calibration resistor and may be 1.0 Meg to 2.2 Meg or may not be in the circuit. The lower the value of R141 the higher the voltage, but the regulation of the amplifier may suffer if too low a value is used.

5-1-'74

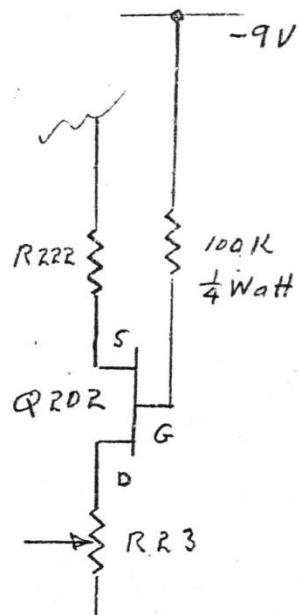
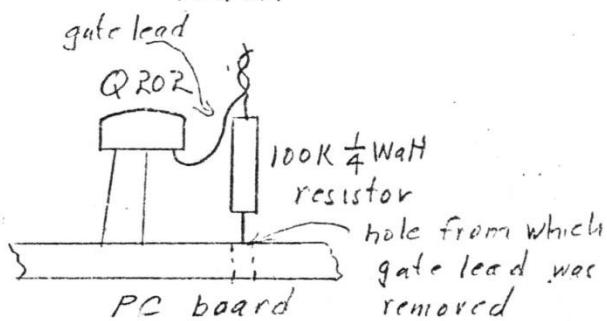
Subject: 603 Modification

Purpose: Gate protection of Q202, Pt No 127-26 FET

Method: 1. Unsolder and lift gate lead of Q202.

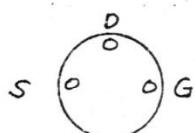
2. Insert and solder one end of 100K $\frac{1}{4}$ Watt resistor in hole from which gate lead was removed.

3. Solder other end of resistor to the gate lead.



All later production runs have this mod. incorporated in them.

127-26
TO-106 case



Viewed from lead end

127-26

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RETURNED UPON REQUEST AND MUST NOT BE DIS-
CLOSED TO ANY PERSONS OTHER THAN THOSE TO
WHOM THEY ARE SENT.

REVISION

NO.

USING 127-53 AS MATERIAL,
SORT AT TRIPPLETT FOR:

1. PINCH OFF VOLTAGE OF 0.8V MIN TO 2.4V MAX.
2. MAX LEAKAGE OF .15 NANOCAMPERES @ 35°C.

110V
40A
0.15N
127-53

TRANSFORMER

MODEL 601 TYPE I
THE TRIPPLETT ELECTRICAL INSTRUMENT CO.
BLUFFTON, OHIO U.S.A.

DATE	DR.	127-26
C.R. 44	ENGR.	127-26

The 2N5089 Transistor, Triplet Part No. 127-37 is material for the following units and must be tested before being used in the Model 5000 Digital Panel Meter.

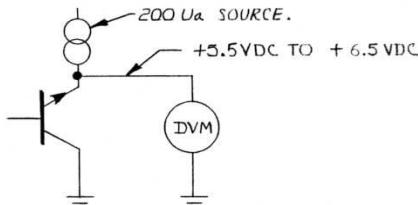
To get the highest yield, the selection must be made in the order indicated below.

Three groupings must be made:

1. Units that can be used as 6 volt Zener Diodes (127-54).
2. Units that have no leakage----- (127-57).
3. Units that have leakage----- (127-56).

Before any testing is done, paint the top of each unit with white epoxy paint.

1. With a 200 Ua current source connected to the 127-37 under test as shown below, select units which fall between 5.5 volts and 6.5 volts. These units will then be temperature tested.



127-54

2. Record the exact voltage of each Zener at 25°C.
3. The Zener voltage then must be measured at 50°C (Let soak in oven at 50°C for 15 minutes).
4. Record the voltage obtained at 50°C beside the voltage value at 25°C.
5. Select only the units which are within 0.01 volt from 25°C. to 50°C.
6. This unit shall be identified with a brown dot and becomes Part Number shown at left.

127-74

1. With A 100UA current source connected to the 127-37 kept as shown above select units which fall between 4.5 volts and 5.5 volts. These units are not temperature tested. These units are identified with a yellow dot.

To check for leakage use the Triplet Model 3490A Transistor Analyzer.

127-57

1. Set the collector voltage to +12 volts. (Use the 12V range on the collector volts switch).
2. Set the input switch to open.
3. Place A 1 Meg Resistor from Base to Emitter.
4. The Transistor should not have more than 50 Nanoamperes of leakage. ($\frac{1}{2}$ of 1 division of the 6 Ua Range).
5. Segregate the leaky and non leaky Transistors.
6. The non leaky unit shall be identified with a green dot and it becomes part number shown at left.

127-56

7. The leaky unit shall be identified with a red dot and it becomes Part Number shown at left.

127-75

1. Similar to 127-54 but item one is to read: With a 200UA current source connected to the 127-37 (2N5089) under test as shown, select units which fall between 5.75 volts and 6.25 volts. These units will then be tested to requirements 2;3;4 and 5 of 127-54.
2. This unit shall be identified with a blue dot.

④ 127-86

1. Similar to 127-54 except item 1 is 4.5-5.0 Volts, item 3 to read ± 4 counts from 1500
2. This unit shall be identified with a Violet Dot.

④ 127-87

1. Similar to 127-54 except item 1 is 5.0-5.5 Volts, item 3 to read ± 4 counts from 1500
2. This unit to be identified with a White Dot.

④ 127-101

1. Similar to 127-54 except item 1 is 6 to 6.5 volts, item 3 to read ± 4 counts from 1500
2. This unit to be identified with an orange dot.



BOTTOM VIEW

DELTET
ECN 7062, 11-15-75
TS

OPERATION PROCEDURE COMPONENT SELECTION MODEL 5000	
DATE 16/10/69	DR. JLM
ENGR. KU	73-2192B

NO.	REVISION
1	Rev. A - ENR. NO. 3057 S 15-65
2	REV. B - 127-74 31-53
A	REV. C - 37233 127-74 31-53
B	REV. D - 40071 127-74 31-53

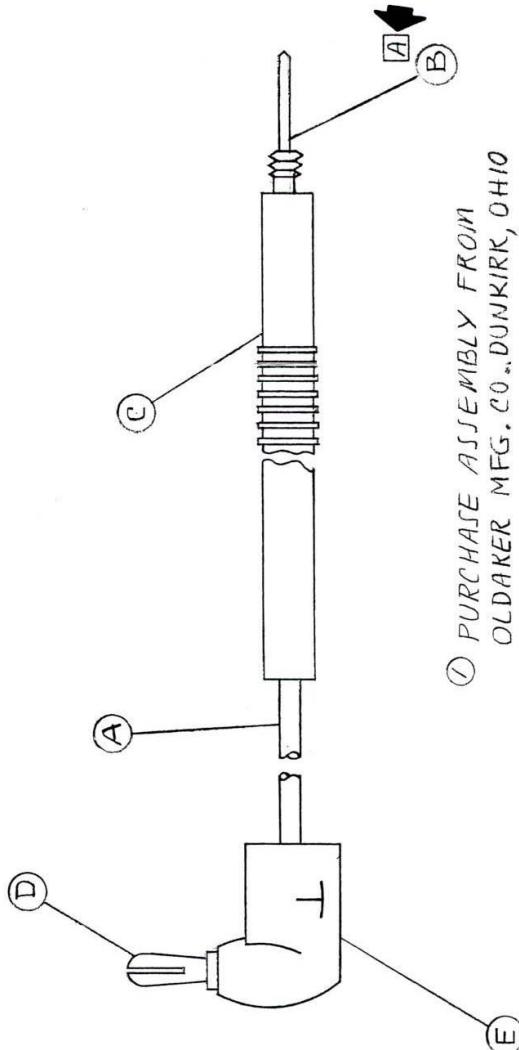
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ENGR. FORM 71-102 K&E 10 5156 11-68.		A E G K E W W C A	
PART NO.	QTY.	DESCRIPTION	SYM
26-262	48"	WIRE, BLACK	A AP62-183 (P2)
2567-75	1	TIP, THREADED	B 1/2-10-106
31-357	1	INSULATOR, BLACK	C 1/2-10-104 (P2)
2455-253	1	PLUG, BANANA	D AP61-107
2455-256	1	PLUG MOLDED, BLACK	E AP61-120 (P2)

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WHOM THEY ARE SENT.

NO.	REVISION
1	REVISED PER ECN 2897 JUN 30 1969
2	ADDED "BLUNT" PER ECN 3391 JUN 23 1970
A	REV NO. CHANGE REL ENG CK DR. 8310 AS NOTED 10/17/73 DS 9-18-78 GND

OBSOLETE
PER ECN 15392
8.24.87



OLDAKER ASSEMBLY NO.
BH 62-176 (P2)

LEAD ASSEMBLY, BLACK,
BANANA TIP, BLUNT ②

THE TRPLETT ELECTRICAL INSTRUMENT CO.

BLUFFTON, OHIO U.S.A.		REV
JUN 66	DR. JC	79-261 A
JUNE 22 1966	JC	SHEET 1 OF 1

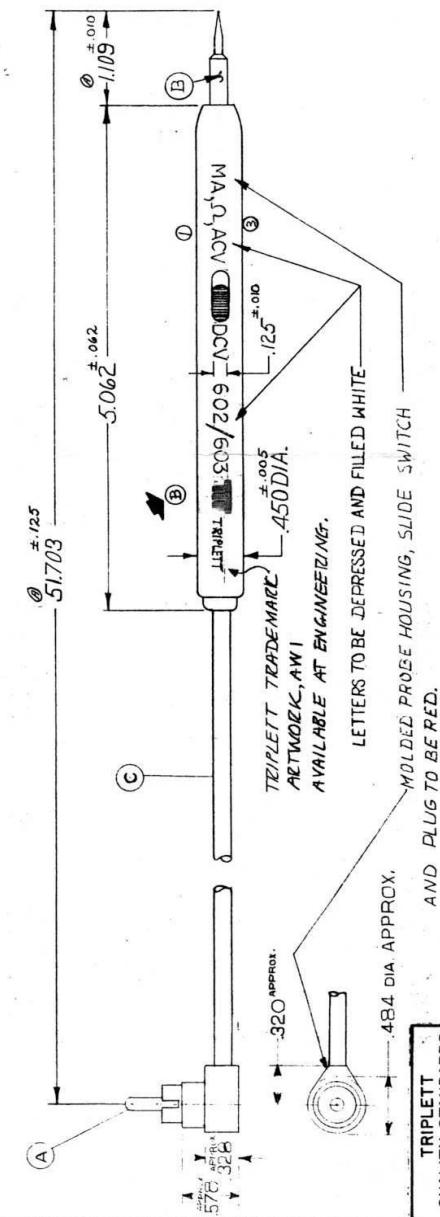
⑦ PURCHASE ASSEMBLY FROM
OLDAKER MFG. CO., DUNKIRK, OHIO

79-288

MODEL 602 603

ENGR. FORM 71-03 KEE 10/16 144-A A E H X E C

PART NO.	QTY	DESCRIPTION	REF
245F-277	1	PHONO PLUG	A
1-5K//247R2	1	RESISTOR, 1.12M OHMS	R1
2567-5B	1	TIP LEAD, THREADED	B
④	AS	CABLE, BELDEN NO. 8421 COLOR - GREY	C
REQ.			

TRIPLITT
QUALITY STANDARDS

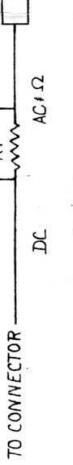
SYMBOL	CLASS	A.S.L.
■	CRITICAL	0%
□	MAJOR	2.5%
□	MINOR	6.5%

SYMBOL	DESCRIPTION	DIMENSION
■	160VAC. TEST	TO CONNECTOR
		DC AC 1Ω

NOTES:
④ ■ - LEAD ASSEMBLY TO WITHSTAND
1600VAC FOR 1 TO 2 SECONDS WITHOUT
ELECTRICAL BREAKDOWN.

PURCHASE ASSEMBLY FROM OLDAKER

MFG. CO. DUNKIRK, OHIO.



PROBE WIRING SCHEMATIC

0	REVISED PER EN 332	5/6 1963
1	REVISED PER EN 332	5/6 1963
2	REVISED PER EN 332	5/6 1963
3	REVISED PER EN 332	5/6 1963
A	44034 TWO 1/2" PROBES	5/6 1963
B	4183 SETTEEN MOLDED PROBES	5/6 1963

OLDAKER NO.	BAH9-354-H
LEAD ASSEMBLY, MODEL 602, 603	PROBE
THE TRILETT ELECTRICAL INSTRUMENT CO.	BLUFFTON, OHIO U.S.A.
DATE 69 035	REV B
PROB.	PROB.
J/B	J/B