

DATE 5/4/56
SH. 1 OF 14

TMC SPECIFICATION NO. S-292

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WDC

TITLE:

MECHANICAL DATA -- GPT-750

JOB

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Purpose:

To supply the Production Department with the necessary mechanical data for making jigs that will insure proper alignment of fixed and free moving parts of all sections which require special attention before final assembly.

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- (2) Antenna Loading Switch
- (3-4) Vacuum Capacitor (C113)
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- (8) Multiplier Chassis Switch and Variable Capacitor
- (9) Front Panel Spacing
- (10,11,12) Front Panels and Cab/Frame Adjustments
- (13) Safety Switch SW-169 Adjustment
- (14) Special Notes

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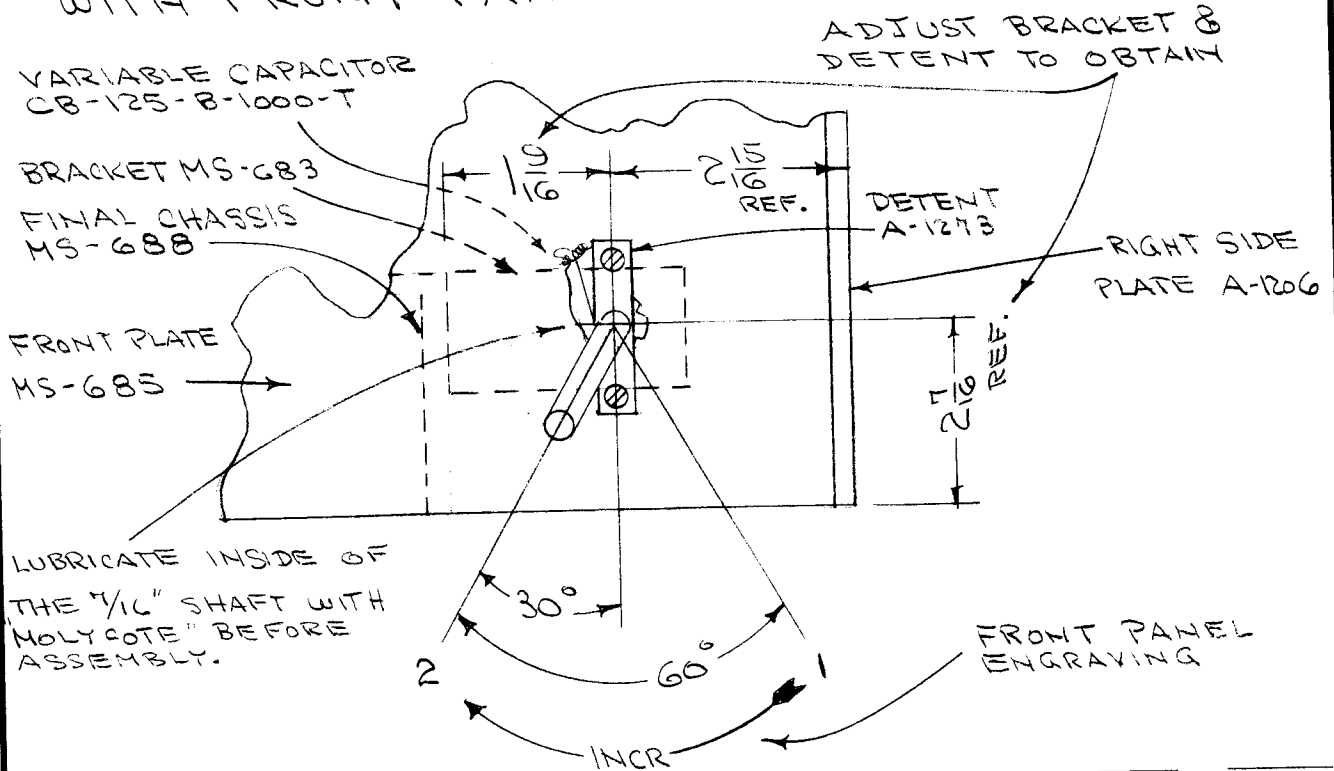
JOB

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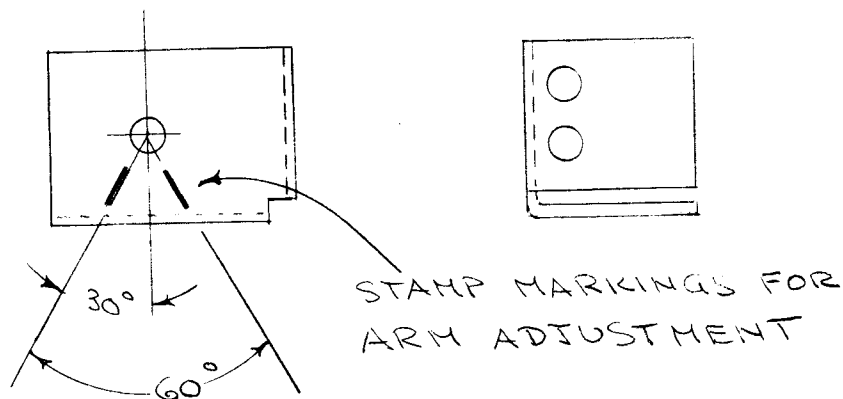
ANTENNA LOADING SWITCH

LOCATION: R.T.F. (POWER AMPLIFIER SECTION)

NOTE: DETENT ASSY. A-1273 MUST BE ALIGNED AS BELOW BEFORE FINAL ASSY. WITH FRONT PANEL.



SUGGESTED JIG TO OBTAIN PROPER ALIGNMENT OF 60° INDEX - VAR. CAP. (DIRECTLY BEHIND INDEX) - AND CONNECTING SHAFTS.



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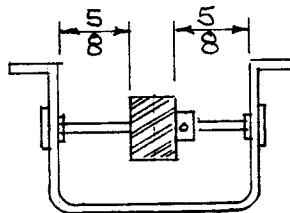
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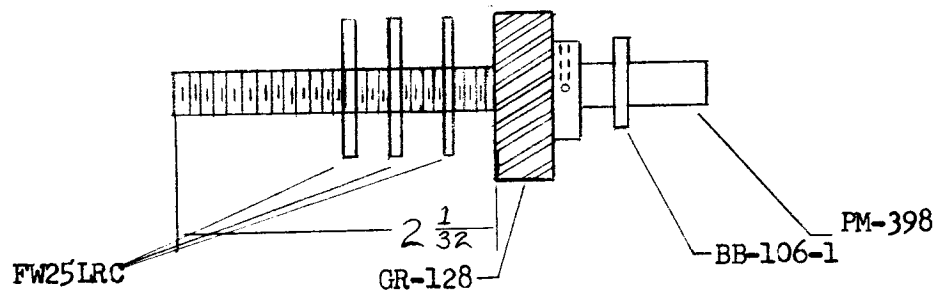
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Model RTF--Mechanical Adjustment of Vacuum Capacitor, C113 (10-300)

1. If Vacuum Capacitor has been installed, loosen Hex head screw on top of chassis and remove capacitor from socket.
2. Turn counter clockwise until mechanical stop meets gears housing.
3. Loosen the coupling between main shaft and counter.
4. Set counter to read 99.6 and tighten the coupling.
5. Turn counter counter-clockwise until reading on counter is 22.3. Then tighten the two $\frac{1}{4}$ -28 hex nuts flush with stop.
6. Revolve counter in each direction a few times to be sure the counter range is between 22.3 and 99.6. If not, re-adjust stops to meet this requirement.
7. Set metal gear GR-124, $\frac{5}{8}$ of an inch from inside wall of gear housing.



8. Remove original shaft from vacuum capacitor and replace with the new shaft PM-398, the nylon gear GR-128, three flat washers FW25LRC, and one thrust bearing BB-106-1 according to the following method of assembly.



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8.(con't)

Rotate shaft and gear clockwise until the rotor of the capacitor begins to move and a snug feeling occurs while rotating the gear. Then add one-quarter additional turn.

9. Lubricate panel bearing on top of gear housing and threaded portion of stop section on counter extension shaft with "Molycote."

10. Set counter at 99.6.

11. Insert vacuum capacitor in its' socket until end of shaft is flush with outside end of panel bearing on top of gear housing.

12. Tighten Hex head screw at base of socket securely.

13. Be sure all set screws are tight and that the assembly runs freely between 22.3 and 99.6. NOTE: This Range must be adhered.

Model RTF--Mechanical Adjustment of Vacuum Capacitor, C113 (10-400)

The Mechanical Adjustment Procedure is the same as explained above except for two reasons listed below.

1. Set the shaft PM-398 according to the same 2 1/32" dimension shown in Step 8 with the gear hub in the opposite direction. The number of flat washers used as spacers will vary with each capacitor in order to obtain the proper mesh between the steel and nylon gear.
2. The range on the counter must read between 21.2 ±.1 and 99.6 ±0.

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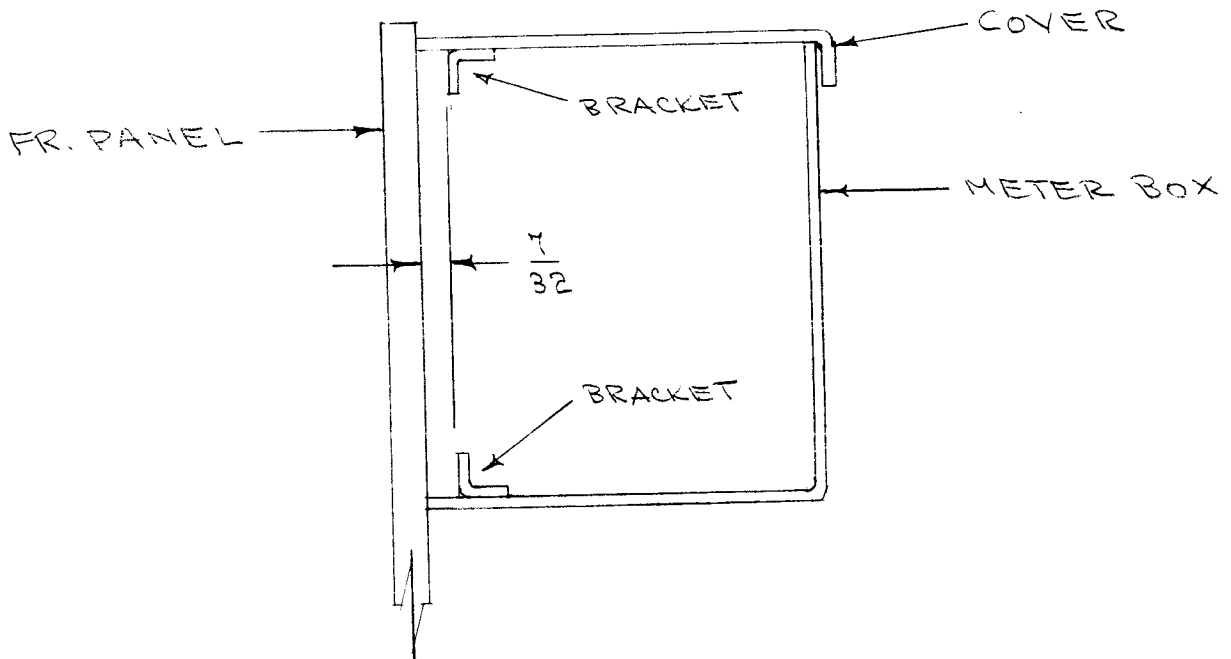
MECHANICAL DATA -- GPT-750

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METER BOX & COVER

LOCATION - RTF (FRONT PANEL)



$\frac{7}{32}$ DIMENSION MUST BE HELD SO THAT THE THREE METERS AND BAKELITE PANEL MAY BE REMOVED FROM THE METER AS AN ASSEMBLY.

SUGGESTED METHOD.

- 1-ANY LONG BAR STOCK CUT TO $\frac{7}{32}$ WIDTH
- 2-MACHINISTS SQUARE SET TO $\frac{7}{32}$.

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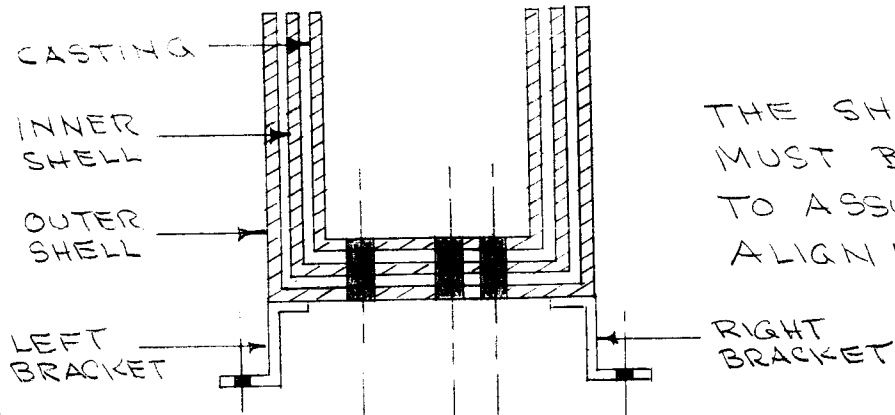
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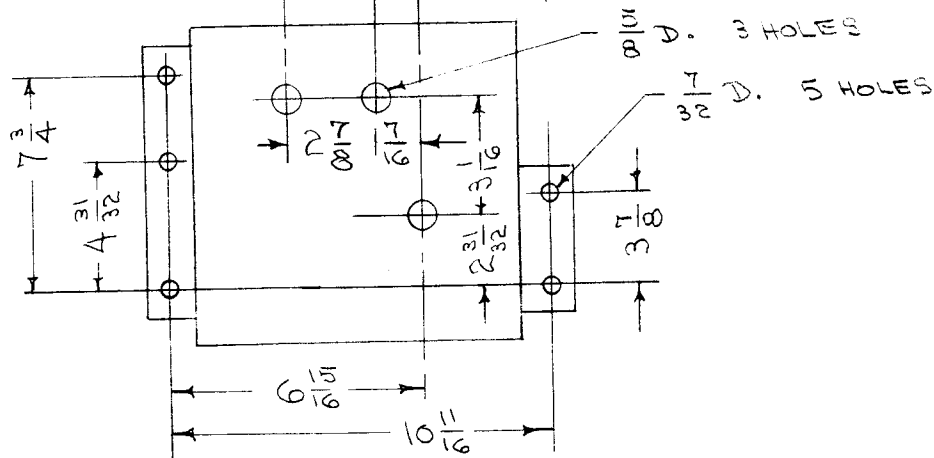
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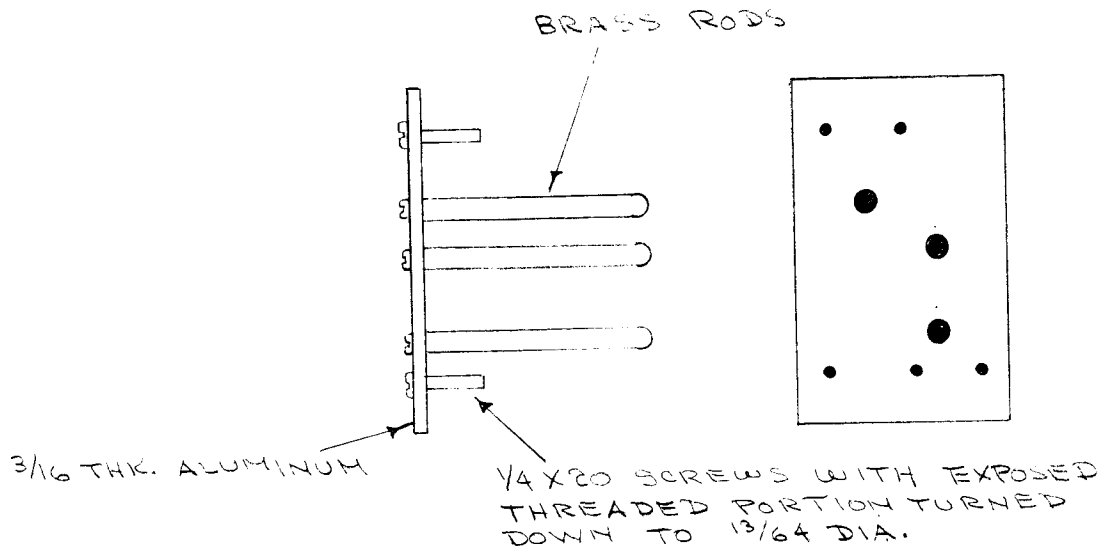
OVEN ASSEMBLY
LOCATION - RTF



THE SHADED HOLES
MUST BE JIG ASSEMBLED
TO ASSURE PROPER
ALIGNMENT.



SUGGESTED JIG



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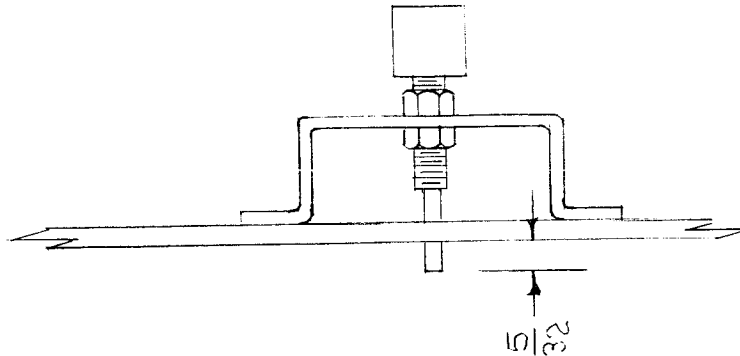
MECHANICAL DATA -- GPT-750

JOB

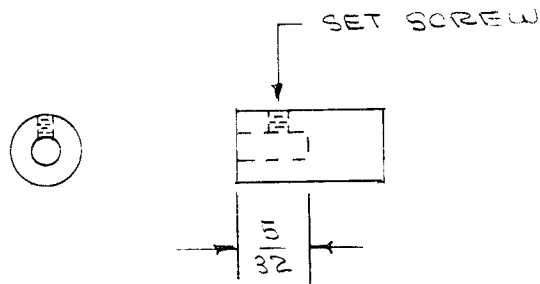
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INTERLOCK SWITCH - SW-169

LOCATION - CAB./FRAME. ONE FOR EACH DRAWER
AND ONE FOR REAR COVER.



SUGGESTED JIG & ITS USE.



PLACE JIG OVER EXPOSED END OF SWITCH
AND TIGHTEN SET SCREW. LOCK SWITCH TO
BRACKET WITH HEX MTG. NUTS. REMOVE JIG.

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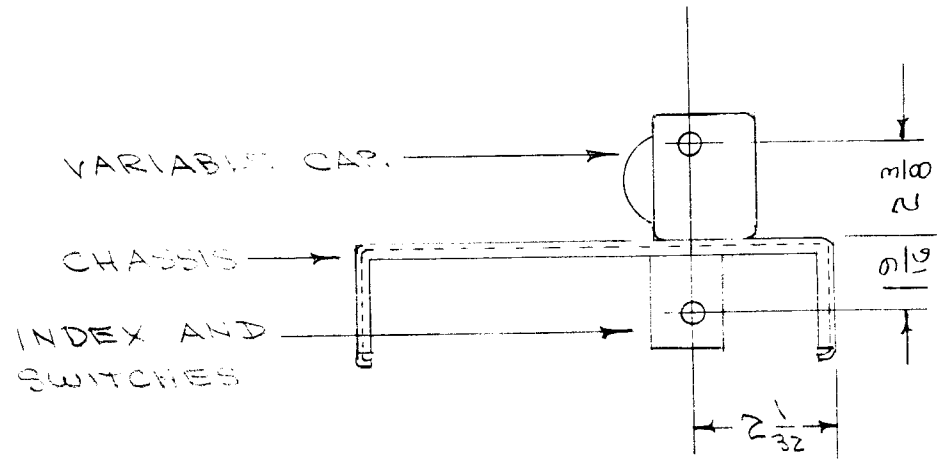
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MULTIPLIER CHASSIS - SWITCHES & VAR. CAPACITOR.

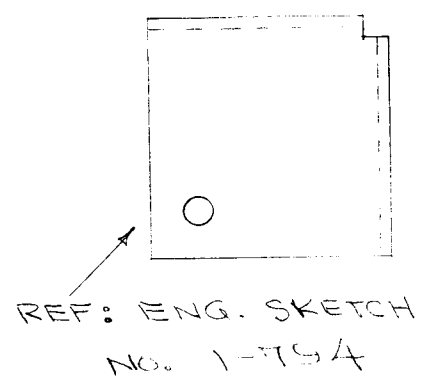


FRONT VIEW

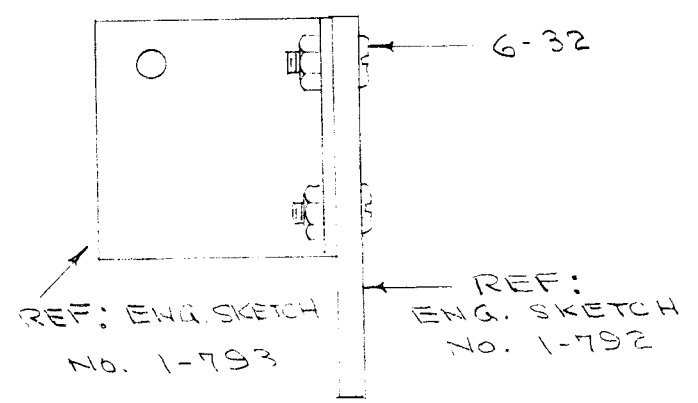
SWITCHES, INDEX AND CAPACITOR MUST BE ALIGNED AS ABOVE TO ASSURE PROPER FIT TO FRONT PANEL.

SUGGESTED JIGS TO MAINTAIN DIMENSIONS SHOWN ABOVE.

FOR INDEX



FOR CAPACITOR



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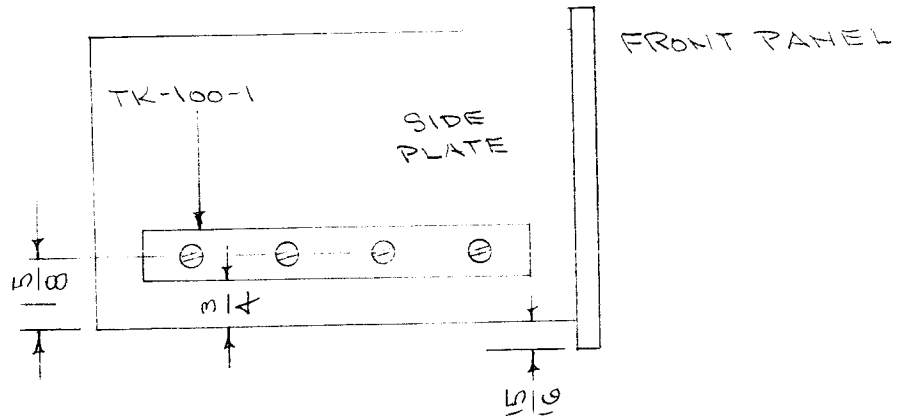
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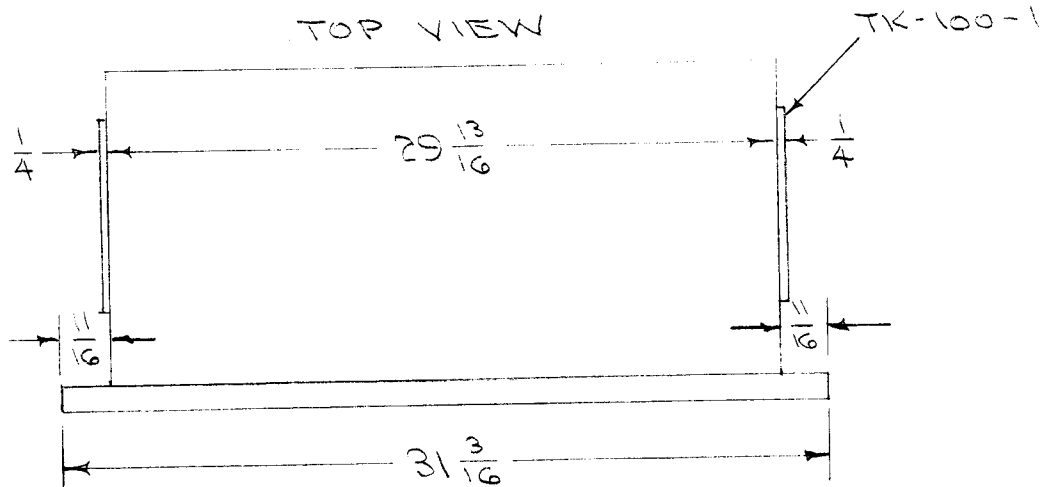
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FRONT PANEL SPACING

LOCATION - RTF, RTM, RTP AND A-959



SIDE VIEW



TOP VIEW

① CHECK PLACEMENT OF TK-100-1 TO DIMENSIONS ABOVE. MINOR ADJUSTMENT MAY BE NECESSARY.

② FOR 1/16 DIM.

GAUGE - BAR STOCK CUT TO 1/16, OR
MACHINISTS SQUARE SET TO 1/16

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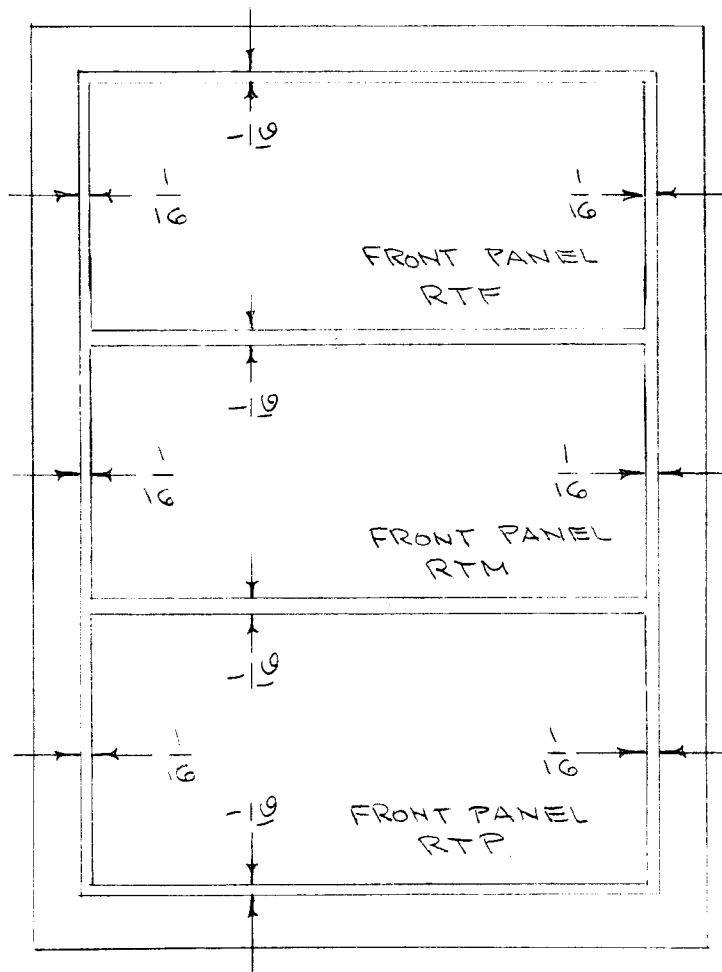
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FRONT PANEL PLACEMENT.

LOCATION - FINAL ASSY. CAB/FRAME 3 UNITS.

PANELS MUST BE IN PLACE AS BELOW.



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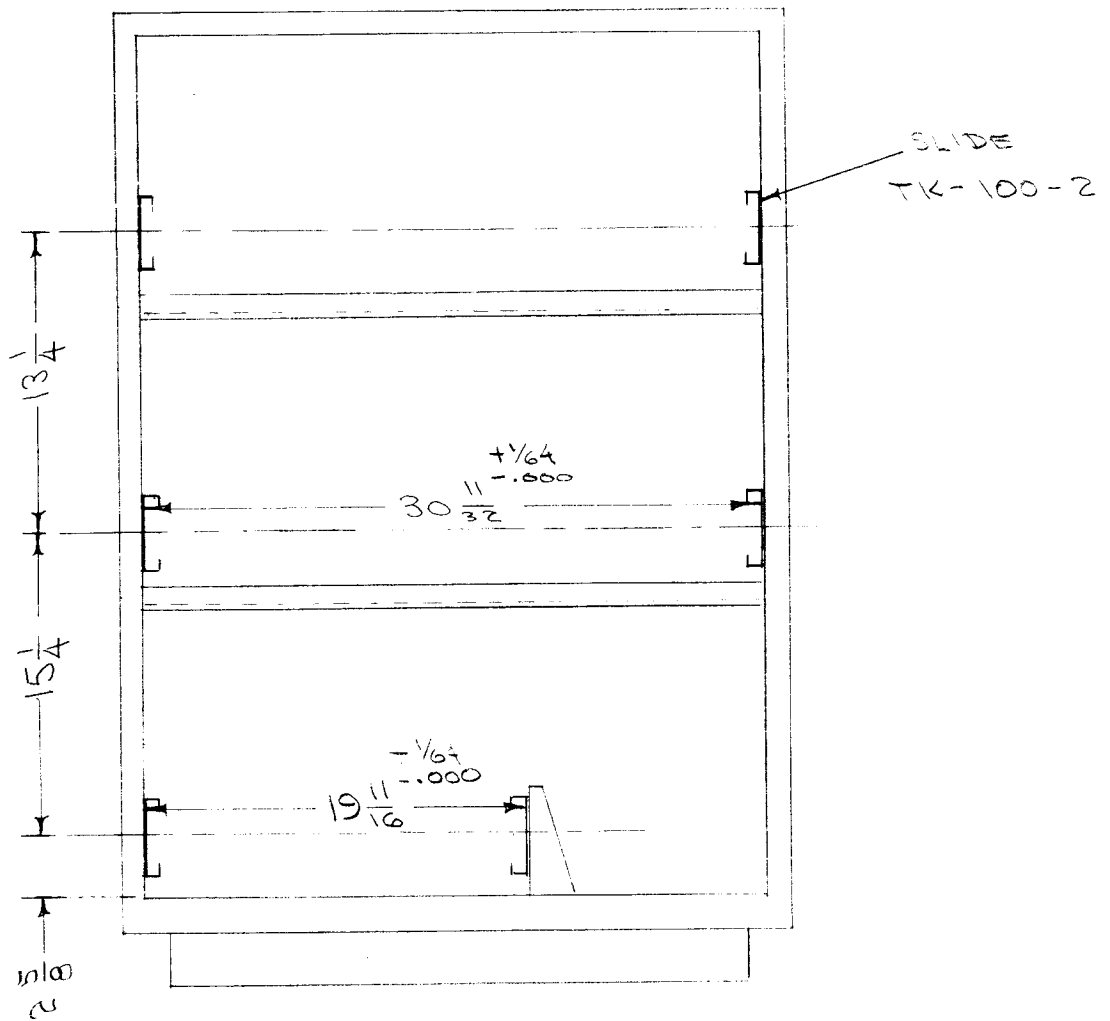
TITLE: MECHANICAL DATA -- GPT-750 JOB

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SLIDE LOCATION

LOCATION - CAB/FRAME

SLIDES MUST BE AS BELOW TO INSURE
PROPER FIT OF FRONT PANELS.
(SEE NEXT PAGE FOR SUGGESTED JIG.)



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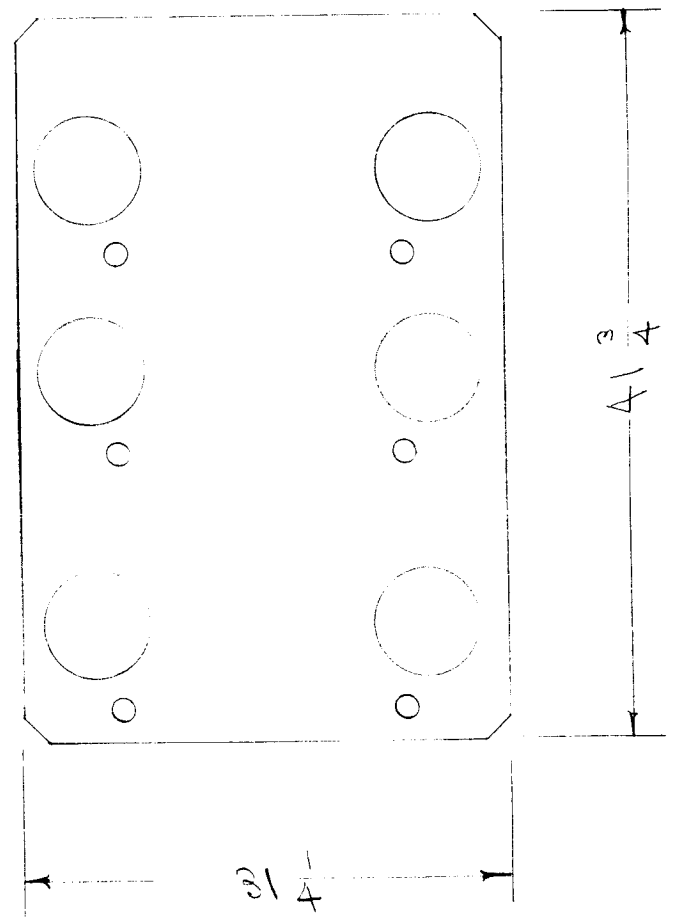
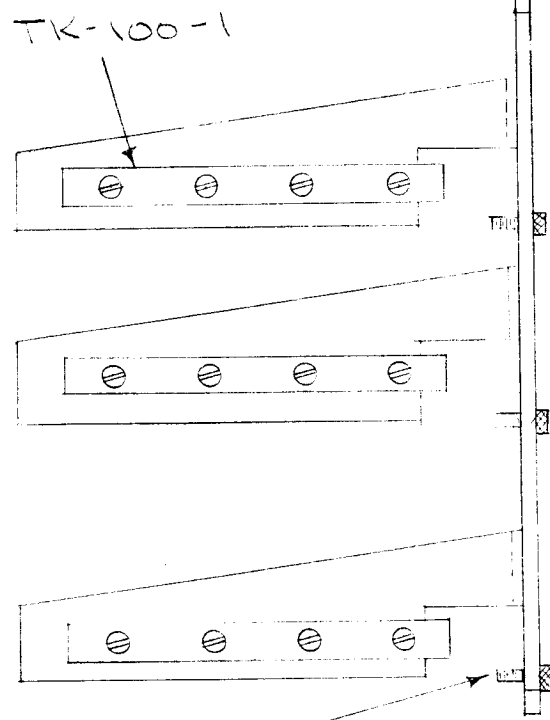
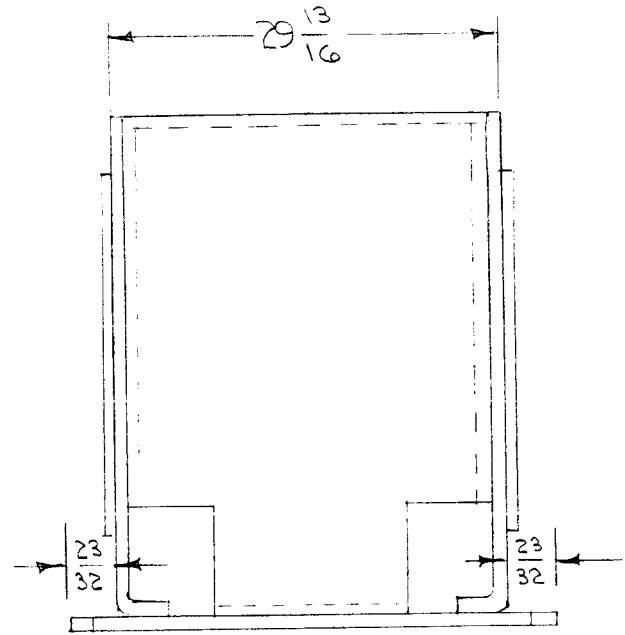
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SUGGESTED JIG
FOR PROPER
ALIGNMENT OF
SLIDES

REF. DRAWINGS
A-1159
A-1099



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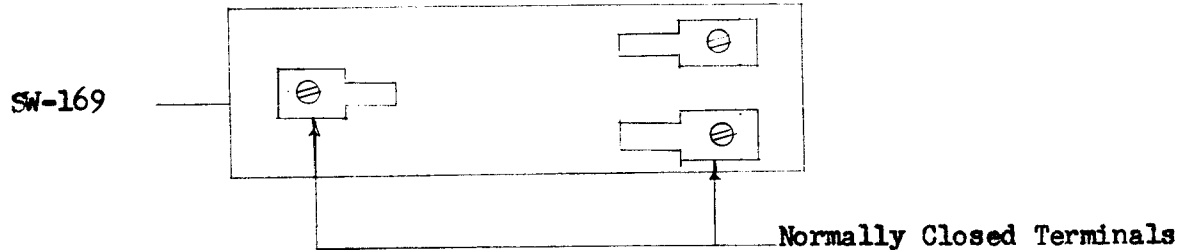
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SW-169 Switch Adjustment

Location: RTF Power Amplifier Front Plate

- (1) Place ohmmeter across the normally closed terminals of switch SW-169.



- (2) Turn PA Band Switch very slowly in either direction to be sure the safety switch SW-169 will open before the feelers of switches SW-165 and SW-166 leave their pins. After the above has happened, return the PA Band Switch slowly to its previous position, observing that the feelers must contact their respective pins before SW-169 closes.

NOTE: This adjustment can also be done without an ohmmeter, by listening to SW-169 click when it opens and closes.

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SPECIAL NOTES

- (1) SET SCREWS-- They must be secure and staked with glyptal.
- (2) SOLDER CONNECTIONS-- They must be wrapped around once before solder is applied.
- (3) COPPER STRAPS-- Use Flat washer as well as lock washer wh r v r twisting causes alignment difficulties.
- (4) INSULATION (SLEEVING)-- It must be kept as close to solder connection as is practical.
- (5) SILVER PLATED STRAPS-- These straps must be free of tool marks and nicks.
- (6) SCREWS-- Screws must be at least two (2) threads beyond top surface of nut.

DO NOT USE burred screws or damaged nuts.

- (7) "Lubriplate" Lubrication -- Apply a thin coat of "Lubriplat " grease to the following locations.
 - (a) Bottom of RFF tray where ground strap makes contact.
 - (b) Between RTF tray and bottom and the end of the ground strap that moves.
 - (c) RF wipers and **buttons** on inside of Cabinet/Frame.
- (8) Apply "Molycote" grease on inner slide of TK-100-2.

