

ECC 85

ECH81

EF 89

EABC 80

EBC 91

2\*EL 84

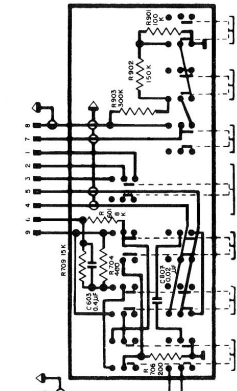
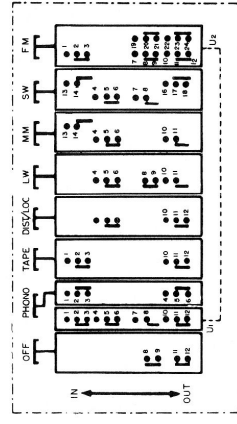
2\*EM 85

**FLEETWOOD GRUNDIG  
CHASSIS MODEL 835W**

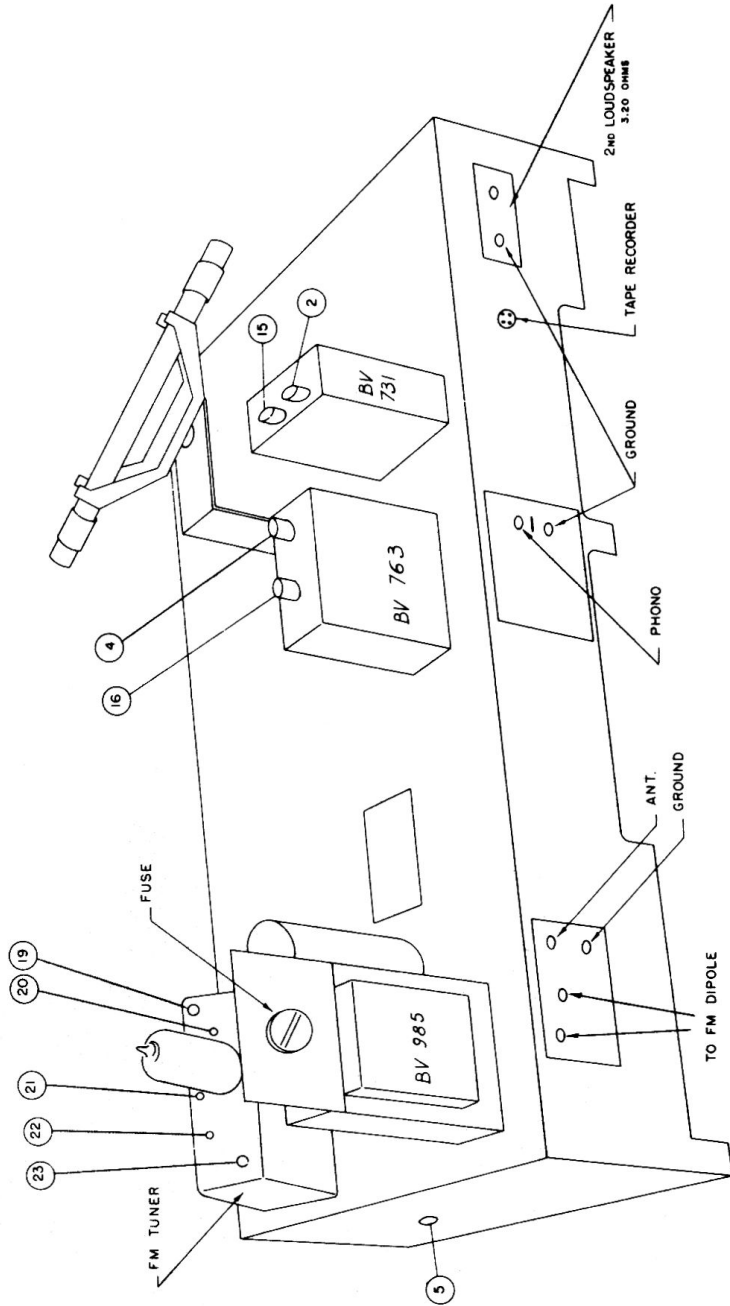
117V AC - 60 CY ONLY

TO MEASURE:

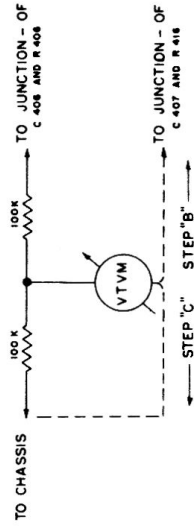
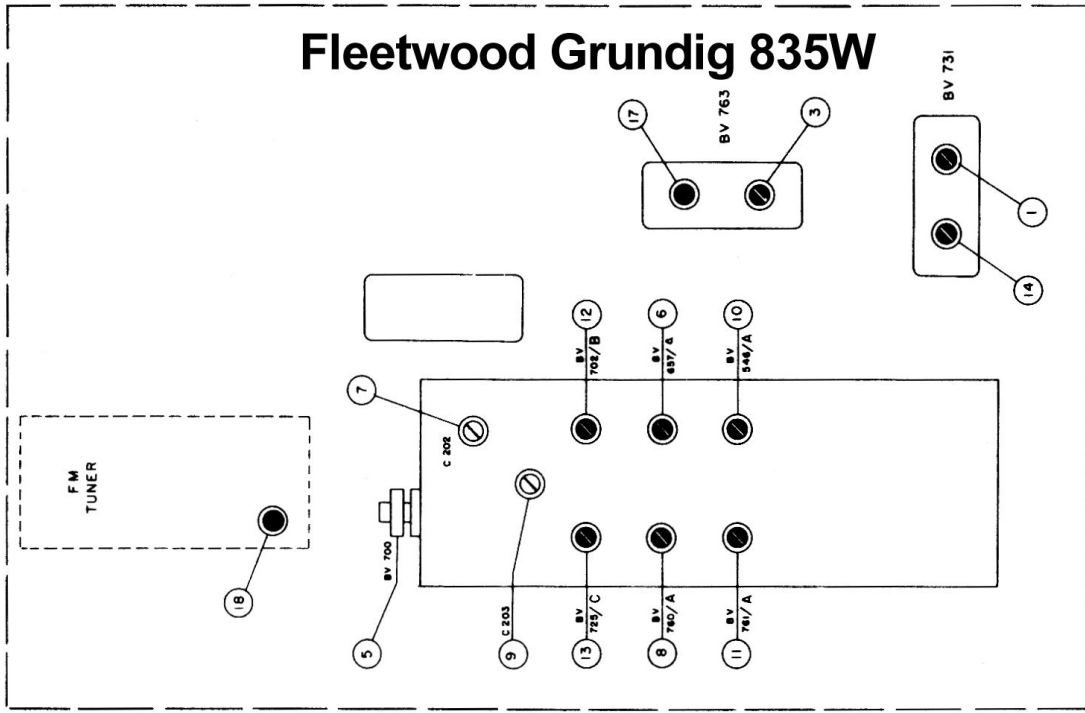
- VOLTAGES - USE VTVM.
- CURRENTS - INSTRUMENT WITH 1000Ω INTERNAL IMPEDANCE.
- ALL MEASUREMENTS DONE IN FM POSITION.
- DRAWN SWITCH POSITION "OFF".



TOP VIEW



BOTTOM VIEW



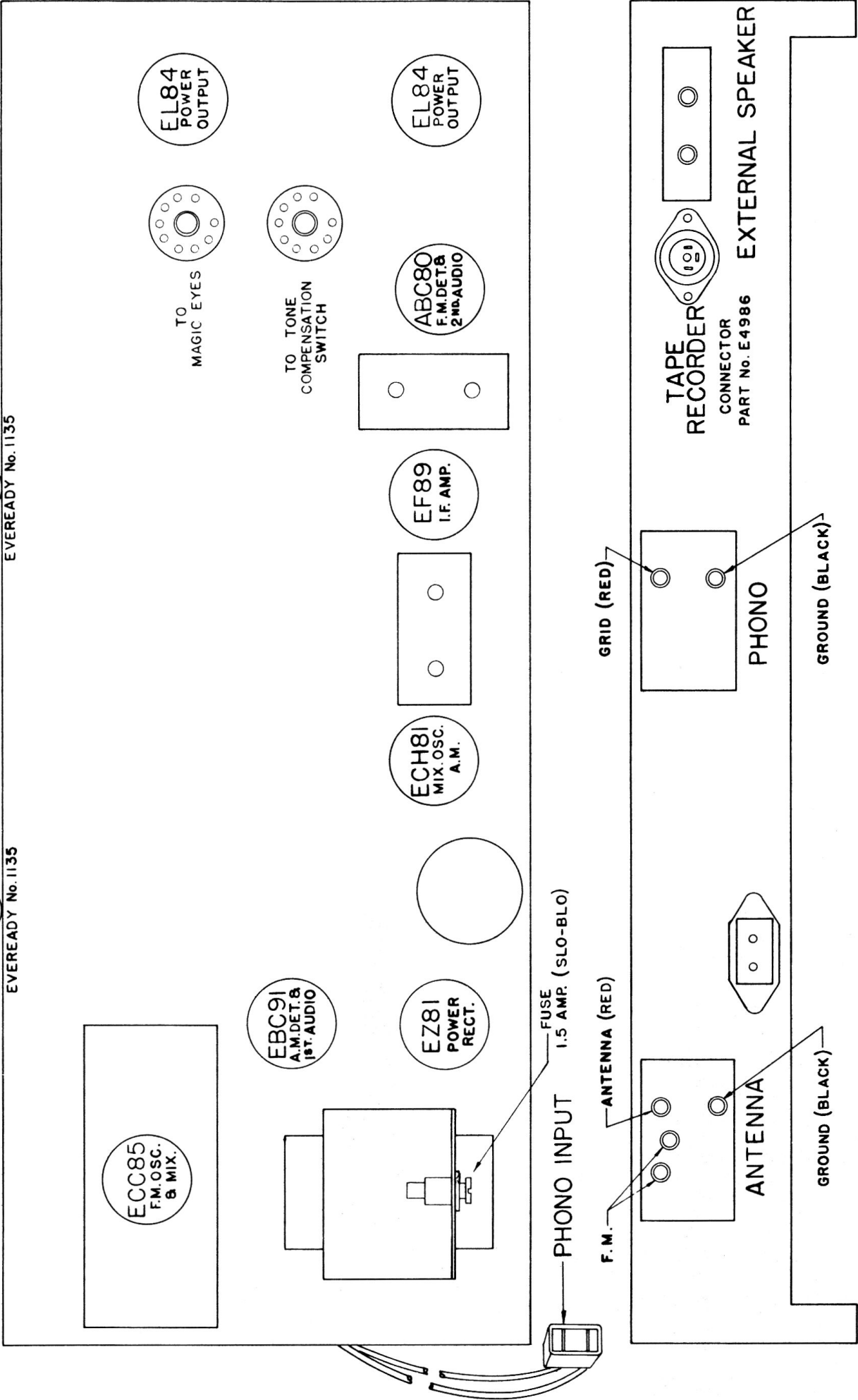
Alignment Chart No. 2 Fig. 2

JEWEL INDICATOR  
MAZDA No. 47

PILOT LAMP

PILOT LAMP

EM85 MAGIC EYE  
EM85 MAGIC EYE



Tube Layout Fig. 3

## ALIGNMENT

Preliminary procedure:

1. Connect receiver to 117V. 60 Cy. line.
2. Set the AM (Broadcast Band) to a small marker on the right hand side of AM scale after closing gang condenser.
3. Set the FM band pointer to a small marker on the right hand side of FM scale.
4. Set the volume control to maximum, Bass and Treble controls to maximum boost. Depress tone compensation push-button marked ORCHESTRA. Set sensitivity switch to FRINGE RECEPTION position.
5. Connect output indicator to external loudspeaker terminals located at rear of chassis. Caution: In case the loudspeakers were disconnected, terminate the output with a wire-wound 3.2 ohm /10 watt resistor.
6. Connect return of signal generator to ground terminal located below AM antenna terminal.
7. Disconnect built-in FM antenna.

### AM- IF ALIGNMENT

As a rule the realignment of IF transformers should be avoided. In case where it is necessary to realign the IF transformers, proceed as follows:

Tune slugs in following sequence: 1-2-3-4 for maximum output (see alignment chart).

### FM- IF ALIGNMENT

Feed 10.7 MC unmodulated signal. Detune discriminator by turning slug # 14 out (approximately 3 turns) and tune slugs # 15, 16, 17, 18, 19 in BV 731 and in FM tuner.

Tune Ratio Detector slug # 14 to "Zero" indication.

### FM TUNER ALIGNMENT

Set FM pointer to small right hand side marker on the FM scale (see of this setting coincides with FM tuner mechanical position.)

Tune receiver to 94 MC.

Feed 94 MC signal, unmodulated (see chart).

Connect VTVM parallel to electrolytic condenser, C 406. Adjust trimmers C 20 and C 21 and C 23 for maximum output.

Following this, adjust C 21 and C22 as follows: Adjust C 22 while disconnecting B<sub>+</sub> from R 191 for minimum and C 21 for maximum with B<sub>+</sub> reconnected. Repeat those two steps till no improvement is obtained.

Note: Keep signal generator output at minimum.

# Fleetwood Grundig 835W Alignment

|    | Signal Gen. Connection                                  | Modulation   | Band Selec for | Set         |          | Detune | Tune   | Position                       | Tune For | See Instr. Below |                |        |             |        |         |        |         |        |         |        |         |        |
|----|---|--------------|----------------|-------------|----------|--------|--|--------------------------------|----------|------------------|----------------|--------|-------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|
|    |   |              |                | Signal Gen. | Receiver |        |  |                                |          |                  |                |        |             |        |         |        |         |        |         |        |         |        |
| AM | Trough .005 $\mu$ Fd to grid # 1 ECH 81 tube            | 30% AM       | AM             | 472KC       | 1,000 KC | -      | Slug # 1 in BC 731<br>Slug # 2 in BV 731<br>Slug # 1 in BV 763<br>Slug # 2 in BV 763 | Bottom<br>Top<br>Bottom<br>Top | Maximum  | "A"              |                |        |             |        |         |        |         |        |         |        |         |        |
|    |   |              |                | 472KC       | 520 KC   | -      | Slug # 5 in BV 700   | Side                           | Minimum  |                  |                |        |             |        |         |        |         |        |         |        |         |        |
|    | Trough Dummy Ant. to Antena & Ground terminal (AM Ant.) | 30% AM       | AM             | 520KC       | 520 KC   | -      | Slug # 6 in BV 657   | Bottom                         | Maximum  |                  |                |        |             |        |         |        |         |        |         |        |         |        |
|    |   |              |                | 1600KC      | 1600 KC  | -      | Trimmer 7 (C208)   | Bottom                         |          |                  |                |        |             |        |         |        |         |        |         |        |         |        |
| FM | Trough capacitive coupling to ECC 85 tube               | Unmodulated. | FM             | 10.7 MC     | 100 MC   | -      | Slug # 8 in BV 760<br>Trimmer # 9 (C203)   | Top<br>Bottom                  | Maximum  | "C"              |                |        |             |        |         |        |         |        |         |        |         |        |
|    |   |              |                | 150KC       | 150 KC   | -      | Slug # 10 in BV 596  | Bottom                         |          |                  |                |        |             |        |         |        |         |        |         |        |         |        |
|    | To FM ant. terminals 300 $\Omega$                       | Unmodulated  | FM             | 94 MC       | 94 MC    | Repeat | SW-Band-spread to "0" position   | Slug # 1 in BV 761             | Top      |                  | "Zero" reading |        |             |        |         |        |         |        |         |        |         |        |
|    |   |              |                |             |          |        | 6 MC   | 6 MC                           | in BV731 |                  | Slug # 14      | Bottom | 3 Turns out |        |         |        |         |        |         |        |         |        |
|    |   |              |                |             |          |        |  | 10.7 MC                        | 100 MC   |                  | 10.7 MC        | 100 MC | 10.7 MC     | 100 MC | 10.7 MC | 100 MC | 10.7 MC | 100 MC | 10.7 MC | 100 MC | 10.7 MC | 100 MC |

Alignment Chart No. 1 Fig. 1

## INSTRUCTIONS

"A" - AC-DC voltmeter, 1.5 V scale connected to External Loudspeaker terminals. On FM band switch off Ferrite loop antenna.  
 "B" - Connect VTVM (or 20,000  $\Omega$ /V VM) to centre junction of 2 x 100 K $\Omega$  Resistors. ( See Diagram)  
 "C" - Connect VTVM to R 407 (40K)  
 "D" - Same as "C". Only disconnect BT from R 191. Increase Sig. gen. output.

| PART NO.   | DESCRIPTION                    | EUROPEAN TUBE | AMERICAN EQUIVALENT        |
|------------|--------------------------------|---------------|----------------------------|
| 4-2491     | FM Tuner                       | R1            | Control, volume 1.3 megohm |
| 5-4444 OKW | Drum, FM Tuner                 | R2            | Control, Treble 500K ohm   |
| L-835-1    | Band Switch Assy.              | R3            | Control, Bass 2 megohm     |
| S-835-1    | Keyboard Switch Assy.          |               |                            |
| BV 763     | 1st I.F. Transformer (AM & FM) |               | ROGERS or PHILLIPS         |
| BV 731     | 2nd I.F. Transformer (AM & FM) |               |                            |
| L-835-2    | Antenna, Ferrite               |               |                            |
| BV 1022    | Transformer, Power             |               |                            |
| BV 1013    | Transformer, Audio Output      |               |                            |
| BV 1014    | Choke, Audio                   |               |                            |
| 5-5164 OKW | Fuse, 1.5 AMP 125V Slow-Blo    |               |                            |
|            | Drum, AM Tuning                |               |                            |