

SECTION I GENERAL INFORMATION

1-1. INTRODUCTION

1-2. This Operating and Service manual contains information required to install, operate, test, adjust, and service the Hewlett-Packard Models 86230A, 86230B, and 86241A RF Plug-ins. (See Figure 1-1.) Throughout this manual, information about the plug-ins that is different will be either noted or separated by a slanted line (/). For example, 10 Vdc/12 Vdc indicates 10 Vdc for the 86230 and 12 Vdc for 86241.

1-3. This section covers instrument identification, description, options, accessories, specifications, and other basic information.

1-4. On the title page of this manual, below the manual part number, is a "Microfiche" part number. This number may be used to order 4 x 6-inch microfiche transparencies of the manual. Each microfiche contains up to 60 photo-duplicates of the manual pages. The microfiche package also includes the latest Manual Changes supplement as well as all pertinent Service Notes.

1-5. Instrument specifications are listed in Table 1-1. These specifications are the performance standards, or limits, against which the instrument may be tested. Table 1-2 lists supplemental characteristics. Supplemental characteristics are not specifications, but are typical characteristics included as additional information for the user.

1-6. INSTRUMENTS COVERED BY MANUAL

1-7. Each instrument has a two-part serial number. The first four digits and the letter comprise the serial number prefix. The last five digits form the sequential suffix that is unique to each instrument. The contents of this manual apply directly to instruments having the same serial number prefix as listed under SERIAL NUMBERS on the title page.

1-8. An instrument manufactured after the printing of this manual may have a serial prefix that is not listed on the title page. This unlisted serial prefix indicates that the instrument is different from those documented in this manual. The

manual for this instrument is supplied with a yellow Manual Changes supplement that contains "change information", that documents the differences.

1-9. In addition to change information, the supplement may contain information for correcting errors in the manual. To keep this manual as current and accurate as possible, Hewlett-Packard recommends that you periodically request the latest Manual Changes supplement. The supplement for this manual is keyed to this manual's print date and part number, both of which appear on the title page. Complimentary copies of the supplement are available from Hewlett-Packard.

1-10. For information concerning a serial number prefix not listed on the title page or in the Manual Changes supplement, contact your nearest Hewlett-Packard office.

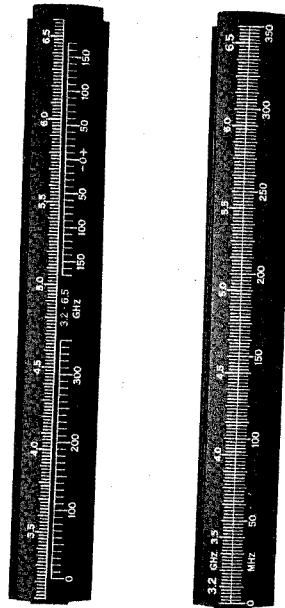
1-11. DESCRIPTION

1-12. The 86230A and 86241A are plug-ins for the HP Model 8620A or 8620B Sweep Oscillator mainframe. The plug-ins consist of a fundamental oscillator in their respective RF ranges and the associated drive circuitry for tuning. Refer to Table 1-2 and Table 1-3 for complete plug-in specifications and characteristics.

1-13. The RF output of the instrument is controlled by the front panel POWER LEVEL control. Power can be leveled, externally or internally, across the band using a conventional power sampling and feedback technique. The automatic level control (ALC) switch selects the mode of leveling either external (EXT), internal (INT), or (OFF). A front panel ALC input connector and gain control are provided to use with an external leveling loop. When the UNLEVELED light is on it indicates that the RF power is not level across the band. BNC connectors on the rear panel allow for external FM signal inputs and a sweep reference voltage output.

1-14. OPTIONS

1-15. Option 001 provides the capability of operating in the internal power leveling mode by adding



NOTE: See ACCESSORIES SUPPLIED in Section I for part number information. Model 86241A and scales are shown, however, Model 86230A and 86230B are similar in appearance with the exception of frequency range of scales.

Figure 1-1. RF Plug-in and Accessories Supplied

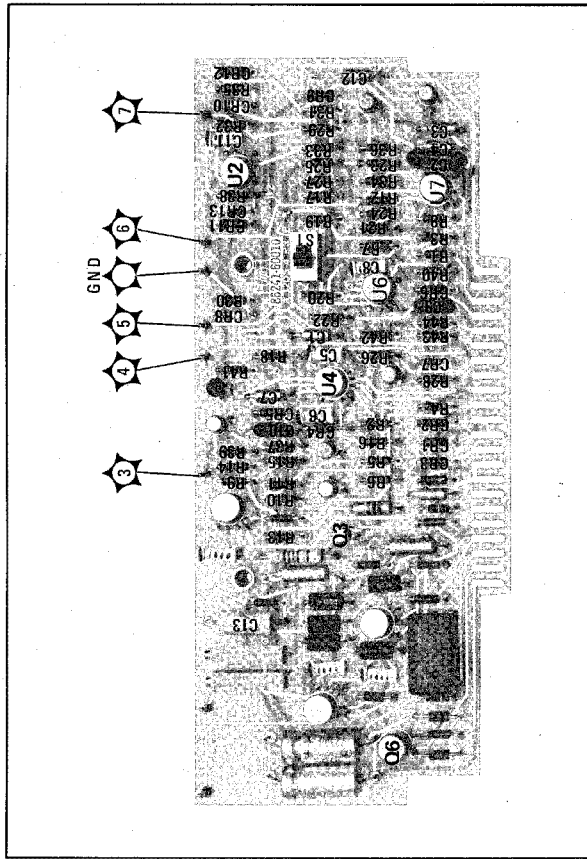
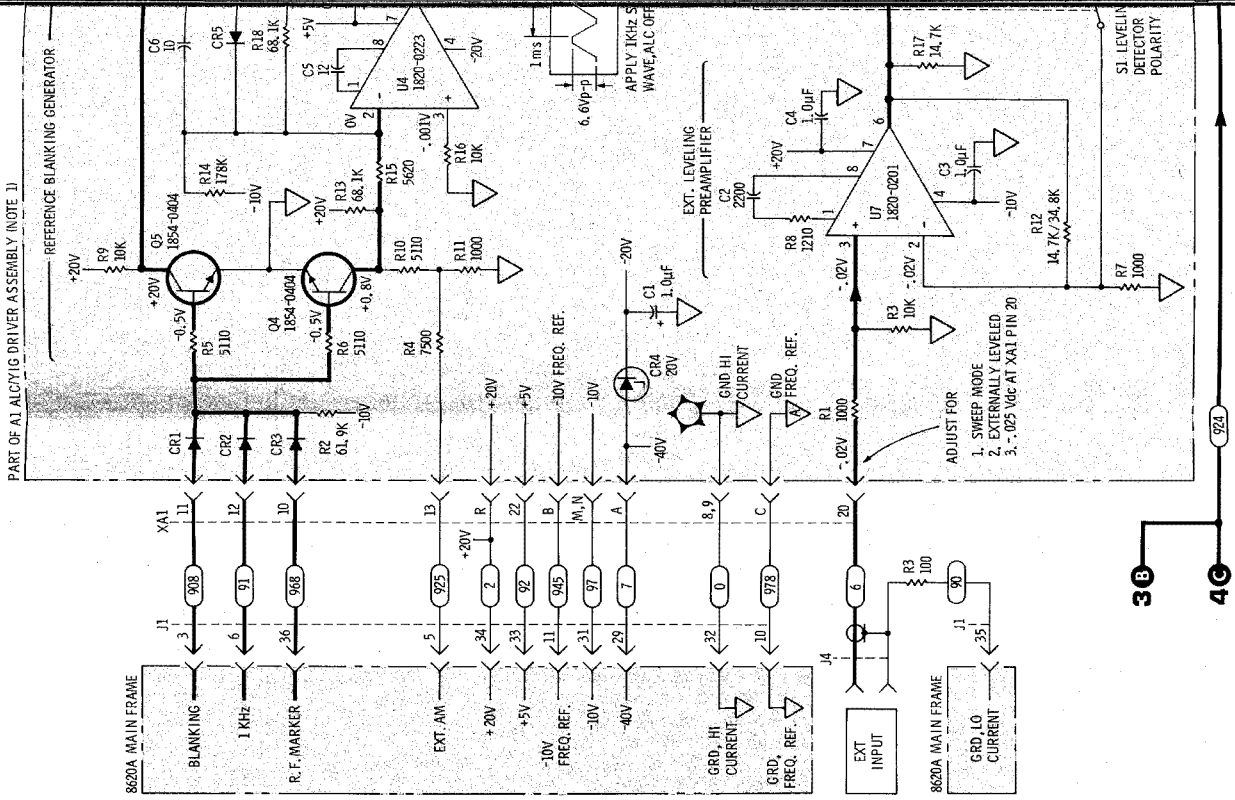
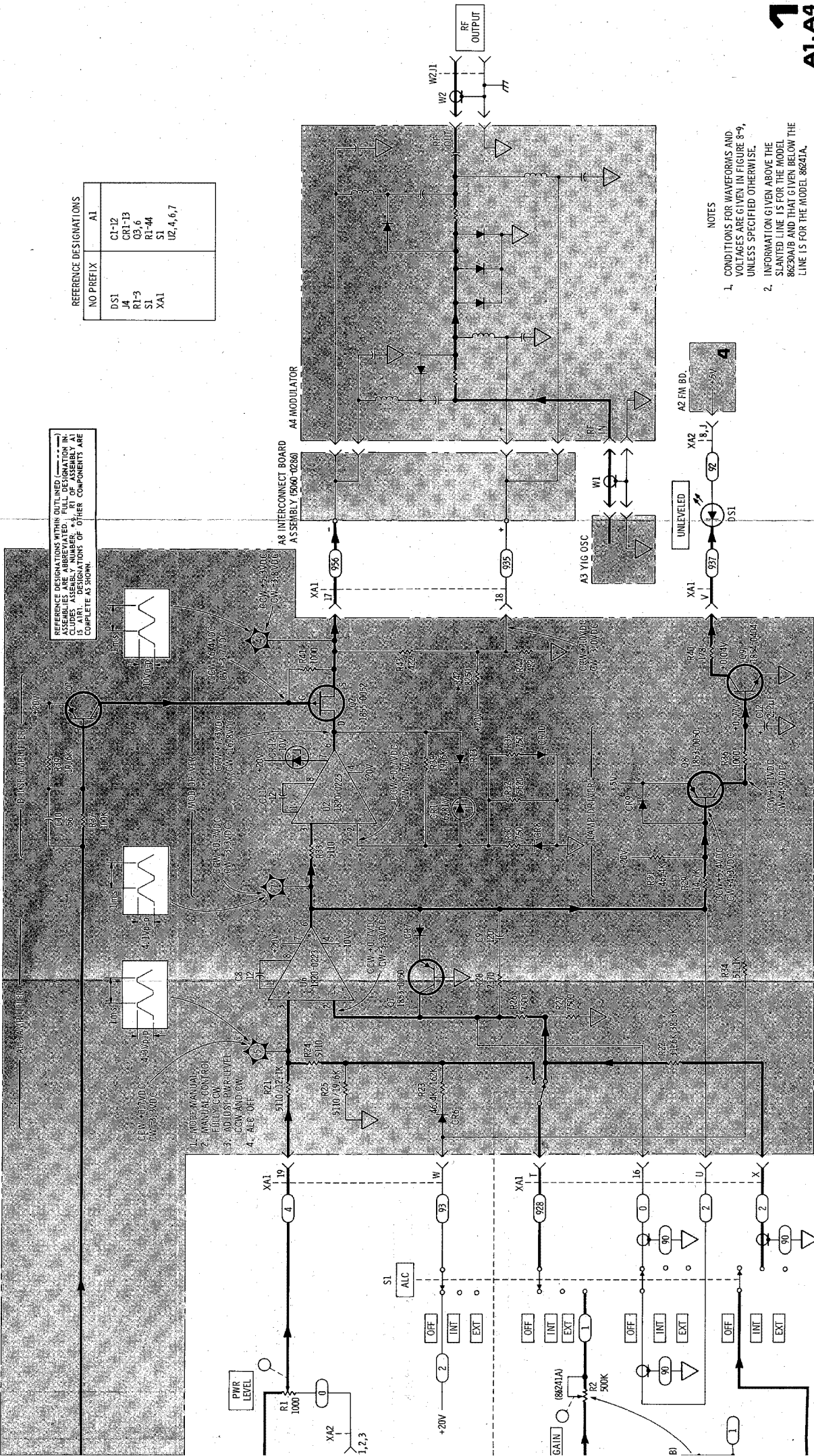


Figure 8-22. Location of Test Points and Parts on Service Sheet 1 of A1 ALC/YIG Driver Assembly



REFERENCE DESIGNATIONS	
NO PREFIX	A1
DS1	CI-12
JA	CR1-19
R1-3	CS 6
SI	R1-44
XA1	S1
	U2, 4, 6, 7

REFERENCE DESIGNATIONS WITHIN OULINED COMPONENTS ARE FOR THE MODEL 86230A/B. REFERENCE DESIGNATIONS WITHIN UNOULINED COMPONENTS ARE FOR THE MODEL 86241A. DESIGNATIONS OF OTHER COMPONENTS ARE COMPLETE AS SHOWN.



- NOTES
1. CONDITIONS FOR WAVEFORMS AND VOLTAGES ARE GIVEN IN FIGURE 8-9, UNLESS SPECIFIED OTHERWISE.
 2. INFORMATION GIVEN ABOVE THE SLANTED LINE IS FOR THE MODEL 86230A/B AND THAT GIVEN BELOW THE LINE IS FOR THE MODEL 86241A.

A1, A4

Figure 8-23. A1 ALC/YIG Driver Assy, Schematic, Part 1