

JEFFERSON-TRAVIS

RADIO MFG. CORPORATION

INSTRUCTION MANUAL

FOR

JEFFERSON-TRAVIS

ULTRA-HIGH FREQUENCY TRANSCEIVER

MODEL

UF-1

RESTRICTED

MODEL UF - 1
ULTRA-HIGH
FREQUENCY TRANSCEIVER

Manufactured by

JEFFERSON-TRAVIS

RADIO MFG. CORPORATION

New York, U. S. A.

INDEX

I	Purpose	Page 1
II	Description	Page 1
	A. Equipment and Accessories	Page 1
	B. Major Units	Page 1
III	Installation	Page 6
	A. Battery Operation	Page 6
	B. Vibrapack Operation	Page 6
IV	Operation	Page 7
V	Service and Maintenance	Page 9
	A. General	Page 9
	B. Replacements	Page 10
	C. Typical Voltages	Page 11
	D. Typical Vibrapack Voltages and Currents	Page 12
	E. Tube Characteristics	Page 12
	F. Adjustments and Location of Miscellaneous Faults	Page 14
VI	List of Drawings	
	Transceiver schematic wiring diagram	Page 19
	Vibrapack schematic and parts list	Page 21
	Vibrapack cable connections	Page 23
	Handset and jack connections	Page 25
	Pin arrangement of vacuum tube sockets and transformer lead code	Page 27
	Battery installation	Page 29
	Front view	Page 31
VII	Photographs	
	Top view	Page 33
	Bottom view	Page 35

INSTRUCTION BOOK
JEFFERSON - TRAVIS
MODEL UF-1

I. PURPOSE

The purpose of the Model UF-1 is to provide a lightweight, portable Two-Way Radio capable of transmission and reception at frequencies from 60 to 75 megacycles.

II. DESCRIPTION

A. The equipment consists of the following major items:

1. UF-1 Transceiver.
2. Telephone Handset and Plug.
3. Whip Antenna.
4. Canvas Carrying Case.
5. Wood Transit Case.
6. Vibrapack Power Supply.
7. Batteries.
8. Tubes.

B. Major Units

1. UF-1 Transceiver

The Model UF-1 transceiver consists of a cadmium plated steel chassis and a chrome plated steel panel mounted in a cabinet 11" high, 8" wide and 6" deep. The cabinet is finished in black crystalline lacquer. Space is provided not only for the transceiver, but also for all necessary batteries. The weight of the UF-1 transceiver, fully equipped for battery operation, is approximately 17 pounds exclusive of the wood transit case. The transceiver can be removed from the cabinet by unscrewing the rear and front panels. Installation of tubes and batteries are made by unscrewing the rear cover. Inspection of

the schematic wiring diagram Drawing No. 2062A will show that the transceiver, when used to transmit, employs the following circuit arrangement: one type 1G6-GT/G vacuum tube as a push-pull U.H.F. oscillator. one type 3Q5-GT as a microphone amplifier and driver, and one 1G6-GT/G as a class B push-pull modulator.

When the transceiver is used for reception, the 1G6-GT/G oscillator is switched to become a super regenerative detector. Likewise, the 3Q5-GT is switched for use as a first audio amplifier, and the 1G6-GT/G modulator becomes the output audio amplifier. The Send-Receive Switch SW-2 performs the switching functions. All tubes are of the low drain type and have 1.4 volt filaments.

Attention should be drawn to certain features of the various components. For instance, the transformers are vacuum impregnated with a high melting point wax and will stand a 15 minute immersion test in fresh water at a temperature of 150° F. and then immediate application of 400 volts D. C. between all windings, and also all windings and core. Likewise, the wiring used is of the flame-resistant type.

Drawing 2062A, Issue C, the schematic wiring diagram of the UF-1, is contained at the end of this Instruction Book. The same drawing in reduced size is fastened to the inside of the back cover of the transceiver.

2. Telephone Handset

The handset is a durable, standard telephone type, having a magnetic telephone receiver, and a single button carbon microphone. The receiver impedance is 2000 ohms at 1000 cycles and the microphone resistance is approximately 60 to 100 ohms.

A three conductor cord and plug provide means for connecting the handset to the UF-1 by plugging it into the jack on the upper left-

hand side near the rear of the cabinet. Drawing No. 2090A shows the plug and jack wiring arrangement.

3. Whip Antenna

A nickel plated brass whip antenna is provided, and when not in use is contained in the small pocket at the side of the canvas carrying case. The whip fastens to the two ceramic posts designated by the word ANTENNA on the UF-1 cabinet. Clips and wing nuts permit ready installation. Antenna lengths for each dial setting are given on the tuning chart contained in the transparent holder on the canvas case. The antenna length is approximately 12" collapsed and 48" fully extended.

It should be noted that the upper antenna post on the UF-1 cabinet is provided for support only, and is not electrically connected. The lower antenna post is connected to the antenna coupling coil in the UF-1 transceiver.

4. Canvas Carrying Case

A water-resistant canvas carrying case is provided for carrying the equipment in the field. It has a heavily padded bottom, and the bottom corners are reinforced with leather. The front flap and the various pocket flaps are equipped with snap fasteners. The equipment should be operated in the canvas case, and it is merely necessary to unfasten the front flap to manipulate the controls. If the front flap is folded under the equipment, the tuning chart contained in the transparent card holder will come into a convenient position below the front panel.

Three pockets are provided. The large pocket at the left-hand side is for the telephone handset. Its inside wall is slotted to give access to the jack into which the handset is plugged.

The long pocket of very small diameter at the right rear of the case is for the whip antenna.

The pocket at the back is for the vibrapack cable.

5. Wood Transit Case

The transit case is made of phenolic resin bonded plywood. The case is fitted with felt lined guides to retain the transceiver in position. The design of the case is such as to permit ready stacking of units on top of each other.

6. Vibrapack Power Supply

The vibrapack unit consists of a metal case in which is contained a 12 volt vibrator unit and transformer with R.F. hash filters, smoothing filters, and the necessary dropping resistors. Drawing No. 2009A shows the schematic circuit diagram.

The vibrapack transformer is fitted with an additional magnetic shield within the case and a heavy outside magnetic shield is fastened to the top of the case.

Four drilled and tapped holes in the bottom of the vibrapack unit correspond to the four clearance holes in the bottom of the UF-1 transceiver and are for the purpose of fastening the vibrapack in place. The No. 6 screws required are supplied in the envelope stamped "Hardware."

Electrical connection to the UF-1 chassis is made by means of plugs and screw terminals. See Drawing No. 2011A. These are the same plugs that are used to connect the batteries when battery operation is employed. A red dot on the central B socket indicates that it is to receive the plug connected to the red wire. Accidental reversal of B plugs will not cause damage, but will render the equipment inoperative. The black wire connected to ground on

the UF-1 chassis must be screwed to the vibra-pack case. On battery operation the black lead is connected to the negative C terminal of the bias battery together with the green C lead.

Note: A piece of horn fibre is supplied with each unit and is used to prevent a short circuit between the vibrapack terminals and the UF-1 rear cover. This paper must be placed in position between the terminals and the cover when using vibrapack operation or damage will result.

The storage battery cable wires are the equivalent of No. 12 B & S gauge and are covered with a tinned braid. The red wire is the positive 12 volt lead and the black wire is negative 12 volts. Clips are provided for ready connection.

A "reduced" schematic diagram is contained within the cover of the vibrapack.

7. Batteries

The batteries required to place the equipment in operation are:

- 2 - Eveready #762 B Batteries
- 1 - Eveready #741 A Battery
- 1 - Burgess 5540 Microphone and
C Battery

UF-1 units purchased for domestic use are shipped with the batteries installed. Export equipments may have the batteries installed or the batteries may be shipped separately. The number of batteries and spare batteries supplied depends on the contractual requirements. The batteries are held in the UF-1 case by means of wooden chocks.

8. Tubes

The UF-1 is usually shipped with one set of tubes installed. Spare tubes are usually

shipped in bulk.

III. INSTALLATION

A. BATTERY OPERATION

While the Model UF-1 is usually shipped with tubes installed, the batteries may have been shipped separately. For instructions as to the method of battery installation, see Section V, "Service and Maintenance", Par. B. To place the equipment in operation, remove the UF-1 from the wooden transit case. Unfasten the front flap on the canvas carrying case and fold it under the unit. Unfasten the left side pocket and remove the telephone handset. Make certain that the handset is plugged into the jack. Extend the handset cord to its fullest length. Remove the telescopic whip from its pocket and fasten it in place by means of the wing nuts on the two ceramic posts identified by ANTENNA on the cabinet. This is illustrated in Drawing No. 2093A. The bottom end of the telescopic whip antenna should just coincide with the bottom edge of the clip on the lower antenna post. The length of antenna to be used for each frequency and dial setting is given on the tuning chart fastened to the cover of the canvas case.

When extending the antenna, always extend the top section first and then each successive section. This method was used during calibration at the Factory. Improper adjustment will be obtained if the same procedure is not followed by the operator.

B. Vibrapack Installation - For 12 Volt Operation Only

When it is desired to use the vibrator power supply, remove the back cover from the Model UF-1 transceiver and remove all batteries. Place the vibrapack unit in the position formerly occupied by the batteries and fasten it in place by means of the 4 screws supplied. The screws should pass through the holes in the

bottom of the UF-1 transceiver case and screw in to the tapped holes in the bottom of the vibrapack unit.

Plug in the "A" and "B" battery cable plugs as shown in Drawing #2011A. Make the connections exactly as shown. Check carefully before connecting the battery cable to the storage battery; otherwise damage may result. Be sure the black wire which connects to C- on battery operation is screwed to the vibrapack case.

The battery cable is intended to pass through the slot in the bottom of the UF-1 transceiver back cover. However, before replacing the back cover, place the piece of horn fibre supplied with the vibrapack between the vibrapack plug connectors and the back cover. The horn fibre is also slotted to permit passage of the battery cable.

The battery cable should be placed in the pocket provided in the canvas carrying case at the lower rear. Pass the cable through the slot in the canvas case into the canvas pocket, and then coil it up. When it is desired to operate the equipment the cable should be uncoiled and extended to its full length. Connect the red wire on the battery to 12 volts positive, and the black wire to 12 volts negative.

The "On-Off" switch on the Volume Control turns the vibrapack "on or off" just as it does on battery operation.

IV. OPERATION

To operate the transceiver successfully a suitable site must first be chosen. The ideal site is usually the highest point of ground available or the top of a structure or building. Increased height means increased range. However, the model UF-1 will also operate satisfactorily when placed directly on the ground. Placing it on a packing case, wooden bench, etc., will improve the performance. It is preferable to keep the unit 10 to 15 feet away from

lighting poles, motor cars, etc., especially if these objects intervene in the transmission path between stations. Intervening objects in the transmission path should always be avoided when possible.

In general, "line of sight" transmission is by far the best, although this does not necessarily apply to intervening foliage, shrubbery, etc. As an example, some tests have shown that excellent communication of approximately 4 miles was entirely possible with intervening trees, while transmission was impossible when the receiver was located in a gully 1 mile distant. Very often a difference of a few feet in elevation or position makes communication possible when before it was impossible. Vertical metallic structures are sometimes nearly resonant to the transmission frequency and produce "freak" results.

The following controls appear on the front panel:
See drawing #2093A

1. Tuning
2. Volume
3. Send-Receive Switch

Place the SEND-RECEIVE switch in RECEIVE position. To turn the equipment "ON", turn the VOLUME control clockwise until a snap is felt. Turn the VOLUME control to approximately 50. A hiss will be heard in the telephone handset, indicating that the receiver is super-regenerating. Rotate the TUNING dial; when a strong carrier is received, the hiss will disappear entirely. Weaker carriers will permit some of the hiss to remain. To transmit throw the SEND-RECEIVE switch to SEND and talk into the handset in a normally loud voice. The volume control at extreme distances can be advanced toward 100 but the cautions mentioned in Section V Par. F. 5 entitled "Audio Distortion" should be observed.

When several UF-1 units are intercommunicating, all stations should employ the same volume control settings for optimum performance.

It is assumed above that the antenna has been extended according to the tuning chart as described under installation.

When two UF-1 units are intercommunicating, unit #1 should be used with the tuning dial at a fixed setting, while unit #2 should transmit on one dial setting and receive on a slightly different one. For example, unit #2 calls on dial setting 50 and then stands by on dial setting 50. Unit #1 answers on whatever dial setting (very near 50) that Unit #2 was received at. Unit #2 will have to retune to receive unit #1, say, to dial setting 49. Thereafter, unit #2 will have to be set to 50 on transmit and 49 on receive, but Unit #1 never changes tuning. This is necessary because the transmitting and receiving frequencies of the Model UF-1 are slightly different for a given dial setting.

To turn the equipment off, place the SEND-RECEIVE switch in the RECEIVE position and turn the volume control counter-clockwise to zero.

THE METHOD OF OPERATION DESCRIBED ABOVE APPLIES TO BOTH BATTERY POWER SUPPLY AND VIBRAPACK POWER SUPPLY.

V. SERVICE AND MAINTENANCE

A. General

Note is made of the following drawings and photographs which are included in this Instruction Book to assist in the servicing and maintenance of the UF-1:

<u>Dwg. No.</u>	<u>Description</u>
2062A	Transceiver schematic wiring diagram.
2009A	Vibrapack schematic and parts list.
2011A	Vibrapack cable connections.
2090A	Handset and jack connections
2091A	Pin arrangement of vacuum tube sockets and transformer lead code.
2092A	Battery installation UF-1.
2093A	Front view UF-1.

- Photograph Top view of UF-1 with circuit components identified.
- Photograph Bottom view of UF-1 with circuit components identified.

B. Replacements

To install new batteries, remove the back cover by unfastening the screws appearing at the edges and the two central screws. Refer to Drawing No. 2092A entitled "Battery Installation." Remove the wooden chocks at the bottom and top of the batteries. Unplug the connectors. Disconnect the C battery. Remove the central battery first and then the two outer ones.

The following batteries are necessary for the operation of the equipment:

- 2 - Eveready #762 B Batteries.
- 1 - Eveready #741 A Battery.
- 1 - Burgess #5540 Microphone and C Battery.

After installing the batteries and plugging in the connectors to the A battery and two B batteries as shown in drawing #2092A, connect the green wire and the black wire with eyelet terminals to C- six Volts. Connect the green wire with the white tracer to C+ six Volts. Wedge the batteries in place with the wooden chocks as illustrated in the drawing.

To replace tubes, the following are needed:

- 2 - Hygrade (preferred) 1G6-GT/G
- 1 - RCA (preferred) 3Q5-GT

The tube arrangement is also shown in Drawing No. 2092A. In replacing tubes be careful not to disturb the small coupling coil at the rear of the chassis.

The central ceramic socket is the oscillator-detector tube. Select the 1G6-GT tube that provides best super-regeneration over the entire dial. Some

tubes may fail to regenerate at the low end of the dial, and this can be detected by the sudden stopping of the super-regenerative hiss.

The 3Q5-GT goes in the right-hand socket when the transceiver is viewed from the back while the other 1G6-GT goes in the socket on the left-hand side. Tubes that do not super-regenerate work very well in the audio socket just mentioned.

The coupling coil affects the super-regeneration, and its position should be determined by the maximum amplification obtainable over the entire dial. Normally, this adjustment need never be touched as it is set at the Factory and will remain correct unless the equipment is damaged.

C. Typical Voltages - UF-1 Chassis

Electrode voltages are measured at tube sockets with respect to pin #2. Meter used has a resistance of 5000 ohms per volt. Refer to Drawing No. 2091A for tube socket connections.

Battery Operation Only

Pin Nos.	3Q5-GT		1G6-GT/G Modulator, Audio Output		1G6-GT/G Oscillator-Detector	
	1st Rec.	Audio Send	Rec.	Send	Rec.	Send
1.	None	None	None	None	None	None
3.	82	80	85	83	82	80
4.	85	84	-1.8	1.5	1.2	None
5.	-7.5	3	-1.8	1.5	1.2	None
6.	None	None	85	83	82	80
7.	None	None	-1.5	-1.5	1.5	1.5
8.	-1.5	-1.5	None	None	None	None

Vibrapack Operation Only

Pin Nos.	3Q5-GT		1G6-GT/G Modulator, Audio Output		1G6-GT/G Oscillator-Detector	
	1st Rec.	Audio Send	Rec.	Send	Rec.	Send
1.	None	None	None	None	None	None
3.	113	100	120	108	110	120
4.	122	105	-1.5	-1.5	2	None
5.	-.25	-.25	-1.5	-1.5	2	None
6.	None	None	122	108	110	120
7.	None	None	1.5	1.5	1.5	1.5
8.	1.5	1.5	None	None	None	None

D. Typical Vibrapack Voltages and Currents

	<u>Receive Position</u>	<u>Send Position</u>
Battery Voltage	12.2 volts	12.2 volts
Battery Current	1.2 amps.	1.6 amps.
Fil. Voltage	1.5 volts	1.5 volts
Fil. Current	300 M.A.	290 M.A.
"B" Voltage	120 volts	96 volts
"B" Current	40 M.A.	65 M.A.
Bias Voltage	6.4 volts	6.5 volts

The above measurements were made with the tuning dial set at 50 and the microphone and antenna disconnected.

E. Tube Characteristics

1G6-GT/G Characteristics

Filament Voltage (D.C.)	1.4	Volts
Filament Current	0.1	Ampere

As Class B. Amplifier

Plate Voltage	110 max. Volts
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Peak Plate Current (Per Plate) 20 max. M.A.

Typical Operation: (Unless otherwise specified, values are for both units.)

Plate-Supply Impedance	0	0	Ohms
Effective Grid-Circuit Impedance (Per Unit)	0	2530	Ohms
Plate Voltage	90	90	Volts
D-C Grid Voltage	0	0	Volts
Peak A-F Grid-to-Grid Vol.	42	48	Volts
Zero-Signal D-C Plate Current	2	2	M.A.
Max.-Signal D-C Plate Current	14	11	M.A.
Peak Grid Current (Per Unit)	5	6	M.A.
Effective Load Resistance (Plate-to-Plate)	12000	12000	Ohms
Total Harmonic Distortion	3	4	Percent
Power Output (Approx.)	675	350	Milliwatts

3Q5-GT Characteristics

	<u>Series-Filament Arrangement</u>	<u>Parallel-Filament Arrangement</u>	
Filament Voltage (D.C.)	2.8	1.4	Volts
Filament Current	0.05	0.1	Ampere
Plate Voltage	90 max.	90 max.	Volts
Screen Voltage (Grid No. 2)	90 max.	90 max.	Volts
Grid Voltage (Grid No. 1)	-4.5	-4.5	Volts
Plate Current	7.5	9.5	M.A.
Screen Current	1.0	1.6	M.A.
Plate Resistance (Approx.)	0.11	0.1	Megohm
Transconductance	1800	2100	Micromhos
Load Resistance	8000	8000	Ohms
Total Harmonic Distortion	7.5	7.5	Percent
Max.-Signal Power Output	250	270	Milliwatts

Reference should be made to drawing 2091A and the typical voltage charts when checking circuit faults.

F. Adjustments, and Location of Miscellaneous Faults

1. Failure to Super-regenerate

In normal operation, a blocking oscillator circuit causes the U.H.F. detector to generate a low frequency in the order of 20 kc. to 30 kc. for interrupting the U.H.F. oscillator to produce the super-regenerative effect, the source of radio frequency amplification during reception. The super-regenerative action produces a constant hiss in the telephone receiver which is more or less suppressed when a carrier is received. The amount of suppression is dependent on the carrier strength. Absence of hiss when not tuned to a carrier is an indication that super-regeneration is not taking place. The trouble may exist throughout the range of the receiver dial or it may occur at one particular point. In the first case, the trouble is usually due to a poor tube. In the second case, the batteries may have either fallen below their useful voltage or the coupling coil L1 is too tightly coupled to L2 and the coupling must be loosened. The right value of the coupling can be determined by (a) first, equip the unit with a set of batteries that have been used to the point where they have about 37 volts left for each 45 volt unit; (b) with the back cover on, adjust coupling through the small hole covered by the Carr fastener so that the set super-regenerates (hisses) all over the dial with correct antenna length; (c) switch to "Send", and with the antenna placed in series with an R.F. milliammeter, make sure the antenna current is approximately 120 M.A. The R.F. meter can be hooked directly across the antenna posts and the antenna clamped only by the top post. The antenna must always be resonated by extending it until maximum current is obtained.

Using the above scheme, a position for L1 with respect to L2 can be found at which optimum transmission and reception characteristics are obtained.

The batteries can now be replaced with fresh ones and the adjustment will be found to hold in the future for any battery voltage of from 45 volts to 37 volts per 45 volt unit. The coupling is adjusted by bending the coil L1 away or towards the coil L2 with an insulated prod. After proper adjustment snap the Carr fastener back in position.

2. Howling

Howling, when it occurs, usually takes place at only one point on the dial. This can be caused by too strong a local carrier for proper reception or by improper adjustment of coupling, in which event the remedies indicated for failure to super-regenerate should be applied. On occasion, a detector tube will be found to be at fault. This is true if the howling occurs at the extreme end of the dial.

3. Calibration of Antenna Length

Should the calibration chart showing dial settings, frequency and antenna length after long use be found to be inaccurate, it can be rechecked by the use of a modulated calibrated oscillator for frequency calibration. Antenna length can be adjusted by the use of either a radio frequency ammeter, a 60 M.A. pilot light used as a resonance indicator in series with the antenna, or by the use of a small ultra-high frequency field strength meter. The field strength meter is the most reliable.

In each case check the frequency with the modulated calibrated oscillator on the "Receive" position and then switch to "Send" and adjust antenna length and coupling until either maximum antenna current or field strength is noted. This should

preferably be done as indicated in paragraph No. 1 "Failure to Super-regenerate."

All calibrations must be done with the back cover of the UF-1 fastened in place. Use the small hole covered by the Carr fastener for making coupling adjustments.

4. Antenna tuning- Vibrapack operation

Under certain ground conditions, the vibrapack may require different antenna tuning than that employed with batteries. In general, this is not true but if the storage batteries used have a large mass they will affect antenna resonance to some extent.

5. Audio Distortion

Audio distortion, that is speech which sounds cracked or broken, is due to improper setting of the volume control. The volume control determines the audio gain on both "Send" and "Receive". At extreme distances, the operator will tend to turn the volume to 100 on "Receive." This setting will cause severe distortion on the "Send" position. Volume settings of 40 to 60 on "Send" are capable of producing 100% voice modulation. The degree of modulation will, of course, vary with the voice of the operator to some extent. Experience with the equipment at various volume control settings should guide the operator in obtaining in full modulation without distortion.

CIRCUIT COMPONENT VALUES

C1	15 mmf. Variable
C2	150 mmf. Mica
C3	.004 mf. Mica
C4	.1 mf. Paper
C5	.01 mf. Mica

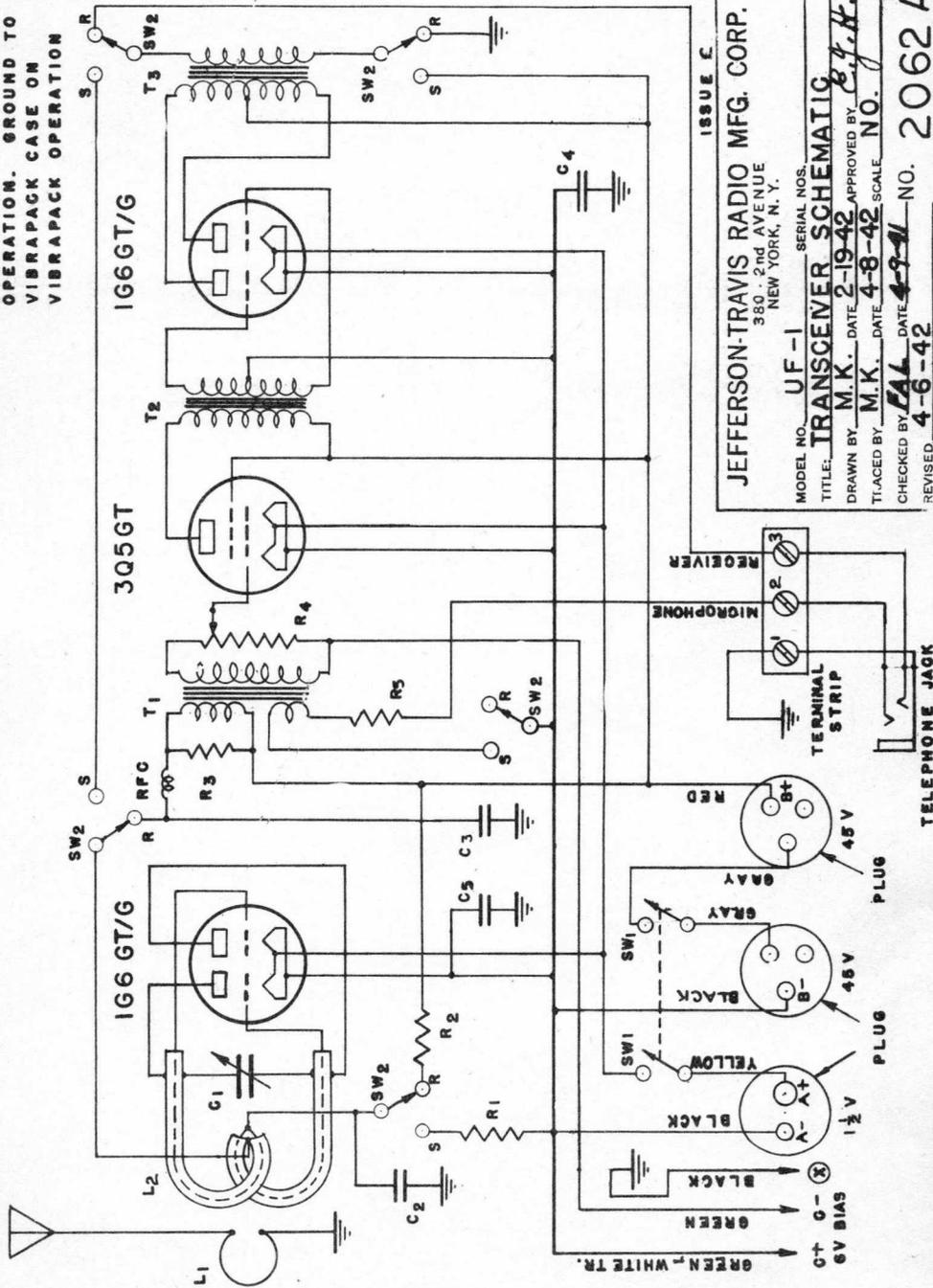
R1 2,500 ohms $\frac{1}{2}$ watt
R2 500,000 ohms $\frac{1}{2}$ watt
R3 50,000 ohms $\frac{1}{2}$ watt
R4 500,000 ohm variable with DPST Switch

T1 Plate and microphone to grid transformer
T2 Class B driver transformer
T3 Modulation transformer

RFC 350 ohms D.C. resistance

For transformer resistance values see
drawing 2091-A.

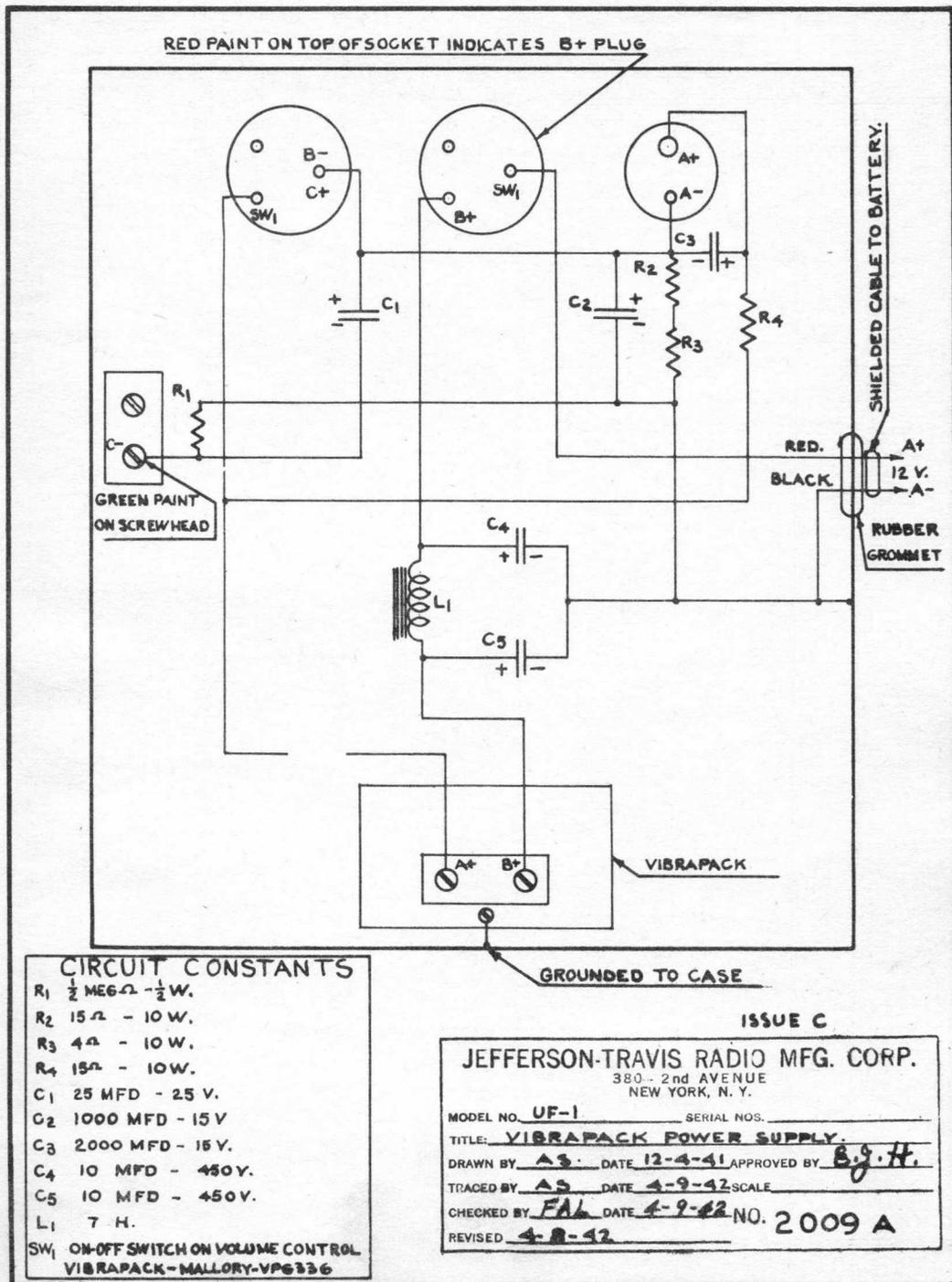
NOTE WIRE (X) TO G- FOR BATTERY OPERATION. GROUND TO VIBRAPACK CASE ON VIBRAPACK OPERATION



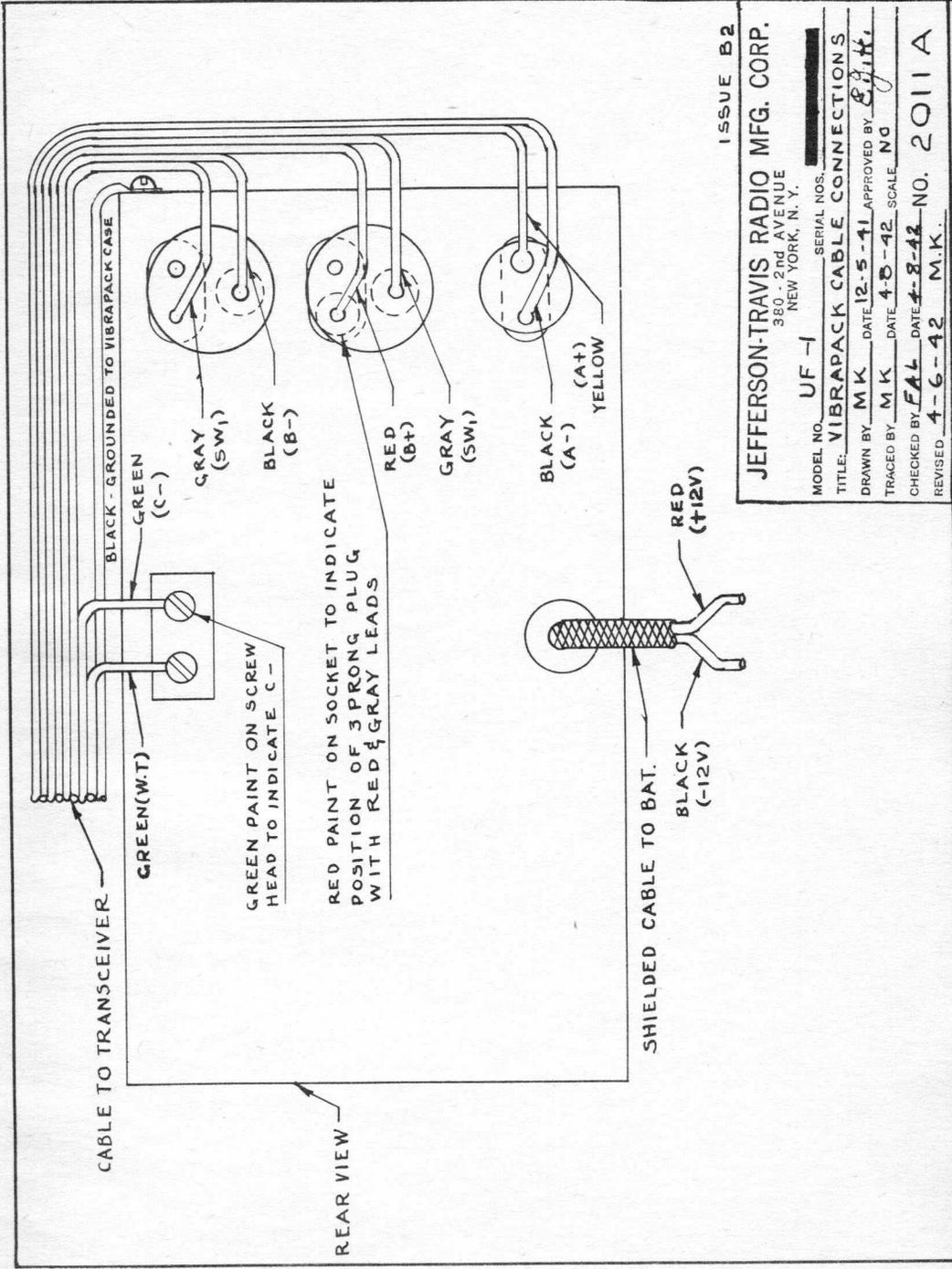
ISSUE C

JEFFERSON-TRAVIS RADIO MFG. CORP.
380 - 2nd AVENUE
NEW YORK, N. Y.

MODEL NO. **UF-1** SERIAL NOS.
TITLE: **TRANSCIVER SCHEMATIC**
DRAWN BY: **M.K.** DATE: **2-19-42** APPROVED BY: **E.J.H.**
TRACED BY: **M.K.** DATE: **4-8-42** SCALE: **NO.**
CHECKED BY: **FAL** DATE: **4-9-41** NO. **2062 A**
REVISED: **4-6-42**



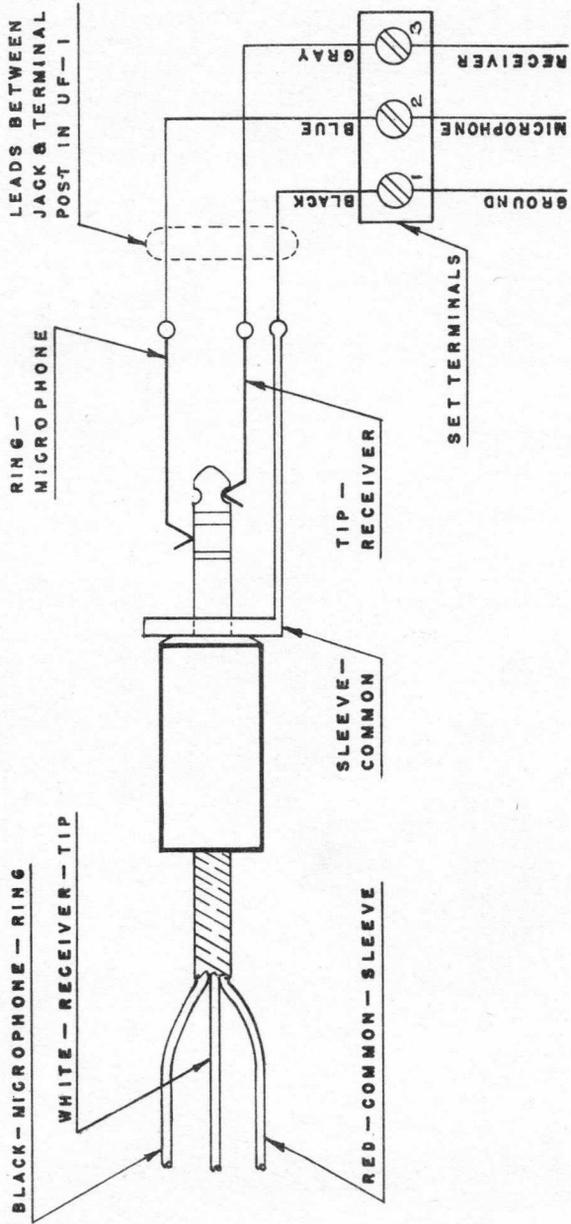
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CHICAGO, ILL. 60637
TEL: 773-936-3000
WWW.CHICAGO.EDU



ISSUE B2

JEFFERSON-TRAVIS RADIO MFG. CORP.
 380 - 2nd AVENUE
 NEW YORK, N. Y.

MODEL NO. **UF-1** SERIAL NOS. **[REDACTED]**
 TITLE: **VIBRAPACK CABLE CONNECTIONS**
 DRAWN BY: **MK** DATE: **12-5-41** APPROVED BY: **[Signature]**
 TRACED BY: **MK** DATE: **4-8-42** SCALE: **NO**
 CHECKED BY: **FAL** DATE: **4-8-42** NO. **2011A**
 REVISED **4-6-42** M.K.



JEFFERSON-TRAVIS RADIO MFG. CORP.
 380 - 2ND AVENUE
 NEW YORK, N. Y.

MODEL NO. UF-1 SERIAL NOS. _____
 TITLE: PLUG & JACK CONNECTIONS
 DRAWN BY MK DATE 4-20-42 APPROVED BY E. J. H.
 TRACED BY MK DATE 4-20-42 SCALE _____
 CHECKED BY EAL DATE 4-20-42 NO. 2090 A
 REVISION _____

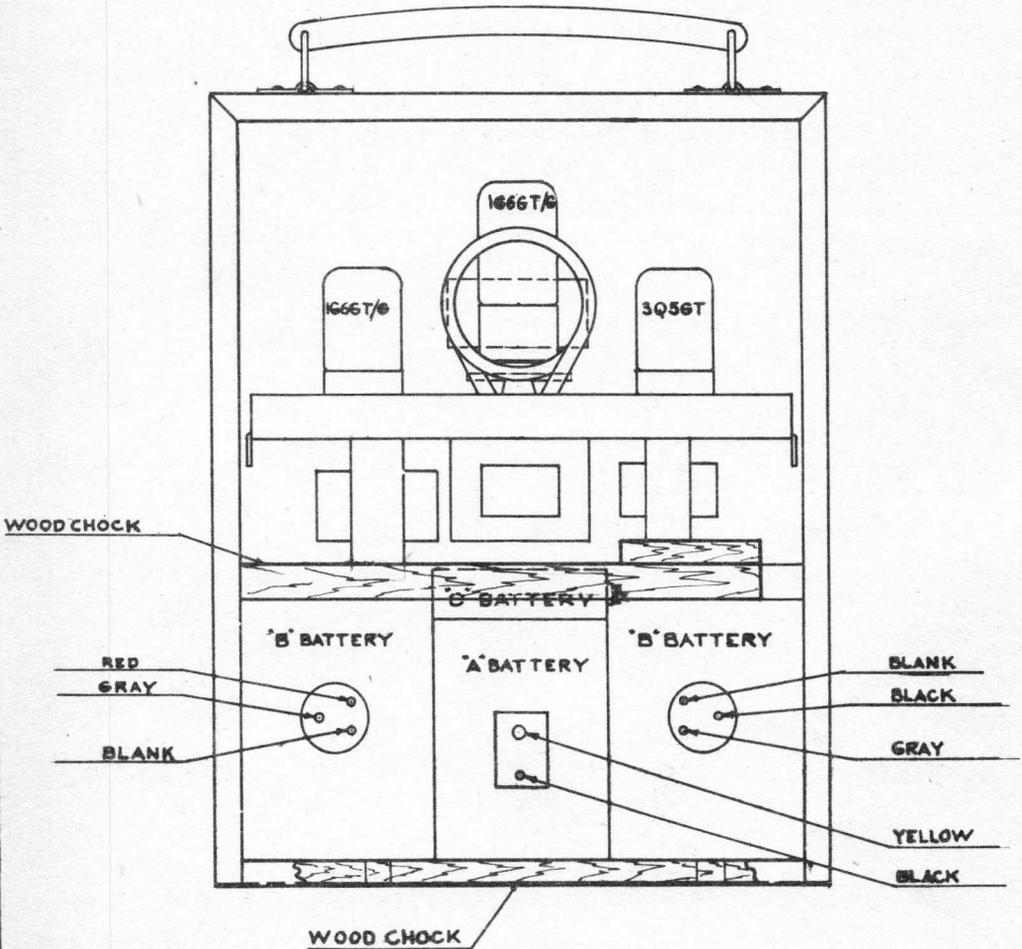
A-1805

THE UNIVERSITY OF CHICAGO

LIBRARY

1957





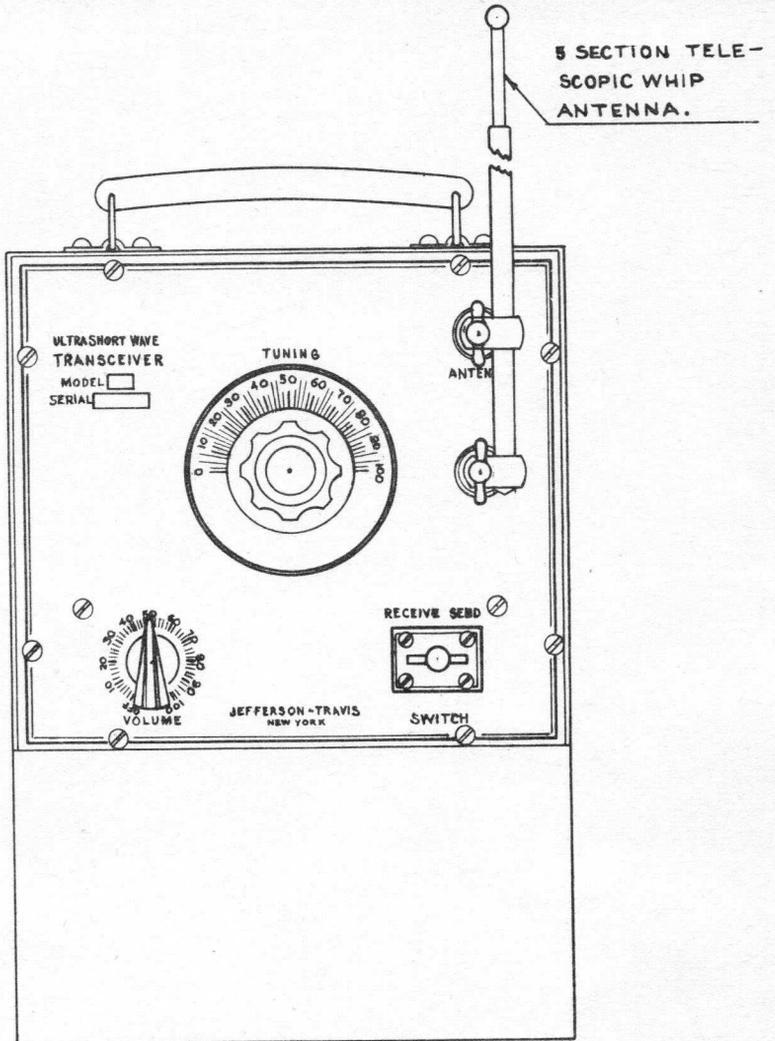
NOTE 1 ON BATTERY OPERATION - GREEN WIRE & BLACK WIRE TO C - 6 VOLTS. GREEN WIRE WITH WHITE TRACER TO C+ 6VOLTS.

NOTE 2 COLORS INDICATE COLORS OF INSULATION ON BATTERY CABLE LEADS.

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 NEW YORK, N. Y.

MODEL NO. <u>UF-1</u>	SERIAL NOS. _____
TITLE: <u>BACK VIEW SHOWING BATTERIES</u>	
DRAWN BY <u>A.S</u>	DATE <u>4-20-42</u> APPROVED BY <u>E.J.B.</u>
TRACED BY _____	DATE _____ SCALE <u>1=1</u>
CHECKED BY <u>E.J.B.</u>	DATE _____ NO. <u>2092 A</u>
REVISED _____	_____

АННОТАЦИЯ



JEFFERSON-TRAVIS RADIO MFG. CORP.
 382 - 2nd AVENUE
 NEW YORK, N. Y.

MODEL NO. UF-1 SERIAL NO. _____

TITLE: FRONT VIEW - GENERAL ASSEMBLY

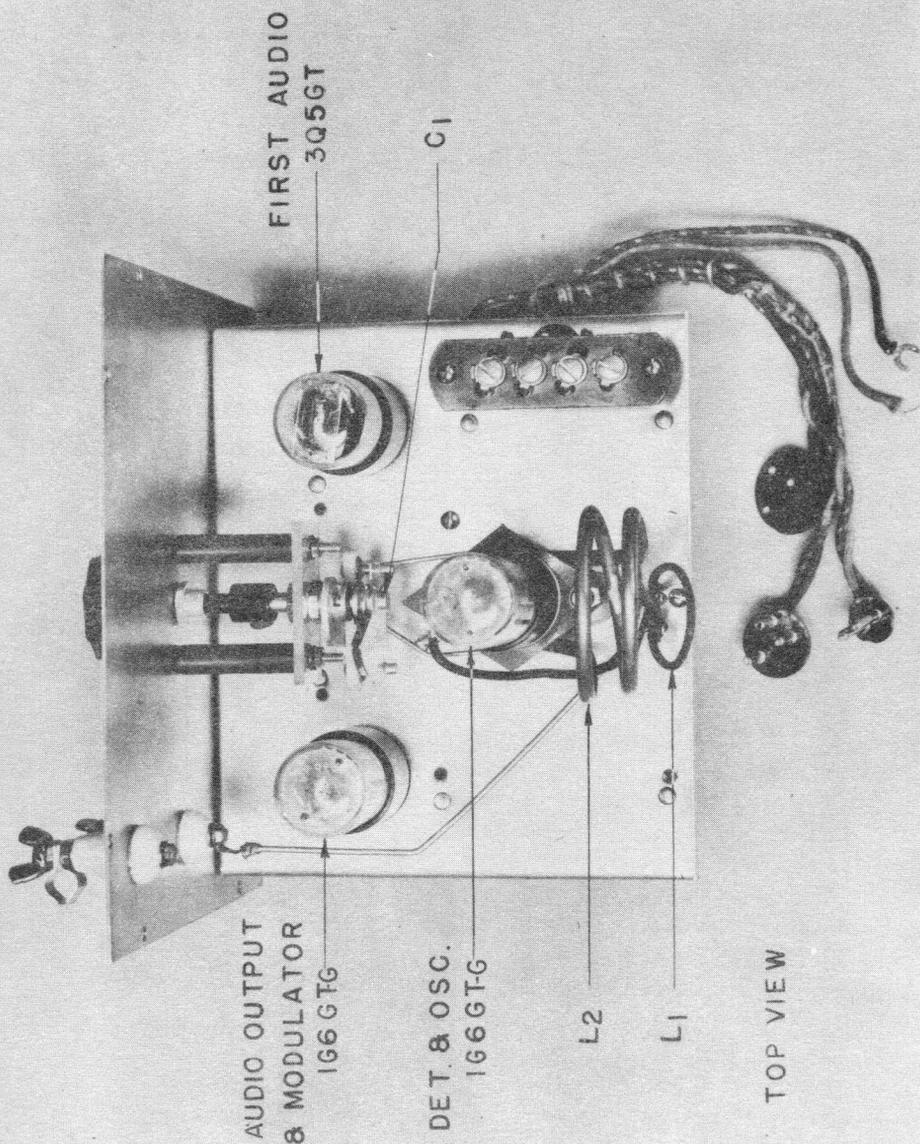
DRAWN BY M.K. DATE 4-22-42 APPROVED BY C.J.H.

TRACED BY _____ DATE _____ SCALE _____

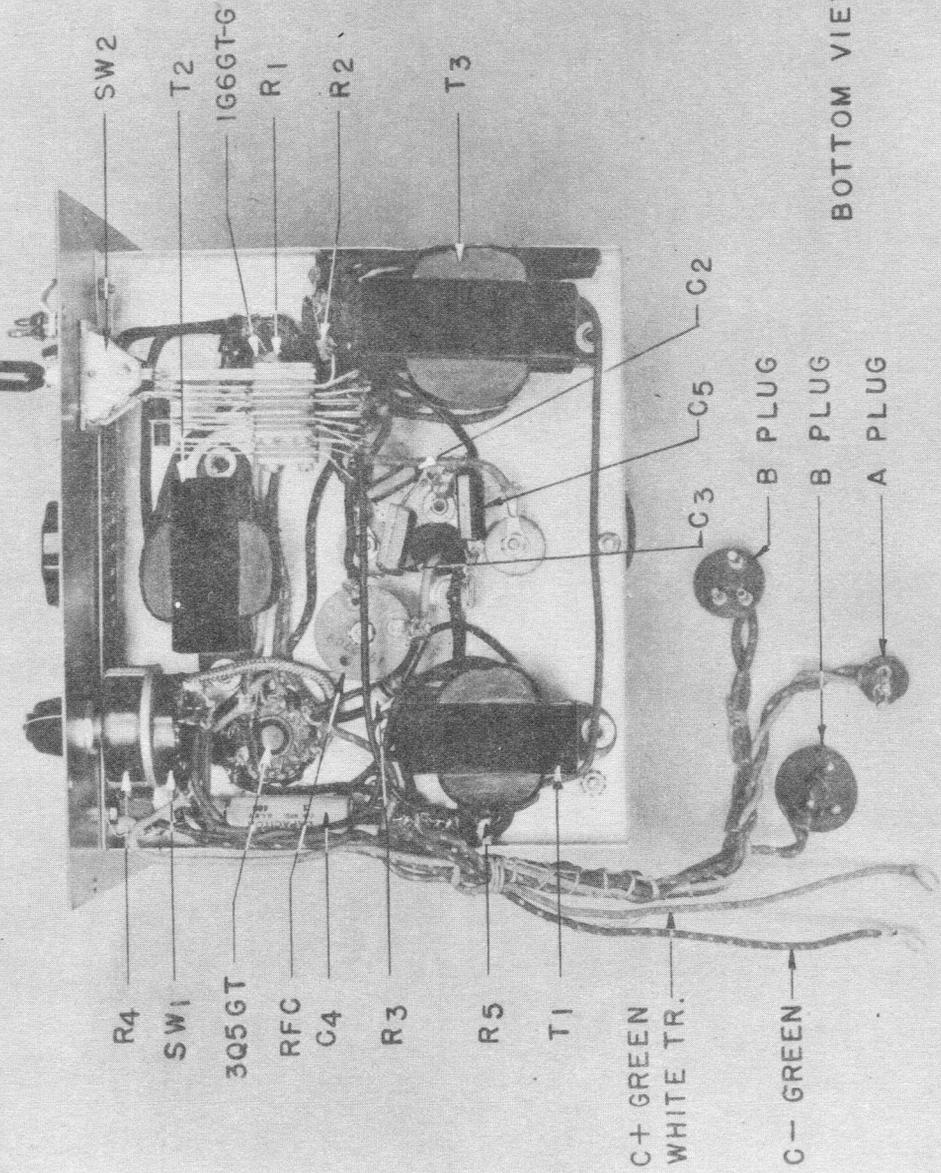
CHECKED BY ees DATE 4-23-42 NO. 2093-A

REVISED _____

JEFFERSON-TRAVIS MODEL UF-1



JEFFERSON-TRAVIS MODEL UF-1



BOTTOM VIEW

PARTS LIST

MODEL UF-1 TRANSCEIVER

<u>Description</u>	<u>No.</u> <u>Required</u>	<u>J-T</u> <u>Stock</u> <u>No.</u>
Cabinet	1	HF-8
Chassis	1	HF-10
Leather Handle	1	HF-9
Handle Brackets	2	HF-9A
Telephone Jack	1	HF-33
Etched Panel	1	HF-35
Insulator	4	D-12
Clamp	4	HF-1
Wing Nut 6-32	2	HF-2
Terminal Strip (4 Terminals)	1	H-85
Socket (Octal, Composition)	2	D-14
Socket (Octal, Ceramic)	1	D-15
Bushing - Spacers	2	HF-12
Lugs (Solder Lugs)	7	HF-4
Knob (Volume Control)	1	H-47
Knob Tuning	1	HF-13
Coupling	1	HF-3
Transformer (Input)	1	TF-1
Transformer (Interstage)	1	TF-2
Transformer (Output)	1	TF-3
Connector	2	HF-14
Volume Control with Switch	1	R-43
Condenser (Tuning of Osc.)	1	CF-3
Choke (RFC plate of Osc.)	1	LF-1
Lever Switch	1	SF-2
Condenser (.004 mfd. Mica)	1	C-47
Condenser (.00015 mfd. Mica)	1	CF-4
Condenser (.01 mfd. Mica)	1	C-48
Condenser (.1 mfd. 400 V. paper tubular)	1	C-3
Resistor (500M $\frac{1}{2}$ Watt)	1	R-15
Resistor (250 Ω ohms $\frac{1}{2}$ Watt)	1	R-5
Resistor (50M $\frac{1}{2}$ Watt)	1	R-11
Resistor (100 ohms $\frac{1}{2}$ Watt)	1	R-1
Lug	1	H-86
Grommet ($\frac{1}{2}$ " Black Rubber)	2	H-46
Insulators (Condenser Mounting)	1	HF-15
Insulator (Osc. Socket Support)	1	HF-16

<u>Description</u>	<u>No.</u> <u>Required</u>	<u>J-T</u> <u>Stock</u> <u>No.</u>
Plug "B" Batteries	2	D-34
Connector "A" Battery	1	HF-5
Oscillator Tank Coil	1	HF-17
Lug Strip	1	HF-18
Bushing	1	HF-32
Plug (3 Circuit)	1	DF-11
Tubes (Oscillator and Modulator)	2	Type 1G6GT/T
Tubes (1st Audio)	1	Type 3Q5GT
Batteries "B"	2	DF6
Battery "A"	1	DF7
Battery "C"	1	DF8
Handset	1	SP2(2W)
Screws 6/32 x 1/4 NPB	26	HF-21A
Screws 6/32 x 2 NPB	2	HF-22
Screws 6/32 x 3/4 NPB	2	HF-23
Nuts 8/32 x 5/16 NPB	2	HF-24
Nuts 6/32 x 1/4 NPB	14	HF-25
Nuts 6/32 x 5/16 Steel	2	HF-26
Spade Lugs	4	HF-27
Terminals	3	HF-28
Terminal Lug Strip	2	HF-29
Lockwasher 6/32	20	HF-30
Rivets 3/16"	8	HF-31
Canvas Carrying Case	1	CCF-1
Wood Transit Case	1	CCF-2
Decalcomanias	2	DF-4
Calibration Chart	2	DF-3
Collapsible Antenna	1	AF-1
Screws 4/36 x 1/2 O. H.	4	HF-41
Screws 6/32 x 1 R. H.	1	HF-39
Wire Flame-Proof #22 Stranded 20 feet	20 feet	W-2
Wire Flame-Proof #16 Solid 1 foot	1 foot	W-3
Wire Flame-Proof #18 Stranded 1 foot	1 foot	W-4

PARTS LIST

MODEL UF-1 VIBRAPACK

<u>Description</u>	<u>No.</u> <u>Required</u>	<u>J-T</u> <u>Stock</u> <u>No.</u>
Resistor (15 ohm - 10 Watt)	2	R-59
Resistor (4 ohm - 4 Watt)	1	R-60
Resistor (500,000 ohm - $\frac{1}{2}$ Watt)	1	R-15
Condenser (25 mfd. - 25 V. Electrolytic)	1	C-49
Condenser (1000 mfd. - 15 V. Electrolytic)	1	C-50
Condenser (2000 mfd. 15 V. Electrolytic)	1	C-51
Condenser (2x10 mfd. 450 V. Electrolytic)	1	C-33
Condenser Clip	2	H-115
Condenser Clip	1	H-36
Condenser Sleeve	1	H-116
Condenser Sleeve	1	H-117
Condenser Sleeve	1	H-118
Vibrapack	1	PWR-13
Choke	1	L-12
Terminal Strip	1	H-114
Grommet 1/2" Black Rubber	1	H-46
B Battery 3 prong sockets	2	HF-20
A Battery 2 prong socket	1	HF-21
Lug Strip	3	HF-29
Lug Strip	2	H-86
Grommet	4	H-119
Vibrapack Case	1	HV-1
A Battery Cable Assembly	1	HF-37

NOTES

ADDENDA

MODEL UF-1

UF-1 sets have either a .001 MFD., .002 MFD. or .005 MFD. paper condenser from the control grid of the first audio tube (3Q5GT) to ground. If audio oscillation is present in sets having a .001 MFD or .002 MFD. condenser this capacity should be increased to .005 MFD.



