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*HANDBOOK OF INSTRUCTIONS
FOR OPERATION OF*

**RADIO SET
SCR-520-B.**

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**DON'T YOU
BELIEVE
IT!**

Do you want me
to write up a
UR on this job?

No, I reported it
to the factory
rep.—that's enuf.



THAT'S NOT ENOUGH! A **UR**

**MUST BE WRITTEN, SO THAT THE AIR SERVICE
COMMAND CAN TAKE NECESSARY ACTION ON
THE REPORTED TROUBLE.**

In filling out a **UR** (AAF Form No. 54) personnel should follow the instructions given in AAF Regulation 15-54. Particular care should be taken to include the following information:

1. ORGANIZATION AND STATION
2. NAME PLATE DATA
3. DATE AND NATURE OF FAILURE
4. TYPE OF AIRPLANE IN WHICH INSTALLED
5. RECOMMENDATIONS

SAFETY NOTICE

OPERATION OF THIS EQUIPMENT INVOLVES THE USE OF HIGH VOLTAGES WHICH ARE DANGEROUS TO LIFE. ADEQUATE SAFETY MEASURES HAVE BEEN TAKEN TO INSURE SAFETY TO OPERATING PERSONNEL. THE FOLLOWING RULES MUST BE OBSERVED IN ORDER TO TAKE FULL ADVANTAGE OF THESE PRECAUTIONARY MEASURES:

- 1. DO NOT DISCONNECT ANY CABLES OR MAKE ANY ADJUSTMENT UNLESS ALL SWITCHES ARE OFF.**
- 2. FOLLOW THE PROPER STARTING SEQUENCE AT ALL TIMES.**
- 3. DO NOT REMOVE ANY UNIT FROM ITS CASE FOR ANY REASON WHATSOEVER WHEN POWER IS TURNED ON. ALL INTERNAL ADJUSTMENTS REQUIRE USE OF SPECIAL TEST EQUIPMENT AND SUCH ADJUSTMENTS MUST BE PERFORMED BY A SPECIALLY TRAINED SERVICEMAN.**
- 4. READ AND UNDERSTAND ALL OF THE INSTRUCTIONS BEFORE ATTEMPTING OPERATION OF THIS EQUIPMENT.**

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OPERATION Of RADIO SET SCR-520-B

SECTION I — GENERAL DESCRIPTION

1. INTRODUCTION

It is assumed that the operator is thoroughly familiar with the tactical use of this equipment. The instructions which follow are for the purpose of familiarizing the operator with the manual operation of the equipment in order that he may make the fullest use of its tactical application.

The life expectancy and proper performance of Radio Set SCR-520-B will be determined primarily by its treatment in the hands of the operator. Therefore, the instructions contained herein should be followed rigorously to insure optimum performance.

Any deviations from normal performance of Radio Set SCR-520-B should be called to the at-

tention of the specially trained radio maintenance crew immediately.

2. COMPONENT UNITS

The operator will normally be concerned only with controls on the following units:

Indicator	BC-1041-B (Operator's)	Fig. 1
Synchronizer	BC-1043-B	Fig. 2
Synchronizer	BC-1045-B (Beacon)	Fig. 5
Control Box	BC-1044-B	Fig. 3
Control Unit	RM-30-A (Power)	Fig. 4
Indicator	BC-742-A (Pilot's)	Fig. 6

SECTION II — PREPARATION FOR USE

3. GENERAL

The distribution of the various units of Radio Set SCR-520-B in the aircraft will depend on the type of aircraft. Those units with which the operator is most concerned are usually well arranged at his station to make operation easy and efficient. The location of the various other units of Radio Set SCR-520-B in the aircraft will be evident to operators who have had specific instructions with this radio equipment.

4. POWER SUPPLY

The electrical energy required for operation of Radio Set SCR-520-B is supplied by the aircraft 27.5-volt d-c system. An inverter unit operated from the 27.5-volt d-c system is used to supply a-c for operation of certain circuits.

The d-c voltage of the aircraft electrical system will vary approximately between 25 and 28 volts, depending on the condition of the ship's batteries

and the output of the ship's regular charging generators. If the d-c voltage of the aircraft system is consistently low, i.e., 26 volts or less, the aircraft voltage regulator should be checked and readjusted by assigned aircraft maintenance personnel. The a-c output of the inverter unit is regulated to a constant voltage by circuits contained within Control Unit RM-30-A (Power).

5. INTER-UNIT CONNECTIONS

The necessary connections between units are carried through flexible cables. Some of the cables end in plug and socket connectors, while others are fastened permanently to a particular unit. It is the operator's duty to check the condition of all cable connectors before each flight and tighten them if necessary.

Connections between the synchronizers and operator's indicator units are accomplished automatically when these units are inserted into their proper mounting racks. Be sure that all units are

in their proper racks before turning on equipment. These units are held securely in place by the knurled locking fasteners on the front of the racks.

Radio Set SCR-520-B is connected to the aircraft 27.5-volt d-c system by a flexible cable from the regular aircraft junction box to Control Unit RM-30-A (Power). Provisions are made through an auxiliary junction box (aircraft) for connecting a portable d-c generator to the aircraft d-c system to provide power for preflight ground checks of the equipment. See Paragraph 8.

The operator should inspect the cable connections to Radio Receiver and Transmitter BC-1040-B and Antenna Equipment RC-94-A before each flight and make tight all locking rings.

6. COMPONENT UNITS, GENERAL

All of the units, with the exception of the antenna, are inclosed in dust covers for protection of the equipment and to prevent the operator from coming in contact with the high voltage circuits. All dust covers except the one for Control Unit RM-

30-A (Power) are to be removed only by the specially trained radio maintenance crew. The cover for the power control unit is removable after disengaging the snap fasteners. Do not attempt this procedure unless the INVERTER switch is OFF. Replacement fuses for Control Unit RM-30-A (Power) are located on the back of the removable cover.

Many of the units are provided with shock mounting to protect the internal circuits. Call any defects or loosening of the mountings to the attention of the radio maintenance crew.

7. ADJUSTMENT

Radio Set SCR-520-B is to be tested and adjusted at regular intervals by the specially trained radio maintenance crew using test equipment provided for the purpose. All adjustments to be made by the operator are described in SECTION III — OPERATION and no others should be attempted except under emergency conditions when the services of the radio maintenance crew are not available.

SECTION III — OPERATION

8. GENERAL

The operation of this equipment draws a large amount of current from the aircraft supply system. Therefore, do not operate the equipment unless the aircraft engines are running at normal speed. Operation of this equipment when the aircraft engines are not turning at normal speed will discharge the ship's storage batteries in a very short time. There should be no occasion for the operator to start this equipment on the ground. However, if it becomes necessary to do so, obtain proper instructions for accomplishing this without damage to the aircraft's storage battery system from the radio maintenance crew.

Operation performance of this equipment is obtained when the d-c supply voltage is between 25 and 28 volts. Notify the aircraft crew chief if this voltage is not obtained during normal flights or if the supply voltage runs consistently low as stated in Paragraph 4.

The operation of the system described as follows presupposes that all screwdriver potentiometer adjustments are such as to give optimum

screen indications. If, after the procedure described in Paragraph 9 has been completely carried out, the pattern is not sharp and the screen indications are not proper, special screwdriver potentiometer adjustments may be necessary. Except under emergency conditions these should be attempted only by the radio maintenance crew, since they require special adjusting technique.

9. PROCEDURE FOR PLACING EQUIPMENT IN OPERATION

NOTE: Paragraphs 9a to 9p inclusive place the system in a non-operate condition from which the system may be put into operation safely by the procedures given in Paragraphs 9q to 9jj inclusive.

- a. Check that the FILAMENT switch (28), Figure 3, is in the OFF position.
- b. Check that the INVERTER switch (29), Figure 3, is in the OFF position.
- c. Check that the SPINNER switch (30), Figure 3, is in the OFF position.
- d. Check that the TRANSMITTER switch (31), Figure 3, is in the OFF position.

- e. Turn the LOWER LIMIT switch (32), Figure 3, to the -10° position.
- f. Turn the UPPER LIMIT switch (33), Figure 3, to the $+65^\circ$ position.
- g. Turn the INTENS control (22), Figure 1, to the extreme counterclockwise position.
- h. Turn the ILLUM control (23), Figure 1, to the extreme counterclockwise position.
- i. Turn the INTENS control (38), Figure 1, to the extreme counterclockwise position.
- j. Check that the VOLTAGE switch (25), Figure 2, is in the BATTERY position.
- k. Turn the RANGE dial (40), Figure 2, to the full range position.
- l. Turn the RANGE control (24), Figure 2, to the FAR position.
- m. Turn the RANGE MARKER AMPLITUDE control (39), Figure 2, to the extreme counterclockwise position.
- n. Turn the RADAR BEACON control (35), Figure 5, to the RADAR position.
- o. Turn the RANGE IN MILES control (36), Figure 5, to the NORMAL position.
- p. Turn the INTENS control (34), Figure 6, to the extreme counterclockwise position.
NOTE: Since the pilot's indicator is located in the pilot's cockpit, a point remote from the Radar operator's position, it would be advisable to check that this intensity control has been turned to the extreme counterclockwise position before starting on any flight.
- q. Throw the FILAMENT switch (28), Figure 3, to the ON position. Now throw the VOLTAGE switch (25), Figure 2 to the BATTERY position and observe voltmeter (26), Figure 2. The meter should read between 25 and 28 volts.
- r. Wait one full minute for the tube filaments to warm up, then throw the INVERTER switch (29), Figure 3, to the ON position.
- s. At the instant the inverter switch is turned on, the battery voltage should drop to about 15 volts due to the heavy inverter starting current. However, within 4 or 5 seconds the voltage should recover and again lie somewhere between 25 and 28 volts. Now throw

the VOLTAGE switch (25), Figure 2, to the PLATE position and observe voltmeter (26), Figure 2. The plate voltage indicated by the meter should be between 270 and 300 volts. Return the VOLTAGE switch (25), Figure 2, to the BATTERY position.

- t. Wait one full minute after the inverter switch has been turned on before throwing the TRANSMITTER switch (31), Figure 3, to the ON position. Immediately observe the TRANSMITTER CURRENT meter (27), Figure 2. If the reading is in excess of 30 milliamperes, turn the TRANSMITTER switch (31), Figure 3, to the OFF position since operation is not proper. The transmitter current meter reading will be governed by the settings of the RADAR BEACON switch (35), Figure 5 and the RANGE IN MILES switch (36), Figure 5.
- u. Turn the RANGE IN MILES switch (36), Figure 5, to the LONG RANGE position. The TRANSMITTER CURRENT meter (27), Figure 2, should read from 4 to 9 milliamperes.
- v. Turn the RADAR BEACON switch (35), Figure 5, to the BEACON position and the RANGE IN MILES switch (36), Figure 5, to the NORMAL position and then to the LONG RANGE position; the TRANSMITTER CURRENT meter (27), Figure 2, should now read from 9 to 15 milliamperes. Return the RADAR BEACON switch (35), Figure 5, to RADAR and the RANGE IN MILES switch (36), Figure 5, to NORMAL.
NOTE: The following is what appears in Paragraphs 9u and 9v above in tabular form:

<i>Transmitter Current Milliamperes</i>	<i>Radar Beacon Switch</i>	<i>Range in Miles Switch</i>
14-24	Radar	Normal
4-9	Radar	Long Range
9-15	Beacon	Normal
9-15	Beacon	Long Range

Transmitter current readings for all the above combinations of switch settings should be checked.

- w. Throw the SPINNER switch (30), Figure 3, to the ON position.
- x. Turn the INTENS control (22), Figure 1, on the operator's indicator clockwise until

a fairly visible pattern appears on the face of indicator tube (41), Figure 1.

- y. Turn the V CENTR control (37), Figure 1, clockwise or counterclockwise as necessary to bring the relatively bright transmitter pulse to the zero line of the scale of indicator tube (41), Figure 1.
- z. Turn the RCVR GAIN control (21), Figure 1, until the pattern on indicator tube (41), Figure 1, brightens up appreciably.
- aa. Slowly turn the RCVR FREQ control (20), Figure 1, until image indications appear on the face of the indicator tube (41), Figure 1. Adjust until the image indications are the brightest. The RCVR GAIN adjustment of Paragraph 9z may require readjustment to avoid a pattern that is too bright.
- bb. Turn the ILLUM control (23), Figure 1, in a clockwise direction to increase the illumination so that the scales on all indicator tubes are moderately visible.
- cc. If all adjustments are optimum the indicator screen (41), Figure 1, will be illuminated with a sharp pattern. General illumination should exist from -90° azimuth to $+90^\circ$ azimuth and from the zero line to the top of the scale. Switch the RADAR BEACON switch (35), Figure 5, between the RADAR and the BEACON positions; also switch the RANGE IN MILES switch (36), Figure 5, between the NORMAL and the LONG RANGE positions; in addition, switch the RANGE switch (24), Figure 2, between the NEAR and the FAR positions. In making these switches it is usually necessary to re-adjust the V CENTR control (37), Figure 1, in order to keep the transmitter pulse and the bottom of the sweep on the zero line of the scale. In all cases the screen should be illuminated from one end to the other and the pattern should be consistent with the positions of the control switches. The final position of the switches should be: RANGE switch (24), Figure 2, on FAR; RADAR BEACON switch (35), Figure 5, on RADAR; and RANGE IN MILES switch (36), Figure 5, on NORMAL.
- dd. Turn the INTENS control (38), Figure 1, on the operator's indicator clockwise until a pattern appears on the face of indicator tube (42), Figure 1. In order to obtain gen-

eral background illumination, the INTENS control (38), Figure 1, should be slightly above normal.

- ee. Turn the INTENS control (34), Figure 6, on the pilot's indicator clockwise until a pattern appears on the face of the pilot's indicator tube. In order to obtain general background illumination, the INTENS control (34), Figure 6, should be slightly above normal.

NOTE:—This is something the pilot will have to do since the pilot's indicator is not accessible to the Radar operator during flight.

- ff. With the LOWER LIMIT switch (32), Figure 3, and the UPPER LIMIT switch (33), Figure 3, in their previously thrown positions of -10° and $+65^\circ$, respectively, the general background illumination on the operator's indicator (42), Figure 1, and the pilot's indicator should be from -10° to $+65^\circ$ in elevation and from -90° to $+90^\circ$ in azimuth. Turn the LOWER LIMIT and UPPER LIMIT switches to the following positions and note whether the general background illumination on the operator's and pilot's indicators shifts correspondingly.

<u>Lower Limit</u>	<u>Upper Limit</u>
-10	+65
+ 5	+50
+20	+35
-10	+65

- gg. If all adjustments are optimum, the screens of the indicator (42), Figure 1 and the pilot's indicator will be illuminated from -90° azimuth to $+90^\circ$ azimuth and in elevation zones corresponding to the settings of the LOWER LIMIT and UPPER LIMIT switches. As in Paragraph 9cc, check this result for both positions of the RANGE switch (24), Figure 2, RADAR BEACON switch (35), Figure 5, and RANGE IN MILES switch (36), Figure 5. Likewise, as in Paragraph 9cc, leave the switches, after performing these operations, in their FAR, RADAR and NORMAL positions, respectively.
- hh. Select a target on the indicator (41), Figure 1, if one exists; otherwise, arbitrarily select a 5-mile range for an imaginary target. Set the RANGE dial (40), Figure 2, to the range of the target turning the RANGE

MARKER AMPLITUDE control (39), Figure 2, clockwise until the range marker pulses place a reasonably bright horizontal line across the indicator (41), Figure 1, at the actual or assumed target range. Turning the RANGE MARKER AMPLITUDE control clockwise increases the intensity of the horizontal line across the indicator. Turning the RANGE dial (40), Figure 2, counterclockwise lowers the horizontal line on the indicator. The position of the range dial should be such as to place the horizontal line tangent to the top of the target. If the target is imaginary, it should coincide with the 5-mile line. In case of an actual target, a pattern should appear on indicator (42), Figure 1. Note its elevation and coordinate the LOWER LEVEL and UPPER LEVEL switch positions to cover the target on a 15-degree or a 30-degree zone on the indicator. In case of an imaginary target, indicator (42), Figure 1, should remain uniformly illuminated as before. Next, move the RANGE dial over its entire scale and check that the range marker pulses place horizontal lines across indicator (41), Figure 1, at their approximately correct range.

ii. In line with Paragraphs 9dd and 9ee, turn the INTENS controls (38), Figure 1, and (34), Figure 6, slightly counterclockwise to obtain normal screen illumination.

jj. At this point it might be well to explain that the pilot of an airplane equipped with Radio Set SCR-520-B has at his disposal Indicator BC-742-A (Pilot's), Figure 6, and a small unit called a pilot's range meter. The pilot's indicator is an exact duplicate of indicator (42), Figure 1, and the same pattern will appear on both indicators. The pilot's range meter is a small meter which indicates to the pilot the range of a particular target. Its readings are controlled by the setting of RANGE dial (40), Figure 2. For example, when the range dial is set on 2 miles, the pilot's range meter indicates 2 miles and when the range dial is set on 5 miles, the pilot's range meter indicates 5 miles, etc.

10. PROCEDURE FOR TURNING EQUIPMENT OFF

a. Throw the TRANSMITTER switch (31), Figure 3, to the OFF position.

- b. Throw the SPINNER switch (30), Figure 3, to the OFF position.
- c. Throw the INVERTER switch (29), Figure 3, to the OFF position.
- d. Wait until the inverter stops and then throw the FILAMENT switch (28), Figure 3, to the OFF position.

11. PRECAUTIONS DURING OPERATION

- a. Do not leave the TRANSMITTER switch (31), Figure 3, in the ON position more than three or four seconds if the transmitter does not draw proper plate current as indicated by the TRANSMITTER CURRENT meter (27), Figure 2, and as described in Paragraph 9t, 9u and 9v.
- b. Do not remove connectors from any unit unless all switches are in the OFF position.
- c. Keep the average intensity on the indicator screens as low as possible for satisfactory performance.
- d. Do not maintain any stationary intense spots on the indicator screens as the material on the face of the cathode ray tubes may be burned.
- e. If the operation of the equipment is not normal, it should be shut off immediately. This does not apply where deficient operation might be of some tactical assistance.
- f. If the transmitter refuses to remain operating after the TRANSMITTER switch (31), Figure 3, has been thrown to the ON position, throw the TRANSMITTER switch to the OFF position and wait one-half minute before again attempting to operate it.
- g. If the aircraft power supply system should fail during the operation, turn off the equipment immediately using the procedure described in Paragraph 10. After the trouble has been remedied, the equipment may again be put into operation as discussed in Paragraph 9. In this event it may not be necessary to carry out the full routine of Paragraph 9.
- h. Do not attempt adjustments of any of the screwdriver controls on the units. These adjustments require special adjusting technique and should be carried out only by the radio maintenance crew.

SECTION IV — MAINTENANCE

12. GENERAL

Many cases of faulty operation can be traced directly to loose connections. A thorough checkup on all cable connectors should be incorporated as a routine procedure.

13. FUSES

The power supply circuits are fused in Control Unit RM-30-A (Power). Spare fuses and a fuse puller are provided in the removable cover of this unit. The operator should keep the spare fuse supply complete at all times and replace open fuses only with the correct size and ampere rating. **DO NOT ATTEMPT ANY REPLACEMENTS UNTIL THE INVERTER SWITCH IS OFF.**

14. SYNCHRONIZER BC-1043-B

- a. If no battery voltage is indicated and plate voltage is high, replace fuse 7 in Control Unit RM-30-A (Power). See Figure 4.
- b. If battery voltage is indicated but there is no plate voltage, replace fuses 4 and 5 in Control Unit RM-30-A (Power). See Figure 4. Ascertain that the inverter unit is functioning. If not, do as indicated in Paragraph 19.
- c. If there is no battery or plate voltage, replace fuse 3 in Control Unit RM-30-A (Power). See Figure 4.
- d. If the TRANSMITTER CURRENT meter (27), Figure 2, reads zero or indicates only for a moment after the TRANSMITTER switch (31), Figure 3, is thrown to the ON position, see Paragraph 16.
- e. Some of the above failures may also be due to poor contact between the synchronizer unit and the rack. This may be remedied by partially removing the synchronizer unit and reinserting with a vigorous thrust, which may clean the contacts.

15. INDICATOR BC-1041-B (OPERATOR'S) AND INDICATOR BC-742-A (PILOT'S)

- a. If the indicator tubes do not light, INTENS controls (22), (38), and (34) of Figures 1 and 6 may be set too low. Replace fuses 4, 5,

6 and 7 in Control Unit RM-30-A (Power) See Figure 4.

- b. If a single vertical line on the indicator screen (41), Figure 1, is obtained with the SPINNER switch (30), Figure 3, turned ON, replace fuse 8 in Control Unit RM-30-A (Power). See Figure 4.
- c. If the indications fade abruptly during normal operation, check to see if the transmitter is operating. See Paragraph 16.
- d. If the indications fade gradually, retune the receiver with RCVR FREQ control (20), Figure 1. Tuning must be checked frequently during the first 15 minutes of operation.
- e. If the indications are obscured by high background intensity, turn the INTENS controls (22), (38), and (34), Figures 1 and 6, slowly counterclockwise until the desired indications stand out. Optimum performance will usually be obtained with the RCVR GAIN control (21), Figure 1 about one-eighth turn below full gain.
- f. Some of the above failures may also be due to poor contact between the synchronizer and indicator units and their racks. This may be remedied by partially removing the synchronizer and indicator units and reinserting with a vigorous thrust which may clean the contacts.

16. RADIO RECEIVER AND TRANSMITTER BC-1040-B

- a. If the transmitter does not operate and no current is indicated on the TRANSMITTER CURRENT meter (27), Figure 2, replace fuses 2, 9 and 10 in Control Unit RM-30-A (Power). See Figure 4.
- b. If the transmitter repeatedly turns on and off, throw TRANSMITTER switch (31), Figure 3, to the OFF position; wait one minute and try again. In some extreme cases it may be necessary to repeat this procedure several times. Difficulties in keeping the transmitter on may be due to loose cable connections on Radio Receiver and Transmitter BC-1040-B, on Synchronizer BC-1043-B, on Synchronizer BC-

1045-B (Beacon), or on Indicator BC-1041-B (Operator's). Check the connectors and tighten the locking nuts if necessary.

- c. If the transmitter current is irregular, it usually indicates trouble in the inverter unit. Do not use the equipment if the instability persists and decreases efficiency of operation. Consult the radio maintenance crew.

17. SYNCHRONIZER BC-1045-B (BEACON)

If the transmitter operates when switches (35) and (36), Figure 5, are in the RADAR and NORMAL positions but will not operate when switches (35) and (36) are in the RADAR and LONG RANGE positions or in the BEACON and NORMAL or LONG RANGE positions, check the connections on Synchronizer BC-1045-B (Beacon) and tighten the locking nuts if necessary.

18. ANTENNA EQUIPMENT RC-94-A

If the antenna does not operate, replace fuse 8 in Control Unit RM-30-A (Power). See Figure 4.

19. INVERTER UNIT PE-118-A

- a. If the inverter unit will not operate, replace fuse 1 in Control Unit RM-30-A (Power). See Figure 4.
- b. If the inverter will not stop, the inverter starting relay is probably stuck. Strike the side of Control Unit RM-30-A (Power) sharply with the hand. If this fails, remove fuse 11 in Control Unit RM-30-A (Power) provided there is no danger of fire. Pulling this fuse will probably cause a considerable arc.

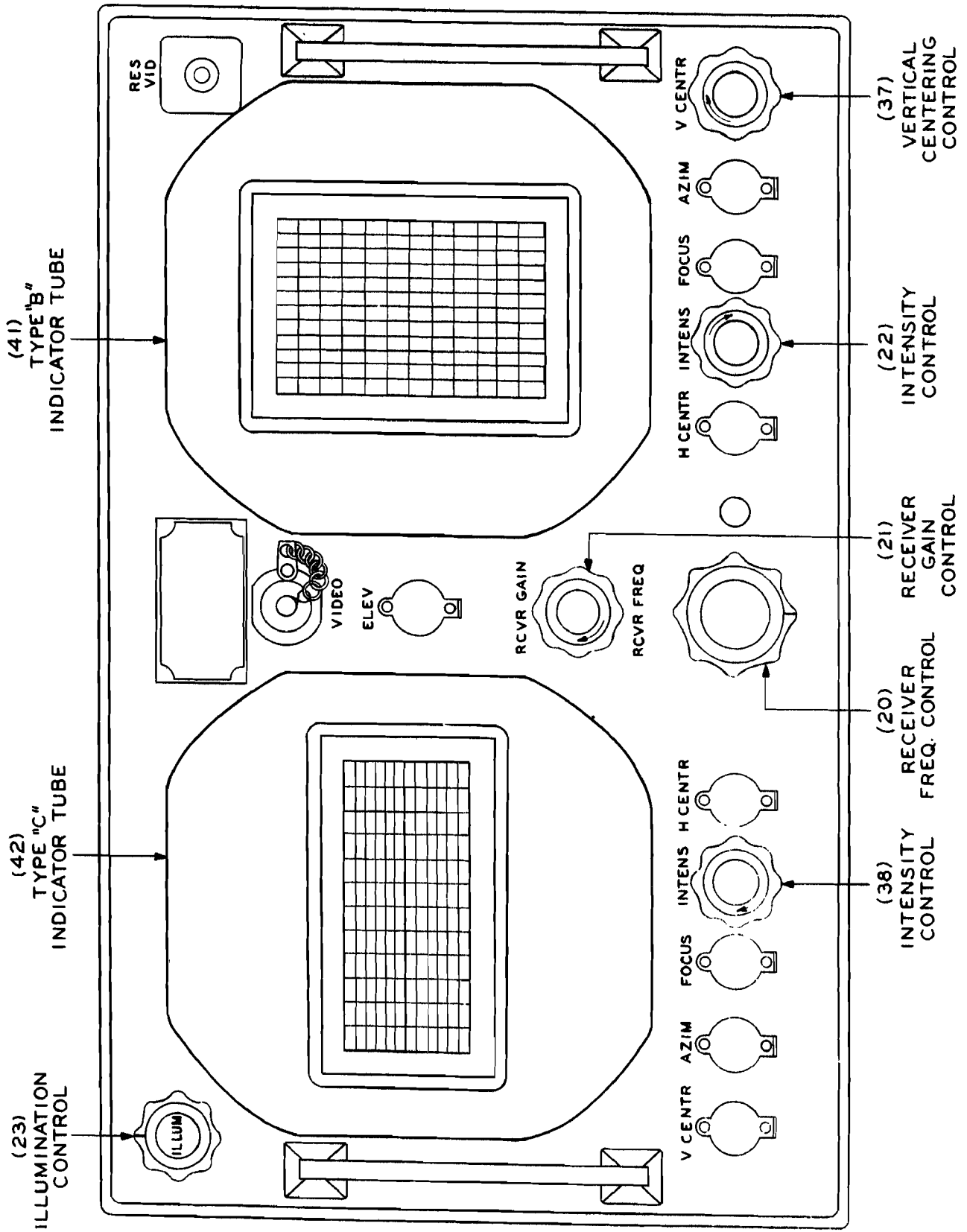


FIGURE 1 — INDICATOR BC-1041-B (OPERATOR'S) — FRONT VIEW

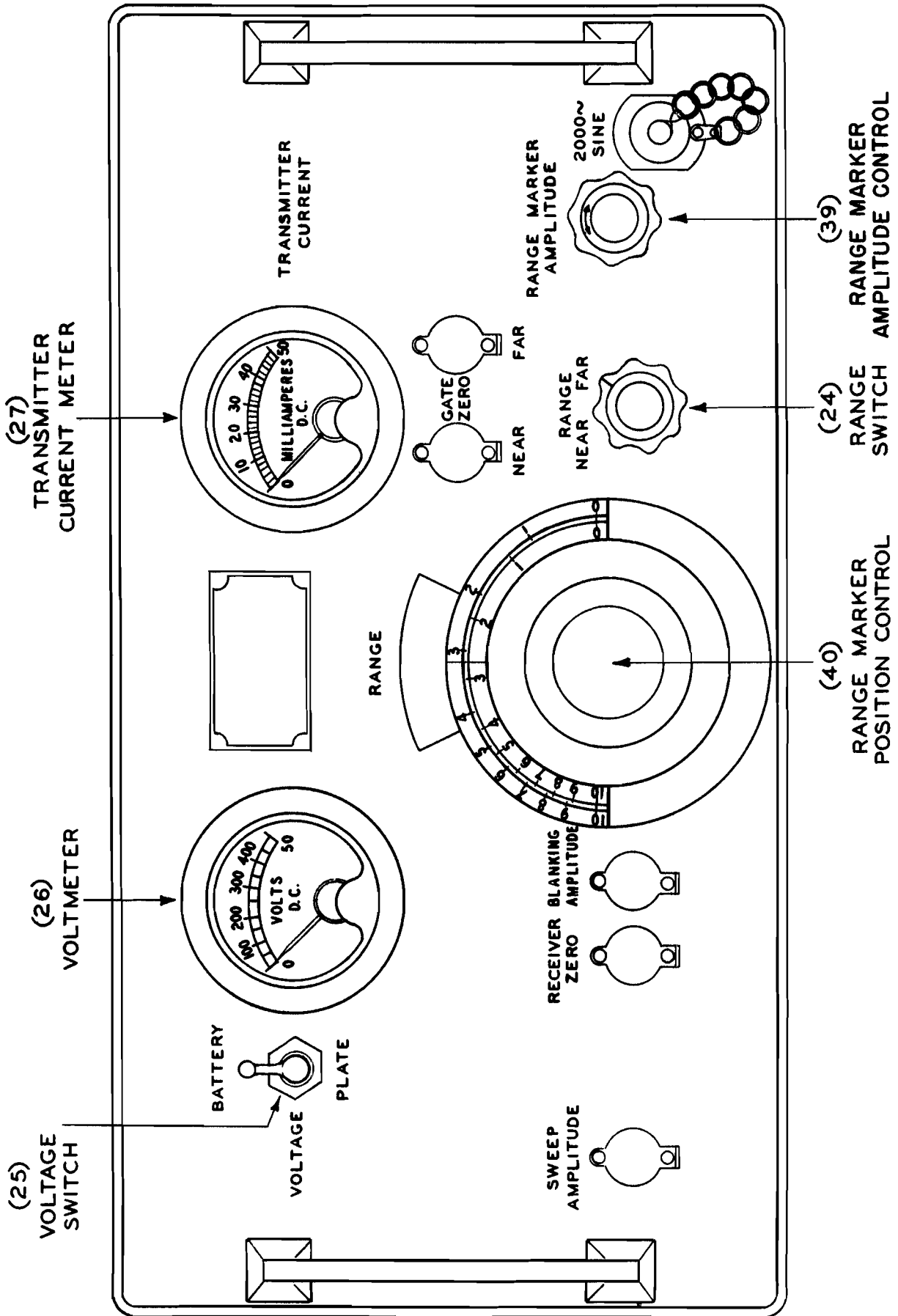


FIGURE 2 — SYNCHRONIZER BC-1043-B — FRONT VIEW

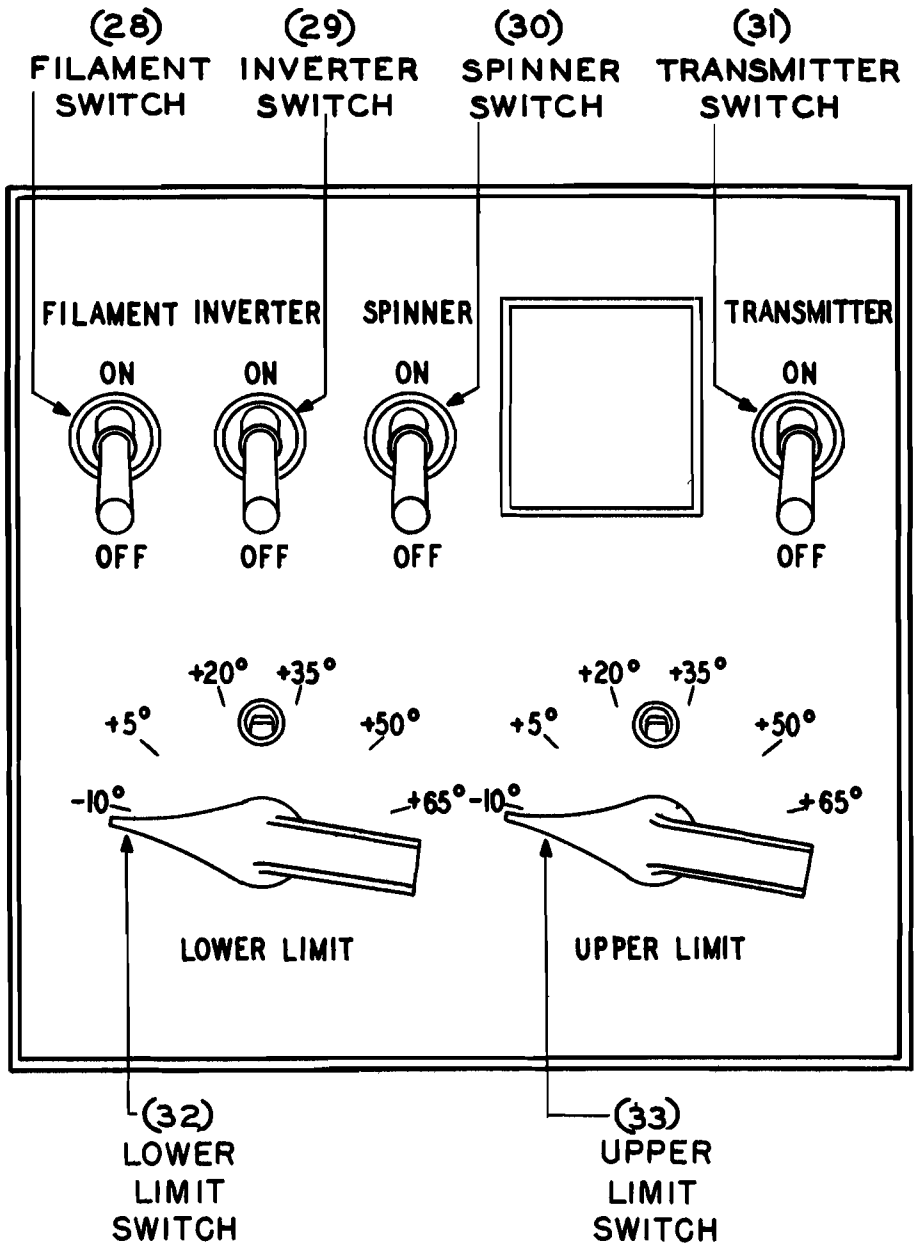


FIGURE 3 — CONTROL BOX BC-1044-B — FRONT VIEW

- (1) 24V-10A. INVERTER STARTING RELAY FUSE
- (2) 24V-20A. TRANSMITTER FUSE
- (3) 24V-40A. FILAMENT FUSE
- (4) 115V-5A. INDICATOR (OPERATORS) AND SYNCHRONIZER (REGULAR) FUSE
- (5) 115V-5A. INDICATOR (OPERATORS) AND SYNCHRONIZER (REGULAR) FUSE.
- (6) 24V-5A. INDICATOR (PILOTS) FUSE
- (7) 24V-15A. INDICATOR (OPERATORS) AND SYNCHRONIZER (REGULAR AND BEACON) FUSE
- (8) 24V-40A. ANTENNA MOTOR FUSE
- (9) 115V-10A. TRANSMITTER FUSE
- (10) 115V-10A. TRANSMITTER FUSE
- (11) 24V-150A. INVERTER FUSETRON
- (12) OPEN FASTENERS AND REMOVE COVERS TO REPLACE FUSES
- (13) 24VOLT OUTPUT SOCKET
- (14) 115 VOLT OUTPUT SOCKET
- (15) 24 VOLT OUTPUT SOCKET TO INVERTER
- (16) 115 VOLT INPUT SOCKET
- (17) 115. VOLT VARIAC SOCKET
- (18) 24 VOLT INPUT SOCKET
- (19) MOUNTING PLATE

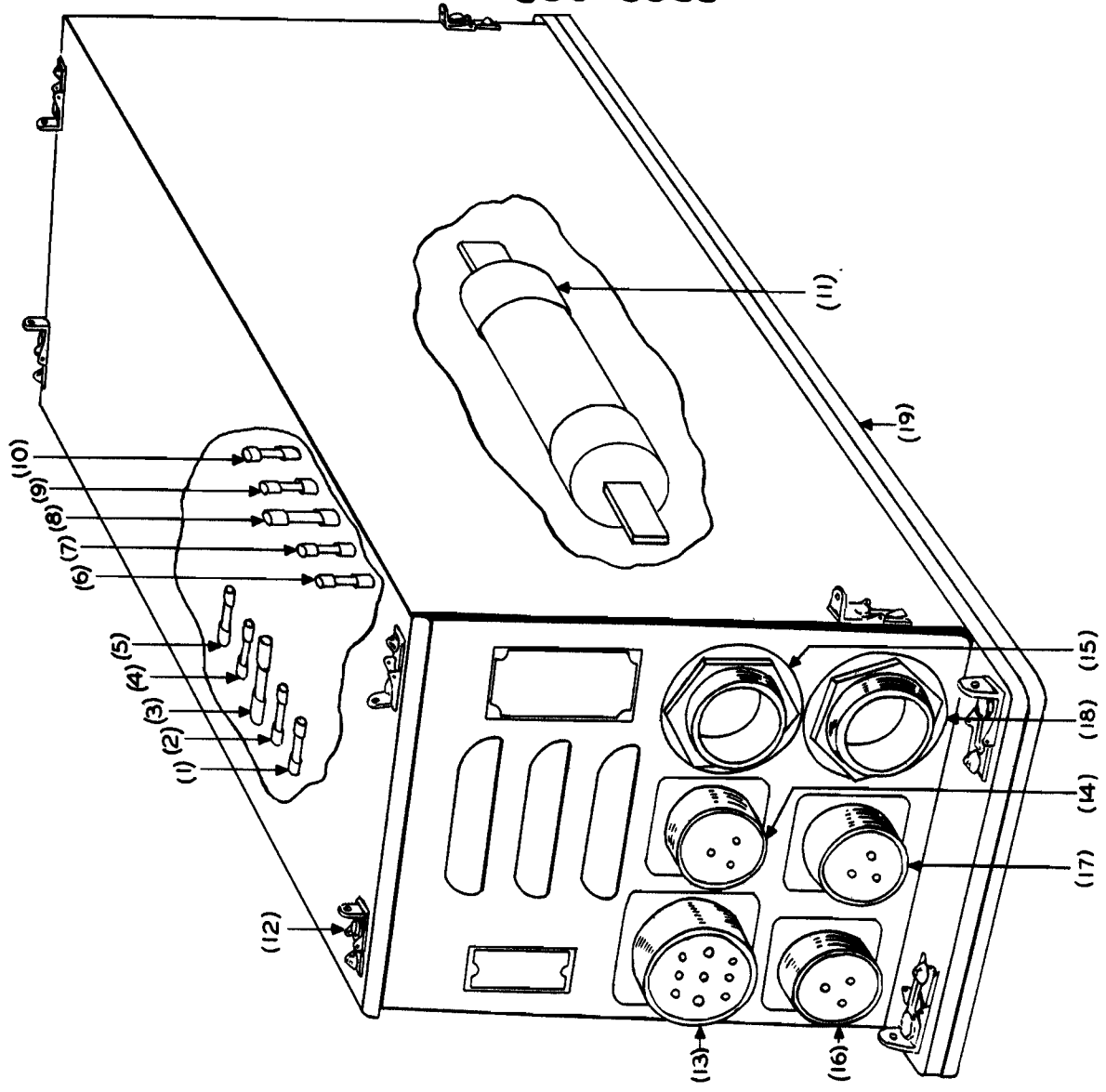


FIGURE 4 — CONTROL UNIT RM-30-A — POWER

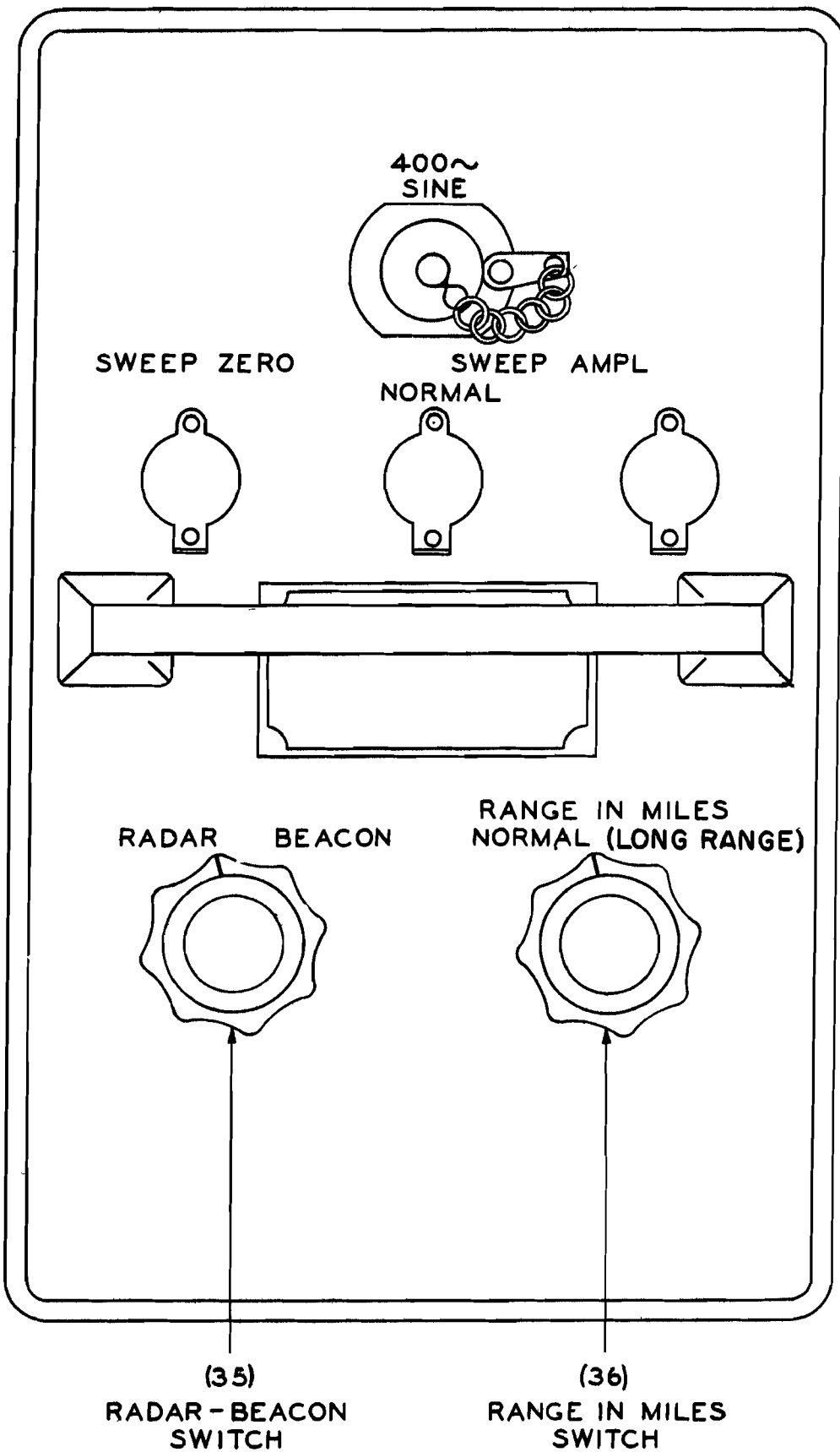


FIGURE 5 — SYNCHRONIZER BC-1045-B — BEACON

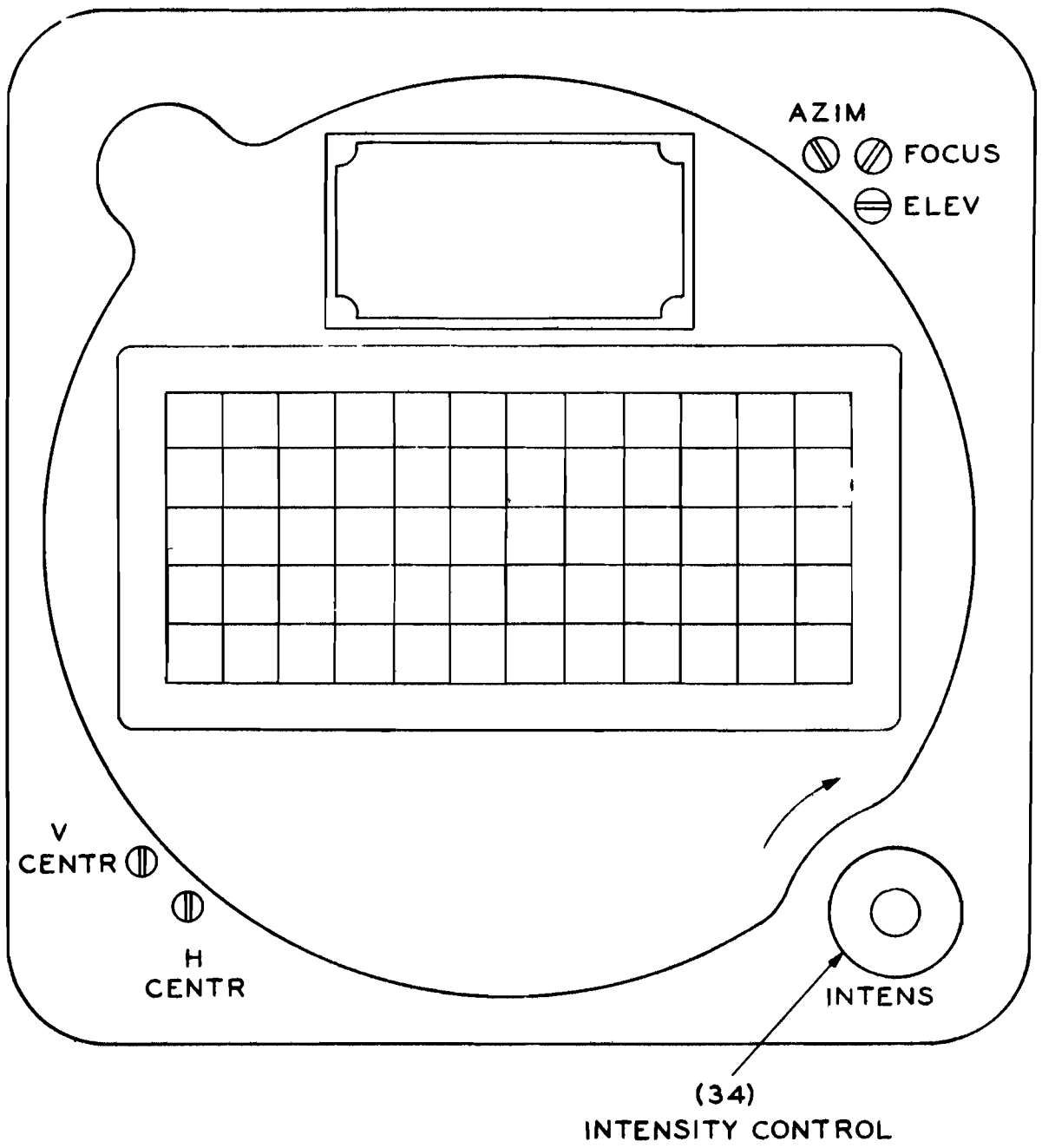


FIGURE 6 — INDICATOR BC-742-A — PILOT'S

