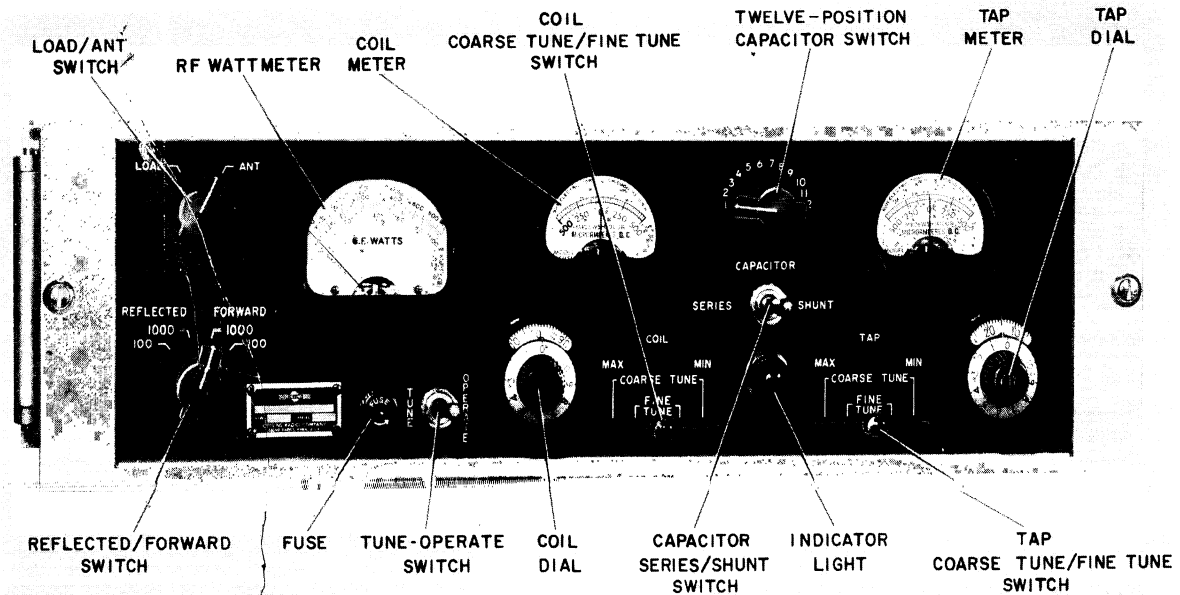


## OPERATING INSTRUCTIONS

### ANTENNA COUPLER AN/SRA-22

These instructions do not replace the technical manual, but do provide ready reference to standard operating procedures. Read your technical manual.



All operating controls for Antenna Coupler Group AN/SRA-22 are located on Coupler Control C-2698/SRA-22, as shown.

#### NOTE

To operate controls of Coupler Control C-2698/SRA-22, it is necessary to hold the TUNE-OPERATE switch in the TUNE position. The original model of Coupler Control C-2698/SRA-22 does not have a TUNE-OPERATE switch.

#### I. CONTROL SETTINGS PRIOR TO STARTING

**STEP 1** Set the CAPACITOR SERIES/SHUNT switch to SHUNT.

**STEP 2** Set the twelve-position CAPACITOR switch to position 1.

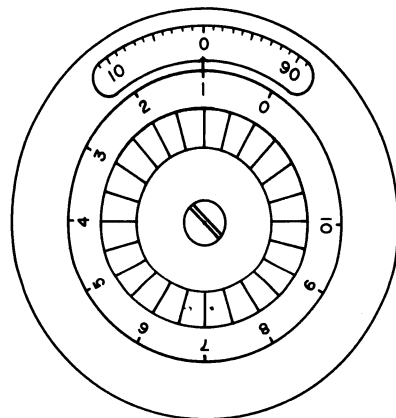
#### NOTE

Make certain that the REFLECTED/FORWARD switch is set to 1000 FORWARD.

**STEP 3** Set the LOAD/ANT switch to LOAD.

**STEP 4** Set the COIL and TAP dials to 100 as shown.

**STEP 5** Operate the COIL and TAP COARSE TUNE/FINE TUNE switches to obtain zero (center of scale) on the COIL and TAP meters respectively.



#### NOTE

If meter pointer is *left* of center, push COARSE TUNE/FINE TUNE switch to the *right*; if pointer is *right* of center, push switch *left*. This applies for both COIL and TAP COARSE TUNE/FINE TUNE switches.

## II. TUNING PROCEDURE

**STEP 1** Tune transmitter into dummy load (refer to transmitter operating chart).

### NOTE

Leave the transmitter TUNE-OPERATE switch in the TUNE position. Set forward power to 150 watts as read on wattmeter. All C-2698/SRA-22 coupler controls equipped with the VSWR protective device will unkey the transmitter automatically if the TUNE-OPERATE switch is in the OPERATE position and reflected power exceeds approximately 30 watts. This device is reset and inoperable with the TUNE-OPERATE switch in the TUNE position.

**STEP 2** Unkey the transmitter and set the LOAD/ANT switch to ANT. The transmitter is now tuned and *should not* be readjusted during the following tuning procedure for Antenna Coupler Group AN/SRA-22.

**STEP 3** Holding TUNE-OPERATE switch in TUNE position, key transmitter. Read forward power to see that it does not exceed 150 watts. Adjust RF EXCITER gain control if necessary. Antenna Coupler Group AN/SRA-22 must now be tuned for a *minimum* reflected power condition. Set REFLECTED/FORWARD switch to 1000 REFLECTED (or to 100 REFLECTED when reflected power is below 100 watts).

**STEP 4** Set the COIL dial to the proper one of the following settings:

FREQUENCY	COIL DIAL SETTING
2-6 mc	500
6-12 mc	350
12-16 mc	250
16-30 mc	200

### CAUTION

Do not exceed these settings. Damage to the CU-714/SRA-22 may result.

**STEP 5** Operate COIL COARSE TUNE/FINE TUNE switch in direction required to obtain zero on COIL

meter (left COARSE TUNE position) while watching rf wattmeter for a dip. (This dip occurs when reflected power is decreasing and suddenly starts increasing. It may be a sharp or a broad dip.) If a dip on rf wattmeter is not obtained before pointer of COIL meter reaches *zero*, release COIL COARSE TUNE/FINE TUNE switch and proceed to STEP 6. If a dip on rf wattmeter is obtained, proceed to STEP 9.

### NOTE

Proceed to STEP 9 when the dip in reflected power has been found. If no dip is found proceed to STEP 6.

**STEP 6** If a dip is not obtained, set TAP dial to 100 and operate TAP COARSE TUNE/FINE TUNE switch to obtain *zero* on TAP meter. Set COIL dial to 130 and operate COIL COARSE TUNE/FINE TUNE switch to obtain zero on COIL meter.

**STEP 7** Advance twelve-position CAPACITOR switch *one position at a time*, watching rf wattmeter for a dip. *At each switch position wait until indicator light goes out.* If no dip is obtained by the time position 12 is reached, switch CAPACITOR SERIES/SHUNT switch to SERIES. Turn twelve-position CAPACITOR switch one step at a time toward position 1, watching rf wattmeter for a dip.

**STEP 8** When a dip is obtained, switch REFLECTED/FORWARD switch to 1000 FORWARD position to see if forward power is still high. Switch REFLECTED/FORWARD switch back to 100 REFLECTED position.

**STEP 9** After dip is obtained, use FINE TUNE positions on COIL and TAP COARSE TUNE/FINE TUNE switches to reduce reflected power to a *minimum*.

**STEP 10** Unkey the transmitter.

**STEP 11** Adjust the COIL and TAP dials for a *zero* reading on the COIL and TAP meters.

**STEP 12** Record channel frequency, capacitor, coil, and tap settings on chart located on dust cover.

## III. VSWR PROTECTIVE DEVICE

**STEP 1** If, during full power operation, reflected power exceeds approximately 30 watts, transmitter will be unkeyed automatically. When this condition occurs, indicator light (which indicates capacitor running during tune-up) will flash a warning, and wattmeter will have nearly a full-scale deflection in the 100 REFLECTED position.

**STEP 2** To reset protective device, place TUNE-OPERATE switch in TUNE position, and check tuning

of coupler. If necessary, retune coupler according to tuning procedure. Release TUNE-OPERATE switch.

**STEP 3** If protective device repeatedly disables transmitter during full power operation but a good tune-up is indicated when TUNE-OPERATE switch is in TUNE position, a fault probably exists in the rf coaxial cable, the CU-714/SRA-22, or the antenna.

## IV. STOPPING THE EQUIPMENT

Refer to transmitter operating chart. Antenna Coupler Group AN/SRA-22 normally receives its power from the transmitter.