

OPERATING INSTRUCTIONS & SERVICING MANUAL



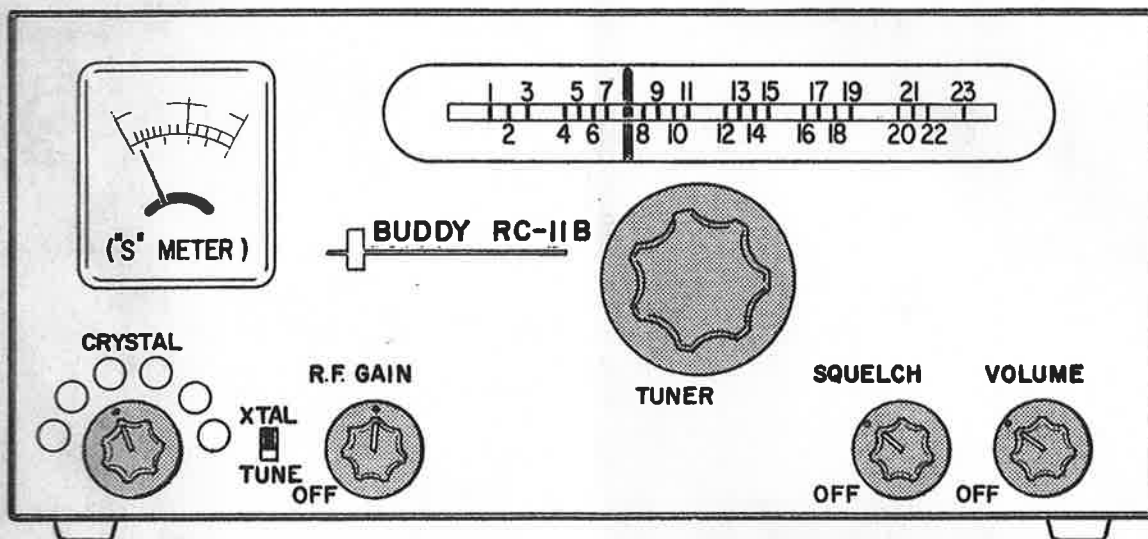
the outstanding
"BUDDY" Citizens Band BASE STATION
CUSTOM BUILT BY



180 NORTH VINEDO PASADENA, CALIFORNIA

OWNER'S MANUAL

BUDDY RC-11B BASE STATION RECEIVER OPERATING INSTRUCTIONS



FRONT PANEL CONTROLS

POWER

Controlled by power switch located on front panel of TX-11B Base Station Transmitter.

VOLUME CONTROL

Set as desired by operator.

SQUELCH

Used to silence background noise when not receiving a signal. To operate: turn control slowly clockwise until background noise JUST disappears when not receiving a signal.

R.F. GAIN CONTROL

Controls the amount of RF amplification in the receiver. Start control in fully clockwise position and turn counter clockwise until a satisfactory listening level is reached. Control is OFF in fully counter clockwise position.

XTAL-TUNE SWITCH

Changes receiver from crystal controlled

to tunable to allow for tuning by Slide Rule Tuning Dial.

CRYSTAL SELECTOR CONTROL

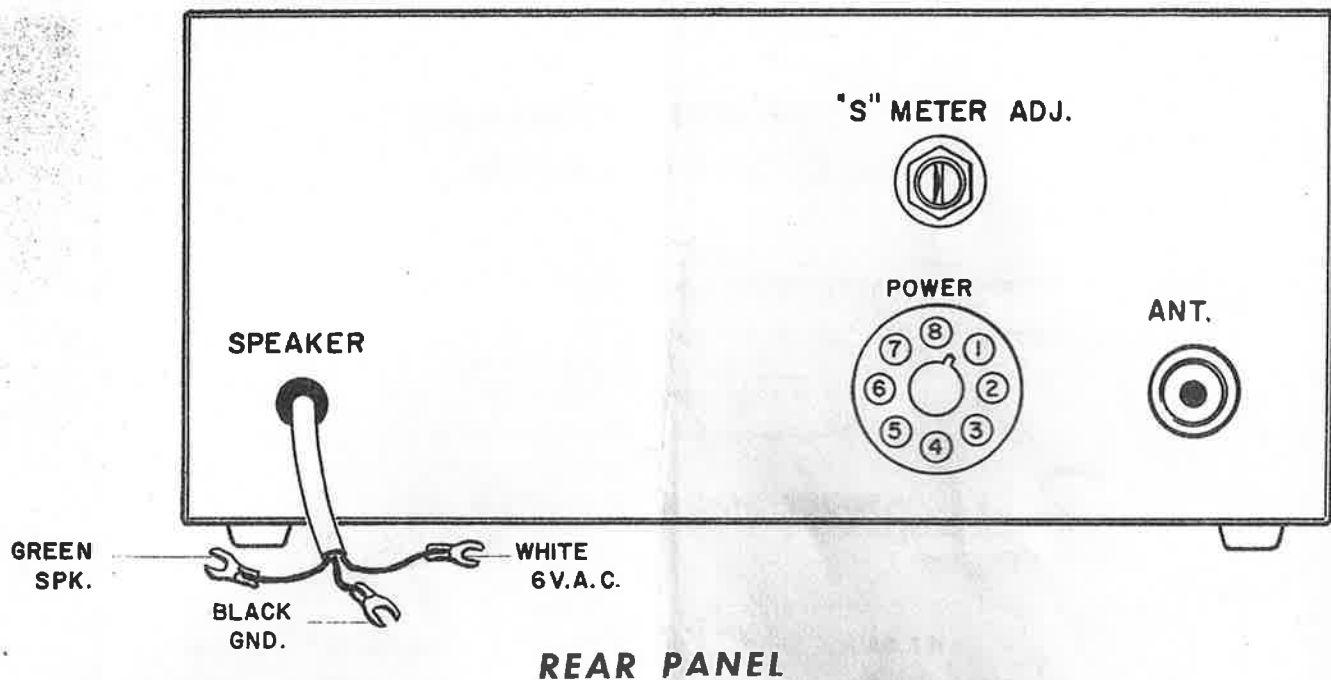
Selects one of six crystal receive positions. XTAL-TUNE switch must be in XTAL position for crystal controlled operation. Crystals available for additional cost. Refer to enclosed crystal sheet (page 7) for desired frequencies when ordering crystals.

SLIDE RULE TUNING DIAL

Allows for tuning complete Citizens Band channels 1 through 23 manually. XTAL-TUNE switch must be in TUNE position for manual operation.

"S" METER

The "S" Meter indicates the relative strength of the signal being received and is used in conjunction with the slide rule tuning dial. Tune for the highest reading on the meter. This will be the best listening position for the station being received.



REAR PANEL

SPEAKER CORD

Provided with set for hookup to BUDDY "On The Air" speaker.

ANTENNA CONNECTOR

Used to connect receiver to transmitter or receiving antenna. Refer to page 4 for correct coupling.

"S" METER ZERO ADJUSTMENT

To adjust "S" METER to zero, disconnect antenna and adjust meter to read zero. Set should be on about 30 minutes before adjustment to allow for proper warm-up. RF gain must be fully clockwise.

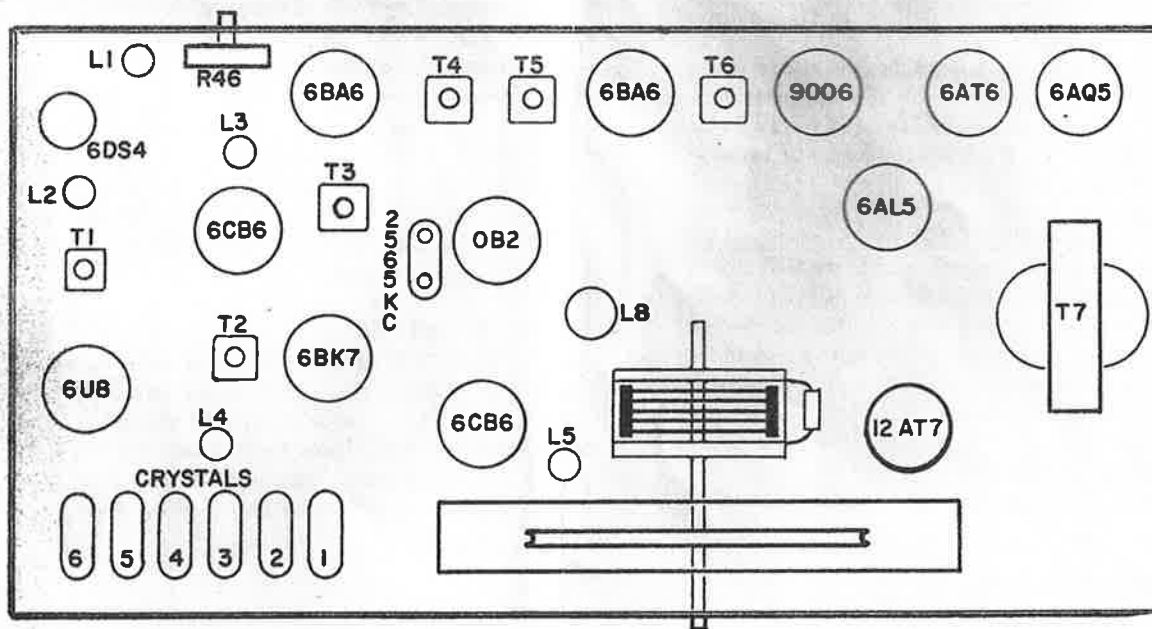
POWER PLUG

For connecting receiver to transmitter with supplied cable. (See page 4)

EIGHT PIN MALE CONNECTOR

Hooked up as follows:

- Pin 1. 6.3 volts AC-filaments
- 2. Common ground
- 3. Not connected
- 4. 250-300 volts B+
- 5. Not connected
- 6. Not connected
- 7. Not connected
- 8. 6.3 volts AC "ON THE AIR" speaker light.



VOLTAGE READINGS

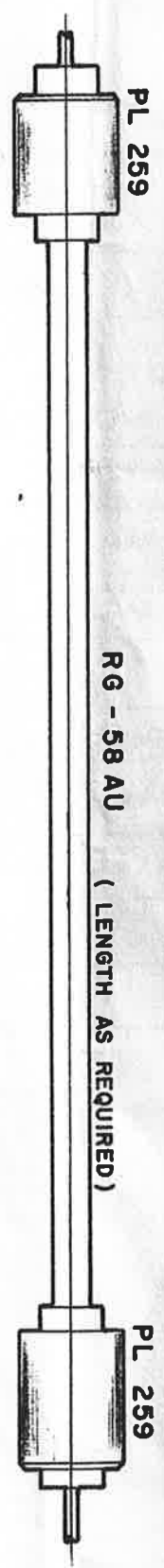
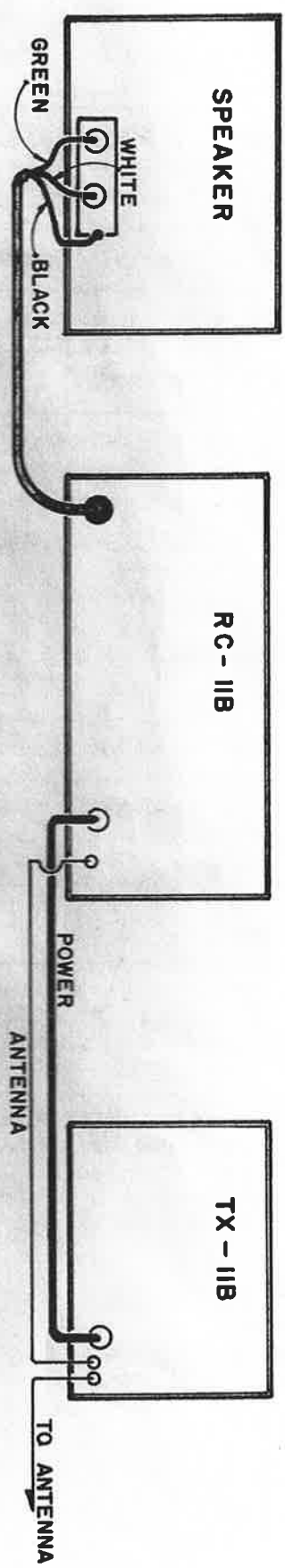
V.NO.	VALVE SOCKET TYPE	PIN.1	PIN.2	PIN.3	PIN.4	PIN.5	PIN.6	PIN.7	PIN.8	PIN.9	PIN.10
V 1	6DS4		+100 V.						+6 V.		6.3 V.A.C.
V 2	6CB6	-1 V.	+1 V.	6.3 V.A.C.		+190 V.	+70 V.				
V 3	6UB	+80 V.		+110 V.		6.3 V.A.C.	+30 V.XTAL. +60 V.TUNE			-7 V.	
V 4	6BK7	+80 V.	-30 V.			6.3 V.A.C.	+110 V.	-12 V.			
V 5	6BA6	-2.4 V.			6.3 V.A.C.	+190 V.	+110 V.	+1.4 V.			
V 6	6BA6	-2.4 V.			6.3 V.A.C.	+180 V.	+115 V.	+1.4 V.			
V 7	9006	-3.5 V.			6.3 V.A.C.						
V 8	12AT7	+25 V.OFF +55 V.ON	-1 V.				+160V.OFF +200V.ON	+25V.OFF +55 V.ON	+25V.OFF +50V.ON	6.3 V.A.C.	
V 9	6AQ5	0.	+9 V.		6.3 V.A.C.	190 V.	200 V.				
V 10	6AT6	0.	+1.3 V.		6.3 V.A.C.			100 V.			
V 11	6AL5	-1 V.	-1.3 V.		6.3 V.A.C.	-1 V.		-1.3 V.			
V 12	6CB6	-3.4 V.		6.3 V.A.C.		+75 V.	+50 V.				
V 13	OB2	+105 V.				+105 V.					

Voltage readings taken with unit connected to BUDDY TX-11B Base Station Transmitter operating from nominal 117 volts AC line, with 50 ohm dummy antenna plugged in and controls set as follows:

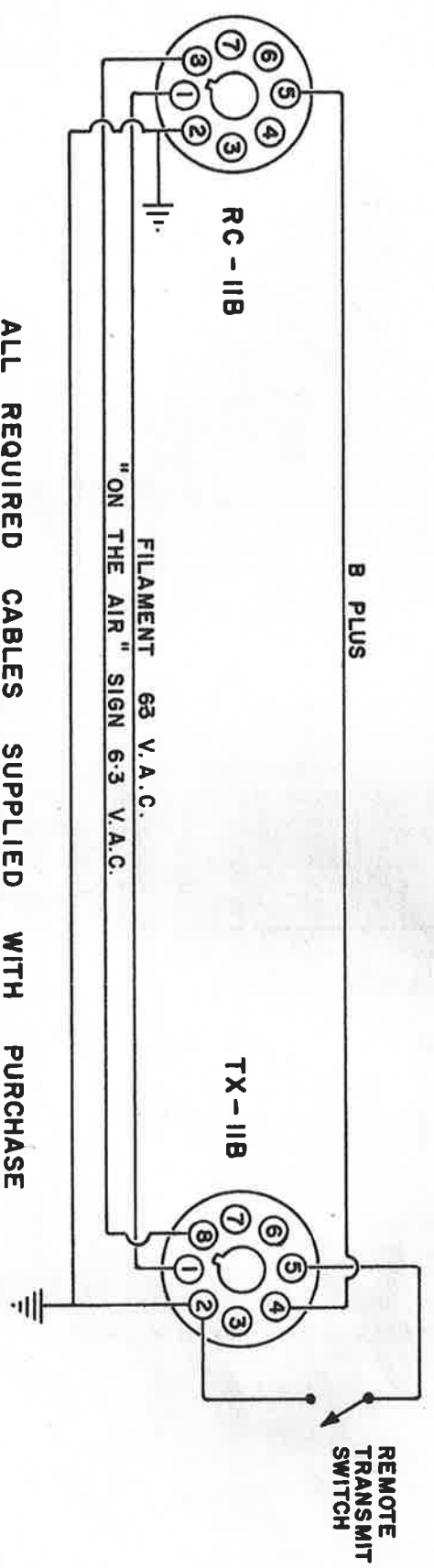
R.F. Gain fully clock-wise
Volume control counter clock-wise
Squelch control counter clock-wise
"S" meter adjusted for zero

All readings $\pm 20\%$ and are measured with respect to chassis ground. All voltages taken with an eleven meg ohm V.T.V.M.

TX - 11B RC - 11B

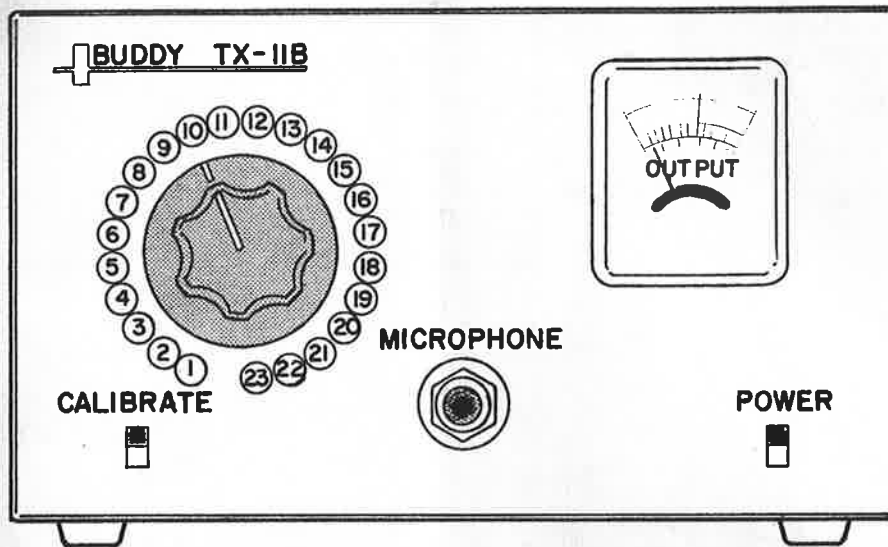


ANTENNA COUPLING



ALL REQUIRED CABLES SUPPLIED WITH PURCHASE
OF BOTH THE BUDDY TX-11B AND RC-11B

BUDDY TX-11B BASE STATION TRANSMITTER



FRONT PANEL

POWER SWITCH

Turns operating power on and off.

OUTPUT METER

Illuminated output meter indicates relative R.F. power out to the antenna. If needle on the meter does not move when the microphone button is depressed, it indicates the crystal or oscillator is not operating. If needle goes all the way over to 5 on the lower scale STOP TRANSMITTING AT ONCE, as antenna is not connected properly. Check antenna fittings and cables. Normal voice modulation while transmitting will cause needle to fluctuate higher.

TRANSMIT CRYSTAL SELECTOR SWITCH

Turning the knob will allow you to transmit from any of the 23 transmit positions

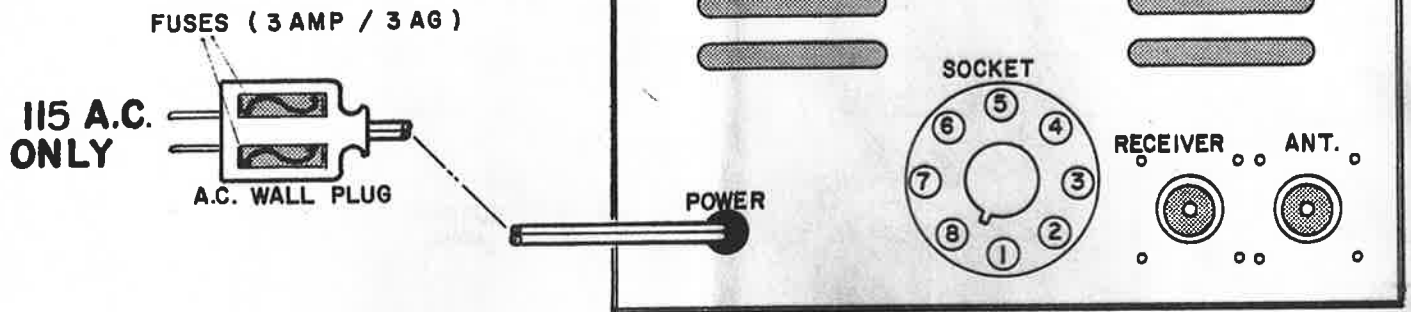
on the TX-11B Base Station Transmitter. See crystal sheet on page 7 for ordering crystals. Transmitter crystal normally installed is for channel 11 unless otherwise specified at the time of purchase.

CALIBRATE SWITCH

The built-in calibrate switch is used to tune your receiver to the transmit crystal that you have selected to use. To use, place the calibrate switch in the up or ON position and tune your receiver for the highest "S" meter reading. BEFORE TRANSMITTING, RETURN THE CALIBRATE SWITCH TO THE OFF POSITION.

MICROPHONE

Use a ceramic or crystal "push to talk" microphone. See schematic on page 10 for connections.



REAR PANEL

POWER CORD

For use only on 115 volts AC 60 cycles. The AC power cord is supplied with two 3amp/3AG fuses, which are located in the AC plug. To remove these fuses use a pointed tool and push out from the rear of the plug.

ANTENNA CONNECTOR

For connecting your present 50 or 72 ohm 11 meter antenna to the TX-11B Base Station Transmitter. Connector used is the PL-259 type.

RECEIVER ANTENNA CONNECTOR

Used to connect your receiver through the TX-11B transmitter to the receiving antenna.

REAR SOCKET (8 pin female)

Used for supplying power to the Base Station Receiver.

PIN LAYOUT OF REAR SOCKET

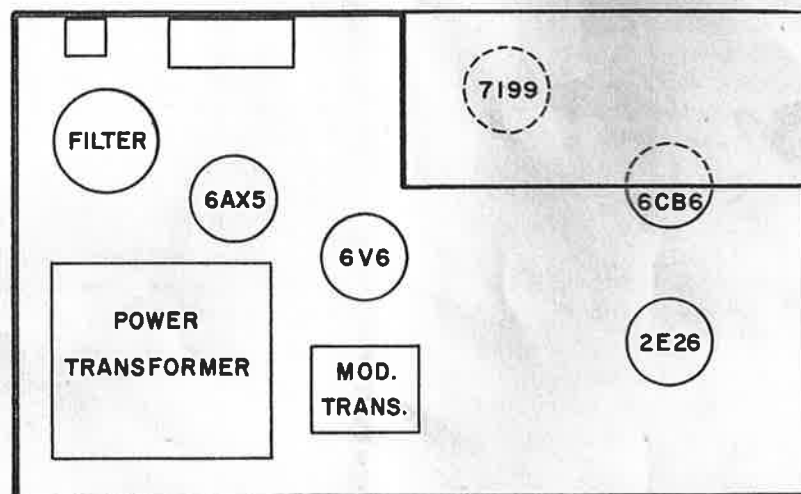
The pin layout of the rear socket is as follows:

- Pin 1. 6.3 volts AC filament
- 2. Common ground
- 3. Not connected
- 4. B+
- 5. Automatic muting (grounded during transmit)
- 6. 6 volts AC
- 7. 6 volts AC except during transmit
- 8. 6.3 volts AC for "ON THE AIR" speaker light.

ANTENNA LOADING

Your TX-11B transmitter has been factory tuned to a 52 ohm antenna and additional loading is not necessary.

TUBE LAYOUT




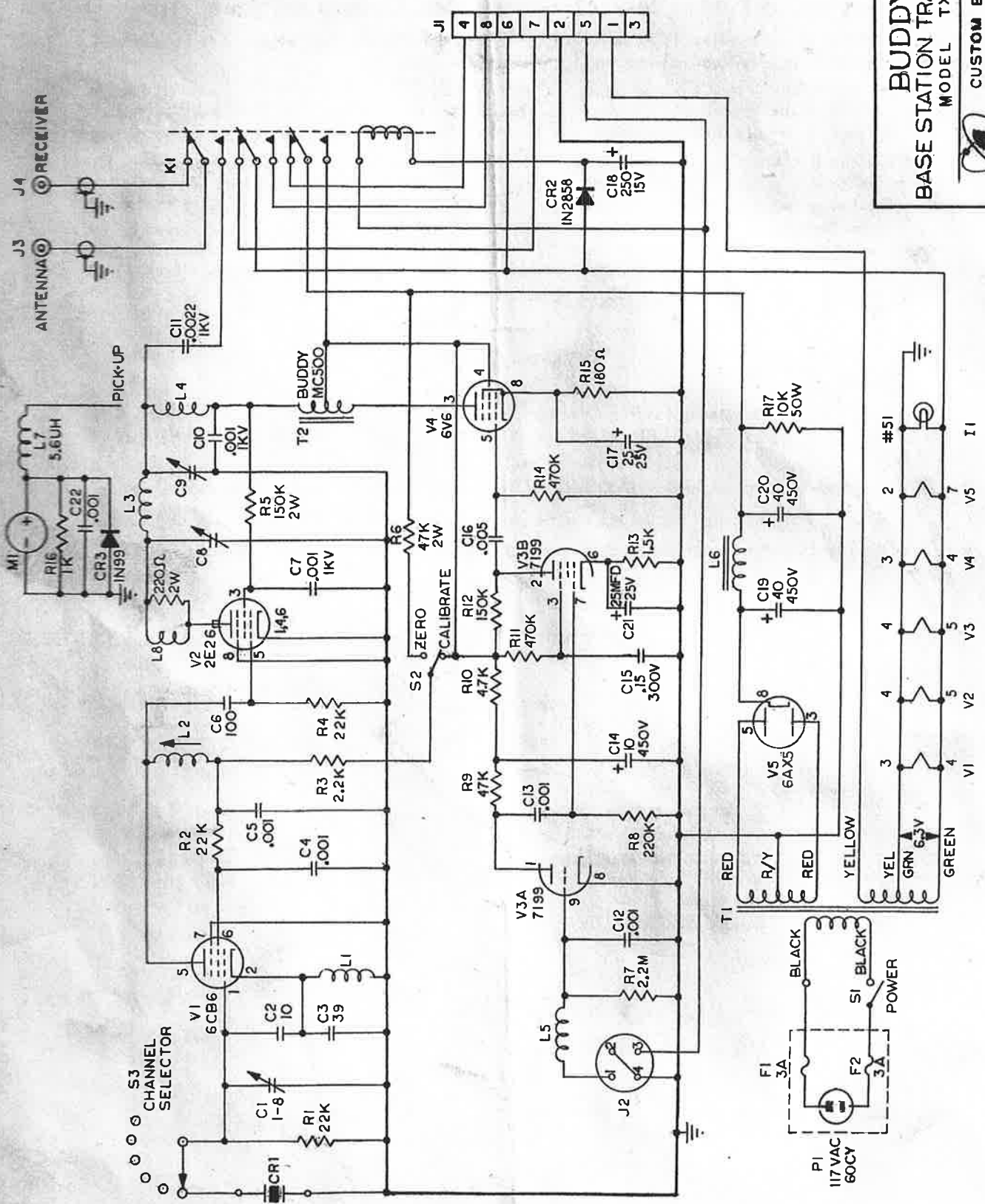
TRANSMIT AND RECEIVE CRYSTALS FOR BUDDY TX-11B and RC-11B

Channel Number	Channel Frequency	TRANSMIT Crystal Frequency	RECEIVE Crystal Frequency
1	26.965 MC	13482.50 KC	24.655 MC
2	26.975 MC	13487.50 KC	24.665 MC
3	26.985 MC	13492.50 KC	24.675 MC
4	27.005 MC	13502.50 KC	24.695 MC
5	27.015 MC	13507.50 KC	24.705 MC
6	27.025 MC	13512.50 KC	24.715 MC
7	27.035 MC	13517.50 KC	24.725 MC
8	27.055 MC	13527.50 KC	24.745 MC
9	27.065 MC	13532.50 KC	24.755 MC
10	27.075 MC	13537.50 KC	24.765 MC
11	27.085 MC	13542.50 KC	24.775 MC
12	27.105 MC	13552.50 KC	24.795 MC
13	27.115 MC	13557.50 KC	24.805 MC
14	27.125 MC	13562.50 KC	24.815 MC
15	27.135 MC	13567.50 KC	24.825 MC
16	27.155 MC	13577.50 KC	24.845 MC
17	27.165 MC	13582.50 KC	24.855 MC
18	27.175 MC	13587.50 KC	24.865 MC
19	27.185 MC	13592.50 KC	24.875 MC
20	27.205 MC	13602.50 KC	24.895 MC
21	27.215 MC	13607.50 KC	24.905 MC
22	27.225 MC	13612.50 KC	24.915 MC
23	27.255 MC	13627.50 KC	24.945 MC

If your dealer cannot supply you with the above crystals,
 you may order direct from AUTRONICS CORPORATION
 180 North Vinedo, Pasadena, California

BUDDY
BASE STATION TRANSMITTER
 MODEL TX-IIB

CUSTOM BUILT BY
PASADENA, CALIFORNIA

SERVICE INSTRUCTIONS

ALIGNMENT CORRECTION FOR THE SLIDE RULE TUNER OF THE RC-11B

The following information is to be followed to the letter if correct alignment is to be obtained. From time to time slight corrections may be needed with use.

It is recommended that a signal generator or the "ZERO BEAT" of the TX-11 transmitter be used. DO NOT ATTEMPT TO ALIGN THE RECEIVER BY USING "ON THE AIR" SIGNALS. Before starting, be sure that the receiver has been on at least one hour, to insure correct stability.

Tune the frequency meter or the ZERO BEAT to the middle of the band (channel eleven). Remove the chrome plug from the top of the receiver. Now, without turning the slug directly below the plug hole, insert a plastic alignment tool (No. GC-8722). Note where the highest "S" Meter reading for channel eleven is; this may be slightly higher or lower than the marked eleven on the slide rule dial. If so, corrections are made by the VERY SLIGHTEST movement of the slug mentioned above. (1-64th of a turn may be too much) NOTICE. . . DO NOT CHANGE ANY OTHER TRIMMERS ON THE TUNER. THIS IS A MUST!!!

ANTENNA LOADING

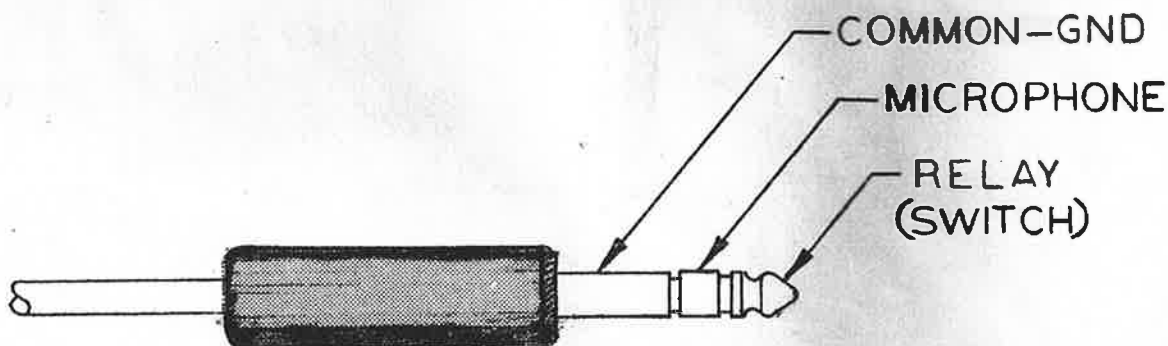
Your TX-11B has been factory tuned to a 52 ohm antenna and additional loading is not necessary. However, if the antenna loading must be changed, the following is the correct method. THIS SHOULD NOT BE ATTEMPTED WITHOUT THE NECESSARY INSTRUMENTS AND KNOWLEDGE.

PLATE: Should be tuned for the MAXIMUM reading on the front panel meter, with no modulation.

LOADING: Should be tuned for the MAXIMUM swing of the needle on the meter, with modulation.

The Plate and Loading coils are located on the bottom of the TX-11 and are so marked.

MICROPHONE CONNECTIONS



STANDARD 3 CONDUCTOR
1/4 IN. PLUG

CITIZENS BAND "10-CODE"

General Station Operation

- 10-1 Receiving poorly.
- 10-2 Signals good.
- 10-3 Stop transmitting.
- 10-4 Okay-Affirmative-Acknowledged.
- 10-5 Relay this message.
- 10-6 Busy, stand by.
- 10-7 Leaving the air.
- 10-8 Back on the air and standing by.
- 10-9 Repeat message
- 10-10 Transmission completed, standing by.
- 10-11 Speak slower.
- 10-13 Advise weather and road conditions.
- 10-19 Return to base.
- 10-20 What is your location? My location is _____.
- 10-21 Call _____ by telephone.
- 10-22 Report in person to _____.
- 10-23 Stand by.
- 10-24 Have you finished? I have finished
- 10-25 Do you have contact with _____?

Emergency or Unusual

- 10-30 Does not conform to Rules & Regulations.
- 10-33 Emergency traffic this station.
- 10-35 Confidential information.
- 10-36 Correct time.

Accident and Vehicle Handling

- 10-54 Accident
- 10-55 Wrecker or tow truck needed.
- 10-56 Ambulance needed.

Net Message Handling

- 10-60 What is next message number?
- 10-64 Net is clear.
- 10-66 Cancellation.
- 10-68 Repeat dispatch on message.
- 10-69 Have you dispatched message _____.

Personal

- 10-82 Reserve room for _____.
- 10-83 Advise present phone number of _____.

Technical

- 10-89 Repairman needed.
- 10-90 Repairmen will arrive at your station _____.
- 10-92 Poor signal, have transmitter checked.
- 10-93 Frequency check.
- 10-94 Give a test without voice for frequency check.
- 10-95 Test with modulation.
- 10-99 Unable to receive your signals.

FACTORY WARRANTY

This BUDDY product is warranted against any defects of material or workmanship, for a period of 90 days from the date of purchase. We agree to repair or replace, without charge, any portion or part of this equipment which, in our judgement proves to be defective; subject to the following conditions:

1. The defective unit is delivered, intact, to the factory or authorized service center.
2. It is understood that this warranty does not include transportation to and from the factory or authorized service center.
3. This warranty is void if the equipment has been altered by unauthorized persons; subjected to misuse, neglect, accident, faulty wiring (not wired by the factory), improper installation, or if used in violation of the instructions furnished by the factory.
4. The warranty is void if the purchaser has not filed the enclosed warranty card with the factory within 10 days of the date of original purchase.
5. This warranty applies to the original purchaser only and is not transferable. Further, it is the only warranty authorized by the factory and supercedes all other warranties, expressed or implied.
6. AUTRONICS CORPORATION does not authorize the purchase of replacement parts, and will under no conditions reimburse anyone for such purchases.
7. AUTRONICS CORPORATION reserves the right to make circuit or component changes, or to incorporate new features without incurring obligations to owners of previously purchased units.

If your equipment arrives in damaged condition, immediately call the Motor Freight Company or Railway Express Agency who delivered it. Save all packing materials for their inspection. They will send out a claims agent who will inspect the unit and give you instructions for filing a claim.

AUTRONICS CORPORATION
PHONE (213) 681-3545

180 NORTH VINEDO

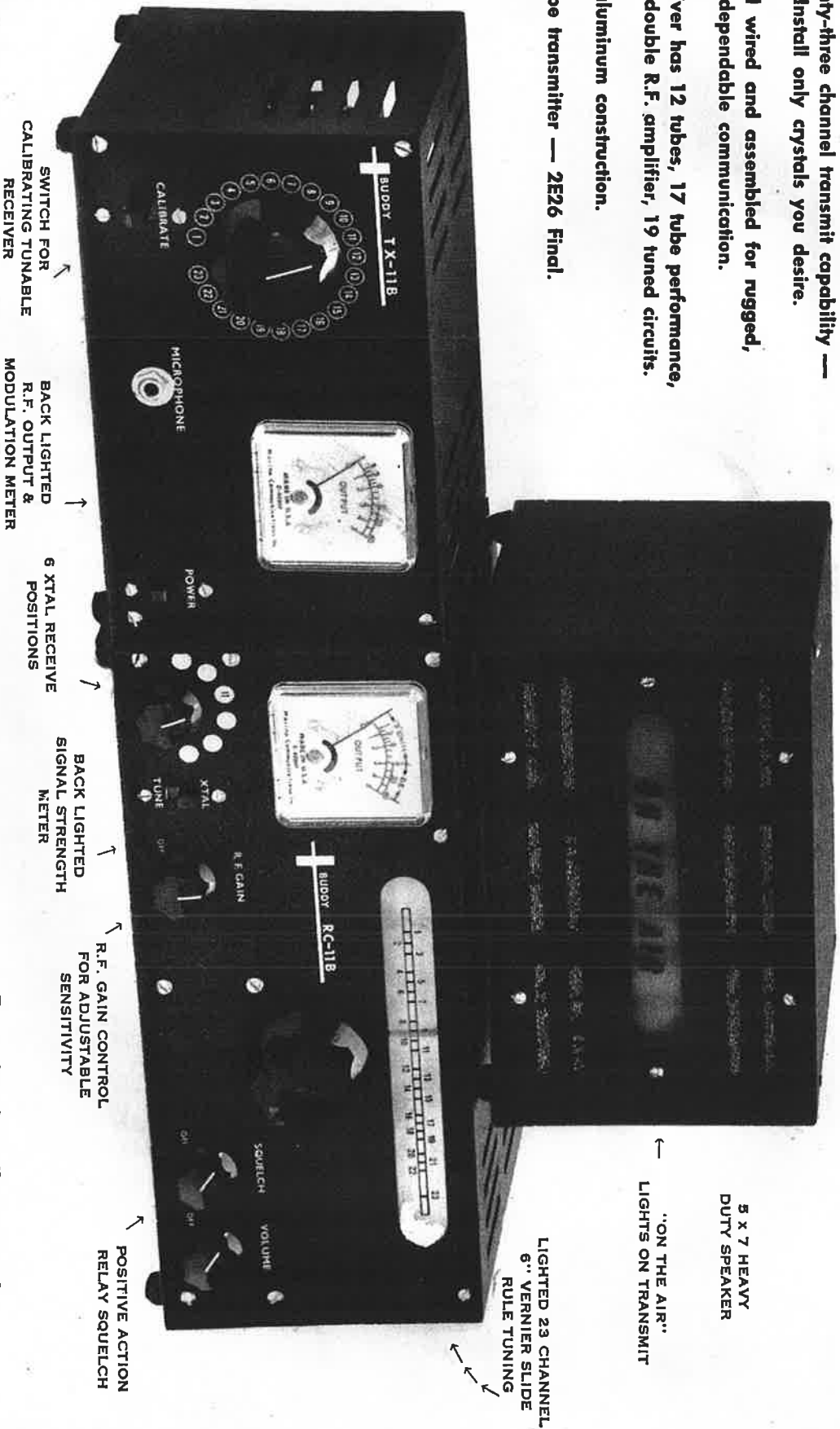
PASADENA, CALIFORNIA
TWX (312) 449-2854

the outstanding

"BUDDY" C.B. BASE STATION

for the Operator who Demands QUALITY

- Twenty-three channel transmit capability — Install only crystals you desire.
- Hand wired and assembled for rugged, dependable communication.
- Receiver has 12 tubes, 17 tube performance, double R.F. amplifier, 19 tuned circuits.
- All aluminum construction.
- 5 tube transmitter — 2E26 Final.



5 X 7 HEAVY
DUTY SPEAKER

"ON THE AIR"
LIGHTS ON TRANSMIT

LIGHTED 23 CHANNEL,
6" VERNIER SLIDE
RULE TUNING

POSITIVE ACTION
RELAY SQUELCH

R.F. GAIN CONTROL
FOR ADJUSTABLE
SENSITIVITY

BACK LIGHTED
SIGNAL STRENGTH
METER

6 XTAL RECEIVE
POSITIONS

BACK LIGHTED
R.F. OUTPUT &
MODULATION METER

SWITCH FOR
CALIBRATING TUNABLE
RECEIVER

Transmitter is easily converted
to the 10 meter amateur band
at 30 watts input to final.

Custom Built by **A**tronics
CORPORATION

The Buddy "C.B." Base Station!

The Finest Citizen Band Base Station on the Market, with No Exception.

TX-11B TRANSMITTER

30 WATT CONSTRUCTION* — 23 CHANNEL XTAL SELECTOR — BACK LIGHTED OUTPUT METER INDICATES R.F. OUTPUT AND MODULATION — TRANSMIT CRYSTALS ARE FUNDAMENTAL TYPE OPERATED AT THE SECOND HARMONIC.

POWER OUT: To 52 ohm non inductive load 3.4 Watts.

HUM OR NOISE ON CARRIER: At least 60 db down at 30% modulation level. The clear and crisp signal will quickly identify a TX-11.

OUTPUT IMPEDANCE: Adjustable Pi net output matches any 50-75 ohm antenna.

RELAY SWITCHING: Internal relay switches antenna from receive to transmit, removes Bt from receiver and applies voltage to "on the air" light in "Buddy" speaker.

* For conversion to the 10 Meter Amateur Band at 30 Watts input to final, send \$1.25 to Autronics for full instructions.

PLATE POWER TO FINAL: 5 Watts Max. (250 Volts @ 20 MA.)

MODULATION: 95 to 100% Plate modulated with clipping of peaks by Special Transformer saturation circuitry.

MICROPHONE: Hi impedance crystal or ceramic.

POWER SUPPLY: Built-in A.C. Power Supply furnishes all power necessary for "Buddy" RC-11B Receiver.

SIZE: 8 1/4 inches wide, 5 inches high, 6 1/2 inches deep.

THE BUDDY RC-11B RECEIVER

R. F. AMPLIFIER: 6SD4 Nuvistor and 6CB6 for Dual R. F. Amplifier with low noise. Five tuned tanks.

NOISE LIMITER: A full wave series noise limiter. One of the most effective noise limiters in which both the positive and negative noise peaks are clipped.

SQUELCH: Relay type; Any 2 microvolt signal above setting will break the squelch.

TUNING: Full 23 channel, lighted, vernier tuned, slide rule dial six inches long.

SENSITIVITY: .1 microvolt for 10 db signal to noise ratio at 30% at 1000 cps. modulation.

SELECTIVITY: 6 db bandwidth 8 KC ± 2 KC. Adjacent channel better than 70 db attenuation.

6 CHANNEL: Crystal controlled, dual conversion, super hetrodyne.

AUDIO OUTPUT: Up to 3 watts audio available to drive accessory speaker.

SIZE: 12 inches wide, 5 inches high and 6 1/2 inches deep.

All three units are finished in Fine Black Krinkle cabinets, panels are Telephone Black with silk screened White lettering.

BUDDY BASE STATION: (TX-11B, RC-11B and "ON THE AIR" Speaker) with Channel 11 Transmit crystal, less microphone **\$299.95**

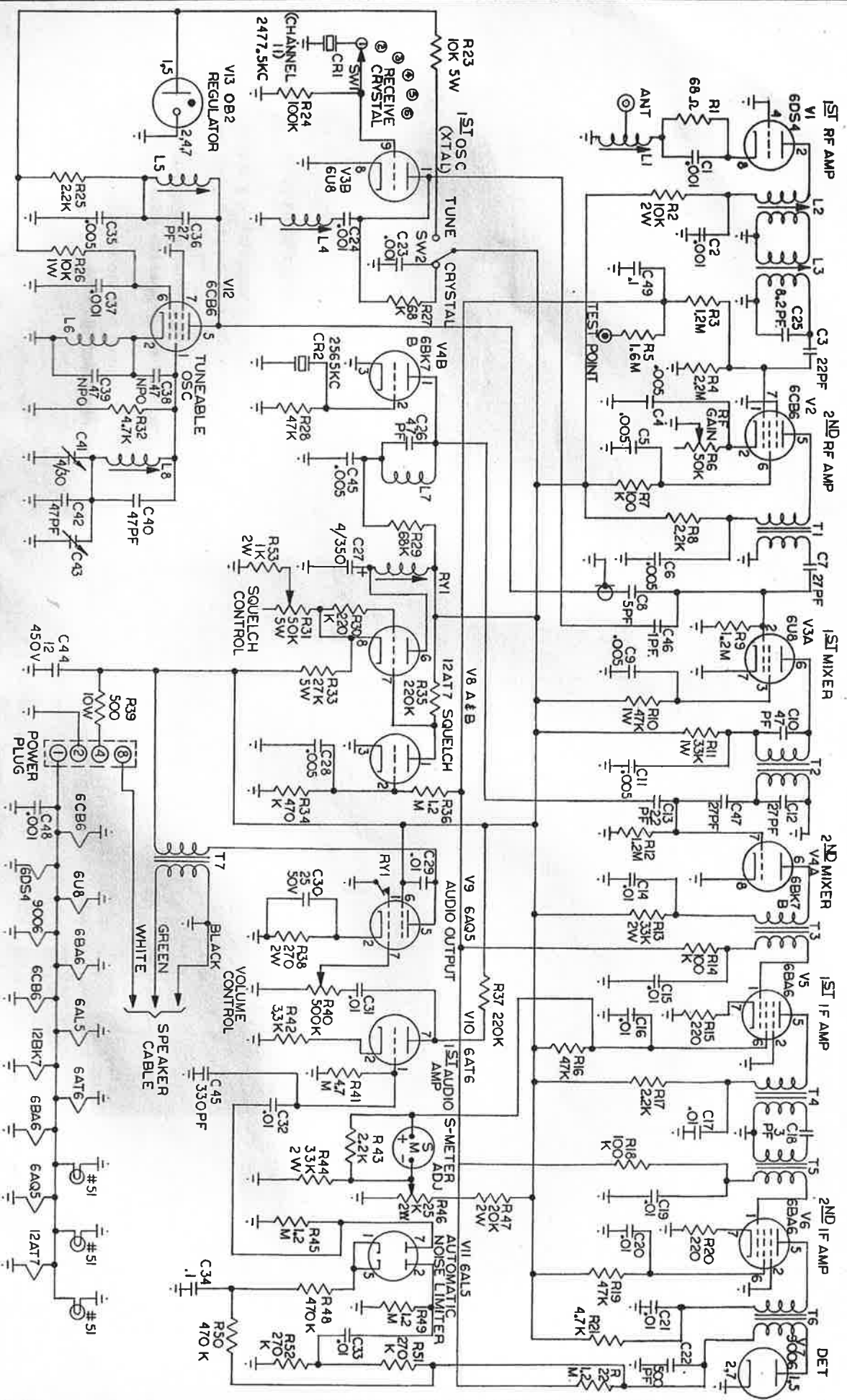
Units may be purchased separately . . .

TX-11B: 23 Channel with Channel 11 Transmit Crystal \$124.95

RC-11B: With all necessary Cables 179.95

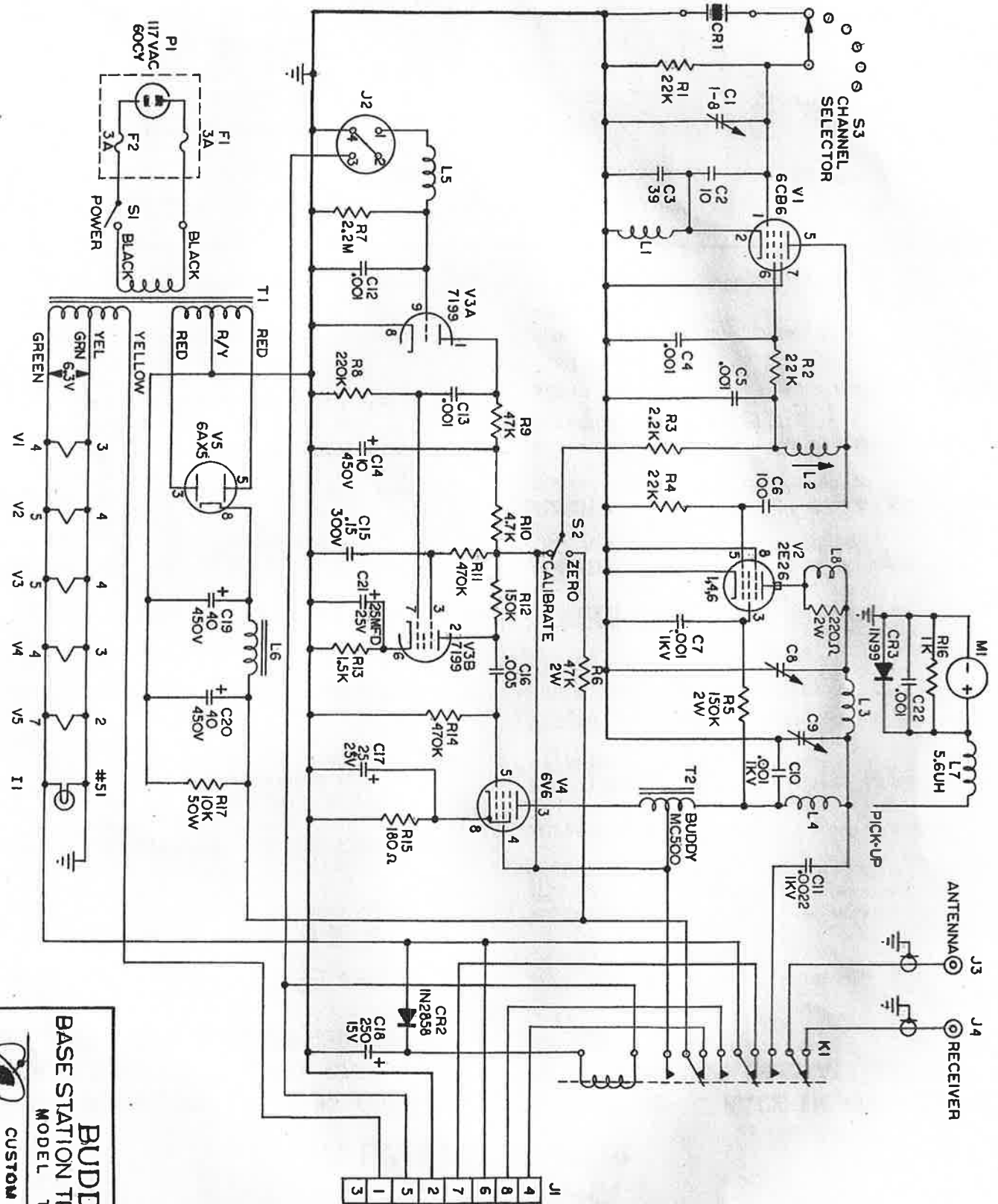
"ON THE AIR" Speaker 17.95

Transmit or Receive Crystals (Specify Channel) each 2.95



BUDDY
BASE STATION RECEIVER
 MODEL RC-11B

CUSTOM BUILT BY
Uttronics Corporation
 PASADENA, CALIFORNIA



BUDDY
BASE STATION TRANSMITTER
 MODEL TX-11B

CUSTOM BUILT BY
Pasadena Corporation
 PASADENA, CALIFORNIA



BULLETIN No. B101

Price \$2.00

Printed in U.S.A.