

This Manual is provided
FREE OF CHARGE from CBTricks.com
Someone who wanted to help you repair your equipment
took the time to scan this manual.

If you paid anyone other than CBTricks.com you paid
some lowlife that is profiting from the free labor of others.

If you would like to help us put more manuals online
support CBTricks.com not some clown on Ebay.

The supporters of CBTricks.com paid for the hosting so
you would have this file.

Thank you for any support you can give.

IMPORTANT NOTICE

The transmitter section of this transceiver may only be serviced by, or under the direct supervision of a qualified technician having a valid First or Second Class FCC Radiotelephone license. This includes internal adjustments or replacement of crystals, transistors, or any other components which can affect the performance of the transmitter. Servicing should only be done by a licensed, capable technician using suitable equipment and having complete knowledge of proper CB servicing techniques.

Information furnished by RCA is believed to be accurate and reliable. However, no responsibility is assumed by RCA for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of RCA. RCA retains the right to make changes in this product at its discretion as may be periodically required.

Table of Contents

	Page
Typical Specifications	4
General Description	5
Circuit Description	
General	5
CB Transmitter	6
CB Receiver	6
AM/FM/FM-Stereo Radio	7
Test Equipment	8
Servicing	
General	8
Alignment Instructions	
AM/FM/FM-Stereo Receiver – Model 14T405	9
AM/FM/FM-Stereo Receiver – Model 14T410	12
CB Section – Model 14T405 and 14T410	14
CB Channels and Frequencies	17
Dial Cord Stringing Guide	18
Speaker Connection	19
Replacement Parts	20

List of Illustrations

Figure 1 – PLL Synthesizer Block Diagram	6
Figure 2 – Test Equipment Connections for 14T405 AM/FM/FM-Stereo Radio Alignment	9
Figure 3 – Radio Alignment Adjustments – 14T405	10
Figure 4 – Radio Alignment Adjustments – 14T410	10
Figure 5 – Test Equipment Connections for 14T410 AM/FM/FM-Stereo Radio Alignment	12
Figure 6 – Test Equipment Connections for 14T405 and 14T410 CB Transmitter Alignment	14
Figure 7 – CB Alignment Adjustments – 14T405 and 14T410	15
Figure 8 – Test Equipment Connections for 14T405 and 14T410 CB Transmitter Alignment	16
Figure 9 – Dial Cord Stringing	18
Figure 10 – Equipment Connection Diagram	19
Figure 11 – Speaker Connections – 14T405	19
Figure 12 – Overall Block Diagram	23, 24
Figure 13 – Printed Board – CB Block – 14T405	25, 26
Figure 14 – Schematic Diagram – CB Block – 14T405	27, 28
Figure 15 – Printed Board – Radio Block – 14T405	29, 30
Figure 16 – Schematic Diagram – Radio Block – 14T405	31, 32
Figure 17 – Printed Board – CB Block – 14T410	33, 34
Figure 18 – Schematic Diagram – CB Block – 14T410	35, 36
Figure 19 – Printed Board – Radio Block – 14T410	37, 38
Figure 20 – Schematic Diagram – Radio Block – 14T410	39, 40
Figure 21 – Exploded View – Model 14T405	41, 42
Figure 22 – Exploded View – Model 14T410	43, 44

Typical Specifications

General

Power Supply Voltage: DC 12 V (11 – 16 V), Negative ground (13.8 V nom)

Power Consumption:
RADIO Approx. 8.3 W
(0.6 A at 0.5 W output, DC 13.8 V)

CB TRANSCEIVER: Approx. 11 W
(0.8 A at non-modulation, DC 13.8 V)

(All performance specifications measured with 13.8 volts power input.)

Power Output:

Continuous: 2 x 3.5 W (at 10% THD)
Maximum: 2 x 4.0 W (Volume Control at max. and Tone Control at treble.)
(Conditions: 400 Hz input signal, 4 Ω load, 13.8 V DC)

Speaker Impedance: 4 – 8 ohms
Transistors: 36 (14T410) – 38 (14T405)
Diodes: 25 (14T410) – 28 (14T405)
ICs: 7 (14T410) – 8 (14T405)

Intermediate

Frequency: 1st 10.595 MHz
2nd 455 kHz
Sensitivity: 6 dB/uV for S/N 10 dB
(at 0.5 W output, DC 13.8 V
1000 Hz, 30 % Mod.)
5 kHz (at 6 dB down)

Selectivity:
Adjacent Channel Rejection: 45 dB
Squelch Sensitivity: 3 dB/uV (threshold)
AGC: 60 dB

AM/FM–STEREO RECEIVER

Frequency Range: AM 535 – 1605 kHz
FM 88 – 108 MHz

Intermediate

Frequency: AM 455 kHz
FM 10.7 MHz
Sensitivity: AM 26 dB/uV
FM 18 dB/uV for S/N 10 dB
28 dB/uV for S/N 30 dB
(at 0.5 W output, DC 13.8 V,
22.5 kHz Dev.)

Stereo Separation: 25 dB (at 400 Hz)

Transmitter

Channels: 40
Frequency Range: 26.965 – 27.405 MHz
Frequency Tolerance: ± 0.005 %
RF Output Power: 4 W (MAX)
Modulation Capability: 80 100 %
Spurious Suppression: –60 dB or more
For use with 50 ohm antenna

Receivers

CITIZEN'S BAND RECEIVER

Channels: 40
Frequency Range: 26.965 27.405 MHz

Mechanical

14T405

Dimensions: Width: 7-3/8" (188 mm)
Height: 2-3/4" (70 mm)
Depth: 4-7/8" (124 mm)
Weight: Approx. 4.5 lbs (2.05 kg)

14T410

Dimensions: Width: 7-1/8" (180 mm)
Height: 2-1/16" (52 mm)
Weight: Depth: 5-1/8" (130 mm)
Approx: 3.5 lbs (1.5 kg)

General Description

The RCA CB Co-Pilot Citizen's Band Transceivers with AM/FM/FM-Stereo radios, Models 14T405 and 14T410, include fully transistorized 40 channel citizen's band transceivers and AM/FM-Stereo radio receivers. Front panel controls and indicators are provided for selection of AM, FM/FM-Stereo, or CB operation. The units are designed for mobile use and are powered by 11-16 volts DC (13.8V nominal), negative ground only. They are especially made for in-dash installation on most cars, trucks, boats, or recreational vehicles.

The AM/FM/FM-Stereo radio in Model 14T405 has five presettable pushbuttons for selection of five AM and or FM broadcast stations. A manual tuning control is also provided for continuous tuning for both AM and FM. Automatic frequency control (AFC) is utilized in the FM receiver for drift-free reception. Front panel balance controls provide adjustment of left and right speaker outputs for optimum stereo listening. A front panel fader control on Model 14T405 permits audio output adjustment between the front and rear stereo speakers.

The CB transceivers provide mobile two-way, AM radio communications in the 26.965 to 27.405 Mhz, Class D citizen's band. Operation on all 40 CB channels is provided through use of 3 built-in crystals which generate crystal-controlled, synthesized signals using a PLL (phase-locked-loop) system for trans-

mission and reception on all 40 channels. A rotary channel selector switch provides for rapid channel selection, with digital readout of channels selected.

The transmitter circuit is amplitude modulated and is designed to prevent spurious and harmonic radiation of RF frequencies in conformance with FCC regulations. An automatic level control (ALC) circuit prevents over-modulation of the RF carrier. An RF output meter, located on the front panel, monitors the relative output of the transmitter. A dynamic, push-to-talk microphone connects to a jack on the face of the 14T410 unit, or to a cable on Model 14T405. The receiver portion of the CB transceiver operates with the microphone disconnected.

The CB receiver circuit consists of a dual conversion, superheterodyne circuit, automatic gain control (AGC) circuit, a squelch circuit, and a delta tune circuit. The squelch and delta tune circuits are controlled from the front panel. An illuminated signal strength (S) meter indicates the relative strength of the received signal. A front panel mounted push switch permits listening to AM/FM broadcasts while monitoring a selected CB channel. The CB transmitter cannot be used when listening in this mode. An additional push switch activates the unit for full CB operation and disables the AM/FM radio receiver.

Circuit Description

General

A block diagram of the overall unit is shown in Figure 12. In general, the units consist of an AM radio, an FM/FM-Stereo radio, and a citizen's band transceiver. The audio power amplifier and the speakers are common to the AM/FM/FM-Stereo and citizen's band transceiver. All functions are selected by front panel mounted switches.

Models 14T405 and 14T410 are 40 channel CB units, and AM/FM/FM-Stereo radios, which use a Phase Locked Loop (PLL) system to produce the crystal controlled channel and IF signals used in operation of the transmitter and receiver sections of the CB portion of the unit. The basic PLL system is comprised of a free-running voltage controlled oscillator (VCO), a phase detector, a reference crystal oscillator, 1/N and programmable dividers as seen in the PLL block diagram Figure 1.

The reference crystal oscillator operates at a frequency of 10.24 MHz. Its output is fed to the 1/N divider in IC901, which counts down the frequency by 1/1024 resulting in a 10 kHz signal output. Simultaneously it counts down the signal by 1/2 producing a 5.12 MHz signal. This signal is tripled to 15.36 MHz in the frequency tripler and fed to the PLL Mixer. The VCO free running oscillator, which is operating in the 16.370 to 16.810 MHz range is also feeding a signal to the PLL mixer. The two signals heterodyne in the mixer resulting in a difference signal between 1.01 and 1.45 MHz. This signal feeds to the programmable counter in IC901 which counts the signal down by 1/101 to 1/145, being programmed by the channel selector. When the PLL mixer and the divider signals correspond a 10 kHz output feeds to the phase detector. This in phase signal with the 10 kHz signal

from the reference oscillator locks the VCO on frequency. If a new channel frequency is programmed to the counter, the counter output is no longer in phase in the phase detector. This results in a DC voltage from the phase detector shifting the VCO frequency, up or down, until the VCO output results in a 10 kHz signal from the counter that is in phase in the phase detector. The VCO is thereby locked on the new frequency.

In summary it will be seen that a range of stable VCO output signals in the 16.370 to 16.810 MHz range will be produced, each specific frequency being determined by the code selected by the channel selector. These output signals are used to control the operating frequencies of both the CB transmitter and receiver sections. Refer to table on page 17 for relationship of channel/VCO/receiver OSC/transmitter OSC and counter frequencies.

CB Transmitter

Refer to the overall block diagram shown in Figure 12 and to simplified block diagram on Page 17. The transmitter crystal oscillator TR907 operates at 10.595 MHz, controlled by crystal X901. Its signal is beat in the mixer TR905 with the 16 MHz signal output from the VCO, the exact frequency of which is determined by channel selection and the PLL circuitry, as previously outlined. The resultant signal (the sum of the two) that is fed on to the RF buffer amplifiers, is the channel frequency

of the channel selected (Channel 1-40 between 26.965 and 27.405 MHz) see Frequency Chart on Page 17.

The 27 MHz RF buffer-amplifier output is coupled to RF buffer TR903 then on to driver transistor TR902. The buffers and driver serve to isolate the oscillator and mixer stages from the output, and at the same time provide some power gain. The output of TR902 is fed to TR901, the RF output stage of the transmitter. This stage amplifies the 27 MHz RF signal resulting in an output of 4 watts.

In the transmit mode, the microphone feeds audio through IC904 to AF Power Amplifier IC301 then to TR901 and TR910 thereby modulating the transmitter. This modulating audio is applied to both the driver and output stages to provide carrier modulation up to 100%. An ALC voltage derived from the audio signal at IC904 is fed back to IC904 through TR908 and TR909 to control the output of IC904 and prevent over modulation. Factory adjustment of a 95% modulation level is achieved by adjustment of VR902 and VR903.

CB Receiver

Refer to overall block diagram in Figure 12 and to the simplified diagram on Page 17. The RF signal, at a frequency between 26.965 and 27.405 MHz, feeds from the antenna by way of C801 to the 27 MHz neutralized RF amplifier TR801. Then the ampli-

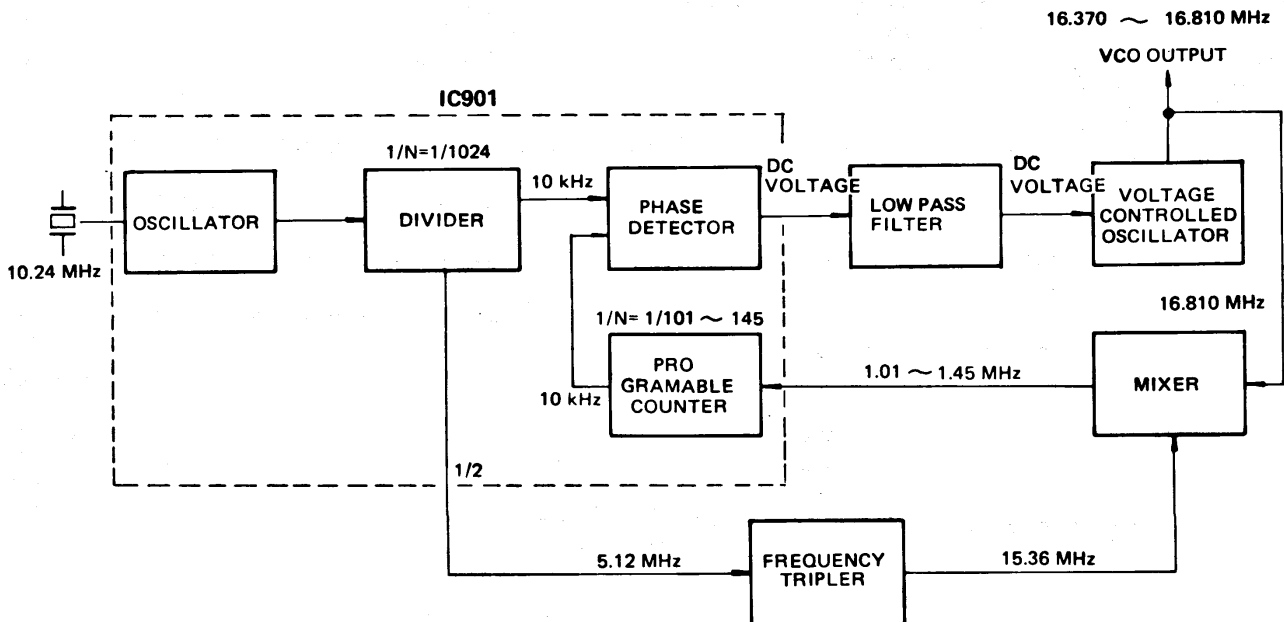


Figure 1. PLL Synthesizer Block Diagram

fied output of TR801 is coupled through T802 to Mixer TR802, where it is beat with an injection signal from the VCO output TR916.

The frequency of the injection signal from the VCO depends on the channel being received, as a signal in the 16 MHz range is programmed by the channel selector in the IC901 PLL synthesizer. The output of mixer TR802 is therefore 10.595 MHz, the first IF frequency, and is the result of the beating of the RF input signal and the VCO signal (see Frequency Chart on Page 17).

This 10.595 MHz 1st IF signal is then fed to TR803 the second mixer. Also fed to the second mixer is a second signal from TR810 the receiver oscillator, at a frequency of 11.050 MHz. Mixing of the two signals in the second mixer results in an output from IFT803 of 455 kHz, the second IF frequency.

The 455 kHz second IF signal passes through ceramic bandpass filter CF81, and feeds the 455 kHz signal to IF amplifiers TR804 and TR805 which incorporate transformer IFT804. The output of TR805 is applied to diode detector D803.

The rectified audio signal from the detector is passed through AF Amplifier TR812 to the AF Power Amplifier circuit in IC201. From IC201 it is coupled to the speaker(s).

TR811 is the squelch control transistor. At low or no signal levels TR811 conducts heavily and its output, connected to TR812 results in no signal output from the audio section. As the incoming RF signal increases it results in a decreasing output from TR811. This results in opening up the AF amplifier and output is achieved. The point at which TR811 cuts off the audio is determined by the setting of squelch control VR801.

Delta Tune

Delta tune circuitry is employed in the CB receiver oscillator TR810 crystal circuit. The "Delta Tune" switch on the front panel acts to connect one of three different capacitors in the oscillator circuit. Depending upon the position of the switch, the crystal frequency is shifted slightly above or below its normal operating frequency.

AM/FM/FM-Stereo Receiver

The radio portion of the 14T405 and 14T410 receivers are shown in block diagram Figure 12. The AM/FM selector switch SW52 or SW702 controls which function is in operation. A stereo indicator on the front panel of Model 14T405 indicates when the unit is in the stereo mode. Front panel balance and fader controls balance the speaker levels. Model 14T405 also provides for pushbutton channel selection on both AM and FM functions.

Test Equipment

The following test equipment is required and recommended for servicing the 14T405 and 14T410 Transceivers with AM/AM/FM-Stereo radios.

1. A 50-ohm resistive antenna load with a power capability of 5 watts or more, such as Bird Model 43 "Thru Line" wattmeter with a 5A Element and a Model 8053 RF Coaxial Load Resistor, or equivalent.
2. A frequency counter operable in the required CB range, such as Hewlett-Packard Model HP 5283A or suitable equivalent.
3. A Signal Generator which operates in the 50 kHz to 65 MHz frequency range with $\pm 1\%$ accuracy, such as Hewlett-Packard HP-606B, Wavetek Model 3000 or equivalent.
4. An oscilloscope capable of accurate monitoring of 27 MHz range AM signals.
5. High Input impedance Electronic Voltmeter such as a WV-500B or equivalent.
6. A 4-ohm, 5-watt resistive speaker dummy load.
7. An Audio Signal Generator.
8. An RF Voltmeter (WV-500B with WG-301A Probe).
9. A bench DC power supply capable of supplying a regulated 13.8 V DC @ at least 2 amperes.
10. A VHF radio receiver capable of tuning in the 54.3 MHz range, or a TV set (for adjustment of the TV interference trap L465).
11. An FM signal generator operating at 10.7 MHz and between 86 and 110 MHz, capable of being modulated 30% (± 22.5 kHz).
12. A stereo signal generator.
13. A sweep generator operating at frequencies of 450 kHz and 10.7 MHz.

Servicing

General

Performance of the RCA 14T405 and 14T410 Co-Pilot Citizen's Band Transceivers with AM/FM/FM-Stereo Radio depends upon the high quality of components employed and proper servicing techniques performed by licensed and fully qualified technical personnel. Use only replacement parts as listed in the parts list at the end of this service manual.

Illustrations to aid in servicing and adjustment, including exploded views, are provided to assist in locating and identifying components, test points and

adjustment points. Wiring diagrams are shown in Figures 13 through 19 and schematic diagrams are shown in Figures 14 through 20. Major mechanical components are illustrated in the exploded views, Figures 21 and 22.

When servicing the transmitter section of the unit, always have a five watt dummy load connected to the antenna terminal to avoid damage to transistors. When servicing the receiver, remove the microphone to avoid possible damage to test equipment that may be attached to the antenna terminal.

ALIGNMENT INSTRUCTIONS

AM/FM/FM-Stereo Receiver - Model 14T405

Figure 2 shows the connections required for performing the 14T405 alignment procedures that follow. Figure 3 shows the location of all test points and adjustments.

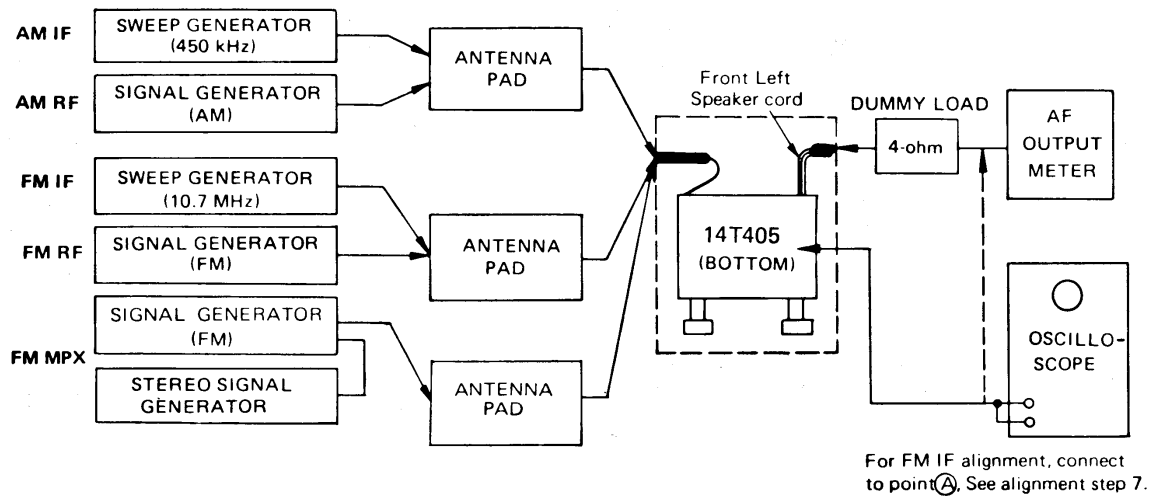


Figure 2. Test Equipment Connections for 14T405
AM/FM/FM-Stereo Radio Alignment

AM (I-F & RF) ALIGNMENT

- Set Volume Control at maximum, and Tone Control in the treble position.
- Set Band Selector Switch in AM.
- Set Balance Control in center.
- Connect the signal generator to the antenna receptacle through the antenna pad. (Fig. 1)
- Keep the signal generator output low enough to prevent overloading the circuit.

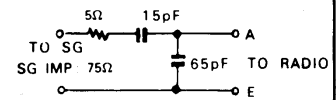


Fig. 1 Antenna Pad

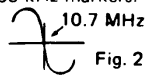
	STEP	GENERATOR FREQUENCY	BAND SELECTOR SETTING	RADIO-DIAL SETTING	SIGNAL FEED POINT	INDICATOR CONNECTION	ADJUST	REMARKS
AM	1 ~ 2	450 kHz [Unmodulated or 400 Hz Mod.]	AM	Point of noninterference (on/about 600 kHz)	Through pad (Fig. 1) to Antenna receptacle	Between Point (A) and ground or speaker terminals	I FT 102 I FT 101	Adjust for maximum
	3	505 kHz [400 Hz Mod.]	"	Low freq. end stop.	"	Output meter across speaker terminals	L104 (OSC)	"
	4	1650 kHz [400 Hz Mod.]	"	High freq. end stop.	"	"	C114 (OSC)	"
	5 ~ 6	1400 kHz [400 Hz Mod.]	"	Tune to signal	"	"	C108 (RF) C102 (ANT)	"

● When radio is installed in car, antenna fully extended, tune in a weak station near 1400 kHz and adjust C102 for maximum output.
● Refer to ANTENNA TRIMMER ALIGNMENT, page 1.
● Repeat steps, two or three times.

FM (I-F & RF) ALIGNMENT

● FM I-F ALIGNMENT USING FM SIGNAL GENERATOR AND SWEEP GENERATOR

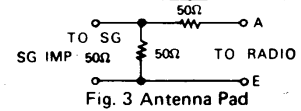
- Volume, Tone and Balance Control may be left in any position.
- Set Band Selector Switch in FM.
- Keep the signal generator output low enough to prevent overloading the circuit.

STEP	GENERATOR FREQUENCY	RADIO-DIAL SETTING	SIGNAL FEED POINT	INDICATOR CONNECTION	ADJUST	REMARKS
F M ⑦	10.7 Mhz	Point of noninterence	Through pad (Fig. 3) to Antenna receptacle	Vert. amp. of scope to point A, low side to ground	IFT51	Adjust for maximum amplitude and proper linearity between 100 kHz markers.  Fig. 2
I F ⑧~⑨	"	"	"	"	IFT151 IFT152	

★ Repeat steps ⑦, ⑧ & ⑨ two or three times.

● FM RF ALIGNMENT

- Set Volume Control at maximum and Tone Control in the treble position..
- Set Band Selector Switch in FM.
- Set Balance Control in center.
- Keep the signal generator output low enough to prevent overloading the circuits.
- Connect the signal generator to the antenna receptacle through the antenna pad. (Fig.3)



STEP	GENERATOR FREQUENCY	RADIO-DIAL SETTING	SIGNAL FEED POINT	INDICATOR CONNECTION	ADJUST (FM Tuner Ass'y)	REMARKS
F M ●	86.0 MHz [400 Hz Mod.]	Low freq. end stop.	Through pad (Fig. 3) to Antenna receptacle.	Output meter across speaker terminals.	C73 (OSC)	★ Adjust for maximum ★ Repeat steps two or three times.
R F ●~●	98.0 MHz [400 Hz Mod.]	Tune to signal	"	"	C63 (RF) C55 (ANT)	

★ In step ●, adjust lower frequency at 86.0 MHz. The upper frequency will be within 108 ~ 110 MHz, because of design characteristics. It is nonadjustable.

NOTE: TEST POINT ① is the AM/FM Selector Switch in the base circuit of transistor TR152.

Numbers in ● are indicated ALIGNMENT STEPS.

MULTIPLEX ALIGNMENT USING FM SIGNAL GENERATOR AND STEREO SIGNAL GENERATOR

- Set Volume Control at maximum and Tone Control in the treble position.
 - Set Band Selector Switch in FM.
 - Set Balance Control in center.
 - Connect the signal generator to the antenna receptacle through the antenna pad. (Fig. 3)
 - Keep the signal generator output low enough to prevent overloading the circuits.
 - FM Signal Generator should be modulated by Stereo Signal Generator.
- Modulation level: 19 kHz 10%
400 Hz 30%
- FM Signal Generator output level: 1 mV
FM Signal Generator frequency: 98 MHz

STEP	MODULATION FREQUENCY	INDICATOR	ADJUST	REMARKS
F M ●	19 kHz	Vert. Amp. of scope to Test Point ②, Low side to ground	T151	Adjust for maximum Set semi-fixed resistor (VR152) to middle position.
M P X ①, ②	19 kHz 400 Hz (Right channel)	VTVM to Left speaker terminals	T152 VR152	Adjust for minimum.
③, ④	19 kHz 400 Hz (Left channel)	VTVM to Right speaker terminals	T152 VR152	Adjust for minimum

Repeat steps ① ~ ④ two or three times.

NOTE: 1) In step ③, input impedance of oscilloscope should be more than 1 MΩ and less than 40 pF, including the scope probe's resistance and capacitance.

2) Test Point ② is shown in the Schematic and Wiring Diagrams. It is terminal No. 1 on IC152.

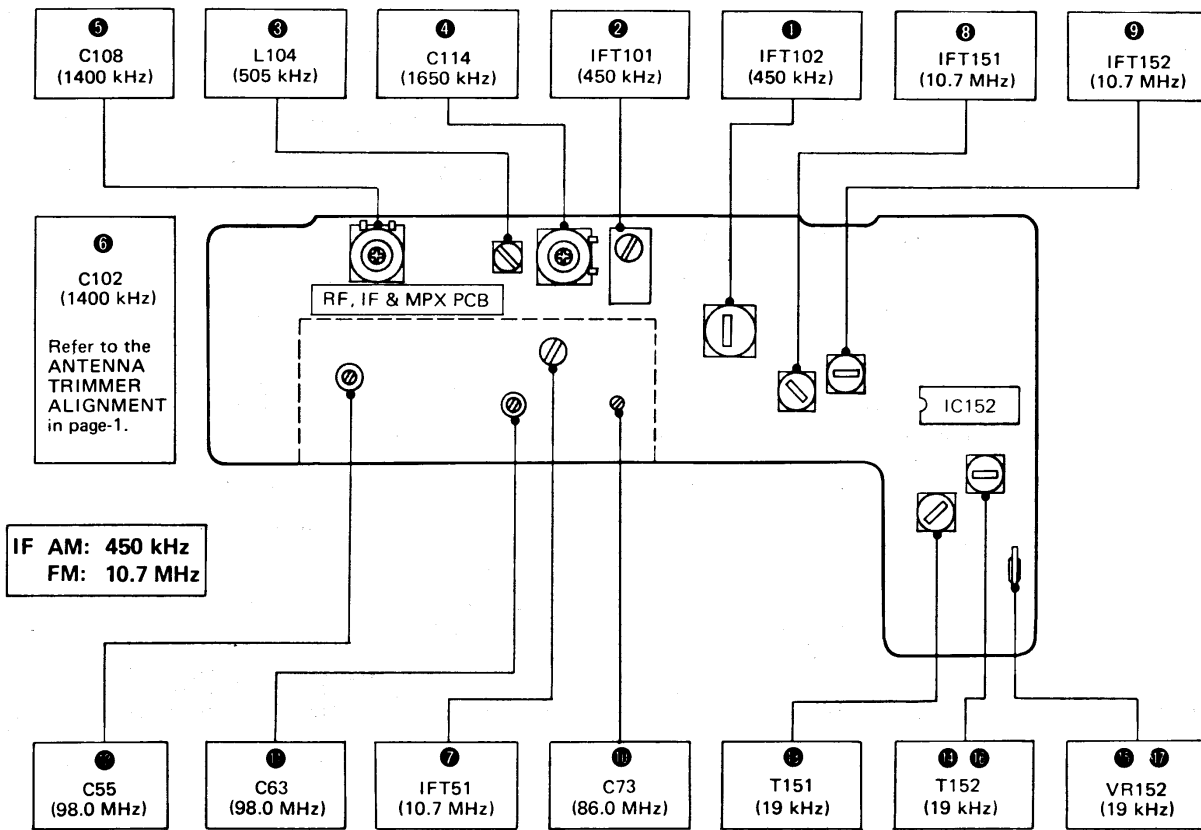


Figure 3. Radio Alignment Adjustments – 14T405

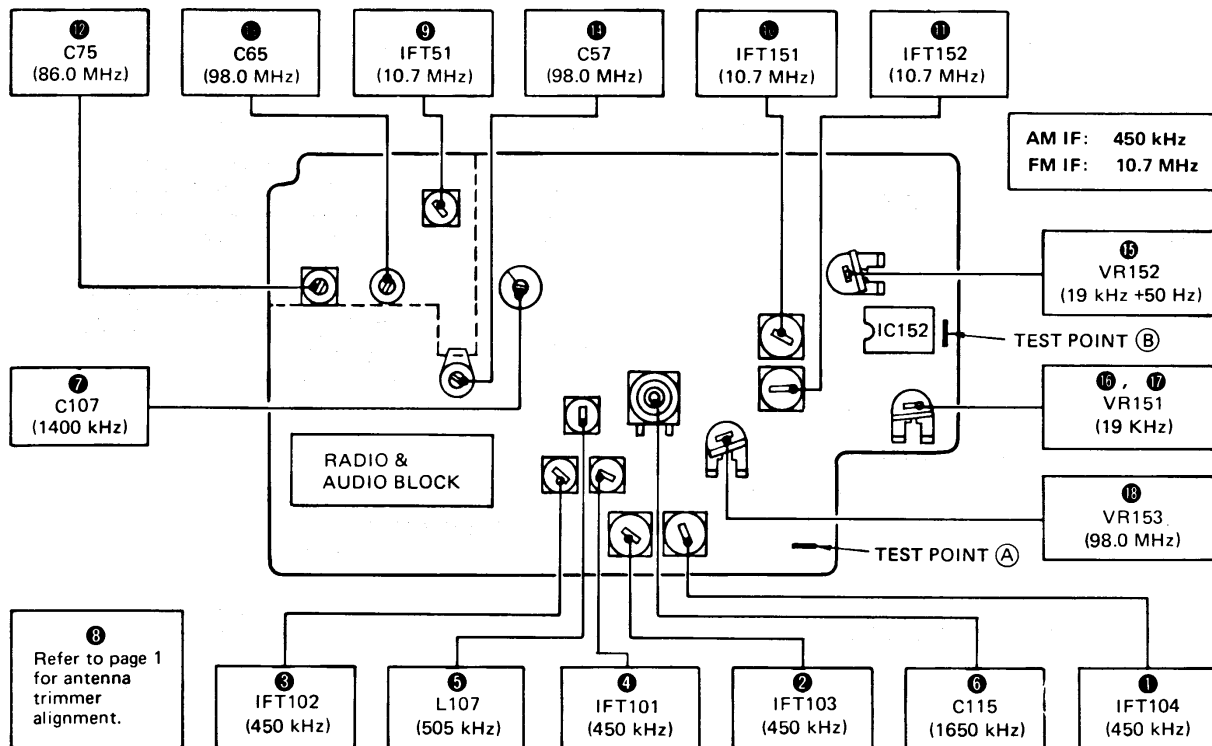


Figure 4. Radio Alignment Adjustments – 14T410

ALIGNMENT INSTRUCTIONS

AM/FM/FM Stereo Receiver - Model 14T410

Figure 5 shows the connections required for performing the 14T410 alignment procedures that follow. Figure 4 shows the location of all test points and adjustments.

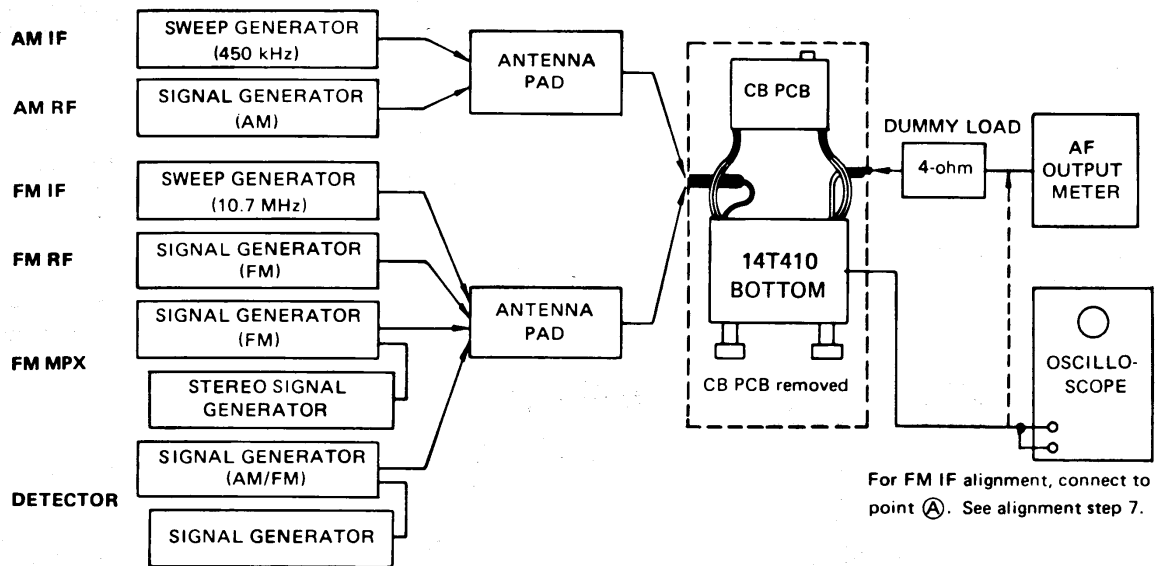
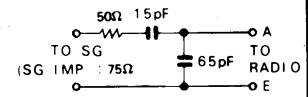


Figure 5. Test Equipment Connections for 14T410
AM/FM/FM-Stereo Radio Alignment

AM (I-F & RF) ALIGNMENT

- Set Volume Control at maximum, and Tone Control in the treble position.
- Set Band Selector Switch in AM.
- Set Balance Control in center.
- Connect the signal generator to the antenna receptacle through the antenna pad. (Fig. 1)
- Keep the signal generator output low enough to prevent overloading the circuit.




	STEP	GENERATOR FREQUENCY	RADIO SELECTOR SETTING	RADIO DIAL SETTING	SIGNAL FEED POINT	INDICATOR CONNECTION	ADJUST	REMARKS
AM F	1 - 4	450 kHz [Un modulated or 400 Hz Mod.]	AM	Point of non interference (on/about 600 kHz)	Through pad (Fig. 1) to antenna receptacle	Between test point A and ground or speaker terminals	IFT104 IFT101	Adjust for maximum
	5	505 kHz [400 Hz Mod.]	"	Low freq. end stop	"	Output meter across speaker terminals	L107 (OSC)	"
	6	1650 kHz [400 Hz Mod.]	"	High freq. end stop	"	"	C115 (OSC)	"
	7 - 8	1400 kHz [400 Hz Mod.]	"	Tune to signal	"	"	C107 (RF) C102 (ANT)	"

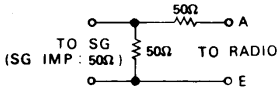
- When radio is installed in car, antenna fully extended, tune in a weak station near 1400 kHz and adjust C102 for maximum output.
- Refer to ANTENNA TRIMMER ALIGNMENT, page 1.
- Repeat steps, two or three times.

FM (I-F & RF) ALIGNMENT

● FM I-F ALIGNMENT USING FM SIGNAL GENERATOR AND SWEEP GENERATOR

<ul style="list-style-type: none"> ● Volume, Tone and Balance Control may be left in any position. ● Set Band Selector Switch in FM. ● Keep the signal generator output low enough to prevent overloading the circuit. 						
STEP	GENERATOR FREQUENCY	RADIO DIAL SETTING	SIGNAL FEED POINT	INDICATOR CONNECTION	ADJUST	REMARKS
F M I F	⑨	10.7 MHz	Through pad (Fig. 3) to antenna receptacle	Vert. amp of scope to test point Ⓐ, low side to ground	IFT51	Adjust for maximum amplitude and proper linearity between 100 kHz markers.  Fig. 2
	⑩ - ⑪	"	"	"	IFT151 IFT152	
<ul style="list-style-type: none"> ● Repeat steps ⑨, ⑩ & ⑪ two or three times. 						

● FM RF ALIGNMENT

<ul style="list-style-type: none"> ● Set Volume Control at maximum and Tone Control in the treble position. ● Set Band Selector Switch in FM. ● Set Balance Control in center. ● Keep the signal generator output low enough to prevent overloading the circuit. ● Connect the signal generator to the antenna receptacle through the antenna pad. (Fig. 3) 						
						
						Fig. 3 Antenna Pad
STEP	GENERATOR FREQUENCY	RADIO DIAL SETTING	SIGNAL FEED POINT	INDICATOR CONNECTION	ADJUST (FM Tuner Ass'y)	REMARKS
F M R M	⑫	86.0 MHz [400 Hz Mod.]	Through pad (Fig. 3) to antenna receptacle	Output meter across speaker terminals	C75 (OSC)	* Adjust for maximum * Repeat steps two or three times.
	⑬ - ⑭	98.0 MHz [400 Hz Mod.]	"	"	C65 (RF) C57 (ANT)	
<ul style="list-style-type: none"> ● In step ⑫, adjust lower frequency at 86.0 MHz. The upper frequency will be within 108 ~ 110 MHz, because of design characteristics. It is nonadjustable. 						

NOTE: Test Point Ⓐ is the AM/FM Selector Switch in the R167 line.

MULTIPLEX ALIGNMENT USING FM SIGNAL GENERATOR AND STEREO SIGNAL GENERATOR

<ul style="list-style-type: none"> ● Volume and Tone Controls at maximum. ● Set Balance Control in center. ● Connect the signal generator to the antenna receptacle through the antenna pad. (Fig. 3) ● Keep the signal generator output low enough to prevent overloading the circuit. ● FM Signal Generator should be modulated by Stereo Signal Generator. Modulation level: 19 kHz, 10% 400 Hz, 30% FM Signal Generator output level: 1mV FM Signal Generator frequency: 98 MHz 					
STEP	MODULATION FREQUENCY	INDICATOR	ADJUST	REMARKS	
F M M P X	⑮	No signal input	Frequency counter to test point Ⓑ, low side to ground	VR152	Adjust to 19 kHz ± 50 Hz
	⑯	19 kHz, 400 Hz (Right Ch)	VTVM to left speaker terminals	VR151	Adjust for minimum
	⑰	19 kHz, 400 Hz (left Ch)	VTVM to right speaker terminals	VR151	Adjust for minimum
<ul style="list-style-type: none"> ● Repeat ⑯ - ⑰ two or three times. ● In step ⑮, short the ⊕ side of C173 to the earth line for easy alignment. 					

NOTE: Test Point Ⓑ is shown in the Schematic and Wiring Diagrams. It is terminal No. 12 on IC152.

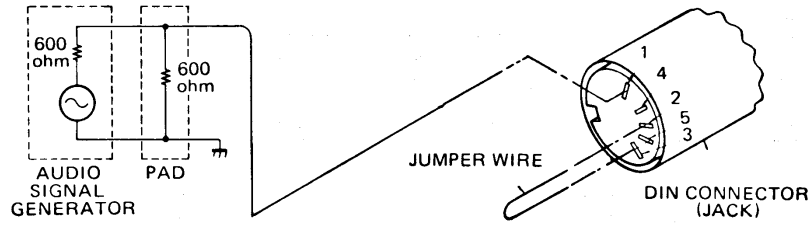


Fig. 4

• **OUTPUT ALIGNMENT**

- Set CB Channel Selector Switch to Channel 18.
- Connect the dummy load to the CB antenna connector. (Fig. 5)
- Insert the shorting wire into the DIN connector terminals No. 2 & 5. (Fig. 4)



Fig. 5 Dummy Load for RF Output

STEP	ADJUST	INDICATOR CONNECTION	REMARKS
5	T904	RF output meter across dummy load (Fig. 5) or wattmeter to CB antenna connector directly.	Adjust for maximum.
6	T903		
7	T902		
8	VR901		
9	L903		
10	L905		

• Repeat steps 9 & 10

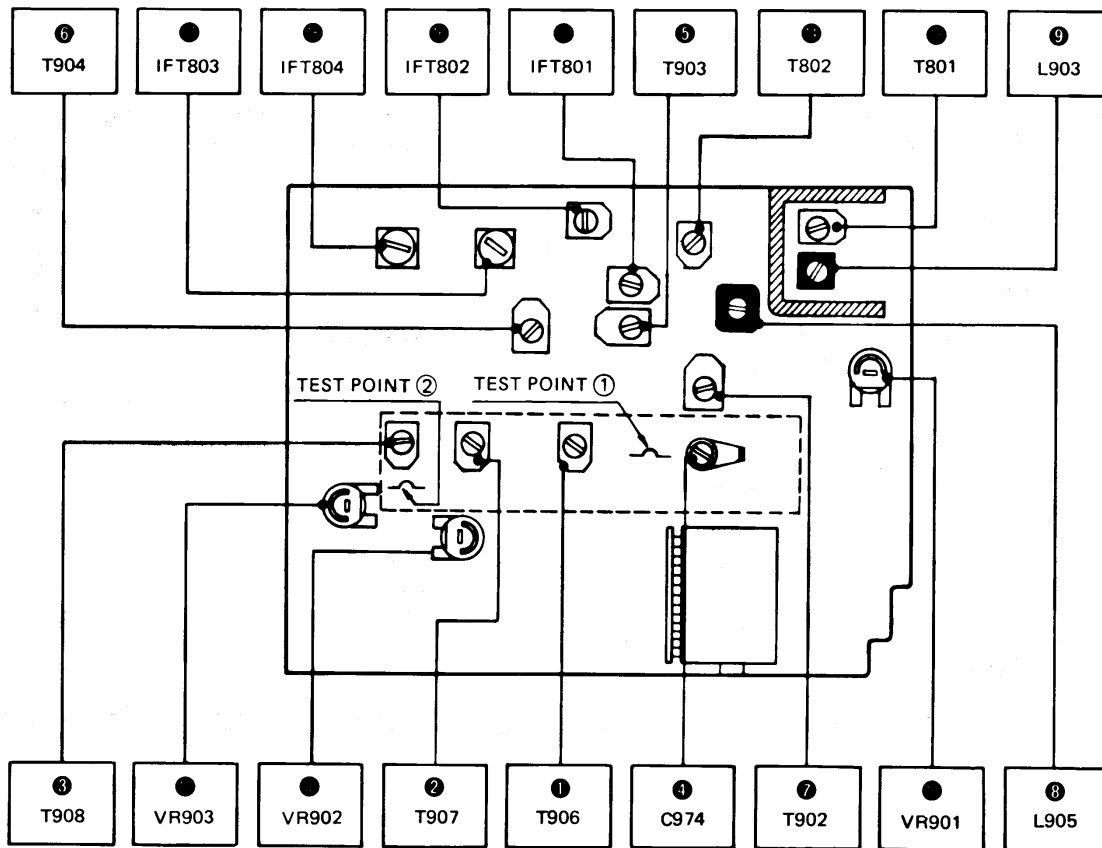
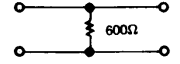



Figure 7. CB Alignment Adjustments – 14T405 and 14T410

● MODULATION ALIGNMENT

<ul style="list-style-type: none"> ● Set CB Channel Selector Switch to Channel 18. ● Connect the audio signal generator to the DIN connector terminal No. 1 (Fig. 4) through the 600-ohm pad (Fig. 6). ● Insert the jumper wire into the DIN connector terminals No. 2 & 5. (Fig. 4) 		 <p>Fig. 6 Pad for Mod.</p>			
STEP	GENERATOR FREQUENCY	ADJUST	INDICATOR CONNECTION	REMARKS	MOD (%) = $\frac{A - B}{A + B} \times 100$
●	1 kHz, -35 dBm (13.8 mV)	VR902	Oscilloscope across CB antenna connector through dummy load (Fig. 5).	Adjust for 95% modulation as follows.	 <p>50% Mod. 90% Mod. Over-Mod.</p>
●		VR903			

CB Receiver Alignment

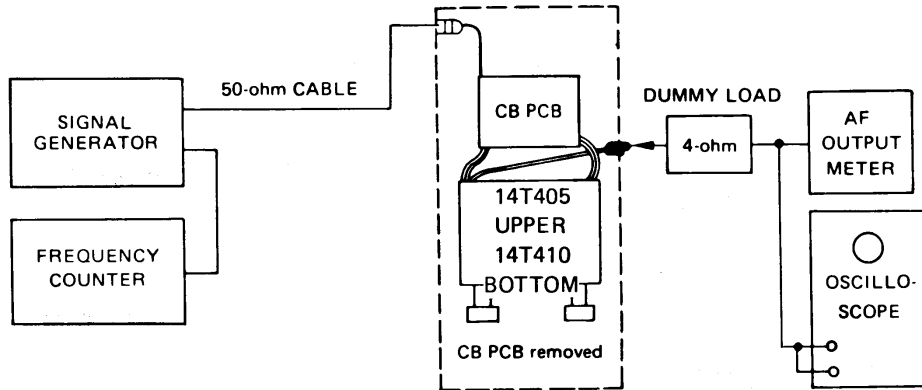
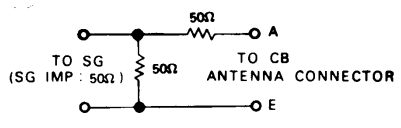


Figure 8. Test Equipment Connections for 14T405 and 14T410 CB Receiver Alignment

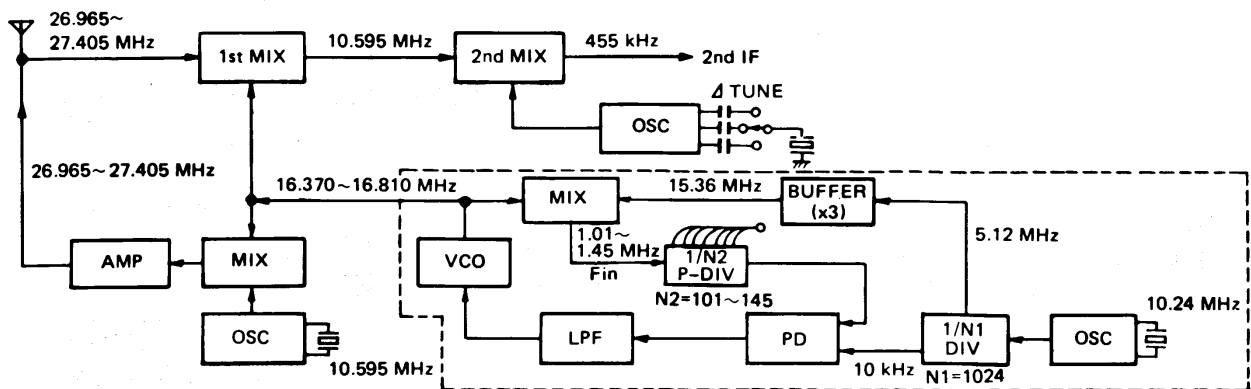
CB RECEIVER ALIGNMENT

<ul style="list-style-type: none"> ● Set the CB Channel Selector Switch to Channel 18. ● Set the Delta Tune Control in its center position. ● Set the Squelch Control in the full-counterclockwise position. ● Set the Tone Control in the treble position (clockwise). ● Set the Balance Control in its center position. ● Set the Volume Control for 0.5 W output. ● Signal Generator should be modulated as follows: Modulation level: 1 kHz, 30% Signal Generator output level: 5 mV (74 dB/μV) 		 <p>Fig. 7 Antenna Pad</p>			
STEP	GENERATOR FREQUENCY	SIGNAL FEED POINT	ADJUST	INDICATOR CONNECTION	REMARKS
1	Ch 18 (27.175 MHz)	CB antenna connector through 50-ohm cable.	T801	Output meter across speaker terminals.	Adjust for maximum
2			T802		
3			IFT801		
4			IFT802		
5			IFT803		
6			IFT804		
● Repeat steps two or three times.					

- NOTES:
- 1) A dummy antenna, or RF wattmeter with a dummy load, should be connected to the CB's antenna connector when aligning the transmitter section.
 - 2) Use an insulated screwdriver to align VR902 (Step ●).
 - 3) Use a nonmetallic screwdriver to align L903 and L905
 - 4) Plug CN801 and CN802 must be connected to the set to align the CB transceiver section.

CB CHANNELS AND FREQUENCIES

CB Channel No.	RCVR/XMTR Frequency	VCO Frequency	Program Counter Frequency	RCVR 2nd OSC Frequency	XMTR OSC Frequency
1	26.965 MHz	16.370 MHz	1.01 MHz	11.050 MHz	10.595-MHz
2	26.975 MHz	16.380 MHz	1.02 MHz	"	"
3	26.985 MHz	16.390 MHz	1.03 MHz	"	"
4	27.005 MHz	16.410 MHz	1.05 MHz	"	"
5	27.015 MHz	16.420 MHz	1.06 MHz	"	"
6	27.025 MHz	16.430 MHz	1.07 MHz	"	"
7	27.035 MHz	16.440 MHz	1.08 MHz	"	"
8	27.055 MHz	16.460 MHz	1.10 MHz	"	"
9	27.065 MHz	16.470 MHz	1.11 MHz	"	"
10	27.075 MHz	16.480 MHz	1.12 MHz	"	"
11	27.085 MHz	16.490 MHz	1.13 MHz	"	"
12	27.105 MHz	16.510 MHz	1.15 MHz	"	"
13	27.115 MHz	16.520 MHz	1.16 MHz	"	"
14	27.125 MHz	16.530 MHz	1.17 MHz	"	"
15	27.135 MHz	16.540 MHz	1.18 MHz	"	"
16	27.155 MHz	16.560 MHz	1.20 MHz	"	"
17	27.165 MHz	16.570 MHz	1.21 MHz	"	"
18	27.175 MHz	16.580 MHz	1.22 MHz	"	"
19	27.185 MHz	16.590 MHz	1.23 MHz	"	"
20	27.205 MHz	16.610 MHz	1.25 MHz	"	"
21	27.215 MHz	16.620 MHz	1.26 MHz	"	"
22	27.225 MHz	16.630 MHz	1.27 MHz	"	"
23	27.255 MHz	16.660 MHz	1.30 MHz	"	"
24	27.235 MHz	16.640 MHz	1.28 MHz	"	"
25	27.245 MHz	16.650 MHz	1.29 MHz	"	"
26	27.265 MHz	16.670 MHz	1.31 MHz	"	"
27	27.275 MHz	16.680 MHz	1.32 MHz	"	"
28	27.285 MHz	16.690 MHz	1.33 MHz	"	"
29	27.295 MHz	16.700 MHz	1.34 MHz	"	"
30	27.305 MHz	16.710 MHz	1.35 MHz	"	"
31	27.315 MHz	16.720 MHz	1.36 MHz	"	"
32	27.325 MHz	16.730 MHz	1.37 MHz	"	"
33	27.335 MHz	16.740 MHz	1.38 MHz	"	"
34	27.345 MHz	16.750 MHz	1.39 MHz	"	"
35	27.355 MHz	16.760 MHz	1.40 MHz	"	"
36	27.365 MHz	16.770 MHz	1.41 MHz	"	"
37	27.375 MHz	16.780 MHz	1.42 MHz	"	"
38	27.385 MHz	16.790 MHz	1.43 MHz	"	"
39	27.395 MHz	16.800 MHz	1.44 MHz	"	"
40	27.405 MHz	16.810 MHz	1.45 MHz	"	"



DIAL CORD STRINGING GUIDE

- 1) To install a new dial cord, remove the escutcheon ass'y, bottom cover and CB block. See page 4.
- 2) Gently remove the dial pointer and the old dial cord.
- 3) Turn the tuning knob fully in the counterclockwise direction. In this position the tuner cores are as for in as they will go.
- 4) Remove screw (A) to remove the cord guide ass'y. Be careful not to distort the universal joint at the end of the tuning drive shaft.
- 5) Starting with the center of 24-inch (70 cm) length of dial cord, hooked into the slotted divider on the rope guide shaft, wind 9 turns towards the gear end and turn towards the other end, as shown in Insert (A).
- 6) Reinstall the rope guide ass'y. Check to see that the cord turns do not overlap each other, and while holding the turns in place, run the remaining cord around pulley (1), (2) and (3). Tie the two ends together, at a point about 3/4-inch to the left of pulley (3). Be sure that the dial cord is reasonable tight with a minimum amount of slack in it.
- 7) Mount the dial pointer, and position it as shown in Insert (B).
- 8) Rotate the tuning knob from one end of its travel to the other, several times, to be sure that the cord and cord guide ass'y are working smoothly.
- 9) Check the position of the dial pointer and correct if necessary by sliding it to the right or left.
- 10) Reinstall the CB block, cover and escutcheon ass'y.

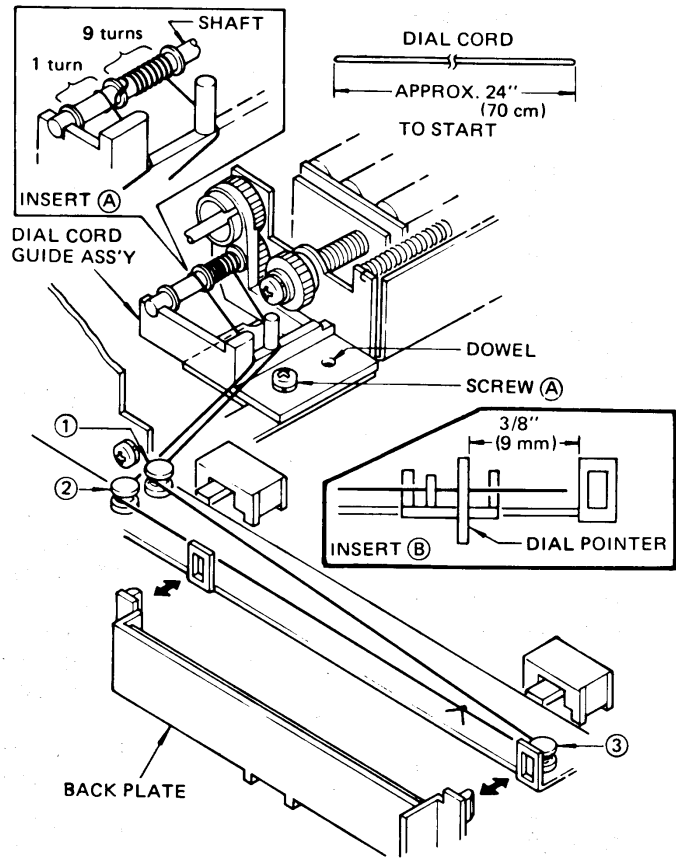


Figure 9. Dial Cord Stringing

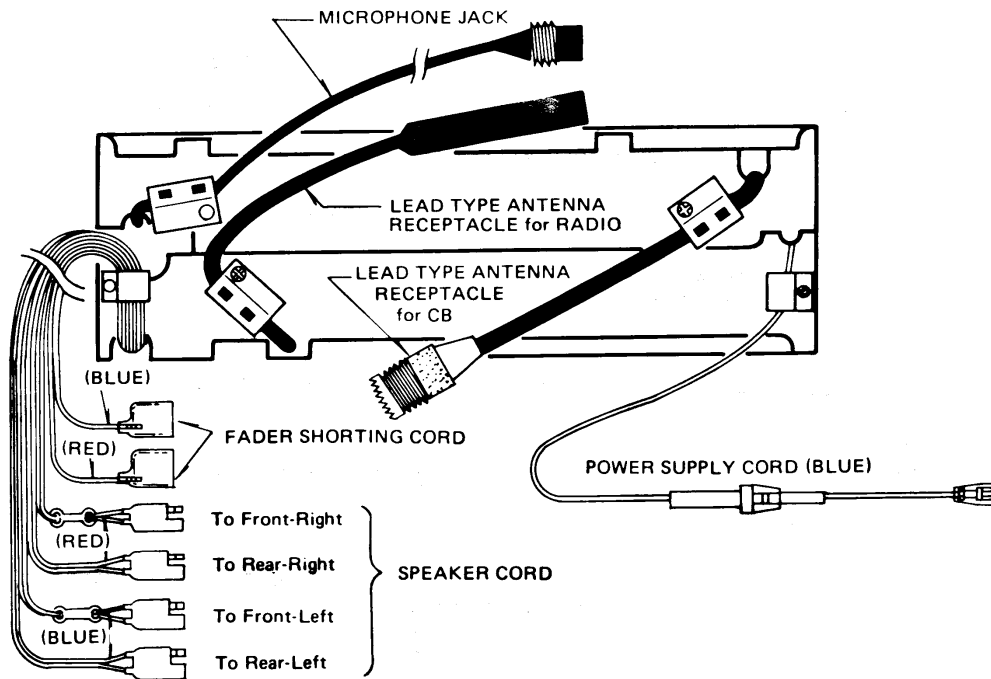
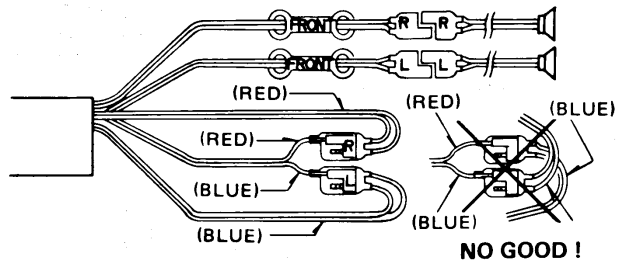


Figure 10. Equipment Connection Diagram

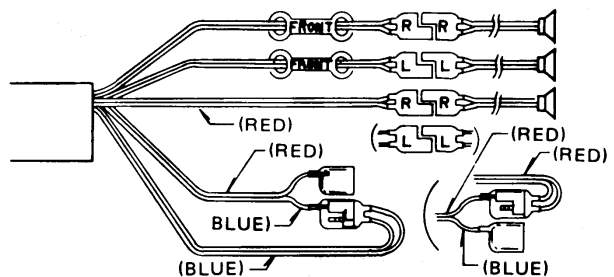
(A) When using 2 speakers ($4 \sim 8 \Omega$ each)

Connect the speaker cords (FR) and (FL) to their respective speaker cords. The Red fader shorting cord should be connected to the speaker cord (RR) (Red) and the Blue shorting cord to the speaker cord (RL) (Blue), respectively.



(B) 3 speakers (8Ω each)

Connect 2 speakers as described in step (A) above. Connect another speaker to either rear speaker cord, (RR) or (RL). Connect the appropriate fader shorting cord to the rear speaker cord not being used (i. e. Red to Red, or Blue to Blue speaker cord)



(C) 4 speakers (8Ω each)

Connect all the speaker cord to the appropriate four speaker cords. Do not connect the fader shorting cords.

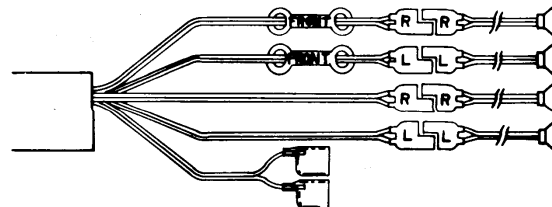


Figure 11. Speaker Connections – 14T405

Replacement Parts

SYMB. NO.	STOCK NO.	DESCRIPTION	SYMB. NO.	STOCK NO.	DESCRIPTION
		CAPACITORS			
C51	741991	8 pf +/-0.5 pf, 50 v, Ceramic	C163	742021	100 uF, 16 v, Elyt
C52	742059	18 pf, 10%, 50 v, CER	C164	742024	1 uF, 50 v, Elyt
C53	437395	10 pf, 5%, 50 v, Ceramic	C171	742023	10 uF, 16 v, Elyt
C54	741875	8 pf +/- .5 pf, 50 v, Ceramic	C172	742023	10 uF, 16 v, Elyt
C55	741889	6 pf, Trimmer	C173	742023	10 uF, 16 v, Elyt
C56	742043	2 pf +/- .25 pf, 50 v, CER	C174	741874	470 pf, 5%, 50 v, Film Polystyrene
C57	742039	33 pf, 10%, 50 v, CER	C175	741873	4700 pf, 5%, 125 v, Film Polystyrene
C58	742054	470 pf, 10%, 50 v, CER, H1-K	C176	741873	4700 pf, 5%, 125 v, Film Polystyrene
C59	742054	470 pf, 10%, 50 v, CER, H1-K	C177	742051	.033 uF, 20%, 50 v, Film Polyester
C60	741991	8 pf +/-0.5 pf, 50 v, Ceramic	C178	742051	.033 uF, 20%, 50 v, Film Polyester
C61	742043	2 pf +/- .25 pf, 50 v, CER	C179	742047	33 uF, 10 v, Elyt
C62	742060	12 pf, 5%, 50 v, CER	C180	742048	33 uF, 6 v, Elyt
C63	741889	6 pf, Trimmer	C181	742023	10 uF, 16 v, Elyt
C64	742043	2 pf, +/- .25 pf, 50 v, CER	C182	742023	10 uF, 16 v, Elyt
C65	742058	27 pf, 10%, 50 v, CER	C183	742046	100 uF, 6 v, Elyt
C66	742044	1 pf +/- .25 pf, 50 v, CER	C184	742048	33 uF, 6 v, Elyt
C67	742055	270 pf, 5%, 50 v, CER	C185	742021	100 uF, 16 v, Elyt
C68	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C186	742024	1 uF, 50 v, Elyt
C69	423553	3 pf, 50 v, CER	C187	742024	1 uF, 50 v, Elyt
C70	742057	39 pf, 10%, 50 v, CER	C202	741878	.2 uF, 20%, 12 v, CER
C71	742054	470 pf, 10%, 50 v, CER, H1-K	C203	742024	1 uF, 50 v, Elyt
C72	742062	4 pf +/- .5 pf, 50 v, CER	C204	742021	100 uF, 16 v, Elyt
C73	741890	5 pf, Trimmer	C205	742047	33 uF, 10 v, Elyt
C74	742030	.0047 uF, 10%, 50 v, Film Polyester	C206	742055	270 pf, 5%, 50 v, CER
C75	742062	4 pf +/- .5 pf, 50 v, CER	C207	742066	.0018 uF, 10%, 50 v, Film Polyester
C76	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C208	742023	10 uF, 16 v, Elyt
C101	742041	15 pf, 10%, 50 v, CER	C209	741877	.3 uF, 20%, 12 v, Ceramic
C102	742743	50 pf, Trimmer	C210	742065	.1 uF, 20%, 50 v, Film Polyester
C103	742041	15 pf, 10%, 50 v, CER	C211	740845	470 uF, 16 v, Elect
C104	742027	.01 uF, 20%, 50 v, Film Polyester	C302	741878	.2 uF, 20%, 12 v, Ceramic
C105	437375	.0022 uF, 10%, 50 v, Film Polyester	C303	742024	1 uF, 50 v, Elyt
C106	742050	.047 uF, 10%, 50 v, Film Polyester	C304	742021	100 uF, 16 v, Elyt
C107	742051	.033 uF, 20%, 50 v, Film Polyester	C305	742047	33 uF, 10 v, Elyt
C108	741887	70 pf, Trimmer	C306	742055	270 pf, 5%, 50 v, CER
C109	742035	100 pf, 10%, 50 v, CER	C307	742066	.0018 uF, 10%, 50 v, Film Polyester
C110	437375	.0022 uF, 10%, 50 v, Film Polyester	C308	742023	10 uF, 16 v, Elyt
C111	437362	.0056 uF, 10%, 50 v, Film Polyester	C309	741877	.3 uF, 20%, 12 v, Ceramic
C112	742056	180 pf, 5%, 50 v, CER	C310	742065	.1 uF, 20%, 50 v, Film Polyester
C113	742057	39 pf, 10%, 50 v, CER	C311	740845	470 uF, 16 v, Elect
C114	741887	70 pf, Trimmer	C601	742836	390 pf, 10%, 50 v, CER
C115	742027	.01 uF, 20%, 50 v, Film Polyester	C602	742837	.018 uF, 20%, 50 v, Film Polyester
C116	742050	.047 uF, 20%, 50 v, Film Polyester	C603	742056	180 pf, 5%, 50 v, CER
C117	742032	330 pf, 10%, 50 v, CER	C604	742037	68 pf, 10%, 50 v, CER
C118	742050	.047 uF, 20%, 50 v, Film Polyester	C605	742050	.047 uF, 20%, 50 v, Film Polyester
C119	742027	.01 uF, 20%, 50 v, Film Polyester	C606	437387	33 uF, 16 v, Elyt
C120	742027	.01 uF, 20%, 50 v, Film Polyester	C607	742838	10 uF, 10 v, Tantalum
C121	742048	33 uF, 6 v, Elyt	C608	742838	10 uF, 10 v, Tantalum
C151	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C609	170543	.015 uF, 20%, 50 v, Film Polyester
C152	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C610	742056	180 pf, 5%, 50 v, CER
C153	742026	.022 uF, 20%, 50 v, Film Polyester	C611	742037	68 pf, 10%, 50 v, CER
C154	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C612	742027	.01 uF, 20%, 50 v, Film Polyester
C155	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C613	742031	.001 uF, 10%, 50 v, Film Polyester
C156	742051	.033 uF, 20%, 50 v, Film Polyester	C614	742839	.0027 uF, 10%, 50 v, Film Polyester
C157	742032	330 pf, 10%, 50 v, CER	C615	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C158	742032	330 pf, 10%, 50 v, CER	C616	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C159	742032	330 pf, 10%, 50 v, CER	C618	742031	.001 uF, 10%, 50 v, Film Polyester
C160	742049	4.7 uF, 25 v, Elyt	C619	742052	.01 uF, +80%, -20%, 50 v, CER, H1-K
C161	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C701	740845	470 uF, 16 v, Elyt
C162	742045	100 uF, 10 v, Elyt	C702	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
			C703	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
			C704	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
			C705	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K

Continued on Page 21

SYMB. NO.	STOCK NO.	DESCRIPTION	SYMB. NO.	STOCK NO.	DESCRIPTION
C706	740845	470 uF, 16 v, Elect	C914	742039	33 pf, 10%, 50 v, CER
C801	742042	12 pf, 10%, 50 v, CER	C915	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C802	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C916	742035	100 pf, 10%, 50 v, CER
C803	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C917	126918	47 uF, 10 v, Elect
C804	742029	.01 uF, 10%, 50 v, CER	C919	425836	33 pf, 50 v, Ceramic
C805	742024	1 uF, 50 v, Elyt	C920	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C806	742029	.01 uF, 10%, 50 v, CER	C921	742039	33 pf, 10%, 50 v, CER
C807	742037	68 pf, 10%, 50 v, CER	C922	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C808	740831	10 pf, 50 v, CER, Disc	C924	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C809	742029	.01 uF, 10%, 50 v, CER	C929	742740	33 pf, 5%, 50 v, CER
C810	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C930	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C811	742043	2 pf +/- .25 pf, 50 v, CER	C936	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C812	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C939	741991	8 pf +/- .5 pf, 50 v, Ceramic
C813	423296	5 pf +/- .5 pf, 50 v, CER	C940	742038	47 pf, 10%, 50 v, CER
C814	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C941	742029	.01 uF, 10%, 50 v, CER
C815	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C942	742042	12 pf, 10%, 50 v, CER
C816	742039	33 pf, 10%, 50 v, CER	C943	742036	82 pf, 10%, 50 v, CER
C817	742029	.01 uF, 10%, 50 v, CER	C944	742031	.001 uF, 10%, 50 v, Film Polyester
C818	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C945	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C821	742033	220 pf, 10%, 50 v, CER	C946	742038	47 pf, 10%, 50 v, CER
C822	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C953	126918	47 uF, 10 v, Elect
C823	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C954	742025	.1 uF, 20%, 12 v, CER
C824	742023	10 uF, 16 v, Elyt	C955	742037	68 pf, 10%, 50 v, CER
C825	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C956	436923	10 uF, 10 v, Tantalum
C826	742027	.01 uF, 20%, 50 v, Film Polyester	C957	742841	.1 uF, 35 v, Tantalum
C827	742024	1 uF, 50 v, Elyt	C958	245245	47 pf, 5%, 75 v, CER Plate
C828	742030	.0047 uF, 10%, 50 v, Film Polyester	C959	423299	10 pf, 10%, 50 v, CER Disc
C829	742033	220 pf, 10%, 50 v, CER	C960	423299	10 pf, 10%, 50 v, CER Disc
C851	742021	100 uF, 16 v, Elyt	C961	742033	220 pf, 10%, 50 v, CER
C852	742023	10 uF, 16 v, Elyt	C962	427831	150 pf, 50 v, 10%, CER. Plate
C854	742037	68 pf, 10%, 50 v, CER	C963	742025	.1 uF, 20%, 12 v, CER
C855	742031	.001 uF, 10%, 50 v, Film Polyester	C964	742039	33 pf, 10%, 50 v, CER
C856	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C965	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C857	742040	22 pf, 10%, 50 v, CER	C966	742066	.0018 uF, 10%, Film Polyester
C858	742058	27 pf, 10%, 50 v, CER	C967	740831	10 pf, 50 v, CER
C859	742039	33 pf, 10%, 50 v, CER	C968	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C861	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C969	742040	22 pf, 10%, 50 v, CER
C862	742023	10 uF, 16 v, Elyt	C970	742040	22 pf, 10%, 50 v, CER
C863	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C971	742039	33 pf, 10%, 50 v, CER
C871	742024	1 uF, 50 v, Elyt	C972	742031	.001 uF, 10%, 50 v, Film Polyester
C872	742023	10 uF, 16 v, Elyt	C973	742024	1 uF, 50 v, Elyt
C873	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	C974	742743	50 pf, Trimmer
C874	742023	10 uF, 16 v, Elyt	C975	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C875	742022	47 uF, 16 v, Elyt	C976	126918	47 uF, 10 v, Elyt
C876	742025	.1 uF, 20%, 12 v, CER	C977	742036	82 pf, 10%, 50 v, CER
C877	742024	1 uF, 50 v, Elyt	C978	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K
C878	742024	1 uF, 50 v, Elyt	C990	742024	1 uF, 50 v, Elyt
C879	742026	.022 uF, 20%, 50 v, Film Polyester	CF151	741909	Filter-Ceramic
C881	742025	.1 uF, 20%, 12 v, CER	CF152	741909	Filter-Ceramic
C882	742025	.1 uF, 20%, 12 v, CER	CF801	741908	Filter-Ceramic
C883	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	CF901	742762	Filter-Ceramic
C884	437387	33 MF, 16 v, Electric (Radial)	CF902	742763	Filter-Ceramic
C901	742034	120 pf, 10%, 50 v, CER	CS701	741879	1000 pf, Feed Through
C902	742055	270 pf, 5%, 50 v, CER	D51	741868	Diode - Type Special
C903	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	D101	168910	Diode - Type OA90
C904	742033	220 pf, 10%, 50 v, CER	D102	168910	Diode - Type OA90
C905	742055	270 pf, 5%, 50 v, CER	D103	168910	Diode - Type OA90
C906	742034	120 pf, 10%, 50 v, CER	D151	741866	Diode - Type Special
C907	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K	D152	741866	Diode - Type Special
C908	742739	220 uF, 16 v, Elyt	D153	741869	Diode - Type Special
C909	742037	68 pf, 10%, 50 v, CER	D154	741870	Diode - Type Special
C910	742039	33 pf, 10%, 50 v, CER			
C911	742052	.01 uF + 80% - 20%, 50 v, CER, H1-K			
C912	742033	220 pf, 10%, 50 v, CER			
C913	742025	.1 uF, 20%, 12 v, CER			

Continued on Page 22

SYMB. NO.	STOCK NO.	DESCRIPTION	SYMB. NO.	STOCK NO.	DESCRIPTION
D501			R52	430554	3900 Ohm, 1/8 w, 5%, Comp
THRU			R53	429826	4700 Ohm, 5%, 1/8 w, Comp
D514	742731	Diode - Type Special	R54	429820	470 Ohm, 1/8 w, 5%, Comp
D701	741865	Diode - Type Special	R55	429829	15,000 Ohm, 1/8 w, 5%, Comp
D801	741864	Diode - Type MA150	R56	430554	3900 Ohm, 1/8 w, 5%, Comp
D802	741864	Diode - Type MA150	R57	428612	1000 Ohm, 5%, 1/8 w, Comp
D803	741866	Diode - Type Special	R58	427815	1500 Ohms, 1/8 w, 5%, Comp
D804	741864	Diode - Type MA150	R59	430554	3900 Ohm, 1/8 w, 5%, Comp
D805	741866	Diode - Type Special	R60	429829	15,000 Ohm, 1/8 w, 5%, Comp
D806	741866	Diode - Type Special	R61	429820	470 Ohm, 1/8 w, 5%, Comp
D807	741864	Diode - Type MA150	R62	429834	100,000 Ohm, 1/8 w, 5%, Comp
D808	741864	Diode - Type MA150	R63	429834	100,000 Ohm, 1/8 w, 5%, Comp
D809	741864	Diode - Type MA150	R101	422021	6800 Ohm, 5%, 1/8 w, Comp
D810	741867	Diode - Type MA1100	R102	429824	2200 Ohm, 1/8 w, 5%, Comp
D901	741864	Diode - Type MA150	R103	741885	560,000 Ohm, 5%, 1/8 w, Comp
D902	741865	Diode - Type Special	R104	429818	33 Ohms, 5%, 1/8 w, Comp
D903	741864	Diode - Type MA150	R105	741882	330 Ohm, 5%, 1/8 w, Comp
D904	741864	Diode - Type MA150	R106	433321	68000 Ohm, 5%, 1/8 w, Comp
D905	741864	Diode - Type MA150	R107	433319	1800 Ohms, 5%, 1/8 w, Comp
D908	742732	Diode - Type Special	R108	429829	15,000 Ohm, 1/8 w, 5%, Comp
D909	741864	Diode - Type MA150	R109	429830	22000 Ohm, 5%, 1/8 w, Comp
FC51	741923	Core - Tuner (Ferrite)	R110	425266	3300 Ohm, 5%, 1/8 w, Comp
IC151	741852	IC - Type Special	R111	422020	5600 Ohm, 5%, 1/8 w, Comp
IC152	741853	IC - Type AN 211	R112	425266	3300 Ohm, 5%, 1/8 w, Comp
IC201	741854	IC - Type AN 214	R113	429832	39000 Ohm, 5%, 1/8 w, Comp
IC301	741854	IC - Type AN 214	R114	429829	15,000 Ohm, 1/8 w, 5%, Comp
IC901	742724	IC - Type Special	R115	741882	330 Ohm, 5%, 1/8 w, Comp
IC902	742725	IC - Type Special	R116	429826	4700 Ohm, 5%, 1/8 w, Comp
IC903	742726	IC - Type Special	R117	742742	390000 Ohm, 5%, 1/8 w, Comp
IC904	742727	IC - Type Special	R118	741883	270 Ohm, 5%, 1/8 w, Comp
IFT51	741910	Transformer - IF	R119	429824	2200 Ohm, 1/8 w, 5%, Comp
IFT101	741914	Filter - Ceramic	R120	429825	2700 Ohm, 1/8 w, 5%, Comp
IFT102	741913	Transformer - IF	R151	429831	27000 Ohm, 5%, 1/8 w, Comp
IFT151	741911	Transformer - IF	R152	429826	4700 Ohm, 5%, 1/8 w, Comp
IFT152	741912	Transformer - IF	R153	429821	680 Ohm, 1/8 w, 5%, Comp
IFT801	742756	Transformer - IF	R154	426376	10 Ohms, 5%, 1/8 w, Comp
IFT802	742756	Transformer - IF	R155	428612	1000 Ohm, 5%, 1/8 w, Comp
IFT803	742757	Transformer - IF	R156	741882	330 Ohm, 5%, 1/8 w, Comp
IFT804	741913	Transformer - IF	R157	428612	1000 Ohm, 5%, 1/8 w, Comp
L52	741916	Coil - RF	R158	428612	1000 Ohm, 5%, 1/8 w, Comp
L54	741921	Coil - RF	R159	428612	1000 Ohm, 5%, 1/8 w, Comp
L101	741917	Coil - RF	R160	430554	3900 Ohm, 1/8 w, 5%, Comp
L104	741915	Coil - OSC	R161	108861	100 Ohm, 5%, 1/4 w, Comp
L105	741916	Coil - RF	R162	228878	56 Ohm, 5%, 1/4 w, Comp
L151	741922	Coil - R.F.	R163	429834	100,000 Ohm, 1/8 w, 5%, Comp
L152	741920	Coil - RF	R164	428612	1000 Ohm, 5%, 1/8 w, Comp
L701	742749	Coil - Choke	R165	430554	3900 Ohm, 1/8 w, 5%, Comp
L802	742750	Coil - RF	R171	429834	100000 Ohm, 5%, 1/8 w, Comp
L803	742750	Coil - RF	R172	427816	33,000 Ohms, 1/8 w, 5%, Comp
L804	741916	Coil - RF	R173	427815	1500 Ohms, 1/8 w, 5%, Comp
L901	741905	Coil - R.F.	R174	428612	1000 Ohm, 5%, 1/8 w, Comp
L902	741905	Coil - R.F.	R175	428612	1000 Ohm, 5%, 1/8 w, Comp
L903	742751	Coil - RF	R176	425269	47,000 Ohm, 5%, 1/8 w, Comp
L904	741904	Coil - R.F.	R177	741886	68 Ohm, 5%, 1/8 w, Comp
L905	742751	Coil - RF	R178	427815	1500 Ohms, 1/8 w, 5%, Comp
L906	741906	Coil - Choke, R.F.	R179	425266	3300 Ohm, 5%, 1/8 w, Comp
L907	741905	Coil - R.F.	R180	425266	3300 Ohm, 5%, 1/8 w, Comp
		<i>All Resistors fixed carbon 1/8 watt unless otherwise noted</i>	R181	741882	330 Ohm, 5%, 1/8 w, Comp
R51	428612	1000 Ohm, 5%, 1/8 w, Comp	R182	429826	4700 Ohm, 5%, 1/8 w, Comp
			R183	428612	1000 Ohm, 5%, 1/8 w, Comp
			R184	425266	3300 Ohm, 5%, 1/8 w, Comp
			R185	422021	6800 Ohm, 5%, 1/8 w, Comp
			R188	429821	680 Ohm, 1/8 w, 5%, Comp
			R202	427816	33,000 Ohms, 1/8 w, 5%, Comp
			R203	429833	56,000 Ohm, 1/8 w, 5%, Comp

Continued on Page 45