RESTRICTED

Installation Instructions

TCS NOISE LIMITER ADAPTER UNIT
for
NAVY MODEL TCS RECEIVING EQUIPMENT

NAVSHIPS 900,005 - IB

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Manufactured for

United States Navy Department **Bureau of Ships**

by

U. S. Television Manufacturing Corp. **New York 11, New York**

Contract NXsr 48301 **Contract dated February 17, 1944**

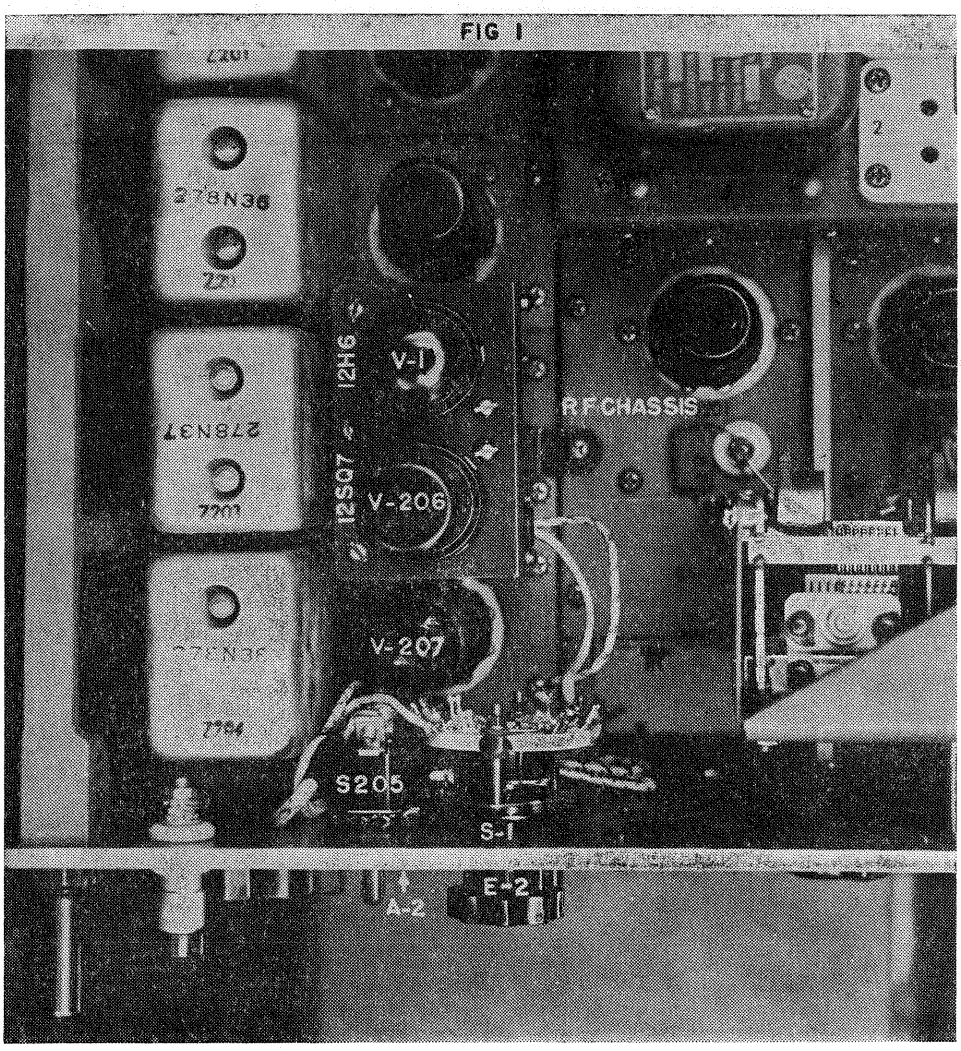
This instruction sheet for the TCS Noise Limiter Adapter Unit is to be placed in the Instruction Book for the TCS Receiver inside the front cover.

CUZ-50159

INSTALLATION

1. Disconnect receiver from power supply and loosen the two knurled nuts on the front panel to relieve the cabinet clamps and remove the receiver unit from its cabinet.
2. Remove the V207 (12A6) tube from socket X207 and also remove the V206 (12SQ7) tube from socket X206.
3. Unsolder all wires from S203. Remove S203. Change mounting of S205 to position formerly occupied by S203.
4. Mount new rotary switch S1 (Figure 2) in position formerly occupied by S205 with red locating spot up. Place A2 switch plate in position on front of panel and firmly attach both switches and plate to panel. Solder brown tracer wire taken from S203 to lug #3 on S1. Solder white wire to lug #2 and solder red and green tracer wire to lug #4 on S1. Unsolder yellow tracer wire from top tap of audio gain control and solder to lug #10 on S1. Connect and solder bare wire from lug #8 on S1 to top tap of audio gain control. Remove center screw and lock washer in plate of RF chassis, directly opposite center of X206 socket.
5. Replace V207 (12A6) tube in socket X207 and plug Noise Limiter Adapter Unit in socket X206 (Figure 1).
6. Replace screw and lock washer in RF chassis through angle bracket of adapter unit.
7. Solder green wire from adapter unit to lug #7, and solder yellow wire to lug #11 on S1.
8. Insert original V206 (12SQ7) tube in adapter socket X2.
9. With the rotor of switch S1 in C W Position (or extreme clockwise), securely fasten switch knob E2 with arrow pointing to C W on Switch Plate A2.

FIG 1



OPERATION

NORMAL OPERATION

For normal operation on a modulated signal, the arrow on Switch Knob E2 should be on MOD.

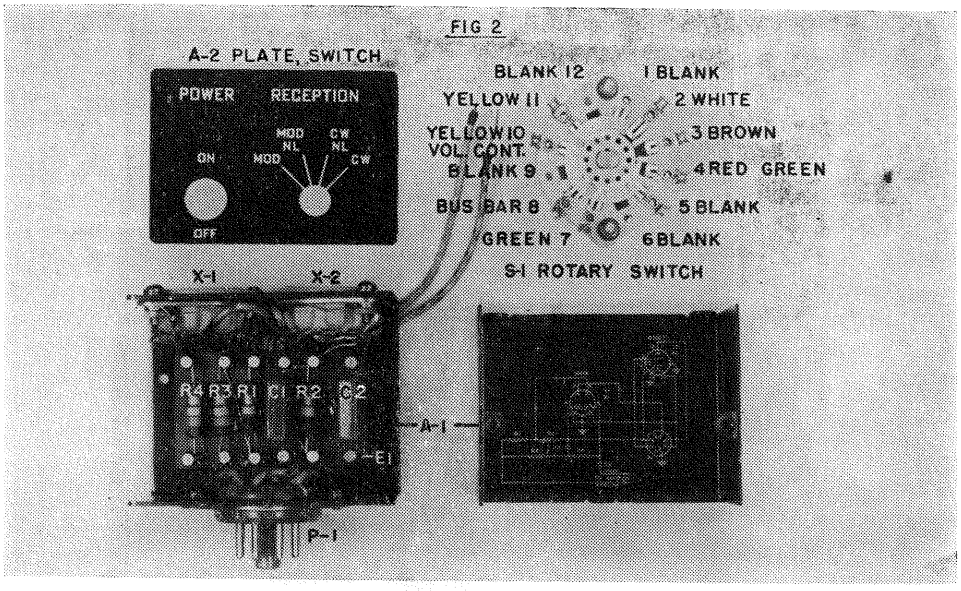
For normal operation on an unmodulated or telegraph signal, the arrow on Switch Knob E2 should be on CW which makes CW Pitch (Z204) Knob effective.

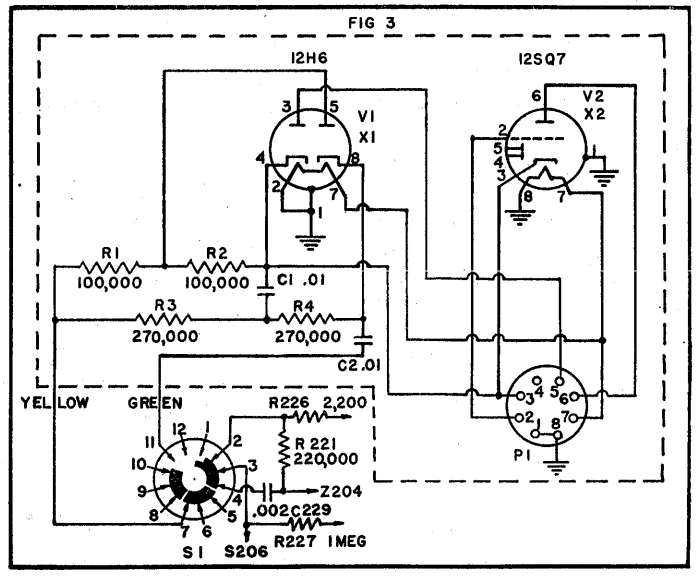
NOISE LIMITING OPERATION

For noise limiting operation on a modulated signal, Switch Knob E2 should be on MOD N L.

For noise limiting operation on an unmodulated or CW signal, Switch Knob E2 should be on CW N L.

Under both modulated noise limiting or CW noise limiting operation conditions, there will be a definite loss in audio signal which may be compensated by increasing AF Gain Knob R220.





TCS NOISE LIMITER PARTS LIST

BY SYMBOL DESIGNATION

SYMBOL DESIGNATION	DESCRIPTION	NAVY TYPE NUMBER	NAVY DWG. OR SPEC.	MFR.	MFR. DESIGNATION
A1	Chassis and Cover			Kent Metal Mfg. Co.	Dwg. #32-33
A2	Plate, switch			Crowe Name Plate	#36 P.R. Plate
C1	Capacitor, mica 0.01 Mfd. ±10% 300 W V		RE13A389M	Solar Mfg. Corp.	MWBW
C2	same as C1				
E1	Terminal Strip, 12 terminals cloth Bakelite			A. W. Franklin	Dwg. #34
E2	Switch Knob			Kurz Kasch	S-308-64-BBBL
P1	Octal Plug			Amphenol	86-RNCP-82
				U.S. Television Mfg. Corp.	Dwg. #45
R1	Resistor, composition 100,000 ohms ±10% ½ watt	RC21BE104K	RE13A340C	IRC	BT-½
R2	same as R1				
R3	Resistor, composition 270,000 ohms ±10% ½ watt	RC21BE274K	RE13A340C	IRC	BT-½
R4	same as R3				
S1	Single Bank Rotary Switch, Special 7 used contacts, four position			Centralab	BHXG 7197
V1	Vacuum Tube, Twin Diode 12H6		JAN-1A	RCA Radiotron	
X1	Octal Socket, ceramic	49373	RE49AA313B	Amphenol A. W. Franklin	49-RNSS-8M 65A - UST
X2	same as X1				

EQUIPMENT SPARE PARTS*	Quantity	DESCRIPTION
C-1, 2	1	Capacitor, mica, 0.01 Mfd. ±10% 300 V. D. C. Wk.
R-1, 2	1	Resistor, composition, 100,000 ohms ±10% ½ watt
R-3, 4	1	Resistor, composition, 270,000 ohms ±10% ½ watt
S-1	1	Single Bank Rotary Switch, Special 7 used contacts four position.
STOCK SPARE PARTS*		
C-1, 2	5	Capacitor, mica, 0.01 Mfd. ±10% 300 V. D. C. Wk.
E-2	5	Switch knob
P-1	5	Plug, octal, Micanol
R-1, 2	5	Resistor, composition, 100,000 ohms ±10% ½ watt
R-3, 4	5	Resistor, composition, 270,000 ohms ±10% ½ watt
X-1, 2	5	Octal socket, ceramic, unassembled.
S-1	5	Single Bank Rotary Switch, Special 7 used contacts four position.

*Where Supplied