QVF52C AND H PROGRAM AMPLIFIERS DESCRIPTION AND INITIAL ADJUSTMENTS PROGRAM OPERATING CENTER

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1. GENERAL

1.01 The QVF52C and QVF52H program amplifiers (see Fig. 1 and 2) are used for amplifying and distributing 5-, 8-, or 15-kHz audio program signals. The gain of the QVF52C unit is adjustable from 0 to 40.5 dB in 5-dB and 0.5-dB steps. The gain of the QVF52H unit is adjustable from 0 to 30 dB in 10-dB steps, with an additional 11-dB range (coarse) and 1-dB range (fine) adjustment from potentiometers mounted on the faceplate (42 dB maximum).

1.02 Whenever this section is reissued, the reason for reissue will be listed in this paragraph.

1.03 Both units have a distribution bridge for up to eight isolated outputs. Unused output ports need not be terminated.

1.04 The QVF52C and H units occupy single positions on the VF-300 shelf. All impedance and gain adjustments are made with switches and potentiometers located on the printed circuit board and the faceplate. Both units may be powered from —24 Vdc or —48 Vdc office battery.

References:

SD6812-01 VF-300 QVF52C and H Plug-In Unit Program Amplifier

2. DESCRIPTION (See Fig. 3)

2.01 ***Input:*** The program input signal to the QVF52C or H unit is wired either through the VF-300 shelf, or plugged into the access jack (AMP IN) on the faceplate of the unit. The input impedance may be set to 150 or 600 ohms through switches SC-1, -2, and -3 (see Table A).

2.02 ***QVF52C Amplifier Gain:*** The gain of the QVF52C unit is adjustable from 0 to 40.5 dB as follows:

- Switches SB-1, -2, -3, -5, -6, and SC-5, 6, mounted on the circuit board control the gain from 0 to 35 dB in 5-dB steps (see Table B).
- GAIN dB, located on the faceplate, controls the gain from 0 to 5.5 dB in 0.5-dB steps.

2.03 ***QVF52H Amplifier Gain:*** The gain of the QVF52H unit is adjustable from 0 to 42 dB and is controlled as follows:

- Switches SB-1, -2, -3, -5, -6, mounted on the circuit board, control the gain from 0 to 30 dB in 10-dB steps (see Table C).

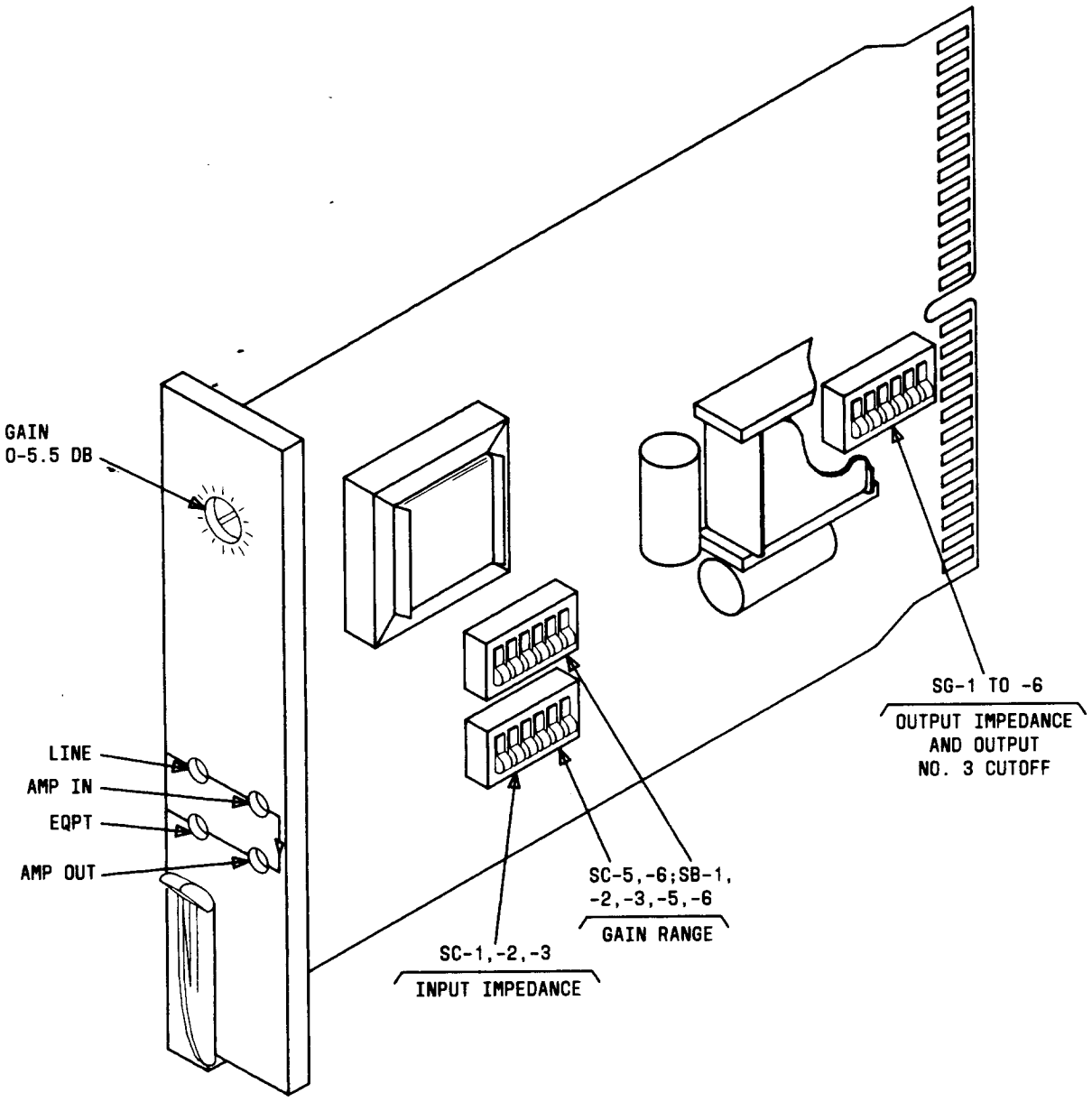

Fig. 1—QVF52C, Physical Layout

- GAIN potentiometer (located on the faceplate) controls the gain from 0 to 11 dB in 1-dB steps.

- GAIN potentiometer (located on the faceplate) supplies an additional continuous range of 0 to 1 dB.

2.04 ***Output:*** Both QVF52C and H units have eight isolated outputs. On a standard VF-300 shelf, three outputs are provided and the remaining five require additional shelf wiring. The impedance of outputs 1 and 2 may be set to 150 or 600 ohms through switches SG-1 through -4 (see Table D). The impedances of outputs 3 through 8 are 600 ohms. Output 3 can be disconnected to minimize crosstalk interference by opening SG-5 and -6.

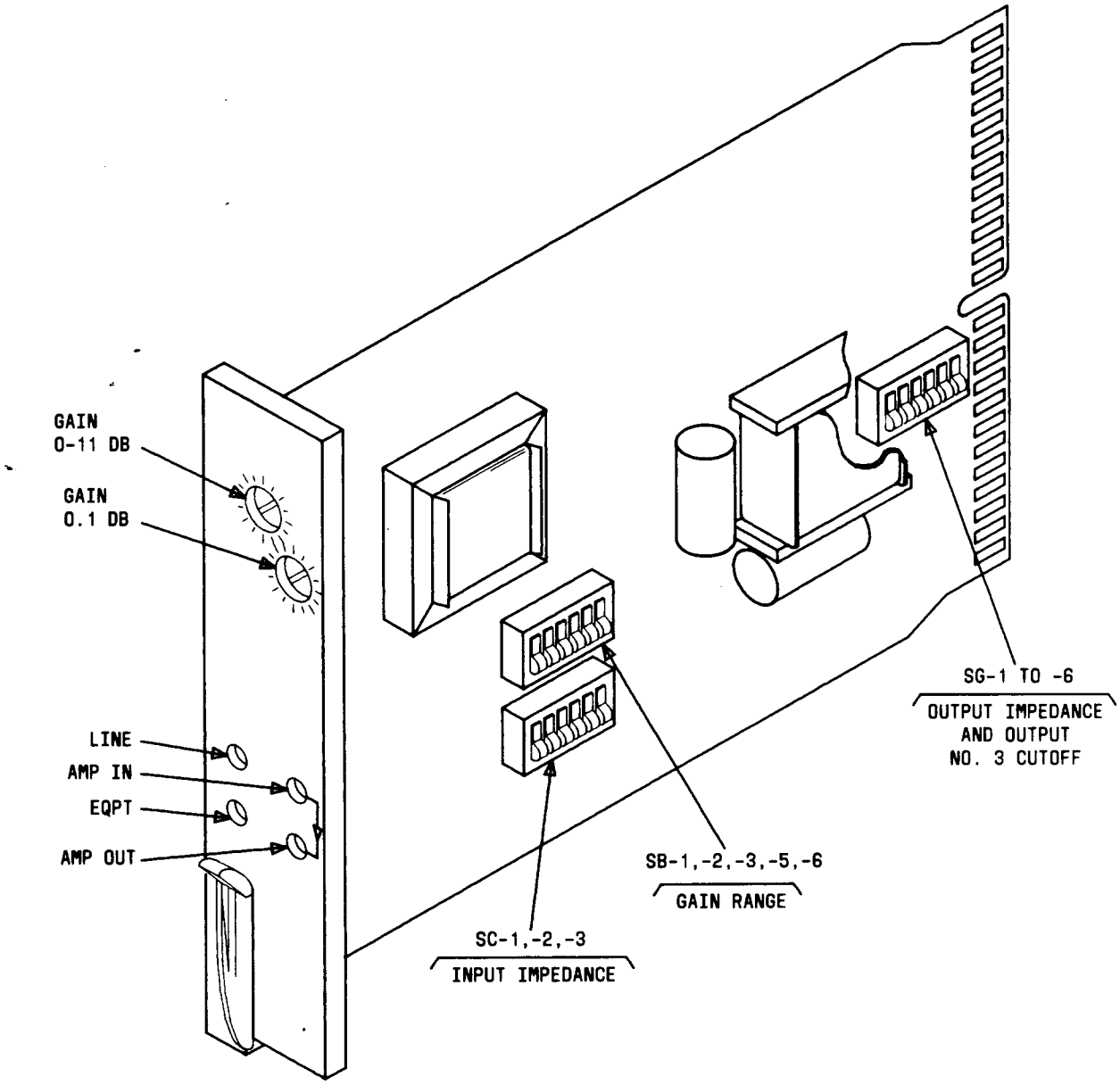

Fig. 2—QVF52H, Physical Layout

2.05 ***Jack Access:*** Faceplate-mounted jacks allow terminated measurements or program signal connections to be made at both the input and output of the QVF52C and H units.

3. INITIAL ADJUSTMENTS

3.01 The following procedure is used when QVF52C or H Program Amplifiers are initially installed. The following information is provided as a checklist and should be used in accordance with circuit information for the program circuit being provided. No special apparatus is required. See Fig. 1 and 2 and Tables A through D for circuit layout information.

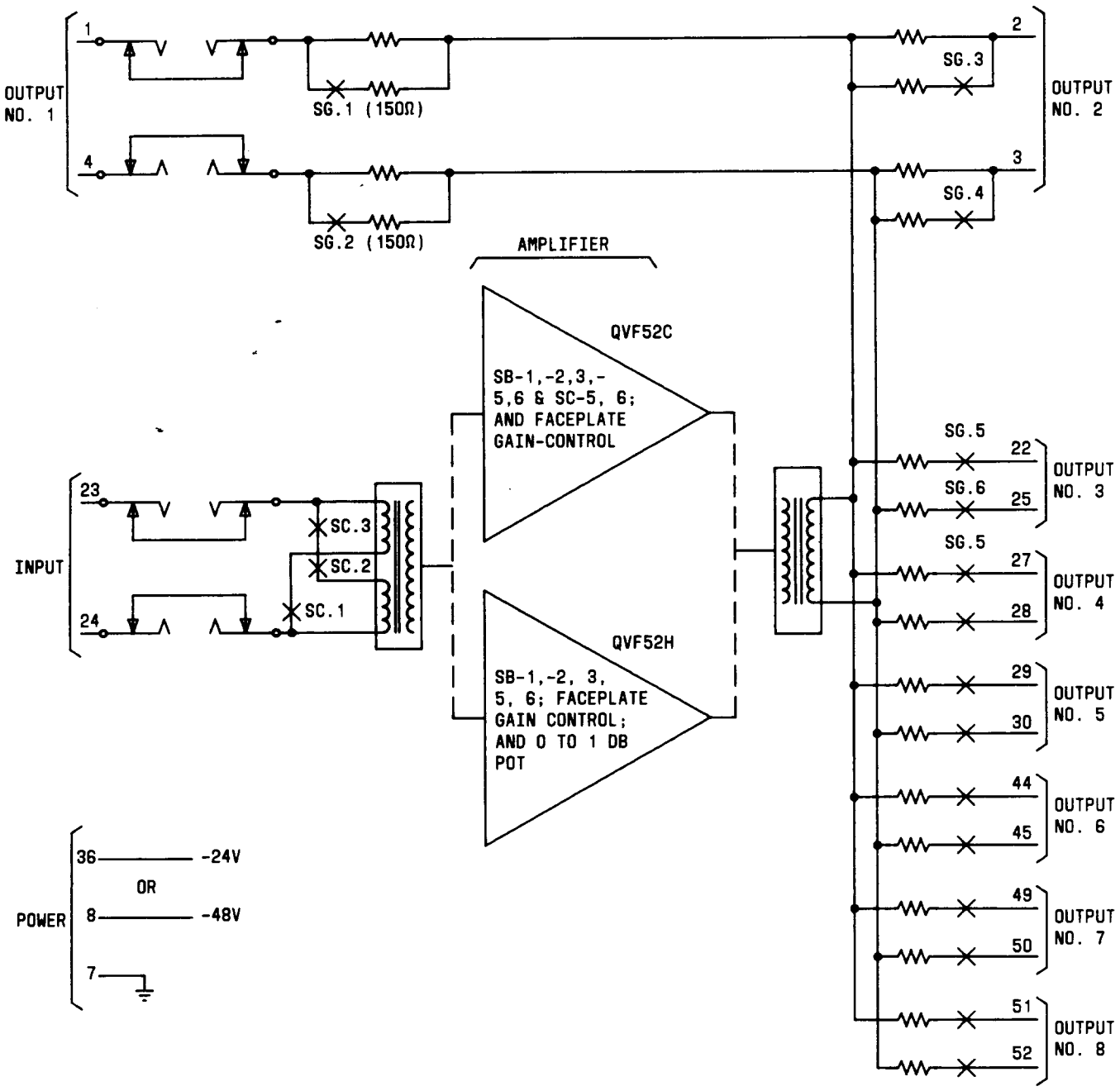

Fig. 3—QVF25C/H Simplified Functional Block Diagram

STEP	PROCEDURE

1 ***Input Impedance.*** Set switches SC-1, -2, -3 for either 150- or 600-ohm input impedance (see Table A).

2 ***Gain Range (QVF52C only) (See Fig. 1).*** Set switches SB-1, -2, -3, -5, -6; SC-5, -6, and the faceplate gain control (0-5.5 dB) for the specified gain requirement (see Table B).

3 ***Gain Range (QVF52H only) (See Fig. 2.)*** Set switches SB-1, -2, -3, -5, -6, and the two faceplate gain controls (0 to 11 dB, and 0 to 1 dB) for the specified gain requirement (see Table C).

4 ***Output Impedance.*** Set switches SG-1 through -4 for the required output impedance (outputs 1 and 2), and for outputs 3 to 8 (600 ohms only). Set switches SG-5 and -6 as shown in Table D.

TABLE A

INPUT IMPEDANCE SWITCH SETTINGS

IMPEDANCE (ohms)	SWITCH SC- (X is closed [ON], — is open [OFF])		
	1	2	3
150	X	—	X
600	—	X	—

TABLE B

QV52C SWITCH SB AND SC SETTINGS
(Faceplate control set to 0 dB)

GAIN (dB)	SWITCH SETTINGS (Note)		
0	SB-3	SB-6	SC-5
5	SB-3	SB-6	SC-6
10	SB-2	SB-6	SC-5
15	SB-2	SB-6	SC-6
20	SB-1	SB-6	SC-5
25	SB-1	SB-6	SC-6
30	SB-1	SB-5	SC-5
35	SB-1	SB-5	SC-6

Note: The switch positions listed in this table must be closed (ON). All other SB switches remain open. The remaining SC switches are used to control input impedance and have no control over amplifier gain.

STEP PROCEDURE

TABLE C

QVF52H SB SWITCH SETTINGS

GAIN (dB)	SWITCH SETTINGS (Note)	
0	SB-3	SB-6
10	SB-2	SB-6
20	SB-1	SB-6
30	SB-1	SB-5

Note: The switch positions listed in the table must be closed (ON). The overall gain of the amplifier is the sum of the gain established through SB switch settings, and the two faceplate control settings.

TABLE D

OUTPUT IMPEDANCE SWITCH SETTINGS

IMPEDANCES (ohms)	SWITCH SETTINGS
OUTPUT 1	
150	SG-1, -2, closed (ON)
600	SG-1, -2, open (OFF)
OUTPUT 2	
150	SG-3, -4, closed (ON)
600	SG-3, -4, open (OFF)
OUTPUT 3	
Connected	SG-5, -6, closed (ON)
Disconnected	SG-5, -6, open (OFF)