2 X1
4 X1
SATELLITE AUDIO SWITCHER

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BROADCAST ELECTRONICS

SATELLITE AUDIO SWITCHER ASSEMBLY

597-9150

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GENERAL INFORMATION

1–1. INTRODUCTION.

1–2. Section I provides a general description of the Broadcast Electronics Satellite Audio Switcher assembly and lists the equipment specifications.

1–3. EQUIPMENT DESCRIPTION.

1–4. The Broadcast Electronics Satellite Audio Switcher Assembly is designed to multiplex satellite systems for digital satellite control equipment such as the Broadcast Electronics AudioVAULT 100 digital record/play system. The switcher assembly operates in association with the control device to select and play a specific satellite system. A dim feature allows a satellite level to be reduced to allow the play of local audio over the satellite system audio. The switcher assembly consists of a 2 input model and a 4 input model and can be connected in parallel to provide control of up to 16 satellite systems. The switcher assembly consists of a single circuit board and is designed for installation in any rack.

1–5. ASSEMBLY CONFIGURATIONS.

1–6. The Satellite Audio Switcher Assemblies can be ordered in the following configurations:

P/N	DESCRIPTION
904–9150–002	2 X 1 Satellite Audio Switcher
904–9150–004	4 X 1 Satellite Audio Switcher

1–7. EQUIPMENT SPECIFICATIONS.

1–8. Refer to Table 1–1 for the physical and environmental specifications of the Broadcast Electronics Satellite Audio Switcher Assembly.

TABLE 1–1. SATELLITE AUDIO SWITCHER BOARD PHYSICAL, ENVIRONMENTAL AND AUDIO SPECIFICATIONS (Sheet 1 of 2)

PARAMETER	SPECIFICATION
PHYSICAL	
DIMENSIONS:	
Width:	9 3/4 inches (24.77 cm).
Height:	21 3/8 inches (54.29 cm).
Depth:	1 3/4 inches (4.45 cm).
WEIGHT	4 pounds (1.80 kg).
ENVIRONMENTAL	
AMBIENT TEMPERATURE RANGE	0° C to +50° C (+32° F to +122° F).
MAXIMUM HUMIDITY	95%, Non–condensing.

TABLE 1–1. SATELLITE AUDIO SWITCHER BOARD PHYSICAL, ENVIRONMENTAL AND AUDIO SPECIFICATIONS (Sheet 2 of 2)

PARAMETER	SPECIFICATION
AUDIO	
INPUT LEVEL	–5 dBu to +15 dBu.
OUTPUT LEVEL	Ground to +24 dBm.
OUTPUT IMPEDANCE	600 Ohms.
FREQUENCY RESPONSE	+0.05 dB / –0.25 dB, 20 Hz to 20 kHz.
DISTORTION	Less than 0.01%, 20 Hz to 20 kHz.
SIGNAL TO NOISE	Greater than 90 dB, 22 Hz to 22 kHz.
SEPARATION	Greater than 90 dB, 20 Hz to 20 kHz.
CROSSTALK	Greater than 80 dB, 20 Hz to 20 kHz.

SECTION II

INSTALLATION

2–1. INTRODUCTION.

2–2. Section II contains information required for the installation of the Broadcast Electronics Satellite Audio Switcher Assembly.

2–3. UNPACKING.

2–4. The equipment becomes the property of the customer when the equipment is delivered to the carrier. Carefully unpack the Satellite Audio Switcher Assembly and perform a visual inspection to determine that no apparent damage has been incurred during shipment. All shipping materials should be retained until it is determined that the unit has not been damaged. Claims for damaged equipment must be promptly filed with the carrier or the carrier may not accept the claim.

2–5. The contents of the shipment should be as indicated on the packing list. If the contents are incomplete, or the unit is damaged electrically or mechanically, notify both the carrier and Broadcast Electronics, Inc.

2–6. APPLICATION INFORMATION.

2–7. The Satellite Audio Switcher Assembly is designed to provide switching operations for satellite control products such as Broadcast Electronics AudioVAULT 100 digital record/play system. Specific AudioVAULT 100 applications include: 1) network delay recording and 2) live satellite switching. Application information for the AudioVAULT 100 system is presented in the AudioVAULT 100 instruction manual. Refer to AudioVAULT 100 instruction manual 597–9210–001 for the connections required to perform specific operations using the AudioVAULT 100 digital record/playback system. If the application requires dim operation, the audio dim operation is performed using the AudioVAULT 100 satellite machine.

2–8. INSTALLATION.

2–9. PLACEMENT.

2–10. The Satellite Audio Switcher Assembly is mounted to a panel. The panel allows the assembly to be mounted in a rack assembly. The Satellite Audio Switcher Assembly requires an area 9 3/4 inches (24.8 cm) X 21 3/8 inches (54.3 cm). The assembly is mounted to the rack using four No. 12 screws and clip nuts. Determine a location in the rack for the panel and mount the panel in the rack as follows:

1. Install the clip nuts in the appropriate location.
2. Insert the panel.
3) Install the No. 12 screws.

2–11. WIRING.

2–12. **MATING CONNECTORS.** The Satellite Audio Switcher Assembly is equipped with mating connectors for the input, output, and control wiring. The connectors are provided in the accessory kit and consist of screw–terminal type connections. To attach a wire to the connectors, proceed as follows:

1. Strip the wire approximately 1/4 inch.

2. Insert the wire in the connector.

3. Secure wire using the connector screw.

2–13. **AUDIO INPUT CONNECTIONS.** The Satellite Audio Switcher Assembly is designed to accept audio input levels from –5 dBu to +15 dBu. The assembly is equipped with channel 1 connector J100, channel 2 connector J200, channel 3 connector J300, and channel 4 connector J400. The audio input connectors interface the satellite audio outputs to the switcher assembly. The pin descriptions for the channel 1 audio input connector are provided in the following text. The pin descriptions for connectors J200 through J400 are identical. Refer to the following text to connect a satellite audio output to the Satellite Audio Switcher Assembly.

AUDIO INPUT CONNECTOR CHANNEL 1 – J100

PIN	DESCRIPTION
J100–1	Right Channel Input+
J100–2	Right Channel Input –
J100–3	Right Channel Input Shield
J100–4	Left Channel Input Shield
J100–5	Left Channel Input –
J100–6	Left Channel Input +

2–14. **INPUT CONTROL.** Each satellite audio input channel is equipped with two control inputs. A main control input enables/disables a main audio output. A dim control input enables/disables a dim function. The dim function lowers the satellite audio level from 0 dB to –10 dB. The dim function is used to allow the play of local audio over the satellite audio. The control inputs are located on connectors J1 and J2.

2–15. Each control input is designed for positive or negative control logic. Positive logic is defined as a control operation requiring sustained contact to a positive voltage to enable the audio output. Negative logic is defined as a control operation requiring: 1) a sustained contact to ground to disable the audio output and 2) removal of the ground to enable the audio output. The positive/negative logic programming is controlled by programming headers J101 through J401.

2–16. The control headers must be properly programmed for the type of control signal to be used. For example, a positive logic control signal is to be used to control channel 1. Jumper P101 must be installed in position 2–3 (control common and ground) on header J101. For negative logic control signals, jumper P101 must be installed in position 1–2 (control common and +V) on header J101. If negative logic control is used with no dim control operation, a jumper must be connected between the dim control input and ground.

2–17. The following text presents the input channel control connectors and headers. As required by the application, refer to the following text and: 1) connect sustained positive or negative control signals to the main/dim control inputs and 2) program the associated control header for positive or negative logic.

NOTE *IF NEGATIVE LOGIC CONTROL IS USED WITH NO DIM OPERATION, CONNECT A JUMPER BETWEEN THE DIM CONTROL INPUT AND GROUND.*

NOTE

CHANNEL 1

INPUT CONTROL	DESCRIPTION
J1–1	Main Control Input
J1–2	Dim Control Input
J1–3	Control Common (Shield)
CONTROL HEADER – J101	
POSITIVE LOGIC	Program Jumper P101 In Position 2–3.
NEGATIVE LOGIC	Program Jumper P101 In Position 1–2.

CHANNEL 2

INPUT CONTROL	
J1–4	Main Control Input
J1–5	Dim Control Input
J1–6	Control Common (Shield)
CONTROL HEADER – J201	
POSITIVE LOGIC	Program Jumper P201 In Position 2–3.
NEGATIVE LOGIC	Program Jumper P201 In Position 1–2.

CHANNEL 3

INPUT CONTROL	
J2–1	Main Control Input
J2–2	Dim Control Input
J2–3	Control Common (Shield)
CONTROL HEADER – J301	
POSITIVE LOGIC	Program Jumper P301 In Position 2–3.
NEGATIVE LOGIC	Program Jumper P301 In Position 1–2.

CHANNEL 4

INPUT CONTROL	
J2–4	Main Control Input
J2–5	Dim Control Input
J2–6	Control Common (Shield)
CONTROL HEADER – J401	
POSITIVE LOGIC	Program Jumper P401 In Position 2–3.
NEGATIVE LOGIC	Program Jumper P401 In Position 1–2.

2–18. **AUDIO OUTPUT CONNECTIONS.** The Satellite Audio Switcher Assembly audio output is located at connector J5. The audio output is designed to be interfaced to any analog or digital satellite control equipment such as the Broadcast Electronics AudioVAULT 100 digital record/playback system. The following text presents the audio output connector pin descriptions.

AUDIO OUTPUT CONNECTOR – J5

PIN	DESCRIPTION
J5–1	Left Channel Output +
J5–2	Left Channel Output –
J5–3	Left Channel Output Shield
J5–4	Right Channel Output Shield
J5–5	Right Channel Output +
J5–6	Right Channel Output –

2–19. **CIRCUIT GROUND PROGRAMMING.**

2–20. Header J7 on the Satellite Audio Switcher Assembly controls the ground reference. For single Satellite Audio Switcher Assembly installations, install jumper P7 in position 2–3. For multiple Satellite Audio Switcher installations, the programming of header J7 is presented in the multiple satellite switcher connection procedures. Refer to CONNECTING MULTIPLE SATELLITE SWITCHER ASSEMBLIES – PROCEDURE in the following text to program the jumper as required.

2–21. **CONNECTING MULTIPLE SATELLITE SWITCHER ASSEMBLIES.**

2–22. The Satellite Audio Switcher Assembly can be connected to provide the switching required for up to 16 satellite systems. Connectors J3 and J4 allow the Switcher Assemblies to be connected in parallel. Interfacing for 8 satellite systems require two Satellite Switcher Assemblies. Interfacing for 12 satellite systems require three Satellite Switcher Assemblies.

2–23. **CONNECTING MULTIPLE SATELLITE SWITCHER ASSEMBLIES – PROCEDURE.** The Satellite Audio Switcher Assemblies can be connected in parallel by connecting a cable between J3/J4 on Switcher Assembly 1 and J3/J4 on Switcher Assembly 2. If multiple Satellite Audio Switcher Assemblies are to be connected in parallel, proceed as follows:

1. Refer to Figure 2–1 and connect J3/J4 on Switcher Assembly 1 to J3/J4 on Switcher Assembly 2 using 6 conductor audio cable.
2. Select a Satellite Switcher Assembly to supply the output audio. Any switcher assembly can be selected to provide the output audio. Refer to AUDIO OUTPUT CONNECTIONS in the preceding text and connect the analog/digital satellite interfacing equipment to J5 on the switcher assembly selected to provide output audio.
3. Program ground header J7 as follows:
   A. For all Satellite Audio Switcher Assemblies not selected for output audio operation, program jumper P7 in position 1–2.
   B. For the Satellite Audio Switcher Assembly selected for output audio operation, program jumper P7 in position 2–3.

SWITCHER ASSEMBLY 1			SWITCHER ASSEMBLY 2	
PIN	DESCRIPTION		PIN	DESCRIPTION
J3–1	Ground	→	J4–1	Ground
J3–2	Right Channel	→	J4–2	Right Channel
J3–3	Ground	→	J4–3	Ground
J3–4	Ground	→	J4–4	Ground
J3–5	Left Channel	→	J4–5	Left Channel
J3–6	Ground	→	J4–6	Ground

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FIGURE 2–1. CONNECTING MULTIPLE SATELLITE AUDIO SWITCHER ASSEMBLIES

2–24. **POWER SUPPLY CONNECTION.**

WARNING ***ENSURE ALL PRIMARY POWER IS DISCONNECTED BEFORE PROCEEDING.***

WARNING

2–25. The Satellite Audio Switcher Assembly is equipped with a 120V ac modular power supply unit. The power supply unit is designed to operate from a 105 to 129 volt ac power supply. Prior to connecting the power supply unit to ac power, ensure the selected ac power supply operates within the 105 to 129 volt range.

2–26. The power supply unit is equipped with 6–pin power supply connector P6. Connect P6 to J6 on the Switcher Assembly. Connect the power supply unit to the selected power supply outlet.

2–27. **INSTALLATION ADJUSTMENTS.**

2–28. The Satellite Audio Switcher is equipped with input, output, and dim level controls. Adjustment of the controls is presented in SECTION III, OPERATION.

SECTION III
OPERATION

3–1. INTRODUCTION.

3–2. Section III presents standard operating procedures for the Satellite Audio Switcher Assembly.

3–3. OPERATING ADJUSTMENTS.

3–4. INPUT LEVEL CALIBRATION.

3–5. The Satellite Audio Switcher Assembly input circuitry is designed for input levels from –5 dBu to +15 dBu. Each input channel is equipped with left channel and right channel input level controls. The input level controls are shipped from the factory configured to provide a +10 dBm output level when the input level is +5 dBu. The following text presents the input level controls.

INPUT CHANNEL	LEVEL CONTROL
1	Left Channel control R130.
	Right Channel control R137.
2	Left Channel control R230.
	Right Channel control R237.
3	Left Channel control R330.
	Right Channel control R337.
4	Left Channel control R430.
	Right Channel control R437.

3–6. The input level controls must be adjusted to obtain a 4 volt peak–to–peak signal at integrated circuits U100, U200, U300, and U400. To adjust the input level controls, proceed as follows:

1. Adjust the left channel on input channel 1 as follows:
   A. Connect an oscilloscope between U100A pin 1 and ground.
   B. Determine a time when a reference tone is available from the satellite service connected to input channel 1. Ensure the tone is at the nominal level of the satellite audio.
   C. During the satellite service reference tone, adjust left channel input level control R130 for a 4 volt peak–to–peak signal.
   D. Repeat the procedure for the right channel. Connect the oscilloscope between U100B pin 1 and ground. Adjust the right channel using right channel input level control R137.
2. Repeat the procedure for input channels 2, 3, and 4. For channel 2: 1) adjust the left channel by connecting the oscilloscope at U200A pin 1 and using left channel input level control R230 and 2) adjust the right channel by connecting the oscilloscope at U200B pin 1 and using right channel input level control R237. For channel 3: 1) adjust the left channel by connecting the oscilloscope at U300A pin 1 and using left channel input level control R330 and 2) adjust the right channel by connecting the oscilloscope at U300B pin 1 and using right channel input level control R337. For channel 4: 1) adjust the left channel by connecting the oscilloscope at U400A pin 1 and using left channel input level control R430 and 2) adjust the right channel by connecting the oscilloscope at U400B pin 1 and using right channel input level control R437.

3–7. OUTPUT LEVEL CALIBRATION.

3–8. The audio output circuitry is equipped with left channel output level control R31 and right channel audio output level control R32. The controls can be adjusted to provide any output level up to +24 dBm. The Satellite Audio Switcher Assembly is shipped from the factory to provide a +10dBm output level. To adjust the audio output level, proceed as follows:

1. Adjust the left channel output as follows:
   A. Connect a VU meter to the left channel audio output at J5–1 (+) and J5–2 (–).
   B. Determine a time when a reference tone is available from the satellite service connected to input channel 1. Ensure the tone is at the nominal level of the satellite audio.
   C. Enable the channel 1 main audio channel.
   D. During the satellite reference tone, adjust left channel output level control R31 for the desired output level level.
   E. Repeat the procedure for the right channel. Connect the VU meter to the right channel audio output at J5–5 (+) and J5–6 (–). Adjust the right channel using right channel output level control R32.

3–9. AUDIO DIM CALIBRATION.

3–10. Each audio input channel is equipped with two output channels: 1) a main channel and 2) a dim channel. The main channel is designed to be used as the main audio channel for satellite audio and is equipped with no level adjustments. The dim channel is designed to provide a lower satellite audio level to allow local audio to be played over the satellite audio. The dim channel is equipped with a potentiometer to allow the level to be reduced to the desired level. The dim control range is from 0 to –10 dB. The following text presents the dim level controls.

INPUT CHANNEL	LEVEL CONTROL
1	Dim Left Channel Control R131.
	Dim Right Channel Control R138.
2	Dim Left Channel Control R231.
	Dim Right Channel Control R238.
3	Dim Left Channel Control R331.
	Dim Right Channel Control R338.
4	Dim Left Channel Control R431.
	Dim Right Channel Control R438.

3–11. The dim level controls are adjusted at the factory to provide a –6 dB dim level. The controls can be adjusted from 0 to –10 dB. To adjust the dim level controls, proceed as follows:

1. Adjust the left channel dim on input channel 1 as follows:
   A. Connect a VU meter to the left channel audio output at J5–1 (+) and J5–2 (–).
   B. Determine a time when a reference tone is available from the satellite service connected to input channel 1. Ensure the tone is at the nominal level of the satellite audio.
   C. Enable the channel 1 main audio channel.
   D. Record the main audio output level _____.

E. Disable the channel 1 main audio channel.

F. Enable the channel 1 dim audio channel.

G. During the satellite service reference tone, adjust the channel 1 left channel dim level control R131 for the desired dim level.

H. Repeat the procedure for the right channel. Connect the VU meter to the right channel audio output at J5–5 (+) and J5–6 (–). Adjust the right channel using right channel dim level control R138.

2. Repeat the procedure for input channels 2, 3, and 4. For channel 2: 1) adjust the left channel by connecting the VU meter at J5–1 (+)/J5–2 (–) and using left channel dim level control R231 and 2) adjust the right channel by connecting the VU meter at J5–5 (+)/J5–6 (–) and using right channel dim level control R238. For channel 3: 1) adjust the left channel by connecting the VU meter at J5–1 (+)/J5–2 (–) and using left channel dim level control R331 and 2) adjust the right channel by connecting the VU meter at J5–5 (+)/J5–6 (–) and using right channel dim level control R338. For channel 4: 1) adjust the left channel by connecting the VU meter at J5–1 (+)/J5–2 (–) and using left channel dim level control R431 and 2) adjust the right channel by connecting the VU meter at J5–5 (+)/J5–6 (–) and using right channel dim level control R438.

SECTION IV
MAINTENANCE

4–1. INTRODUCTION.

4–2. This section provides maintenance information for the Broadcast Electronics Satellite Audio Switcher Assembly.

4–3. FIRST LEVEL MAINTENANCE.

4–4. **INSPECTION AND CLEANING.** On a regular basis, clean the equipment of accumulated dust using a brush and vacuum cleaner. Inspect the circuit board for damage caused by components overheating. Overheated components are identified by circuit board discoloration near the component leads. Inspect the circuit board for loose hardware as required.

4–5. SECOND LEVEL MAINTENANCE.

4–6. Second level maintenance consists of procedures required to adjust the Satellite Audio Switcher Assembly circuitry or restore the transmitter to operation after a fault has occurred. The procedures consists of electrical adjustments and component replacement procedures.

4–7. The maintenance philosophy for the Satellite Audio Switcher Assembly consists of isolating a problem to a specific area. Once the specific area is located, subsequent troubleshooting using the schematic diagram in SECTION VI, DRAWINGS will assist in problem isolation to a replaceable component. If required, the assembly may be: 1) returned to the factory for repair or exchange or 2) repaired locally.

4–8. **ELECTRICAL ADJUSTMENTS.**

WARNING ***NEVER OPEN THE EQUIPMENT UNLESS ALL TRANSMITTER PRIMARY POWER IS DISCONNECTED. ENSURE ALL TRANSMITTER PRIMARY POWER IS DISCONNECTED BEFORE ATTEMPTING MAINTENANCE ON ANY AREA WITHIN THE TRANSMITTER.***

WARNING

4–9. Adjustment procedures for controls associated with the Satellite Audio Switcher Assembly circuitry are presented in the SECTION III, OPERATION. Refer to SECTION III as required for the adjustment procedures.

4–10. **COMPONENT REPLACEMENT PROCEDURE.** Component replacement on printed circuit boards requires extreme care to avoid damage to the circuit board traces. The following text describes the procedure to replace components on the Satellite Audio Switcher Assembly circuit board.

4–11. On all circuit boards, the adhesive securing the copper trace to the board melts at almost the same temperature at which solder melts. A circuit board trace can be destroyed by excessive heat or lateral movement during soldering. Use of a small iron with steady pressure is required for circuit board repairs.

4–12. To remove a component from a circuit board, cut the leads from the body of the defective component while the device is still soldered to the board.

4–13. Grip each component lead, one at a time, with long–nose pliers. Rotate the circuit board and touch a soldering iron to the lead at the solder connection. When the solder begins to melt, push the lead through the back side of the board. Each lead may now be heated independently and pulled out of each hole. The holes may be cleared of solder by carefully re–heating each hole with a low wattage iron and removing the residual solder with a soldering vacuum tool.

WARNING WARNING WARNING WARNING ***MOST SOLVENTS WHICH WILL REMOVE ROSIN FLUX ARE VOLATILE AND TOXIC BY THEIR NATURE AND SHOULD BE USED ONLY IN SMALL AMOUNTS IN A WELL VENTILATED AREA, AWAY FROM FLAME SUCH AS FROM A SOLDERING IRON OR SMOKING MATERIALS. OBSERVE THE MANUFACTURER'S CAUTIONARY INSTRUCTIONS.***

4–14. Install the new component and apply solder from the bottom side of the circuit board. After soldering, remove flux with a cotton swab moistened with a suitable solvent. Rubbing alcohol is highly diluted and is not effective.

4–15. The board should be checked to ensure the flux has been removed and not just smeared. Rosin flux is not normally corrosive, but rosin will absorb enough moisture in time to become conductive and cause problems.

4–16. **INTEGRATED CIRCUITS.** Special care should be exercised with integrated circuits. Each integrated circuit must be installed by matching the integrated circuit notch with the notch on the socket. Do not attempt to remove an integrated circuit from a socket with your fingers. Use an integrated circuit puller to lightly pry the component from the socket.

SECTION V
PARTS LIST

5–1. INTRODUCTION.

5–2. This section provides parts lists for the Satellite Audio Switcher Assembly. The parts lists provide descriptions and part numbers of electrical components, assemblies, and selected mechanical parts required for maintenance. Each parts list entry in this section is indexed by reference designators appearing on the applicable schematic diagrams.

TABLE 5–1. SATELLITE AUDIO SWITCHER REPLACEABLE PARTS LIST INDEX

TABLE 5–2. 2 X 1 SATELLITE AUDIO SWITCHER – 904–9150–002

REF. DES.	DESCRIPTION	PART NO.	QTY.
——	Connector, Male, 6 Terminal	418–0046	1
——	Power Supply, Source MPX Assembly	958–0015	1
——	2 x 1 Satellite Audio Switcher Circuit Board Assembly	918–0203–002	1
——	Instruction Manual, Satellite Audio Switcher Board	597–9150	1

TABLE 5–3. 4 X 1 SATELLITE AUDIO SWITCHER – 904–9150–004

REF. DES.	DESCRIPTION	PART NO.	QTY.
——	Connector, Male, 6 Terminal	418–0046	1
——	Eight Way Multiplexer Plate	471–1306	1
——	Satellite Audio Switcher Cover	471–1307–002	1
——	Power Supply, Source MPX Assembly	958–0015	1
——	4 x 1 Satellite Audio Switcher Circuit Board Assembly	918–0203–004	1
——	Instruction Manual, Satellite Audio Switcher Board	597–9150	1

TABLE 5–4. POWER SUPPLY, SOURCE MPX ASSEMBLY – 958–0015

REF. DES.	DESCRIPTION	PART NO.	QTY.
——	Pins, Connector	417–0053	4
——	Connector, Housing, 6–Pin	418–0670	1
——	Power Supply, ±5V dc, ±12V dc, –12V	540–0009	1

TABLE 5–5. 2 X 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–002 (Sheet 1 of 4)

REF. DES.	DESCRIPTION	PART NO.	QTY.
C14	Capacitor, Electrolytic, 330 uF, 25V Non–Polarized	020–3385	1
C15	Capacitor, Mica, 750 pF ±5%, 500V	042–7522	1
C16	Capacitor, Silvered Mica, 100 pF ±5%, 500V	040–1022	1
C17 thru C20	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	4
C21, C22	Capacitor, Polyester Film, .0015 uF, 100V, ±10%	030–1533	2
C23	Capacitor, Electrolytic, 330 uF, 25V Non–Polarized	020–3385	1
C24	Capacitor, Mica, 750 pF ±5%, 500V	042–7522	1
C25	Capacitor, Silvered Mica, 100 pF ±5%, 500V	040–1022	1
C26, C27	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	2
C28, C29	Capacitor, Polyester Film, .0015 uF ±10%, 100V	030–1533	2
C101 thru C104	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C105	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1

TABLE 5–5. 2 X 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–002 (Sheet 2 of 4)

REF. DES.	DESCRIPTION	PART NO.	QTY.
C106 thru C109	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C110	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C111 thru C116	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	6
C201 thru C204	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C205	Capacitor, Ceramic, 68 pF ±5%, 50V	003–6812	1
C206 thru C209	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C210	Capacitor, Ceramic, 68 pF ±5%, 50V	003–6812	1
C211 thru C216	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	6
FB1 thru FB4	Ferrite Bead	360–0001	4
FB101 thru FB104	Ferrite Bead	360–0001	4
FB201 thru FB204	Ferrite Bead	360–0001	4
J1	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J5	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J6	Receptacle, 5–Pin	417–0677	1
J7	Receptacle, Male, 3–Pin In–line	417–0003	1
J100	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J101	Receptacle, Male, 3–Pin In–line	417–0003	1
J200	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J201	Receptacle, Male, 3–Pin In–line	417–0003	1
P7	Jumper, Programmable, 2–Pin	340–0004	1
P101	Jumper, Programmable, 2–Pin	340–0004	1
P201	Jumper, Programmable, 2–Pin	340–0004	1
R7 thru R10	Resistor, 10 Ohm ±1%, 1/4W	103–1021	4
R15	Resistor, 10 Ohm ±1%, 1/4W	103–1021	1
R16	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R17, R18	Resistor, 33.2 Ohm, ±1%, 1/4W	103–3322	1
R19 thru R22	Resistor, 10 Ohm, ±1%, 1/4W	103–1021	4
R27	Resistor, 10 Ohm, ±1%, 1/4W	103–1021	1
R28	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R29, R30	Resistor, 33.2 Ohm, ±1%, 1/4W	103–3322	2
R101 thru R104	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R105, R106	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R107, R108	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R109, R110	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2

TABLE 5–5. 2 X 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–002 (Sheet 3 of 4)

REF. DES.	DESCRIPTION	PART NO.	QTY.
R111	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R112, R113	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R114	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R115 thru R118	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R119, R120	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R121, R122	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R123, R124	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R125	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R126, R127	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R128	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R129	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R130	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R131	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R132, R133	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R134, R135	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R136	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R137	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R138	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R139, R140	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	2
R201 thru R204	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R205, R206	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R207, R208	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R209, R210	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R211	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R212, R213	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R214	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R215 thru R218	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R219, R220	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R221, R222	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R223, R224	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R225	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R226, R227	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R228	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R229	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R230	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R231	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R232, R233	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R234, R235	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R236	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1

TABLE 5–5. 2 X 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–002 (Sheet 4 of 4)

REF. DES.	DESCRIPTION	PART NO.	QTY.
R237	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R238	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R239, R240	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
U9	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
U10, U11	Integrated Circuit, SSM–2142P Balanced Line Driver, Plastic 8–Pin DIP Package	220–1597	2
U12, U13	Integrated Circuit, SSM–2404P Logic Level Control Input, Plastic 20–Pin Package	220–1487	2
U100	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
U200	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
XU9 thru XU11	Socket, 8–Pin DIP	417–0804	3
XU12, XU13	Socket, 20–Pin DIP	417–2004	2
XU100	Socket, 8–Pin DIP	417–0804	1
XU200	Socket, 8–Pin DIP	417–0804	1
——	4 X 1 Satellite Audio Switcher Circuit Board	518–0203	1

TABLE 5–6. 4 x 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–004 (Sheet 1 of 6)

REF. DES.	DESCRIPTION	PART NO.	QTY.
C14	Capacitor, Electrolytic, 330 uF, 25V Non–Polarized	020–3385	1
C15	Capacitor, Mica, 750 pF ±5%, 500V	042–7522	1
C16	Capacitor, Silvered Mica, 100 pF ±5%, 500V	040–1022	1
C17 thru C20	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	4
C21, C22	Capacitor, Polyester Film, .0015 uF ±10%, 100V	030–1533	2
C23	Capacitor, Electrolytic, 330 uF, 25V Non–Polarized	020–3385	1
C24	Capacitor, Mica, 750 pF ±5%, 500V	042–7522	1
C25	Capacitor, Silvered Mica, 100 pF ±5%, 500V	040–1022	1
C26, C27	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	2
C28, C29	Capacitor, Polyester Film, .0015 uF ±10%, 100V	030–1533	2
C101 thru C104	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C105	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C106 thru C109	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C110	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C111 thru C116	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	6
C201 thru C204	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4

TABLE 5–6. 4 x 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–004 (Sheet 2 of 6)

REF. DES.	DESCRIPTION	PART NO.	QTY.
C205	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C206 thru C209	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C210	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C213 thru C215	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	3
C216	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	1
C301 thru C304	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C305	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C306 thru C309	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C310	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C313 thru C316	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	4
C401 thru C404	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C405	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C406 thru C409	Capacitor, Mica, 330 pF ±5%, 500V	042–3322	4
C410	Capacitor, Ceramic, 68 pF, 50V ±5%	003–6812	1
C413 thru C416	Capacitor, Monolithic Ceramic, 0.1 uF ±20%, 50V	003–1054	4
FB1 thru FB4	Ferrite Bead	360–0001	4
FB101 thru FB104	Ferrite Bead	360–0001	4
FB201 thru FB204	Ferrite Bead	360–0001	4
FB301 thru FB304	Ferrite Bead	360–0001	4
FB401 thru FB404	Ferrite Bead	360–0001	4
J1 thru J5	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	5
J6	Receptacle, 6–Pin	417–0677	1
J7	Receptacle, Male, 3–Pin In–line	417–0003	1
J100	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J101	Receptacle, Male, 3–Pin In–line	417–0003	1
J200	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J201	Receptacle, Male, 3–Pin In–line	417–0003	1
J300	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J301	Receptacle, Male, 3–Pin In–line	417–0003	1
J400	Connector, Female, 6–Terminal, Circuit Board Mount	417–0125	1
J401	Receptacle, Male, 3–Pin In–line	417–0003	1

TABLE 5–6. 4 x 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–004 (Sheet 3 of 6)

REF. DES.	DESCRIPTION	PART NO.	QTY.
P7	Jumper, Programmable, 2–Pin	340–0004	1
P101	Jumper, Programmable, 2–Pin	340–0004	1
P201	Jumper, Programmable, 2–Pin	340–0004	1
P301	Jumper, Programmable, 2–Pin	340–0004	1
P401	Jumper, Programmable, 2–Pin	340–0004	1
R7 thru R15	Resistor, 10 Ohm, ±1%, 1/4W	103–1021	9
R16	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R17, R18	Resistor, 33.2 Ohm, ±1%, 1/4W	103–3322	1
R19 thru R27	Resistor, 10 Ohm ±1%, 1/4W	103–1021	9
R28	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R29, R30	Resistor, 33.2 Ohm, ±1%, 1/4W	103–3322	1
R101 thru R104	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R105, R106	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R107, R108	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R109, R110	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R111	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R112, R113	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R114	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R115 thru R118	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R119, R120	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R121, R122	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R123, R124	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R125	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R126, R127	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R128	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R129	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R130	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R131	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R132, R133	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R134, R135	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R136	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R137	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R138	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R139, R140	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	2
R201 thru R203	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	3
R204	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	1
R205, R206	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R207, R208	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R209, R210	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2

TABLE 5–6. 4 x 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–004 (Sheet 4 of 6)

REF. DES.	DESCRIPTION	PART NO.	QTY.
R211	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R212, R213	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R214	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R215 thru R218	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R219, R220	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R221, R222	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R223, R224	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R225	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R226, R227	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R228	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R229	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R230	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R231	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R232, R233	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R234, R235	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R236	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R237	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R238	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R239, R240	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	2
R301, R302	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	2
R303, R304	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	2
R305, R306	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R307, R308	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R309, R310	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R311	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R312, R313	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R314	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R315 thru R318	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R319, R320	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R321, R322	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R323, R324	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R325	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R326, R327	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R328	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R329	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R330	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R331	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R332, R333	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R334, R335	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R336	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R337	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R338	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1

TABLE 5–6. 4 x 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–004 (Sheet 5 of 6)

REF. DES.	DESCRIPTION	PART NO.	QTY.
R339, R340	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	2
R401 thru R404	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R405, R406	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R407, R408	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R409, R410	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R411	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R412, R413	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	2
R414	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R415 thru R418	Resistor, 1.91 k Ohm ±1%, 1/4W	103–1914	4
R419	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	1
R420	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	1
R421	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	1
R422	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	1
R423	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	1
R424	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	1
R425	Resistor, 1.27 k Ohm ±1%, 1/4W	103–1274	1
R426, R427	Resistor, 4.99 k Ohm ±1%, 1/4W	100–5041	1
R428	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	1
R429	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R430	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R431	Potentiometer, 2 k Ohm ±10%, 1/2W	177–2044	1
R432, R433	Resistor, 10 k Ohm ±1%, 1/4W	100–1051	2
R434, R435	Resistor, 100 k Ohm ±1%, 1/4W	103–1062	2
R436	Resistor, 121 Ohm ±5%, 1/4W	100–1231	1
R437	Potentiometer, 100 k Ohm, ±10%, 1/2W	179–1065	1
R439, R440	Resistor, 1 k Ohm ±1%, 1/4W	100–1041	2
U9	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
U10, U11	Integrated Circuit, SSM–2142P Balanced Line Driver, Plastic 8–Pin DIP Package	220–1597	2
U12 thru U15	Integrated Circuit, SSM–2404P Logic Level Control Input, Plastic 20–Pin Package	220–1487	4
U100	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
U200	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
U300	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
U400	Integrated Circuit, NE5532AP, Dual Low Noise Operational Amplifier, 8–Pin DIP	221–5532–001	1
XU9 thru XU11	Socket, 8–Pin DIP	417–0804	3
XU12 thru XU15	Socket, 20–Pin DIP	417–2004	4

TABLE 5–6. 4 x 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD ASSEMBLY – 918–0203–004 (Sheet 6 of 6)

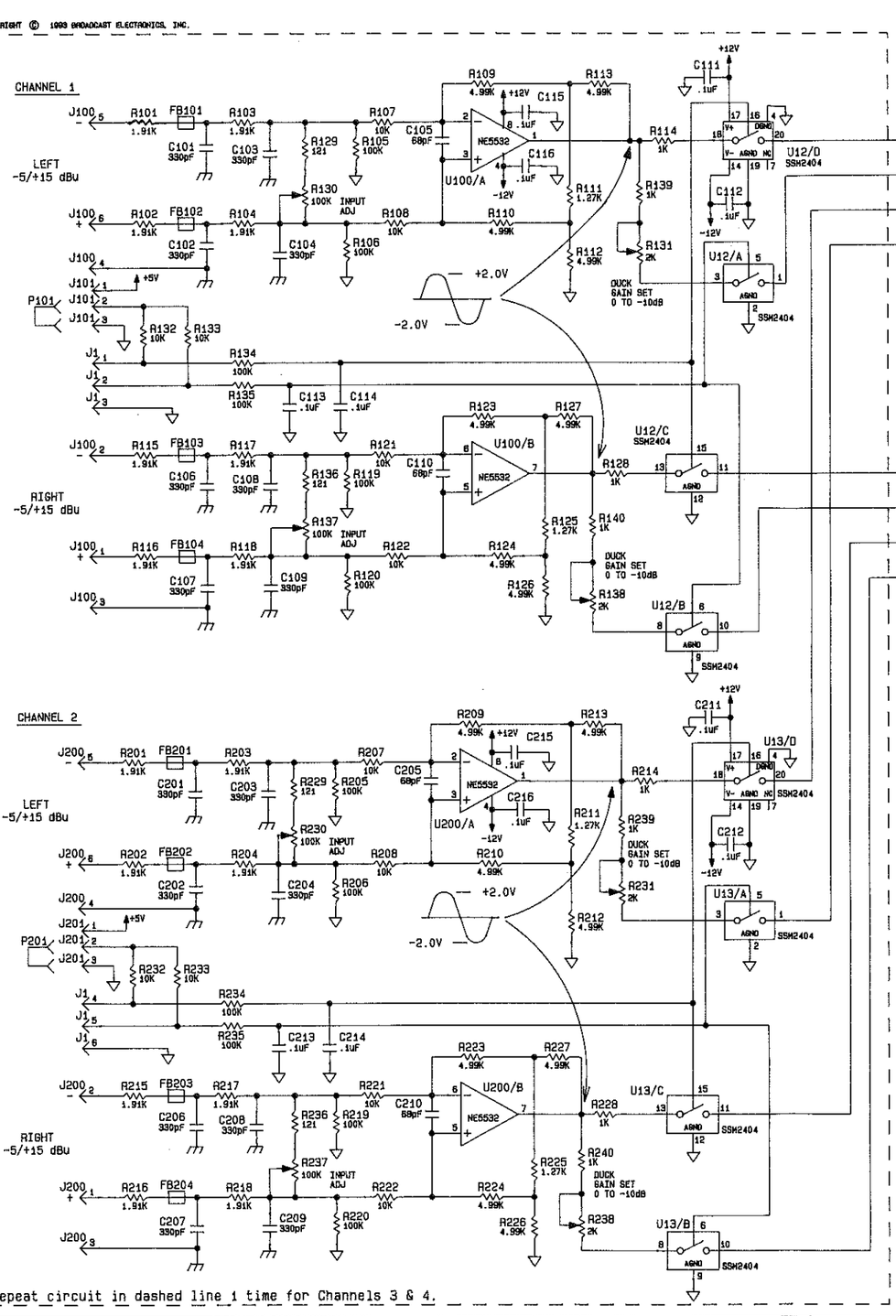
REF. DES.	DESCRIPTION	PART NO.	QTY.
XU100 XU400	Socket, 8–Pin DIP	417–0804	4
——	4 x 1 Audio Switcher Circuit Board	518–0203	1

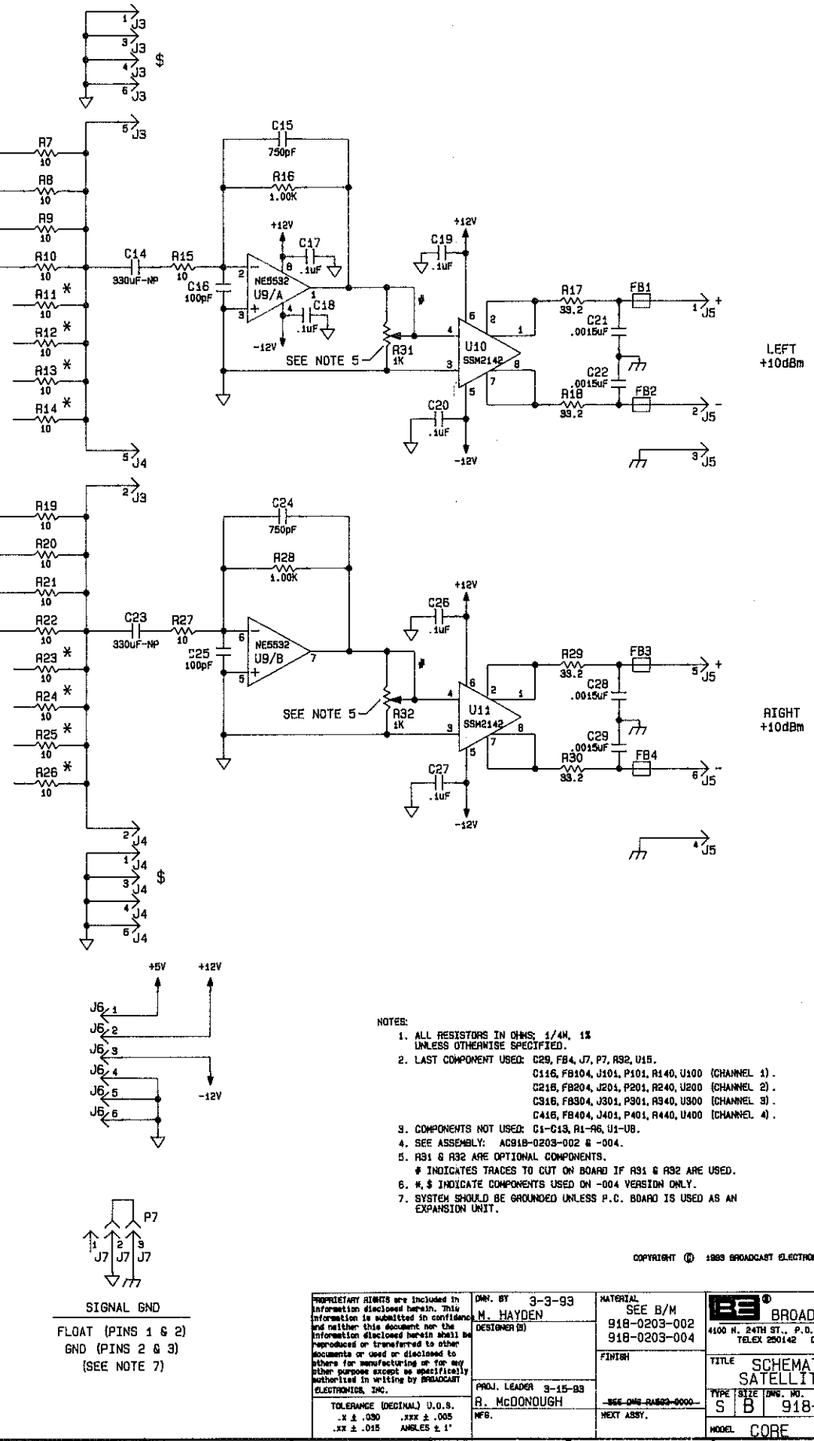
SECTION VI
DRAWINGS

6–1. INTRODUCTION.

6–2. This section provides assembly drawings, wiring diagrams, and schematic diagrams as listed below for the Broadcast Electronics Satellite Audio Switcher Assembly.

FIGURE	TITLE	NUMBER
6–1	SCHEMATIC DIAGRAM, 2 X 1 AND 4 X 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD	SB918–0203–002/ –004
6–2	ASSEMBLY DIAGRAM, 2 x 1 AND 4 X 1 SATELLITE AUDIO SWITCHER CIRCUIT BOARD	AC918–0203–002/ –004





NOTES:

1. ALL RESISTORS IN OHMS; 1/4W, 1% UNLESS OTHERWISE SPECIFIED.
2. LAST COMPONENT USED: C29, FB4, J7, P7, RS2, U15.
   C116, FB104, J101, P101, R140, U100 (CHANNEL 1).
   C216, FB204, J201, P201, R240, U200 (CHANNEL 2).
   C316, FB304, J301, P301, R340, U300 (CHANNEL 3).
   C416, FB404, J401, P401, R440, U400 (CHANNEL 4).
3. COMPONENTS NOT USED: C1-C13, R1-R6, U1-U8.
4. SEE ASSEMBLY: AC918-0203-002 & -004.
5. R31 & R32 ARE OPTIONAL COMPONENTS.
   # INDICATES TRACES TO CUT ON BOARD IF R31 & R32 ARE USED.
6. *, & $ INDICATE COMPONENTS USED ON -004 VERSION ONLY.
7. SYSTEM SHOULD BE GROUNDED UNLESS P.C. BOARD IS USED AS AN EXPANSION UNIT.

TOLERANCE (DECIMAL) U.O.S.
.X ± .030 .XXX ± .005
.XX ± .015 ANGLES ± 1°

DWN. BY 3-3-93 M. HAYDEN
DESIGNER (S)
PROJ. LEADER 3-15-93 R. McDONOUGH
MFG.

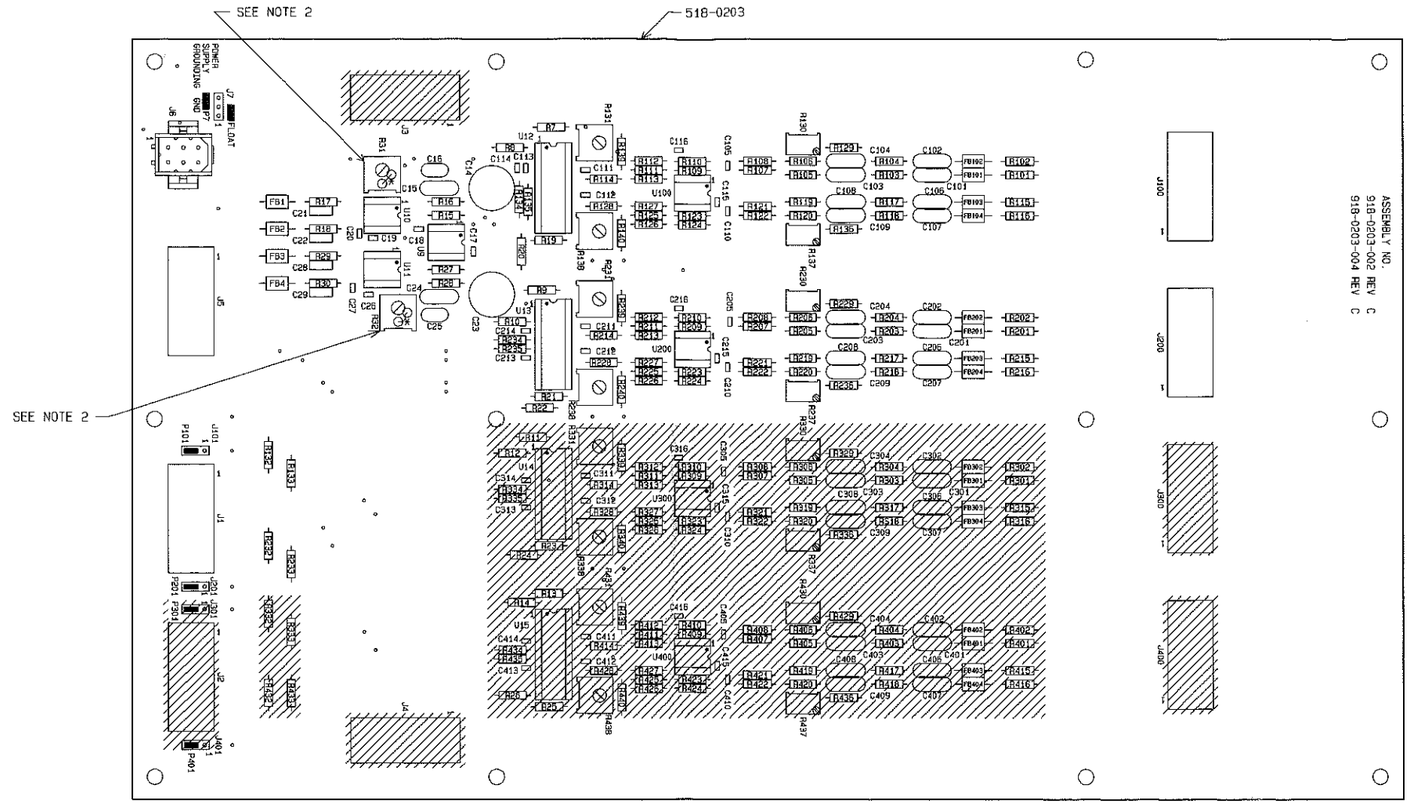
MATERIAL SEE B/M 918-0203-002 918-0203-004
FINISH
NEXT ASSY.

BROADCAST ELECTRONICS INC.
4100 N. 24TH ST., P.O.BOX 3606 QUINCY, IL. 62306 217/224-9600
TELEX 250142 CABLE BROADCAST FAX 217/224-9607

TITLE SCHEMATIC, 2X1 & 4X1 SATELLITE AUDIO SWITCHER

TYPE S | SIZE B | DWG. NO. 918-0203-002 & -004 | REV B

MODEL CORE | SCALE NONE | SHEET 1 OF 1



NOTES:

1. //// INDICATES COMPONENTS NOT USED ON 918-0203-002.
2. R31 & R32 ARE OPTIONAL COMPONENTS. * INDICATES TRACES ON BOTTOM OF BOARD TO CUT WHEN R31 & R32 ARE USED.

TOLERANCE (DECIMAL) U.O.S.
.X ± .030 .XXX ± .005
.XX ± .015 ANGLES ± 1°

DWN. BY 3-12-93
M. HAYDEN
DESIGNER (S)

PROJ. LEADER 8-6-93
R. McDONOUGH
MFG.

MATERIAL
SEE B/M
918-0203-002
918-0203-004

FINISH

~~SEE DWG RA592-0000~~
NEXT ASSY.

BROADCAST ELECTRONICS INC.
4100 N.24TH ST. P.O.BOX 3606 QUINCY, IL. 62305 PH. 217/224-9600
TELEX 250142 CABLE BROADCAST FAX 217/224-9607

TITLE PCB ASSEMBLY, 2X1 & 4X1 SATELLITE AUDIO SWITCHER

TYPE	SIZE	DWG No.	REV
A	C	918-0203-002&-004	C

MODEL CORE | SCALE 1/1 | SHEET 1 OF 1