542 RANGE

Section 6 SPARES KIT

The spares kit carried by the 542 range of consoles comprises the items listed below.

On the 5422 console the spares compartment is located beneath internal power supply module 34613.

On the 5432 and 5442 consoles the spares compartment is located below the blanking panel on the internal power supply module when this module is fitted as an option.

The spares kit for the 5422-R console is packaged as a separate item from the console.

(a)	Fuse antisurge 1 amp (34613 - 5422 only)	2 off	Part No. FU10001
(b)	Operational Amplifier TDA 1034-5	5 off	Part No. IC20007
(c)	Extension Lead 15 way (for channel amps.)	1 off	Part No. PN70107
(d)	Fuse 2 amp mains (33643 P.S.U.)	3 off	Part No. FU14402
(e)	Fuse 2 amp Quick Blow (33643 P.S.U.)	3 off	Part No. FU12002
(f)	Fuse 160mA Quick Blow	3 off	Part No. FU12006

542 RANGE

Section 7 TEST REPORT

Neve

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Date : 6th March 1984

Works Order No. A10544

SUITCASE MIXER 8 CHANNEL, 2 GROUP (SPEC 5442)

This desk has been fitted with 8 stereo channel modules No: 34149.

1. General Test Conditions

1.1 Test Equipment

Sound Technology Distortion Measuring System (Ser. No. K201)
Sennheiser Millivoltmeter UPM 550 (Ser. No. K374)

1.2 Definitions

0VU = 4dBu
0dBm = 0dBu into 600ohms = 1mW
0dBu = 0.775V rms
PPM4 ('B' Scale) = 0dBu

1.3 Conditions

For all tests, unless otherwise stated,

i) Line and Aux outputs are terminated with 620 ohms.

ii) Monitor outputs are unterminated.

iii) Monitor is selected to audition.

iv) Channels other than that under test are off.

v) Playback inputs are off.

vi) Monitor and facilities panel level controls are set to maximum.

vii) On each channel, equaliser, high pass filter, 'pre' and aux 1 and 2 are deselected, and faders and aux pots are set to maximum.

viii) On mono modules, pan is either fully left or fully right as appropriate.

xi) On stereo modules, trim is set to zero and balance is set to centre. Signal is applied to both inputs for measurements at Aux outputs.

2. Performance

2.1 Maximum Output

Mono channels set to Line, sensitivity - 15dB.
1KHz input signal adjusted for maximum output.

a) Channel 1 to all outputs.

Line L	+22.4	dBu	Aux	1	+22.5	dBu
Line R	+22.4	dBu	Aux	2	+22.5	dBu
Mon L	+20.4	dBu				
Mon R	+20.5	dBu				

b) Pan fully left on mono channels.
Signal to left input on stereo channels.
Maximum output at Line L.

Channel	1	+22.4	dBu
	2	+22.4	dBu
	3	+22.4	dBu
	4	+22.4	dBu
	5	+22.4	dBu
	6	+22.4	dBu
	7	+22.4	dBu
	8	+22.4	dBu

c) Playback to Line L output.

Playback	1	+22.3	dBu
	2	+22.3	dBu

2.2 Input Headroom of Mono Channels

Signal to Line inputs in turn. Input level -30dBu, sensitivity -30dB, pan fully left. Channel fader adjusted to give -30dBu output at Line L. Input level increased until output is just below clipping.

Channel	1	dBu
	2	dBu
	3	dBu
	4	dBu
	5	dBu
	6	dBu
	7	dBu
	8	dBu

2.3 Frequency Response

a) Frequency response measured relative to 1KHz, 0dBu in for 0dBu out (monitor outputs -2.5dBu).
Signal to channel 1 (Line input, sensitivity 0dB if mono channel).

	25Hz (dB)	30Hz (dB)	16KHz (dB)	20KHz (dB)
Line L	+0.2	+0.3	0.0	-0.1
Line R	+0.2	+0.3	0.0	-0.1
Aux 1	+0.2	+0.3	0.0	-0.1
Aux 2	+0.2	+0.3	0.0	-0.1
Mon L	+0.2	+0.3	0.0	0.0
Mon R	+0.2	+0.3	0.0	0.0

b) Mono channels: inputs terminated with 200ohms, microphone input, sensitivity -30dB, pan fully left. Stereo channels: signal to left input. Frequency response measured relative to 1KHz, 0dBu out at Line L.

	25Hz (dB)	30Hz (dB)	16KHz (dB)	20KHz (dB)
Channel 1	+0.2	+0.3	0.0	-0.1
2	+0.2	+0.3	0.0	0.0
3	+0.2	+0.3	0.0	0.0
4	+0.2	+0.3	0.0	0.0
5	+0.2	+0.3	0.0	-0.1
6	+0.2	+0.3	0.0	-0.1
7	+0.2	+0.3	0.0	0.0
8	+0.2	+0.3	0.0	0.0

c) Signal to playback inputs. Frequency response measured relative to 1KHz, 0dBu in for 0dBu out at Line L.

	25Hz (dB)	30Hz (dB)	16KHz (dB)	20KHz (dB)
Playback 1	-0.4	-0.3	+0.1	+0.1
2	-0.4	-0.3	+0.1	+0.1

2.4 Distortion

a) Signal to channel 1 (Line input, sensitivity -15dB if mono channel). Input level set to give +20dBu out (+17.5dBu at monitor outputs).

	100Hz (%)	1KHz (%)	10KHz (%)
Line L	0.004	0.003	0.006
Line R	0.004	0.003	0.006
Aux 1	0.004	0.003	0.006
Aux 2	0.004	0.003	0.006
Mon L	0.004	0.003	0.006
Mon R	0.004	0.003	0.006

b) Mono channels: microphone input, sensitivity -60dB, pan fully left.
Stereo channels: signal to left input.
Input set to give +20dBu out.
Distortion measured at Line L with 80KHz filter in circuit.

		100Hz (%)	1KHz (%)	10KHz (%)
Channel	1	0.004	0.003	0.006
	2	0.004	0.003	0.006
	3	0.004	0.003	0.006
	4	0.004	0.003	0.006
	5	0.004	0.003	0.006
	6	0.004	0.003	0.006
	7	0.004	0.003	0.006
	8	0.004	0.003	0.006

c) Signal to playback inputs. Input set to give +20dBu out.
Distortion measured at Line L.

		100Hz (%)	1KHz (%)	10KHz (%)
Playback	1	0.004	0.003	0.005
	2	0.004	0.003	0.005

2.5 Crosstalk

a) Mono channels: line input, sensitivity -15dB, pan fully right.
Stereo channels: signal to right input.
Input set to give +20dBu at Line R.
Monitor deselected.
Crosstalk measured at Line L.

		100Hz (dB)	1KHz (dB)	15KHz (dB)
Channel	1	-83.7	-86.1	-65.8
	2	-84.4	-87.4	-67.1
	3	-83.1	-86.4	-67.3
	4	-83.4	-85.6	-65.2
	5	-83.6	-86.9	-68.0
	6	-85.2	-86.3	-65.4
	7	-84.1	-86.6	-66.6
	8	-83.8	-86.2	-65.8

b) Signal to Channel 1
If mono channel: Line input, sensitivity -15dB, pan centre.
Input set to give +17dBu output at Line L & R and hence +20dBu at Aux outputs and +14.5dBu at Monitor L & R (with audition selected). If stereo channel: signal to both inputs. Input set to give +20dBu output at Line L & R and hence +20dBu at Aux outputs and +17.5dBu at Monitor L & R (with audition selected).

i) channel & monitor selected to audition. Aux 1 and 2 selected. Crosstalk measured at

	100Hz (dB)	1KHz (dB)	15KHz (dB)
Line L	-82.4	-86.2	-85.9
Line R	-82.4	-85.9	-83.9

ii) Channel and monitor selected to programme. Aux output under test deselected. Crosstalk measured at

Aux 1	-92.6	-97.8	-83.0
Aux 2	-90.0	-90.6	-75.6

iii) Channel selected to audition. Monitor selected to Line. Aux 1 and 2 selected. Crosstalk measured at

Mon L	-86.7	-97.6	-86.5
Mon R	-87.8	-98.9	-94.8

c) Mono channels: Line input, sensitivity -15dB, pan fully left.
Stereo channels: signal to left input.
Signal to channel under test. Input set to give +20dBu at Line L. Channel deselected. All other channels selected to programme. Crosstalk measured at Line L output.

		100Hz (dB)	1KHz (dB)	15KHz (dB)
Channel	1	-94.3	-98.9	-89.0
	2	-93.4	-99.3	-85.1
	3	-94.7	-99.1	-86.1
	4	-94.5	-99.3	-85.9
	5	-94.2	-99.3	-85.7
	6	-94.9	-99.2	-84.7
	7	-94.8	-99.6	-84.8
	8	-94.9	-99.2	-89.9

2.6 Noise

Bandwidth 20Hz to 20KHz. Inputs open circuit unless otherwise stated.

a) Output stage noise. Output level controls at minimum.

b) Bus noise. No outputs selected. Level controls set to maximum.

	a (dBu)	b (dBu)
Line L	-104.2	-93.6
Line R	-103.9	-94.3
Aux 1	- 97.1	-95.1
Aux 2	- 97.6	-95.8

c) Channel input noise.
Mono channels: line input, sensitivity 0dB, pan fully left, input terminated with 620 ohms.
Stereo channels: left input terminated with 620 ohms.
Channels individually selected to programme. Noise measured at Line L.

d) Channel input noise.
Mono channels only: microphone input, sensitivity -90dB, pan fully left, input terminated with 200 ohms.
Channels individually selected to programme. Noise measured at Line L.

e) Equivalent input noise with respect to an input impedance of 200 ohms.

		c (dBu)	d (dBu)	GAIN	e (dBu)
Channel	1	-88.1			
	2	-88.0			
	3	-88.1			
	4	-87.9			
	5	-87.9			
	6	-87.8			
	7	-87.9			
	8	-88.0			

2.7 Miscellaneous Tests

a) Quiescent current with maximum number of modules in circuit.

+590 mA

-610 mA

b) Supply voltage

+14.5

-14.9

For and on behalf of Neve Electronics International Limited