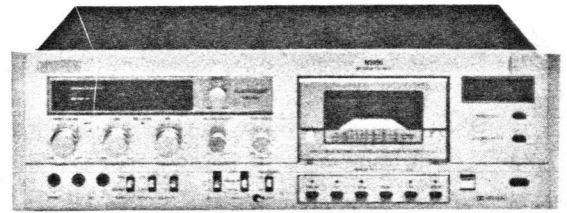


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# Service Manual

## CONTENTS

	Page		
Inputs and outputs	2	Layout of power supply p.c. board	16
List of cabinet parts	2	List of electrical parts	17
Technical specifications	3	Layout of audio section p.c. board	18
Connections and controls	4	Circuit diagram of audio section	19
Exploded view of cabinet	5	Units:	
Repair instructions	6	Logic circuitry U301	20...25
Maintenance and lubricating instructions	6	Motor control U302	26 + 27
Mechanical adjustments and checks	7 + 8	Recording amplifier U406	28
List of tape-deck parts	8	Indicator U407	29
Exploded view of tape deck	9	Oscillator U408	30
Electrical measurements and adjustments	10,11,12,13	Playback amplifier U409	31
List of electrical adjusting elements	12	Mixer/headphone amplifier U410	32
Wiring	14 + 15	Dolby U412...U415	33
Circuit diagram of power supply	16	List of symbols	34

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

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
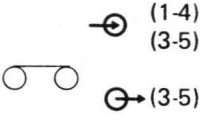

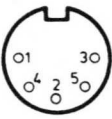






Subject to modification

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**PHILIPS**

## INPUTS AND OUTPUTS

HEADPHONES BU1		0,2 mW	8-600 $\Omega$	JACK	1 -  2 - left 3 - right
MICROPHONE L BU2		0,4 mV	47 k $\Omega$	JACK	1 -  2 - left
MICROPHONE R BU3		0,4 mV	47 k $\Omega$	JACK	1 -  2 - right
LINE INPUT L BU4		60 mV	300 k $\Omega$	CINCH 	1 - left 2 - 
LINE INPUT R BU5		60 mV	300 k $\Omega$	CINCH 	1 - right 2 - 
LINE OUTPUT L BU6		0...1 V	3 k $\Omega$	CINCH 	1 - left 2 - 
LINE OUTPUT R BU7		0...1 V	3 k $\Omega$	CINCH 	1 - right 2 - 
LINE INPUT/OUTPUT BU8	 (1-4) (3-5)  (3-5)	0,4 mV 200 mV 0...1 V	2 k $\Omega$ 1 M $\Omega$ 3 k $\Omega$	5p, 180°, DIN 	1 - left 4 - right 2 -  5 - right 3 - left
MONITOR BU9	 (3-5)	0...1 V	3 k $\Omega$	5p, 180°, DIN, 	1 - 4 - 2 -  5 - right 3 - left
REMOTE BU10				8p, DIN 	7 - STOP 1 - PAUZE 4 - WIND 2 - REC 5 - PLAY 3 - REWIND 8 - -12 V 6 - PLAY

401 4822 130 90035  
402 4822 480 20049  
403 4822 454 20408  
404 4822 450 60174  
405 4822 214 30436  
406 4822 505 10571  
407 4822 417 50132  
408 4822 462 71126  
409 4822 460 20192  
410 4822 413 40863  
411 4822 413 40864  
412 4822 411 50474  
413 4822 532 10284  
414 4822 492 31498  
415 4822 413 30868

416 4822 403 51148  
417 4822 403 51147  
418 4822 214 30435  
419 4822 459 80118  
421 4822 443 50315  
422 4822 276 20262  
423 4822 410 40164  
427 4822 403 51146  
428 4822 462 40381  
429 4822 532 10582  
431 4822 267 54072  
434 4822 413 30757  
436 4822 349 50104  
437 4822 410 22275  
438 4822 276 10731

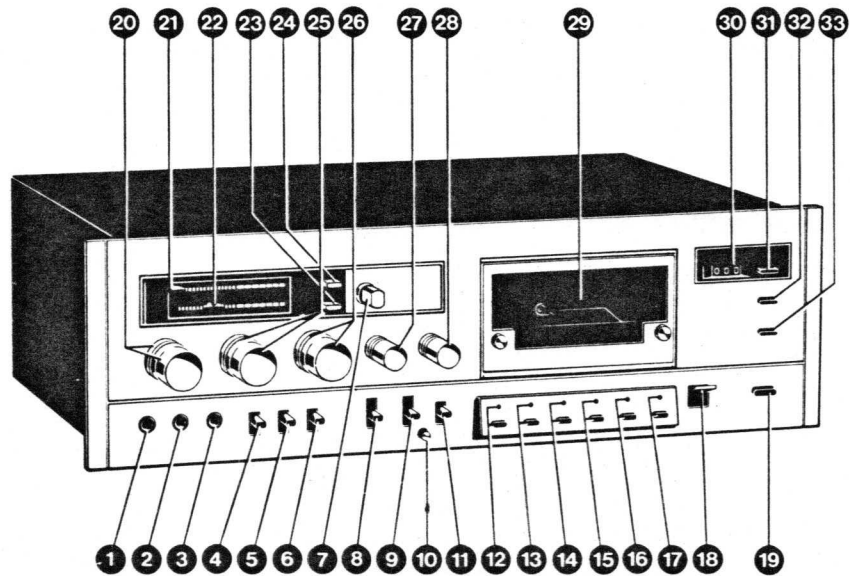
439 4822 410 22188  
441 4822 267 20168  
443 4822 459 80119  
444 4822 492 60063  
446 4822 146 20588  
447 4822 272 10079  
448 4822 462 71121  
449 4822 462 71127  
451 4822 276 10641  
452 4822 492 30256  
453 4822 411 50475  
454 4822 410 40154  
455 4822 413 30869

**3**

**SPECIFICATIONS**

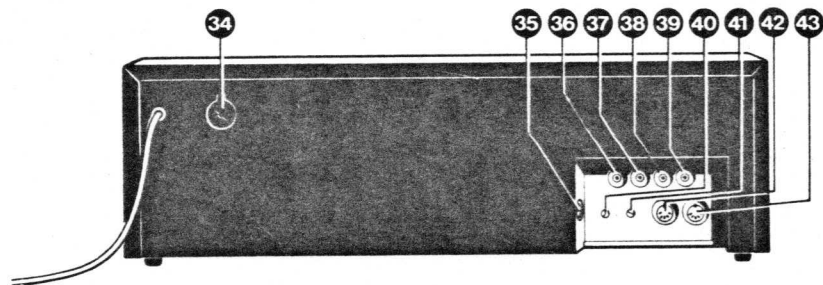
Mains voltage : 110-127-220-240 V  
 Mains frequency : 50-60 Hz  
 Power consumption : 20 W  
 Number of tracks : 2x2  
 Tape speed : 4.76 cm/sec.  $\pm$  1 % (DIN 45500)  
 Wow and flutter :  $\leq$  0.1 % (DIN 45500)  
 Winding time C60 cassette :  $\leq$  85 secs.  
 Frequency range for  
 . Metal cassettes : 20...20,000 Hz (DIN 45500)  
 . Chromium cassettes : 20...20,000 Hz (DIN 45500)  
 . Ferro cassettes : 20...20,000 Hz (DIN 45511)  
 Improvement in dynamic range when metal cassettes are used in comparison with chromium reference tape C401R  
 . Max. output level at 315 Hz : + 3 dB  
 . Saturation level at 10 kHz : + 7 dB  
 . Saturation level at 16 kHz : +10 dB  
 Signal/noise ratio (without DNL or Dolby)

. Metal cassettes :  $\geq$  57 dB (DIN 45405)  
 . Chromium cassettes :  $\geq$  56 dB (DIN 45405)  
 . Ferro cassettes :  $\geq$  55 dB (DIN 45405)  
 Improvement in signal/noise ratio (with A-filter) obtained with metal cassettes in comparison with the chromium reference tape C401R  
 . At 315 kHz : + 1 dB  
 . At 10 kHz : + 5 dB  
 . At 16 kHz : + 8 dB  
 Improvement signal/noise ratio with  
 . Dolby :  $\geq$  8.5 dB (CCIR)  
 . DNL :  $\geq$  10 dB (with filter 5.6 kHz, 18 dB/octave)  
 Erase frequency : 100 kHz  $\pm$  10 %  
 Input and output sensitivities : See Chapter "Inputs and outputs"  
 Dimensions : 482 x 150 x 300 mm  
 Weight : 8.2 kg



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Fig. 1



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Fig. 2