

# CD Stereo Radio Recorder

Service  
Service  
**Service**



**AZ1140**  
**AZ1141**  
**AZ1142**  
**AZ1143**  
**AZ1145**  
all versions

# Service Manual



## TABLE OF CONTENTS

	chapter		chapter
Handling chip components and safety .....	1 - 1	MAIN BOARD	
Technical Specification & Service Tools.....	2 - 1	circuit diagram .....	10 - 1
Service Measurement .....	2 - 2	layout diagram .....	10 - 2
Connections & Controls .....	3 - 1	RECORDER & BEAT CUT BOARD	
Instructions for use .....	3 - 2 to 3 - 6	circuit diagram .....	11 - 1
Disassembly Diagram .....	4 - 1	layout diagram .....	11 - 2
CD Service Test Program.....	4 - 2 to 4 - 3	CD MODULE	
Block Diagram .....	5 - 1	circuit diagram .....	12 - 2
Wiring Diagram .....	6 - 1	layout diagram .....	12 - 1
CONTROL BOARD		EXPLODED VIEWS DIAGRAM	
circuit diagram .....	7 - 1, 7 - 3	cabinet .....	13 - 1
layout diagram.....	7 - 2	tape deck .....	13 - 2
SWITCH & VOLUME BOARD		Mechanical partslist .....	13 - 2
layout diagram.....	8 - 1	Electrical partslist .....	14 - 1 to 14 - 4
TUNER BOARD			
circuit diagram .....	9 - 1		
layout diagram.....	9 - 2		

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

© Copyright 1995 Philips Consumer Electronics B.V. Eindhoven, The Netherlands  
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.



Published by SS 0024 Service Audio    Printed in The Netherlands    Copyright reserved    Subject to modification    © 3140 785 22260

PCS 104 409



# PHILIPS

## TECHNICAL SPECIFICATIONS

### GENERAL

Mains voltage	-/00 : 230 V -/01/11/16 : 120/230 V -/05/10 : 240 V -/17 : 120 V
Mains frequency	-/00/05/10 : 50 Hz -/01/11/16 : 50 / 60 Hz -/17 : 60 Hz
Battery	mains : 9 V (R14 x 6) Remote : 3V (R03 x 2)
Power consumption	normal : 10 W standby : 2 W
Dimension (W x H x D)	: 290 x 152 x 253 mm
Weight	: 2.6 Kg

### AMPLIFIER

Output power	mains : 2 x 1.6 W battery : 2 x 2 W
Speaker impedance	: 2 x 4 ohm
Frequency response	: 100 Hz - 8 kHz ( $\pm 3$ dB)

### TUNER - FM SECTION

Tuning range	: 87.5 - 108 MHz
IF frequency	: 10.7 MHz $\pm$ 0.2 MHz
Sensitivity	: 16 dBf at 26dB S/N
Selectivity	: 55 dB at $\pm$ 300kHz
IF rejection	: 85 dB
Image rejection	: 40 dB

### TUNER - AM SECTION

Tuning range	MW : 531 - 1602 kHz -/17 : 520 - 1730 kHz LW : 153 - 279 kHz
IF frequency	: 450 kHz $\pm$ 1 kHz
Sensitivity	MW : 64 dBu at 26dB S/N LW : 70 dBu at 26dB S/N
Selectivity	MW : 22dB LW : 29 dB
IF rejection ratio	MW : 70 dB LW : 70 dB
Image rejection ratio	MW : 32 dB LW : 35 dB

### AUDIO CASSETTE RECORDER

Tape speed accuracy	: $\pm$ 3%
Wow & flutter	: < 0.35 % JIS WTD
Fast wind/rewind C60	: < 120 sec.
Frequency response	P/B : 125 – 6.3 kHz
S/N ratio	: 45 dB

### COMPACT DISC

Frequency response	: 100 Hz - 10 kHz
S/N ratio	: > 50 dB
Channel difference	1 kHz : < 3 dB
Channel crosstalk	1 kHz : > 26 dB
Laser wavelength	: 780 $\pm$ 20nm
Laser light power	: < 0.3 mW

## SERVICE TOOLS

Audio signal disc SBC 429.....	4822 397 30184
Playability test disc SBC 444.....	4822 397 30245
Test disc 5 (disc without errors) +	
Test disc 5A (disc with dropout errors, black spots and fingerprints)	
SBC 426/426A.....	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30 dB level without "pause").....	4822 397 30155
Universal test cassette Fe SBC 420.....	4822 397 30071

**ELECTRICAL PARTSLIST - CD99 DA11****- RESISTORS -**

4888	482205120008	Jumper
4889	482205120008	Jumper

**- COILS & FILTERS -**

1810	482224273557	Filter CST8,46MTW-TF01
5803	482215711231	Coil LAN02TB1R0J

**- DIODES -**

6877	482213011564	Diode UDZ3.9B
------	--------------	---------------

**- IC & TRANSISTORS -**

7800	482220917324	IC SAA7325H
7802	532220911517	IC PC74HCU04T
7803	532213060123	Trans BC807-40
7804	532220982941	IC LM358D
7807	532213042755	Trans BC847C
7808	482220932852	IC TDA7073A/N2
7809	482220932852	IC TDA7073A/N2
7810	482220933165	IC TDA1308T/N1
7875	482213060511	Trans BC847B

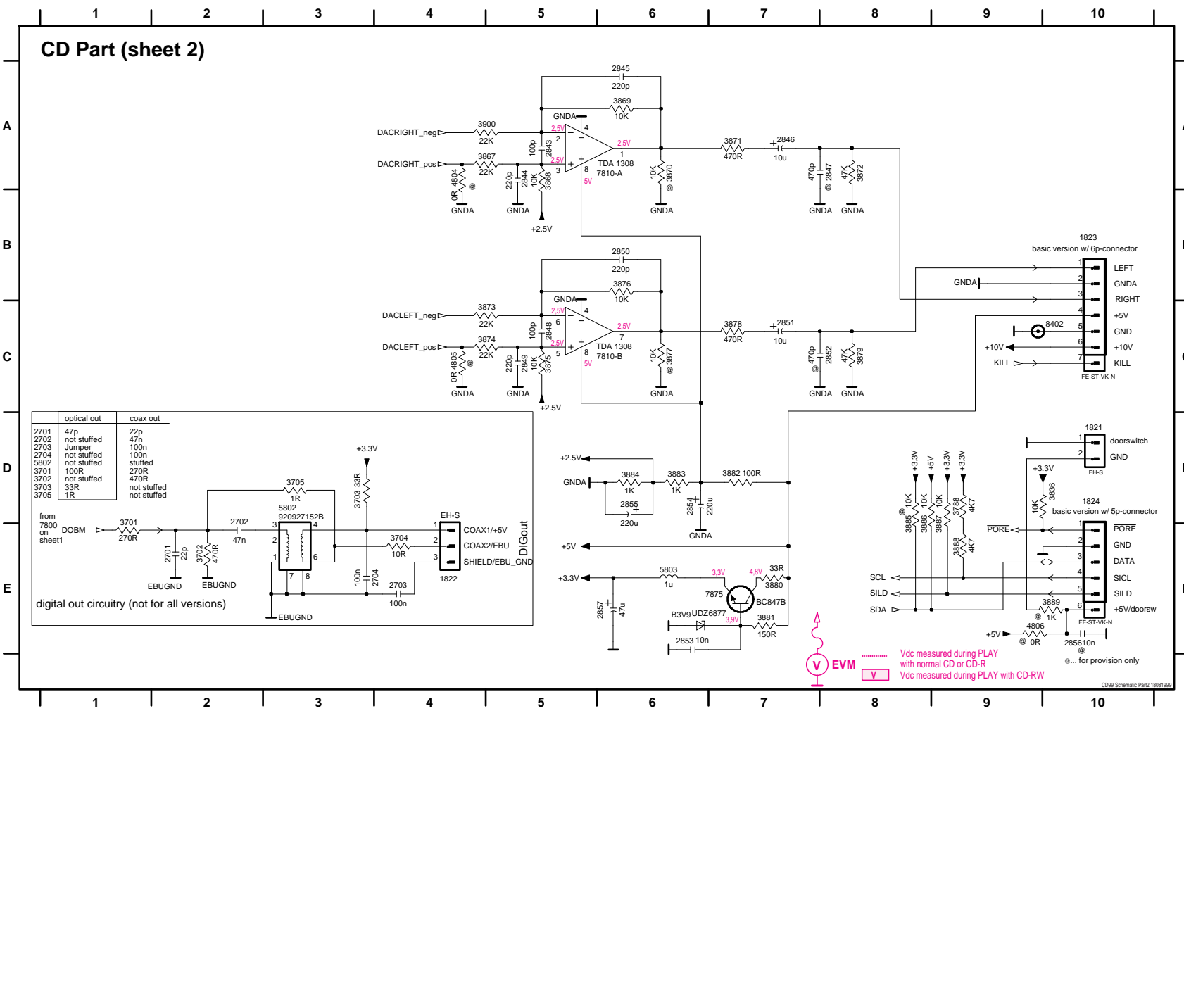
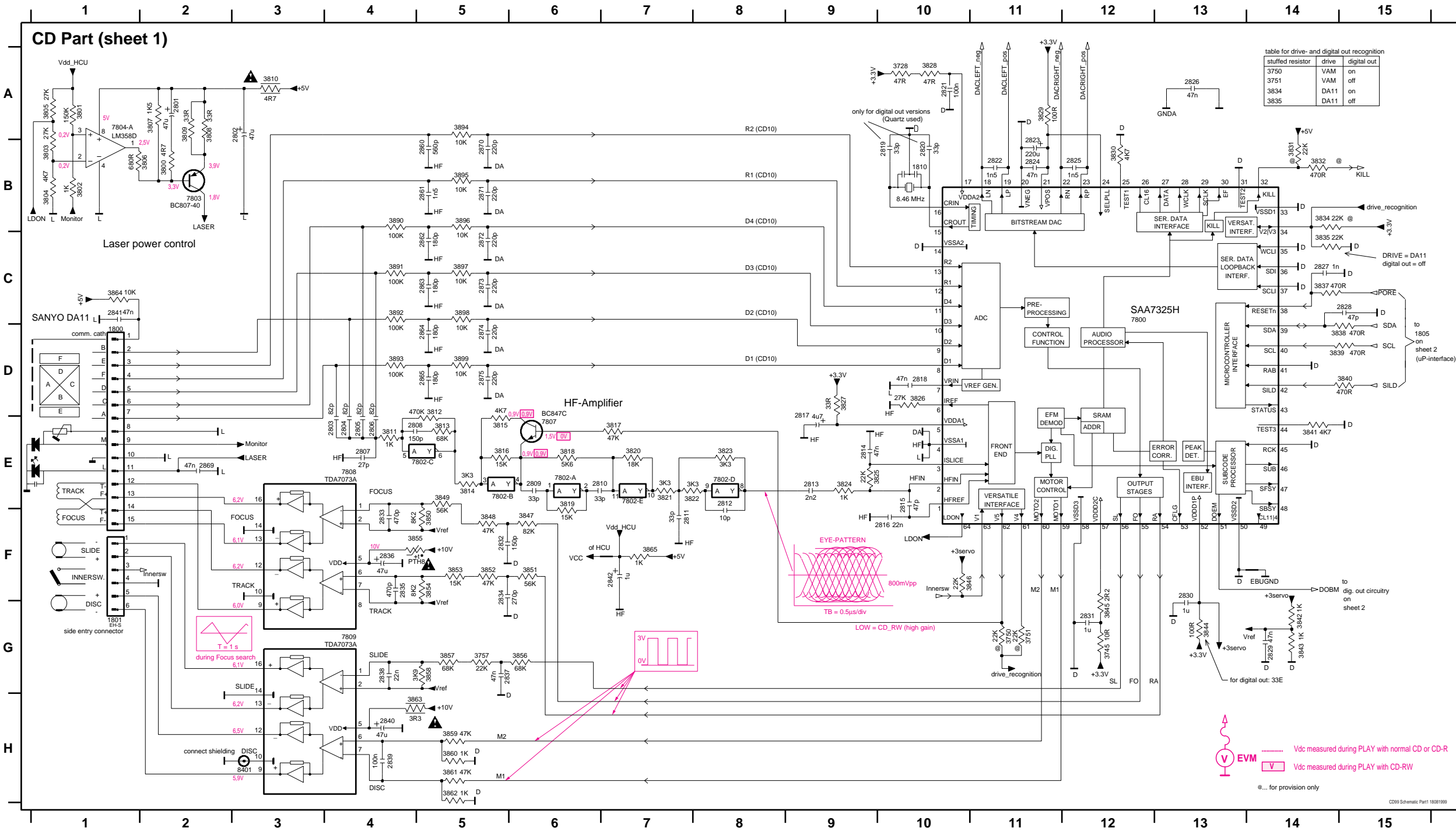
**- MISCELLANEOUS -**

1800	482226510925	Connector 15P
1823	482226511207	Connector 6P
1824	482226511207	Connector 6P
8000	482232012178	Flexible Foil 15P

**Note : Only these parts mentioned in the list are normal service parts.**

1800 D1	2806 E4	2813 E9	2820 B10	2827 C14	2834 F5	2841 C1	2848 D5	2855 D5	2875 D5	3801 A1	3808 A2	3815 E5	3822 E7	3829 A11	3836 D14	3843 G12	3852 F5	3859 H5	3890 B4	3897 C5	7802-D E8	7808 E4
1801 D5	2807 E4	2814 E9	2821 B11	2828 C14	2835 F4	2842 F7	2849 E2	2869 E2	3728 A10	3802 B1	3809 A2	3816 E5	3823 E8	3830 B12	3837 D14	3844 F10	3853 F5	3860 H5	3891 C4	3898 C5	7802-E F7	7809 G4
2801 A2	2808 E4	2815 E10	2822 B11	2829 G14	2836 F4	2843 B5	2850 B5	2870 B5	3745 G12	3803 B1	3810 A3	3817 E7	3824 E9	3831 B14	3838 D15	3845 F6	3854 F5	3861 H5	3892 C4	3899 D5	7802-F F8	8401 H3
2802 A3	2809 E6	2816 F10	2823 B11	2830 F13	2837 G5	2844 B5	2871 B5	2878 B5	3750 G11	3804 B1	3811 E4	3818 E6	3825 E9	3832 B14	3841 E14	3848 F5	3855 F4	3862 H5	3893 D4	7800 D12	7803 B2	
2803 E4	2810 E6	2817 D9	2824 B11	2831 G12	2838 G4	2845 C3	2872 C5	2879 C5	3751 G11	3805 A1	3812 D5	3819 E6	3826 D10	3834 B14	3843 G14	3850 F5	3856 G6	3863 H4	3894 A5	7802-A E6	7804-A A1	
2804 E4	2811 F7	2818 D9	2825 B12	2832 F5	2839 H4	2846 D5	2873 C5	2879 C5	3757 G5	3806 B2	3813 E5	3820 E7	3827 D9	3835 C14	3843 G14	3850 F5	3857 G5	3864 C1	3895 B5	7802-B E5	7804-B C3	
2805 E4	2812 E8	2819 B10	2826 A13	2833 F4	2840 H4	2847 D5	2874 D5	2880 B2	3807 A2	3814 E5	3821 E7	3828 A10	3837 C14	3844 G13	3851 F6	3858 G5	3865 F7	3896 B5	7802-C E5	7807 E6		

1821 D10	2702 E2	2845 A6	2850 B6	2855 D6	3703 D3	3867 A5	3872 A8	3877 C6	3882 D7	3887 E9	4805 C4	7810-A A5
1822 E4	2703 E4	2846 A7	2851 C7	2856 E10	3704 E4	3868 A5	3873 C5	3878 C7	3883 D6	3888 E9	4806 E9	7810-B C5
1823 B10	2704 E3	2847 A8	2852 C8	2857 E6	3705 D3	3869 A6	3874 C5	3879 C8	3884 D6	3889 E10	5802 D3	7875 E7
1824 D10	2843 A5	2848 C5	2853 E8	3701 E1	3788 E9	3870 A6	3875 C5	3880 E7	3885 E8	3900 A5	5803 E6	8402 C9
2701 E2	2844 A5	2849 C5	2854 D6	3702 E2	3836 D10	3871 A7	3876 B6	3881 E7	3886 E8	4804 A4	6877 E7	



SCREW LIST

- 1. C2 x 10
- 2. C2 x 12
- 3. C2.5 x 9.5
- 4. C3 x 7.5
- 5. C3 x 8
- 6. C3 x 9
- 7. C3 x 10
- 8. C3 x 12
- 9. C3 x 34
- 10. C P/W 2.5 x 16
- 11. C P/W 3 x 10
- 12. C P/W 3 x 14

