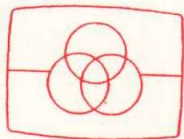


Service
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Service Manual

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TECHNICAL SPECIFICATIONS

General

1. Supply voltage	DC	: +10V min. +8,5V max. +15,5V
	DC	: -10V min. -8,5V max. -15,5V
	V _{kk}	: -32V min. -30V max. -36V
	AC	: 4,5V ± 0,4V
4. Power consumption	+10V play mode	: 300mA, peak 600mA
	-10V play mode	: 150mA, peak 300mA
	-10V open/close	: 200mA, peak 500mA
	V _{kk}	: max.40mA
	AC	: max.150mA

Audio performance

1. Number of channels	: 2
2. Output voltage	: 1,5 V _{rms} ± 3dB
3. Unbalance left-right	: max. ± 1,2dB at 1 kHz
4. Output resistance	: 1 kΩ
5. Amplitude linearity	: +2dB -3dB from 20 Hz to 20 kHz
6. Phase non-linearity	: max. ±5,0° from 20 Hz to 20 kHz
7. Signal to noise ratio	: min. 80dB from 20 Hz to 20 kHz
8. Dynamic range	: min. 70dB from 20 Hz to 20 kHz
	: min. 80db at 1kHz
9. Total harmonic distortion + noise	: min. 60dB from 20Hz to 20kHz
	: min. 70db at 1kHz
10. Out-band atenuation	: min. 35db above 40kHz
11. Channel separation	: min. 70dB from 20Hz to 20kHz
	: min. 80dB at 1kHz
12. Muting during random access	: min. 80dB from 20 Hz to 20kHz
13. Automatic switched de-emphasis(simple) with time constants 15/50 μs	

Dimensions and weight

1. Apparatus tray closed	: WxDxH 260 x 255 x 57,5 mm
2. Weight	: 1,6 Kg

Optical read-out system

1. Laser type	: Semiconductor AlGaAs
2. Wavelength	: 780 nm ± 20 nm
3. Light output (c.w.)	: max. 0,5 mW

CONTROLS AND CONNECTIONS

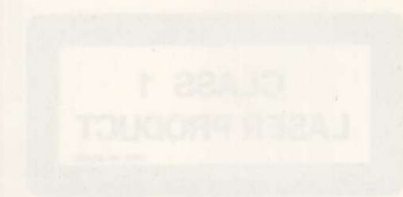


CONTROLS

Indication on Player	Indication in diagram
1. << SEARCH >>	1422 1423
2. SHUFFLE	1424
3. SCAN	1425
4. CD compartment	
5. REPEAT	1426
6. TIME	1427
7. EDIT	1428
8. TITLES	1429(CD080) 1437(CD070)
9. FTS	1430(CD080)
10. REVIEW	1431
11. CLEAR	1432
12. PROG(ram)	1433
13. display	7400
14. OPEN/CLOSE	1434
15. STOP	1435
16. PLAY/PAUSE	1436

CONNECTIONS

Indication on Player	Indication in diagram
2. CD IN/OUT	1510
20. DIGITAL OUT	1250



GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation. Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité. Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD). Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen Sie dafür, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind. Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD). Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD). La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

GB

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

NL

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati pezzi di ricambio identici a quelli specificati.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.

S Varning!

Osynlig laserstrålning när apparaten är öppnad och spärrenär urkopplad. Betrakta ej strålen.

SF Varo!

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen!

DK Adversel!

Usynlig laserstråling ved åbning. Undgå uansættelse for stråling.

DANGER

Invisible laser radiation when open.
Avoid direct exposure to beam

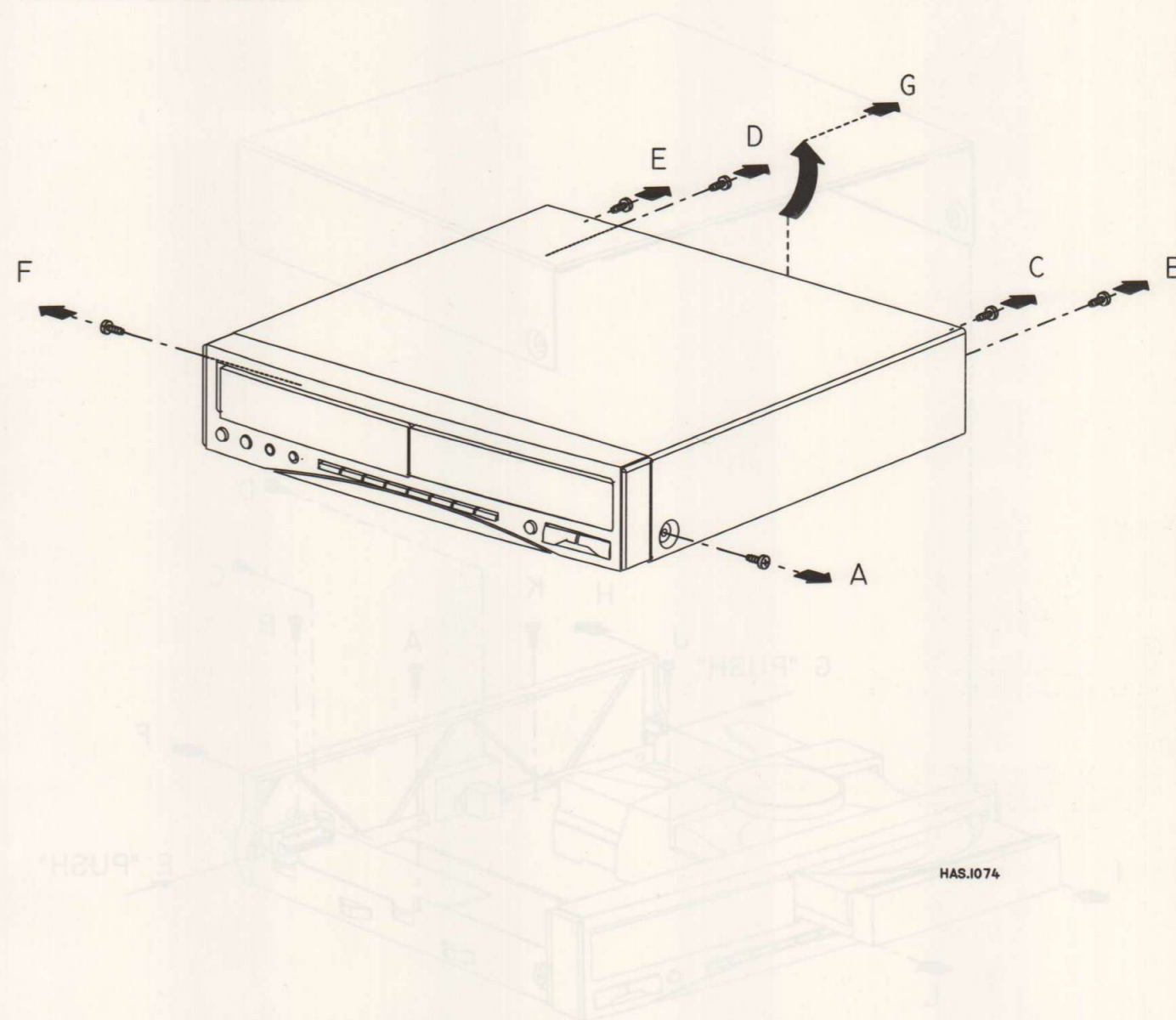
CAUTION

Invisible laser radiation when open.
Avoid exposure to beam.

**CLASS 1
LASER PRODUCT**

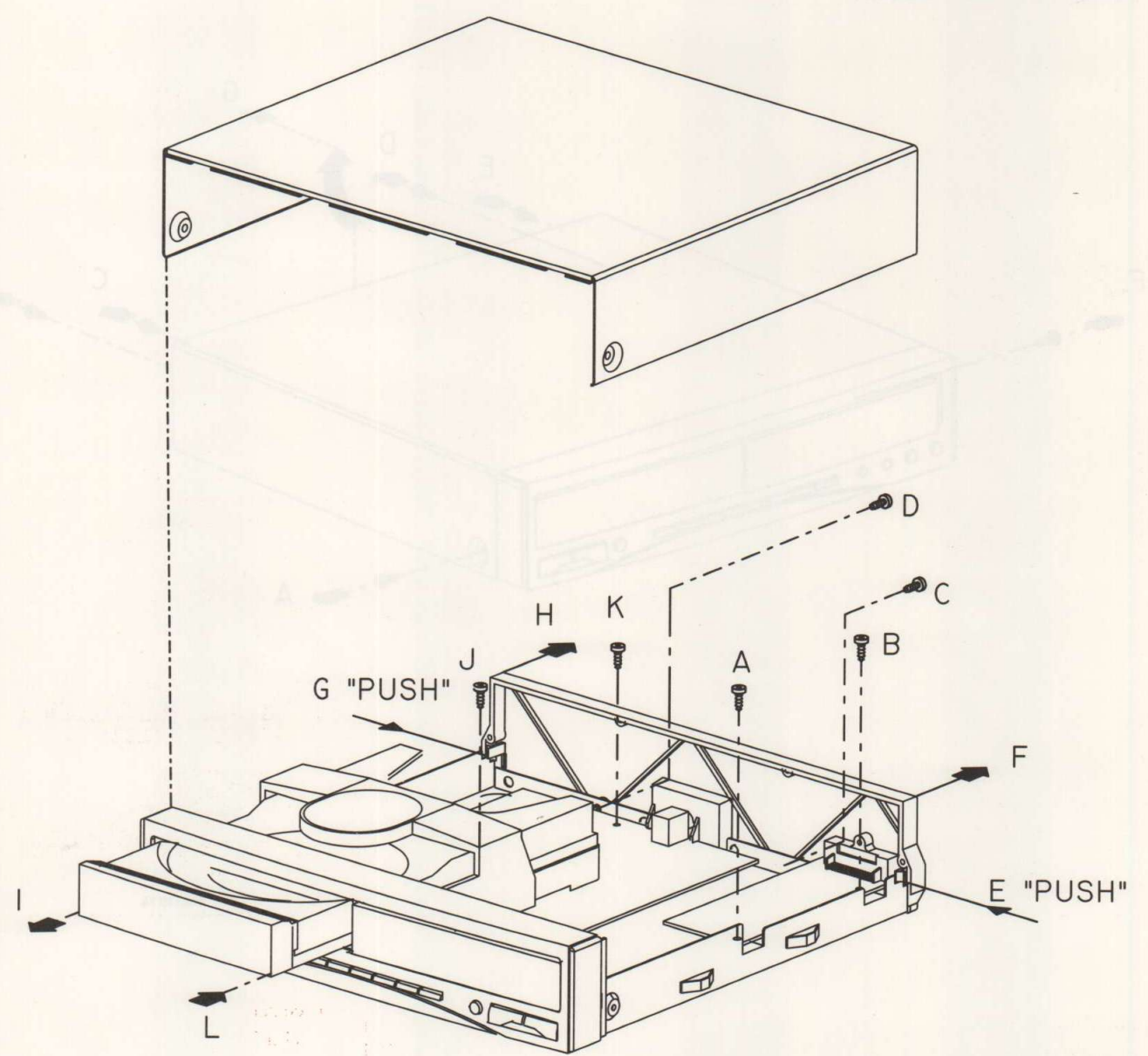
3122 110 03420

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne"

DISMANTLING INSTRUCTIONS**DEMOUNTING OF COVER**

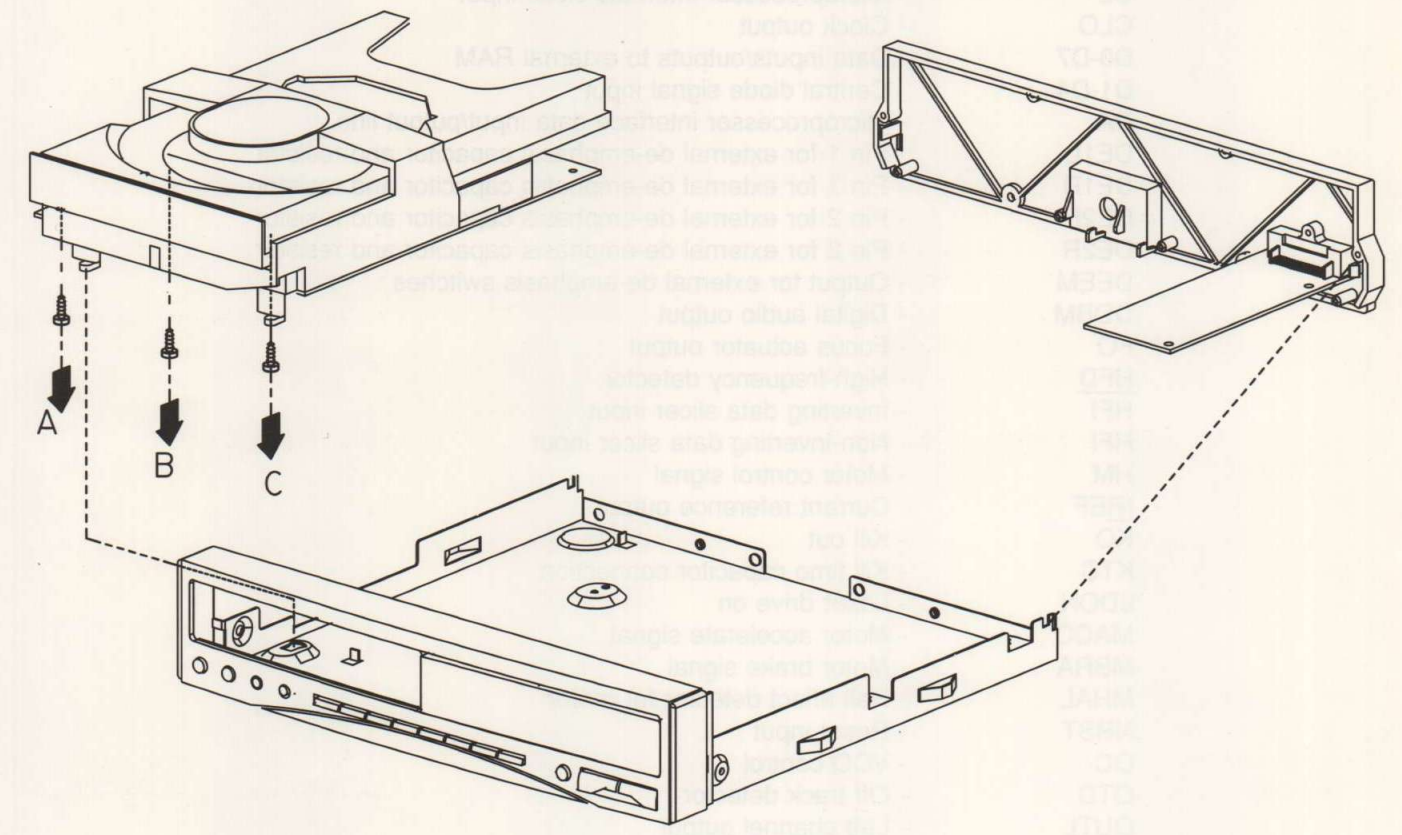
HAS.1074

DEMOUNTING BACKPLATE AND LOADER



HAS.1075

DEMOUNTING OF SERVO DECODER PANEL



HAS.1076

SERVICE POSITION OF LOADER

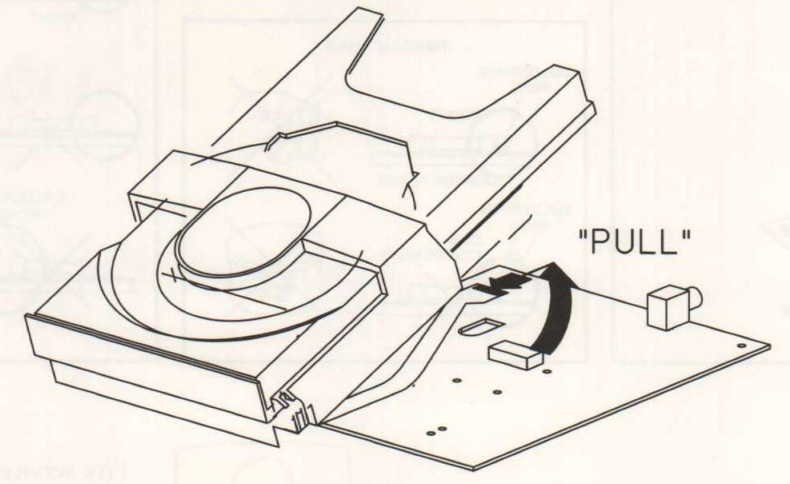
1. Demount backplate (drawing HAS1075 A -> H).
2. Demount loader (drawing HAS1075 J -> M).

Put loader on left side to execute measurements on Servo panel.

EXCHANGING CDM

1. Demount backplate.
2. Demount loader.
3. Demount Servo panel (drawing HAS1076 A-C).
4. Disconnect connectors and flex (HAS1077).
5. Remove tray and disc hold down (see also exploded view of loader on page 30)
6. Demount subchassis.
7. Exchange CDM, pay attention to the wiring.

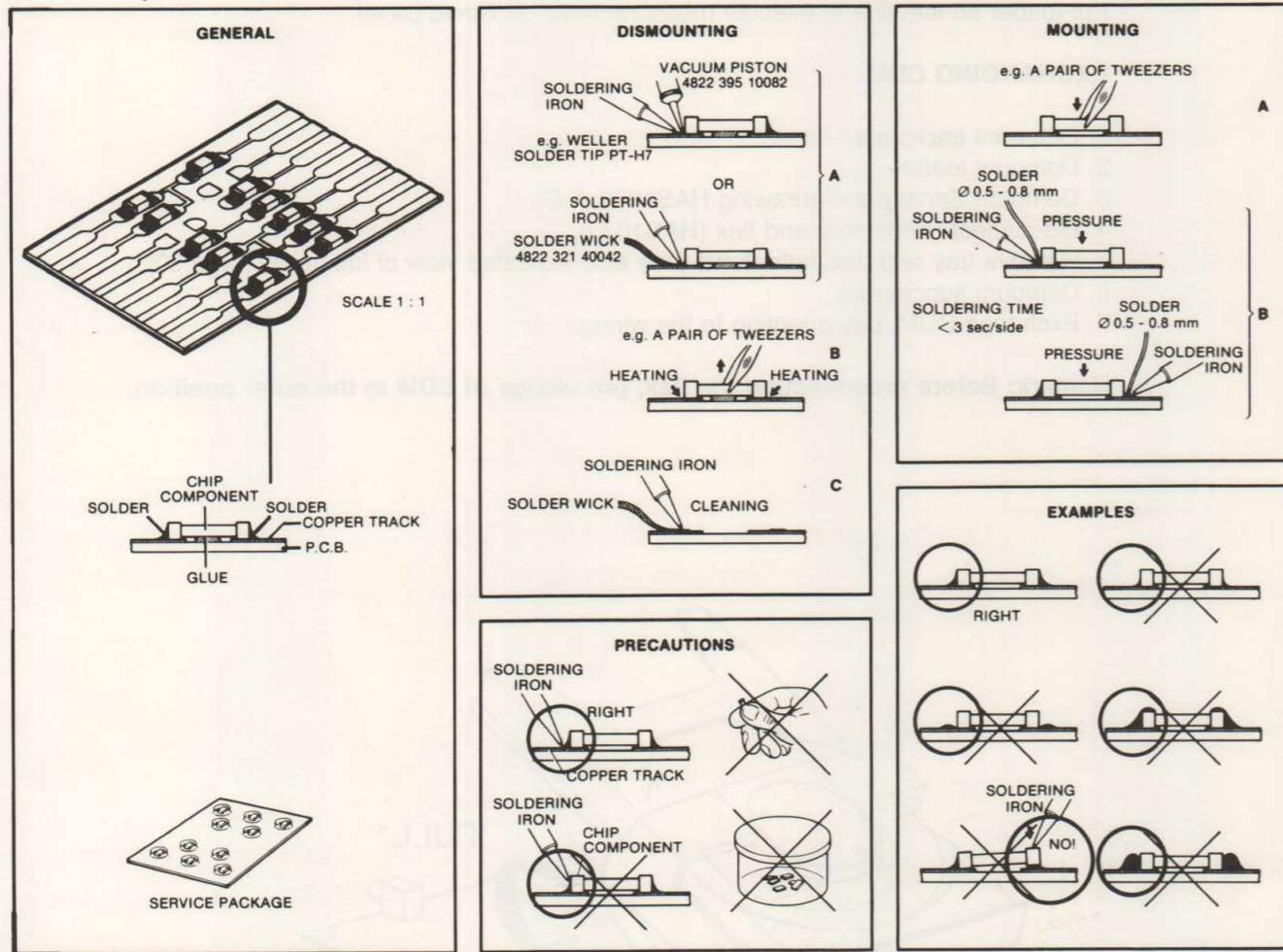
Remark: Before reconnecting the flex, put sledge of CDM in the outer position.



HAS.1077

SERVICING HINTS

In the set chip components have been applied. For disassembly and assembly of chip components see the figure below.



27 012C12

SERVICE TOOLS

- Audio signal disc
- Disc without errors (test disc 5) + disc with DO errors, black spots and fingerprints (test disc 5A)
- Disc (65 min 1kHz) without pause
- Max. diameter disc (58.0 mm)
- Torx screwdrivers
 - Set (straight)
 - Set (square)
- 13th order filter

4822 397 30184

4822 397 30096

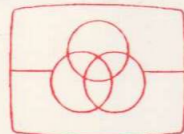
4822 397 30155

4822 397 60141

4822 395 50145

4822 395 50132

4822 395 30204



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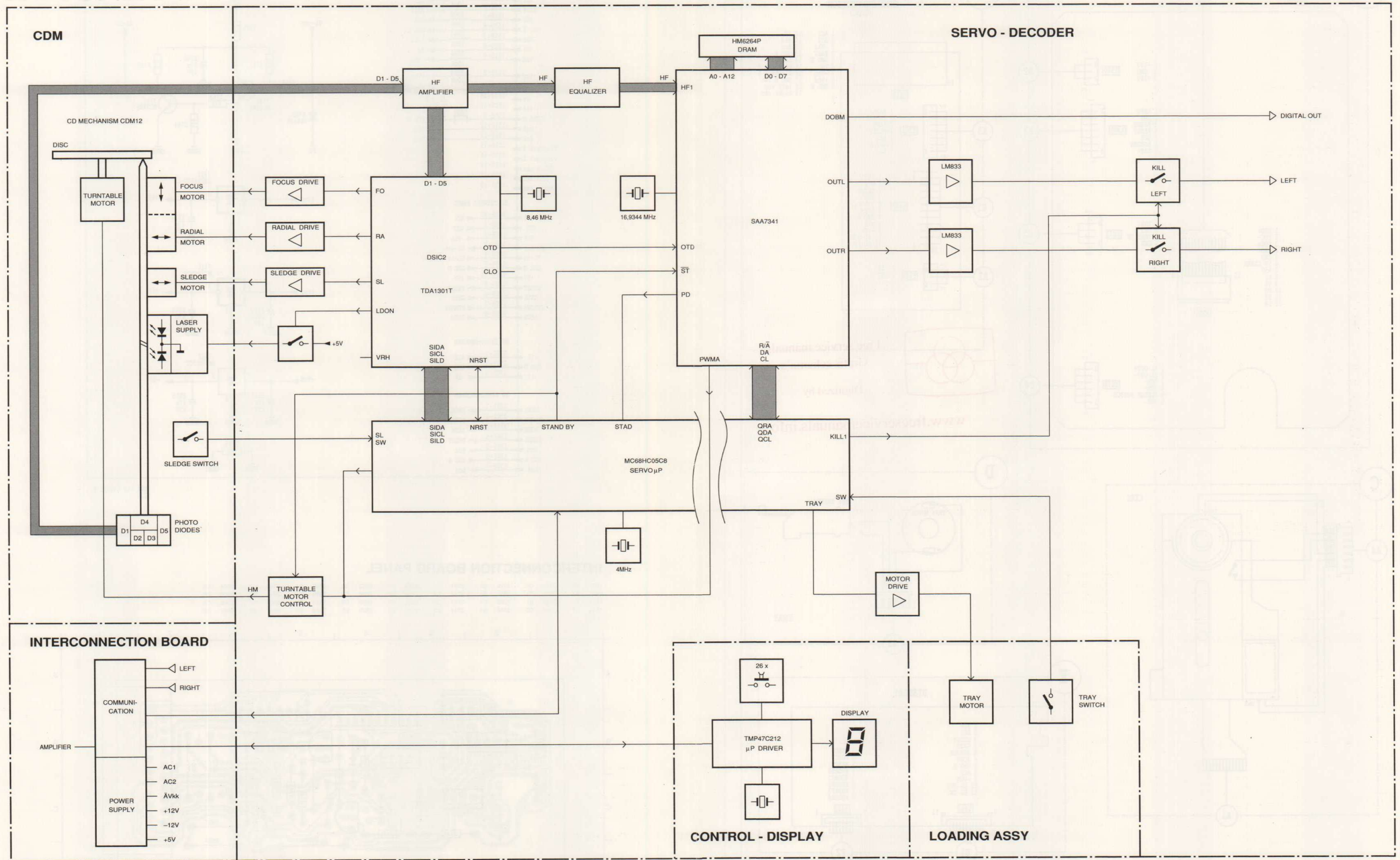
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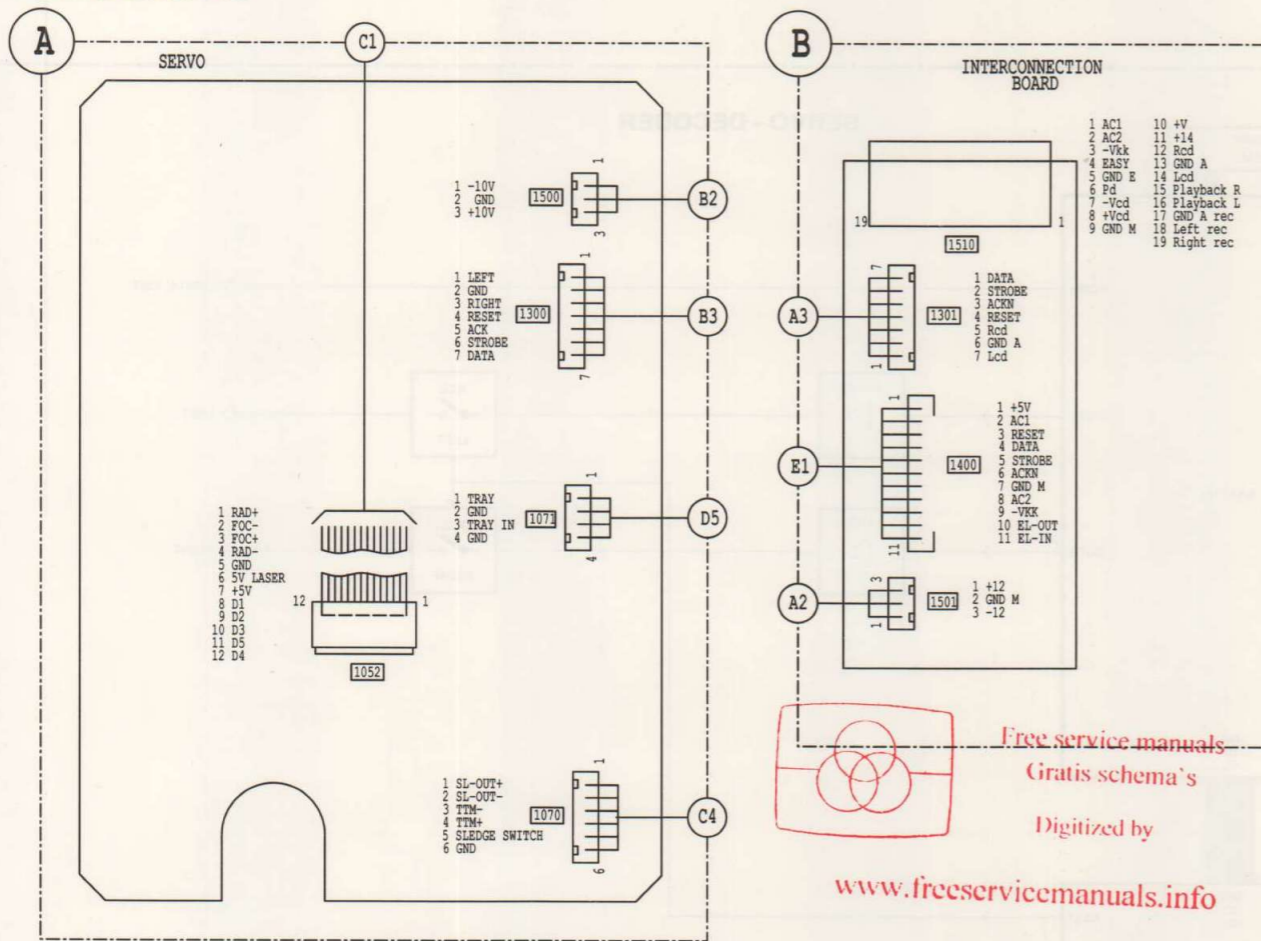
- A0-A12
- AM
- CFB
- CL
- CLO
- D0-D7
- D1-D4
- DA
- DE1L
- DE1R
- DE2L
- DE2R
- DEEM
- DOBM
- FO
- HFD
- HFI
- HFI
- HM
- IREF
- KO
- KTC
- LDON
- MACC
- MBRA
- MHAL
- NRST
- OC
- OTD
- OUTL
- OUTR
- PD
- PWMA
- PWMB
- R/A
- R1-R2
- RA
- SD1-5
- SICL
- SIDA
- SILD
- SL
- ST
- TS1-TS2
- VddA
- VddD
- VddD
- VRH
- VRL
- VssA
- VssD
- WE
- XIN
- XOUT
- XTLI
- XTLO
- XTLR

- Address outputs to external RAM
- Additional mute
- Data slicer feedback output to capacitor
- Microprocessor interface clock input
- Clock output
- Data inputs/outputs to external RAM
- Central diode signal input
- Microprocessor interface data input/output line
- Pin 1 for external de-emphasis capacitor and resistor
- Pin 2 for external de-emphasis capacitor and resistor
- Pin 2 for external de-emphasis capacitor and resistor
- Output for external de-emphasis switches
- Digital audio output
- Focus actuator output
- High-frequency detector
- Inverting data slicer input
- Non-inverting data slicer input
- Motor control signal
- Current reference output
- Kill out
- Kill time capacitor connection
- Laser drive on
- Motor accelerate signal
- Motor brake signal
- Hall effect detector for motor
- Reset input
- VCO control
- Off track detector
- Left channel output
- Right channel output
- Phase detector
- Pulse width modulated motor control acceleration
- Pulse width modulated motor control brake signal
- Request/acknowledge
- Satellite diode signal input
- Radial actuator output
- Photodiode signals
- Serial interface clock
- Serial interface data
- Serial interface load
- Sledge output
- Standby mode
- Test input
- Power supply analog part
- Power supply digital part
- Power supply digital part
- Reference input for A/D converter
- Reference input for A/D converter
- Ground analog part
- Ground digital part
- Write enable
- Crystal oscillator input
- Output to clock crystal
- Oscillator input
- Oscillator output
- Oscillator reference

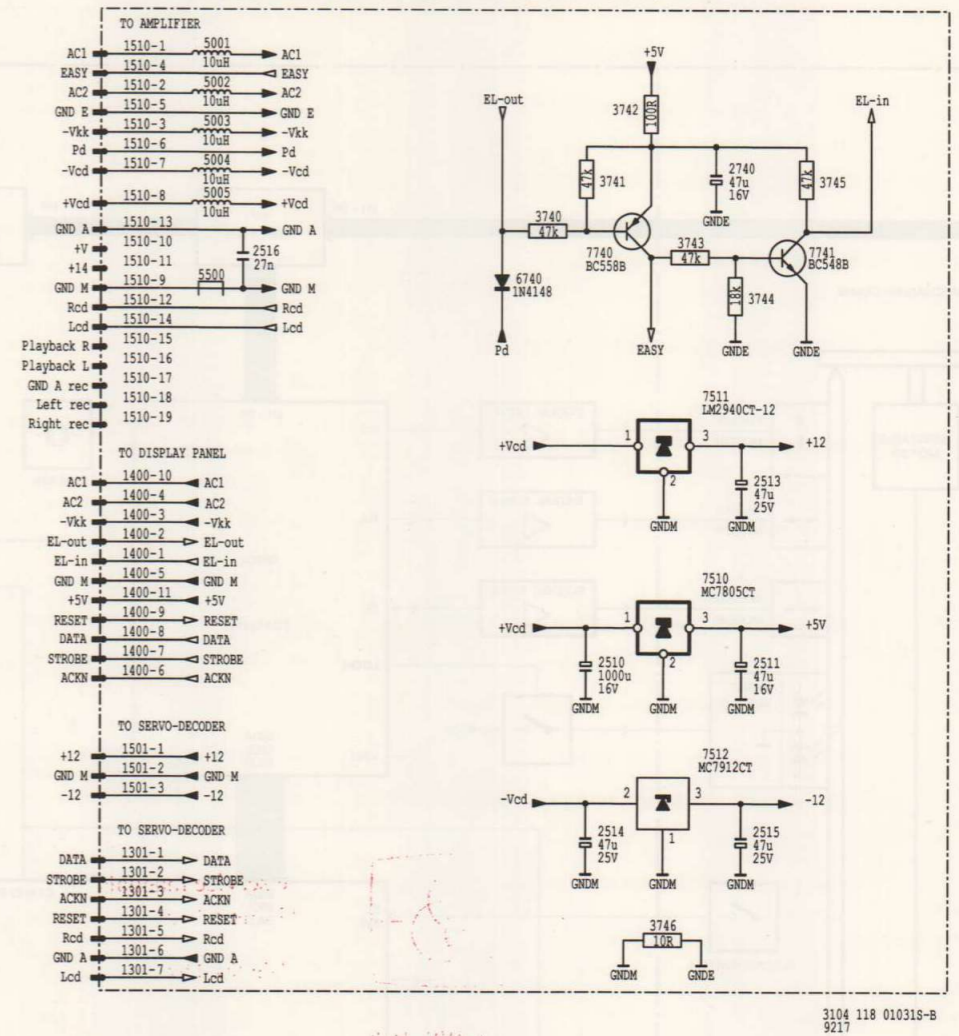
BLOCK DIAGRAM



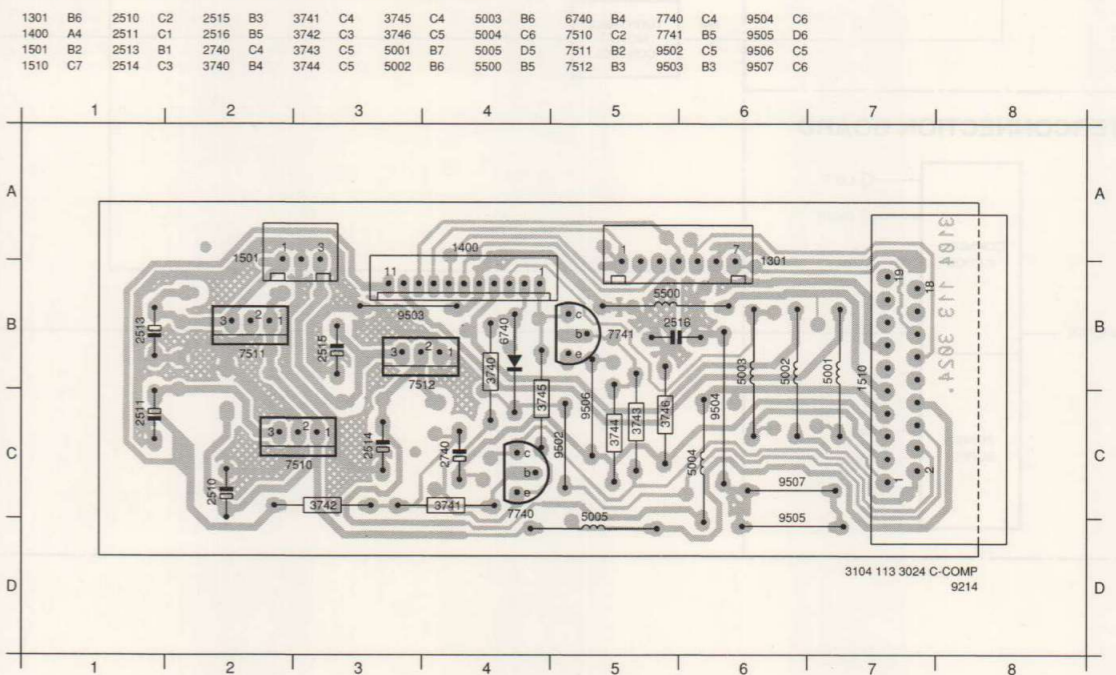
WIRING DIAGRAM



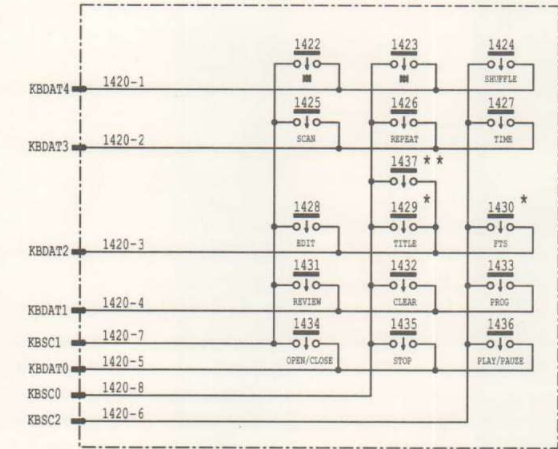
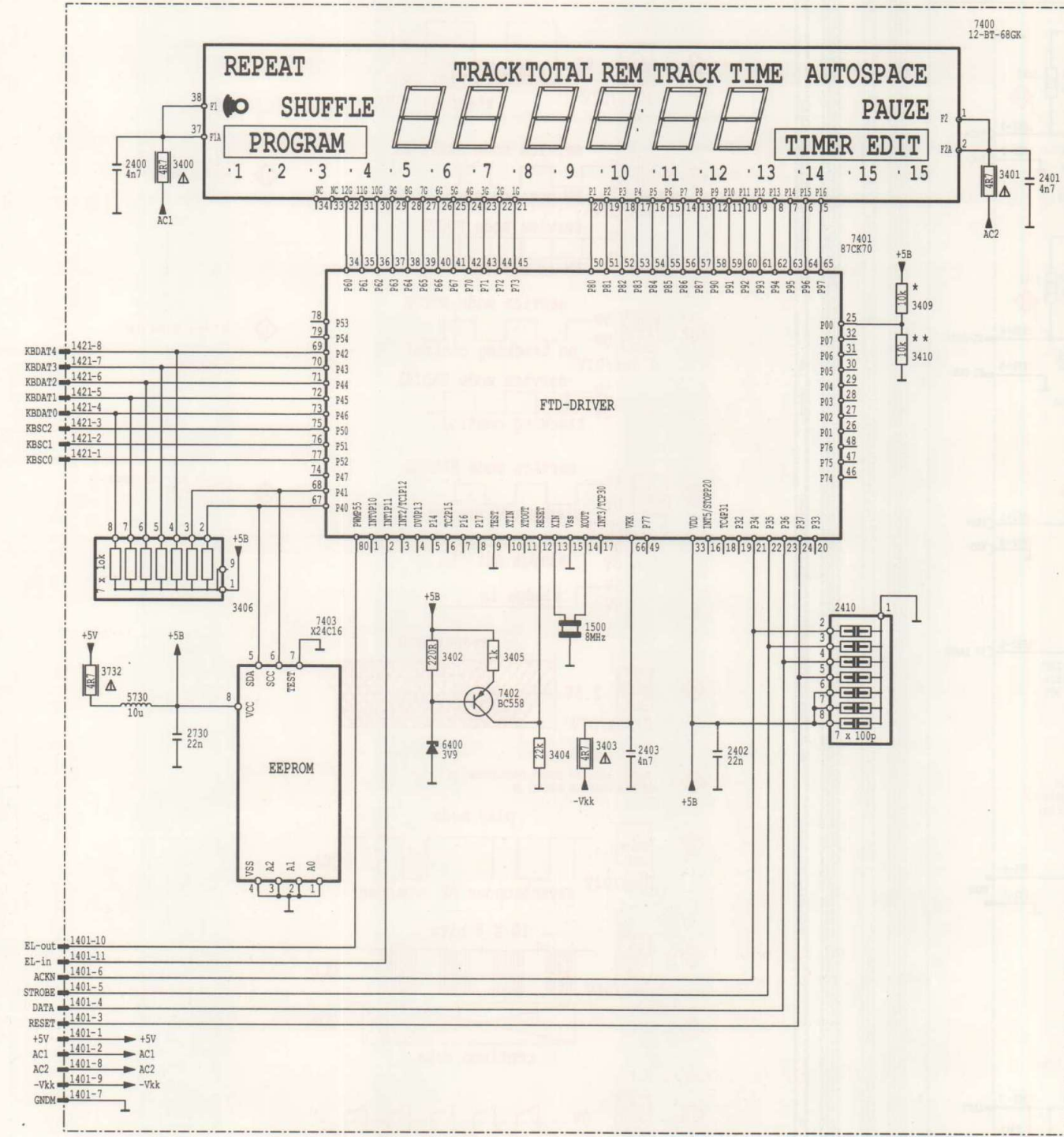
INTERCONNECTION BOARD CIRCUIT DIAGRAM



INTERCONNECTION BOARD PANEL



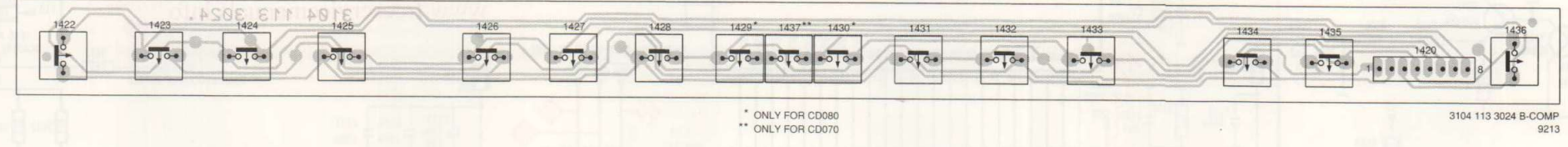
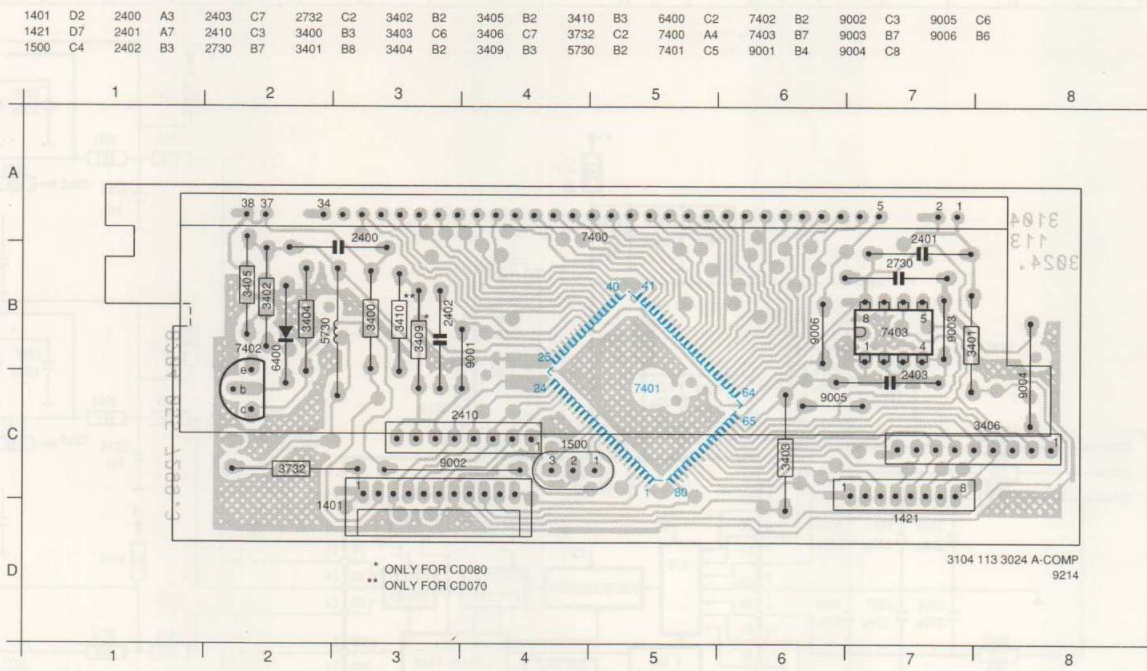
CONTROL & DISPLAY CIRCUIT DIAGRAM



* only for CD080
 ** only for CD070

3104 118 010315-A
 9214

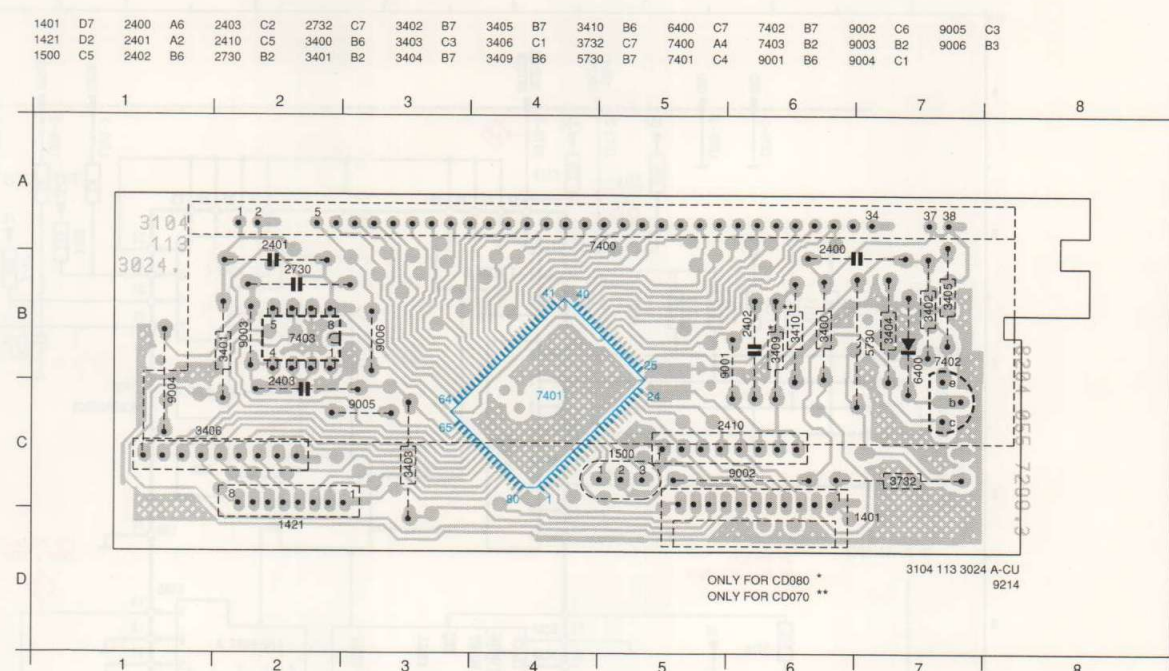
CONTROL & DISPLAY PANEL



* ONLY FOR CD080
 ** ONLY FOR CD070

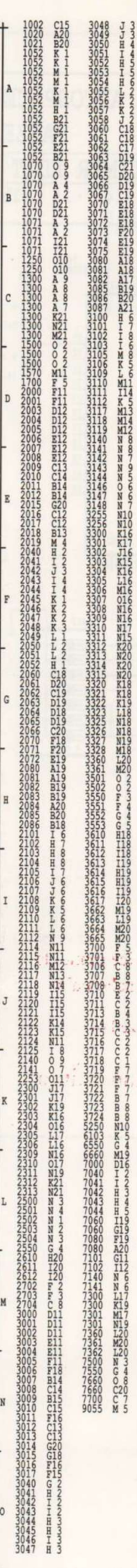
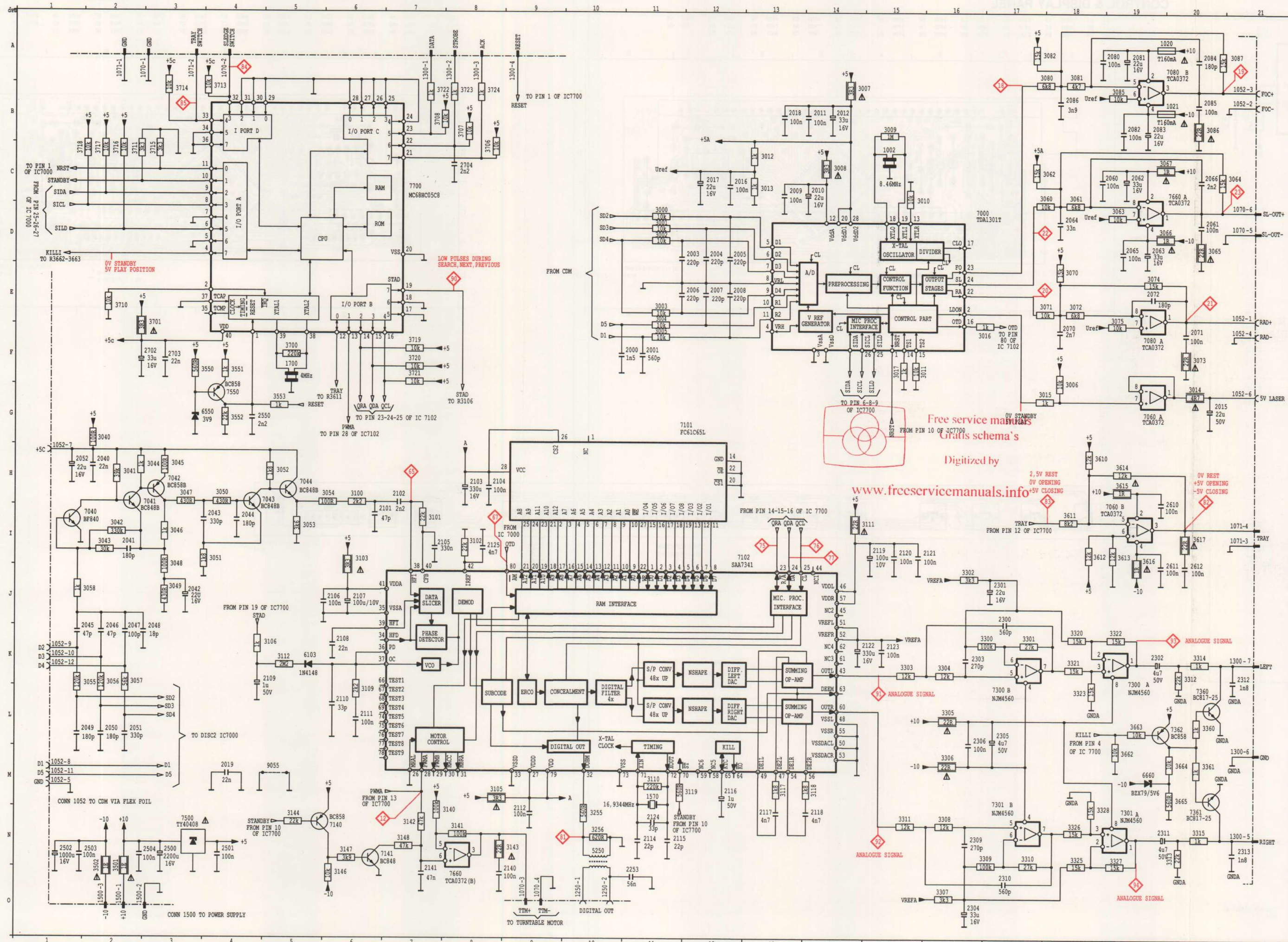
3104 113 3024 B-COMP
 9213

CONTROL & DISPLAY PANEL

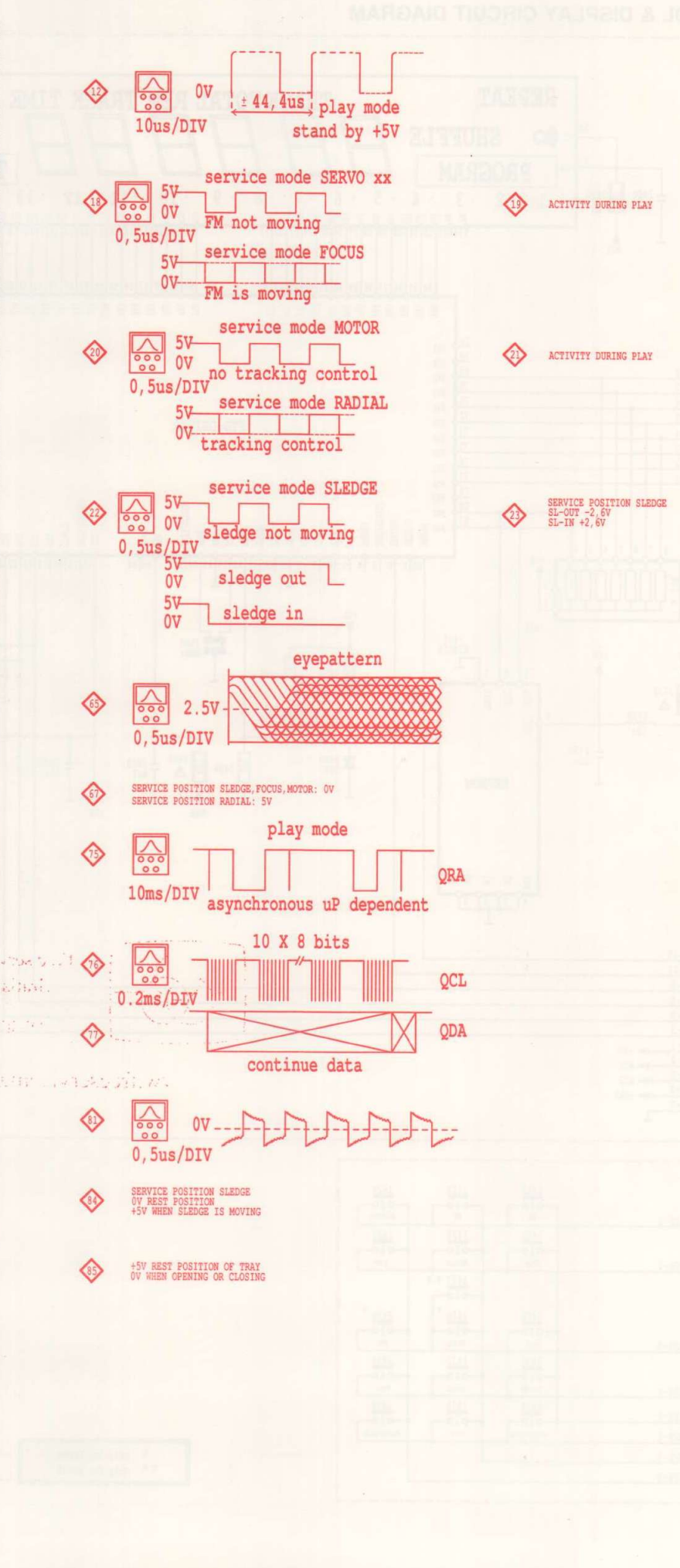


* ONLY FOR CD080
 ** ONLY FOR CD070

3104 113 3024 A-CU
 9214

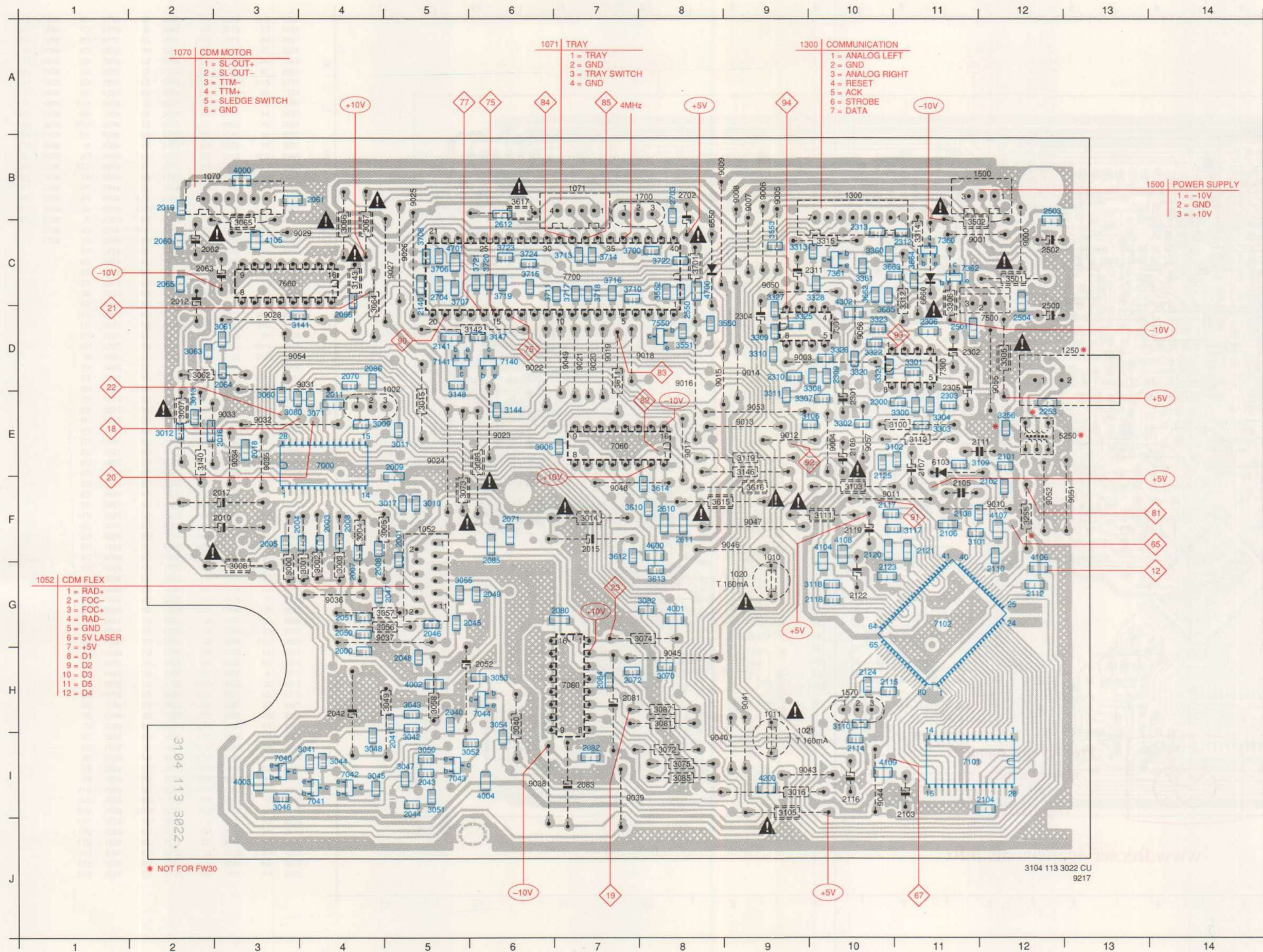


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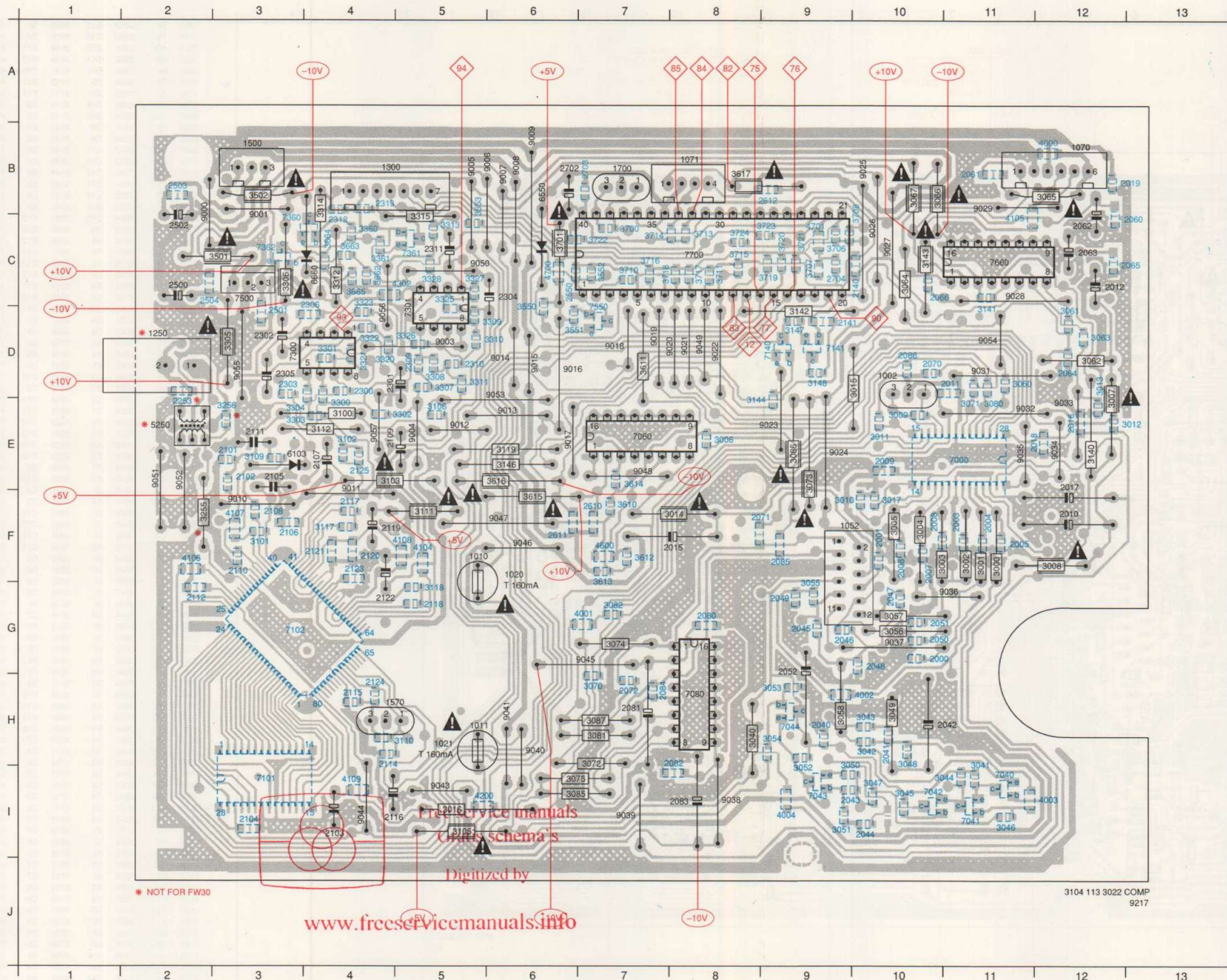
SERVO & DECODER PANEL SOLDER SIDE

SERVO & DECODER PANEL COMPONENT SIDE



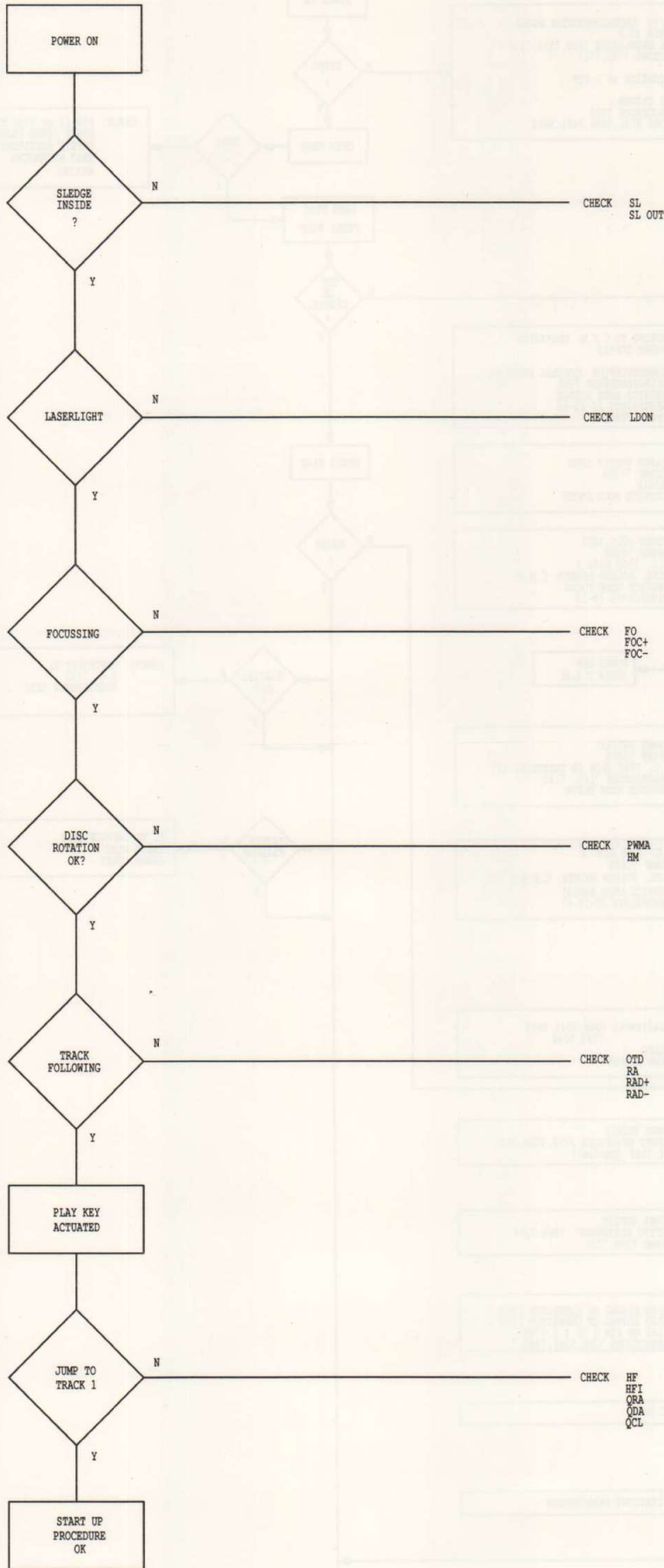
1002	E4	2253	E12	3105	I9	4004	I6	9052	F12
1010	F9	2300	E10	3106	E9	4104	F10	9053	E9
1011	H9	2301	E10	3109	E11	4105	C3	9054	D3
1020	G9	2302	D11	3110	H10	4106	G12	9055	E12
1021	I9	2303	E11	3111	F10	4107	F12	9056	D10
1052	F5	2304	D9	3112	E11	4108	F10	9057	E10
1070	B2	2305	E11	3117	F11	4109	I0		
1071	B7	2306	D11	3118	G9	4200	I9		
1250	D12	2309	D10	3119	E9	4302	D10		
1300	B10	2310	D9	3140	E2	4600	F8		
1500	B11	2311	C9	3141	D3	4700	C8		
1570	H10	2312	C11	3142	D5	4701	C5		
1700	B7	2313	C10	3143	C4	5250	E12		
2000	H4	2500	D12	3144	E6	6103	E11		
2001	F5	2501	D11	3146	E9	6550	C8		
2003	F4	2502	C12	3147	D6	6660	C11		
2004	F4	2503	B12	3148	E5	7000	E4		
2005	F3	2504	D12	3255	F12	7040	I3		
2007	G4	2550	D8	3256	E12	7041	I4		
2008	F4	2610	F8	3300	E10	7042	I4		
2008	G4	2611	F8	3301	D11	7043	I5		
2009	E5	2612	C6	3302	E10	7044	H6		
2010	F3	2702	B8	3303	E11	7060	E7		
2011	E4	2703	B8	3304	E11	7080	H7		
2012	C2	2704	C5	3305	D12	7101	I11		
2015	F7	3000	G3	3306	D11	7102	G11		
2016	E3	3001	G4	3307	E9	7140	D6		
2017	F2	3002	G4	3308	E9	7141	D5		
2018	E3	3003	G4	3309	D9	7300	D11		
2019	B2	3004	F4	3310	D9	7301	D10		
2040	H5	3005	F5	3311	E9	7360	C11		
2041	I5	3006	E6	3312	D11	7361	C10		
2042	H4	3007	E2	3313	C9	7362	C11		
2043	I5	3008	G3	3314	C11	7500	D12		
2044	J5	3009	E4	3315	D10	7550	D8		
2045	G5	3010	F5	3320	D10	7660	C3		
2046	G5	3011	E5	3321	D10	7700	C7		
2047	G5	3012	E2	3322	D10	9000	C12		
2048	H5	3013	E2	3323	D10	9001	C11		
2049	G6	3014	F7	3325	D9	9003	D9		
2050	G4	3015	E5	3326	D10	9004	E10		
2051	G4	3016	I9	3327	C9	9005	B9		
2052	H6	3017	F4	3328	C9	9006	B9		
2060	C2	3040	I6	3360	C10	9007	B9		
2061	B4	3041	I3	3361	C10	9008	B9		
2062	C2	3042	I5	3501	C12	9009	B9		
2063	C2	3043	H5	3502	C11	9010	F12		
2064	D3	3044	I4	3550	D8	9011	F10		
2065	C2	3045	I4	3551	D8	9012	E9		
2066	D4	3046	I3	3552	C8	9013	E9		
2070	D4	3047	I5	3553	C9	9014	D9		
2071	F6	3048	I4	3610	F7	9015	D8		
2072	H7	3049	H5	3611	D7	9016	D8		
2080	G6	3050	I5	3612	F7	9017	E8		
2081	H7	3051	I5	3613	G8	9018	D7		
2082	I7	3052	I5	3614	F8	9019	D7		
2083	I7	3053	H6	3615	F8	9020	D7		
2084	H7	3054	H6	3616	F9	9021	D7		
2085	G6	3055	G5	3617	B6	9022	D6		
2086	D4	3056	G4	3662	D10	9023	E6		
2101	E12	3057	G4	3663	C10	9024	E5		
2102	F12	3058	H5	3664	C11	9025	B5		
2103	J11	3060	E3	3665	D10	9026	C5		
2104	I11	3061	D3	3700	C7	9027	C5		
2105	F11	3062	D2	3701	C8	9028	D3		
2106	F11	3063	D2	3706	C5	9029	C3		
2107	F11	3064	D4	3707	D5	9031	D3		
2108	F11	3065	C3	3708	C5	9032	E3		
2109	E10	3066	C4	3710	C7	9033	E3		
2110	G12	3067	C4	3711	C6	9034	E3		
2111	E11	3070	H8	3713	C7	9035	E3		
2112	G12	3071	E4	3714	C7	9036	G4		
2114	I10	3072	I8	3715	C6	9037	G4		
2115	H10	3073	F5	3716	C7	9038	I6		
2116	I10	3074	G7	3717	C7	9039	I7		
2117	F10	3075	I8	3718	C7	9040	I8		
2118	G9	3080	E3	3719	C6	9041	H9		
2119	F10	3061	H8	3720	C6	9043	I9		
2120	F10	3082	G7	3721	C6	9044	I10		
2121	F11	3085	I8	3722	C6	9045	H8		
2122	G10	3086	E8	3723	C6	9046	F8		
2123	G10	3087	H8	3724	C6	9047	F9		
2124	H10	3100	E10	4000	B3	9048	F7		
2125	F10	3101	F11	4001	G8	9049	D7		
2140	D5	3102	E10	4002	H5	9050	C9		
2141	D5	3103	F10	4003	I3	9051	F13		

SERVO & DECODER PANEL COMPONENT SIDE

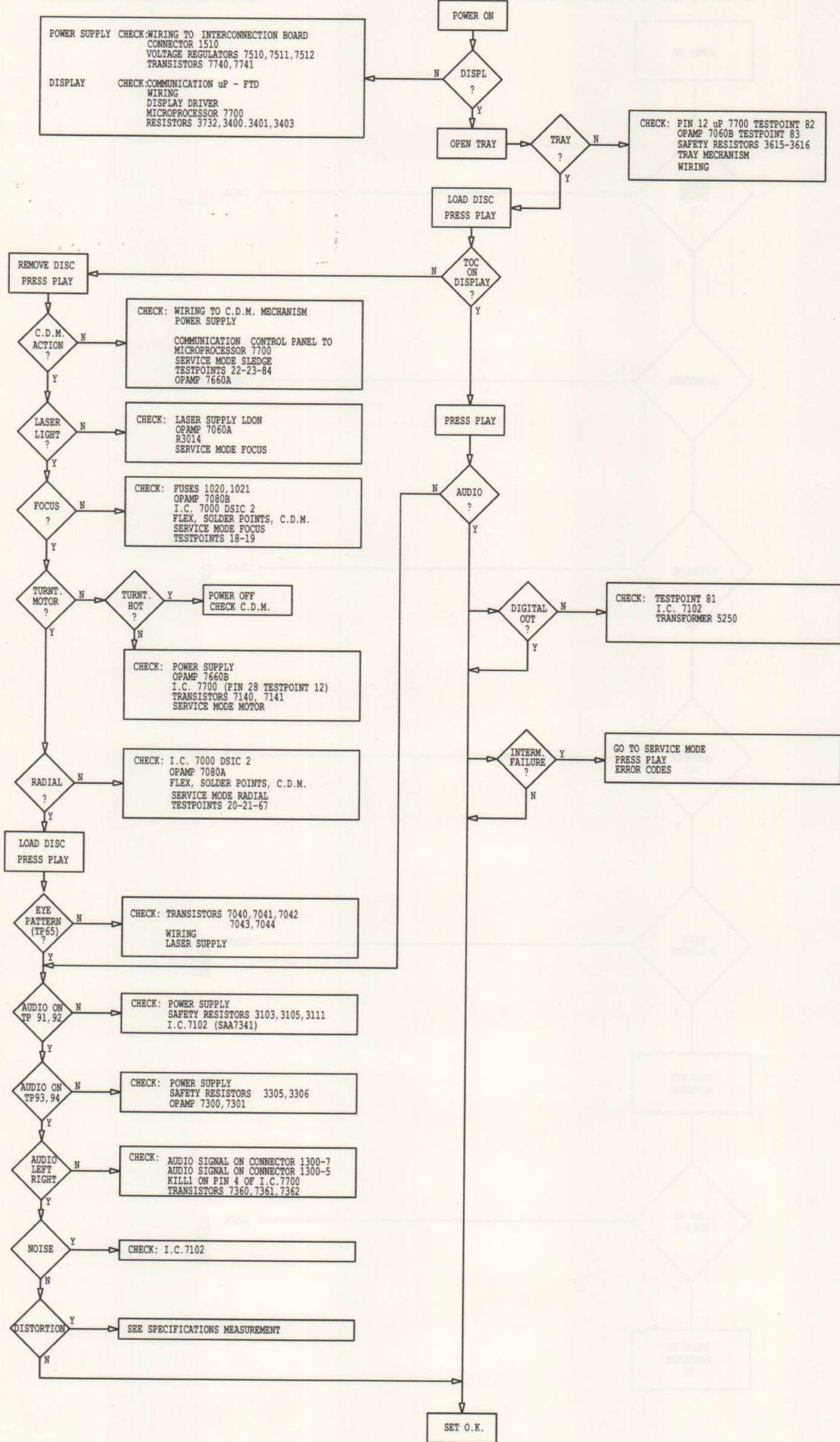


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1010	F5	2125	E4	3085	I6	3718	C7	9036	G10
1011	H5	2140	C10	3086	E9	3719	C8	9037	G10
1020	F6	2141	D9	3087	H7	3720	C9	9038	I8
1021	H5	2253	E2	3100	E4	3721	C9	9039	I7
1052	F9	2300	D4	3101	F3	3722	C7	9040	H6
1070	B12	2301	D4	3102	E4	3723	C8	9041	H6
1071	B8	2302	D3	3103	E4	3724	C8	9043	I5
1250	D2	2303	D3	3105	I5	4000	B12	9044	I4
1300	B4	2304	C6	3106	E5	4001	G6	9045	G6
1500	B3	2305	D3	3109	E3	4002	H10	9046	F6
1570	H4	2306	D3	3110	H5	4003	I2	9047	F6
1700	B7	2309	D5	3111	F5	4004	I9	9048	E7
2000	G10	2310	D5	3112	E4	4104	F5	9049	D8
2001	F10	2311	C5	3117	F4	4105	C11	9050	C5
2003	F11	2312	C4	3118	G5	4106	F2	9051	E2
2004	F11	2313	B4	3119	E6	4107	F3	9052	E2
2005	F11	2500	C2	3140	E12	4108	F4	9053	D5
2007	G10	2501	D3	3141	D11	4109	I4	9054	D11
2008	F10	2502	C2	3142	D9	4200	I5	9055	D3
2008	F10	2503	B2	3143	C10	4302	C4	9056	D4
2009	E10	2504	C2	3144	E8	4600	F7	9057	E4
2010	F12	2505	C6	3146	E6	4700	C6		
2011	D10	2610	F7	3147	D9	4701	C9		
2012	C12	2611	F6	3148	D9	5250	E2		
2015	F7	2612	B8	3255	F2	6103	E3		
2016	E12	2702	B6	3256	E3	6550	B6		
2017	E12	2703	B7	3300	E4	6660	C4		
2018	E12	2704	C9	3301	D4	7000	E11		
2019	B12	3000	F11	3302	E4	7040	I11		
2040	H9	3001	F11	3303	E3	7041	I11		
2041	H10	3002	F11	3304	E3	7042	I10		
2042	H10	3003	F11	3305	D3	7043	I9		
2043	I9	3004	F10	3306	C3	7044	H9		
2044	I10	3005	F10	3307	D5	7060	E7		
2045	G9	3006	E8	3308	D5	7080	H8		
2046	G9	3007	E12	3309	D5	7101	I3		
2047	G10	3008	F12	3310	D5	7102	G3		
2048	G10	3009	E10	3311	D5	7140	D9		
2049	G9	3010	F9	3312	C4	7141	D9		
2050	G10	3011	E10	3313	C5	7300	D3		
2051	G10	3012	E12	3314	C4	7301	D5		
2052	G9	3013	D12	3315	C5	7360	C3		
2060	C12	3014	F7	3320	D4	7361	C5		
2061	B11	3015	D10	3321	D4	7362	C3		
2062	C12	3016	I5	3322	D4	7500	C3		
2063	C12	3017	F10	3323	C4	7550	D7		
2064	D12	3040	H8	3325	C5	7660	C11		
2065	C12	3041	I11	3326	D5	7700	C8		
2066	C10	3042	H10	3327	C5	9000	C2		
2070	D10	3043	H10	3328	C5	9001	C3		
2071	F8	3044	I10	3360	C4	9003	D5		
2072	H7	3045	I10	3361	C4	9004	E5		
2080	G8	3046	I11	3501	C2	9005	B5		
2081	H7	3047	I10	3502	B3	9006	B6		
2082	I7	3048	I10	3550	D6	9007	B6		
2083	I8	3049	H10	3551	D6	9008	B6		
2084	H7	3050	I9	3552	C7	9009	B6		
2085	F9	3051	I9	3553	C5	9010	F3		
2086	D10	3052	I9	3610	F7	9011	F4		
2101	E3	3053	H9	3611	D7	9012	E5		
2102	E3	3054	H9	3612	F7	9013	E6		
2103	I4	3055	G9	3613	G7	9014	D6		
2104	I3	3056	G10	3614	E7	9015	D6		
2105	E3	3057	H10	3615	F6	9016	D6		
2106	F3	3058	H9	3616	E6	9017	E6		
2107	E4	3060	D11	3617	B8	9018	D7		
2108	F3	3061	D12	3662	C4	9019	D7		
2109	E4	3062	D12	3663	C4	9020	D8		
2110	F3	3063	D12	3664	C4	9021	D8		
2111	E3	3064	C10	3665	C4	9022	D8		
2112	G2	3065	B12	3700	C7	9023	E8		
2114	I4	3066	B10	3701	C6	9024	E9		
2115	H4	3067	B10	3706	C9	9025	B10		
2116	I4	3070	H7	3707	C9	9026	C10		
2117	F4	3071	E11	3708	C10	9027	C10		
2118	G5	3072	I7	3710	C7	9028	C11		
2119	F4	3073	F9	3711	C8	9029	B11		
2120	F4	3074	G7	3713	C8	9031	D11		
2121	F4	3075	I6	3714	C7	9032	E11		
2122	G4	3080	E11	3715	C8	9033	E12		
2123	F4	3081	H7	3716	C7	9034	E12		

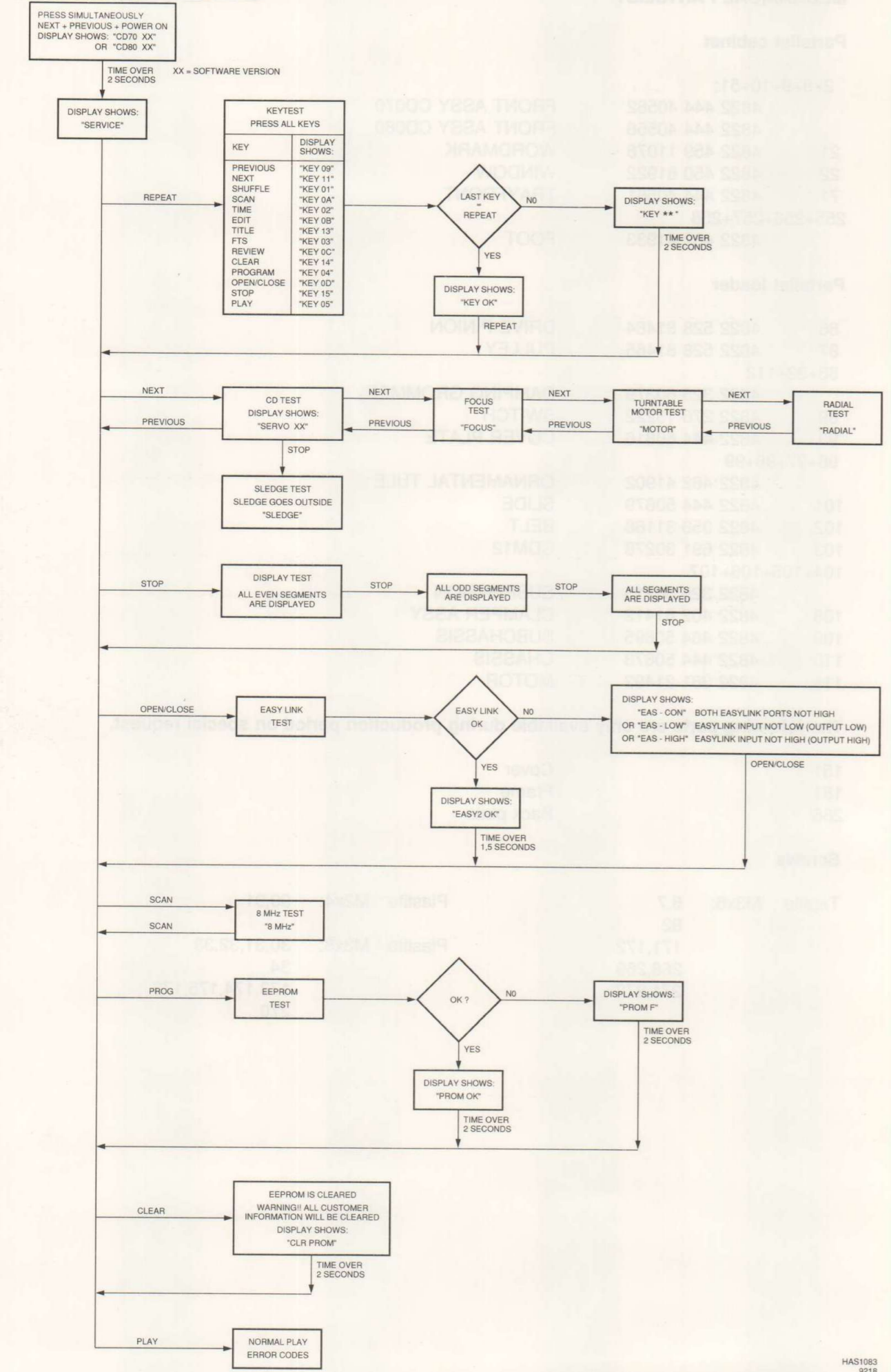
START UP PROCEDURE



FAULTFINDING GUIDE



SERVICE TEST PROGRAM



HAS1083
9218

ERROR CODE TABLE

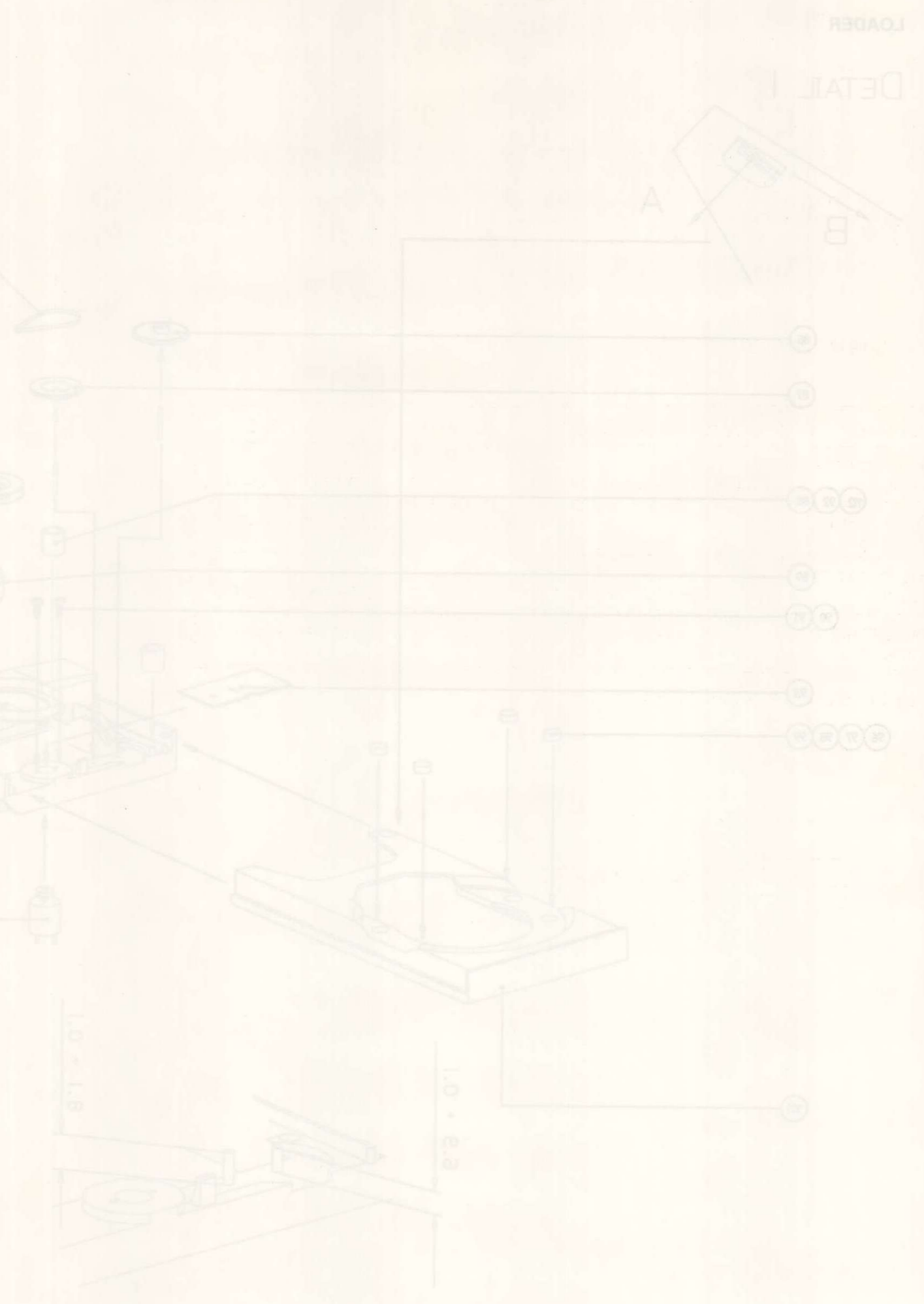
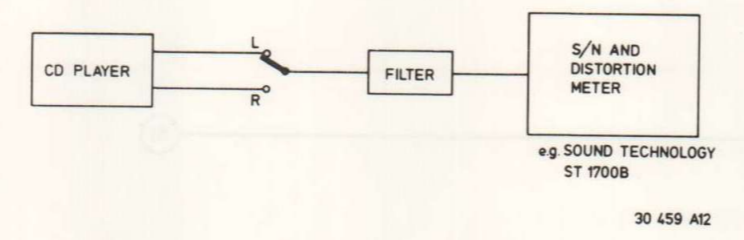
SYSTEM ERRORS

- ERR 1002 Focus error, no disc.
- ERR 1007 Subcode error, no valid subcode.
- ERR 1008 TOC error, out of lead-in area while reading TOC
- ERR 1009 CD4+ decoder(SAA7341) error.
- ERR 1010 Radial error.
- ERR 1012 Fatal sledge error
- ERR 1013 Turntable motor error

SPECIFICATIONS MEASUREMENT

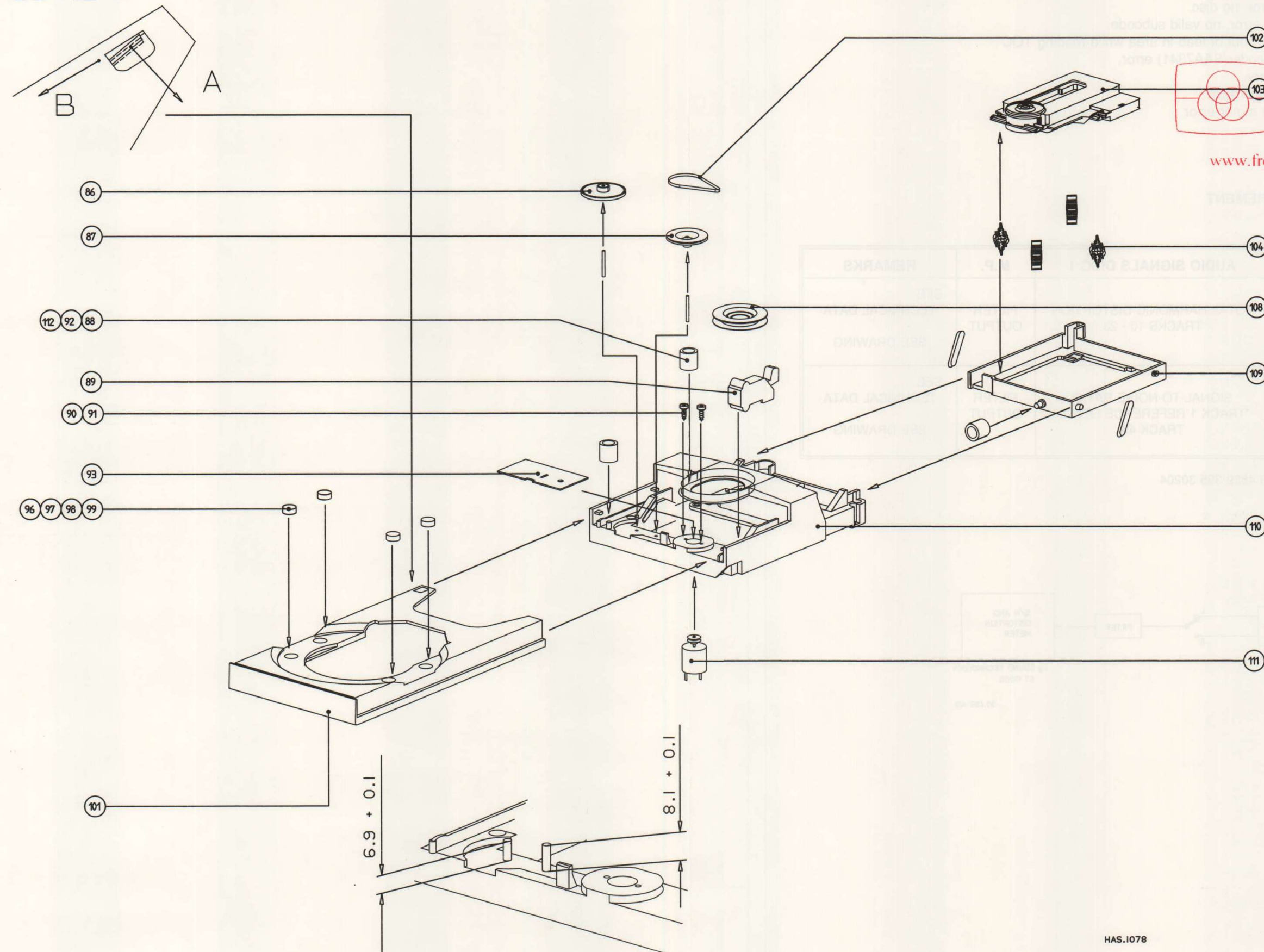
SIGNAL	AUDIO SIGNALS DISC 1	M.P.	REMARKS
ANALOG OUT LEFT 1300 - 7	TOTAL HARMONIC DISTORTION TRACKS 10 - 23	FILTER OUTPUT	SEE TECHNICAL DATA
ANALOG OUT RIGHT 1300 - 5			SEE DRAWING
ANALOG OUT LEFT 1300 - 7	SIGNAL-TO-NOISE RATIO TRACK 1 REFERENCE LEVEL TRACK 49	FILTER OUTPUT	SEE TECHNICAL DATA
ANALOG OUT RIGHT 1300 - 5			SEE DRAWING

FILTER = 13th ORDER FILTER 4822 395 30204



LOADER

DETAIL I



Free service manuals
Gratis schema's
Digitized by
www.freeservicemanuals.info

MECHANICAL PARTSLIST

Partslist cabinet

2+8+9+10+51:		
4822 444 40562		FRONT ASSY CD070
4822 444 40556		FRONT ASSY CD080
21 4822 459 11078		WORDMARK
22 4822 450 61922		WINDOW
71 4822 444 40561		TRAYFRONT
255+256+257+258		
4822 462 41933		FOOT

Partslist loader

86	4822 528 81464	DRIVE PINION
87	4822 528 81465	PULLEY
88+92+112		
4822 325 60379		DAMPING GROMMET
89	4822 276 13222	SWITCH
93	4822 444 60816	COVER PLATE
96+97+98+99		
4822 462 41902		ORNAMENTAL TULE
101	4822 444 50679	SLIDE
102	4822 358 31168	BELT
103	4822 691 30278	CDM12
104+105+106+107		
4822 325 50215		SUSPENSION
108	4822 402 61412	CLAMPER ASSY
109	4822 464 50895	SUBCHASSIS
110	4822 444 50678	CHASSIS
111	4822 361 21492	MOTOR

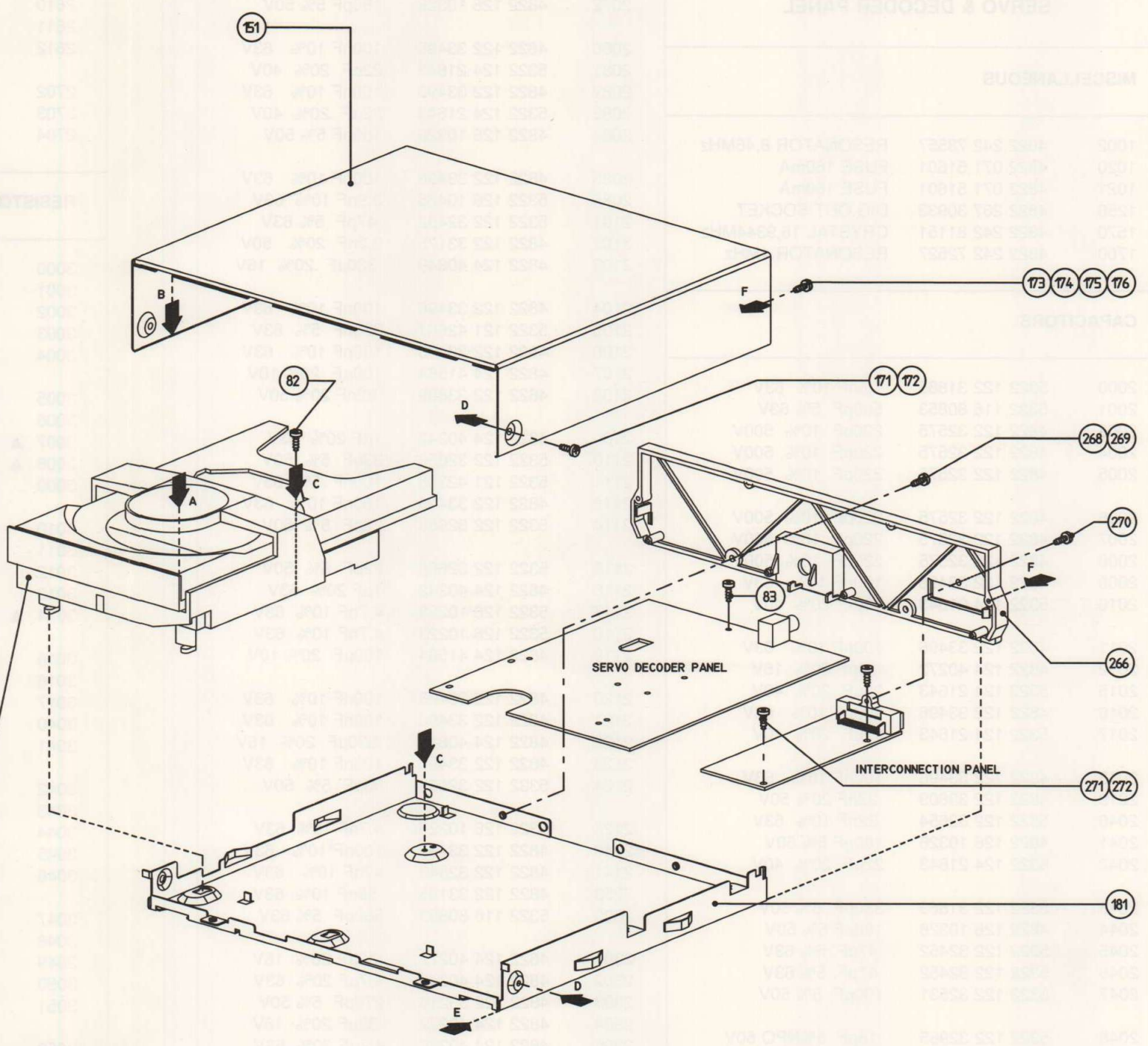
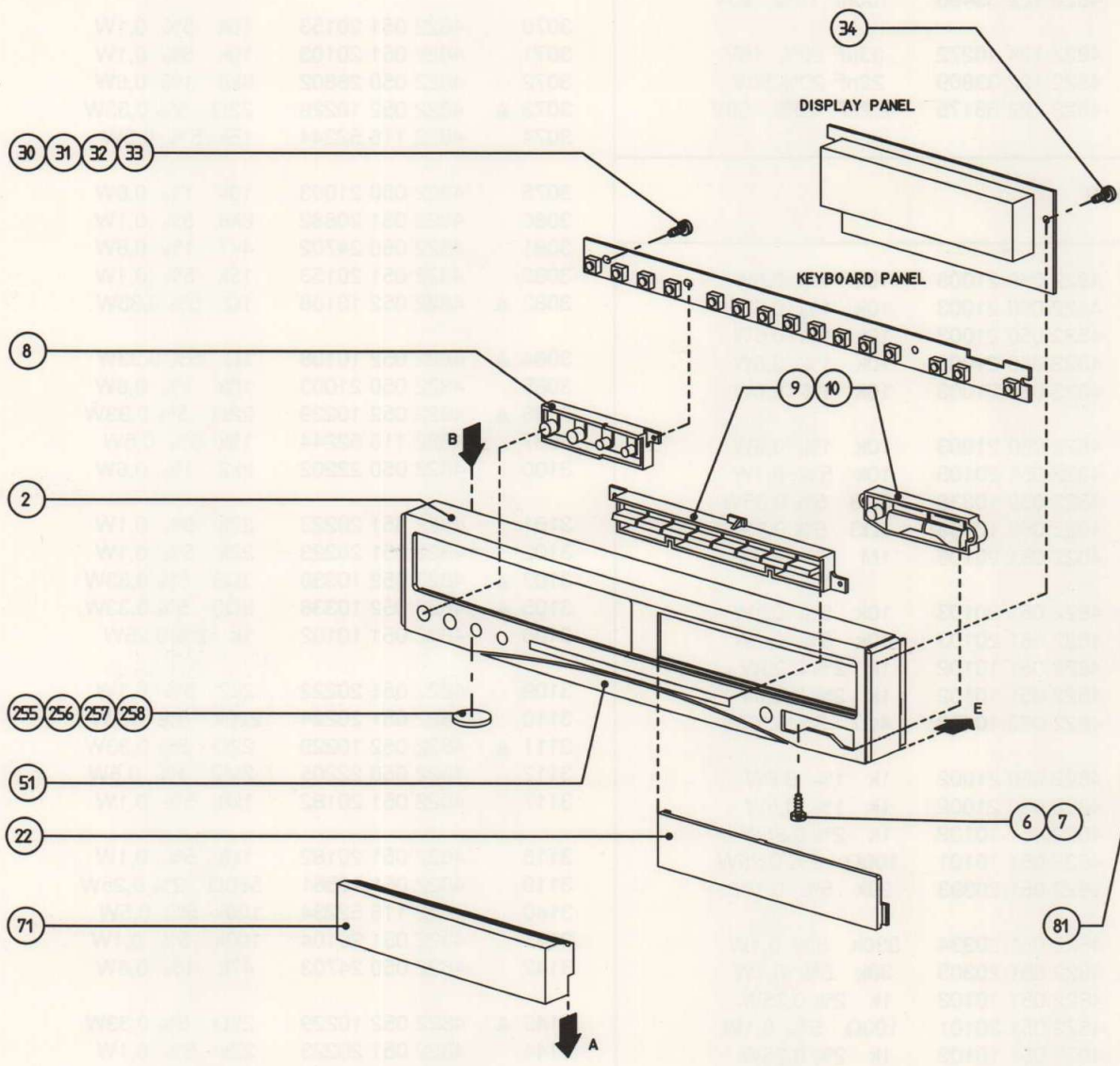
The following parts are only available during production period on special request.

151	Cover
181	Frame
266	Back plate

Screws

Taptite	M3x6:	6,7	Plastite	M2x4:	90,91
		82			
		171,172	Plastite	M3x8:	30,31,32,33
		268,269			34
		271,272			173,174,175,176
					270

EXPLODED VIEW



HAS.1073
AHT31.92.0000

3314	4822 050 21002	1k	1%	0,6W
3315	4822 050 21002	1k	1%	0,6W
3320	4822 116 83933	15k	1%	0,1W
3321	4822 116 83933	15k	1%	0,1W
3322	4822 116 83933	15k	1%	0,1W
3323	4822 116 83933	15k	1%	0,1W
3325	4822 116 83933	15k	1%	0,1W
3326	4822 116 83933	15k	1%	0,1W
3327	4822 116 83933	15k	1%	0,1W
3328	4822 116 83933	15k	1%	0,1W
3360	4822 051 10102	1k	2%	0,25W
3361	4822 051 10102	1k	2%	0,25W
3501 ▲	4822 052 10108	1Ω	5%	0,33W
3502 ▲	4822 052 10108	1Ω	5%	0,33W
3550	4822 051 20561	560Ω	5%	0,1W
3551	4822 051 10102	1k	2%	0,25W
3552	4822 051 20223	22k	5%	0,1W
3553	4822 051 10102	1k	2%	0,25W
3610	4822 051 20123	12k	5%	0,1W
3611	4822 116 52303	8k2	5%	0,5W
3612	4822 051 20123	12k	5%	0,1W
3613	4822 051 20123	12k	5%	0,1W
3614	4822 051 20123	12k	5%	0,1W
3615 ▲	4822 052 10108	1Ω	5%	0,33W
3616 ▲	4822 052 10108	1Ω	5%	0,33W
3617 ▲	4822 052 10229	22Ω	5%	0,33W
3662	4822 051 20103	10k	5%	0,1W
3663	4822 051 20103	10k	5%	0,1W
3664	4822 051 20103	10k	5%	0,1W
3665	4822 051 20561	560Ω	5%	0,1W
3700	4822 051 20224	220k	5%	0,1W
3701 ▲	4822 052 10338	3Ω3	5%	0,33W
3706	4822 051 20103	10k	5%	0,1W
3707	4822 051 20103	10k	5%	0,1W
3708	4822 051 20103	10k	5%	0,1W
3710	4822 051 20103	10k	5%	0,1W
3711	4822 051 20332	3k3	5%	0,1W
3713	4822 051 20103	10k	5%	0,1W
3714	4822 051 20103	10k	5%	0,1W
3715	4822 051 20332	3k3	5%	0,1W
3716	4822 051 20103	10k	5%	0,1W
3717	4822 051 20103	10k	5%	0,1W
3718	4822 051 20103	10k	5%	0,1W
3719	4822 051 20103	10k	5%	0,1W
3720	4822 051 20103	10k	5%	0,1W
3721	4822 051 20103	10k	5%	0,1W
3722	4822 051 10102	1k	2%	0,25W
3723	4822 051 10102	1k	2%	0,25W
3724	4822 051 10102	1k	2%	0,25W
4000	4822 051 10008	0Ω	5%	0,25W
4001	4822 051 10008	0Ω	5%	0,25W
4002	4822 051 10008	0Ω	5%	0,25W
4003	4822 051 10008	0Ω	5%	0,25W
4004	4822 051 10008	0Ω	5%	0,25W

4104	4822 051 10008	0Ω	5%	0,25W
4105	4822 051 10008	0Ω	5%	0,25W
4106	4822 051 10008	0Ω	5%	0,25W
4107	4822 051 10008	0Ω	5%	0,25W
4108	4822 051 10008	0Ω	5%	0,25W
4109	4822 051 10008	0Ω	5%	0,25W
4200	4822 051 10008	0Ω	5%	0,25W
4302	4822 051 10008	0Ω	5%	0,25W
4600	4822 051 10008	0Ω	5%	0,25W
4700	4822 051 10008	0Ω	5%	0,25W
4701	4822 051 10008	0Ω	5%	0,25W

COILS

5250	4822 148 80281	DIG.OUT TRANSFORMER		
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DIODES

6103	4822 130 30621	1N4148
6550	4822 130 31981	BZX79-C3V9
6660	4822 130 34173	BZX79-C5V6

TRANSISTORS & IC's

7000	4822 209 31064	TDA1301T/N1
7040	4822 130 60887	BF840
7041 ▲	5322 130 41982	BC848B
7042	5322 130 41983	BC858B
7043 ▲	5322 130 41982	BC848B
7044 ▲	5322 130 41982	BC848B
7060	4822 209 72587	TCA0372DP2-
7080	4822 209 72587	TCA0372DP2-
7101	4822 209 63925	FCB61C65L-70T
7102	4822 209 30388	SAA7341GP
7140	5322 130 42012	BC858
7141	4822 130 61207	BC848
7300	4822 209 83274	NJM4560D
7301	4822 209 83274	NJM4560D
7360	4822 130 42804	BC817-25
7361	4822 130 42804	BC817-25
7362	5322 130 42012	BC858
7500 ▲	4822 209 71579	TY40408
7550	5322 130 42012	BC858
7660	4822 209 72587	TCA0372DP2-
7700	4822 209 31055	MC 68HC05C8-ZC405039

CONTROL & DISPLAY PANEL**MISCELLANEOUS**

4822 256 91933	DISPLAY HOLDER
1422 4822 276 13114	TACT SWITCH
1423 4822 276 13114	TACT SWITCH
1424 4822 276 13114	TACT SWITCH
1425 4822 276 13114	TACT SWITCH
1426 4822 276 13114	TACT SWITCH
1427 4822 276 13114	TACT SWITCH
1428 4822 276 13114	TACT SWITCH
1429 4822 276 13114	TACT SWITCH(CD080)
1430 4822 276 13114	TACT SWITCH(CD080)
1431 4822 276 13114	TACT SWITCH
1432 4822 276 13114	TACT SWITCH
1433 4822 276 13114	TACT SWITCH
1434 4822 276 13114	TACT SWITCH
1435 4822 276 13114	TACT SWITCH
1436 4822 276 13114	TACT SWITCH
1437 4822 276 13114	TACT SWITCH(CD070)
1500 5322 242 73697	CRYSTAL 8MHz
1510 4822 267 60331	SOCKET CD IN/OUT

CAPACITORS

2400 4822 122 10176	4,7nF 10% 50V
2401 4822 122 10176	4,7nF 10% 50V
2402 4822 122 10166	22nF 30% 16V
2403 4822 122 10176	4,7nF 10% 50V
2410 4822 122 90111	NETWORK 7X100pF
2510 4822 124 41853	1000µF 16V
2511 4822 124 40433	47µF 20% 25V
2513 4822 124 40433	47µF 20% 25V
2514 4822 124 40433	47µF 20% 25V
2515 4822 124 40433	47µF 20% 25V
2516 4822 121 43187	27nF 5% 250V
2730 4822 122 10166	22nF 30% 16V
2740 4822 124 41506	47µF 20% 16V

RESISTORS

3400 ▲ 4822 052 10478	4Ω7 5% 0,33W
3401 ▲ 4822 052 10478	4Ω7 5% 0,33W
3402 4822 050 22201	220Ω 1% 0,6W
3403 ▲ 4822 052 10478	4Ω7 5% 0,33W
3404 4822 050 22203	22k 1% 0,6W
3405 4822 050 21002	1k 1% 0,6W
3406 4822 116 90842	NETWORK 7X10k
3409 4822 050 21003	10k 1% 0,6W(CD080)
3410 4822 050 21003	10k 1% 0,6W(CD070)

3732 ▲ 4822 052 10478	4Ω7 5% 0,33W
3740 4822 050 24703	47k 1% 0,6W
3741 4822 050 24703	47k 1% 0,6W
3742 4822 051 10101	100Ω 2% 0,25W
3743 4822 050 24703	47k 1% 0,6W
3744 4822 050 21803	18k 1% 0,6W
3745 4822 050 24703	47k 1% 0,6W
3746 ▲ 4822 052 10109	10Ω 5% 0,33W

COILS

5001 4822 157 51462	10µH
5002 4822 157 51462	10µH
5003 4822 157 51462	10µH
5004 4822 157 51462	10µH
5005 4822 157 51462	10µH
5500 4822 157 60363	ANTI INTERFERENCE COIL
5730 4822 157 51462	10µH

DIODES

6400 4822 130 31981	BZX79-C3V9
6740 4822 130 30621	1N4148

TRANSISTORS & IC's

7400 4822 130 91136	VFD-FUTABA-CD070-080
7401 4822 209 31517	TMP87CK70F...
7402 4822 130 40941	BC558
7403 4822 209 62524	X24C16P
7510 4822 209 80891	MC 78M05CT
7511 4822 209 62085	LM2940CT-12
7512 5322 209 85913	MC 7912CT
7740 4822 130 40941	BC558
7741 4822 130 40938	BC548