

CDR570
 CDR770
 CDR775
 CDR930
 CDR950

Service
 Service
Service

Service Manual



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1. Technical Specifications/Introduction.

In this document the important issues for the mechanical and electrical testing, adjusting, checking and diagnosing of the Digital Audio CDR Module such as applied in so-called 3rd generation CDR recorders is described.

In this first chapter is presented the introduction of the repair manual for 2nd line repair workshops. It contains the repair instructions of the CDR Module CDL4009 + Mainboard 4228. All modules consist of the same loader + CDM part, the mounting of the components on the Mainboard deviates from each other. For that reason a separate CDR-module has been defined for each type/modelnumber.

On top of that: Each mainboard connected to another CDM has to be adjusted before that module can be used. To have this module on component level repaired this second line service (repair) manual has to be used in combination with the "first" line service manual of mentioned typenumber. As long as the adjustment instructions can not be carried out, the module has to be exchanged by an adjusted one from Service stock in case of repairs concerning CDM and/or Servo circuits.

Chapter 2 contains the required safety instructions, in chapter 3 a referring to the directions for use, as published in the typenumber Service Manual, is made.

In chapter 4 the mechanical exploded view of the complete module, the loading part and the CDM3800 is presented. This chapter also includes the mounting, demounting, cleaning and greasing instruction.

In chapter 5 the internal selfdiagnostics without opening the set and use of other tools is described in the service modes. The faultfinding trees and repair suggestions like the power supply voltages for proper functioning of the mainboard are indicated there too. This chapter also contains initialising and reset, concerned measuring points are highlighted. For proper functioning of all ICs the clockfrequencies have to be tested and the importance of derived clockfrequencies is shown. and how to operate with the menu driven diagnostics. Via a PC connection (serial input socket RS232C) the Menu Driven Diagnostics feature is started.

To improve the interactivity and communication with the set/module the COMPAIR (the for service designed computer aided repair) tool is supported too by this CDR generation. Details to be defined soonest and will be published by a service information bulletin later on.

Via blockdiagrams of applied boards the common issues of all boards are shown and in short explained in chapter 6.

In chapter 7 the circuit diagrams and printed wiring boards with important measuring points are shown.

The adjustment of the laser current (only one important and necessary adjustment has to be carried out, the rest of the adjustments are calculated from that parameter onwards) will be presented in chapter 8. The needed PC program is under investigation now and with the implementation of COMPAIR this adjustment action will be explained. The method how to align the software, if needed, is indicated here.

In chapter 9 reference is made to existing 3rd generation circuit description in which publication a lot of details about the functioning of the set is explained.

Also the list of abbreviations is inserted here.

Finally a survey of applied components and corresponding service ordering numbers is given in chapter 10.

As the Mainboard 4228 is designed to be applied for several modelnumbers this board contains a lot of optional components.

The most extended board is modelnumber CDR775 where double speed dubbing feature is applied too.

2. Safety and Maintenance instructions warnings and notes

(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.



(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor elektrostatische 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.

(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 IC und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD).

Unsorgfältige Behandlung bei der Reparatur kann die Lebensdauer drastisch vermindern. Sorgen sie dafür, das Sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.

Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridotta 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 terug gebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerats 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.



**CAUTION
VARO!
WARNING
ADVERSEL
DANGER
VORSICHT**

INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
AVATTAESSA OLET ALTIINA NÄKYMÄTTÖMÄLLE LASER SÄTTEILYLLE ÄLÄ KATSO SÄTEESEN.
ÖSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.
USYNLIG LASERSTRÅLNING VED ÅBNING. UNDGÅ UNSÆTTELSE FOR STRÅLING.
INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
UNSICHTBARE LASERSTRAHLUNG WENN ABEDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.

SHOCK, FIRE HAZARD SERVICE TEST:

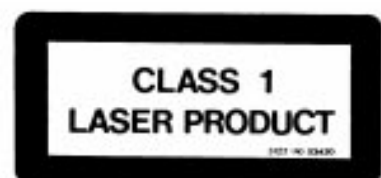
CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom,

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.

Ref.UL Standard NO.1492.

NOTE ON SAFETY:

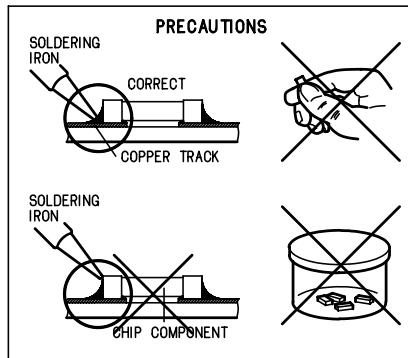
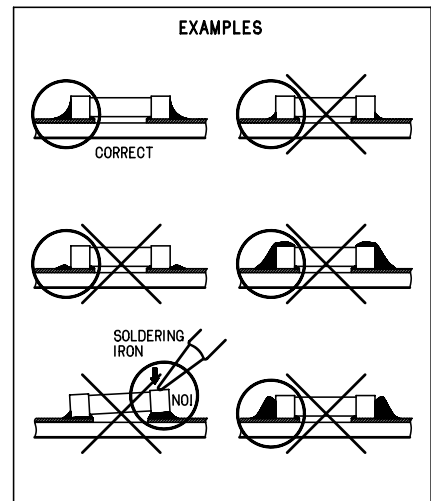
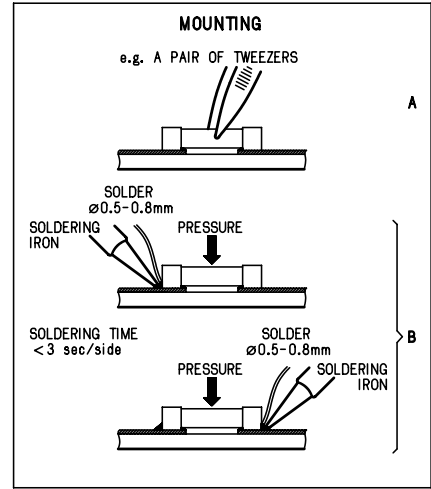
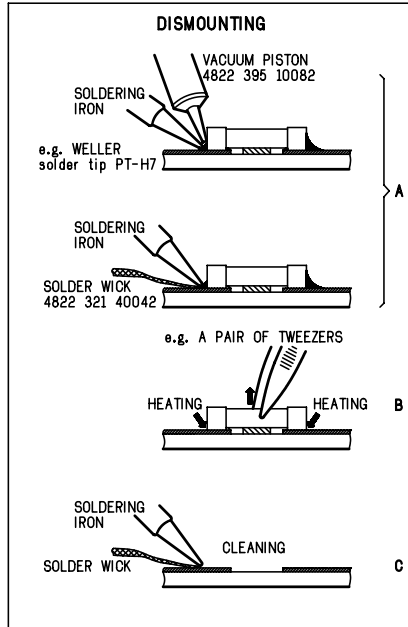
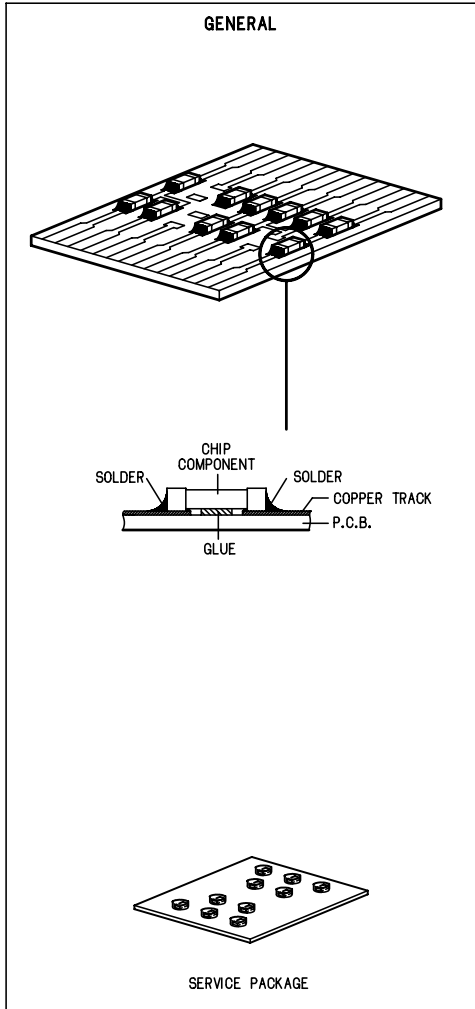
Symbol : Fire or electrical shock hazard. Only original parts should be used to replace any part with symbol Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.



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

SERVICING HINTS

In the set, chip components have been applied. For disassembly and assembly check the figure below.



SAFETY GUIDELINES FOR THE PROFESSIONAL SERVICE TECHNICIAN

Important

Proper service and repair is important to the safe, reliable operation of all Philips equipment. The service procedures recommended by Philips and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It also is important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. Philips could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, Philips has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by Philips must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

Safety Checks

After the original service problem has been corrected, a complete safety check should be made. Be sure to check over the entire set, not just the areas where you have worked. Some previous servicer may have left an unsafe condition, which could be unknowingly passed on to your customer. Be sure to check all of the following:

Fire and Shock Hazard

1. Be sure all components are positioned in such a way as to avoid the possibility of adjacent component shorts. This is especially important on those units which are transported to and from the service shop.
2. Never release a repaired unit unless all protective devices such as insulators, barriers, covers, strain reliefs, and other hardware have been installed according to the original design.
3. Soldering and wiring must be inspected to locate possible cold solder joints, solder splashes, sharp solder points, frayed leads, pinched leads, or damaged insulation (including the ac cord). Be certain to remove loose solder balls and all other loose foreign particles.
4. Check across-the-line components and other components for physical evidence of damage or deterioration and replace if necessary. Follow original layout, lead length, and dress.
5. No lead or component should touch a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces or edges must be avoided.
6. Critical components having special safety characteristics are identified with a **▲** by the Ref. No. in the parts list and enclosed within a broken line* (where several critical components are grouped in one area) along with the safety symbol **▲** on the schematic diagrams and/or exploded views.
Replacement parts without the same safety characteristics may create shock, fire, or other hazards.
7. When servicing any unit, always use a separate isolation transformer for the chassis. Failure to use a separate isolation transformer may expose you to possible shock hazard, and may cause damage to servicing instruments.
8. Many electronic products use a polarized ac line cord (one wide pin on the plug). Defeating this safety feature may create a potential hazard to the servicer and the user. Extension cords which do not incorporate the polarizing feature should never be used.

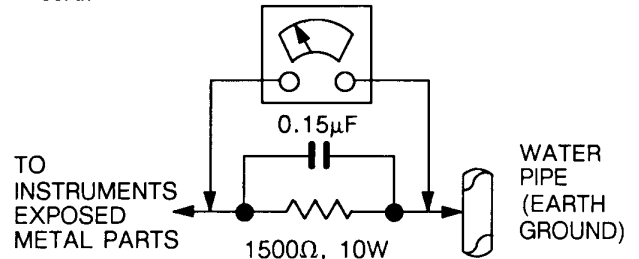
Fire and Shock Hazard (Continued)

9. After reassembly of the unit, always perform an ac leakage test or resistance test from the line cord to all exposed metal parts of the cabinet. Also, check all metal control shafts (with knobs removed), antenna terminals, handles, screws, etc. to be sure the unit is safe to operate without danger of electrical shock.

* Broken line: 

Leakage Current Cold Check

1. Unplug the ac line cord and connect a jumper between the two prongs of the plug.
2. Turn on the power switch.
3. Measure the resistance value between the jumpered ac plug and all exposed cabinet parts of the receiver, such as screw heads, antennas, and control shafts. When the exposed metallic part has a return path to the chassis, the reading should be between 1 megohm and 5.2 megohms. When the exposed metal does not have a return path to the chassis, the reading must be infinity. Remove the jumper from the ac line cord.



Leakage Current Hot Check

1. Do not use an isolation transformer for this test. Plug the completely reassembled unit directly into the ac outlet.
2. Connect a 1.5k, 10W resistor paralleled by a 0.15μF. capacitor between each exposed metallic cabinet part and a good earth ground such as a water pipe, as shown above.
3. Use an ac voltmeter with at least 5000 ohms/volt sensitivity to measure the potential across the resistor.
4. The potential at any point should not exceed 0.75 volts. A leakage current tester may be used to make this test; leakage current must not exceed 0.5 milliamps. If a measurement is outside of the specified limits, there is a possibility of shock hazard. The receiver should be repaired and rechecked before returning it to the customer.
5. Repeat the above procedure with the ac plug reversed. (Note: An ac adapter is necessary when a polarized plug is used. Do not defeat the polarizing feature of the plug.)

Parts Replacement

1. Many electrical and mechanical parts in Philips equipment have special safety related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. The use of a substitute part which does not have the same safety characteristics as the Philips recommended replacement part shown in this service manual may create shock, fire, or other hazards. Under no circumstances should the original design be modified or altered without written permission from Philips. Philips assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.
2. All ICs and many other semiconductor parts are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce the life of the part drastically.

LASER NOTE:
DANGER - Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.
CAUTION - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
CAUTION - The use of optical instruments with this product will increase eye hazard.

3. Instructions for use

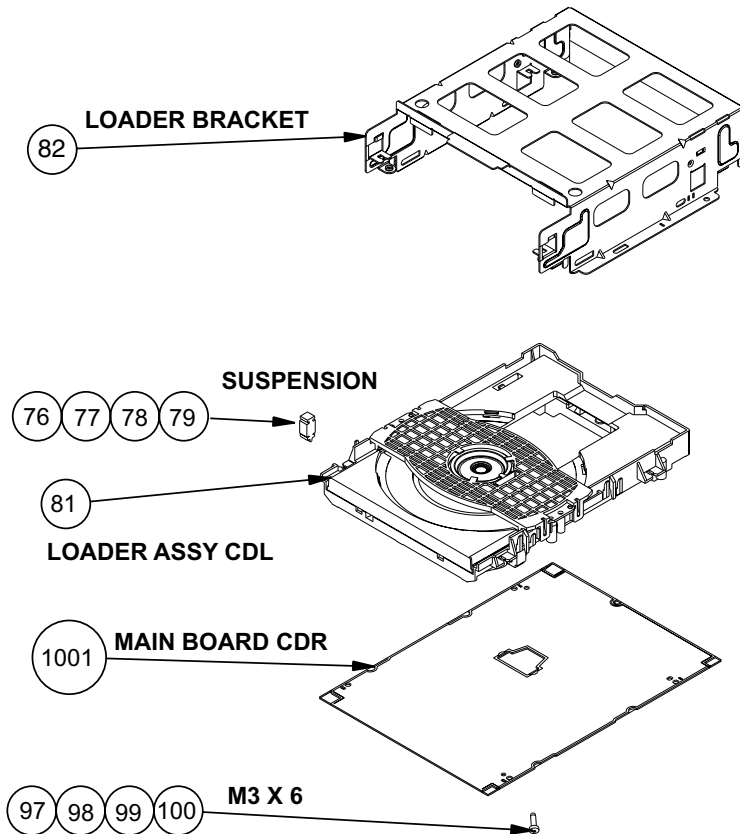
See service manual of concerned modelnumber in which the instructions for use has been inserted. This chapter has not been filled as this module of CDR Module CDL4009 + Mainboard 4228 is only a part of a complete set.

4. Mechanical instructions

4.1 Loader CDL4009

CDL4009 consists of metal loader bracket item 82 and glued on it an identification sticker (on which the module production number and production code is printed); 4 suspension rubbers items 76, 77, 78 and 79 which carry loader assembly item 81;

and on the bottom side the CDR mainboard 1001 is mounted. Notice that mainboard is dependant to the applied set and has to be adjusted to mounted CDM in loader in case of exchange. See next figure, Loader CDL4009



82: LOADER BRACKET
81: LOADER ASSY CDL
76: SUSPENSION

3104 121 23900
9305 043 20900
3104 144 05730

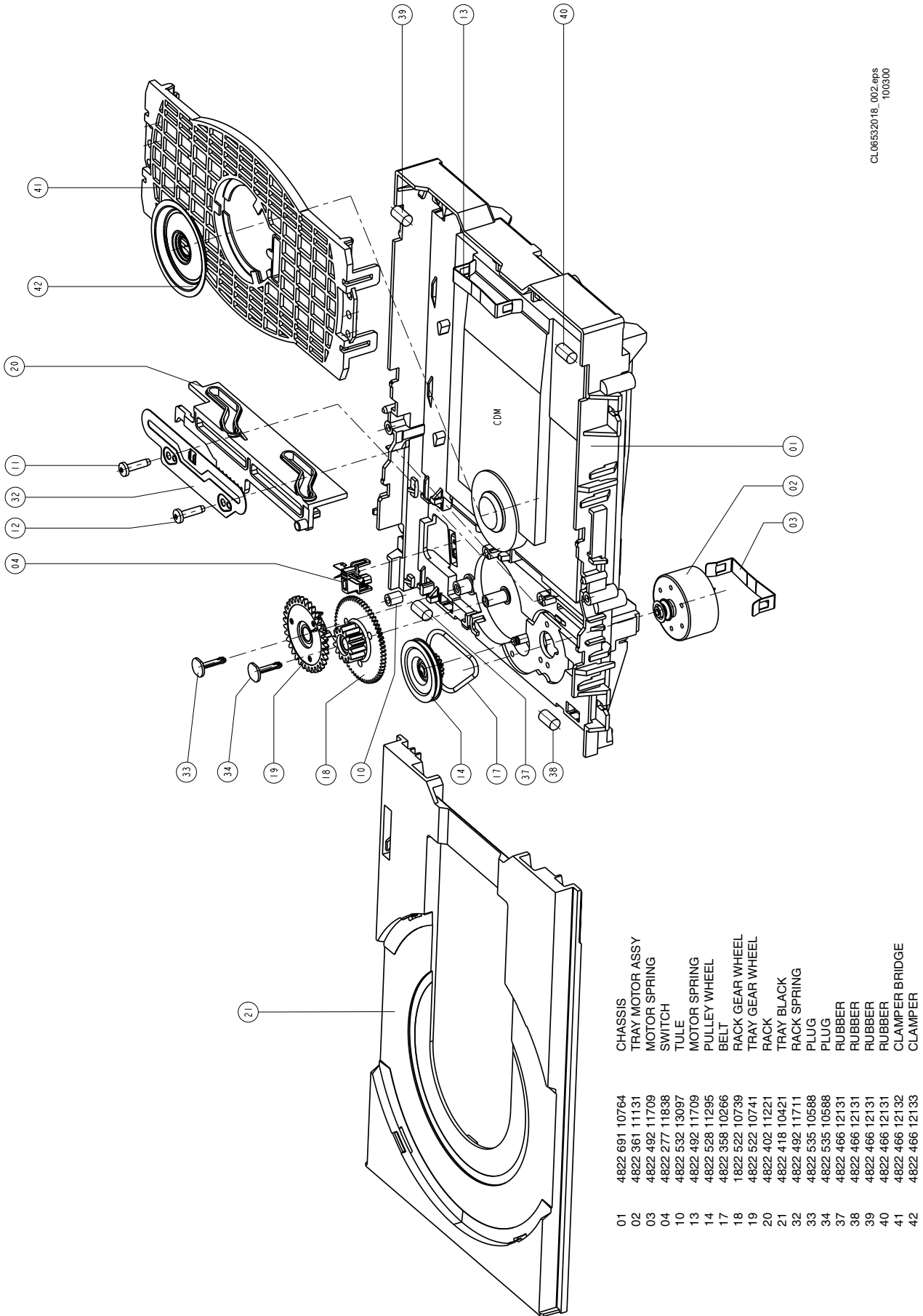
CL06532018_001.eps
090300

Figure 4-1

To demount loader module CDL4009:

1. Mainboard item 1001. Beware of connections to CDM.
Optical pick-up unit has to be ESD protected!
2. Loosen suspensions 76, 77, 78 and 79 from metal loader bracket 81
3. Take out Loader assy CDL

4.2 Exploded view CDL3800



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100300

Figure 4-2

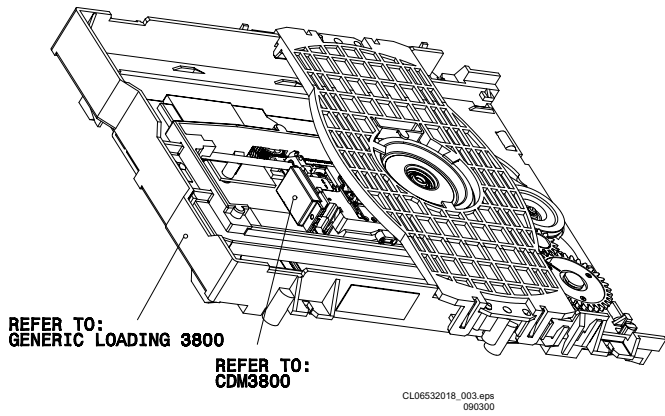


Figure 4-3

4.3 DEMOUNTING LOADER CDL3800

Remove the following items starting with:
(For the item numbers refer to the Exploded Views CDL3800, figure 4.2)

4.3.1 Release and remove tray

Push to open the tray on the rack (item 20)

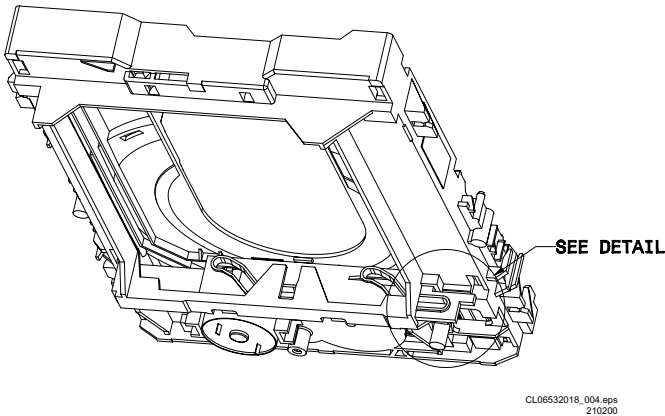


Figure 4-4

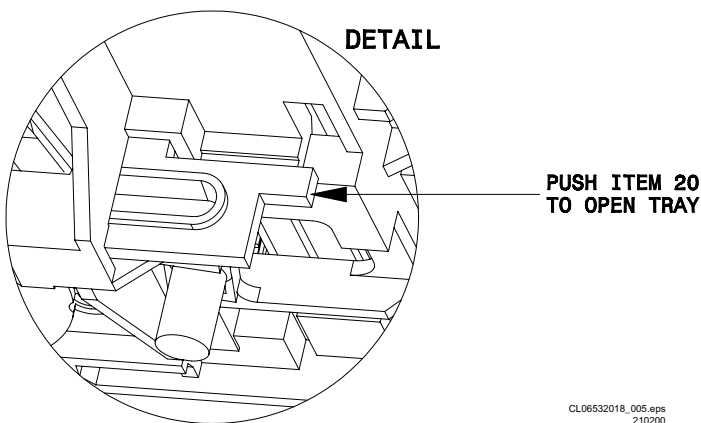


Figure 4-5

Tray

Pull out the tray (item 21) until it sticks. Press the lock at the left side of the tray upwards. Pull out the tray.

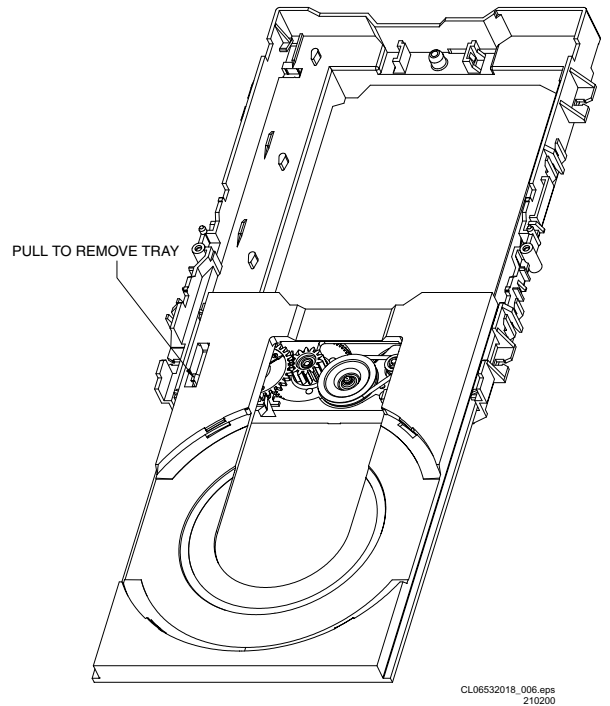


Figure 4-6

Tray motor assey

Remove the tray motor belt (item 17).
Loosen the motorspring (item 3) with a pair of tweezers or a screwdriver via the rectangular hole at the right side of the tray motor.

Clamper bridge

Bend the locks-profiles on both sides of the clamper bridge (item 41) carefully to the outside and lift up the clamper bridge.

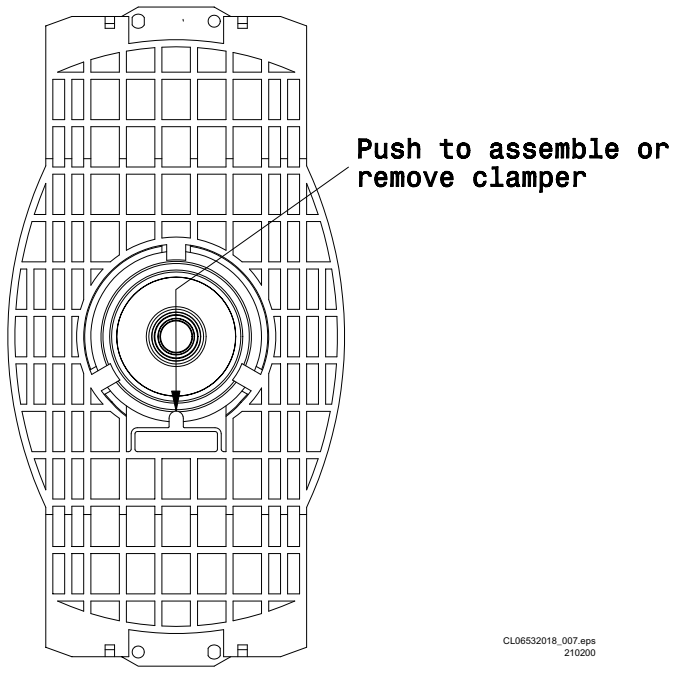
CDM

Place the loader upside down and remove the motorspring (item 13) with a pair of tweezers or a screwdriver, but hold the CDM so it can't fall down.

Rack

First remove the rack spring (item 32) by unscrewing items 11 and 12.

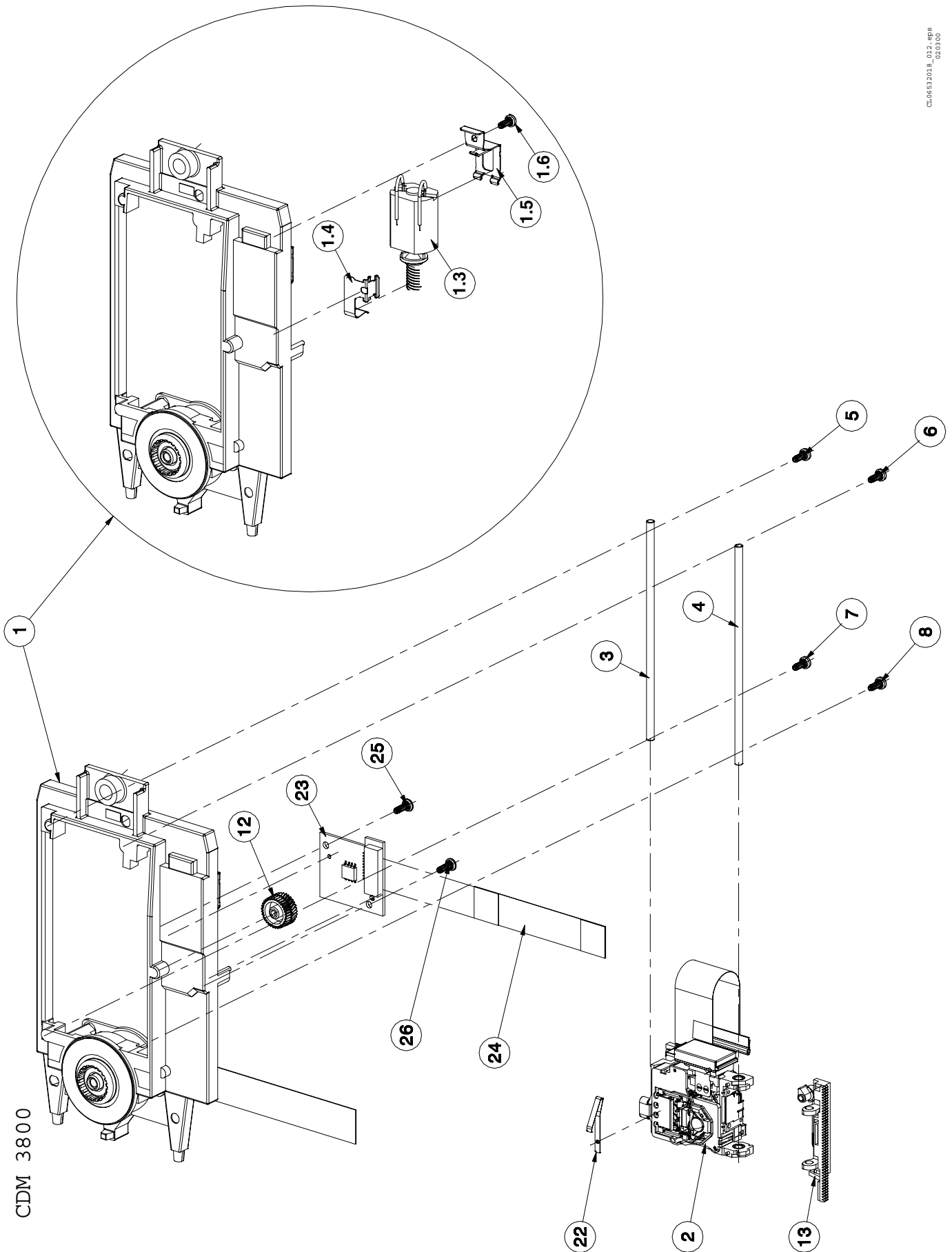
Clamper



CL06532018_007.eps
210200

Figure 4-7

4.4 Exploded view CDM3800



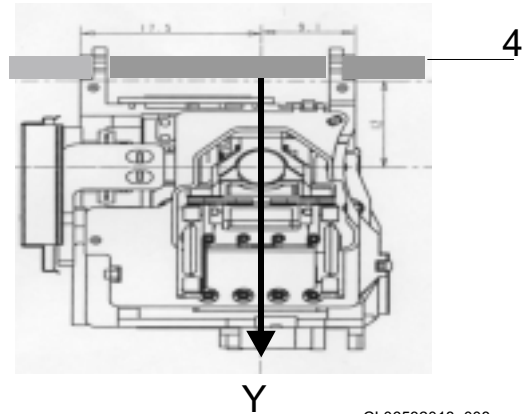
CD06512018_012.dwg
02/03/00

Figure 4-8

3104 147 01580 CDM3800 COMPLETE

- 1: 4822 691 10765 MOUNTING PLATE ASSY
- 1.3: 4822 361 11132 SLEDGE MOTOR ASSY
- 2: 3104 147 12890 OPU-24.24
- 3: 4822 535 10591 THIRD BEARING AXLE
- 4: 4822 535 10591 AXLE
- 12: 4822 528 11297 COMBI WHEEL
- 13: 4822 522 10742 GEAR RACK ASSY
- 22: 3104 141 21830 THIRD BEARING SPRING

2100: 4822 126 13196 100nF 10% 25V
 3100: Δ 4822 051 20101 100 Ω 5% 0,1W
 5101: 4822 130 11531 SENSOR LT125A



CL06532018_008.eps
210200

4.5 Cleaning objective lens

4.5.1 CLEANING PRESCRIPTION OBJECTIVE LENS

- Cleaning fluid

The lens cleaner codenumber reads 4822 389 10026

- Procedure

- Take a clean cotton wool tipped stick and put Lens-cleaner on the wool.
- Wipe the lens very softly with the wet wool end of the stick by moving it forwards and backwards in the Y-direction. (see drawing)
- Take a dry cotton wool tipped stick and remove the Lens-cleaner from the lens by moving it very softly back and forth in the Y-direction (see drawing)
- During cleaning, take the necessary precautions in order to prevent damage to the*Actuator (hinges, lens, litze-wires) or OPU (ESD, ...) Do not remove axle (item 4, see drawing) from OPU, because the fixing screws of axle are deforming it at it's end. On their turn these deformings are damaging the hinges of the OPU when loosening the axle.

- Application

This cleaning procedure is only applicable for the flat side (upside) of the lens.

Never try to clean the round side (underside) of the lens (replica-side).

With this cleaning procedure, fingerprints and dust can easily be removed with very soft and gently movements of the cotton wool tipped stick.

- Limitation

This cleaning procedure is only applicable in cases of malfunctions of the product, due to lens-problems. It's not ment to be applied on 100% of the actuators, OPU's.

After cleaning, the product must be re-checked on it's functionality.

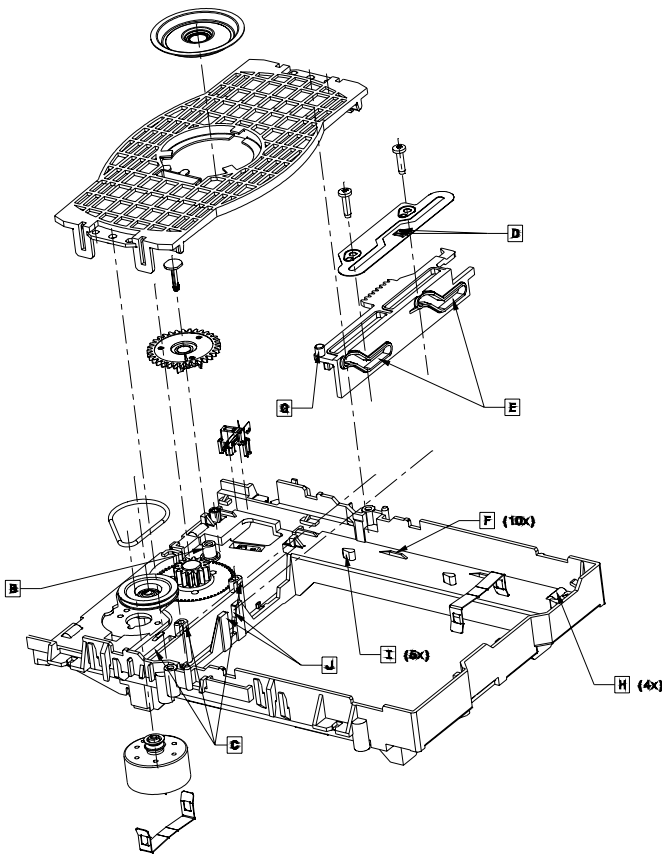
Figure 4-9

4.6 Lubricating

4.6.1 LUBRICATING INSTRUCTIONS FOR GENERIC LOADING CDL3800

USE TRIBOL GREASE (1322 523 78101)
 Be careful when lubricating the parts.
 For parts and points to apply grease, refer to the drawing figure 4-10.

- Avoid excess grease.
 - B. The bearing of the gearwheel. Grease on upper part of cylindrical surface.°
 - C. Guiding and 2 guiding pins of the rack on the chassis.°
 - D. The guiding of the rackspring.*
 - E. The 2 guiding profiles of the rack.*
 - F. 10 guiding surface of the chassis on the tray.*
 - G. The guiding pin on the rack.*
 - H. On top (in the middle) of the 4 rubbers.*
 - I. Guiding on the chassis of the tray. Grease around the 5 guiding pins.*
 - J. The guiding ribs of the chassis for guiding the CDM-nose.*
- °=Lubricated with dosing apparatus.
 *=Lubricated with a brush.



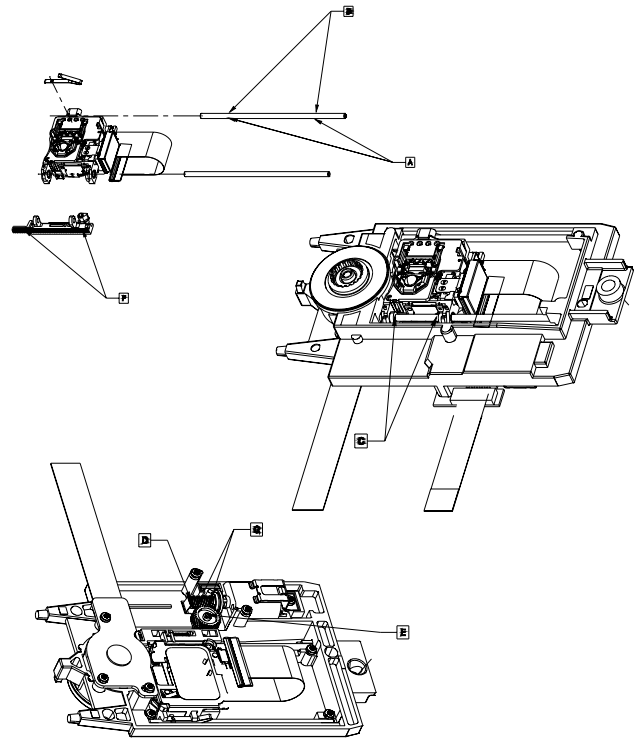
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210200

Figure 4-10

4.6.2 Lubricating instructions for CDM3800

USE TRIBOL GREASE (1322 523 78101)
 The third bearing axle (item 3, 4822 535 10591) on the upperside of the axle 2x
 The third bearing axle on the bottomside of the axle 2x
 The OPU bearing with Mobil Oil SHC 629 (see next paragraph)
 The top of the worm
 The pressed in axle on the top
 The gear rack assy (item 13, 4822 522 10742) on the teeth 2x

Between worm and combiwheel (item 12, 4822 528 11297)2x

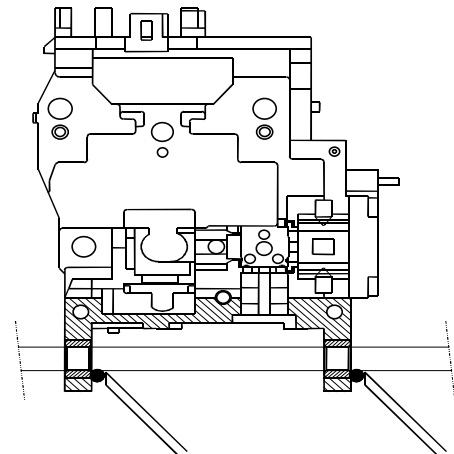


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020300

Figure 4-11

Oiling the centrifuged bearings

USE MOBIL OIL SHC 629 (3104 129 52260)
 Use dose apparatus
 Place the needle against the bearing and axle.
 Dose one (1) drop of oil there where the bearing touches the axle (see drawing figure 4-12)
 Repeat this handling for the second bearing
 Move the OPU for a few times up and down.
REMARKS:
 Do not use the oil on the axle alone. Always place the oil drop against the bearing.
 No oil on top of the OPU.



2x 1 DROP OF OIL

CL06532018_011.eps
020300

Figure 4-12

5. Service modes, repair tips and faultfinding trees

5.1 Service modes

In this paragraph the internal selfdiagnostics without opening the set and use of other tools is described.

Notice: Module is mounted in a set

5.1.1 Dealer mode

The purpose of the dealer mode is to prevent people taking out the CD inside the player at exhibitions, showrooms etc.. This mode disables the open/close function of the player. The dealer mode can be switched on and off pressing keys [OPEN/CLOSE] and [STOP] of the CDR player simultaneously while switching on the unit. The dealer mode is stored in the flash memory and can only be changed by executing the above actions.

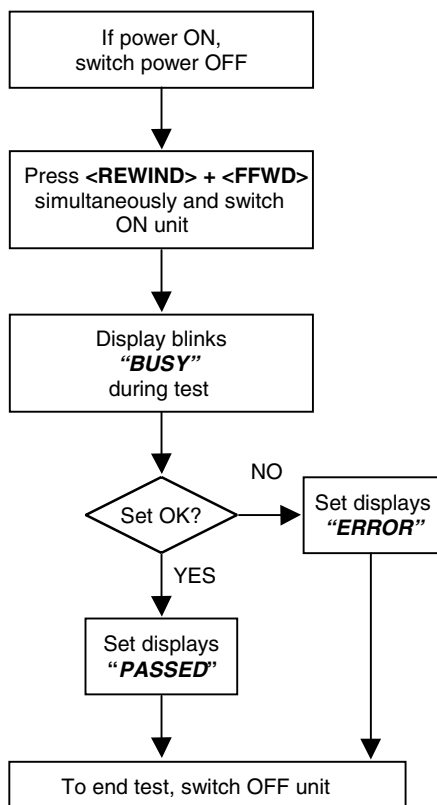
5.1.2 Dealer diagnostics

display. Pressing keys [F FWD] and [REWIND] simultaneously while switching on the unit, starts the test. Switching off the unit ends the test.

Requirements to perform the test

- Working keyboard to start up the test.
- Working local display to check the output messages.

DEALER DIAGNOSTICS (status of player)



CL96532086-024.eps
090999

Figure 5-1

Description

The intention of the dealer diagnostics is to give an indication of the CDR player status. An inexperienced, even non-technical dealer will/can perform the test. Tests are executed automatically without need for external tools or disassembly of the unit. This test checks the CDR main board using the same tests as the electrical service diagnostics program. Only the result of the test, "PASSED" or "ERROR", will be shown on the

5.1.3 Electrical service diagnostics

ELECTRICAL SERVICE DIAGNOSTICS
(software versions, test for defective components)

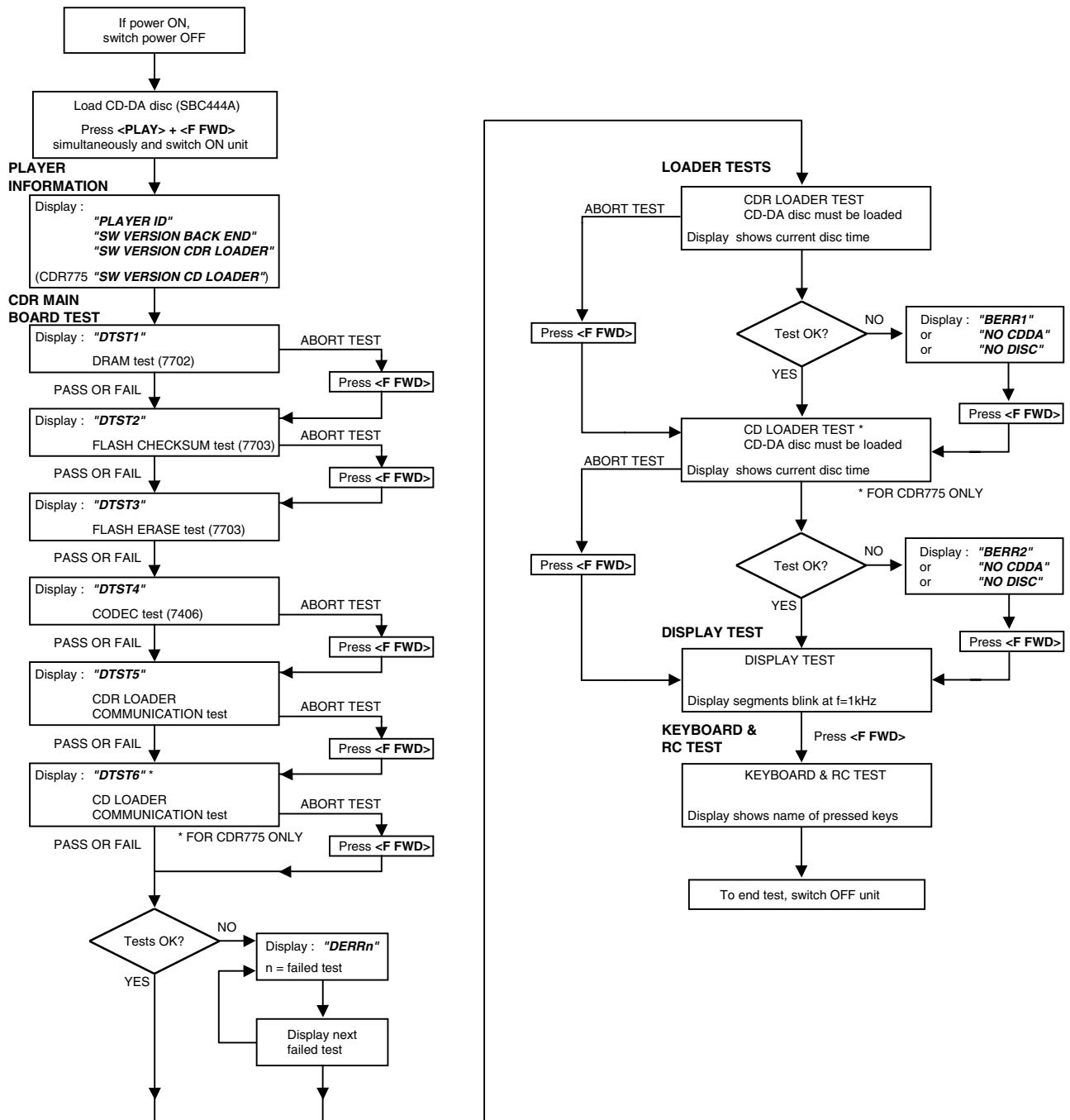


Figure 5-2

Description

The intention of the electrical service diagnostics is to show the software versions present in the player and to direct the dealer towards defective internal units. The units are : the CDR main board, the CDR loader, the CD loader in case of a CDR775 and the keyboard/display board. A sequence of tests is executed automatically. Some of the tests can be aborted or skipped without the result being taken into account. External tools or disassembly of the unit is not necessary to get the diagnostic information. Pressing keys [PLAY/PAUSE] and [F FWD] simultaneously while switching on the unit, starts the test. Switching off the unit ends the test.

Requirements to perform the test

- Working keyboard to start up the test.
- Working local display to check the output messages.
- A CD-DA disc with a minimum of 3 tracks in all trays to perform the disc test.

Description of the tests**Player information**

In this part of the test the following important information can be checked without removing the cover :

- Recorder ID.
- SW-version back end of player.
- SW-version CDR loader.
- SW-version CD loader (only for CDR775).

CDR main board test

[F FWD] key. The message "DERRn" will be displayed with n indicating the faulty test number.

If one of the tests is aborted with the [F FWD] key, no error message will be displayed for this test. The flash data erase test ("DTST3") can not be aborted !

The CDR main board test consists out of :

DRAM test

Display : "DTST1". The DRAM used for buffer management is tested by writing, reading and verifying test patterns.

Flash checksum test

Display : "DTST2". This test checks the checksum of the player's SW stored in the flash.

Flash data erase

Display : "DTST3". During this test, all temporary information (CDtxt) in the flash is erased.

CODEC (ADC/DAC) test

Display : "DTST4". This test checks the CODEC IC by writing, reading and verifying test patterns. The test is not applicable for CDR950.

CDR communication test

Display : "DTST5". The communication between the host processor (DASP) and the CDR loader via the DSA-R-bus is tested.

CD communication test

Display : "DTST6"). The communication between the host processor (DASP) and the CD loader is tested. The test is only applicable for CDR775.

Loader tests

These tests determine if the CDR loader and the CD loader in case of a CDR775 work correctly. A CD-DA disc with a minimum of 3 tracks needs to be inserted in both loaders. A disc test is executed to check focus control, disc motor control, radial control and jump grooves control. The disc test is

performed by audio play-back of 5 seconds at the beginning, middle and end of the disc.

CDR loader test

During the test, the current disc time is shown. In case of an error the message "BERR1" will be displayed and the [F FWD] key must be pressed to continue with the following test. Pressing the [F FWD] key also aborts this test.

CD loader test

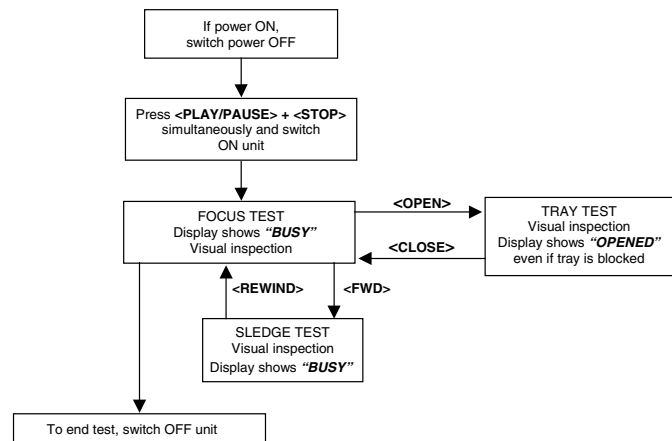
For CDR775 only. During the test, the current disc time is shown. In case of an error the message "BERR2" will be displayed and the [F FWD] key must be pressed to continue with the following test. Pressing the [F FWD] key also aborts this test.

Display test

All segments will blink at a frequency of 1 Hz. Pressing the [F FWD] key will start the next test because the user has to check for himself if all segments work properly.

Keyboard and remote control tests

The test will give the user the ability to test every key without executing the function assigned to it. Therefore, the user needs to press every key on the keyboard and the remote control. The display will show the name of the key being pressed. Pressing more than one key at once will give an unpredictable result except for the service combinations : [PLAY/PAUSE] + [STOP], [PLAY/PAUSE] + [F FWD], [F FWD] + [REWIND], [ERASE] + [RECORD], [PLAY/PAUSE] + [RECORD], [OPEN/CLOSE] + [PROGRAM].

5.1.4 Mechanical service diagnostics**MECHANICAL SERVICE DIAGNOSTICS**
(test for defective components)CL96532086_026.eps
080999**Figure 5-3****Description**

No external tools are required to perform this test. The cover needs to be removed because the user has to check the movements of the tray, focus and sledge visually. Pressing keys [PLAY/PAUSE] and [STOP] simultaneously while switching on the unit, starts the test. Switching off the unit ends the test. In case of a CDR775, one can check the CD loader mechanics in the same way by pressing the above key combination on the CD player keys.

Requirements to perform the test

- Working keyboard to cycle through the tests and to start up the test.
- Working local display to check the output messages.

Description of the tests

Focus control test

The focussing lens is continuously moving up and down. The display reads "BUSY".

Sledge control test

After pressing [F FWD] the sledge continuously moves up and down. Pressing [REWIND] stops the sledge at the position it is in and the focus control test resumes. The display reads "BUSY".

Tray control test

This test starts from within the focus control test routine. Pressing [OPEN/CLOSE] moves the tray in or out. In the tray open position one can initiate focus and sledge tests by pressing [F FWD]. One has to stop these tests pressing [REWIND] before it is possible to close the tray again. Depending on the action the display reads "OPEN", "OPENED", "CLOSE" or "BUSY".

5.1.5 DC-erase service mode

DC ERASE SERVICE MODE
(erasure of complete CD-RW)

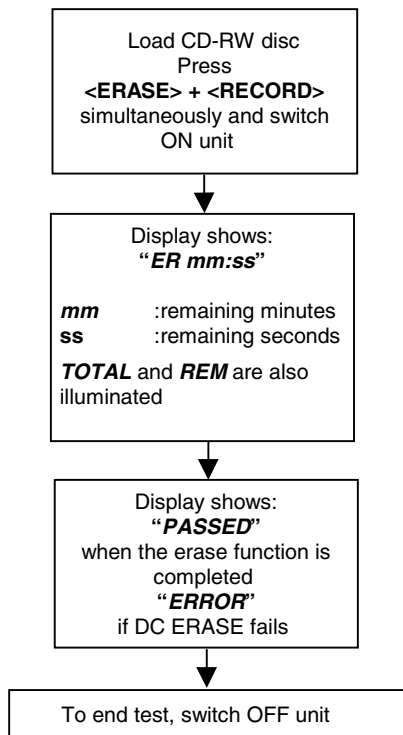


Figure 5-4

Description

This test is initiated by pressing [ERASE] and [RECORD] simultaneously while switching on the unit. The player will erase a complete CD-RW disc (including PMA and ATIP lead out area) at speed N=2. The display shows the countdown of the remaining time required for the operation to complete. The format is "ER mm:ss", where "mm" are the remaining minutes and "ss" the remaining seconds. After completion the message "PASSED" is shown, and the player has to be switched off and on again to start up in normal operating mode. Switching off the

unit before completion of the test, leaves the disc in an unpredictable state. In such case only a complete DC-erase procedure can recover the CD-RW disc.

Requirements to perform the test

- Functional CDR player.
- A CD-RW audio disc must be present in the tray.

5.1.6 Burn in mode

Description:

The Burn In mode is an endless cycle of:

- DC-Erase to erase the CDRW disc with maximum laser power.
- Recording a CDRW disc
- Finalising at double speed

The Burn In mode is used to test intermittent faults of the loader.

Requirements to perform the test:

- Working Local Keyboard: needed to start up the test.
- Working Local Display: all output messages must be displayed on the local display.
- Analog source connected to the CDR99 player
- CDRW disc in tray

Burn in sequence

– Initialisation

The 'Burn In' mode is initiated by pressing the PAUSE> and key on the local keyboard at the same time, and then switching the POWER switch on.

– Continuous loop

The following picture shows the burn in sequence.

Burn in sequence

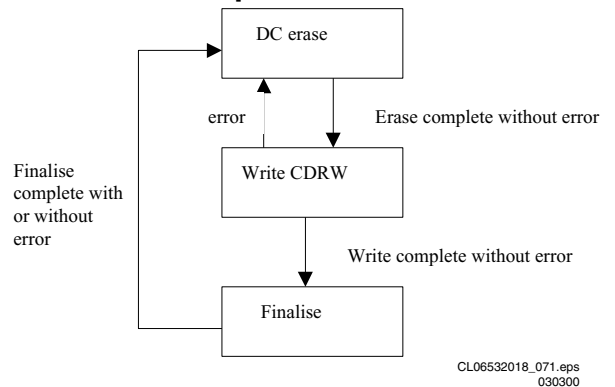


Figure 5-5

Continuously do DC erase, record complete CDRW and then finalise until the player is powered off.

When an error is detected during writing, the DC erase procedure is called again., the disc will be DC erased and the cycle starts again.

During the test the display shows the number of hours for which the test is running and the number of errors detected during the test. The display looks as follows : "HH BI RE FE"

- HH : number of hours on digits 1 and 2
- "BI" : burn in mode, digits 3 and 4
- RE : number of errors detected during DC erase and write CDRW modes on digits 7 and 8

FE : number of errors detected during finalise modes on digits 10 and 11

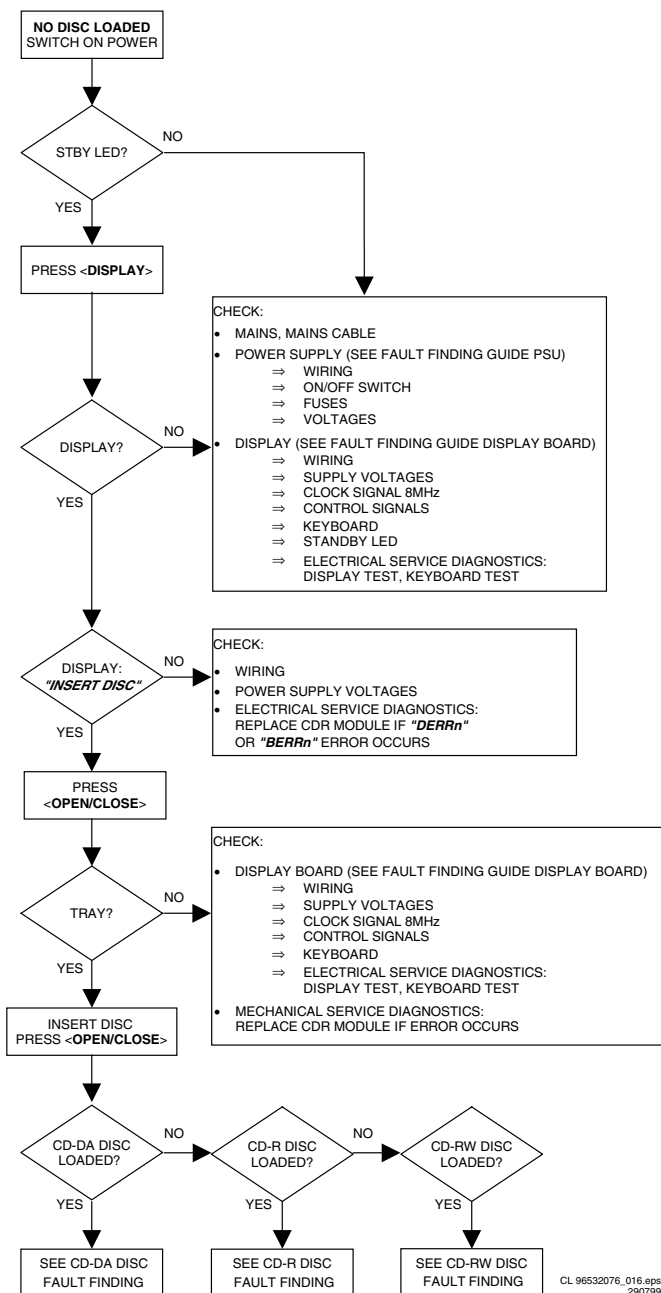
If started up with a disc other than a CDRW disc the display shows : "WRONG DISC", if no disc is inserted display : "NO DISC".

– End of test
To exit the Burn In mode, power off the player.

5.2 Faultfinding Trees

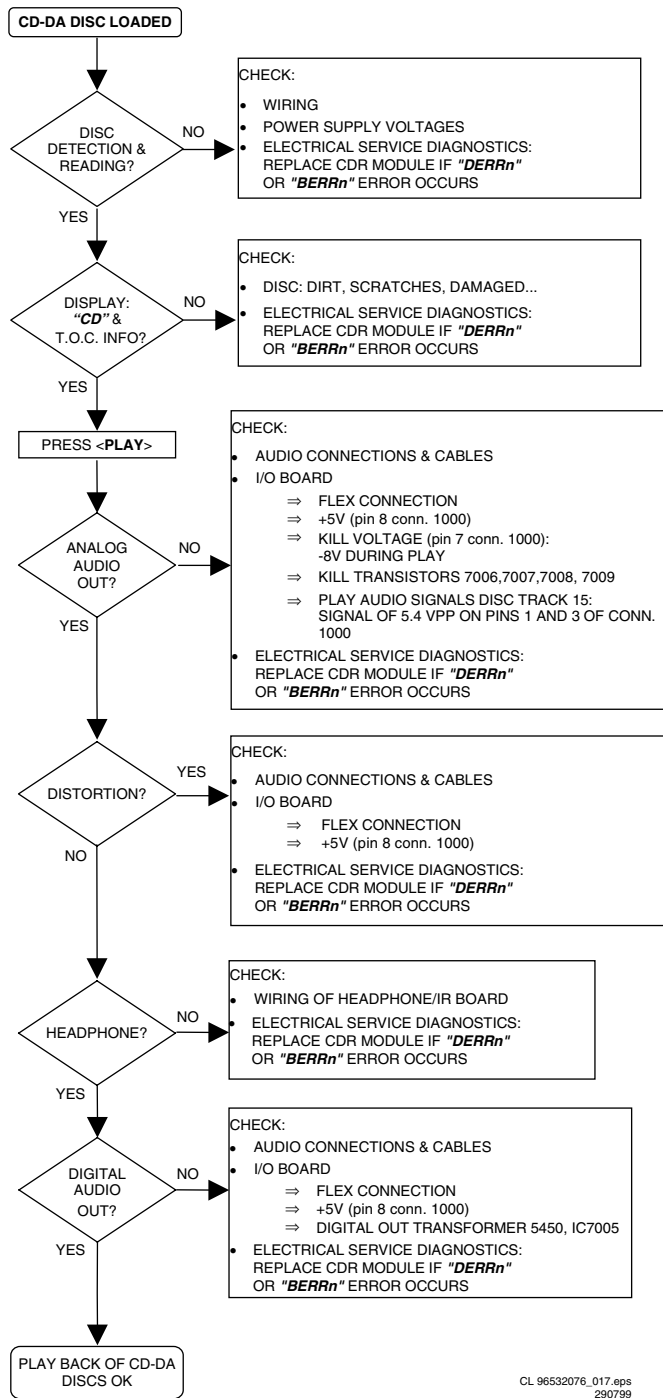
The faultfinding trees and repair suggestions like the power supply voltages for proper functioning of the mainboard are indicated here.

5.2.1 CDR-Module



CL 96532076_016.eps 290799

Figure 5-6



CL 96532076_017.eps 290799

Figure 5-7

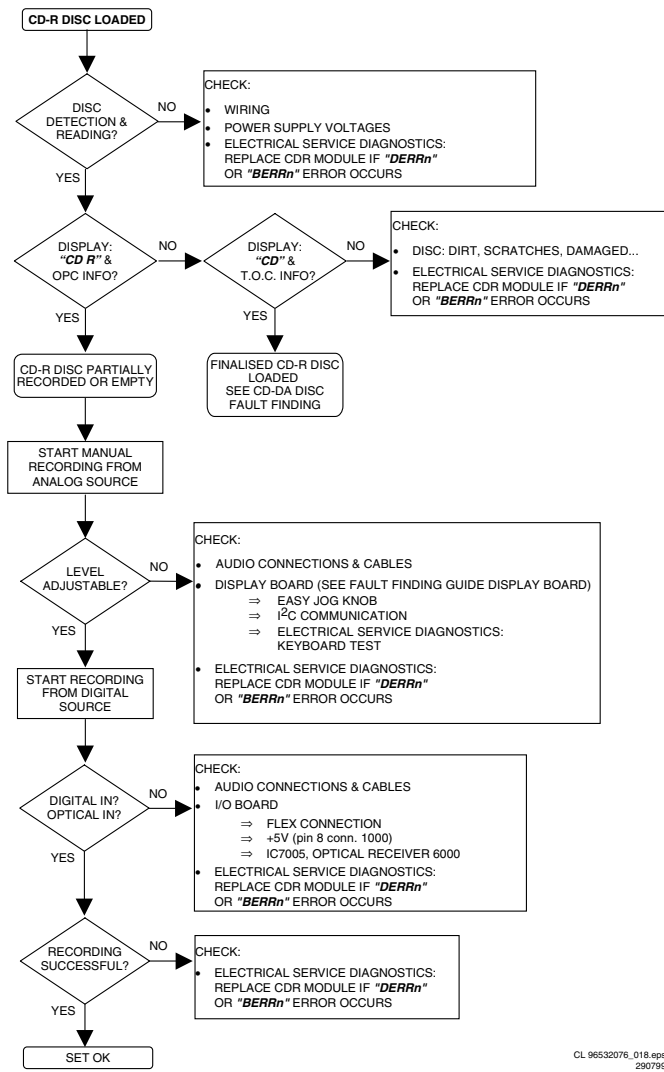


Figure 5-8

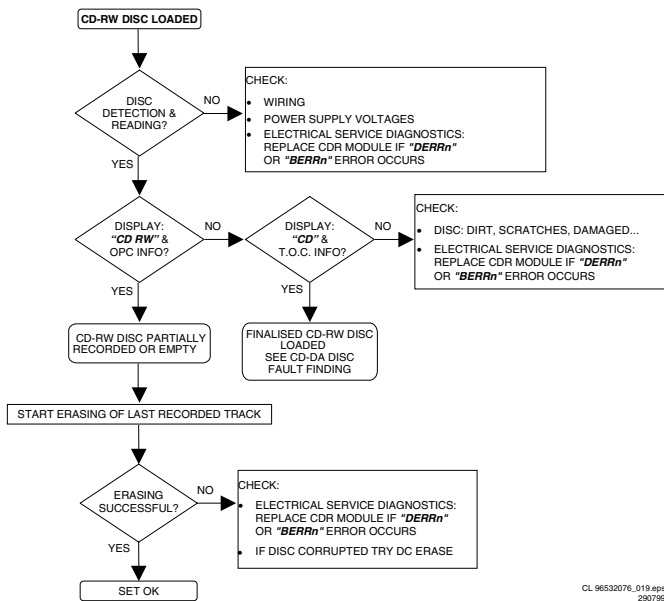


Figure 5-9

5.2.2 Mainboard

Power supply part on mainboard

Description.

The most important part of an electrical function is the power supply. Without it will never operate. The power supplies as well analog as digital equipment. For these reasons the power supply is split-up in different sections. One for the digital electronics, one for the servo controls and one for the AUDIO part. The servo controls are the big consuming parts with high peak-currents, also introducing disturbances in the power lines. The audio part needs very "clean" power, because noise and ripples have there reflection in the audio signals, specially in S/N and THD+N. Some of the power supplies are switched off, this to reduce consumption in case of standby.

The different power supplies are delivered to the PCB via connector 1500 This is a 11 pole connector with following voltages on it: +5V, +12V, -8V, VFTD, VDC1 and VDC2. The last 3 voltages are not used on the main PCB, but are meant for the FTD (Fluorescent Tube Display). They are directly routed to connector 1705.

The other voltages are split up in different functions on the PCB. The following block-diagram gives an indication of that implementation.

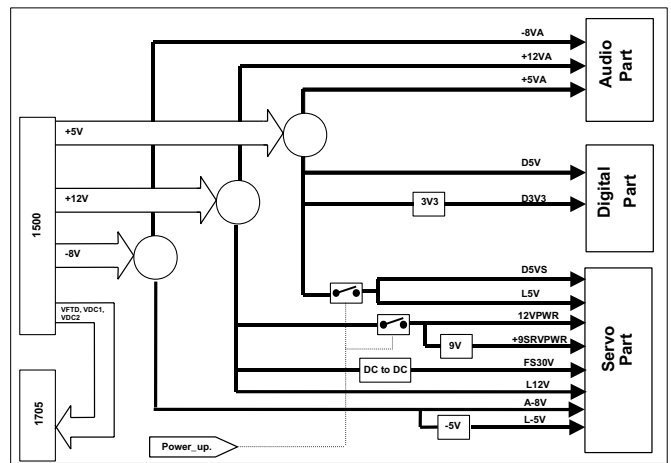


Figure 5-10

- Power supply to main board.
- Power supply enters the BOARD via connector 1500. Pinning as follows:
- Connector 1500
- pin 1: VDC2 : 3V8 (10%)
 - pin 2: VFTD : -38V (5%)
 - pin 3: VDC1 : 3V8 (10%)
 - pin 4: GND : Ground.
 - pin 5: D5V : +5V (5%)
 - pin 6: D5V : +5V (5%)
 - pin 7: GND : Ground.
 - pin 8: GND : Ground.
 - pin 9: GND : Ground.
 - pin 10: 12V : 12V (10%)
 - pin 11: -8V : -8V (10%)

POWER PART CHECK

USE CDR MAIN BOARD CIRCUIT DIAGRAM 7 AND CDR MAIN BOARD BOTTOM VIEW : POWER PART TEST POINTS

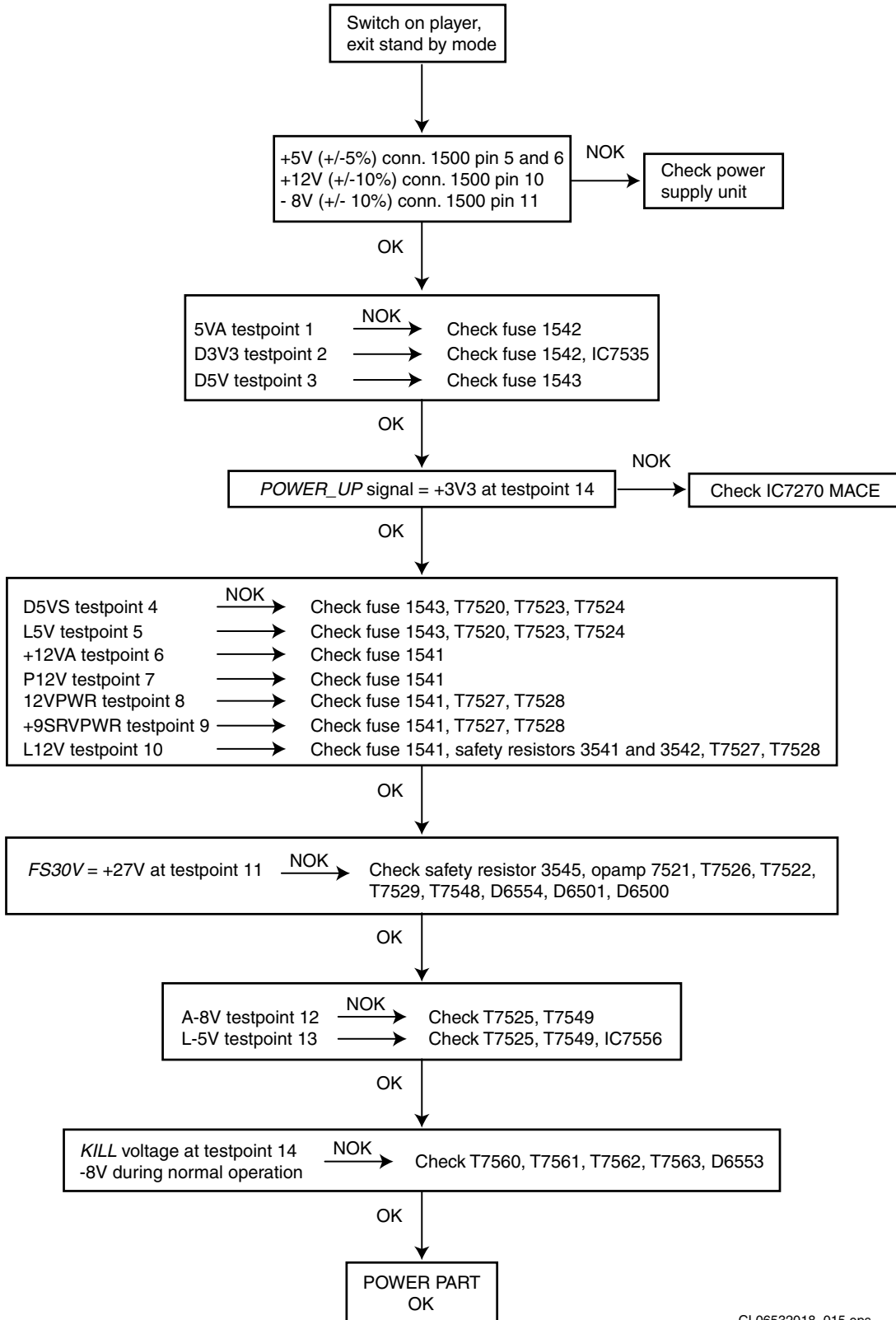


Figure 5-11

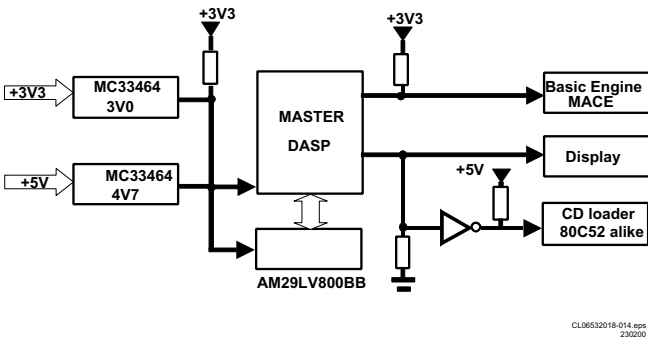
Reset & Clock

Master reset.

Since the Mainboard is more or less mix-mode between +3V3 and +5V devices, special treatment for the RESET behavior is wishful. Controlling the RESET only from 1 power supply could lead to collisions between different devices, damaging the internal I/O structure of the devices. To avoid this the +3V3 and the +5V are guarded by a special device. These devices keep the output low as long as the power supply is not stable or is not above the required level. As soon as the power supply is stable it switches the output to "HIGH-Z". The output is an open collector type. From then onwards the line can be controlled by means of external pull-up resistors. Benefit of the open-collector devices is that several of those devices can be tight together at the outputs. In our case we used a device on the +5V and one on the +3V3. This means that both power supplies need to be stable before the RESET of the Master processor is released.

Resetting several processors in the same structure by means of the power supplies invokes certain risks. The duration of initialization after reset is processor and Code depending. It can lead to hang-up in those cases that communication between the processors is "time" driven. Meaning that only in a certain time frame the establishment of the communication-bus must take place. If not successful the Bus hangs!

To avoid these kinds of problems, only 1 RESET is depending on the power supply, and this is the RESET of the Master controller. The same master controller will then take care of the RESET of the other devices. In the next figure this is explained.



CL06532018-014 app 230200

Figure 5-12

For further measurements see next reset and clock flowcharts.

RESET & CLOCK CHECK

USE CDR MAIN BOARD CIRCUIT DIAGRAMS 4, 9 AND 10 AND CDR MAIN BOARD BOTTOM VIEW : RESET & CLOCK TESTPOINTS

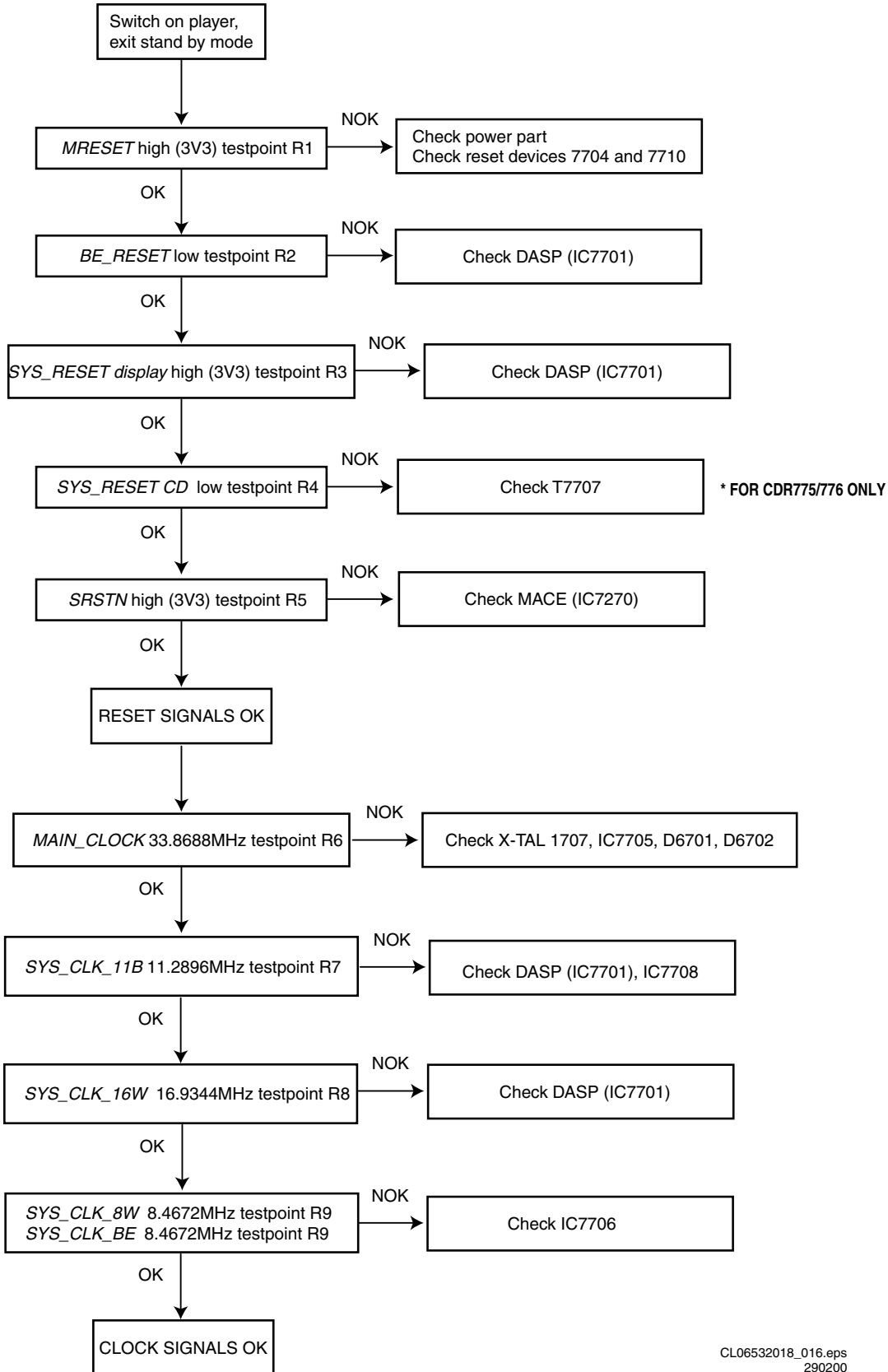


Figure 5-13

The clockgeneration

All microprocessors or digital devices need a clock. The clock is usually made by means of resonators or crystals depending on the speed and the accuracy that is requested. The clock can also differ from device to device so that more than one crystal is needed. The cheapest and "system wise" best way is only 1 crystal. The derived clocks are then Phase related to each other.

On the CDR MAIN 99 the DASP is generating all clock signals. Not only the systemclock for the processor itself, but also for the basic engine processor and even the systemclock for the ADDA part which is directly related to the 44.1kHz. sample frequency. To be able to do this a 33.8688Mhz. crystal with 25ppm accuracy is connected to the internal oscillator of the DASP. Internal the clock signal is multiplied by means of a PLL. This gives the systemclock on which the processor runs internally. This systemclock is then again divided internally to have the systemclock for the ADDA, which is 11.2896Mhz, and the 16.9344Mhz. which divided by 2 gives the systemclock for the BE part. In this way only 1 crystal is required. The same 8.4672MHz. is also routed to the CD-module in case of a CDR775 player.

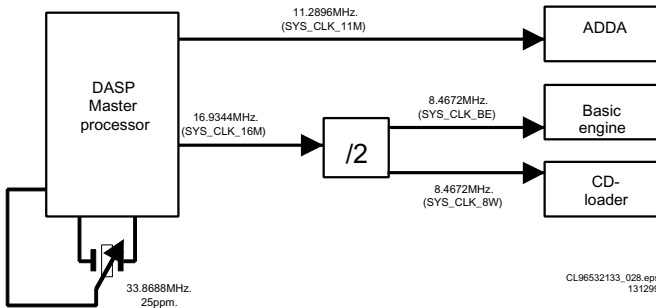


Figure 5-14

PC help on mainboard diagnostics

A couple of the diagnostics are only possible with the help of a PC. The DASP micro controller will contain an interface with the external world; this interface is realised via a serial RS232 connector that is accesible inside the player. It can be accessed from the outside world by means of test pins and connector 1818 and interface board 7104 086 91111.

Via those test pins a terminal emulator can be connected. Then menus will come up that give the opportunity to enter all Audio Engine commands. This includes the commands on Bit Engine Level (transparent). This terminal emulator functionality is part of the embedded software, so no external software is needed. It can also read out the User Profile Logging of Bit Engine. This can show the hours that the loader really was in recording mode.

This diagnostic tool is activated if communication is detected on the RS232 interface during power up. The baud rate for both is 19k2 baud.

Details of the diagnostic tool are given in chapter 5.2.3 of this publication: Menu Driven Diagnostics.

Also in preparation is the interactive COMPAIR tool. Then the PC communicates in an active form with the set and compares the result for making the next decision. With MDD the technician has to take the next active step from his experiences onwards.

5.2.3 Menu Driven Diagnostics

In this paragraph the specification of the software requirements for the Menu Driven Fault Finding Diagnostics is given. It will give a clear and unambiguous description of what the Menu Driven Diagnostics (MDD) do.

NOTICE: THE TESTS, AS PROVIDED BY THE MENU DRIVEN DIAGNOSTICS, ARE NOT SUPPOSED TO BE MIXED RANDOMLY, ESPECIALLY TESTS LIKE 'LASER ON' AND 'FOCUS ON'. IT IS ASSUMED THAT THE PERSON THAT USES THE MDD KNOWS IN WHICH ORDER THESE TESTS CAN BE EXECUTED.

The MDD module communicates with two entities: the terminal emulator on the PC. The MDD receives instructions (test to be executed) and transmits the menu to be shown and the test results; the Audio Engine module. It instructs the Audio Engine via the interface field which test should be executed. The test result is retrieved from the interface field.

Requirements

The functionality of the Menu Driven Diagnostics module is to implement Menu Driven Diagnostics for service purposes.

When the CDR recorder is connected to a PC via an interface board 7104 086 91111, connection cable 3104 157 11122 and a RS232 cable (available at PC shop), the service technician can select via a menu on the PC screen which test should be performed. The result of the test is also shown on the PC screen. No special test tool is needed for the PC; any terminal emulation program can be used (for example, HyperTerminal under Windows95/NT).

The last occurred error during a test session can be retrieved via the menu.

The RS232 connector should be soldered to pins:

1818-1 = Rx

1818-4 = Gnd

1818-2 = Tx

General Constraints

It is advised to connect the connection cable 3104 157 11122 to the Mainboard connector 1818 mounted just under the loader (topview). Via this cable also the powersupply for the interface board 7104 086 91111 is arranged when it is connected to connector 1000 on interfaceboard. To start this application at powering on; for 5 seconds the Rx and Tx output pin of the mainboard connector should be short circuited. This temporarily short circuit indicates the internal CDR software program to switch onto Menu Driven Diagnostics. This short cut can easily be done via the switch (1009) on the interface board. To communicate with the PC the RS232 cable has to be connected to output connector 1010 on the interface board and the switch (1009) should be released.

When switching on the CDR, two possibilities exist: the RS232 cable is not connected. The application is executed (no MDD mode); the RS232 connector is connected; Rx and Tx are short circuited for more than 5 seconds then the Menu Driven Diagnostics is started. By connecting via connection cable to interface and from there via the RS232 cable onto the PC, so the MDD can transmit the main menu to the PC.

User Interfaces

RS232 interface

The CDR recorder transmits the menu to be shown and the test results to the PC via connection cable 3104 157 11122, interface board 7104 086 91111 and a RS232 cable. It receives the selection of the user, chosen in the menu.

Hardware Interfaces

RS232 interface

The communication via RS232 should be set to the following settings:

Baudrate:19200

Databits:8

Stopbits1

Parity:none

Handshaking:none

Data Communication Interfaces

Communication between the CDR recorder and the PC is straightforward: everything the CDR recorder transmits to the PC is shown on the PC screen. Data, transmitted from the PC to the CDR775, is treated as a choice from the currently shown menu.

All functionality of the MDD has to be part of the CDR775 software; the PC can only use a terminal emulation program.

Menu Structure and Test Results

This chapter describes the structure of the menus and the results of the tests, as shown on the PC screen.

Menu Structure

When starting up, the PC screen is cleared and the software version and the main menu (level 1) are shown. From the main menu, one of the sub menus (level 2) can be selected. These sub menus contain other sub menus and/or a number of tests that can be executed. The menus are shown below. '>>' indicates that when this option is selected, a new menu will be shown.

Level 1 Mainmenu:

MAIN MENU
 1 General tests >>
 2 Retrieve last occurred error
 3 Recorder module test >>
 4 Playback module test >>* *Only used for the CDR775
 5 Select adjust program CDM
 6 Download new program

When a test is running, a 'test running indicator' (a dot) is showed on the screen every second, When a test has been executed, the screen is cleared and the result of the test (if any) and the menu, separated by one empty line, are showed.

Three types of tests exist:

Tests that return PASSED or FAILED, like the DRAM test.

When a test has been executed, the result is showed on the PC screen;

Tests that return a value, the message 'PASSED, xxx' (with xxx is the returned value) is showed on the PC screen;

Tests that don't return anything, like the 'laser on' test. Most of these tests require a visual check of the service person. When one of these tests is executed, 'PASSED, visual check' is showed on the PC.

Level 2 menus

When a submenu is selected in the main menu, the level 2 menus are showed . These sub menus contain other sub menus and/or a number of tests that can be executed.

GENERAL TESTS MENU

1 Check DRAM
 2 CHECK FLASH>>
 3 Check ADC/DAC
 4 Check LCD

RECORDER MODULE TEST MENU

1 communication test
 2 Tray >>
 3 Laser >>
 4 Focus >>
 5 Radial >>
 6 Sledge >>
 7 Miscellaneous >>
 8 Jump grooves >>

PLAYBACK MODULE TEST MENU

1 communication test
 2 Tray >>
 3 Laser >>
 4 Focus >>

5 Turntable motor >>
 6 Radial >>
 7 Sledge >>
 8 Miscellaneous >>

Level 3 menus

CHECK FLASH MENU
 1 Check FLASH
 2 Manufacturer-ID and
 3 Device ID

TRAY MENU

1 Open tray
 2 Close tray

LASER MENU

1 Laser off
 2 Laser on, read
 3 Laser on, write*-----*Laser on, write' only used for the recorder module

FOCUS MENU

1 Focus on
 2 Focus off

TURNTABLE MOTOR

1 Turntable motor ON
 2 Turntable motor OFF

RADIAL MENU

1 Radial control on
 2 Radial control off

SLEDGE MENU

1 Sledge inwards
 2 Sledge outwards*-----*Sledge stays outwards for the recorder module; sledge moves inwards after 300 ms for playback module

JUMP GROOVES MENU

1 Jump grooves to inside
 2 Jump grooves to middle
 3 Jump grooves to outside

MISCELLANEOUS MENU

1 Start player
 2 Stop player
 3 Calibrate CD >>*-----*Only used for recorder module
 4 Get user profile logging
 5 Erase CD-RW*-----*Only used for recorder module
 6 Read firmware version**-----**CD firmware version for CD-module, CDR firmware version for CDR-module

CALIBRATE CD MENU *-----*Only used for recorder module

1 Calibrate CD, N=1
 2 Calibrate CD, N=2
 3 Get last OPC values

End of test

These diagnostics can be quitted by powering off the player

5.2.4 Servo drivers check

SERVO DRIVERS CHECK

USE CDR MAIN BOARD CIRCUIT DIAGRAMS 1, 3 AND 4 AND CDR MAIN BOARD BOTTOM VIEW : SERVO DRIVERS TESTPOINTS

FOCUS SERVO

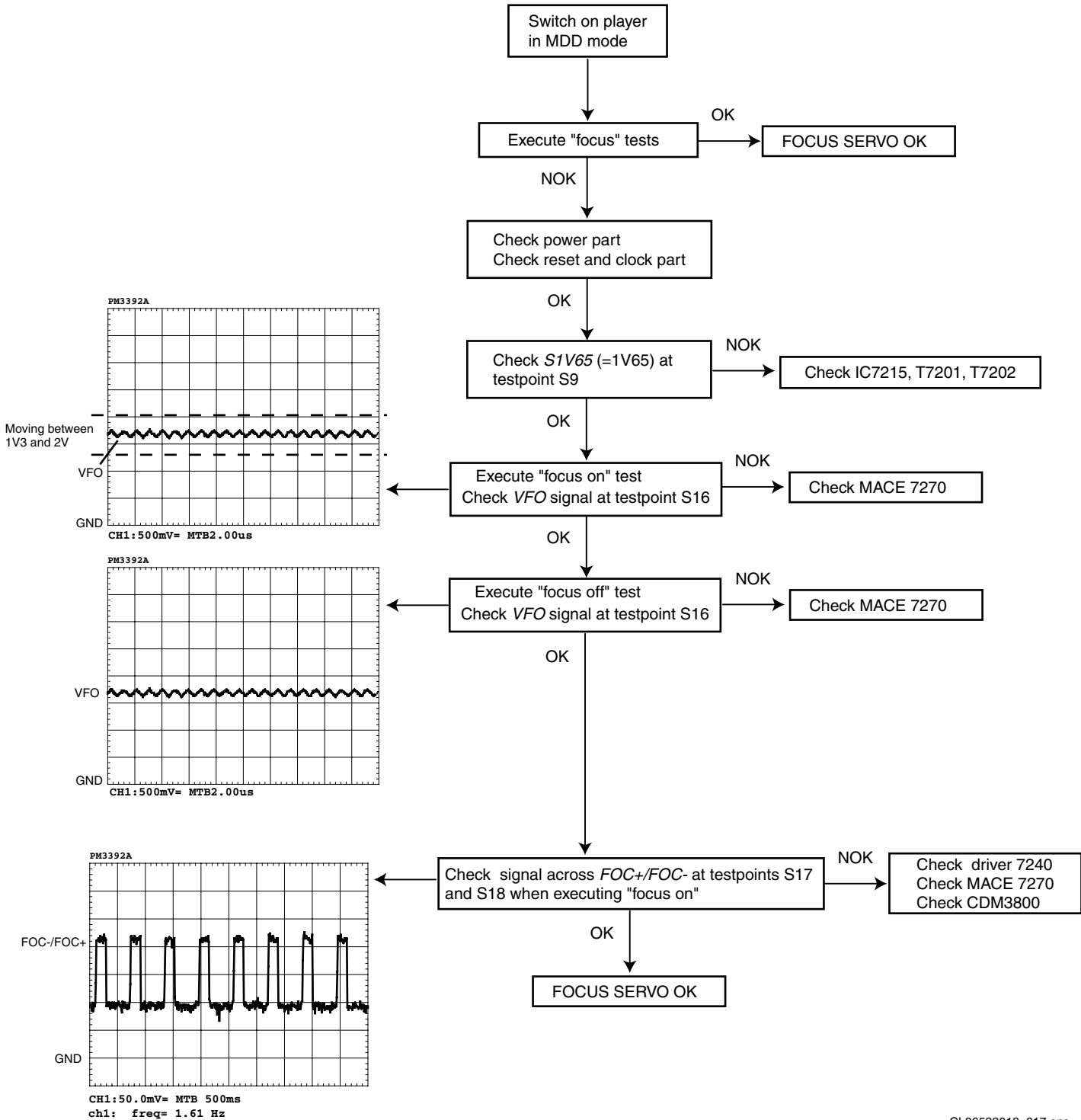


Figure 5-15

SERVO DRIVERS CHECK

USE CDR MAIN BOARD CIRCUIT DIAGRAMS 1, 3 AND 4 AND CDR MAIN BOARD BOTTOM VIEW : SERVO DRIVERS TESTPOINTS

RADIAL SERVO

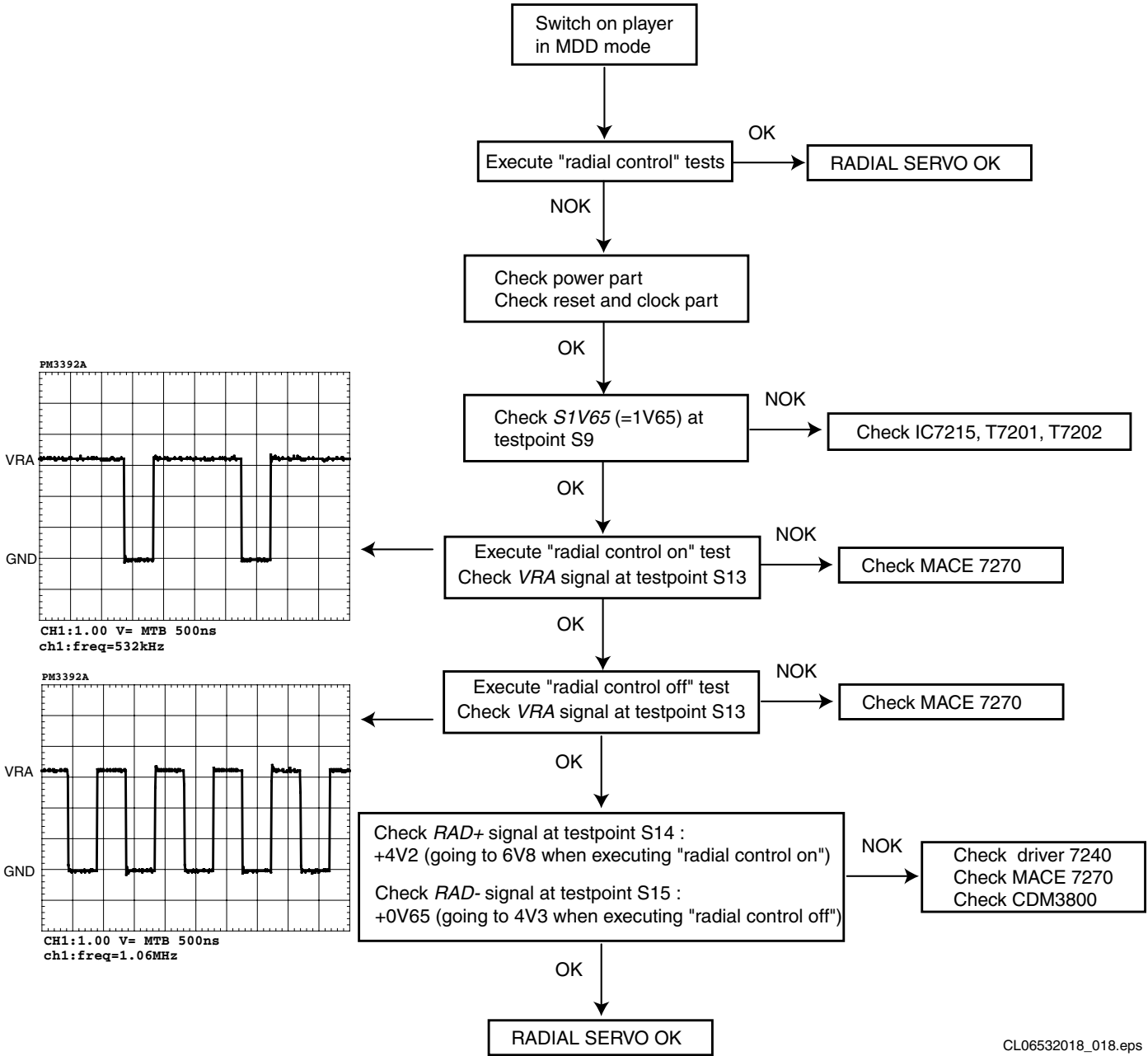


Figure 5-16

SERVO DRIVERS CHECK

USE CDR MAIN BOARD CIRCUIT DIAGRAMS 3 AND 4 AND CDR MAIN BOARD BOTTOM VIEW : SERVO DRIVERS TESTPOINTS

SLEDGE SERVO

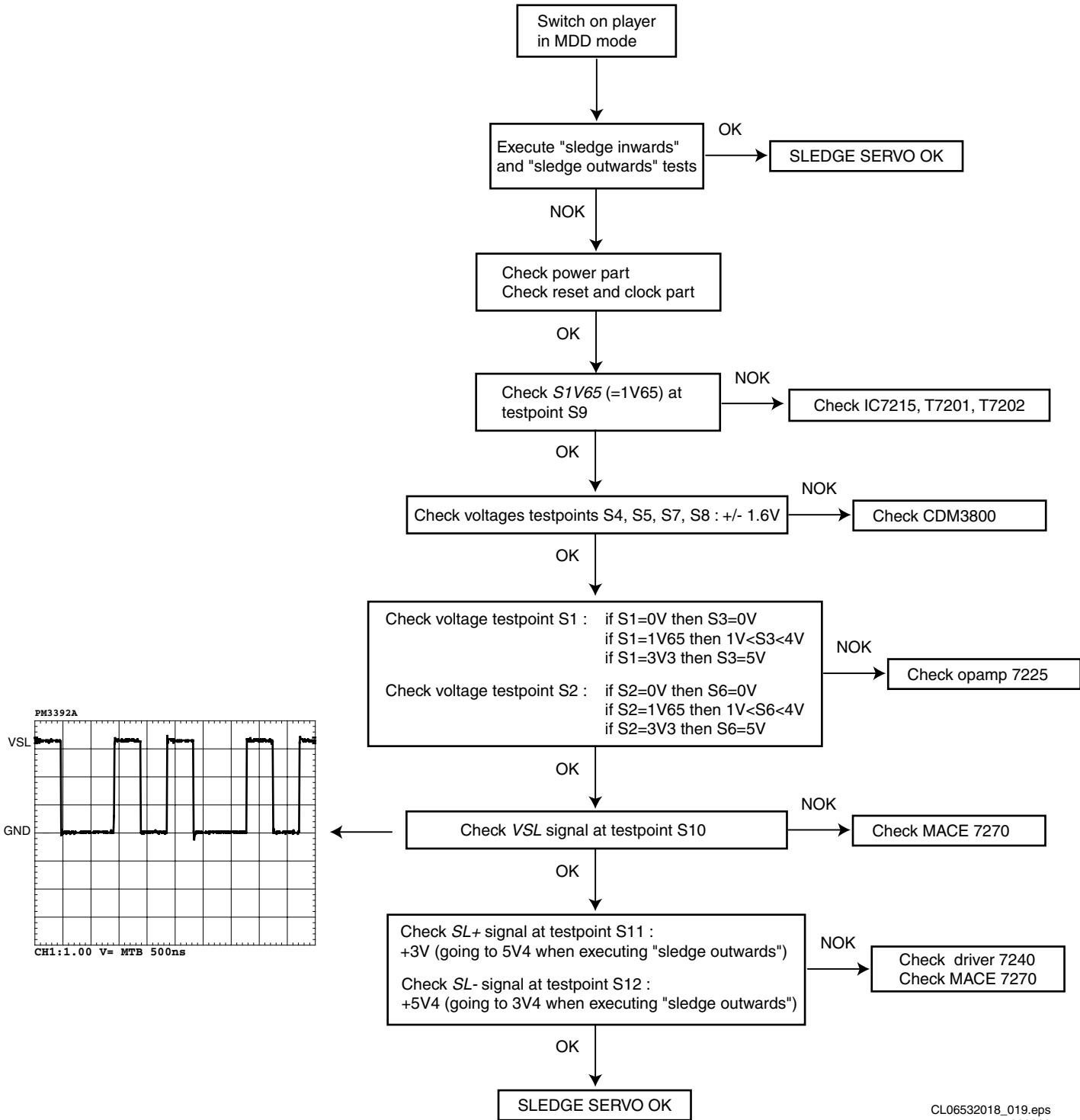


Figure 5-17

SERVO DRIVERS CHECK

USE CDR MAIN BOARD CIRCUIT DIAGRAMS 3 AND 4 AND CDR MAIN BOARD BOTTOM VIEW : SERVO DRIVERS TESTPOINTS

TRAY SERVO

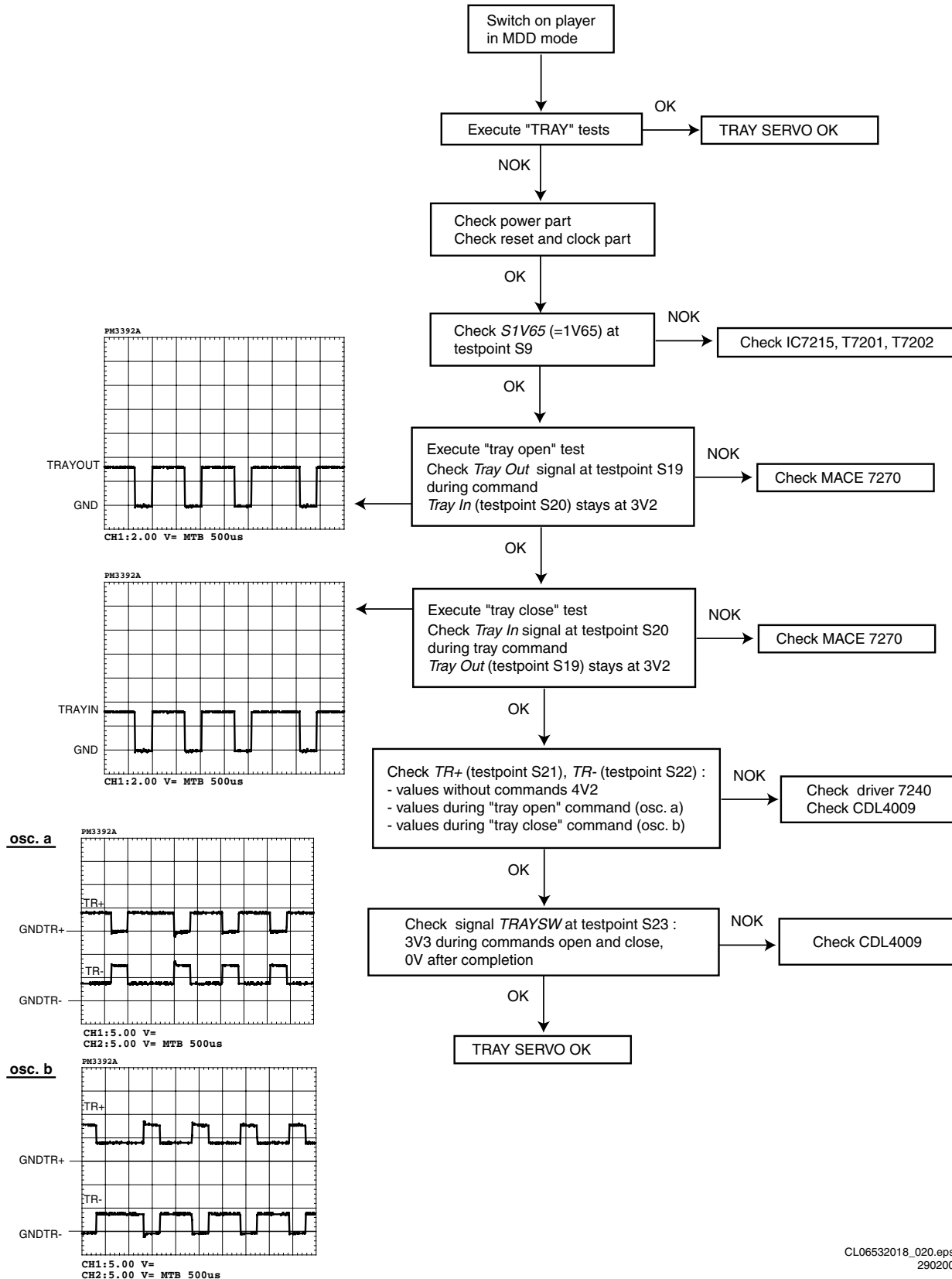


Figure 5-18

5.2.5 Audio signal check

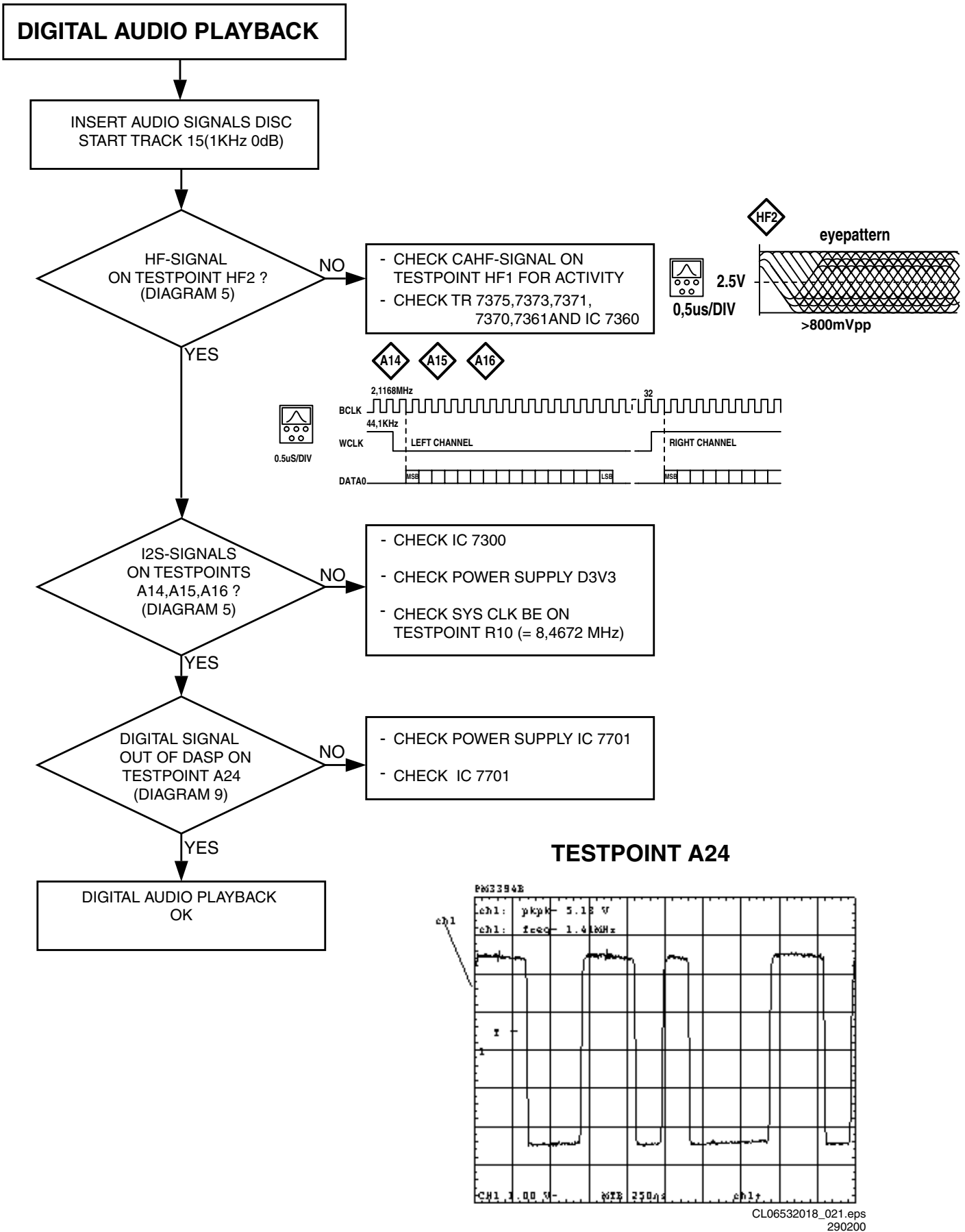


Figure 5-19

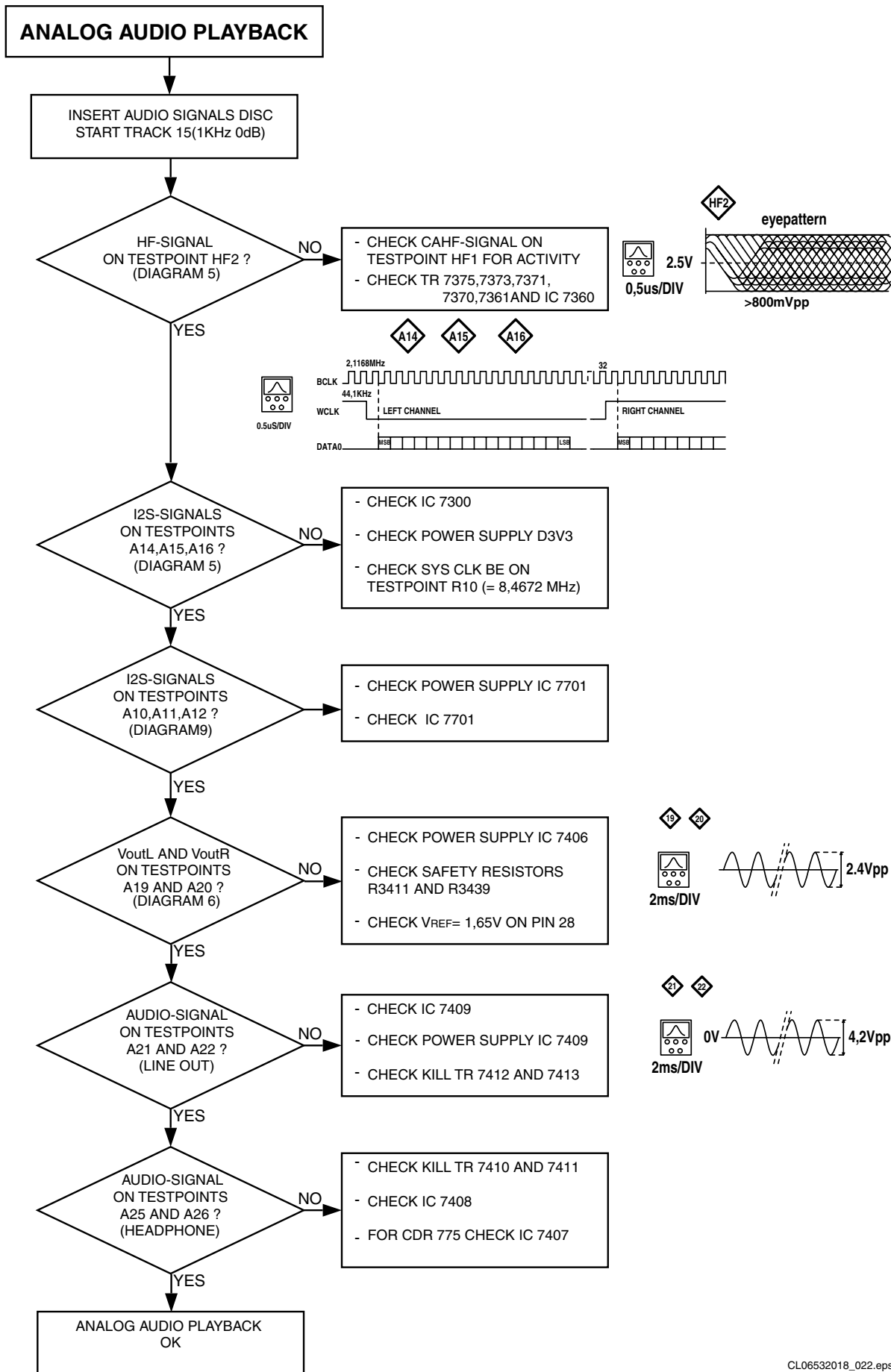


Figure 5-20

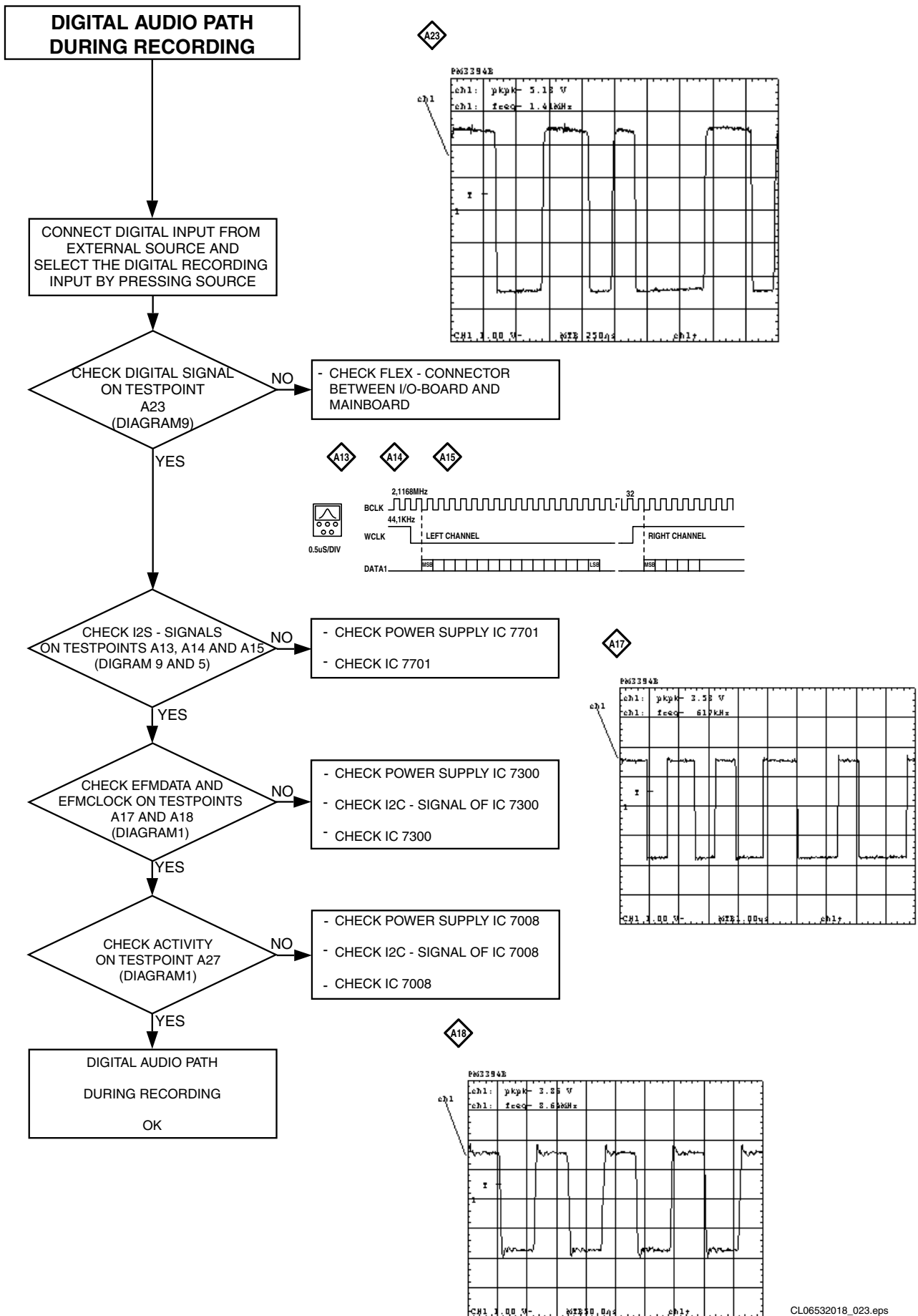


Figure 5-21

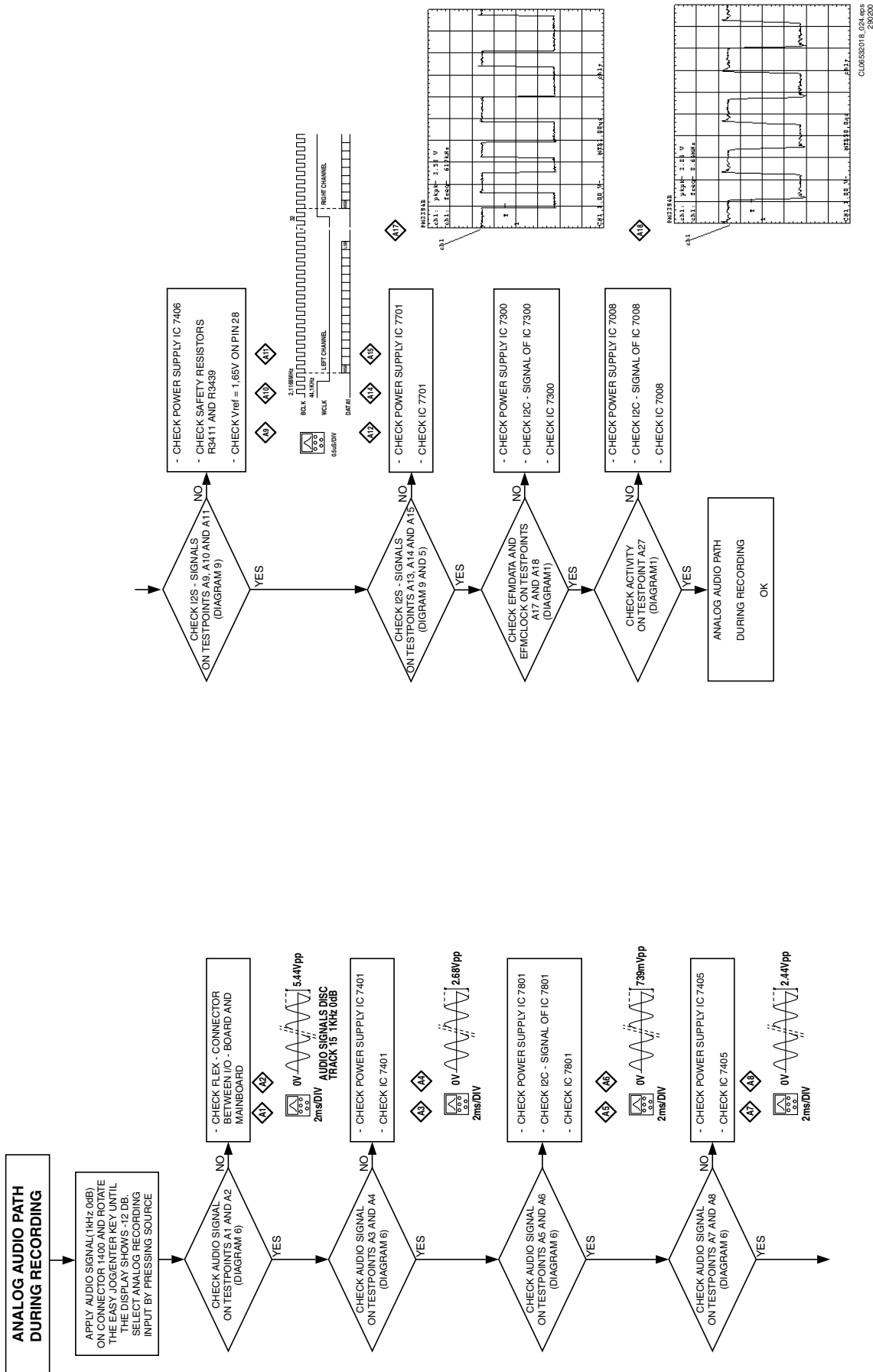


Figure 5-22

8. Alignments & Adjustments

Each CDR-module composed from CDRloader and CDRmainboard has to be matched via SW filled parameters. This adjustment processed in the factory is under investigation to have it implemented into the COMPAIR tool. As long as this adjustment is not possible to be executed in secondline service workshop, the swop of modules and a central repair has to be continued. Adjustment only has to be done at replacement of CDM and concerned servo circuits. Other repairs (audio signals, replacement of adapted Flash roms etc) can be done without infringing the adjusted components.

As soon as COMPAIR CDR is installed this chapter will be adapted via a service information.

Flash Rom IC 7208 (MACE-ROM) is mounted on a socket and can be replaced after lifting up the loader part above it. Flash Rom IC 7703 (DASP-ROM) has to be soldered.

Take care for both ICs Firmware loaded components are mounted.

In case a module is offered with SW versions 1.4 and 91.48, the complete CDR-module should be replaced.

For SW versions 1.23 and 91.63, IC7703 and IC7208 have to be replaced by the latest SW verions.

9. Circuit description

9.1 Description

A separate circuit description concerning the 3rd generation CDR recorders is available with order number 3104 125 40100

9.2 List of Abbreviations

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|-----------------|--|---|
| +12V | main supply voltage from PSU | +12V supply voltage from PSU |
| +12VA | supply voltage | +12V supply voltage for Audio part |
| +5V | main supply voltage from PSU | +5V supply voltage from PSU |
| +5VA | supply voltage | +5V supply voltage for Audio part |
| +9SRVPWR | IC7558 → IC7240 | PoWeR supply for SeRVo driver IC |
| 12VPWR | supply voltage | +12V supply voltage for servo part |
| -8V | main supply voltage from PSU | -8V supply voltage from PSU |
| -8VA | supply voltage | -8V supply voltage for Audio part |
| A(1:20) | IC7701 → R3818,R3819, R3820, R3821, R3897 → IC7703 | Address lines 1 to 20 between DASP and flash ROM |
| A(10:20) | IC7701 → R3819, R3820, R3821 → IC7702 | Address lines 10 to 20 between DASP and DRAM |
| A1 | IC7010 → IC7270 | amplitude of the “land” reflection relative to the average EFM, voltage output, OPC input |
| A1LF, A2LF | CONN1000 → IC7010 | satellite photo diodes A1, A2 current output |
| A2 | IC7010 → IC7270 | amplitude of the “pit” reflection relative to the average EFM, voltage output, OPC input |
| A-8V | supply voltage | -8V supply voltage for servo part |
| AEGER | | Analog Error signal GEnerator for Recordable |
| AINTON | IC7008 → IC7010 | Alpha INTegrator ON (to AEGER) |
| ALE | * IC7270 → R3213 → IC7209, IC7300 * IC7270 → R3230 | Address Latch Enable; external address latch strobe line, freeze address when low |
| ALPHA0 | IC7270 → IC7010 | analog voltage mode output from OPC D/A converter |
| ALS | IC7008 → IC7010 | Alpha Loop Switch (to AEGER) |
| ASTROBE | IC7008 → IC7010 | Alpha STROBE (to AEGER) |
| ATIP | | Absolute Time In Pre-groove (sync signal) |
| ATIPSYNC | IC7300 → IC7270 | ATIP SYNC signal |
| ATT | * IC7270 → R3717, R3722 * IC7270 → IC7701 | ATTenuation request from MACE2 to audio DAC, active low; means that the output can be attenuated in case of search activities |
| B1LF, B2LF | CONN1000 → IC7010 | satellite photo diodes B1, B2 current output |
| BCLK | IC7701 → R3898A → IC7300 | I ² S1 BitCLock from DASP to CDR60 (playback and record) |
| BE_RESET | * IC7701 → R3261 → IC7270 * IC7701 → R3716 | Basic Engine RESET, active high |
| BIASC | IC7008 → R3056 | BIAS Current switch CDRW output |
| BKPT | CONN1819, R3907 → IC7701 | JTAG mode select / debug mode BreakPoint |
| C1LF, .. , C4LF | CONN1000 → IC7010 | Central photo diodes C1, C2, C3, C4 current output |
| CAGAIN | R3016,R3115 → IC7010 | set-point laser power on disc, current input |
| CAHF | CONN1000 → C2374 | Central Aperture (central photo diodes) High Frequency current output (C1+C2+C3+C4) |
| CALF | IC7010 → IC7270 | Central Aperture (central photo diodes) Low-pass Filtered signal (DC coupled EFM signal), voltage output, OPC input |
| CAS0 | IC7701 → IC7702 | Column Address Strobe DRAM for upper byte |

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|-------------|--|---|
| CAS1 | IC7701 → IC7702 | Column Address Strobe DRAM for lower byte |
| CDR | IC7008 → IC7355 | CDR strategy detected output (active high) |
| CDR60CFLG | IC7300 → R3382B → CONN1812 | serial output of error corrector status information of the CDR60-decoder, to be measured at test connector |
| CDR60CL1 | IC7300 → R3382C → CONN1812 | output of CLock signal for testing system clock of IC CDR60 at test connector |
| CDR60CS | IC7270 → R3235B → R3702, IC7300 | CDR60 Chip Select, active high |
| CDR60INT | IC7300 → IC7270 | CDR60 INTerrupt line, active low |
| CDR60LWRT | IC7300 → R3048 | CDR60 Laser WRiTe control output |
| CDR60MEAS1 | IC7300 → R3382A → CONN1812 | serial output of information about jitter, PLL frequency and asymmetry of bit recovery block in CDR60, to be measured at test connector |
| CDR60PLL | IC7270 → R3305 → IC7300 | CDR60 clock multiplier enable, active high |
| CDRW | * IC7355D → IC7355C * IC7355D → CONN1000 | inverted CDR-strategy-detected signal |
| CLK_OUT | IC7701 → R3771 → CONN1819 | system CLock OUT |
| CLK_SYS | IC7701 → R3727, R3731 | oscillator output |
| COS- | CONN1220 → IC7225B | Hall feedback signal from sledge motor |
| COS+ | CONN1220 → IC7225B | Hall feedback signal from sledge motor |
| CSFLASH | IC7701 → IC7703 | Chip Select for FLASH or boot device |
| CSRAM | IC7270 → R3235A → R3703, IC7802 | Chip Select SRAM, active low |
| D(16:31) | IC7701 ↔ R3822, R3823, R3824, R3825 ↔ IC7703, IC7702 | Databus bit 16 to 31 between DASP, flash ROM and DRAM |
| D3V3 | supply voltage | +3,3V supply voltage for Digital part |
| D5V | supply voltage | +5V supply voltage for Digital part |
| D5VS | supply voltage | +5V supply voltage for Servo part |
| DALPHA | IC7010 → R3037 | ALPHA error signal for laser power control |
| DASP | | Digital Audio Signal Processor |
| DATAI | IC7701 → R3898C → IC7300 | I ² S1 DATA In from DASP to CDR60 (recording) |
| DATAO | IC7300 → R3314 → IC7701 | I ² S1 DATA Out from CDR60 to DASP (playback) |
| DEEMP | * IC7270 → R3719, R3724 * IC7270 → IC7701 | DE-EMphasis control for audio DAC from MACE2, active high; means that de-emphasis is needed in digital filter |
| DELTAP | IC7016 → R3126 | DELTA Power current source drive signal from XDAC |
| DIG_OUT_C | IC7701 → R3706 → C2707, CONN1400 | Common DIGital OUTput (consumer) |
| DISPLAY_INT | F934 → R3812, IC7701 | DISPLAY INTerrupt |
| DMON | IC7270 → R3324 | power save at stop, active low |
| DOBM_CD | CONN1708, C2731 → R3757 → R3903 → IC7701 | Digital Output (EBU output) from CD player in CDR775 to DASP |
| DOBM_CDR | IC7300 → R3382D → C2379, IC7701 | Digital Output (EBU output) from CDR60 to DASP |
| DRAM_RW | IC7701 → IC7702 | Read/Write strobe for DRAM |
| DSA_ACK_CD | * IC7701 ↔ R3830 ↔ R3831 | Data/Strobe/Acknowledge serial communication |

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|--------------|---|---|
| | ↔ CONN1708 * IC7701 ↔ R3830 ↔ C2735 | between DASP and CD-player in CDR775 |
| DSA_ACK_CDR | * IC7701 → R3729 → IC7270, CONN1830 * IC7701 → R3729 → R3769 | Data/Strobe/Acknowledge serial communication between MACE2 and DASP for CDR; acknowledge input for MACE2 is strobe output for DASP |
| DSA_DATA_CD | * IC7701 ↔ R3828 ↔ R3829 ↔ CONN1708 * IC7701 ↔ R3828 ↔ C2733 | Data/Strobe/Acknowledge serial communication between DASP and CD-player in CDR775 |
| DSA_DATA_CDR | * IC7270↔R3246 ↔ R3813 ↔ IC7701, CONN1830 * IC7270↔R3246 ↔ R3767 | Data/Strobe/Acknowledge serial communication between MACE2 and DASP for CDR |
| DSA_STR_CD | * IC7701 ↔ R3835 ↔ R3832 ↔ CONN1708 * IC7701 ↔ R3835 ↔ C2734 | Data/Strobe/Acknowledge serial communication between DASP and CD-player in CDR775 |
| DSA_STR_CDR | * IC7270 → R3245 → IC7701, CONN1830 * IC7270 → R3245 → R3768 | Data/Strobe/Acknowledge serial communication between MACE2 and DASP for CDR (strobe output for MACE2 is acknowledge input for DASP) |
| DSCLK | CONN1819, R3908 → IC7701 | reset in / Debug Serial CLock in |
| DSI | CONN1819, R3909 → IC7701 | JTAG reset in / Debug Serial clock In |
| EFM | | Eight to Fourteen Modulation = modulation method used for CD storage, also the actual raw CD signal as written or read on or from the CD disc |
| EFMCLK | IC7300 → IC7008 | EFM CLock output |
| EFMDATA | IC7300 → IC7008 | EFM DATA output |
| EFMTIM3 | | EFM TIMing generator |
| EPON | IC7008 → R3010 IC7008 → C2010 | Erase Power ON |
| EPONO | IC7008 → R3107 | Erase Power ON Open drain output |
| EPONRC | R3004 → CONN1000 | Erase Power ON (after RC circuit) |
| ERASEC | IC7008 → R3087 | ERASE Current switch CDRW output |
| ERON | IC7008 → IC 7010 | ERror ON (to AEGER) |
| EXT_DIG_IN1 | CONN1400 → IC7701 | EXTernal DIGital INput 1 |
| EXT_DIG_IN2 | CONN1702, C2767, C2721 → R3701 → IC7701 | EXTernal DIGital INput 2 (CDR950 only) |
| EXT_OPT_IN | CONN1400, C2722 → R3708 → IC7701 | EXTernal OPTical INput |
| F_READY | * IC7703 → R3817 → IC7701 * CONN1701 → IC7701 | Flash READY detection, this line is forced low as long as the flash is busy with erase or program algorithm |
| F_RW | IC7701 → IC7708B | Read/Write strobe for Flash ROM |
| FEN | IC7010 → IC7270 | Focus Error Normalized current output |
| FOC- | IC7240 → CONN1000 | FOCus actuator drive signal negative connection |
| FOC+ | IC7240 → CONN1000 | FOCus actuator drive signal positive connection |
| FS30V | D6500 → CONN1000 | Forward Sense diode 30V power supply |
| FSA | CONN1000 → T7119, T7120 | Forward Sense photo diode current output |
| FSCLR | IC7008 → IC7126 | Forward Sense signals CLear switch |
| FSOF | IC7008 → R3052 | Forward Sense photo diode sampling OFF |

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|---------------------------|---|--|
| FSON | IC7008 → R3051 | Forward Sense photo diode sampling ON |
| FSR | R3040 → IC7270 | Forward Sense signal while Reading for read control loop |
| FSRS | IC7008 → IC7126D | Forward Sense photo diode Read Sampling |
| FSW | R3050 → IC7270 | Forward Sense signal while Writing for write control loop |
| FSWS | IC7008 → IC7126C | Forward Sense photo diode Write Sampling |
| FWEN | IC7270 → IC7208, R3806 | Flash EPROM Write ENable |
| HALL_U, HALL_V, HALL_W | IC7330 → IC7300, CONN1812 | HALL feedback signals from turn table motor via hall motor driver |
| HFS0 | IC7270 → R3249 → IC7360 | select HF circuit |
| I ² C | | Inter IC |
| I ² C_CLK | * IC7701, R3711 → R3715 → C2709 → F934 * IC7701, R3711 → IC7801 | I ² C CLock line used for display slave processor and digital potmeter |
| I ² C_DATA | * IC7701, R3712 ↔ R3713 ↔ C2708, R3714 ↔ F934 * IC7701, R3712 ↔ IC7801 | I ² C DATA line used for display slave processor and digital potmeter |
| I ² CL | R3248B → IC7207, R3247C | I ² C CLock line |
| I ² C_SCL | * IC7207 → IC7008 * IC7207 → IC7010 * IC7207 → R3248B | I ² C Serial CLock line |
| I ² C_SDA | * IC7207 ↔ IC7008 * IC7207 ↔ IC7010 * IC7207 ↔ R3248A | I ² C Serial DATA line |
| I ² DA | R3248A ↔ IC7270, R3247D | I ² C DATA line |
| I ² S_BCLK_AI | IC7701 → R3814 → IC7406 | I ² S4 Bit CLock for CODEC (ADC for CDR950) Analog Input (record from analog source) |
| I ² S_BCLK_AO | IC7701 → R3894A → IC7406 | I ² S2 Bit CLock for CODEC (DAC for CDR950) Analog Output |
| I ² S_BCLK_CD | CONN1708, C2739 → R3834 → IC7701 | I ² S3 Bit CLock from CD player (record n=2) (CDR775 only) |
| I ² S_BCLK_MIC | CONN1708, C2739 → R3834 → IC7701 | I ² S3 Bit CLock from MICrophone (CDR950 only) |
| I ² S_DATA_AI | IC7406 → IC7701 | I ² S4 DATA from CODEC (ADC for CDR950) Analog Input (record from analog source) |
| I ² S_DATA_AO | IC7701 → R3894C → IC7406 | I ² S2 DATA for CODEC (DAC for CDR950) Analog Output |
| I ² S_DATA_CD | CONN1708, C2738 → R3836 → IC7701 | I ² S3 DATA from CD player (record n=2) (CDR775 only) |
| I ² S_DATA_MIC | CONN1708, C2738 → R3836 → IC7701 | I ² S3 DATA from MICrophone (CDR950 only) |
| I ² S_WS_AI | IC7701 → R3743 → IC7406 | I ² S4 Word CLock for CODEC (ADC for CDR950) Analog Input (record from analog source) |
| I ² S_WS_AO | IC7701 → R3894B → IC7406 | I ² S2 Word CLock for CODEC (DAC for CDR950) Analog Output |
| I ² S_WS_CD | CONN1708, C2740 → R3833 → IC7701 | I ² S3 Word CLock from CD player (record n=2) (CDR775 only) |

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|-------------------------|---|---|
| I ² S_WS_MIC | CONN1708, C2740 → R3833 → IC7701 | I ² S3 Word CLock from MICrophone (CDR950 only) |
| I ² S1_MS | IC7270 → R3910, IC7701 | I ² S1 Master-Slave interrupt from MACE2 |
| IE | T7121 → CONN1000 | laser Erase drive current signal |
| INT_COPY_ANA | * IC7701 → R3721 → IC7401 * IC7701 → R3721 → R3410 | select INTernal COPY ANALog (in case of copy protected disc or track on CD drive) (CDR775 only) |
| IR | * T7135 → CONN1000 * T7135 → R3056 * T7135 → IC7008 | laser Read drive current signal |
| IW | * T7122 → CONN1000 * T7122 → D6003 | laser Write drive current signal |
| KEY_PRESSED | IC7706B → R3816 → IC7701 | KEY PRESSED interrupt |
| KILL | T7560, T7561, R3560 → CONN1400, R3424, R3428 | KILL signal from power supply part to audio outputs |
| KILL_OUT | IC7701 → R3532 | disables the KILL activity from the PSU; 1 = no kill, 0 = kill active |
| L12V | supply voltage | +12V supply voltage for servo/Laser part |
| L3_CLK | IC7701 → R3725 → IC7406 | L3 interface CLock line / control CODEC (not for CDR950) |
| L3_DATA | IC7701 ↔ R3728 ↔ IC7406 | L3 interface DATA line with CODEC (not for CDR950) |
| L3_MODE | IC7701 → R3735 → IC7406 | L3 interface MODE line selects data or address transfer mode for CODEC (not for CDR950) |
| L5V | supply voltage | +5V supply voltage for servo/Laser part |
| L-5V | supply voltage | -5V supply voltage for servo/Laser part |
| LASCK | IC7270 ↔ R3248D | Clock line DAC LASer control |
| LASDACCK | R3248D ↔ IC7016 | Clock line DAC LASer control |
| LASDACDI | R3248C ↔ IC7016 | Data line DAC LASer control |
| LASDACLD | R3212 ↔ IC7016 | LoaD line DAC LASer control |
| LASDD | IC7270 ↔ R3248C | Data line DAC LASer control |
| LASLD | * IC7270 ↔ R3238 ↔ R3212 * IC7270 ↔ R3232 | LoaD line DAC LASer control |
| LEFT | CONN1708, C2743 → IC7401C, IC7407C | audio output LEFT channel from CD-player in CDR775 |
| LLP | IC7270 → IC7300 | Laser Low Power (active high), switches the laser from write to read power whenever the device tends to go offtrack |
| LWRT | R3048 → IC7008 | Laser WRiTe control input |
| MA(16:17) | IC7270 ↔ IC7208 | bank switch higher address lines |
| MA(8:15) | IC7270 ↔ IC7802 ↔ IC7208 | address bus high byte |
| MACE2 | | Mini All Cd Engine (minus decoder + OPC + PCS + extra RAM) |
| MAD(0:7) | IC7270 ↔ IC7209 ↔ IC7802 ↔ IC7208 ↔ IC7300 | bi-directional data bus / address bus low byte |
| MIRN | IC7010 → IC7270 | MIRror Normalized (disc reflection) current output |
| MOTO1 | IC7300 → IC7355A | turn table MOTOr control output |

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|-------------|---|--|
| MRDN | IC7270 → R3276 → R3242A, IC7802, IC7300 | Master ReaD, read strobe for external peripherals, active low |
| MUTE | * IC7270 → R3718, R3723 * IC7270 → IC7701 | MUTE control from MACE2 to DASP, active low |
| MWRN | IC7270 → R3280 → R3242B, IC7802, IC7300 | Master WRite, write strobe for external peripherals, active low |
| NMUTE | IC7701 → R3726, IC7406 | MUTE output, low active |
| OFFTRACK | IC7270 → IC7300 | OFFTRACK detection flag |
| OPC | | Optimum Power Calibration |
| P12VKILL | supply voltage | +12V supply voltage for KILL-circuit |
| PCS | | Position Control Sledge |
| PCSCOS | IC7225B, C2229 → IC7270, CONN1812 | Position Control Sledge COS feedback signal |
| PCSSIN | IC7225A, C2227 → IC7270, CONN1812 | Position Control Sledge SIN feedback signal |
| PDAR | | Photo Diode Amplifier Recordable |
| PERASE | R3036, R3031, R3030, R3029, R3028, R3027, R3020 → IC7002C, R3043, T7113 | laser Power switch for ERASE |
| POWER_UP | IC7270 → R3243C, R3556, R3538 | standby pin, high level activates essential powers necessary for full function; overrules HI_POWER setting |
| PPN | IC7010 → IC7050C | Push-Pull signal, Normalized, balanced, voltage output |
| PRCOARSE | IC7016 → R3057 | drive signal from Power Read COARSE DAC for read current source |
| PRFINE | IC7016 → R3058 | drive signal from Power Read FINE DAC for read current source |
| PROF_EBU | IC7701 → CONN1820 | PROFessional digital output (CDR950 only) |
| PSEn | * IC7270 → R3260 → IC7208 * IC7270 → R3231 | Program Store ENable; external ROM output enable line, active low |
| PW | R3081 → IC7008 | Write Power signal to OPC input of MACE2 |
| PWB | IC7001C → IC7016 | drive signal to XDAC's for write and erase current sources and VCAGAIN |
| PWD | * IC7016 → IC7002B * IC7016 → IC7002C | drive signal from XDAC for write and erase current sources |
| PWMAX | IC7016 → R3073 | PW MAXimum signal from DAC used for determining set point for laser power during writing |
| PWMIN | IC7016 → R3072 | PW MINimum signal from DAC used for determining set point for laser power during writing |
| PWRITE | R3035, R3026, R3025, R3024, R3023, R3022, R3021 → IC7002B, R3044, T7124 | laser Power switch for WRITE |
| RAD- | IC7240 → CONN1000 | Radial actuator drive signal negative connection |
| RAD+ | IC7240 → CONN1000 | Radial actuator drive signal positive connection |
| RAS0 | IC7701 → IC7702 | Row Address Strobe DRAM |
| RCK | IC7300 → R3319 → IC7701 | EIAJ subcode clock from CDR60 to DASP (CD text interface) |
| RDGAIN1 | IC7008 → R3054 | forward sense ReaD GAIN switch 1 |

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|-------------|--|--|
| RDGAIN2 | IC7008 → C2027 | forward sense ReaD GAIN switch 2 |
| RDGAIN3 | IC7008 → C2060 | forward sense ReaD GAIN switch 3 |
| RE | IC7010 → IC7215A | Radial Error signal for fast track counting, voltage output |
| RECORDING | * IC7008 → IC7010 * IC7008 → CONN1000 * IC7008 → IC7355C | RECORDING output (active high) |
| REN | IC7010 → IC7270 | Radial Error Normalized current output |
| RIGHT | CONN1708, C2742 → IC7401A, IC7407A | audio output RIGHT channel from CD-player in CDR775 |
| RXD_TOOL | CONN1818 → IC7701 | Receive of UART for test TOOL |
| S1V65 | Reference Voltage | 1.65V delivered by IC7215B for Servo part |
| S2V9 | Reference Voltage | 2.9V delivered by IC7010 for Servo part |
| SEL_HP_OUT | * IC7701 → R3720 → IC7407 | SElect HeadPhone OUTput in DJ-mode (for CDR775 only) |
| SFSY | IC7701 → R3756 → IC7300 | EIAJ subcode synchronisation from DASP to CDR60 (CD text interface) |
| SIN- | CONN1220 → IC7225A | Hall feedback signal from sledge motor |
| SIN+ | CONN1220 → IC7225A | Hall feedback signal from sledge motor |
| SL- | IC7240 → R3265 → CONN1220 | SLedge motor drive signal negative connection |
| SL+ | IC7240 → CONN1220 | SLedge motor drive signal positive connection |
| SRSTN | IC7270 → R3243B, IC7300 | Slave ReSeT out (CDR60 reset), active low |
| STANDBY | IC7270 → R3807 → R3887 → IC7701 | STANDBY pin, high level activates essential powers necessary for full function; overrules HI_POWER setting |
| SUB | IC7701 → R3710 → IC7300 | EIAJ subcode data from DASP to CDR60 (CD text interface) |
| SYS_CLK_11W | IC7701 → R3732 → IC7406 | 11.2896 MHz SYStem CLock for AD/DA datapath |
| SYS_CLK_16W | IC7701 → R3894D → IC7706A | 16.9344 MHz SYStem CLock for producing SYS_CLK_BE |
| SYS_CLK_8W | IC7706A → R3815 → CONN1708 | SYStem CLock CD player (8.4672 MHz) (CDR775 only) |
| SYS_CLK_BE | IC7706A → R3826 → IC7270 | SYStem CLock Basic Engine (8.4672 MHz) |
| SYS_RESET | * IC7701 → R3758 → CONNF934 * IC7701 → R3770 → T7707 → CONN1708 | SYStem RESET to display assy (and CD player for CDR775) |
| TCK | CONN1819 → R3906, IC7701 | JTAG Clock signal |
| TDSO | IC7701 → CONN1819 | JTAG Serial Data Out / debug data out |
| TERMB | IC7270 ↔ CONN1818 | UART connection with MACE |
| TLN | IC7010 → IC7270 | Track Loss Normalized current output |
| TR- | IC7240 → CONN1200 | TRay motor drive signal negative connection |
| TR+ | IC7240 → CONN1200 | TRay motor drive signal positive connection |
| TRACE99_RXD | CONN1818 → R3838, IC7701 | TRACE99 test tool receive data |
| TRACE99_TXD | IC7701 → CONN1818 | TRACE99 test tool transmit data |
| TRAYIN | IC7270 → IC7240 | move TRAY IN line, active low |

| SIGNAL NAME | SIGNAL FLOW | FUNCTION AND DESCRIPTION |
|---------------------------|--|--|
| TRAYOUT | IC7270 → IC7240 | move TRAY OUT line, active low |
| TRAYSW | * CONN1200 → R3747 * CONN1200 → R3748 | TRAY SWitch signal from loader assy |
| TRAYSWF | R3748, C2214 → IC7270 | Filtered TRAY SWitch signal, low is completely out or in |
| TXD_TOOL | IC7701 → CONN1818 | Transmit of UART for test TOOL |
| U+, U-, V+, V-, W+, W- | CONN1330 → IC7330 | hall feedback signals from turn table motor to hall motor driver |
| UCOIL, VCOIL, WCOIL | IC7330 → CONN1330 | drive signals for turn table motor |
| VCAGAIN | IC7016 → IC7005A | set-point laser power on disc, voltage output |
| VDC1 | CONN1500 → CONNF934 | supply voltage for display assy |
| VDC2 | CONN1500 → CONNF934 | supply voltage for display assy |
| VFO | IC7270 → R3295 → R3244 | FOcus actuator drive output |
| VFTD | CONN1500 → CONNF934 | Voltage Fluorescent Tube Display (display assy) |
| VRA | IC7270 → R3297 → R3254 | RAdial actuator drive output |
| VSL | IC7270 → R3299 → IC7240 | SLedge actuator drive output |
| WCLK | IC7701 → R3898B → IC7300 | I ² S1 WordCLock from DASP to CDR60 (playback and record) |
| WOBBLE | IC7050C → IC7300 | analog WOBBLE signal of pre-groove detected by PPN-signal |
| WPON | * IC7008 → R3009 * IC7008 → C2009 | Write Power ON |
| WPONO | IC7008 → R3106 | Write Power ON Open drain output |
| WPONRC | R3003 → CONN1000 | Write Power ON (after RC circuit) |
| XDAC | | multiplying DAC |

10. Spareparts List

ELECTRICAL PARTSLIST MAINBOARD CDR'99

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------------|--------|--------|--------|--------|
| 1000 | 482226710666 | 30 P. FEM. | + | + | + | + |
| 1541 | 482225251173 | 19398E1(1,000A) | + | + | + | + |
| 1542 | 482225251173 | 19398E1(1,000A) | + | + | + | + |
| 1543 | 482225251173 | 19398E1(1,000A) | + | + | + | + |
| 1707 | 482224210757 | 33.868 000MHZ SM 20P CX-11F | + | + | + | + |
| 1708 | 482226760409 | CONN 22P FEMALE | + | - | - | - |
| 1820 | 482226710666 | 30 P. FEM. | - | - | - | + |
| 2001 | 482212612105 | CER2 0805 X7R 50V 33NF PM5 | + | + | + | + |
| 2002 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2003 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2009 | 482212233753 | 150PF 5%NP0 50V | + | + | + | + |
| 2010 | 482212233753 | 150PF 5%NP0 50V | + | + | + | + |
| 2011 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2012 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2013 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2014 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2015 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2016 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2018 | 482212613694 | 68PF 1% NP0 63V | + | + | + | + |
| 2019 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2020 | 482212613188 | 15NF 5% X7R 63V | + | + | + | + |
| 2021 | 482212233177 | 10NF 20% X7R 50V | + | + | + | + |
| 2022 | 482212233177 | 10NF 20% X7R 50V | + | + | + | + |
| 2023 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2024 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2025 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2026 | 222286115272 | CER1 0805 NP0 50V | + | + | + | + |
| 2027 | 222286115272 | CER1 0805 NP0 50V | + | + | + | + |
| 2028 | 532212232531 | 100PF 5%NP0 50V | + | + | + | + |
| 2029 | 532212232531 | 100PF 5%NP0 50V | + | + | + | + |
| 2030 | 532212231647 | 1NF10%X7R 63V | + | + | + | + |
| 2031 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2032 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2033 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2037 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2038 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2039 | 482212233177 | 10NF 20% X7R 50V | + | + | + | + |
| 2040 | 482212233172 | 390PF 5% NP0 50V | + | + | + | + |
| 2041 | 532212234099 | 470PF10%X7R 63V | + | + | + | + |
| 2042 | 532212233538 | 150PF 2%NP0 63V | + | + | + | + |
| 2043 | 532212231647 | 1NF10%X7R 63V | + | + | + | + |
| 2044 | 482212613486 | 15PF 2% NP0 63V | + | + | + | + |
| 2045 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2046 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2047 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2048 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2049 | 532212611579 | 3,3NF10%X7R 63V | + | + | + | + |
| 2050 | 482212614238 | CER2 0603 X7R 50V 2N2 COL R | + | + | + | + |
| 2052 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2053 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2054 | 482212614238 | CER2 0603 X7R 50V 2N2 COL R | + | + | + | + |
| 2056 | 532212611579 | 3,3NF10%X7R 63V | + | + | + | + |
| 2057 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2058 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2059 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2060 | 532212611579 | 3,3NF10%X7R 63V | + | + | + | + |
| 2061 | 482212411947 | 10UF 20% 16V | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------------|--------|--------|--------|--------|
| 2063 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2078 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2080 | 482212614238 | CER2 0603 X7R 50V 2N2 COL R | + | + | + | + |
| 2081 | 532211680853 | 560PF 5%NP0 63V | + | + | + | + |
| 2082 | 482212614238 | CER2 0603 X7R 50V 2N2 COL R | + | + | + | + |
| 2083 | 482212613956 | 68PF 5% NP0 63V CASE 0603 | + | + | + | + |
| 2084 | 482212232627 | 2.7NF10%X7R 50V | + | + | + | + |
| 2126 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2207 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2208 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2209 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2214 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2216 | 482212233777 | 47PF 5%NP0 63V | + | + | + | + |
| 2217 | 482212614494 | 22NF 10% X7R 25V 0603 | + | + | + | + |
| 2218 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2220 | 319801734730 | CER2 0603 X7R 16V 47N COL | + | + | + | + |
| 2221 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2222 | 482212614226 | 82PF 5% NP0 50V 0603 | + | + | + | + |
| 2224 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2225 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2226 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2227 | 319801631020 | CER1 0603 NP0 25V 1N | + | + | + | + |
| 2228 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2229 | 319801631020 | CER1 0603 NP0 25V 1N | + | + | + | + |
| 2230 | 482212614494 | 22NF 10% X7R 25V 0603 | + | + | + | + |
| 2231 | 482212614494 | 22NF 10% X7R 25V 0603 | + | + | + | + |
| 2232 | 482212614494 | 22NF 10% X7R 25V 0603 | + | + | + | + |
| 2233 | 319801631020 | CER1 0603 NP0 25V 1N | + | + | + | + |
| 2234 | 319801631020 | CER1 0603 NP0 25V 1N | + | + | + | + |
| 2235 | 319801631020 | CER1 0603 NP0 25V 1N | + | + | + | + |
| 2240 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2241 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2242 | 482212441796 | 22UF20% 16V | + | + | + | + |
| 2243 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2255 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2256 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2272 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2273 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2274 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2275 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2276 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2277 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2278 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2283 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2284 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2285 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2286 | 482212233127 | 2,2NF10%X7R 63V | + | + | + | + |
| 2287 | 482212233127 | 2,2NF10%X7R 63V | + | + | + | + |
| 2288 | 532212232654 | 22NF10%X7R 63V | + | + | + | + |
| 2289 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2291 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2300 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2302 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2303 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2304 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2305 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2306 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2308 | 222286115222 | CER1 0805 NP0 50V 2N2 PM5 | + | + | + | + |
| 2309 | 222286115222 | CER1 0805 NP0 50V 2N2 PM5 | + | + | + | + |
| 2310 | 222286115222 | CER1 0805 NP0 50V 2N2 PM5 | + | + | + | + |
| 2314 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------------|--------|--------|--------|--------|
| 2315 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2316 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2317 | 532212611579 | 3,3NF10%X7R 63V | + | + | + | + |
| 2318 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2319 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2320 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2321 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2322 | 532212611579 | 3,3NF10%X7R 63V | + | + | + | + |
| 2333 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2335 | 319801734730 | CER2 0603 X7R 16V 47N COL | + | + | + | + |
| 2336 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2337 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2355 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2359 | 482212613692 | 47PF 1% NP0 63V | + | + | + | + |
| 2360 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2362 | 482212613751 | 47NF10% X7R 63V | + | + | + | + |
| 2364 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2368 | 223886115182 | CER1 0805 NP0 50V 1N8 PM5 R | + | + | + | + |
| 2369 | 532212232268 | 470PF 10% 50V | + | + | + | + |
| 2370 | 482212441796 | 22UF20% 16V | + | + | + | + |
| 2371 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2372 | 532212232447 | 1PF 5% NP0 63V CASE 0805 | + | + | + | + |
| 2373 | 482212441796 | 22UF20% 16V | + | + | + | + |
| 2374 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2375 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2378 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2379 | 482212613692 | 47PF 1% NP0 63V | + | + | + | + |
| 2401 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2402 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | + |
| 2404 | 482212412245 | ELCAP 10V 220U PM20 | + | + | + | - |
| 2405 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2406 | 532212411919 | 47UF 20% 6,3V | + | + | + | - |
| 2407 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2408 | 532212411919 | 47UF 20% 6,3V | + | + | + | - |
| 2409 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2411 | 319803074780 | ELCAP SM 35V 4U7 PM20 COL R | + | + | + | - |
| 2413 | 482212613838 | 100NF Y5V 0805 50V P80M20 | + | + | + | - |
| 2414 | 482212480483 | 47UF20% 6,3V | + | + | + | - |
| 2415 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2417 | 319803074780 | ELCAP SM 35V 4U7 PM20 COL R | + | + | + | - |
| 2419 | 482212613838 | 100NF Y5V 0805 50V P80M20 | + | + | + | - |
| 2421 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2422 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2424 | 482212480483 | 47UF20% 6,3V | + | + | + | - |
| 2425 | 482212233216 | 270PF 5%NP0 50V | + | + | - | - |
| 2430 | 482212480483 | 47UF20% 6,3V | + | + | + | - |
| 2431 | 482212233216 | 270PF 5%NP0 50V | + | - | - | - |
| 2433 | 482212614585 | 100NF 10% X7R 0805 50V | + | - | - | - |
| 2434 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2435 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | - |
| 2437 | 202002490264 | ELCAP MA 4V S 470U PM20 A | + | + | + | - |
| 2438 | 202002490264 | ELCAP MA 4V S 470U PM20 A | + | + | + | - |
| 2440 | 482212480483 | 47UF20% 6,3V | + | + | + | - |
| 2441 | 482212480483 | 47UF20% 6,3V | + | + | + | - |
| 2442 | 532212231647 | 1NF10%X7R 63V | + | + | + | - |
| 2443 | 532212231647 | 1NF10%X7R 63V | + | + | + | - |
| 2450 | 482212233216 | 270PF 5%NP0 50V | + | + | + | - |
| 2451 | 482212233216 | 270PF 5%NP0 50V | + | + | + | - |
| 2460 | 482212611663 | 12PF | + | + | + | - |
| 2463 | 482212233926 | 12PF 50V | + | + | + | - |
| 2464 | 482212611663 | 12PF | + | + | + | - |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------------|--------|--------|--------|--------|
| 2465 | 482212611663 | 12PF | + | + | + | - |
| 2500 | 482212614238 | CER2 0603 X7R 50V 2N2 COL R | + | + | + | + |
| 2501 | 482212614238 | CER2 0603 X7R 50V 2N2 COL R | + | + | + | + |
| 2502 | 482212614238 | CER2 0603 X7R 50V 2N2 COL R | + | + | + | + |
| 2504 | 482212412245 | | + | + | + | + |
| 2505 | 482212412255 | 10UF 20% 50V | + | + | + | + |
| 2506 | 482212612105 | CER2 0805 X7R 50V 33NF PM5 | + | + | + | + |
| 2507 | 482212412255 | 10UF 20% 50V | + | + | + | + |
| 2508 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2509 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2535 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2536 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2537 | 532212411919 | 47UF 20% 6,3V | + | + | + | + |
| 2541 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2543 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2544 | 482212480483 | 47UF20% 6,3V | + | + | + | + |
| 2546 | 482212480483 | 47UF20% 6,3V | + | + | + | + |
| 2547 | 482212481286 | 47UF20% 16V | + | + | + | + |
| 2548 | 482212441643 | 100UF 20% 16V DIM:6,3X11MM | + | + | + | + |
| 2550 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2551 | 482212441796 | 22UF20% 16V | + | + | + | + |
| 2552 | 532212231647 | 1NF10%X7R 63V | + | + | + | + |
| 2553 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2555 | 482212233177 | 10NF 20% X7R 50V | + | + | + | + |
| 2556 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2557 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2558 | 482212441584 | 100UF 20% 10V | + | + | + | + |
| 2561 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2562 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2563 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2565 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2568 | 482212441643 | 100UF 20% 16V DIM:6,3X11MM | + | + | + | + |
| 2571 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2572 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2574 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2575 | 482212412245 | ELCAP 220U 16V 20% | + | + | + | + |
| 2576 | 482212613838 | 100NF Y5V 0805 50V P80M20 | + | + | + | + |
| 2577 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | + | + | + |
| 2700 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2701 | 532212411919 | 47UF 20% 6,3V | + | + | + | + |
| 2702 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2703 | 532212411919 | 47UF 20% 6,3V | + | + | + | + |
| 2704 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2705 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2706 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2707 | 482212613692 | 47PF 1% NP0 63V | + | + | + | + |
| 2708 | 482212613692 | 47PF 1% NP0 63V | + | + | + | + |
| 2709 | 482212613692 | 47PF 1% NP0 63V | + | + | + | + |
| 2710 | 532212411919 | 47UF 20% 6,3V | + | + | + | + |
| 2711 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2712 | 482212612105 | CER2 0805 X7R 50V 33NF PM5 | + | + | + | + |
| 2713 | 532212611583 | 10NF 10% X7R 50V 0603 CER2 | + | + | + | + |
| 2714 | 482212614549 | 33N 16V X7R O6O3 | + | + | + | + |
| 2715 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2716 | 532212611583 | 10NF 10% X7R 50V 0603 CER2 | + | + | + | + |
| 2717 | 319801741050 | CER2 0603 Y5V 10V 1U COL R | + | + | + | + |
| 2718 | 532211680853 | 560PF 5%NP0 63V | + | + | + | + |
| 2719 | 532211680853 | 560PF 5%NP0 63V | + | + | + | + |
| 2720 | 532212231647 | 1NF10%X7R 63V | + | + | + | + |
| 2721 | 482212613692 | 47PF 1% NP0 63V | + | + | + | + |
| 2722 | 482212613692 | 47PF 1% NP0 63V | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------------|--------|--------|--------|--------|
| 2723 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2725 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2726 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2727 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2728 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2731 | 482212613692 | 47PF 1% NP0 63V | + | - | - | - |
| 2733 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2734 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2735 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2736 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | - | - | - |
| 2737 | 482212614305 | 100NF 10% X7R 16V 0603 CER2 | + | - | - | - |
| 2738 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2739 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2740 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2741 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2742 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2743 | 482212233777 | 47PF 5%NP0 63V | + | - | - | - |
| 2750 | 319801741050 | CER2 0603 Y5V 10V 1U COL R | + | + | + | + |
| 2751 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2752 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2760 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2761 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2762 | 482212612105 | CER2 0805 X7R 50V 33NF PM5 | + | + | + | + |
| 2763 | 482212614585 | 100NF 10% X7R 0805 50V | + | + | + | + |
| 2764 | 482212612105 | CER2 0805 X7R 50V 33NF PM5 | + | + | + | + |
| 2765 | 482212612105 | CER2 0805 X7R 50V 33NF PM5 | + | + | + | + |
| 2766 | 482212612105 | CER2 0805 X7R 50V 33NF PM5 | + | + | + | + |
| 2901 | 319802190030 | RST JUMPER 0603 0.05 OHM | + | + | + | + |
| 2902 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | + |
| 2903 | 319802190030 | RST JUMPER 0603 0.05 OHM | + | + | - | + |
| 2904 | 319802190030 | RST JUMPER 0603 0.05 OHM | + | + | + | + |
| 2905 | 319802190030 | RST JUMPER 0603 0.05 OHM | + | + | + | + |
| 2906 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | + |
| 2907 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | + |
| 2908 | 319802190030 | RST JUMPER 0603 0.05 OHM | + | + | + | + |
| 2909 | 319801741050 | CER2 0603 Y5V 10V 1U COL R | + | + | + | + |
| 2910 | 482212412245 | ELCAP 220U 16V 20% | + | + | + | + |
| 3000 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3001 | 482211711151 | 1R 5% | + | + | + | + |
| 3002 | 482205120122 | 1K20 5% 0,1W | + | + | + | + |
| 3003 | 482205130121 | 120R00 5% 0,062W | + | + | + | + |
| 3004 | 482205130121 | 120R00 5% 0,062W | + | + | + | + |
| 3006 | 482205130008 | 0R00 JUMPER | + | + | + | + |
| 3007 | 482205120154 | 150K00 5% 0,1W | + | + | + | + |
| 3009 | 482205130681 | 680R00 5% 0,062W | + | + | + | + |
| 3010 | 482205130681 | 680R00 5% 0,062W | + | + | + | + |
| 3011 | 482205120829 | 82R00 5% 0,1W | + | + | + | + |
| 3012 | 482205130154 | 150K00 5% 0,062W | + | + | + | + |
| 3013 | 482205120105 | 1M00 5% 0,1W | + | + | + | + |
| 3014 | 482211711139 | 1K5 1% 0,1W | + | + | + | + |
| 3015 | 482211683933 | 15K 1% 0,1W | + | + | + | + |
| 3016 | 482211713172 | 62K 1% RC12H 0805 0,1W | + | + | + | + |
| 3017 | 482205130392 | 3K9 5% 0.063W 0603 | + | + | + | + |
| 3019 | 482205130105 | 1M00 5% 0,062W | + | + | + | + |
| 3020 | 482211683933 | 15K 1% 0,1W | + | + | + | + |
| 3021 | 482211683933 | 15K 1% 0,1W | + | + | + | + |
| 3022 | 482211711456 | 30K 1% 0,1W | + | + | + | + |
| 3023 | 482211713172 | 62K 1% RC12H 0805 0,1W | + | + | + | + |
| 3024 | 482211711374 | 120K 1% RC12H 0805 | + | + | + | + |
| 3025 | 482211713569 | 240K 1% 0805 RC12H | + | + | + | + |
| 3026 | 482205120474 | 470K00 5% 0,1W | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|------------------------|--------|--------|--------|--------|
| 3027 | 482211711456 | 30K 1% 0,1W | + | + | + | + |
| 3028 | 482211713172 | 62K 1% RC12H 0805 0,1W | + | + | + | + |
| 3029 | 482211711374 | 120K 1% RC12H 0805 | + | + | + | + |
| 3030 | 482211713569 | 240K 1% 0805 RC12H | + | + | + | + |
| 3031 | 482205120474 | 470K00 5% 0,1W | + | + | + | + |
| 3035 | 482211713571 | 910K 1% 0805 RC12H | + | + | + | + |
| 3036 | 482211713571 | 910K 1% 0805 RC12H | + | + | + | + |
| 3037 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3039 | 482205130183 | 18K00 5% 0,062W | + | + | + | + |
| 3040 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3041 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3043 | 482205130105 | 1M00 5% 0,062W | + | + | + | + |
| 3044 | 482205120105 | 1M00 5% 0,1W | + | + | + | + |
| 3048 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3049 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3050 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3051 | 482211712902 | 8K2 1% 0.063W 0603 | + | + | + | + |
| 3052 | 482211712902 | 8K2 1% 0.063W 0603 | + | + | + | + |
| 3053 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3054 | 482211711188 | 20K 1% 0,1W | + | + | + | + |
| 3055 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3056 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3057 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3058 | 482205120154 | 150K00 5% 0,1W | + | + | + | + |
| 3059 | 482205130682 | 6K80 5% 0,062W | + | + | + | + |
| 3060 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3061 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3063 | 482211713572 | 22R 5% 1206 | + | + | + | + |
| 3064 | 482205130221 | 220R00 5% 0,062W | + | + | + | + |
| 3065 | 482205120393 | 39K00 5% 0,1W | + | + | + | + |
| 3066 | 482211712367 | 33K 1% 0.10W | + | + | + | + |
| 3067 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3068 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3069 | 482205120392 | 3K90 5% 0,1W | + | + | + | + |
| 3070 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3071 | 482205130222 | 2K20 5% 0,062W | + | + | + | + |
| 3072 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3073 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3074 | 482211711151 | 1R 5% | + | + | + | + |
| 3075 | 482205120154 | 150K00 5% 0,1W | + | + | + | + |
| 3076 | 482205120154 | 150K00 5% 0,1W | + | + | + | + |
| 3077 | 482205120154 | 150K00 5% 0,1W | + | + | + | + |
| 3078 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3079 | 482211711751 | 16K RC12H 1% 0805 | + | + | + | + |
| 3081 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3082 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3085 | 482211713568 | 6R8 5% 1206 | + | + | + | + |
| 3086 | 482211711503 | 220R 1% 0.1W | + | + | + | + |
| 3087 | 482205130222 | 2K20 5% 0,062W | + | + | + | + |
| 3088 | 482205130152 | 1K50 5% 0,062W | + | + | + | + |
| 3090 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3091 | 482211712903 | 1K8 1% 0.063W 0603 | + | + | + | + |
| 3092 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3094 | 482205130221 | 220R00 5% 0,062W | + | + | + | + |
| 3095 | 482211713568 | 6R8 5% 1206 | + | + | + | + |
| 3097 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3098 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3100 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3101 | 482211713572 | 22R 5% 1206 | + | + | + | + |
| 3102 | 482211711148 | 56K 1% 0,1W | + | + | + | + |
| 3103 | 482211710833 | 10K 1% 0,1W | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|--------------------------------|--------|--------|--------|--------|
| 3104 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3105 | 482205120182 | 1K80 5% 0,1W | + | + | + | + |
| 3106 | 482205130008 | 0R00 JUMPER | + | + | + | + |
| 3107 | 482205130008 | 0R00 JUMPER | + | + | + | + |
| 3110 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3111 | 482211712902 | 8K2 1% 0.063W 0603 | + | + | + | + |
| 3112 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3113 | 482211711503 | 220R 1% 0.1W | + | + | + | + |
| 3114 | 482211713577 | 330R 1% RC12H 0805 1,25W | + | + | + | + |
| 3115 | 482211712521 | 68R 1% 0,1W | + | + | + | + |
| 3116 | 482211711817 | 1K2 1% 1/16W | + | + | + | + |
| 3117 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3118 | 482205130561 | 560R00 5% 0,062W | + | + | + | + |
| 3119 | 482205130221 | 220R00 5% 0,062W | + | + | + | + |
| 3120 | 532211711726 | 10R 5% | + | + | + | + |
| 3123 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3126 | 482205130682 | 6K80 5% 0,062W | + | + | + | + |
| 3127 | 482211712903 | 1K8 1% 0.063W 0603 | + | + | + | + |
| 3128 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3129 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3130 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3131 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3200 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3201 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3202 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3203 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3204 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3205 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3206 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3207 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3208 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3209 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 3210 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3211 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3212 | 482211711503 | 220R 1% 0.1W | + | + | + | + |
| 3213 | 482205130008 | 0R00 JUMPER | + | + | + | + |
| 3215 | 482205130153 | 15K00 5% 0,062W | + | + | + | + |
| 3216 | 482205130153 | 15K00 5% 0,062W | + | + | + | + |
| 3217 | 482211712925 | 47K 1% 0.063W 0603 | + | + | + | + |
| 3218 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3219 | 482205130223 | 22K00 5% 0,062W | + | + | + | + |
| 3220 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3221 | 482205130223 | 22K00 5% 0,062W | + | + | + | + |
| 3222 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3223 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3224 | 482211711374 | 120K 1% RC12H 0805 | + | + | + | + |
| 3225 | 482211712367 | 33K 1% 0.10W | + | + | + | + |
| 3226 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3227 | 482211712367 | 33K 1% 0.10W | + | + | + | + |
| 3228 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3229 | 482211711374 | 120K 1% RC12H 0805 | + | + | + | + |
| 3230 | 482211713632 | 100K 1% 0603 0.62W | + | + | + | + |
| 3231 | 482211713632 | 100K 1% 0603 0.62W | + | + | + | + |
| 3232 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3233 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3234 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3235 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3237 | 482205130562 | 5K6 5% 0,063W 0603 RC21 RST SM | + | + | + | + |
| 3238 | 482205130221 | 220R00 5% 0,062W | + | + | + | + |
| 3239 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3240 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|--------------------------------|--------|--------|--------|--------|
| 3241 | 482205130008 | OR00 JUMPER | + | + | + | + |
| 3242 | 235003510103 | RST NETW SM ARV24 4X10K PM5 R | + | + | + | + |
| 3243 | 235003510103 | RST NETW SM ARV24 4X10K PM5 R | + | + | + | + |
| 3244 | 482205130008 | OR00 JUMPER | + | + | + | + |
| 3245 | 482205130221 | 220R00 5% 0,062W | + | + | + | + |
| 3246 | 482205130221 | 220R00 5% 0,062W | + | + | + | + |
| 3248 | 482211713523 | 220R 5% RESN 0.63W | + | + | + | + |
| 3249 | 482211711503 | 220R 1% 0.1W | + | + | + | + |
| 3252 | 482211711145 | 4K70 1% 0,1W | + | + | + | + |
| 3253 | 482211711145 | 4K70 1% 0,1W | + | + | + | + |
| 3254 | 482205130008 | OR00 JUMPER | + | + | + | + |
| 3255 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3256 | 482205130008 | OR00 JUMPER | + | + | + | + |
| 3260 | 482205130008 | OR00 JUMPER | + | + | + | + |
| 3261 | 482205130222 | 2K20 5% 0,062W | + | + | + | + |
| 3265 | 482205130008 | OR00 JUMPER | + | + | + | + |
| 3271 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3273 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3274 | 482211710837 | 100K 1% 0.1W | + | + | + | + |
| 3276 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3280 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3281 | 482211713579 | 220K 1% 0.1W RC12H 0805 | + | + | + | + |
| 3284 | 482211711151 | 1R 5% | + | + | + | + |
| 3286 | 482205130223 | 22K00 5% 0,062W | + | + | + | + |
| 3287 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3288 | 482205130563 | 56K00 5% 0,062W | + | + | + | + |
| 3289 | 482205130563 | 56K00 5% 0,062W | + | + | + | + |
| 3290 | 482205130683 | 68K00 5% 0,062W | + | + | + | + |
| 3291 | 482205130563 | 56K00 5% 0,062W | + | + | + | + |
| 3295 | 482205130332 | 3K30 5% 0,062W | + | + | + | + |
| 3297 | 482205130332 | 3K30 5% 0,062W | + | + | + | + |
| 3299 | 482205130332 | 3K30 5% 0,062W | + | + | + | + |
| 3300 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3301 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3303 | 482211713572 | 22R 5% 1206 | + | + | + | + |
| 3305 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3308 | 482205120008 | OR00 JUMP. (0805) | + | + | + | + |
| 3309 | 482211712367 | 33K 1% 0.10W | + | + | + | + |
| 3312 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3313 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3314 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3315 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3316 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3317 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3319 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3322 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3323 | 482205130562 | 5K6 5% 0,063W 0603 RC21 RST SM | + | + | + | + |
| 3324 | 482205130562 | 5K6 5% 0,063W 0603 RC21 RST SM | + | + | + | + |
| 3325 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3333 | 482211713574 | 1R5 5% 1206 | + | + | + | + |
| 3334 | 482211713574 | 1R5 5% 1206 | + | + | + | + |
| 3335 | 482211713574 | 1R5 5% 1206 | + | + | + | + |
| 3337 | 482205130563 | 56K00 5% 0,062W | + | + | + | + |
| 3338 | 532211712487 | 1K RC12G 1% 0,125W | + | + | + | + |
| 3339 | 532211712487 | 1K RC12G 1% 0,125W | + | + | + | + |
| 3340 | 482211713632 | 100K 1% 0603 0.62W | + | + | + | + |
| 3341 | 232273468209 | RST SM 0805 RC12H 82R PM1 | + | + | + | + |
| 3346 | 482211711507 | 6K8 1% 0,1W | + | + | + | + |
| 3347 | 482211711507 | 6K8 1% 0,1W | + | + | + | + |
| 3348 | 482211711507 | 6K8 1% 0,1W | + | + | + | + |
| 3349 | 482211713632 | 100K 1% 0603 0.62W | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|---------------------------|--------|--------|--------|--------|
| 3350 | 232273468209 | RST SM 0805 RC12H 82R PM1 | + | + | + | + |
| 3351 | 482211711151 | 1R 5% | + | + | + | + |
| 3352 | 482205130008 | 0R00 JUMPER | + | + | + | + |
| 3360 | 482211710354 | 22K 1% 0,1W | + | + | + | + |
| 3361 | 482211712139 | 22R 5% 0,062W | + | + | + | + |
| 3362 | 482211712708 | 39K 1% 0,1W 0805 RC12G | + | + | + | + |
| 3363 | 482211712968 | 820R 5% 0,62W | + | + | + | + |
| 3365 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3368 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3370 | 482205130561 | 560R00 5% 0,062W | + | + | + | + |
| 3371 | 482205130152 | 1K50 5% 0,062W | + | + | + | + |
| 3372 | 482205120122 | 1K20 5% 0,1W | + | + | + | + |
| 3373 | 482211712903 | 1K8 1% 0.063W 0603 | + | + | + | + |
| 3374 | 482211713572 | 22R 5% 1206 | + | + | + | + |
| 3375 | 482205130222 | 2K20 5% 0,062W | + | + | + | + |
| 3376 | 482205130221 | 220R00 5% 0,062W | + | + | + | + |
| 3377 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3378 | 482205130273 | 27K00 5% 0,062W | + | + | + | + |
| 3379 | 482205130183 | 18K00 5% 0,062W | + | + | + | + |
| 3381 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | + |
| 3382 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3402 | 482211711503 | 220R 1% 0.1W | + | + | + | - |
| 3403 | 482211712024 | 27K 1% 0.1W | + | + | + | - |
| 3404 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3405 | 482211712024 | 27K 1% 0.1W | + | + | + | - |
| 3407 | 482205120101 | 100R00 5% 0,1W | + | + | + | - |
| 3408 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3409 | 482211712367 | 33K 1% 0.10W | + | + | + | - |
| 3410 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3411 | 482211711152 | 4R7 5% | + | + | + | - |
| 3412 | 482211712024 | 27K 1% 0.1W | + | + | + | - |
| 3413 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3414 | 482211712024 | 27K 1% 0.1W | + | + | + | - |
| 3415 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3416 | 482211712367 | 33K 1% 0.10W | + | + | + | - |
| 3418 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | - |
| 3420 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3421 | 482211711383 | 12K 1% 0,1W | + | + | + | - |
| 3422 | 482211710834 | 47K 1% 0,1W | + | + | + | - |
| 3423 | 482211713629 | 120R 1% 0.1W RC12H 0805 | + | - | + | - |
| 3424 | 482205120225 | 2M20 5% 0,1W | + | - | + | - |
| 3427 | 482211713629 | 120R 1% 0.1W RC12H 0805 | + | - | + | - |
| 3428 | 482205120225 | 2M20 5% 0,1W | + | - | + | - |
| 3429 | 482211710834 | 47K 1% 0,1W | + | + | + | - |
| 3432 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3433 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | - |
| 3435 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3436 | 482211711383 | 12K 1% 0,1W | + | + | + | - |
| 3439 | 482211711152 | 4R7 5% | + | + | + | - |
| 3441 | 482205120101 | 100R00 5% 0,1W | + | + | + | - |
| 3447 | 482205120008 | 0R00 JUMP. (0805) | - | + | + | - |
| 3448 | 482205120008 | 0R00 JUMP. (0805) | - | + | + | - |
| 3449 | 482205120008 | 0R00 JUMP. (0805) | - | + | + | - |
| 3450 | 319802153311 | 330R 5% | + | - | - | - |
| 3451 | 482211711383 | 12K 1% 0,1W | + | + | + | - |
| 3452 | 482211711383 | 12K 1% 0,1W | + | + | + | - |
| 3453 | 482211713579 | 220K 1% 0.1W RC12H 0805 | + | + | + | - |
| 3454 | 482211713579 | 220K 1% 0.1W RC12H 0805 | + | + | + | - |
| 3455 | 319802190030 | RST JUMPER 0603 0.05 OHM | + | + | + | - |
| 3460 | 319802190030 | RST JUMPER 0603 0.05 OHM | + | + | + | - |
| 3531 | 482205120562 | 5K6 5% 0,1W 0805 | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-------------------|--------|--------|--------|--------|
| 3532 | 482205120562 | 5K6 5% 0,1W 0805 | + | + | + | + |
| 3533 | 482211710837 | 100K 1% 0,1W | + | + | + | + |
| 3536 | 482211710837 | 100K 1% 0,1W | + | + | + | + |
| 3537 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3538 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3539 | 482211710837 | 100K 1% 0,1W | + | + | + | + |
| 3540 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3541 | 482211711747 | 12R 1206 5% FUSE | + | + | + | + |
| 3542 | 482211711747 | 12R 1206 5% FUSE | + | + | + | + |
| 3544 | 482211710834 | 47K 1% 0,1W | + | + | + | + |
| 3545 | 482211713568 | 6R8 5% 1206 | + | + | + | + |
| 3546 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3547 | 482211683933 | 15K 1% 0,1W | + | + | + | + |
| 3548 | 482211710834 | 47K 1% 0,1W | + | + | + | + |
| 3549 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3550 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3551 | 482205120332 | 3K30 5% 0,1W | + | + | + | + |
| 3552 | 482211710834 | 47K 1% 0,1W | + | + | + | + |
| 3553 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3554 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3555 | 482205120122 | 1K20 5% 0,1W | + | + | + | + |
| 3556 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3557 | 482211710837 | 100K 1% 0,1W | + | + | + | + |
| 3559 | 482205120562 | 5K6 5% 0,1W 0805 | + | + | + | + |
| 3560 | 482211710837 | 100K 1% 0,1W | + | + | + | + |
| 3562 | 482205120562 | 5K6 5% 0,1W 0805 | + | + | + | + |
| 3563 | 482205130563 | 56K00 5% 0,062W | + | + | + | + |
| 3566 | 482211710837 | 100K 1% 0,1W | + | + | + | + |
| 3567 | 482205120223 | 22K00 5% 0,1W | + | + | + | + |
| 3570 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3701 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3702 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3703 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3704 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | + |
| 3705 | 482205130223 | 22K00 5% 0,062W | + | + | + | + |
| 3706 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3708 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3710 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3711 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3712 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3713 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3714 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3715 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3716 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3717 | 482211710833 | 10K 1% 0,1W | - | + | + | + |
| 3718 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3719 | 482205130103 | 10K00 5% 0,062W | + | + | - | + |
| 3720 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3721 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3722 | 482211710833 | 10K 1% 0,1W | + | - | - | - |
| 3723 | 482211710833 | 10K 1% 0,1W | - | - | - | + |
| 3724 | 482205130103 | 10K00 5% 0,062W | + | - | + | - |
| 3725 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3726 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3727 | 482205120105 | 1M00 5% 0,1W | + | + | + | + |
| 3728 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3729 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3731 | 482205130391 | 390R00 5% 0,062W | + | + | + | + |
| 3732 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3735 | 482205120479 | 47R00 5% 0,1W | + | + | + | + |
| 3742 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------|--------|--------|--------|--------|
| 3743 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3744 | 482205120274 | 270K00 5% 0,1W | + | + | + | + |
| 3745 | 482205120274 | 270K00 5% 0,1W | + | + | + | + |
| 3746 | 482205130153 | 15K00 5% 0,062W | + | + | + | + |
| 3747 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3748 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3749 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3750 | 482205130123 | 12K00 5% 0,062W | + | + | + | + |
| 3751 | 482205120472 | 4K70 5% 0,1W | + | - | - | - |
| 3752 | 482211710353 | 150R 1% 0,1W | + | + | + | + |
| 3753 | 482205120472 | 4K70 5% 0,1W | + | - | - | - |
| 3754 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3755 | 482211710353 | 150R 1% 0,1W | + | + | + | + |
| 3756 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3757 | 482205120479 | 47R00 5% 0,1W | + | - | - | - |
| 3758 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3759 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3760 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3761 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3762 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3763 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3764 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3766 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3767 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3768 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3769 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3770 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3771 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3780 | 482211710837 | 100K 1% 0,1W | + | + | + | + |
| 3806 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3807 | 482205120008 | 0R00 JUMP. (0805) | + | + | + | + |
| 3808 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3809 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3810 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3811 | 482205130103 | 10K00 5% 0,062W | + | + | + | + |
| 3813 | 482205130101 | 100R00 5% 0,062W | + | + | + | + |
| 3814 | 482205130479 | 47R00 5% 0,062W | + | + | + | + |
| 3817 | 482205110102 | 1K00 2% 0,25W | + | + | + | + |
| 3818 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3819 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3820 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3821 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3822 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3823 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3824 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3825 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3826 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3828 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3829 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3830 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3831 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3832 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3833 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3834 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3835 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3836 | 482205130479 | 47R00 5% 0,062W | + | - | - | - |
| 3837 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3838 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3841 | 482205120101 | 100R00 5% 0,1W | + | + | + | + |
| 3843 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3844 | 482211710833 | 10K 1% 0,1W | + | + | + | + |

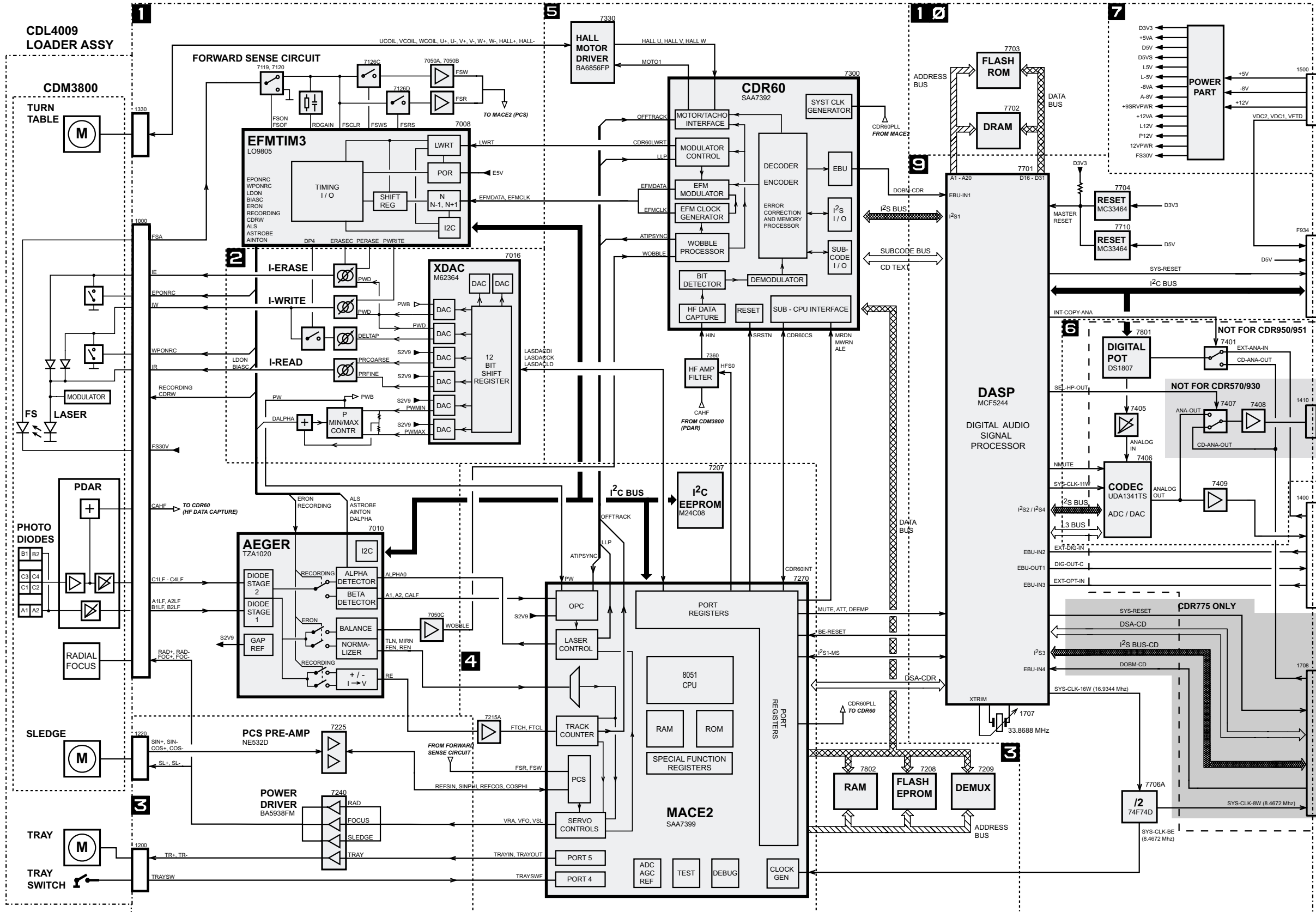
| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------------|--------|--------|--------|--------|
| 3845 | 482211710833 | 10K 1% 0,1W | + | + | + | + |
| 3886 | 482205120008 | 0R00 JUMP. (0805) | - | + | + | - |
| 3889 | 482211711151 | 1R 5% | + | + | + | + |
| 3891 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3892 | 482211710833 | 10K 1% 0,1W | + | + | + | - |
| 3894 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3897 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3898 | 482211713573 | NETW 4 X 47R 5% MNR14 | + | + | + | + |
| 3900 | 319802190030 | RST JUMPER 0603 0.05 OHM | - | - | - | + |
| 3902 | 319802190030 | RST JUMPER 0603 0.05 OHM | - | - | - | + |
| 3903 | 482205130008 | 0R00 JUMPER | + | + | + | + |
| 3904 | 482205110102 | 1K00 2% 0,25W | - | + | - | + |
| 3906 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3907 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3908 | 482205130102 | 1K00 5% 0,062W | + | + | + | + |
| 3909 | 482205130472 | 4K70 5% 0,062W | + | + | + | + |
| 3910 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 3911 | 482205120472 | 4K70 5% 0,1W | + | + | + | + |
| 5008 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5201 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5202 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5203 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5301 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5302 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5303 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5401 | 482215771206 | BLM21A601SPT | + | + | + | - |
| 5403 | 482215771206 | BLM21A601SPT | + | + | + | - |
| 5404 | 482215771206 | BLM21A601SPT | + | + | + | - |
| 5406 | 482215771206 | BLM21A601SPT | + | + | + | - |
| 5407 | 482215771206 | BLM21A601SPT | + | + | + | - |
| 5413 | 482215771206 | BLM21A601SPT | + | + | + | - |
| 5414 | 482215771206 | BLM21A601SPT | + | + | + | - |
| 5500 | 482215711716 | BLM21P300SPT | + | + | + | + |
| 5501 | 242254942103 | IND FXD SM EMI 100MHZ 2K2 R | + | + | + | + |
| 5502 | 242254942103 | IND FXD SM EMI 100MHZ 2K2 R | + | + | + | + |
| 5503 | 242254942103 | IND FXD SM EMI 100MHZ 2K2 R | + | + | + | + |
| 5541 | 242254942103 | IND FXD SM EMI 100MHZ 2K2 R | + | + | + | + |
| 5542 | 242254942103 | IND FXD SM EMI 100MHZ 2K2 R | + | + | + | + |
| 5543 | 482215711716 | BLM21P300SPT | + | + | + | + |
| 5544 | 482215711716 | BLM21P300SPT | + | + | + | + |
| 5546 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5551 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5554 | 482215710548 | 47UH 5% | + | + | + | + |
| 5555 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5556 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5557 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5701 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5709 | 242254942103 | IND FXD SM EMI 100MHZ 2K2 R | + | + | + | + |
| 5710 | 482215710477 | COIL 47UH | + | + | + | + |
| 5712 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5713 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5715 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 5716 | 482215771206 | BLM21A601SPT | + | + | + | + |
| 6002 | 532213030691 | BAW56 | + | + | + | + |
| 6003 | 482213083757 | BAS216 | + | + | + | + |
| 6007 | 532213034337 | BAV99 | + | + | + | + |
| 6373 | 482213083757 | BAS216 | + | + | + | + |
| 6374 | 482213083757 | BAS216 | + | + | + | + |
| 6375 | 482213083757 | BAS216 | + | + | + | + |
| 6400 | 482213010648 | BZX284-C5V6 | + | - | - | - |
| 6500 | 532213083777 | BAV70W | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------|--------------|-----------------------------|--------|--------|--------|--------|
| 6501 | 532213034337 | BAV99 | + | + | + | + |
| 6502 | 482213034441 | BZX79-B22 | + | + | + | + |
| 6553 | 482213083757 | BAS216 | + | + | + | + |
| 6554 | 532213034337 | BAV99 | + | + | + | + |
| 6555 | 482213083757 | BAS216 | + | + | + | + |
| 6556 | 482213083757 | BAS216 | + | + | + | + |
| 6557 | 482213083757 | BAS216 | + | + | + | + |
| 6701 | 934042250135 | DIO VAR SM BB147 (PHSE) R | + | + | + | + |
| 6702 | 934042250135 | DIO VAR SM BB147 (PHSE) R | + | + | + | + |
| 7001 | 482220963709 | LM324DTR | + | + | + | + |
| 7002 | 482220963709 | LM324DTR | + | + | + | + |
| 7005 | 482220990331 | TL084CDT | + | + | + | + |
| 7008 | 482220917223 | EFM TIM3 | + | + | + | + |
| 7010 | 935261972518 | IC SM TZA1020HP/M1 (PHSE) R | + | + | + | + |
| 7016 | 482220917225 | M62364FP | + | + | + | + |
| 7050 | 482220990331 | TL084CDT | + | + | + | + |
| 7104 | 482213060373 | BC856B | + | + | + | + |
| 7110 | 482213060511 | BC847B | + | + | + | + |
| 7111 | 482213060511 | BC847B | + | + | + | + |
| 7112 | 482213042804 | BC817-25 | + | + | + | + |
| 7113 | 482213060511 | BC847B | + | + | + | + |
| 7119 | 482213060383 | BF824 | + | + | + | + |
| 7120 | 482213060383 | BF824 | + | + | + | + |
| 7121 | 532213060123 | BC807-40 | + | + | + | + |
| 7122 | 532213060123 | BC807-40 | + | + | + | + |
| 7124 | 482213060511 | BC847B | + | + | + | + |
| 7126 | 933714420653 | IC SM 74HC4066D | + | + | + | + |
| 7127 | 482213060373 | BC856B | + | + | + | + |
| 7133 | 482213060511 | BC847B | + | + | + | + |
| 7135 | 532213060123 | BC807-40 | + | + | + | + |
| 7201 | 482213060511 | BC847B | + | + | + | + |
| 7202 | 482213060511 | BC847B | + | + | + | + |
| 7207 | 932213040668 | IC SM M24C16-WMN (ST00) R | + | + | + | + |
| 7208 | 310412394850 | FLASH EPROM ASSY CDR-AUDIO | + | + | + | + |
| 7209 | 482220917227 | MC74LCX573 | + | + | + | + |
| 7215 | 482220932073 | MC34072D | + | + | + | + |
| 7225 | 532220971553 | NE532D | + | + | + | + |
| 7240 | 482220917229 | BA5938FM | + | + | + | + |
| 7270 | 482220917231 | SAA7399HL | + | + | + | + |
| 7300 | 935263368557 | IC SM SAA7392HL/M3 (PHSE) Y | + | + | + | + |
| 7330 | 482220916877 | BA6856FP | + | + | + | + |
| 7355 | 933713370653 | IC SM 74HCT00D (PHSE) R | + | + | + | + |
| 7360 | 933715300118 | IC SM 74HCT4051D (PHSE) R | + | + | + | + |
| 7361 | 482213060511 | BC847B | + | + | + | + |
| 7370 | 482213060511 | BC847B | + | + | + | + |
| 7371 | 482213011527 | BFS540 | + | + | + | + |
| 7373 | 482213011527 | BFS540 | + | + | + | + |
| 7375 | 482213011527 | BFS540 | + | + | + | + |
| 7401 | 482220960792 | 74HC4053D | + | - | - | - |
| 7405 | 482220930095 | LM833D | + | + | + | - |
| 7406 | 935254530118 | IC SM UDA1341TS/N1 (PHSE) R | + | + | + | - |
| 7407 | 482220960792 | 74HC4053D | + | - | - | - |
| 7408 | 482220982362 | NJM4556D | + | - | + | - |
| 7409 | 482220930095 | LM833D | + | + | + | - |
| 7410 | 482213042804 | BC817-25 | + | - | + | - |
| 7411 | 482213042804 | BC817-25 | + | - | + | - |
| 7520 | 820405604480 | FET POW STD16NE06L | + | + | + | + |
| 7521 | 482220932073 | MC34072D | + | + | + | + |
| 7522 | 482213060373 | BC856B | + | + | + | + |
| 7523 | 482213060511 | BC847B | + | + | + | + |
| 7524 | 482213060511 | BC847B | + | + | + | + |

| ITEM | CODENUMBER | DESCRIPTION | CDR775 | CDR570 | CDR770 | CDR950 |
|------------|--------------|--------------------------------|--------|--------|--------|--------|
| 7525 | 482213060373 | BC856B | + | + | + | + |
| 7526 | 482213060511 | BC847B | + | + | + | + |
| 7527 | 482213011379 | BCP69 | + | + | + | + |
| 7528 | 482213060511 | BC847B | + | + | + | + |
| 7529 | 482213060373 | BC856B | + | + | + | + |
| 7535 | 482220917398 | LD1117DT33 | + | + | + | + |
| 7548 | 482213060511 | BC847B | + | + | + | + |
| 7549 | 482213060511 | BC847B | + | + | + | + |
| 7556 | 482220990332 | MC79L05ABD | + | + | + | + |
| 7558 | 482220915083 | AN78M09 | + | + | + | + |
| 7560 | 482213060373 | BC856B | + | + | + | + |
| 7561 | 482213060373 | BC856B | + | + | + | + |
| 7562 | 482213060511 | BC847B | + | + | + | + |
| 7563 | 482213060511 | BC847B | + | + | + | + |
| 7701 | 820405603460 | USER PROCESSOR DASP CF5244PU | + | + | + | + |
| 7702 | 482220917375 | GM71V18163CJ-6 | + | + | + | + |
| 7703 | 932213814668 | IC SM AM29LV800BB-70REC (AMD)R | + | + | + | + |
| 7704 | 482220916318 | MC33464-30A | + | + | + | + |
| 7705 | 482220932073 | MC34072D | + | + | + | + |
| 7706 | 482220917236 | 74LV74D | + | + | + | + |
| 7707 | 482213060511 | BC847B | + | - | - | - |
| 7708 | 932214178668 | IC SM 74LCX00M (ST00) R | + | + | + | + |
| 7710 | 932213967685 | IC SM MC33464N-45A (MOTA) R | + | + | + | + |
| 7801 | 820405603520 | LEVEL DIG POTMETER DS1807S-T/R | + | + | + | - |
| 7802 | 820405603910 | IC SM CY7C199-15ZC | + | + | + | + |
| 7803 | 482213060511 | BC847B | + | + | + | + |
| 7804 | 482213060511 | BC847B | + | + | + | + |
| PCINT-DASP | 710408691110 | PC-INTERFACE BOARD DASP | + | + | + | + |
| PCINT-MACE | 710408683110 | PC-INTERFACE BOARD MACE | + | + | + | + |

6. Block diagrams

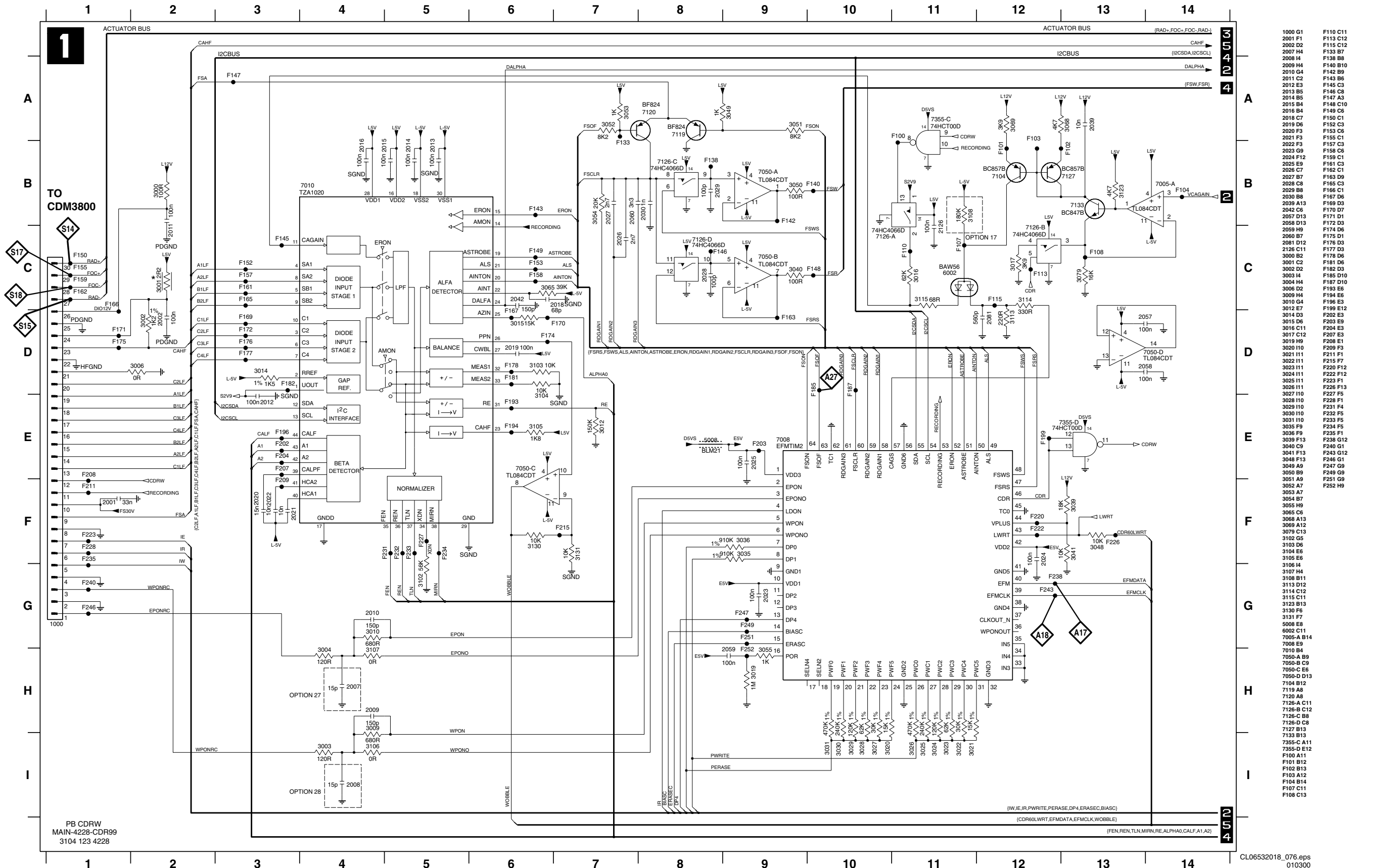
CDR MAIN BOARD BLOCK DIAGRAM



7. Electrical diagrams and PWB's

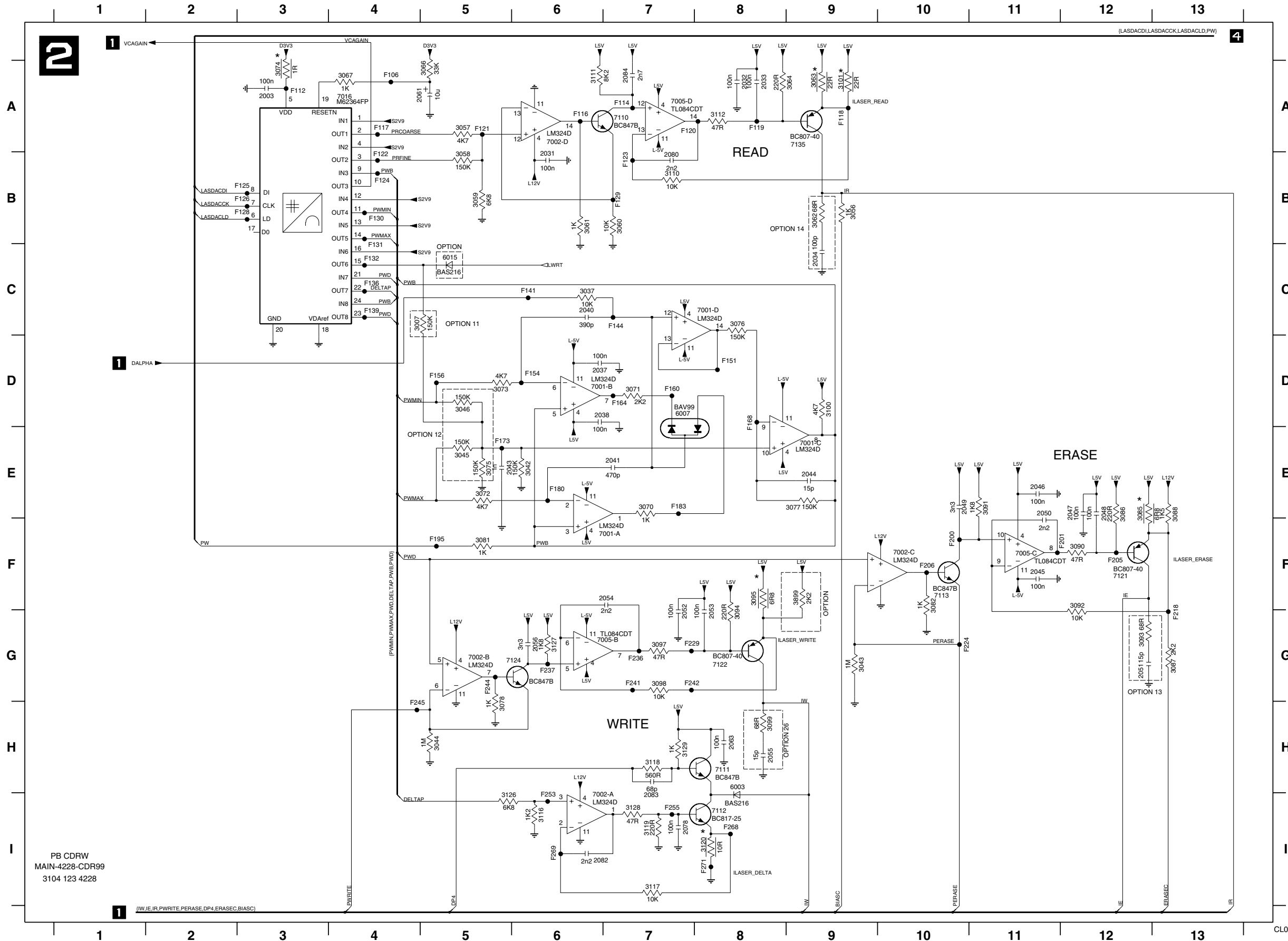
CDR-Mainboard Version 4228.5

CDR MAIN BOARD - CIRCUIT DIAGRAM 1 : AEGER, EFMTIM, FORWARD SENSE CIRCUIT TESTPOINTS



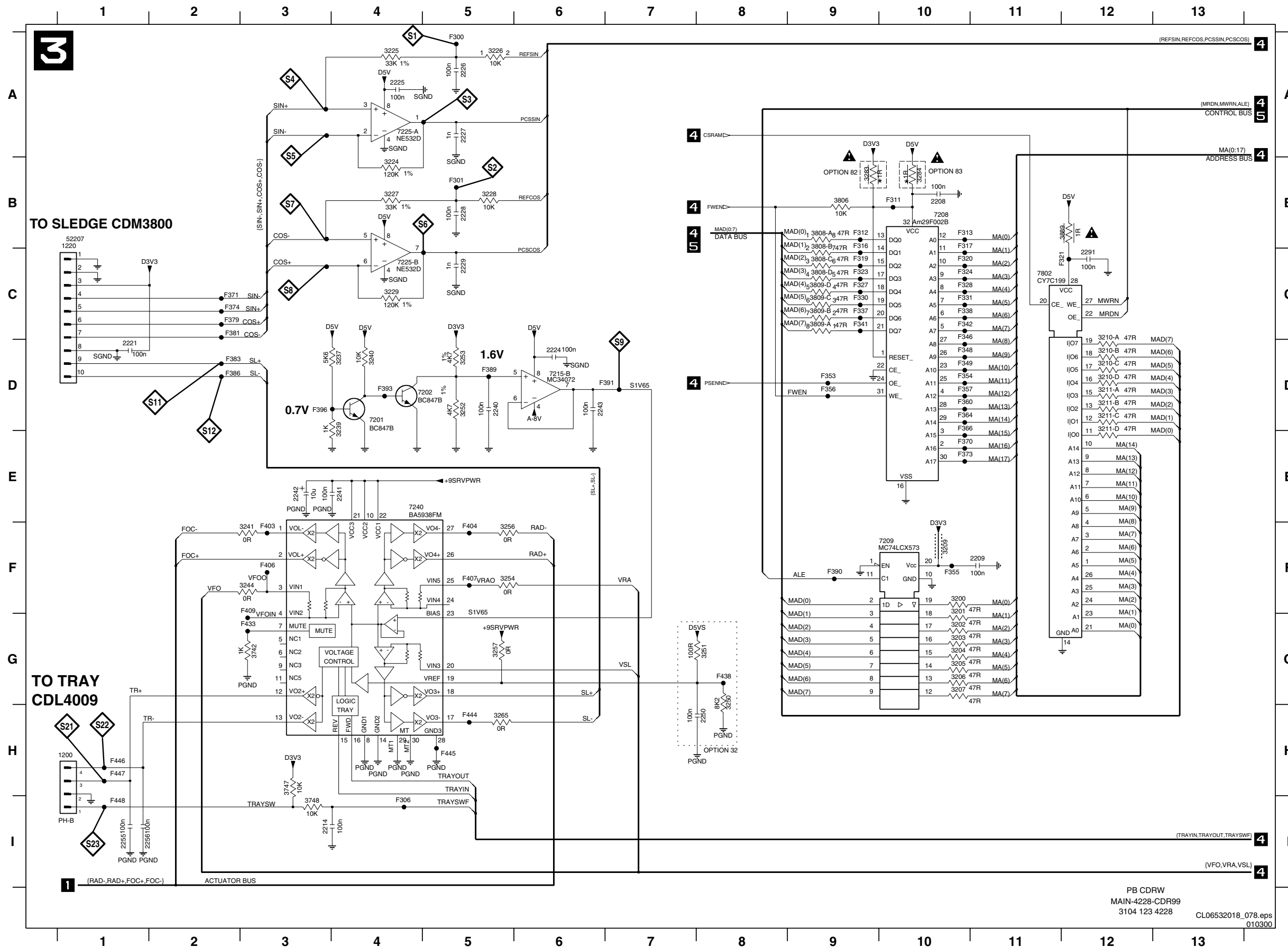
- 1000 G1
- 2001 F1
- 2002 D2
- 2007 H4
- 2008 I4
- 2009 H4
- 2010 G4
- 2011 C2
- 2012 E3
- 2013 B5
- 2014 B5
- 2015 B4
- 2016 B4
- 2018 C7
- 2019 D6
- 2020 F3
- 2021 F3
- 2022 F3
- 2023 G9
- 2024 F12
- 2025 E9
- 2026 C7
- 2027 B7
- 2028 C8
- 2029 B8
- 2030 B8
- 2035 A13
- 2042 C6
- 2057 D13
- 2058 D13
- 2059 H9
- 2060 B7
- 2061 D12
- 2126 C11
- 3000 B2
- 3001 C2
- 3002 D2
- 3003 I4
- 3004 H4
- 3006 D2
- 3009 H4
- 3010 G4
- 3012 E7
- 3014 D3
- 3015 D6
- 3016 C11
- 3017 C12
- 3019 H9
- 3020 I10
- 3021 I11
- 3022 I11
- 3023 I11
- 3024 I11
- 3025 I11
- 3026 I11
- 3027 H0
- 3028 I10
- 3029 I10
- 3030 I10
- 3031 I10
- 3035 F9
- 3036 F9
- 3039 F13
- 3040 C9
- 3041 F13
- 3048 F13
- 3049 A9
- 3050 B9
- 3051 A9
- 3052 A7
- 3053 A7
- 3054 B7
- 3055 H9
- 3065 C6
- 3068 A13
- 3069 A13
- 3079 C13
- 3102 G5
- 3103 D6
- 3104 E6
- 3105 E6
- 3106 I4
- 3107 H4
- 3108 B11
- 3113 D12
- 3114 C12
- 3115 C11
- 3123 B13
- 3130 F6
- 3131 F7
- 5008 E6
- 6002 C11
- 7005-A B14
- 7008 E9
- 7010 B4
- 7050-A B9
- 7050-B C9
- 7050-C E6
- 7050-D D13
- 7104 B12
- 7119 A8
- 7120 A8
- 7126-A C11
- 7126-B C12
- 7126-C B8
- 7126-D C8
- 7127 B13
- 7133 B13
- 7355-C A11
- 7355-D E12
- F100 A11
- F101 B12
- F102 B13
- F103 A12
- F104 B14
- F107 C11
- F108 C13
- F110 G1
- F111 C12
- F115 C12
- F133 B7
- F138 B8
- F140 B10
- F142 B9
- F143 B6
- F145 C3
- F146 C3
- F147 A3
- F148 C10
- F149 C6
- F150 C1
- F152 C3
- F153 C6
- F155 C1
- F157 C3
- F158 C6
- F159 C1
- F161 C3
- F162 C1
- F163 D9
- F165 C3
- F166 C1
- F167 D6
- F169 D3
- F170 D7
- F171 D1
- F172 D3
- F174 D6
- F175 D1
- F176 D3
- F177 D3
- F178 D6
- F181 D6
- F182 D3
- F183 D6
- F185 D10
- F187 D10
- F193 E5
- F194 E6
- F196 E3
- F199 E12
- F202 E3
- F203 E9
- F204 E3
- F207 E1
- F208 E1
- F209 F3
- F211 F1
- F215 F7
- F220 F12
- F222 F12
- F223 F1
- F226 F13
- F227 F5
- F228 F1
- F231 F4
- F232 F5
- F233 F5
- F234 F5
- F235 F5
- F236 G12
- F240 G1
- F243 G12
- F246 G1
- F247 G9
- F249 G9
- F251 G9
- F252 H9

CDR MAIN BOARD - CIRCUIT DIAGRAM 2 : XDAC, LASER DRIVE CURRENT CIRCUITS



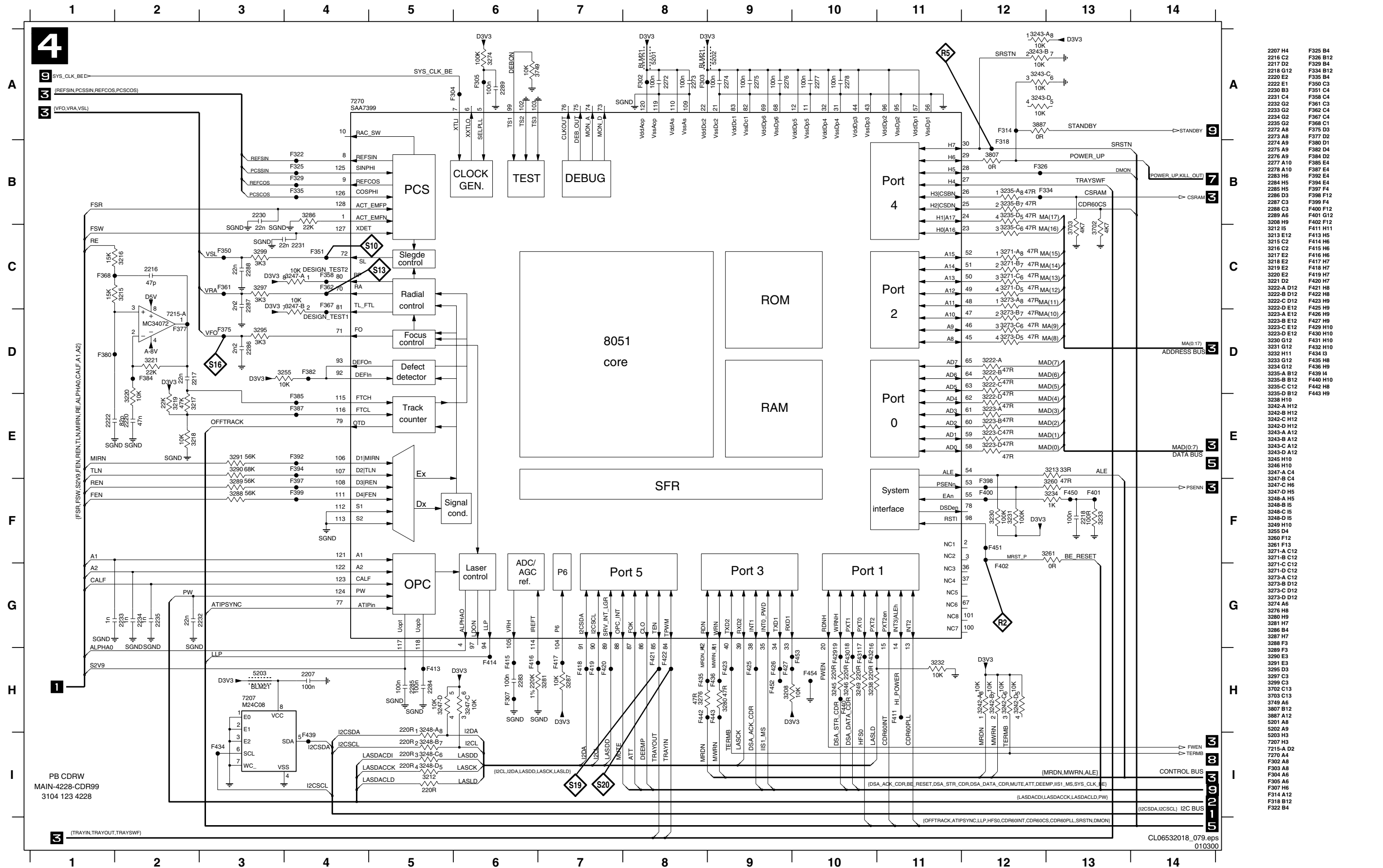
- 2003 A3
- 2031 B6
- 2032 A8
- 2033 A8
- 2034 C9
- 2037 D6
- 2038 D6
- 2040 C6
- 2041 E7
- 2043 E5
- 2044 E9
- 2045 F11
- 2046 E11
- 2047 E12
- 2048 E12
- 2049 E10
- 2050 E11
- 2051 G12
- 2052 G7
- 2053 G8
- 2054 F7
- 2055 H8
- 2056 G6
- 2061 A5
- 2063 H8
- 2078 I7
- 2080 B7
- 2082 I6
- 2083 I7
- 2084 A7
- 2087 C4
- 2088 B7
- 2089 H5
- 2092 F12
- 2093 G12
- 2094 G8
- 2095 F8
- 2097 G7
- 2098 G7
- 2099 H8
- 2100 D9
- 2101 A9
- 2110 B7
- 2111 A6
- 2112 A8
- 2116 I8
- 2117 I7
- 2118 H7
- 2119 I7
- 2120 I8
- 2126 I5
- 2127 G6
- 2128 I7
- 2129 H7
- 2130 F9
- 2135 A9
- 2136 A4
- 2137 A3
- 2138 A3
- 2139 A3
- 2140 A3
- 2141 A3
- 2142 A3
- 2143 A3
- 2144 A3
- 2145 A3
- 2146 A3
- 2147 A3
- 2148 A3
- 2149 A3
- 2150 A3
- 2151 A3
- 2152 A3
- 2153 A3
- 2154 A3
- 2155 A3
- 2156 A3
- 2157 A3
- 2158 A3
- 2159 A3
- 2160 A3
- 2161 A3
- 2162 A3
- 2163 A3
- 2164 A3
- 2165 A3
- 2166 A3
- 2167 A3
- 2168 A3
- 2169 A3
- 2170 A3
- 2171 A3
- 2172 A3
- 2173 A3
- 2174 A3
- 2175 A3
- 2176 A3
- 2177 A3
- 2178 A3
- 2179 A3
- 2180 A3
- 2181 A3
- 2182 A3
- 2183 A3
- 2184 A3
- 2185 A3
- 2186 A3
- 2187 A3
- 2188 A3
- 2189 A3
- 2190 A3
- 2191 A3
- 2192 A3
- 2193 A3
- 2194 A3
- 2195 A3
- 2196 A3
- 2197 A3
- 2198 A3
- 2199 A3
- 2200 A3
- 2201 A3
- 2202 A3
- 2203 A3
- 2204 A3
- 2205 A3
- 2206 A3
- 2207 A3
- 2208 A3
- 2209 A3
- 2210 A3
- 2211 A3
- 2212 A3
- 2213 A3
- 2214 A3
- 2215 A3
- 2216 A3
- 2217 A3
- 2218 A3
- 2219 A3
- 2220 A3
- 2221 A3
- 2222 A3
- 2223 A3
- 2224 A3
- 2225 A3
- 2226 A3
- 2227 A3
- 2228 A3
- 2229 A3
- 2230 A3
- 2231 A3
- 2232 A3
- 2233 A3
- 2234 A3
- 2235 A3
- 2236 A3
- 2237 A3
- 2238 A3
- 2239 A3
- 2240 A3
- 2241 A3
- 2242 A3
- 2243 A3
- 2244 A3
- 2245 A3
- 2246 A3
- 2247 A3
- 2248 A3
- 2249 A3
- 2250 A3
- 2251 A3
- 2252 A3
- 2253 A3
- 2254 A3
- 2255 A3
- 2256 A3
- 2257 A3
- 2258 A3
- 2259 A3
- 2260 A3
- 2261 A3
- 2262 A3
- 2263 A3
- 2264 A3
- 2265 A3
- 2266 A3
- 2267 A3
- 2268 A3
- 2269 A3
- 2270 A3
- 2271 A3
- 2272 A3
- 2273 A3
- 2274 A3
- 2275 A3
- 2276 A3
- 2277 A3
- 2278 A3
- 2279 A3
- 2280 A3
- 2281 A3
- 2282 A3
- 2283 A3
- 2284 A3
- 2285 A3
- 2286 A3
- 2287 A3
- 2288 A3
- 2289 A3
- 2290 A3
- 2291 A3
- 2292 A3
- 2293 A3
- 2294 A3
- 2295 A3
- 2296 A3
- 2297 A3
- 2298 A3
- 2299 A3
- 2300 A3

CDR MAIN BOARD - CIRCUIT DIAGRAM 3 : SERVO DRIVERS, MACE-RAM, -FLASH, -DEMUX TEST POINTS



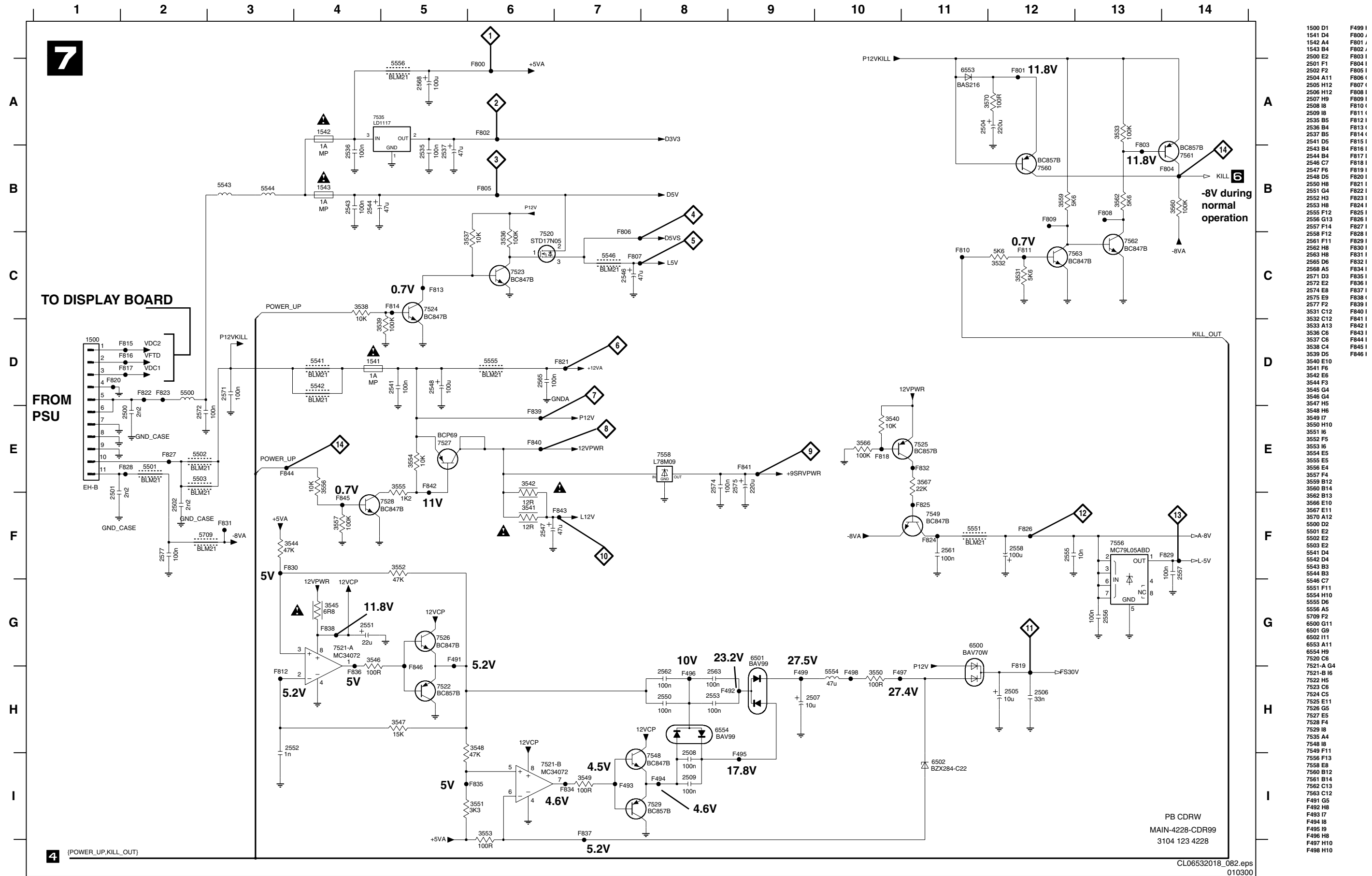
- 1200 H1
- 1220 B1
- 2208 B10
- 2209 F11
- 2214 I3
- 2221 D1
- 2224 C2
- 2225 A4
- 2226 A5
- 2227 A5
- 2228 B5
- 2229 C5
- 2240 D5
- 2241 E4
- 2242 E3
- 2243 D6
- 2250 H6
- 2255 I1
- 2256 I1
- 2291 C12
- 3200 F10
- 3201 G10
- 3202 G10
- 3203 G10
- 3204 G10
- 3205 G10
- 3206 G10
- 3207 G10
- 3209 F10
- 3210-A D12
- 3210-B D12
- 3210-C D12
- 3210-D D12
- 3211-A D12
- 3211-B D12
- 3211-C D12
- 3211-D E12
- 3224 B4
- 3225 A4
- 3226 A5
- 3227 B4
- 3228 B5
- 3229 C4
- 3237 D4
- 3239 D4
- 3240 D4
- 3241 F3
- 3244 F3
- 3250 G8
- 3251 G8
- 3252 D5
- 3253 D5
- 3254 F5
- 3256 F5
- 3257 G5
- 3265 H5
- 3283 B9
- 3284 B10
- 3742 G3
- 3747 H5
- 3748 I3
- 3806 B9
- 3808-A B9
- 3808-B C9
- 3808-C C9
- 3808-D C9
- 3809-A C9
- 3809-B C9
- 3809-C C9
- 3809-D C9
- 3889 B12
- 7201 D4
- 7202 D4
- 7208 B10
- 7209 F10
- 7215-B D6
- 7225-A A4
- 7225-B C4
- 7240 E4
- 7802 C11
- F300 A5
- F301 B5
- F306 H4
- F311 B10
- F312 B9
- F313 B10
- F316 B9
- F317 B10
- F319 C9
- F320 C10
- F321 C12
- F323 C9
- F324 C10
- F327 C9
- F328 C10
- F330 C9
- F331 C10
- F337 C9
- F338 C10
- F341 C9
- F342 C10
- F346 C10
- F348 D10
- F349 D10
- F353 D9
- F354 D10
- F355 F10
- F356 D9
- F357 D10
- F360 D10
- F364 D10
- F366 D10
- F370 E10
- F371 C2
- F373 E10
- F374 C2
- F379 C2
- F381 C2
- F383 D2
- F386 D2
- F389 D5
- F390 F9
- F391 D7
- F393 D4
- F396 D3
- F403 F3
- F404 F5
- F406 F3
- F407 F5
- F409 F3
- F433 G3
- F438 G8
- F444 H5
- F445 H5
- F446 H1
- F447 H1
- F448 I1

CDR MAIN BOARD - CIRCUIT DIAGRAM 4 : MACE BE-PROCESSOR TESTPOINTS



| | |
|------------|----------|
| 2207 H4 | F325 B4 |
| 2216 C2 | F326 B12 |
| 2217 D2 | F329 B4 |
| 2218 G12 | F334 B12 |
| 2220 E2 | F335 B4 |
| 2222 E1 | F350 C3 |
| 2230 B3 | F351 C4 |
| 2231 C4 | F358 C4 |
| 2232 G2 | F361 C3 |
| 2233 G2 | F362 C4 |
| 2234 G2 | F367 C4 |
| 2235 G2 | F368 C1 |
| 2272 A8 | F375 D3 |
| 2273 A8 | F377 D2 |
| 2274 A9 | F380 D1 |
| 2275 A9 | F382 D4 |
| 2276 A9 | F384 D2 |
| 2277 A10 | F385 E4 |
| 2278 A10 | F387 E4 |
| 2283 H6 | F392 E4 |
| 2284 H5 | F394 E4 |
| 2285 H5 | F397 F4 |
| 2286 D3 | F398 F12 |
| 2287 C3 | F399 F4 |
| 2288 C3 | F400 F12 |
| 2289 A6 | F401 G12 |
| 3208 H9 | F402 F12 |
| 3212 I5 | F411 H11 |
| 3213 E12 | F413 H5 |
| 3215 C2 | F414 H6 |
| 3216 C2 | F415 H6 |
| 3217 E2 | F416 H6 |
| 3218 E2 | F417 H7 |
| 3219 E2 | F418 H7 |
| 3220 E2 | F419 H7 |
| 3221 D2 | F420 H7 |
| 3222-A D12 | F421 H8 |
| 3222-B D12 | F422 H8 |
| 3222-C D12 | F423 H9 |
| 3222-D E12 | F425 H9 |
| 3223-A E12 | F426 H9 |
| 3223-B E12 | F427 H9 |
| 3223-C E12 | F429 H10 |
| 3223-D E12 | F430 H10 |
| 3230 G12 | F431 H10 |
| 3231 G12 | F432 H10 |
| 3232 H11 | F434 I3 |
| 3233 G12 | F435 H8 |
| 3234 G12 | F436 H9 |
| 3235-A B12 | F438 I4 |
| 3235-B B12 | F440 H10 |
| 3235-C C12 | F442 H8 |
| 3235-D B12 | F443 H9 |
| 3238 H10 | |
| 3240-A H12 | |
| 3242-B H12 | |
| 3242-C H12 | |
| 3242-D H12 | |
| 3243-A A12 | |
| 3243-B A12 | |
| 3243-C A12 | |
| 3243-D A12 | |
| 3245 H10 | |
| 3246 H10 | |
| 3247-A C4 | |
| 3247-B C4 | |
| 3247-C H6 | |
| 3247-D H5 | |
| 3248-A H5 | |
| 3248-B I5 | |
| 3248-C I5 | |
| 3248-D I5 | |
| 3249 H10 | |
| 3255 D4 | |
| 3260 F12 | |
| 3261 F13 | |
| 3271-A C12 | |
| 3271-B C12 | |
| 3271-C C12 | |
| 3271-D C12 | |
| 3273-A C12 | |
| 3273-B D12 | |
| 3273-C D12 | |
| 3273-D D12 | |
| 3274 A6 | |
| 3276 H8 | |
| 3280 H9 | |
| 3281 H7 | |
| 3286 B4 | |
| 3287 H7 | |
| 3288 F3 | |
| 3289 E3 | |
| 3290 E3 | |
| 3291 E3 | |
| 3295 D3 | |
| 3297 C3 | |
| 3299 C3 | |
| 3702 C13 | |
| 3703 C13 | |
| 3749 A6 | |
| 3807 B12 | |
| 3887 A12 | |
| 5201 A8 | |
| 5202 A9 | |
| 5203 H3 | |
| 7207 H3 | |
| 7215-A D2 | |
| 7270 A4 | |
| F302 A8 | |
| F303 A8 | |
| F304 A6 | |
| F307 H6 | |
| F314 A12 | |
| F318 B12 | |
| F322 B4 | |

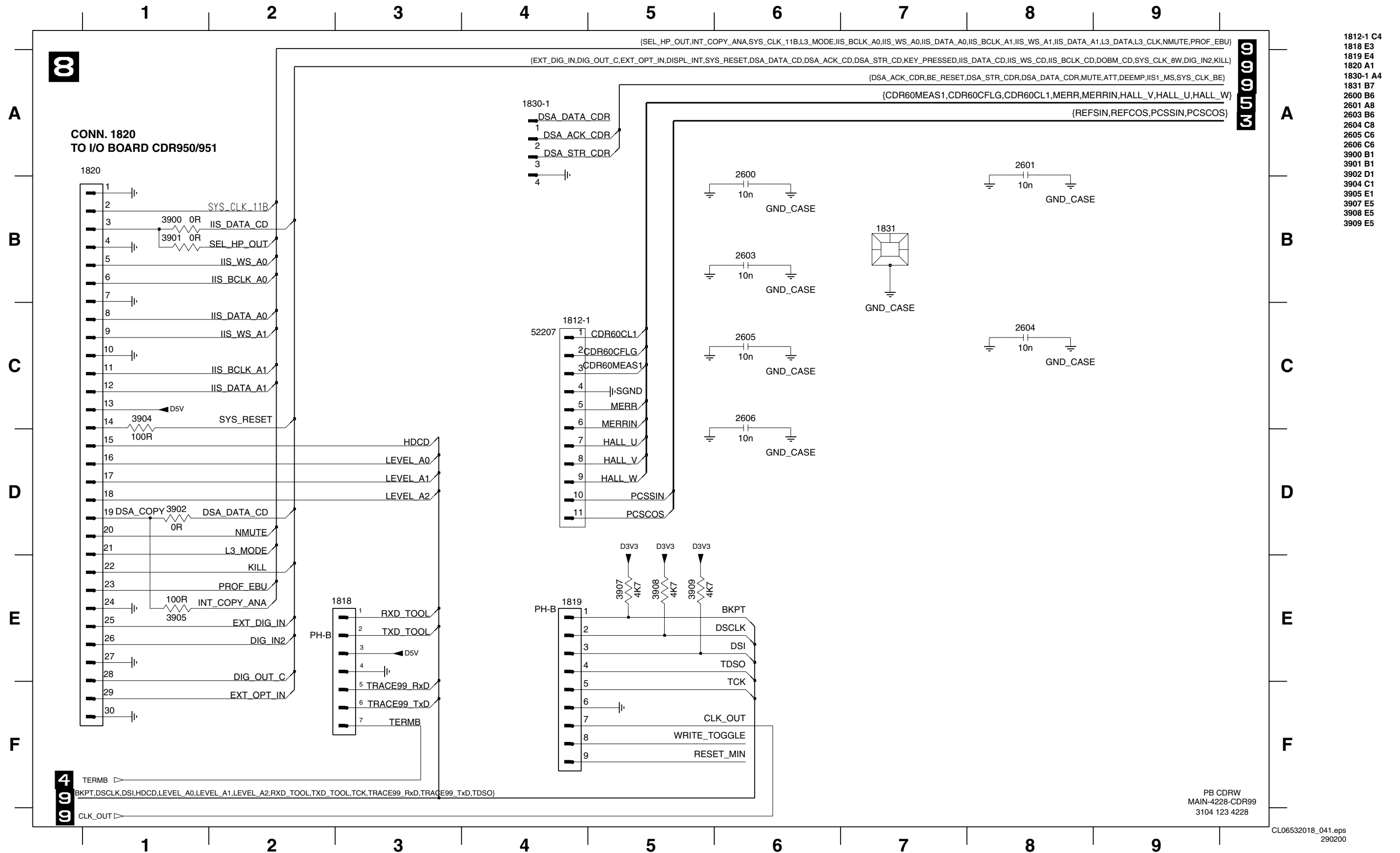
CDR MAIN BOARD - CIRCUIT DIAGRAM 7 : POWER PART TESTPOINTS



- F499 I
- F800 J
- F801 J
- F802 J
- F803 I
- F804 I
- F805 I
- F806 I
- F807 I
- F808 I
- F809 I
- F810 C
- F811 C
- F812 I
- F813 I
- F814 I
- F815 I
- F816 I
- F817 I
- F818 I
- F819 I
- F820 I
- F821 I
- F822 I
- F823 I
- F824 I
- F825 I
- F826 I
- F827 I
- F828 I
- F829 I
- F830 I
- F831 I
- F832 I
- F834 I
- F835 I
- F836 I
- F837 I
- F838 I
- F839 I
- F840 I
- F841 I
- F842 I
- F843 I
- F844 I
- F845 I
- F846 I
- F499 I
- F800 J
- F801 J
- F802 J
- F803 I
- F804 I
- F805 I
- F806 I
- F807 I
- F808 I
- F809 I
- F810 C
- F811 C
- F812 I
- F813 I
- F814 I
- F815 I
- F816 I
- F817 I
- F818 I
- F819 I
- F820 I
- F821 I
- F822 I
- F823 I
- F824 I
- F825 I
- F826 I
- F827 I
- F828 I
- F829 I
- F830 I
- F831 I
- F832 I
- F834 I
- F835 I
- F836 I
- F837 I
- F838 I
- F839 I
- F840 I
- F841 I
- F842 I
- F843 I
- F844 I
- F845 I
- F846 I

PB CDRW
MAIN-4228-CDR99
3104 123 4228

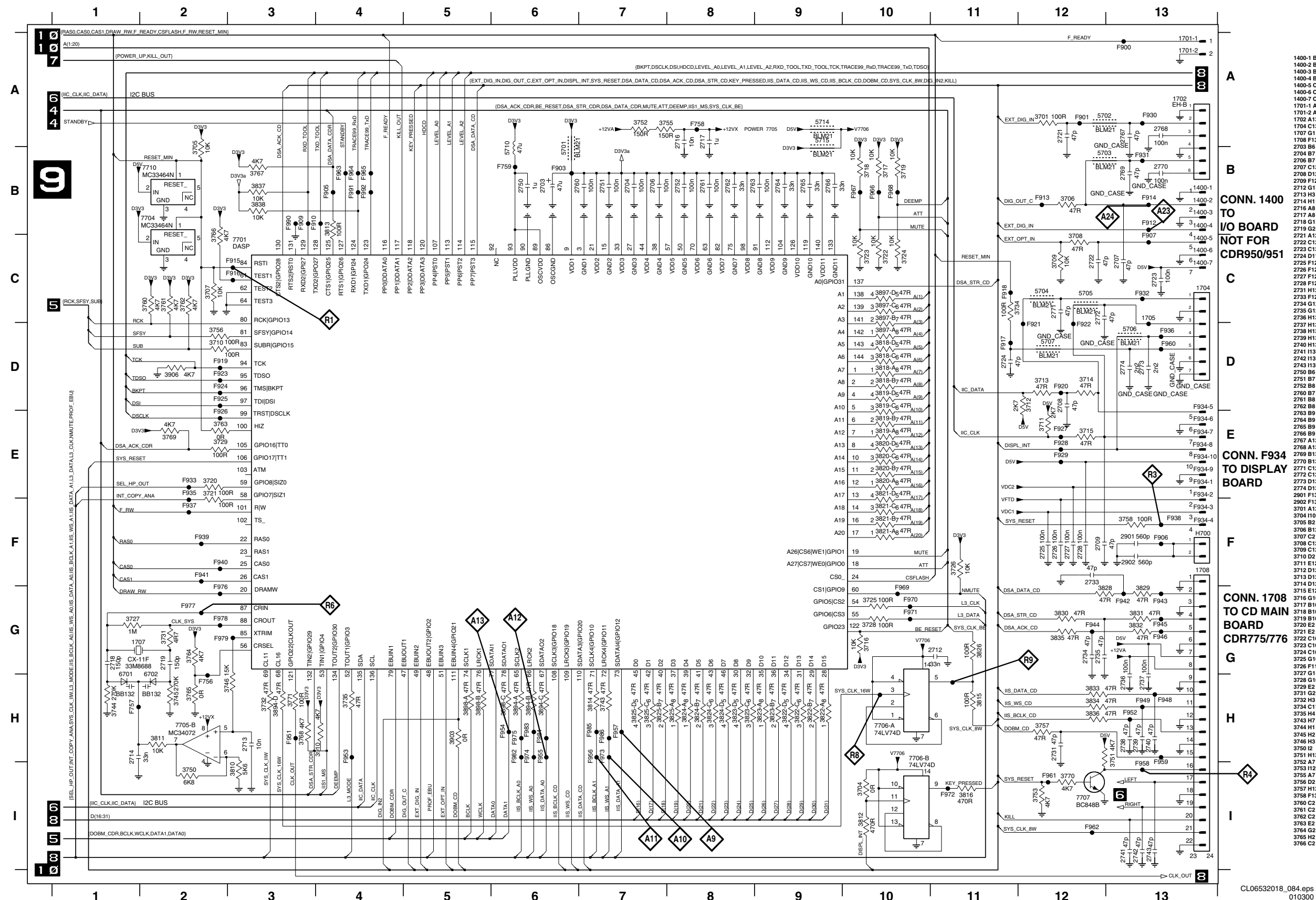
CDR MAIN BOARD - CIRCUIT DIAGRAM 8 : TEST & CONNECTOR PART



- 1812-1 C4
- 1818 E3
- 1819 E4
- 1820 A1
- 1830-1 A4
- 1831 B7
- 2600 B6
- 2601 A8
- 2603 B6
- 2604 C8
- 2605 C6
- 2606 C6
- 3900 B1
- 3901 B1
- 3902 D1
- 3904 C1
- 3905 E1
- 3907 E5
- 3908 E5
- 3909 E5

PB CDRW
MAIN-4228-CDR99
3104 123 4228

CDR MAIN BOARD - CIRCUIT DIAGRAM 9 : DASP MASTER PROCESSOR TESTPOINTS



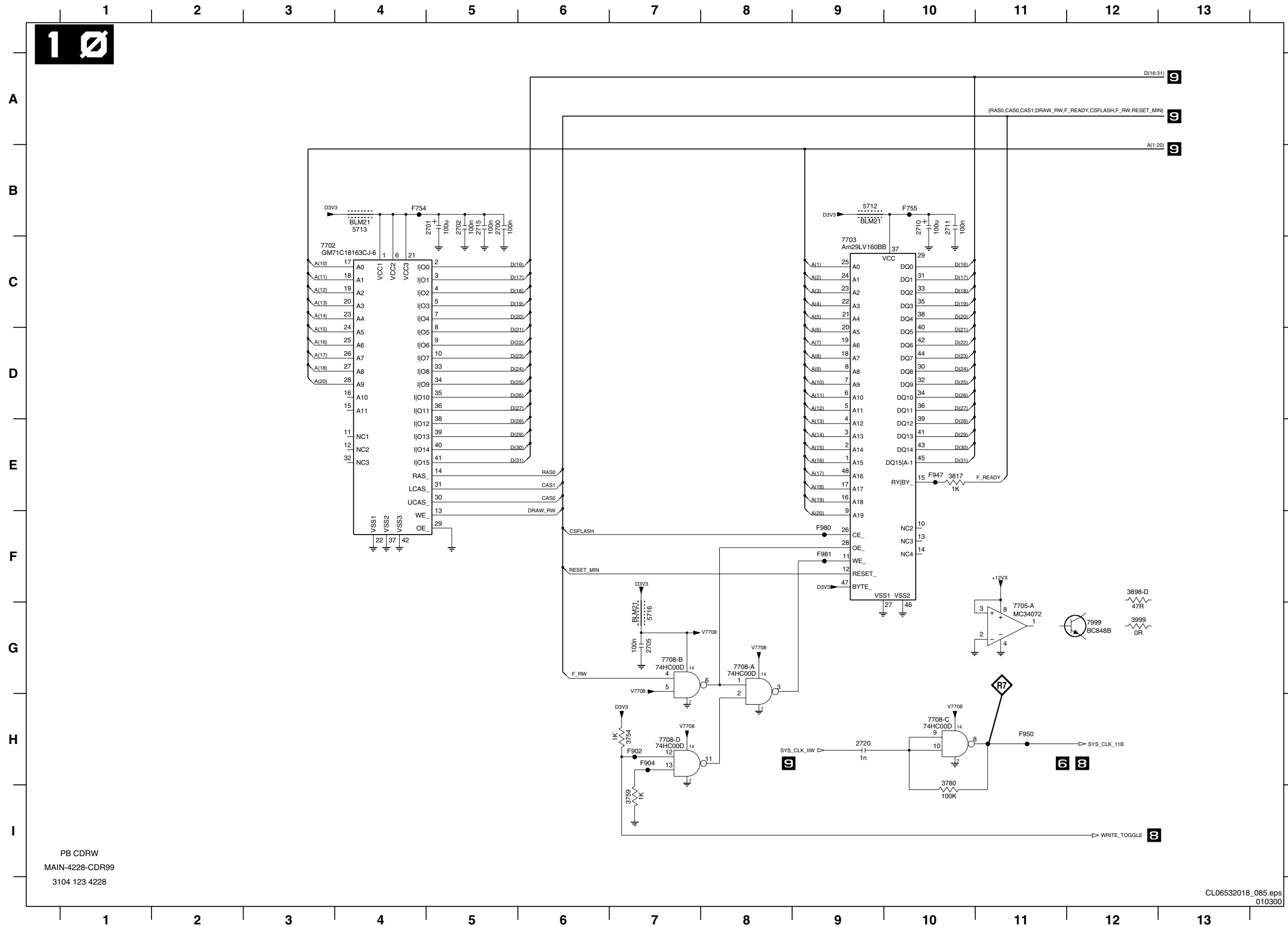
| | |
|------------|------------|
| 1400-1 B13 | 3767 B3 |
| 1400-2 B13 | 3768 H3 |
| 1400-3 B13 | 3769 E2 |
| 1400-4 B13 | 3770 H2 |
| 1400-5 C13 | 3771 H3 |
| 1400-6 C13 | 3810 I3 |
| 1400-7 C13 | 3811 H2 |
| 1701-1 A13 | 3812 H0 |
| 1701-2 A13 | 3813 B4 |
| 1702 A13 | 3814 H7 |
| 1704 C13 | 3815 H11 |
| 1707 G1 | 3816 H1 |
| 1708 F13 | 3816-A D10 |
| 2703 B6 | 3816-B D10 |
| 2704 B7 | 3816-C D10 |
| 2706 B7 | 3816-D D10 |
| 2707 C13 | 3819-A E10 |
| 2708 D12 | 3819-B E10 |
| 2709 F12 | 3819-C D10 |
| 2712 G11 | 3819-D D10 |
| 2713 H3 | 3820-A E10 |
| 2714 H1 | 3820-B E10 |
| 2716 A8 | 3820-C E10 |
| 2717 A8 | 3820-D E10 |
| 2718 G1 | 3821-A F10 |
| 2719 G2 | 3821-B F10 |
| 2721 A12 | 3821-C F10 |
| 2722 C12 | 3821-D E10 |
| 2723 C13 | 3822-A H9 |
| 2724 D11 | 3822-B H9 |
| 2725 F12 | 3822-C H9 |
| 2726 F12 | 3822-D H9 |
| 2727 F12 | 3823-A H9 |
| 2728 F12 | 3823-B H9 |
| 2729 H12 | 3823-C H8 |
| 2730 F12 | 3823-D H8 |
| 2731 G12 | 3824-A H8 |
| 2732 G12 | 3824-B H8 |
| 2733 H12 | 3824-C H8 |
| 2734 H12 | 3824-D H8 |
| 2735 G12 | 3824-E H8 |
| 2736 H12 | 3824-F H8 |
| 2737 H13 | 3824-G H8 |
| 2738 H13 | 3825-A H8 |
| 2739 H13 | 3825-B H7 |
| 2740 H13 | 3825-C H7 |
| 2741 H13 | 3825-D H7 |
| 2742 H13 | 3826 G11 |
| 2743 H13 | 3826 G12 |
| 2744 H13 | 3826 G13 |
| 2745 H13 | 3826 G14 |
| 2746 H13 | 3826 H12 |
| 2747 B7 | 3830 G12 |
| 2752 B8 | 3831 G13 |
| 2753 B8 | 3832 G13 |
| 2754 B9 | 3833 H12 |
| 2755 B9 | 3833 H13 |
| 2756 B9 | 3833 B3 |
| 2757 B9 | 3833 B9 |
| 2758 B9 | 3834 H12 |
| 2759 B13 | 3894-A H6 |
| 2760 B13 | 3894-B H6 |
| 2761 B13 | 3894-C H6 |
| 2762 B13 | 3894-D H6 |
| 2763 B13 | 3894-E H6 |
| 2764 B13 | 3894-F H6 |
| 2765 B13 | 3894-G H6 |
| 2766 B13 | 3894-H H6 |
| 2767 B13 | 3894-I H6 |
| 2768 B13 | 3894-J H6 |
| 2769 B13 | 3894-K H6 |
| 2770 B13 | 3894-L H6 |
| 2771 C12 | 3897-A D10 |
| 2772 C12 | 3897-B C10 |
| 2773 D13 | 3897-C C10 |
| 2774 D13 | 3897-D C10 |
| 2775 F13 | 3898-A H5 |
| 2776 F13 | 3898-B H5 |
| 2777 F13 | 3898-C H6 |
| 2778 F13 | 3898-D H6 |
| 2779 F13 | 3898-E H6 |
| 2780 F13 | 3898-F H6 |
| 2781 F13 | 3898-G H6 |
| 2782 F13 | 3898-H H6 |
| 2783 F13 | 3898-I H6 |
| 2784 F13 | 3898-J H6 |
| 2785 F13 | 3898-K H6 |
| 2786 F13 | 3898-L H6 |
| 2787 F13 | 3898-M H6 |
| 2788 F13 | 3898-N H6 |
| 2789 F13 | 3898-O H6 |
| 2790 F13 | 3898-P H6 |
| 2791 F13 | 3898-Q H6 |
| 2792 F13 | 3898-R H6 |
| 2793 F13 | 3898-S H6 |
| 2794 F13 | 3898-T H6 |
| 2795 F13 | 3898-U H6 |
| 2796 F13 | 3898-V H6 |
| 2797 F13 | 3898-W H6 |
| 2798 F13 | 3898-X H6 |
| 2799 F13 | 3898-Y H6 |
| 2800 F13 | 3898-Z H6 |

CONN. 1400 TO I/O BOARD NOT FOR CDR950/951

CONN. F934 TO DISPLAY BOARD

CONN. 1708 TO CD MAIN BOARD CDR775/776

CDR MAIN BOARD - CIRCUIT DIAGRAM 10 : DASP FLASH & DRAM TESTPOINTS

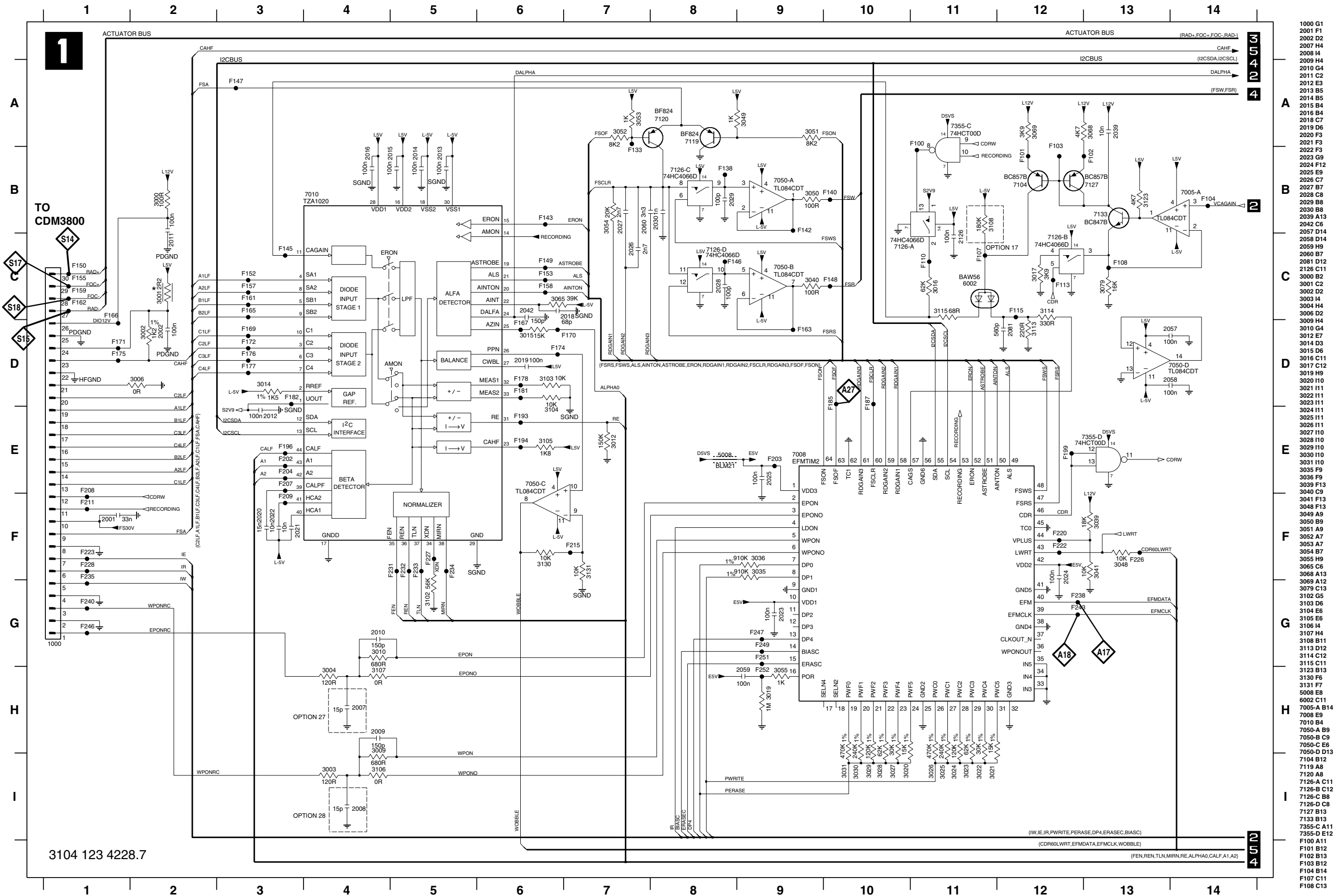


- 2700 B5
- 2701 B5
- 2702 B5
- 2705 G7
- 2710 B10
- 2711 B10
- 2715 B5
- 2720 H9
- 3754 H7
- 3759 I7
- 3780 I10
- 3817 E10
- 3898-D F12
- 3999 G12
- 5712 B9
- 5713 B4
- 5716 G7
- 7702 C3
- 7703 C9
- 7705-A G11
- 7708-A G8
- 7708-B G7
- 7708-C H10
- 7708-D H7
- 7999 G12
- F754 B4
- F755 B10
- F902 H7
- F904 H7
- F947 E10
- F950 H11
- F980 F9
- F981 F9

PB CDRW
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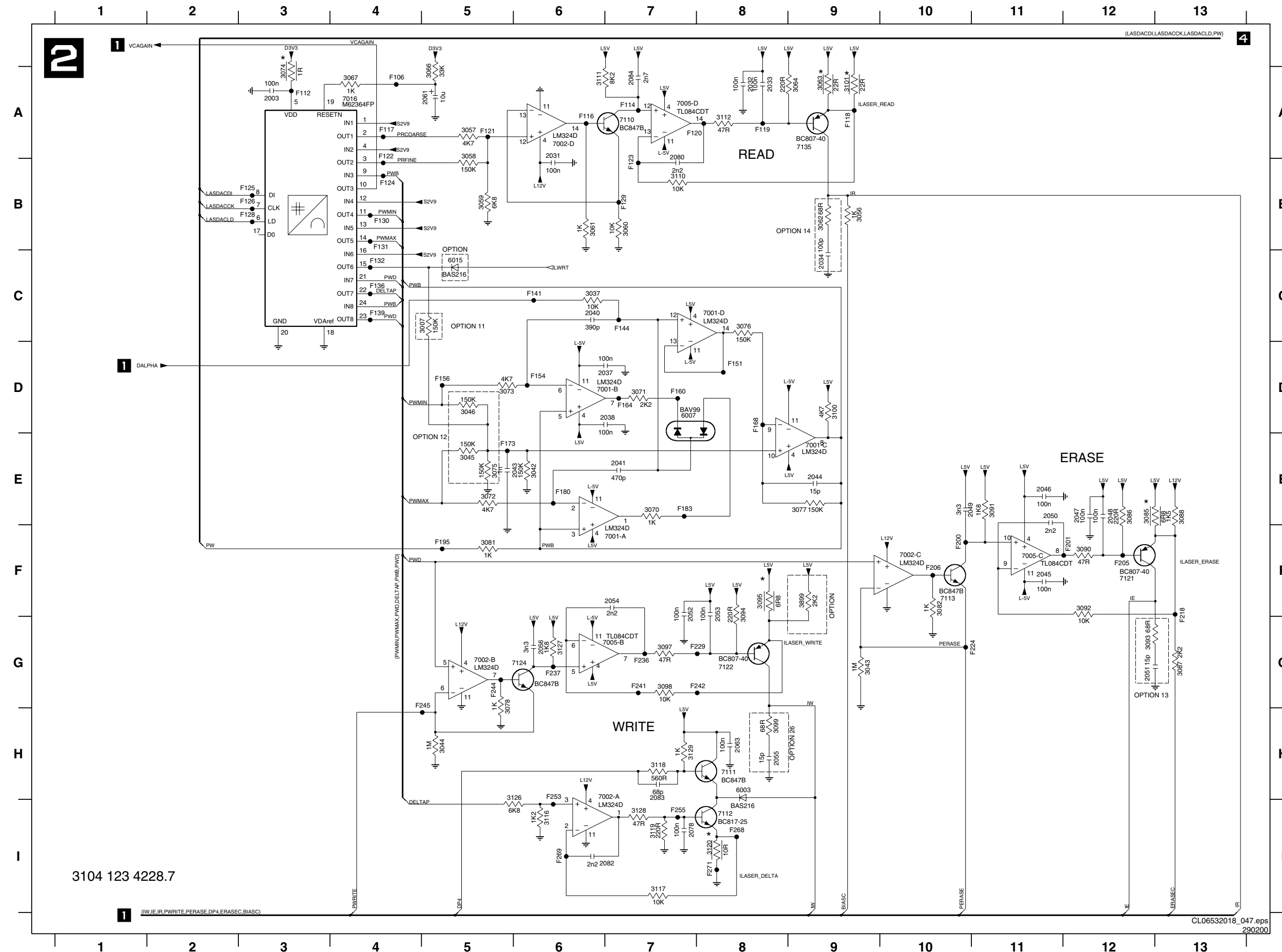
CDR-Mainboard Version 4228.7

CDR MAIN BOARD - CIRCUIT DIAGRAM 1 : AEGER, EFMTIM, FORWARD SENSE CIRCUIT TESTPOINTS



- 1000 G1
- 2001 F1
- 2002 D2
- 2007 H4
- 2008 I4
- 2009 H4
- 2010 G4
- 2011 C2
- 2012 E3
- 2013 B5
- 2014 B5
- 2015 B4
- 2016 B4
- 2018 C7
- 2019 D6
- 2020 F3
- 2021 F3
- 2022 F3
- 2023 G9
- 2024 F12
- 2025 E9
- 2026 C7
- 2027 B7
- 2028 C8
- 2029 B8
- 2030 B8
- 2039 A13
- 2042 C6
- 2057 D14
- 2058 D14
- 2059 H9
- 2060 B7
- 2081 D12
- 2126 C11
- 3000 B2
- 3001 C2
- 3002 D2
- 3003 I4
- 3004 H4
- 3006 D2
- 3009 H4
- 3010 G4
- 3012 E7
- 3014 D3
- 3015 D6
- 3016 C11
- 3017 C12
- 3019 H9
- 3020 F10
- 3021 H11
- 3022 H11
- 3023 H11
- 3024 H11
- 3025 H11
- 3026 H11
- 3027 H10
- 3028 H10
- 3029 H10
- 3030 H10
- 3031 H10
- 3035 F9
- 3036 F9
- 3039 F13
- 3040 C9
- 3041 F13
- 3048 F13
- 3049 A9
- 3050 B9
- 3051 A9
- 3052 A7
- 3053 A7
- 3054 B7
- 3055 H9
- 3056 C6
- 3068 A13
- 3069 A13
- 3079 C13
- 3102 G5
- 3103 D6
- 3104 E6
- 3105 E6
- 3106 H4
- 3107 H4
- 3108 B11
- 3113 D12
- 3114 C12
- 3115 C11
- 3123 B13
- 3130 F8
- 3131 F7
- 5008 E8
- 6002 C11
- 7005-A B14
- 7008 E9
- 7010 B4
- 7050-A B9
- 7050-B C9
- 7050-C E6
- 7050-D D13
- 7104 B12
- 7119 A8
- 7120 A8
- 7126-A C11
- 7126-B C12
- 7126-C B8
- 7126-D C8
- 7127 B13
- 7133 B13
- 7355-C A11
- 7355-D E12
- F100 A11
- F101 B12
- F102 B13
- F103 B12
- F104 B14
- F107 C11
- F108 C13
- F110 C11
- F113 C12
- F115 C12
- F133 B7
- F138 B8
- F140 B10
- F142 B9
- F143 B6
- F145 C2
- F146 C8
- F147 A3
- F148 C10
- F149 C6
- F150 C1
- F152 C3
- F153 C5
- F155 C1
- F157 C3
- F158 C6
- F159 C1
- F162 C1
- F163 D9
- F165 C3
- F166 C1
- F167 D6
- F169 D3
- F170 D7
- F171 D1
- F172 D3
- F174 D6
- F175 D1
- F176 D3
- F177 D3
- F178 D6
- F181 D6
- F182 D3
- F185 D10
- F187 D10
- F193 E6
- F194 E6
- F196 E3
- F199 E12
- F202 E3
- F203 E9
- F204 E3
- F207 E3
- F208 E1
- F209 F3
- F211 F1
- F215 F7
- F220 F12
- F221 F12
- F222 F12
- F223 F1
- F226 F13
- F227 F5
- F228 F1
- F231 F4
- F232 F5
- F233 F5
- F234 F5
- F235 F1
- F238 G12
- F240 G1
- F243 G12
- F246 G1
- F247 G9
- F249 G9
- F251 G9
- F252 H9

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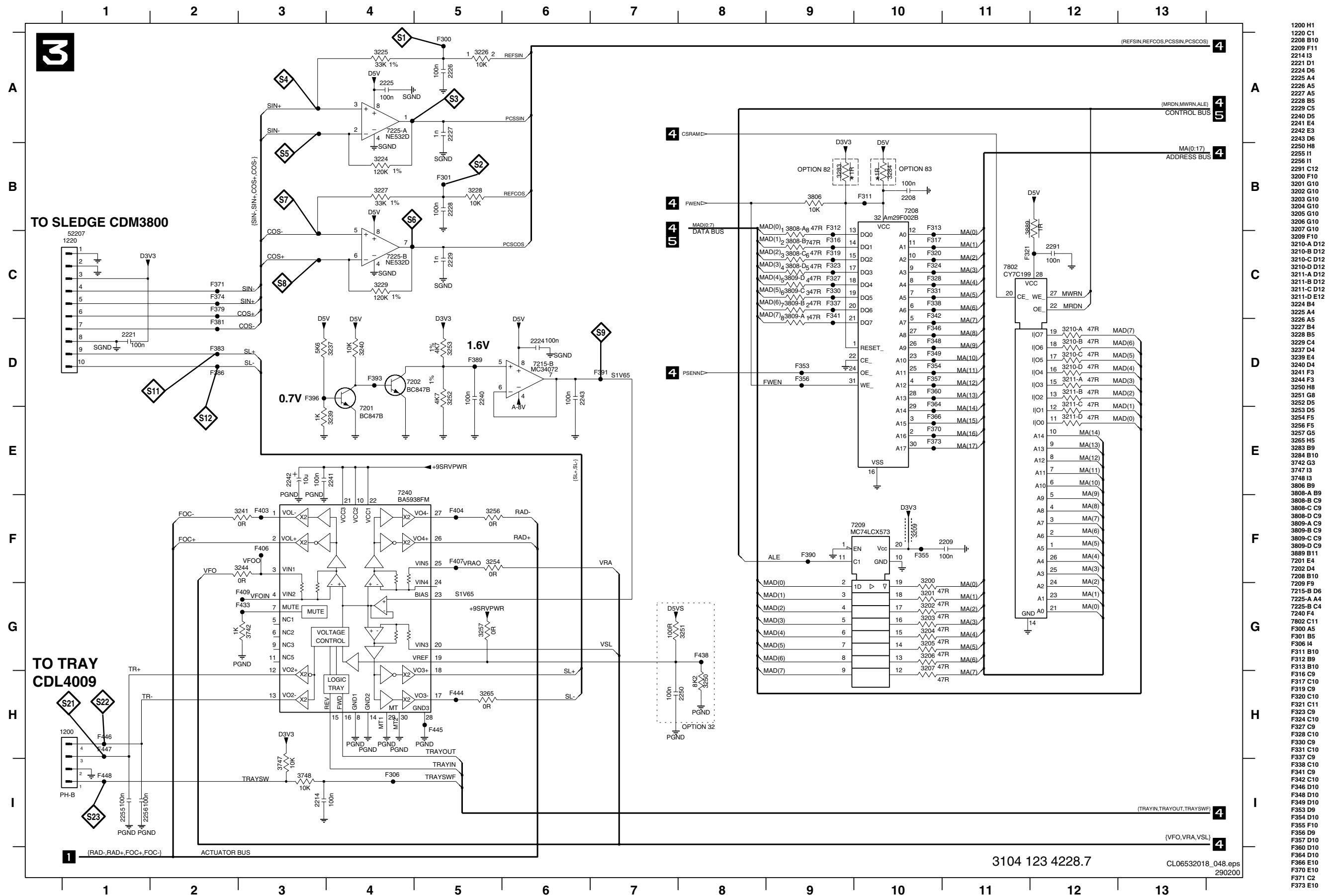


- 2003 A3
- 2031 A6
- 2032 A8
- 2033 A8
- 2034 C9
- 2037 D7
- 2038 D7
- 2040 C6
- 2041 E7
- 2043 E5
- 2044 E9
- 2045 F11
- 2046 E11
- 2047 E12
- 2048 E12
- 2049 E10
- 2050 E11
- 2051 G12
- 2052 F7
- 2053 F8
- 2054 F7
- 2055 H8
- 2056 G6
- 2061 A5
- 2063 H8
- 2078 I7
- 2080 B7
- 2082 I7
- 2083 I7
- 2084 A7
- 3007 C5
- 3037 C6
- 3042 E6
- 3043 G9
- 3044 H5
- 3045 E5
- 3046 D5
- 3056 B9
- 3057 A5
- 3058 B5
- 3059 B5
- 3060 B7
- 3061 B6
- 3062 B9
- 3063 A9
- 3064 A9
- 3066 A5
- 3067 A4
- 3070 E7
- 3071 D7
- 3072 E5
- 3073 D5
- 3074 A3
- 3075 E5
- 3076 C8
- 3077 E9
- 3078 G5
- 3081 F5
- 3082 F10
- 3085 E12
- 3086 E12
- 3087 G13
- 3088 E13
- 3090 F12
- 3091 E11
- 3092 F12
- 3093 G12
- 3094 F8
- 3095 F8
- 3097 G7
- 3098 G7
- 3099 H8
- 3100 D9
- 3101 A9
- 3110 B7
- 3111 A6
- 3112 A8
- 3116 I6
- 3117 I7
- 3118 H7
- 3119 I7
- 3120 I8
- 3126 I6
- 3127 G6
- 3128 I7
- 3129 H7
- 3899 F9
- 6003 H8
- 6007 D7
- 6015 C5
- 7001-A F7
- 7001-B D6
- 7001-C E9
- 7001-D C8
- 7002-A H6
- 7002-B G5
- 7002-C F10
- 7002-D A6
- 7005-B G6
- 7005-C F11
- 7005-D A7
- 7016 A4
- 7110 A7
- 7111 H8
- 7112 I8
- 7113 F10
- 7121 F12
- 7122 G8
- 7124 G5
- 7135 A9
- F106 A4
- F112 A3
- F114 A7
- F116 A6
- F117 A4
- F118 A9
- F119 A8
- F120 A7
- F121 A5
- F122 A4
- F123 B7
- F124 B4
- F125 B3
- F126 B3
- F128 B3
- F129 B7
- F130 B4
- F131 B4
- F132 C4
- F135 C4
- F139 C4
- F141 C6
- F144 C7
- F151 D8
- F154 D6
- F156 D5
- F160 D7
- F164 D7
- F168 D8
- F173 E5
- F180 E6
- F183 E7
- F195 F5
- F200 F10
- F201 F12
- F205 F12
- F206 F10
- F218 F13
- F224 G10
- F229 G6
- F236 G7
- F237 G6
- F241 G7
- F242 G8
- F244 G5
- F245 G5
- F253 H6
- F255 I7
- F268 I8
- F269 I6
- F271 I6

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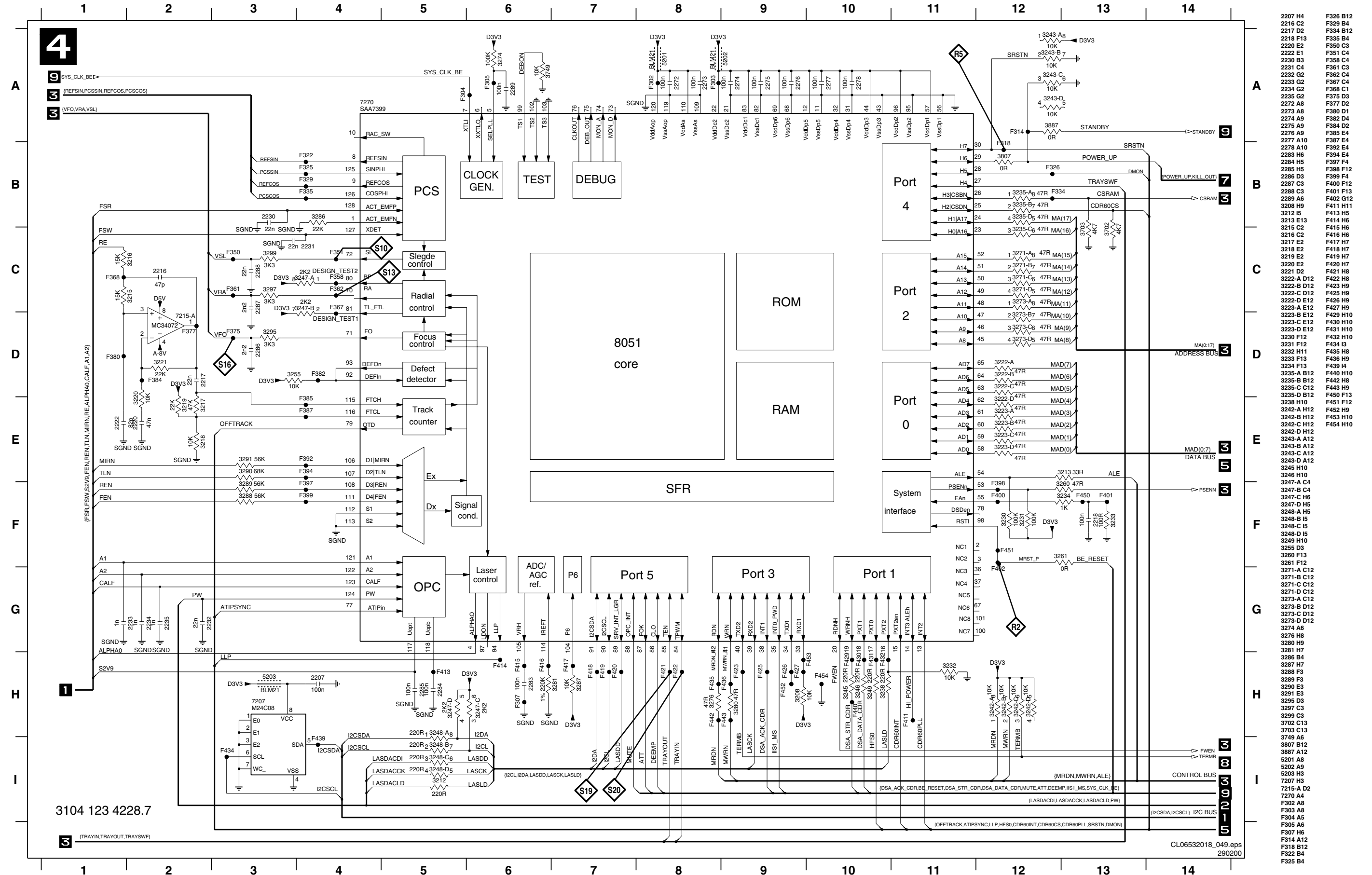
(/I/E,IR,PWRITE,PERASE,DP4,ERASEC,BIASC)

CDR MAIN BOARD - CIRCUIT DIAGRAM 3 : SERVO DRIVERS, MACE-RAM, -FLASH, -DEMUX TEST POINTS

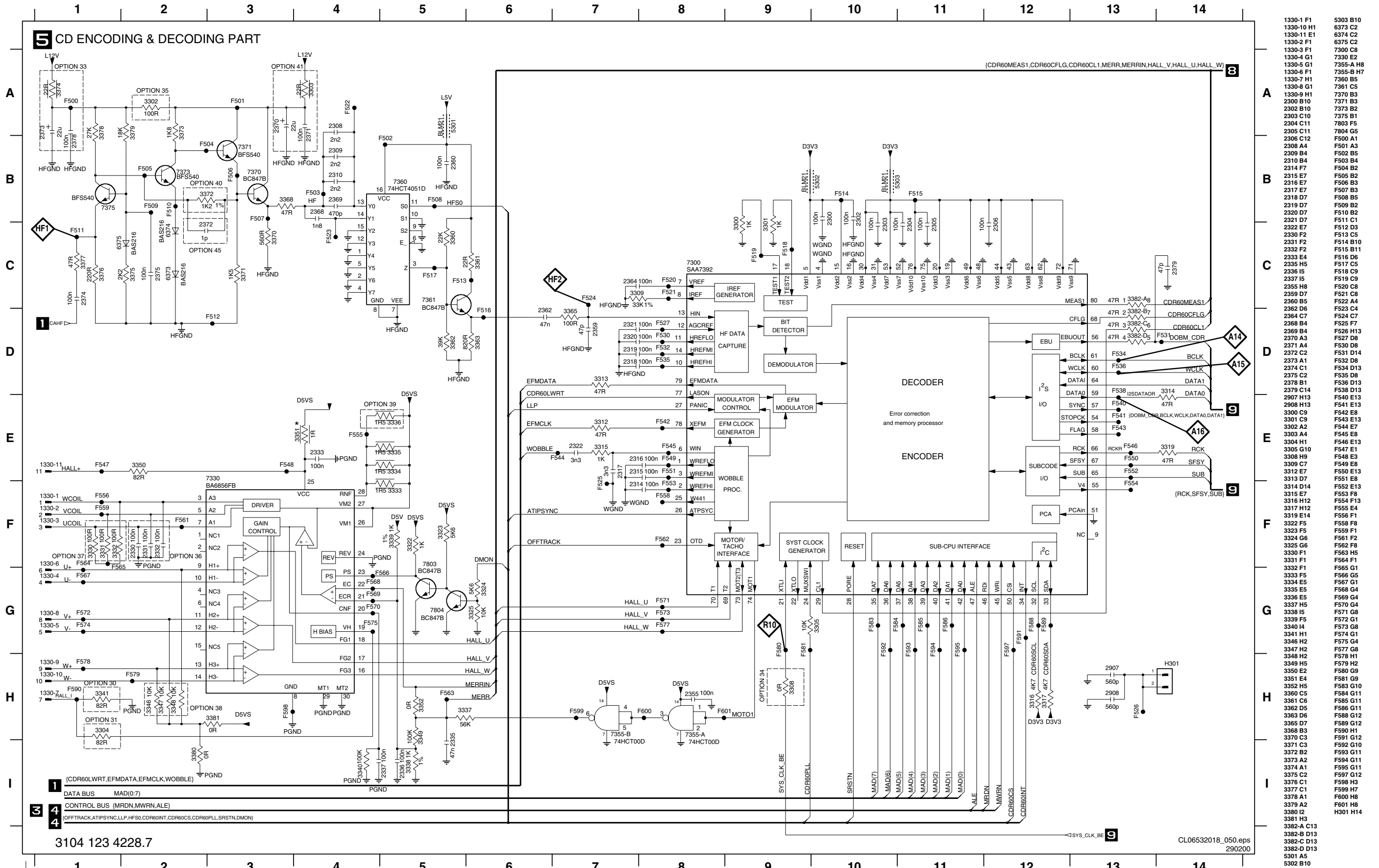


- 1200 H1
- 1220 C1
- 2208 B10
- 2209 F11
- 2214 B3
- 2221 D1
- 2224 D6
- 2225 A4
- 2226 A5
- 2227 A5
- 2228 B5
- 2229 C5
- 2240 D5
- 2241 E4
- 2242 E3
- 2243 D6
- 2250 H8
- 2255 I1
- 2256 I1
- 2291 C12
- 3200 F10
- 3201 G10
- 3202 G10
- 3203 G10
- 3204 G10
- 3205 G10
- 3206 G10
- 3207 G10
- 3209 F10
- 3210-A D12
- 3210-B D12
- 3210-C D12
- 3210-D D12
- 3211-A D12
- 3211-B D12
- 3211-C D12
- 3211-D E12
- 3224 B4
- 3225 A4
- 3226 A5
- 3227 B4
- 3228 B5
- 3229 C4
- 3237 D4
- 3239 E4
- 3240 D4
- 3241 F3
- 3244 F3
- 3250 H8
- 3251 G8
- 3252 D5
- 3253 D5
- 3254 F5
- 3255 F5
- 3257 G5
- 3265 H5
- 3283 B9
- 3284 B10
- 3742 G3
- 3747 I3
- 3748 I3
- 3806 B9
- 3808-A B9
- 3808-B C9
- 3808-C C9
- 3808-D C9
- 3809-A C9
- 3809-B C9
- 3809-C C9
- 3809-D C9
- 3889 B11
- 7201 E4
- 7202 D4
- 7208 B10
- 7209 F9
- 7215-B D6
- 7225-A A4
- 7225-B C4
- 7240 F4
- 7802 C11
- F300 A5
- F301 B5
- F306 I4
- F311 B10
- F312 B9
- F313 B10
- F316 C9
- F317 C10
- F319 C9
- F320 C10
- F321 C11
- F323 C9
- F324 C10
- F327 C9
- F328 C10
- F330 C9
- F331 C10
- F337 C9
- F338 C10
- F341 C9
- F342 C10
- F346 D10
- F348 D10
- F349 D10
- F354 D10
- F355 F10
- F356 D9
- F357 D10
- F360 D10
- F364 D10
- F366 E10
- F370 E10
- F371 C2
- F373 E10
- F374 C2
- F379 C2
- F381 D2
- F383 D2
- F386 D2
- F389 D5
- F391 D7
- F390 F9
- F393 D4
- F396 D3
- F404 F5
- F406 F3
- F407 F5
- F409 G3
- F433 G3
- F438 G8
- F444 H5
- F445 H5
- F446 H1
- F447 H1
- F448 I1

CDR MAIN BOARD - CIRCUIT DIAGRAM 4 : MACE BE-PROCESSOR TESTPOINTS



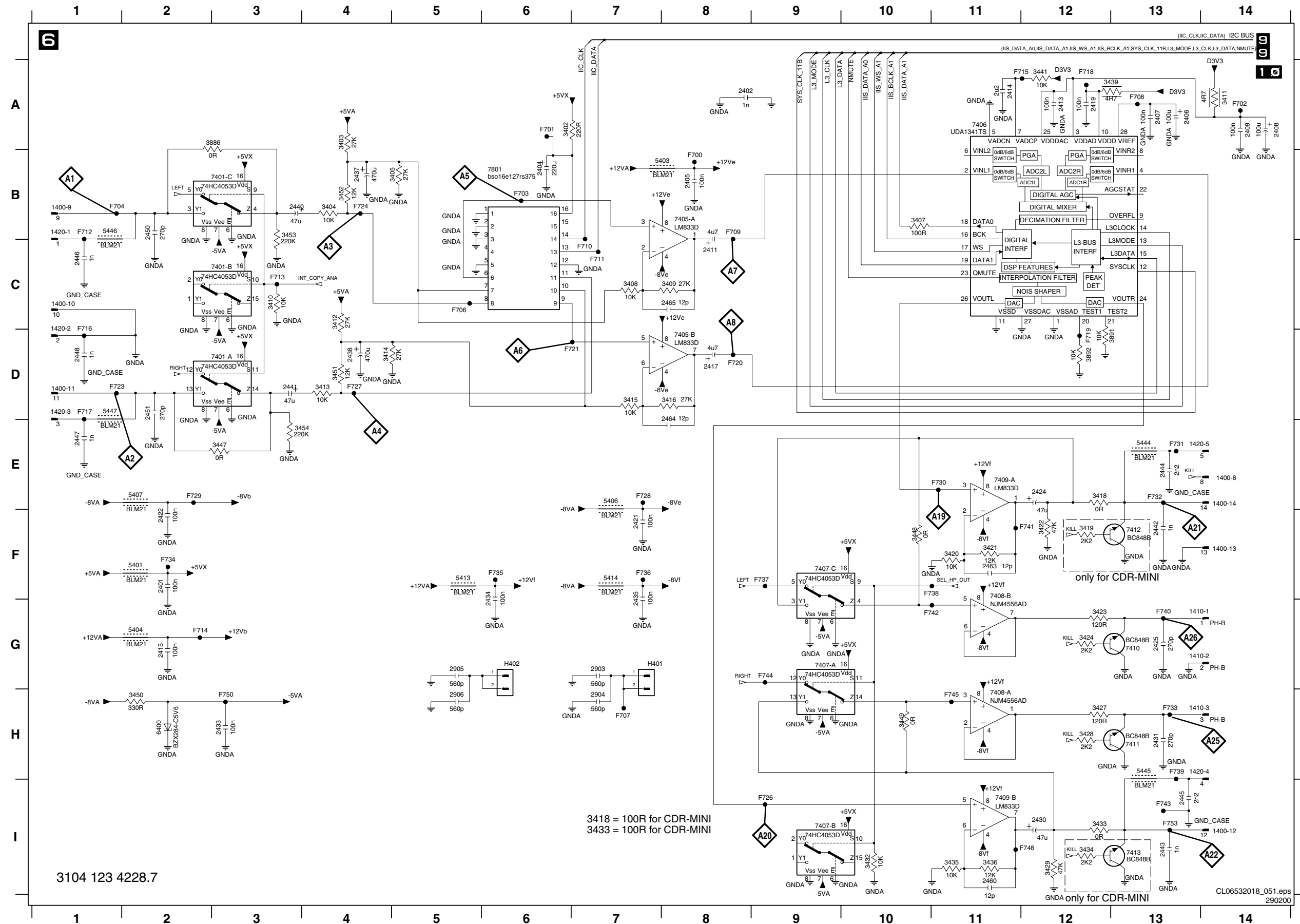
CDR MAIN BOARD - CIRCUIT DIAGRAM 5 : CD ENCODING-DECODING PART



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CDR MAIN BOARD - CIRCUIT DIAGRAM 6 : AUDIO PART (NOT FOR CDR950/951)

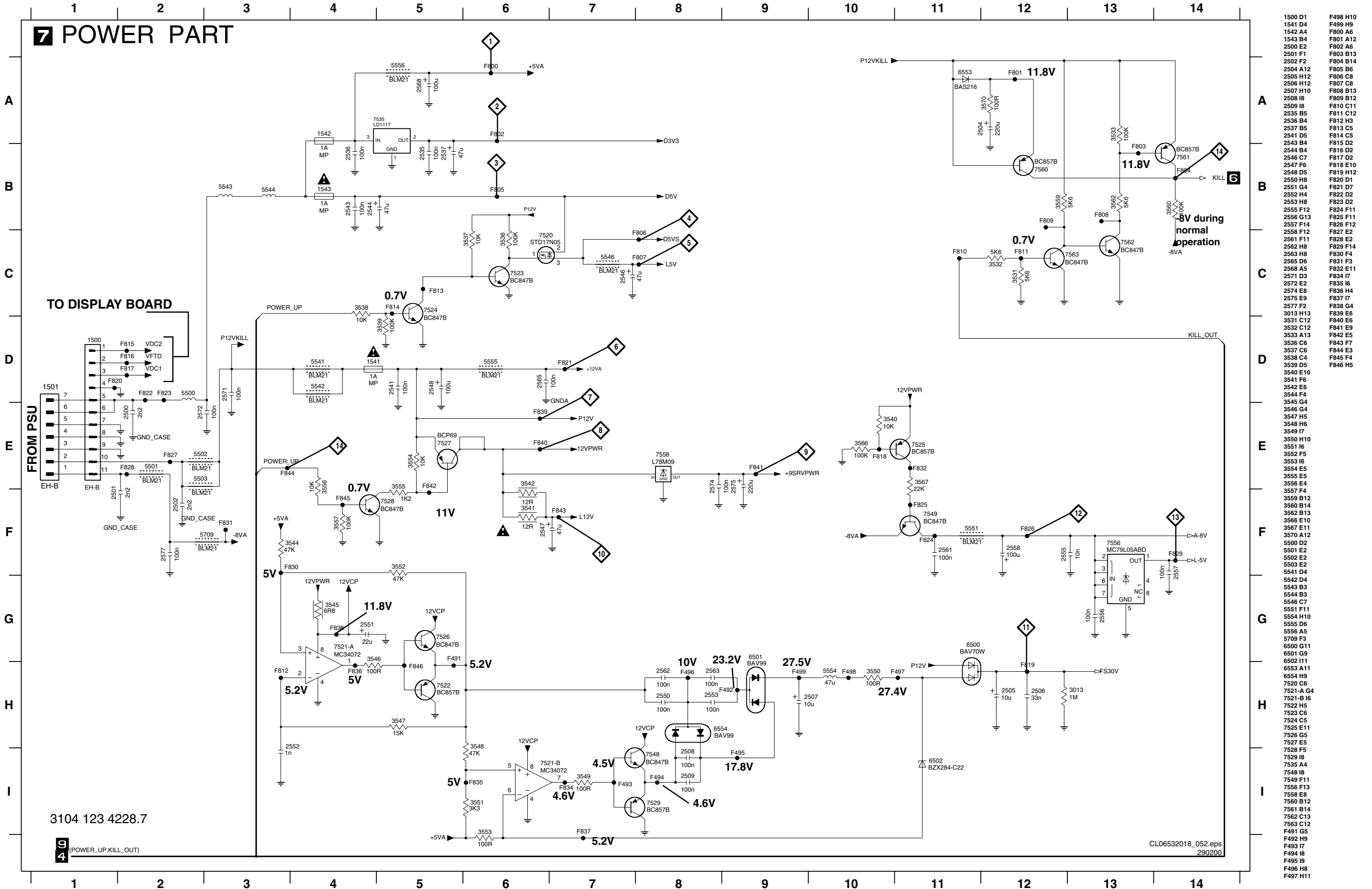


- 1400-10 C1
- 1400-11 D1
- 1400-12 H1
- 1400-13 F14
- 1400-14 E14
- 1400-8 E14
- 1400-9 B1
- 1410-1 G14
- 1410-2 H14
- 1410-3 H14
- 1420-1 B1
- 1420-2 D1
- 1420-3 D1
- 1420-4 H14
- 1420-5 E14
- 2401 F2
- 2402 A8
- 2404 B6
- 2405 B8
- 2406 A13
- 2407 A13
- 2408 A14
- 2409 A14
- 2411 C8
- 2413 A12
- 2414 A11
- 2415 G2
- 2417 D8
- 2419 A12
- 2421 F7
- 2422 F2
- 2424 E2
- 2425 G13
- 2430 H12
- 2431 H13
- 2433 H3
- 2434 F6
- 2435 F7
- 2437 B4
- 2438 D4
- 2440 B3
- 2441 D3
- 2442 F3
- 2443 H13
- 2444 E13
- 2445 H13
- 2446 C1
- 2447 E1
- 2448 D1
- 2450 B2
- 2451 D2
- 2460 H11
- 2463 F11
- 2464 E8
- 2465 C8
- 2903 G7
- 2904 H17
- 2905 G5
- 2906 H5
- 3402 A6
- 3403 A4
- 3404 B4
- 3405 B5
- 3407 B10
- 3408 C7
- 3409 C8
- 3410 C3
- 3411 A14
- 3412 C4
- 3413 D4
- 3414 D4
- 3415 D7
- 3416 D8
- 3418 E12
- 3419 F11
- 3420 F12
- 3421 F11
- 3422 F12
- 3423 G12
- 3424 G12
- 3427 H12
- 3428 H12
- 3429 H12
- 3432 H10
- 3433 H12
- 3434 H12
- 3435 H11
- 3436 H11
- 3439 A13
- 3441 A12
- 3447 E3
- 3448 F10
- 3449 H10
- 3450 H2
- 3451 D4
- 3452 B4
- 3453 B3
- 3454 E4
- 3885 A3
- 3891 D12
- 3892 D12
- 5401 F2
- 5403 B8
- 5404 G2
- 5406 E7
- 5407 E2
- 5413 F5
- 5414 F7
- 5444 E13
- 5445 H13
- 5446 B1
- 5447 D1
- 6400 H2
- 7401-A D3
- 7401-C B3
- 7405-A B8

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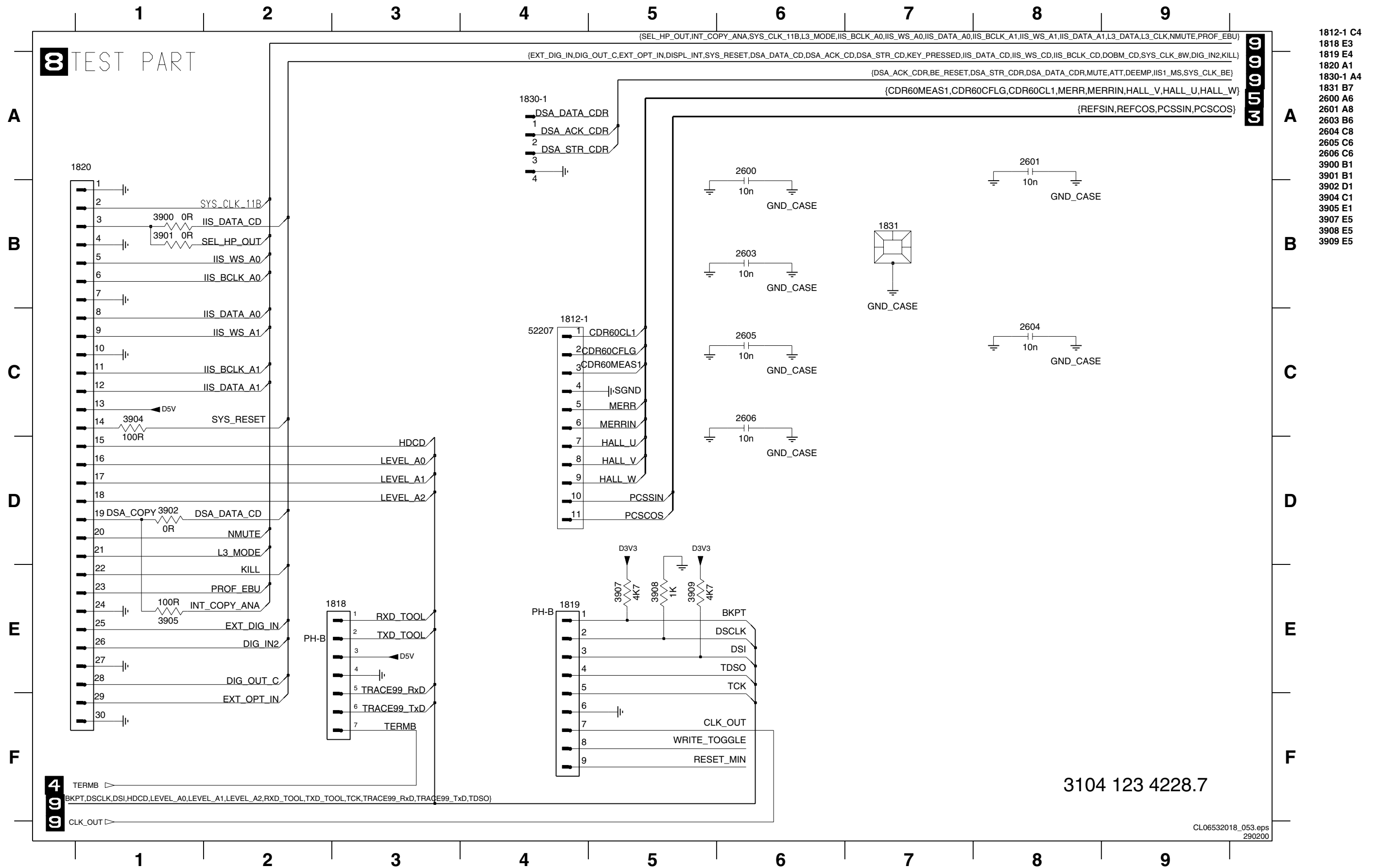
CDR MAIN BOARD - CIRCUIT DIAGRAM 7 : POWER PART TESTPOINTS



- 1500 D1
- 1541 D4
- 1542 A4
- 1543 B4
- 2500 E2
- 2501 F1
- 2502 F2
- 2504 A12
- 2505 H12
- 2506 H12
- 2507 H10
- 2508 I8
- 2509 I8
- 2535 B5
- 2536 B4
- 2537 B5
- 2541 D5
- 2543 B4
- 2544 B4
- 2546 C7
- 2548 D5
- 2550 H8
- 2551 G4
- 2552 H4
- 2553 H8
- 2555 F12
- 2556 G13
- 2557 F14
- 2558 F12
- 2561 F11
- 2562 H8
- 2563 H8
- 2565 D6
- 2568 A5
- 2571 D3
- 2572 E2
- 2574 E8
- 2575 E9
- 2577 F2
- 3013 H13
- 3531 C12
- 3532 C12
- 3533 A13
- 3536 C6
- 3537 C6
- 3538 C4
- 3539 D5
- 3540 E10
- 3541 F6
- 3542 E6
- 3544 F4
- 3545 G4
- 3546 G4
- 3547 H5
- 3548 H6
- 3549 I7
- 3550 H10
- 3551 I6
- 3552 F5
- 3553 I6
- 3554 E5
- 3555 E5
- 3556 E4
- 3557 F4
- 3559 B12
- 3560 B14
- 3562 B13
- 3566 E10
- 3567 E11
- 3570 A12
- 5000 D2
- 5501 E2
- 5502 E2
- 5503 E2
- 5541 D4
- 5542 D4
- 5543 B3
- 5544 B3
- 5546 C7
- 5551 F11
- 5554 H10
- 5555 D6
- 5556 A5
- 5709 F3
- 6500 G11
- 6501 G9
- 6502 I11
- 6553 A11
- 6554 H9
- 7200 C6
- 7521-A G4
- 7521-B I6
- 7522 H5
- 7523 C6
- 7524 C5
- 7525 E11
- 7526 G5
- 7527 E5
- 7528 F5
- 7529 I8
- 7535 A4
- 7548 I8
- 7549 F11
- 7556 F13
- 7558 E8
- 7560 B12
- 7561 B14
- 7562 C13
- 7563 C12
- F491 G5
- F492 H9
- F493 I7
- F494 I8
- F495 I9
- F496 H8
- F497 H11
- F498 H10
- F499 H9
- F800 A6
- F801 A12
- F802 A6
- F803 B13
- F804 B14
- F805 B6
- F806 C8
- F807 C8
- F808 B13
- F809 B12
- F810 C11
- F811 C12
- F812 H3
- F813 C5
- F814 C5
- F815 D2
- F816 D2
- F817 D2
- F818 E10
- F819 H12
- F820 D1
- F821 D7
- F822 D2
- F823 D2
- F824 F11
- F825 F11
- F826 F12
- F827 E2
- F828 E2
- F829 F14
- F830 F4
- F831 F3
- F832 E11
- F834 I7
- F835 I6
- F836 H4
- F837 I7
- F838 G4
- F839 E6
- F840 E6
- F841 E9
- F842 E5
- F843 F7
- F844 E3
- F845 F4
- F846 H5

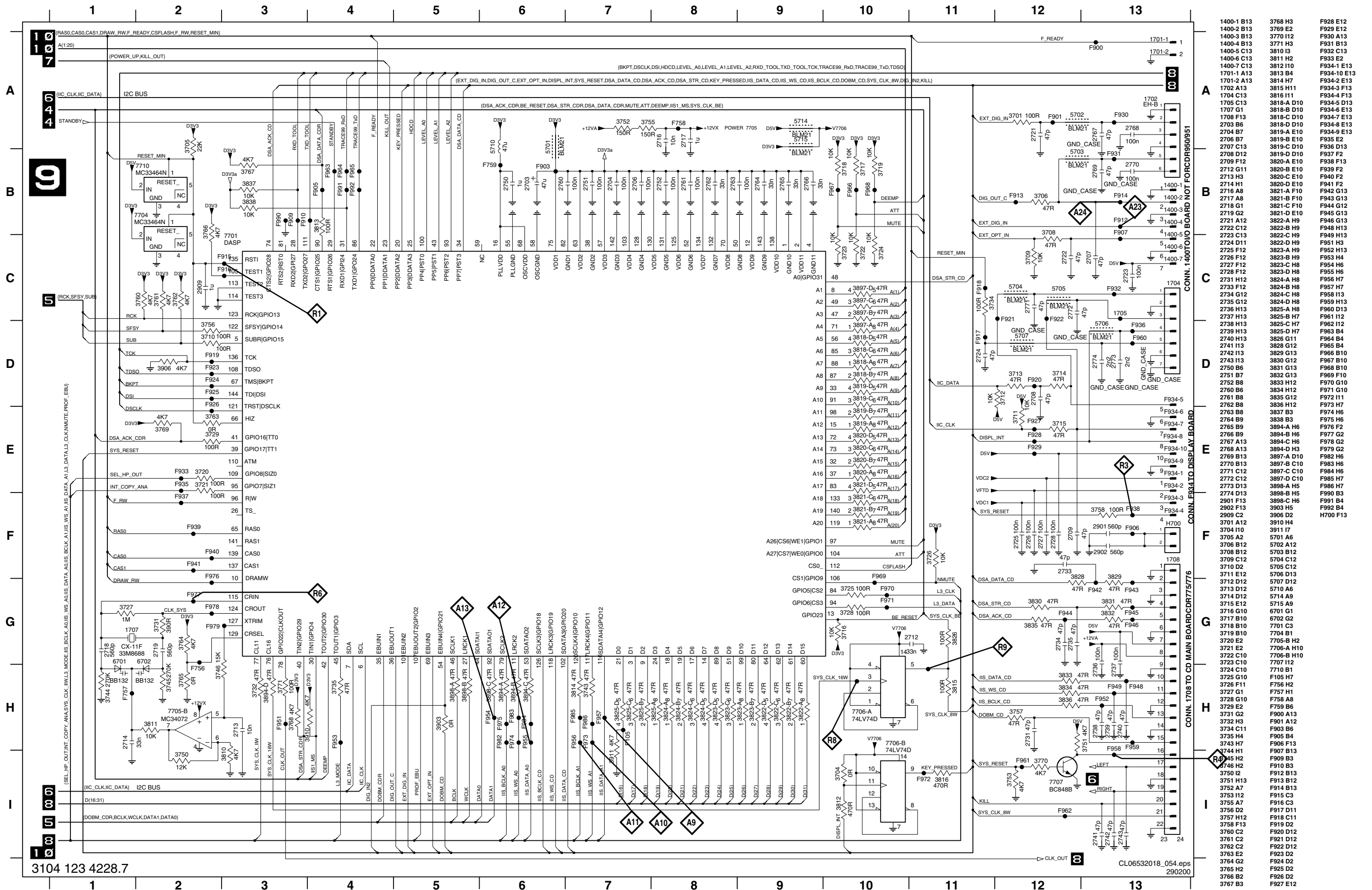
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- 1812-1 C4
- 1818 E3
- 1819 E4
- 1820 A1
- 1830-1 A4
- 1831 B7
- 2600 A6
- 2601 A8
- 2603 B6
- 2604 C8
- 2605 C6
- 2606 C6
- 3900 B1
- 3901 B1
- 3902 D1
- 3904 C1
- 3905 E1
- 3907 E5
- 3908 E5
- 3909 E5

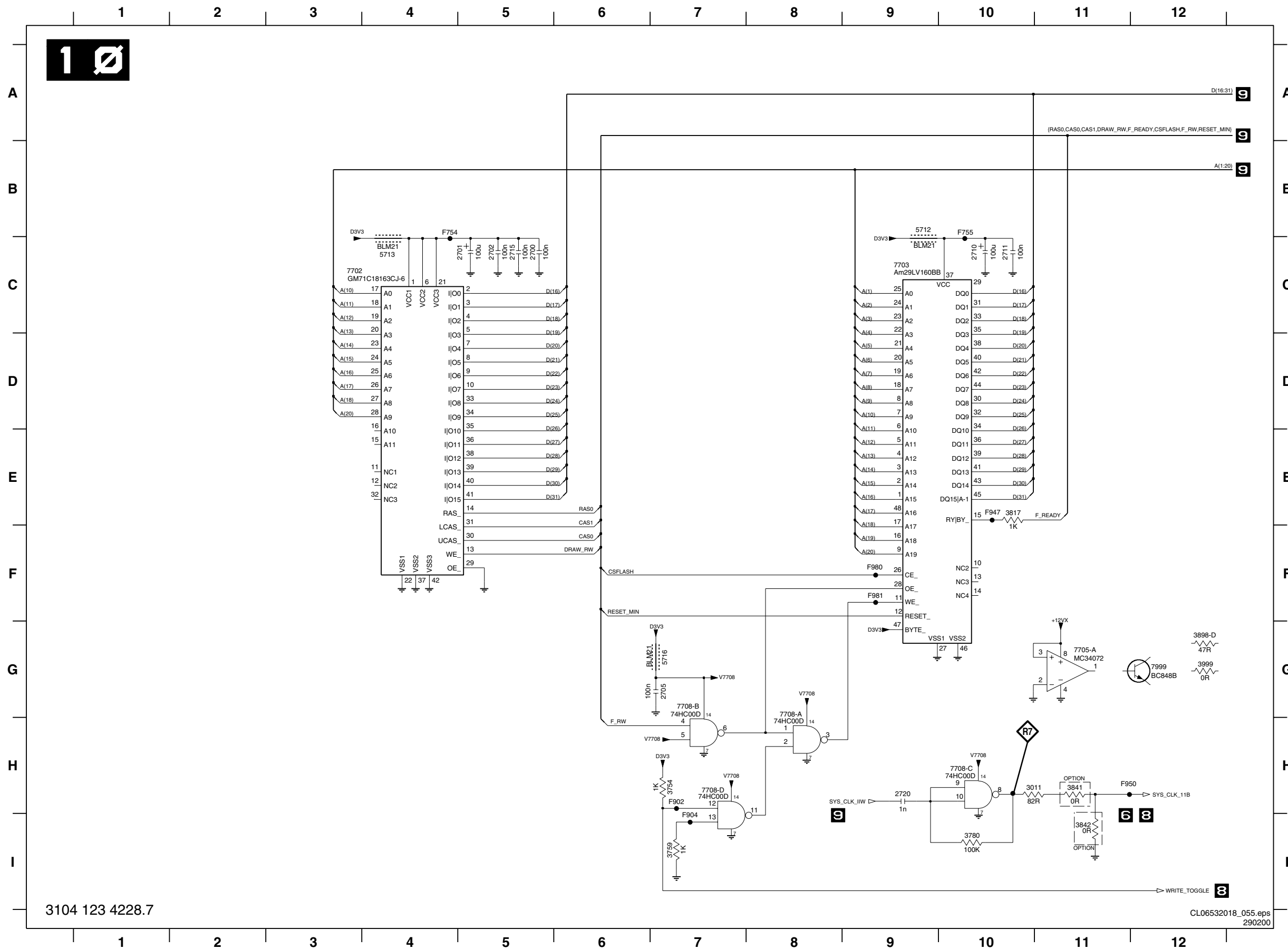
CDR MAIN BOARD - CIRCUIT DIAGRAM 9 : DASP MASTER PROCESSOR TESTPOINTS



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CDR MAIN BOARD - CIRCUIT DIAGRAM 10 : DASP FLASH & DRAM TESTPOINTS

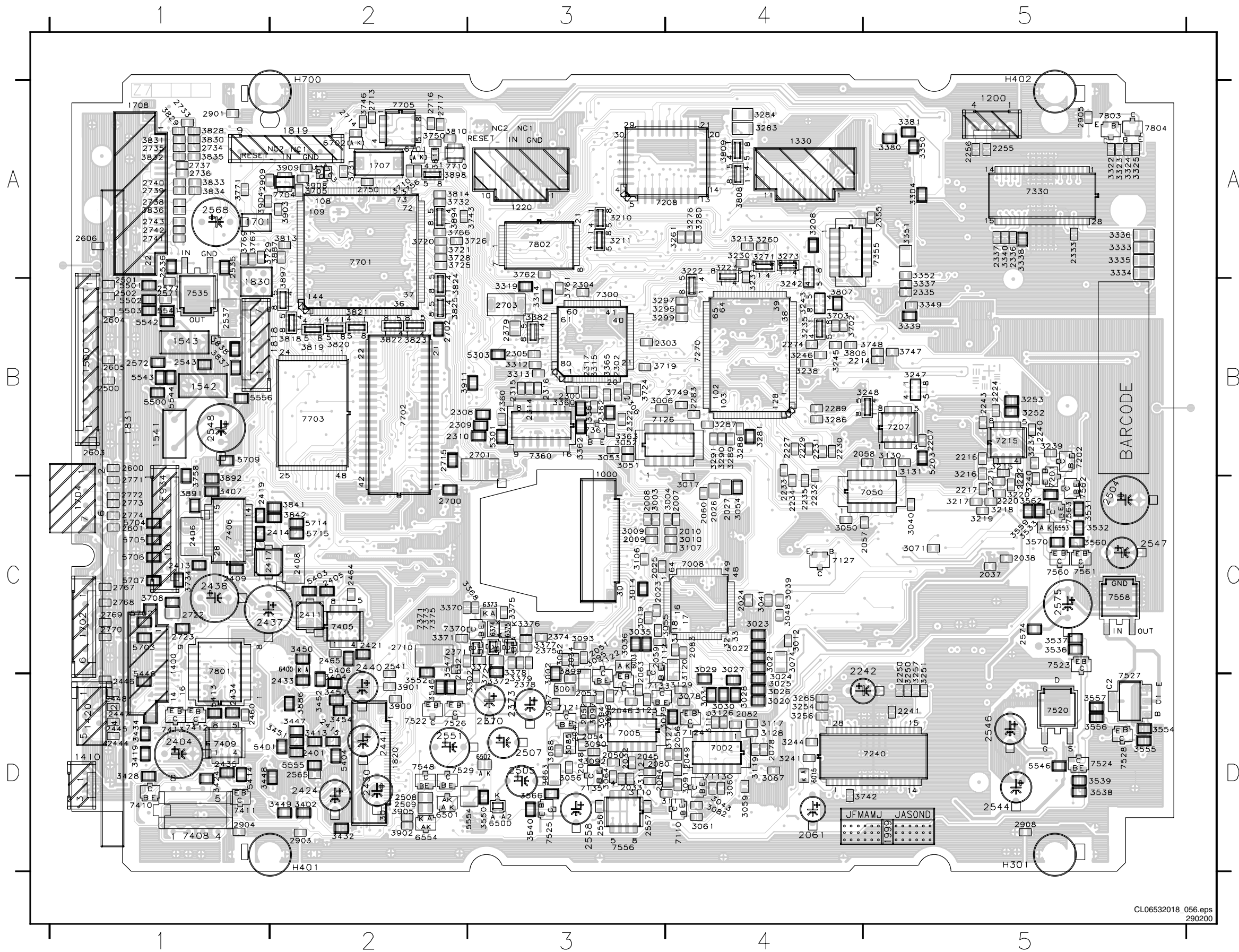


- 2700 C5
- 2701 C5
- 2702 C5
- 2705 G7
- 2710 C10
- 2711 C10
- 2715 C5
- 2720 H9
- 3011 H10
- 3754 H7
- 3759 I7
- 3780 I10
- 3817 E10
- 3841 H11
- 3842 I11
- 3898-D G12
- 3999 G12
- 5712 B9
- 5713 C4
- 5716 G7
- 7702 C3
- 7703 C9
- 7705-A G11
- 7708-A G8
- 7708-B G7
- 7708-C H10
- 7708-D H7
- 7999 G12
- F754 B4
- F755 B10
- F902 H7
- F904 I7
- F947 E10
- F950 H11
- F980 F9
- F981 F9

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CDR MAIN BOARD .7 - TOP VIEW

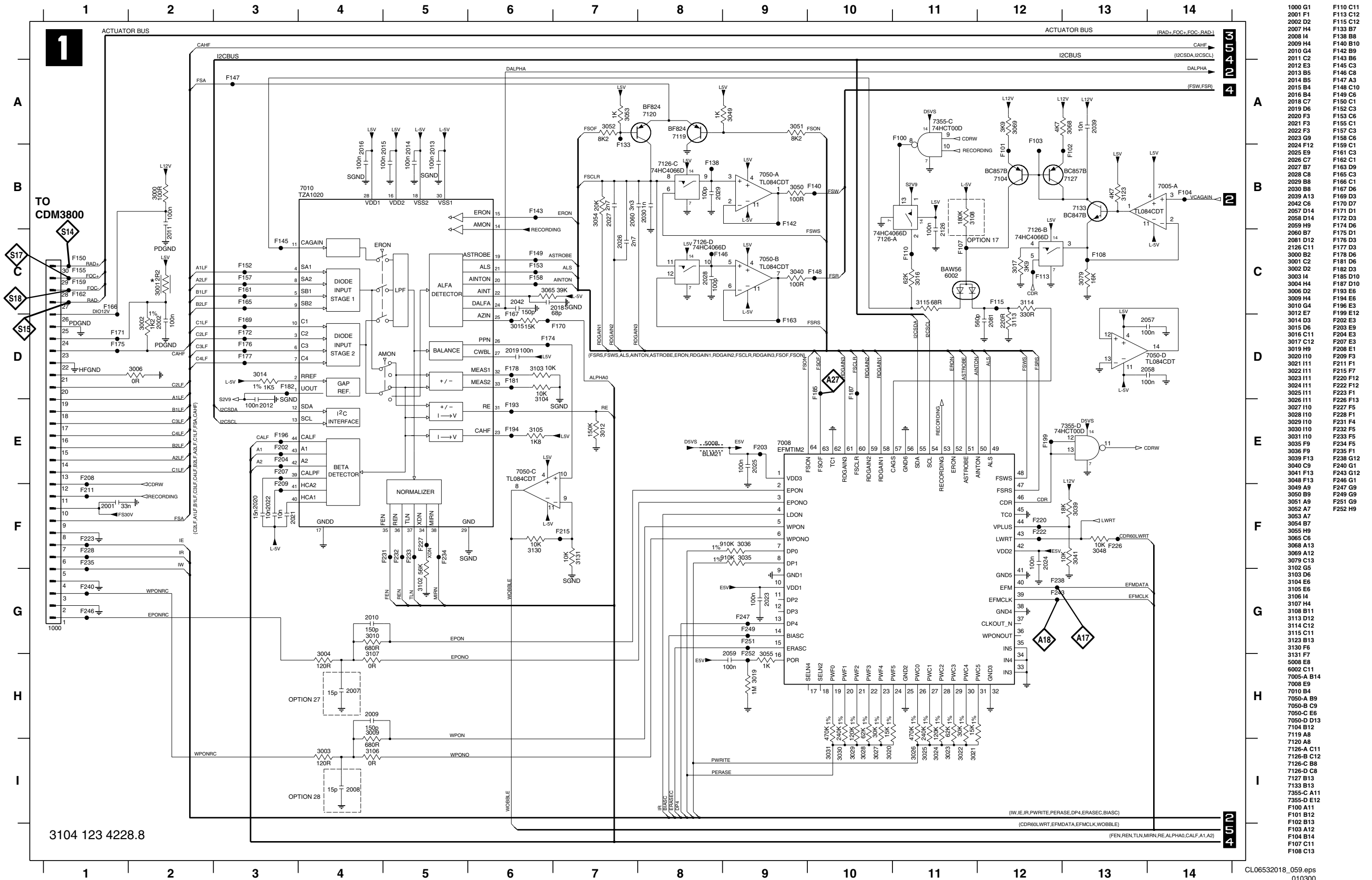


Component list table with columns for designator, value, and footprint. The table is partially obscured by a vertical barcode on the right side.

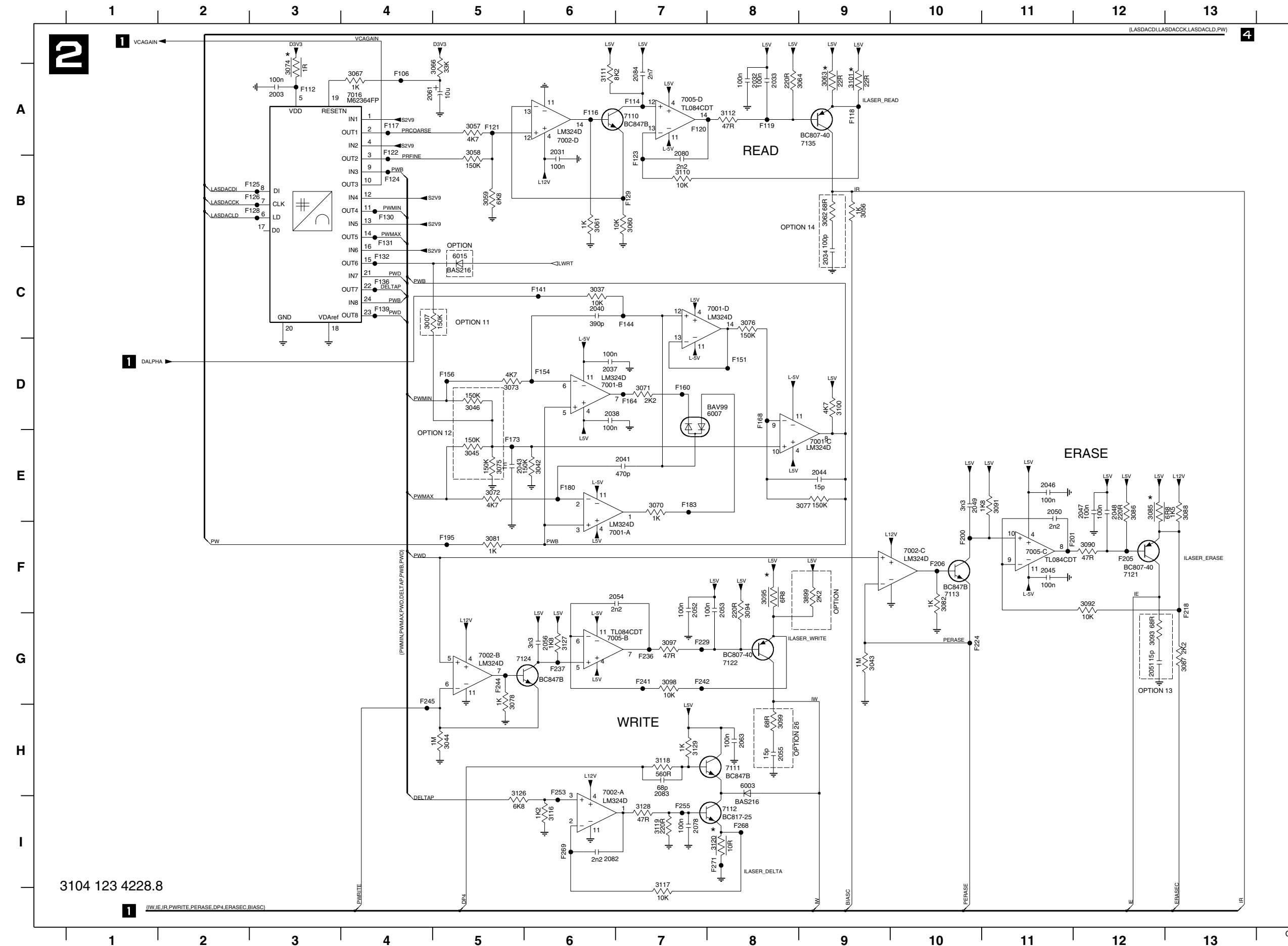
| Designator | Value | Footprint |
|------------|-------|-----------|
| 1708 | | |
| 1819 | | |
| 1909 | | |
| 2733 | | |
| 2734 | | |
| 2735 | | |
| 2736 | | |
| 2737 | | |
| 2738 | | |
| 2739 | | |
| 2740 | | |
| 2741 | | |
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CDR-Mainboard Version 4228.8

CDR MAIN BOARD - CIRCUIT DIAGRAM 1 : AEGER, EFMTIM, FORWARD SENSE CIRCUIT TESTPOINTS



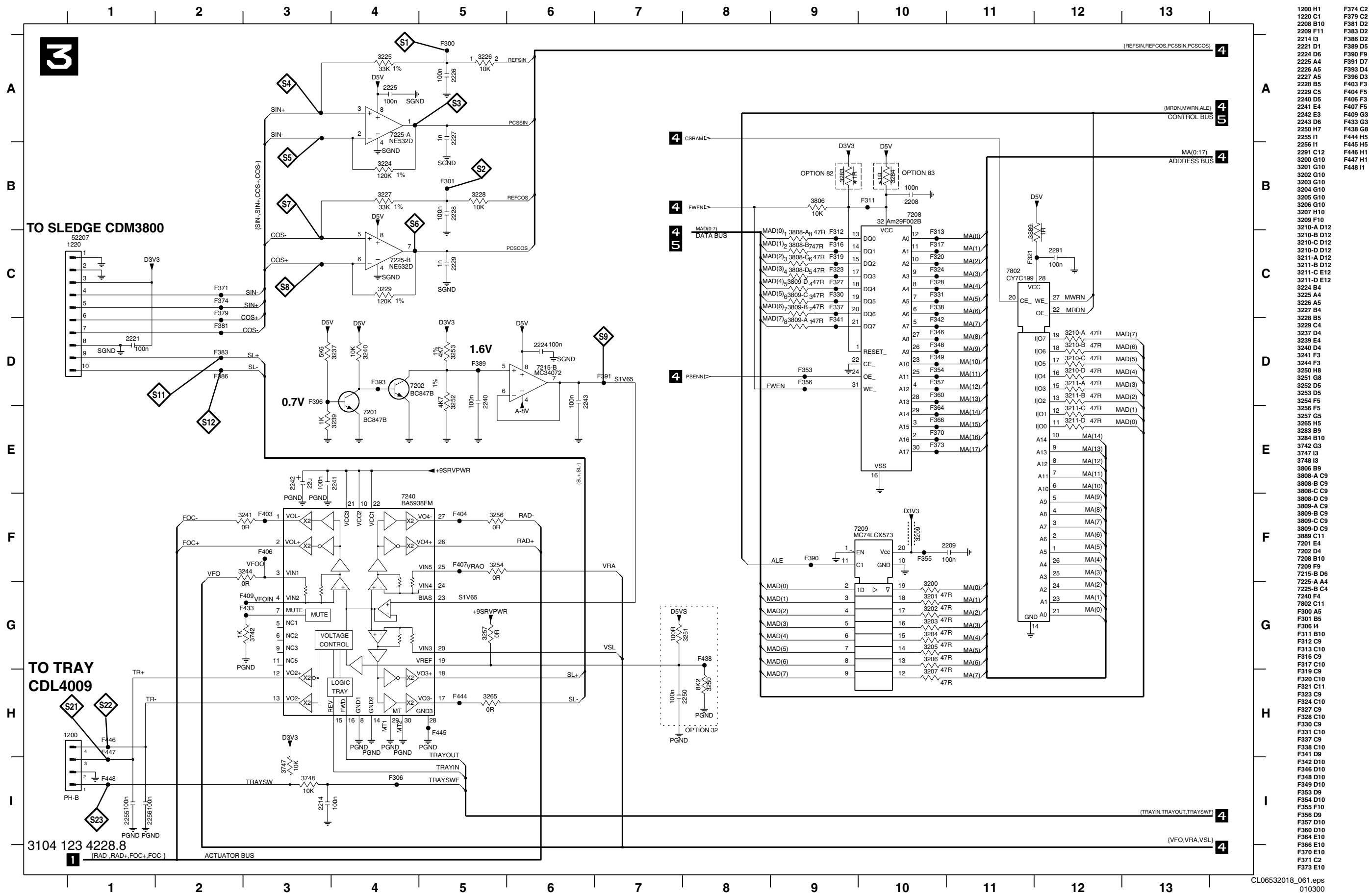
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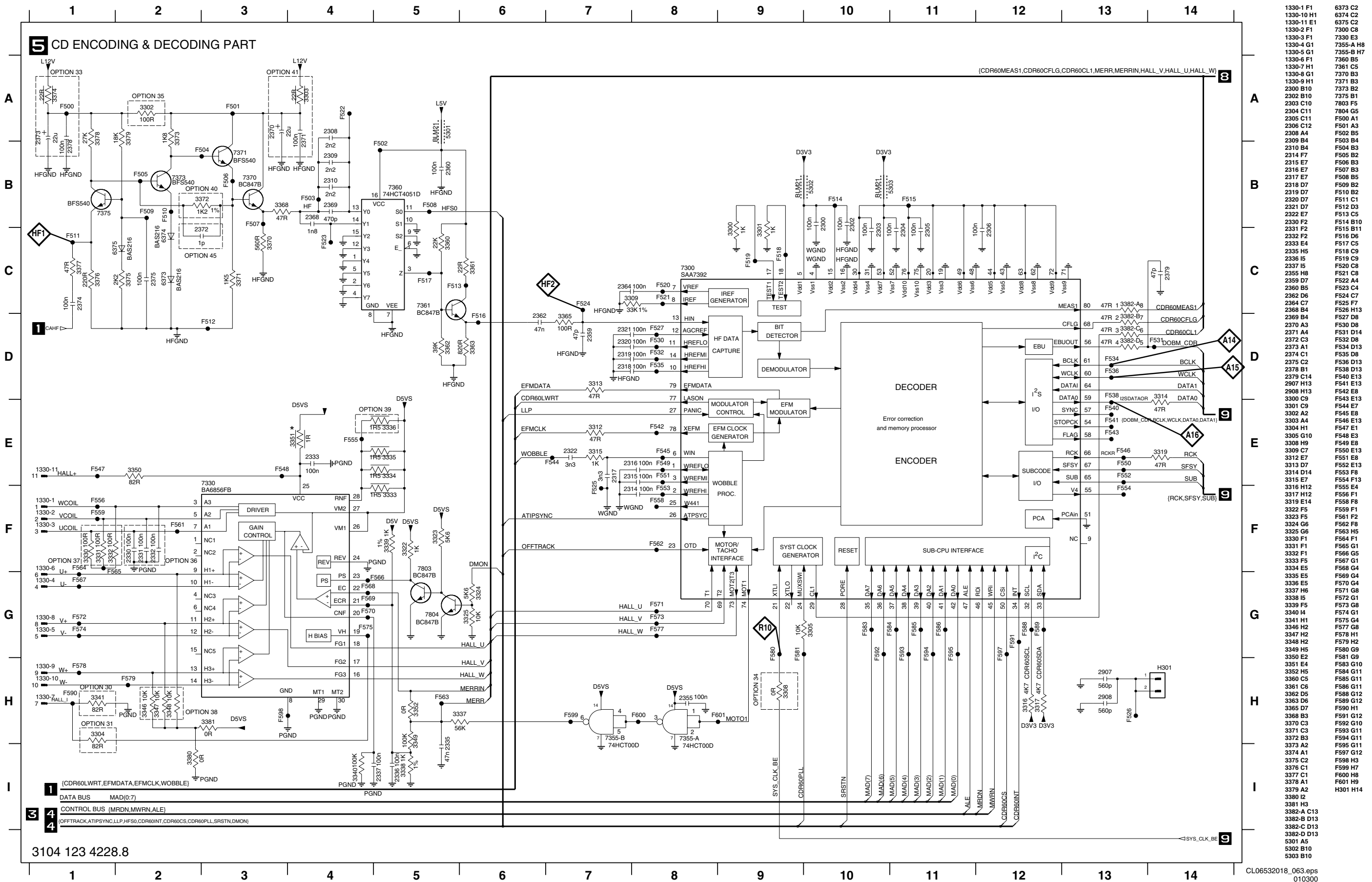
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| 2003 A3 | F120 A7 |
| 2031 A6 | F121 A5 |
| 2032 A8 | F122 A4 |
| 2033 A8 | F123 B7 |
| 2034 C9 | F124 B4 |
| 2037 D6 | F125 B3 |
| 2038 D6 | F126 B3 |
| 2040 C6 | F128 B3 |
| 2041 E7 | F129 B7 |
| 2043 E5 | F130 B4 |
| 2044 E9 | F131 B4 |
| 2045 F11 | F132 C4 |
| 2046 E11 | F136 C4 |
| 2047 E12 | F139 C4 |
| 2048 E12 | F141 C6 |
| 2049 E10 | F144 C7 |
| 2050 E11 | F151 D8 |
| 2051 G12 | F154 D6 |
| 2052 F7 | F156 D5 |
| 2053 F8 | F160 D7 |
| 2054 F7 | F164 D7 |
| 2055 H8 | F168 D8 |
| 2056 G6 | F173 E5 |
| 2061 A4 | F180 E6 |
| 2063 H8 | F183 E7 |
| 2078 I7 | F195 F5 |
| 2080 B7 | F200 F10 |
| 2082 I6 | F201 F11 |
| 2083 H7 | F205 F12 |
| 2084 A7 | F206 F10 |
| 3007 C4 | F218 F13 |
| 3037 C6 | F224 G10 |
| 3042 E6 | F229 G7 |
| 3043 G9 | F236 G7 |
| 3044 H5 | F237 G6 |
| 3045 E5 | F241 G7 |
| 3046 D5 | F242 G7 |
| 3056 B9 | F244 G5 |
| 3057 A5 | F245 G4 |
| 3058 A5 | F253 H6 |
| 3059 B5 | F255 I7 |
| 3060 B7 | F268 I8 |
| 3061 B6 | F269 I6 |
| 3062 B9 | F271 I8 |
| 3063 A9 | |
| 3064 A8 | |
| 3066 A5 | |
| 3067 A4 | |
| 3070 E7 | |
| 3071 D7 | |
| 3072 E5 | |
| 3073 D5 | |
| 3074 A3 | |
| 3075 E5 | |
| 3076 C8 | |
| 3077 E9 | |
| 3078 G5 | |
| 3081 F5 | |
| 3082 F10 | |
| 3085 E12 | |
| 3086 E12 | |
| 3087 G13 | |
| 3088 E13 | |
| 3090 F12 | |
| 3091 E11 | |
| 3092 F12 | |
| 3093 G12 | |
| 3094 F8 | |
| 3095 F8 | |
| 3097 G7 | |
| 3098 G7 | |
| 3099 H8 | |
| 3100 D9 | |
| 3101 A9 | |
| 3110 B7 | |
| 3111 A6 | |
| 3112 A8 | |
| 3116 I6 | |
| 3117 I7 | |
| 3118 H7 | |
| 3119 I7 | |
| 3120 I6 | |
| 3126 H5 | |
| 3127 G6 | |
| 3128 I7 | |
| 3129 H7 | |
| 3899 F9 | |
| 6003 H8 | |
| 6007 D8 | |
| 6015 C5 | |
| 7001-A F6 | |
| 7001-B D6 | |
| 7001-C E9 | |
| 7001-D C8 | |
| 7002-A H6 | |
| 7002-B G5 | |
| 7002-C F10 | |
| 7002-D A6 | |
| 7005-B G6 | |
| 7005-C F11 | |
| 7005-D A7 | |
| 7016 A4 | |
| 7110 A7 | |
| 7111 H8 | |
| 7112 I8 | |
| 7113 F10 | |
| 7121 F12 | |
| 7122 G8 | |
| 7124 G5 | |
| 7135 A9 | |
| F106 A4 | |
| F112 A3 | |
| F114 A7 | |
| F116 A6 | |
| F117 A4 | |
| F118 A9 | |
| F119 A8 | |

CDR MAIN BOARD - CIRCUIT DIAGRAM 3 : SERVO DRIVERS, MACE-RAM, -FLASH, -DEMUX TEST POINTS

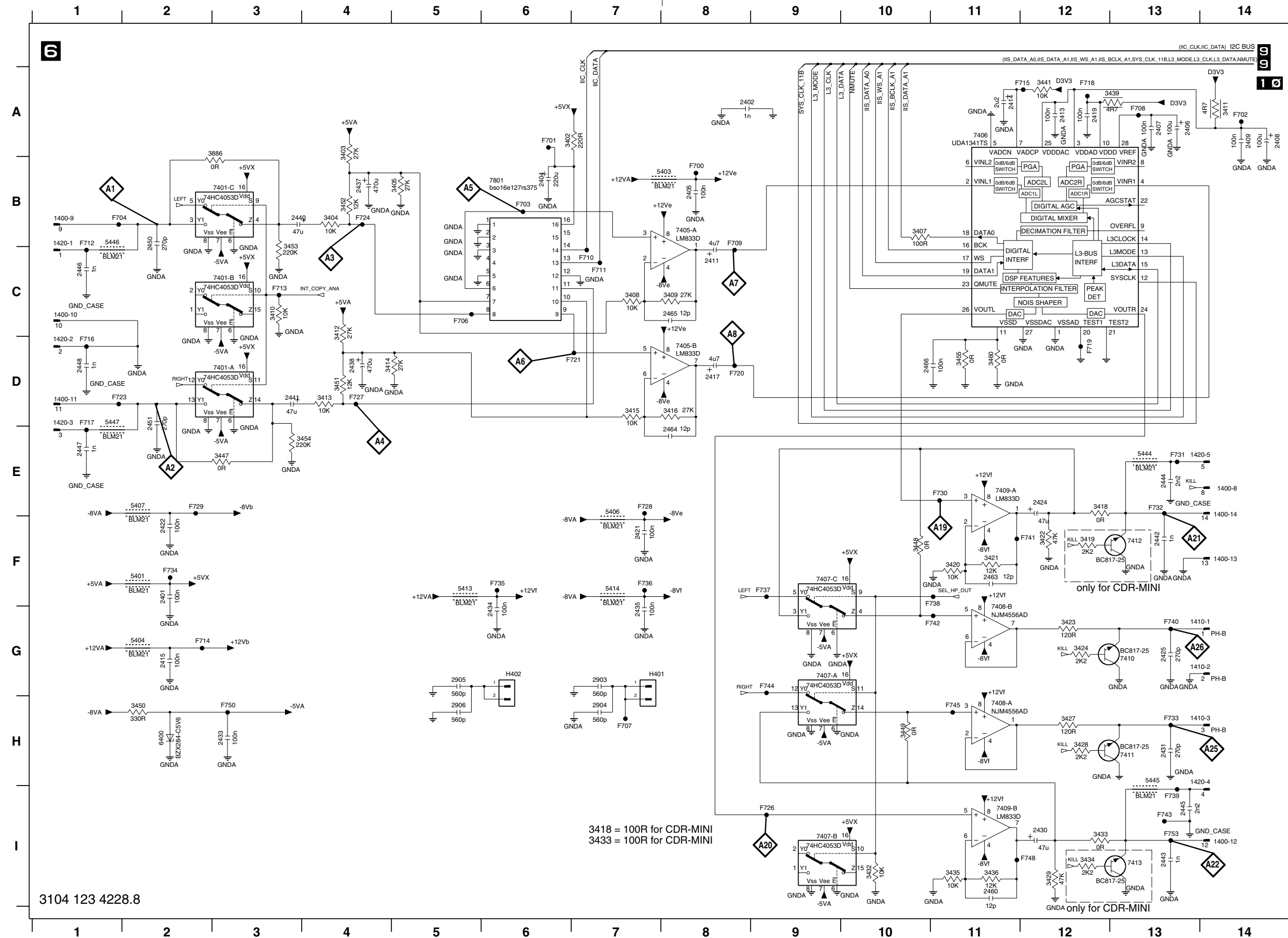


- 1200 H1
- 1220 C1
- 2208 B10
- 2209 F11
- 2214 I3
- 2221 D1
- 2224 D6
- 2225 A4
- 2226 A5
- 2227 A5
- 2228 B5
- 2229 C5
- 2240 D5
- 2241 E4
- 2242 E3
- 2243 D6
- 2250 H7
- 2255 I1
- 2256 I1
- 2291 C12
- 3200 G10
- 3201 G10
- 3202 G10
- 3203 C10
- 3204 G10
- 3205 G10
- 3206 G10
- 3207 H10
- 3209 F10
- 3210-A D12
- 3210-B D12
- 3210-C D12
- 3210-D D12
- 3211-A D12
- 3211-B D12
- 3211-C E12
- 3211-D E12
- 3224 B4
- 3225 A4
- 3226 A5
- 3227 B4
- 3228 B5
- 3229 C4
- 3237 D4
- 3239 E4
- 3240 D4
- 3241 F3
- 3244 F3
- 3250 H8
- 3251 G8
- 3252 D5
- 3253 D5
- 3254 F5
- 3256 F5
- 3257 G5
- 3265 H5
- 3283 B9
- 3284 B10
- 3742 G3
- 3747 I3
- 3748 I3
- 3806 B9
- 3808-A C9
- 3808-B C9
- 3808-C C9
- 3808-D C9
- 3809-A C9
- 3809-B C9
- 3809-C C9
- 3809-D C9
- 3889 C11
- 7201 E4
- 7202 D4
- 7208 B10
- 7209 F9
- 7215-B D6
- 7225-A A4
- 7225-B C4
- 7240 F4
- 7802 C11
- F300 A5
- F301 B5
- F306 I4
- F311 B10
- F312 C9
- F313 C10
- F316 C9
- F317 C10
- F319 C9
- F320 C10
- F321 C11
- F323 C9
- F324 C10
- F327 C9
- F328 C10
- F330 C9
- F331 C10
- F337 C9
- F338 C10
- F341 D9
- F342 D10
- F346 D10
- F348 D10
- F349 D10
- F353 D9
- F354 D10
- F355 F10
- F356 D9
- F357 D10
- F360 D10
- F364 E10
- F366 E10
- F370 E10
- F371 C2
- F373 E10
- F374 C2
- F375 C2
- F381 D2
- F383 D2
- F386 D2
- F389 D5
- F390 F9
- F391 D7
- F393 D4
- F396 D3
- F403 F3
- F404 F5
- F406 F3
- F407 F5
- F409 G3
- F433 G3
- F438 G8
- F444 H5
- F445 H5
- F446 H1
- F447 H1
- F448 I1

CDR MAIN BOARD - CIRCUIT DIAGRAM 5 : CD ENCODING-DECODING PART

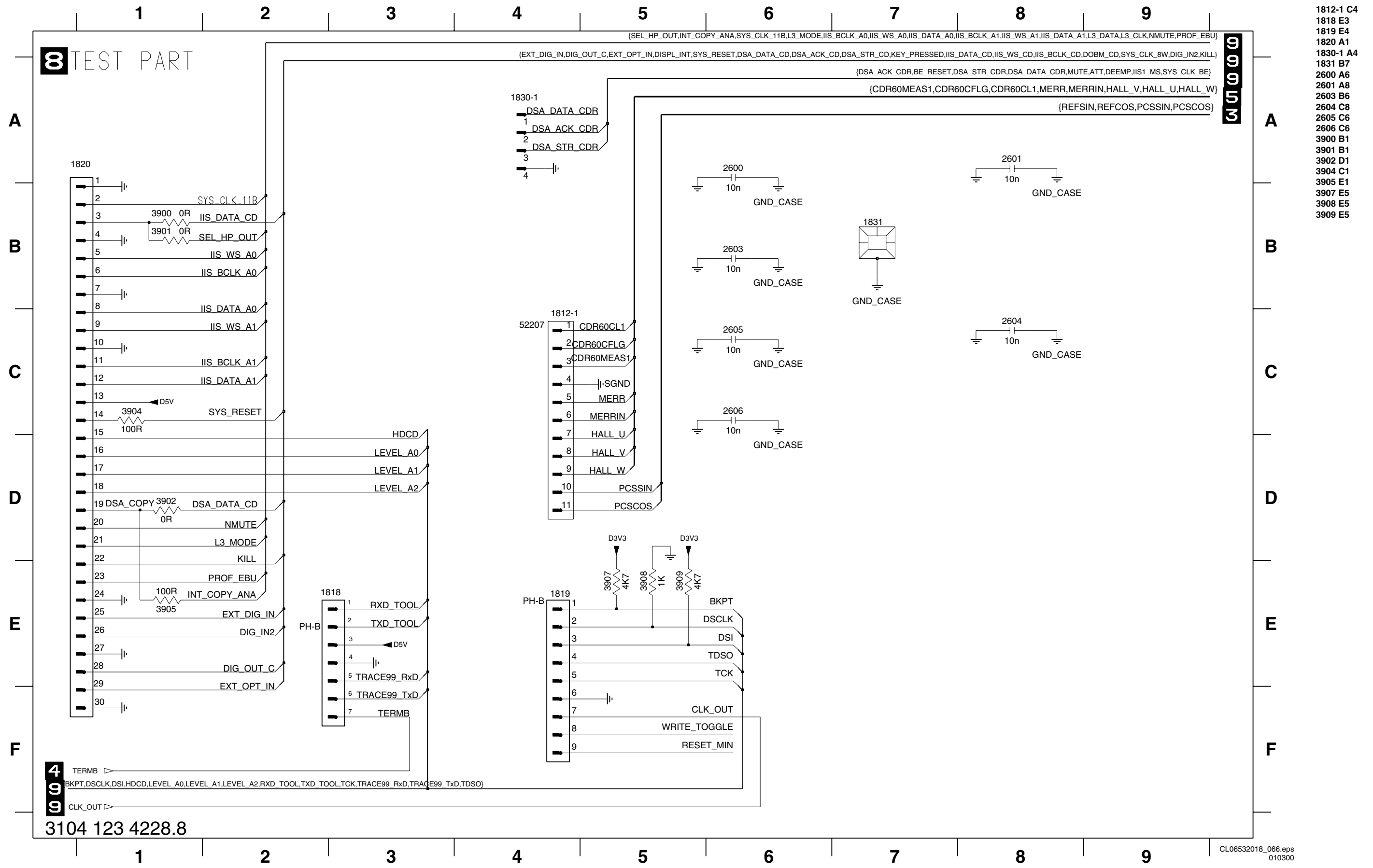


CDR MAIN BOARD - CIRCUIT DIAGRAM 6 : AUDIO PART (NOT FOR CDR950/951)



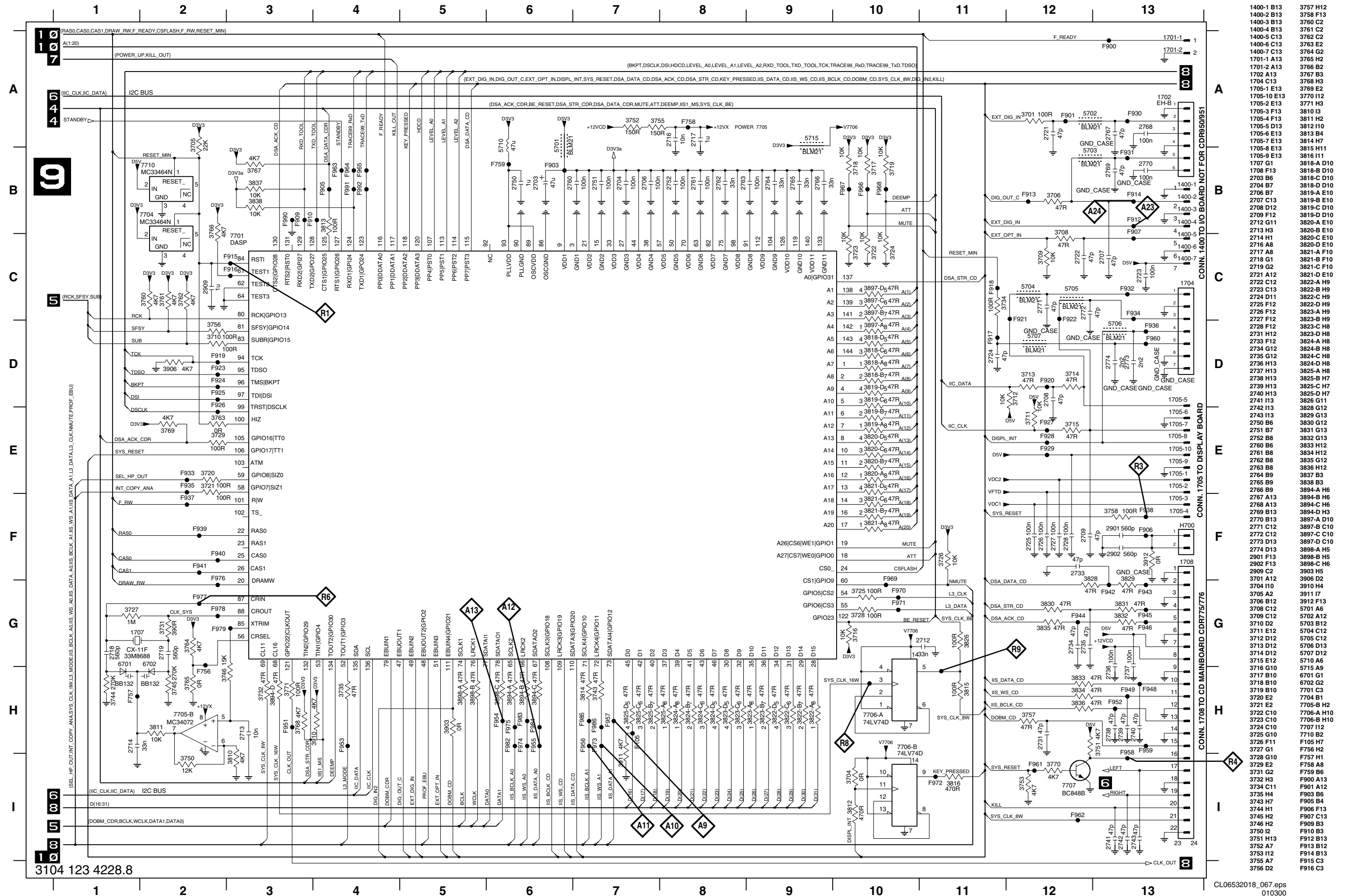
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| 1400-10 C1 | 7405-B D8 |
| 1400-11 D1 | 7406 A11 |
| 1400-12 I14 | 7407-A G9 |
| 1400-13 F14 | 7407-B I9 |
| 1400-14 F14 | 7407-C F9 |
| 1400-5 E14 | 7408-A H11 |
| 1400-9 B1 | 7408-B G11 |
| 1410-1 G14 | 7409-A E11 |
| 1410-2 G14 | 7409-B I11 |
| 1410-3 H14 | 7410 G13 |
| 1420-1 B1 | 7411 H13 |
| 1420-2 D1 | 7412 F13 |
| 1420-3 D1 | 7413 H13 |
| 1420-4 H14 | 7801 B5 |
| 1420-5 E14 | 7700 B8 |
| 2401 F2 | 7701 A6 |
| 2402 A8 | 7702 A14 |
| 2404 B6 | 7703 B6 |
| 2405 B8 | 7704 B1 |
| 2406 A13 | 7705 C5 |
| 2407 A13 | 7707 H7 |
| 2408 A14 | 7708 A13 |
| 2409 A14 | 7709 B8 |
| 2411 C8 | 7710 C7 |
| 2413 A12 | 7711 C7 |
| 2414 A11 | 7712 B1 |
| 2415 G2 | 7713 C3 |
| 2417 D8 | 7714 G2 |
| 2419 A12 | 7715 A12 |
| 2421 F7 | 7716 D1 |
| 2422 F2 | 7717 D1 |
| 2424 E12 | 7718 A12 |
| 2425 G13 | 7719 D12 |
| 2430 I12 | 7720 D8 |
| 2431 H13 | 7721 D7 |
| 2433 H3 | 7723 D1 |
| 2434 G6 | 7724 B4 |
| 2435 G7 | 7725 G7 |
| 2437 B4 | 7727 D4 |
| 2438 D4 | 7728 E7 |
| 2440 B3 | 7729 E2 |
| 2441 D3 | 7730 E11 |
| 2442 F13 | 7731 E13 |
| 2443 I13 | 7732 E13 |
| 2444 E13 | 7733 H13 |
| 2445 I13 | 7734 F2 |
| 2446 C1 | 7735 F6 |
| 2447 E1 | 7736 F7 |
| 2448 D1 | 7737 F9 |
| 2450 B2 | 7738 F11 |
| 2451 D2 | 7739 I13 |
| 2460 I11 | 7740 G13 |
| 2463 F11 | 7741 F12 |
| 2464 E8 | 7742 G11 |
| 2465 C8 | 7743 I13 |
| 2466 D10 | 7744 G9 |
| 2903 G7 | 7745 H11 |
| 2904 H7 | 7746 H7 |
| 2905 G5 | 7750 H3 |
| 2906 H5 | 7753 I13 |
| 3402 A6 | H401 G7 |
| 3403 A4 | H402 G6 |
| 3404 B4 | |
| 3405 B5 | |
| 3407 B10 | |
| 3408 C7 | |
| 3409 C8 | |
| 3410 C3 | |
| 3411 A14 | |
| 3412 C4 | |
| 3413 D4 | |
| 3414 D4 | |
| 3415 D7 | |
| 3416 D8 | |
| 3418 E12 | |
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| 3427 H12 | |
| 3428 H12 | |
| 3429 I12 | |
| 3432 I10 | |
| 3433 H12 | |
| 3434 I12 | |
| 3435 I11 | |
| 3436 I11 | |
| 3439 A13 | |
| 3441 A12 | |
| 3447 E3 | |
| 3448 F10 | |
| 3449 H10 | |
| 3450 H2 | |
| 3451 D4 | |
| 3452 B4 | |
| 3453 B3 | |
| 3454 E4 | |
| 3455 D11 | |
| 3459 D11 | |
| 3886 A3 | |
| 5401 F2 | |
| 5403 B8 | |
| 5404 G2 | |
| 5406 E7 | |
| 5407 E2 | |
| 5413 F5 | |
| 5414 F7 | |
| 5444 E13 | |
| 5445 H13 | |
| 5446 B1 | |
| 5447 D1 | |
| 6400 H2 | |
| 7401-A D3 | |
| 7401-B C3 | |
| 7401-C B3 | |
| 7405-A B8 | |

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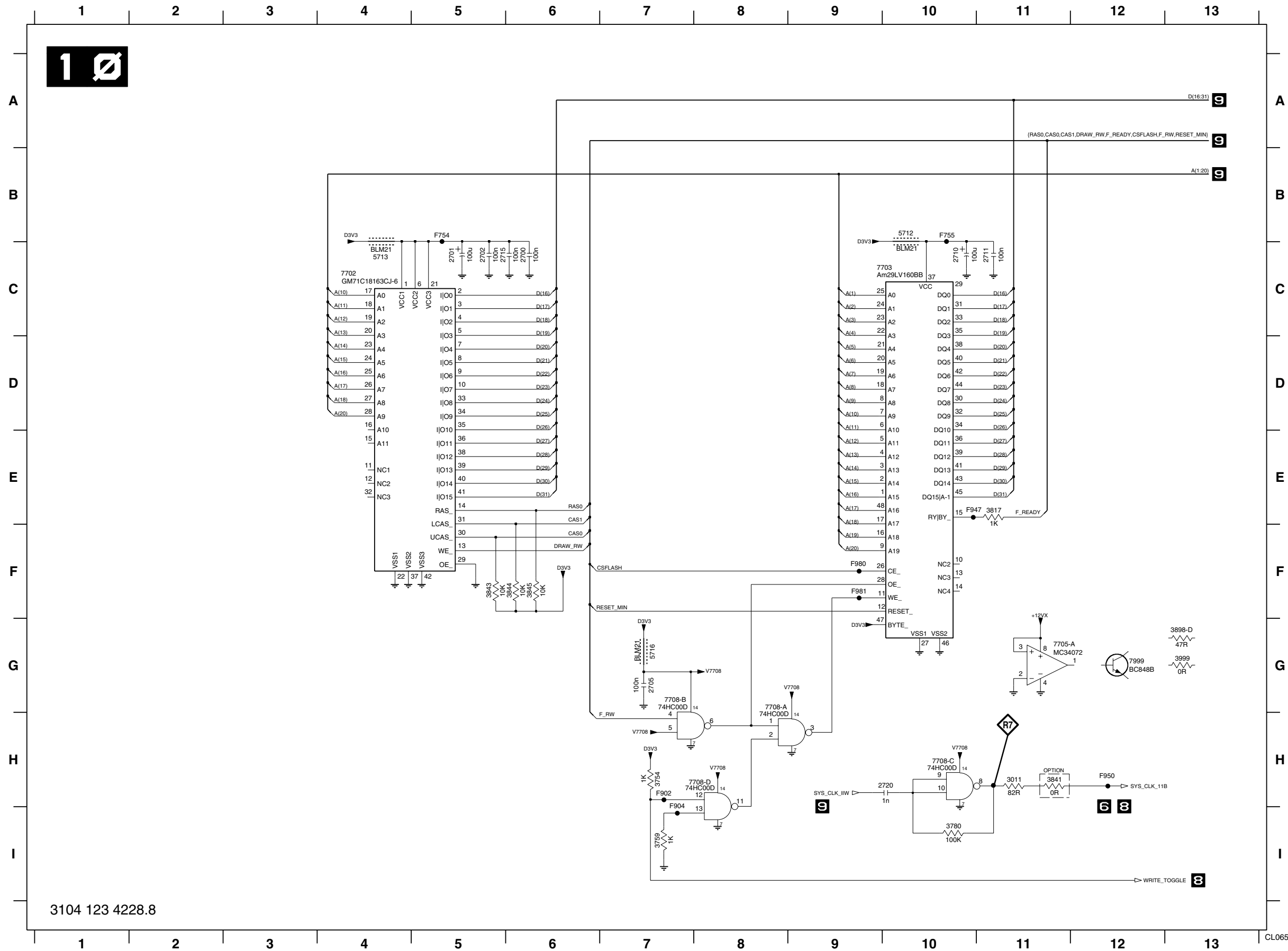
- 1812-1 C4
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- 1819 E4
- 1820 A1
- 1830-1 A4
- 1831 B7
- 2600 A6
- 2601 A8
- 2603 B6
- 2604 C8
- 2605 C6
- 2606 C6
- 3900 B1
- 3901 B1
- 3902 D1
- 3904 C1
- 3905 E1
- 3907 E5
- 3908 E5
- 3909 E5

CDR MAIN BOARD - CIRCUIT DIAGRAM 9 : DASP MASTER PROCESSOR TESTPOINTS



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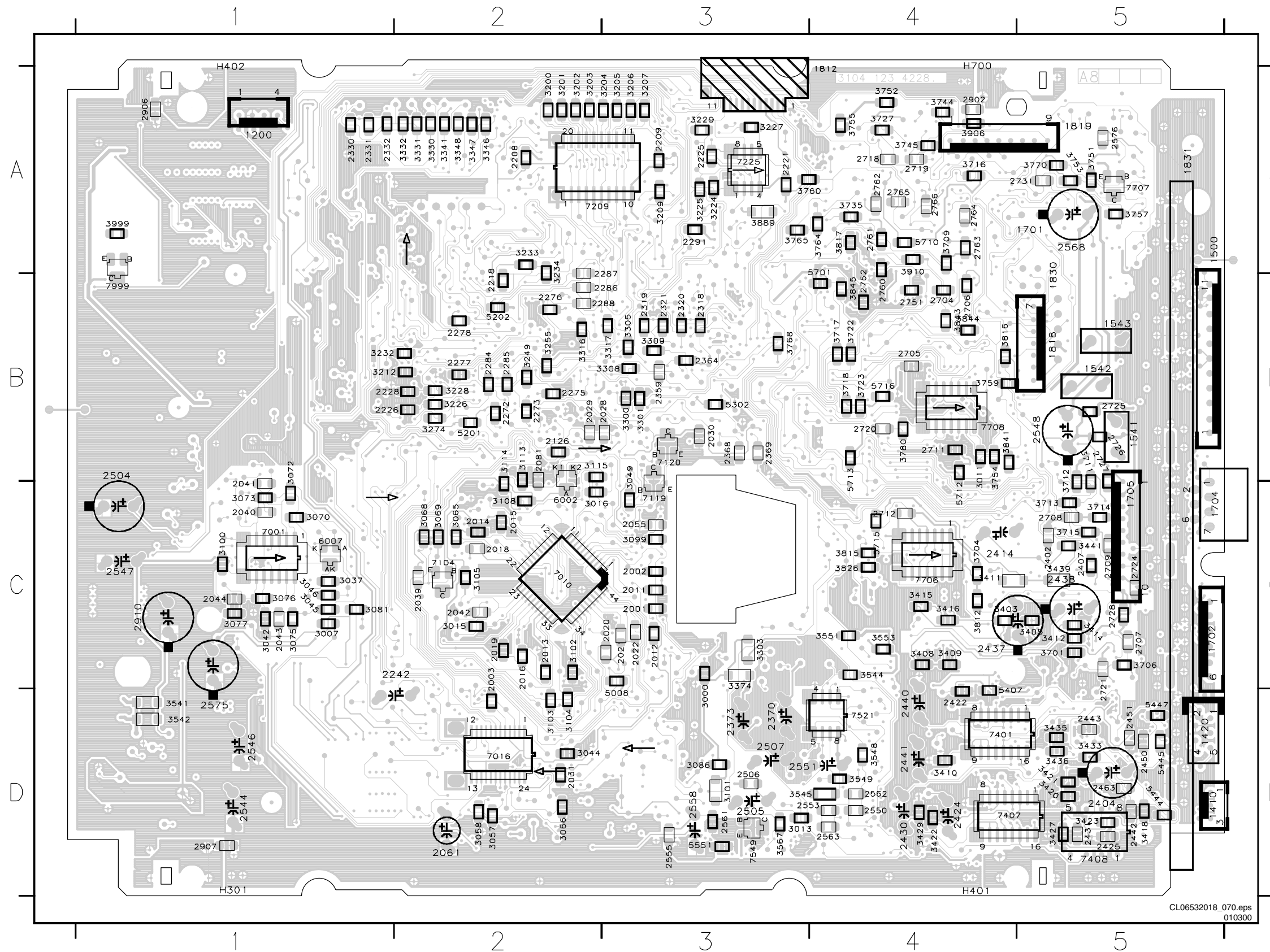
CDR MAIN BOARD - CIRCUIT DIAGRAM 10 : DASP FLASH & DRAM TESTPOINTS



- 2700 C6
- 2701 C5
- 2702 C5
- 2705 G7
- 2710 C10
- 2711 C11
- 2715 C5
- 2720 H10
- 3011 H11
- 3754 H7
- 3759 I7
- 3780 H10
- 3817 E11
- 3841 H11
- 3843 F5
- 3844 F6
- 3845 F6
- 3898-D G13
- 3999 G13
- 5712 B10
- 5713 C4
- 5716 G7
- 7702 C4
- 7703 C9
- 7705-A G11
- 7708-A G8
- 7708-B G7
- 7708-C H10
- 7708-D H7
- 7999 G12
- F754 B5
- F755 B10
- F902 H7
- F904 I7
- F947 E10
- F950 H12
- F980 F9
- F981 F9

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CDR MAIN BOARD .8 - BOTTOM VIEW

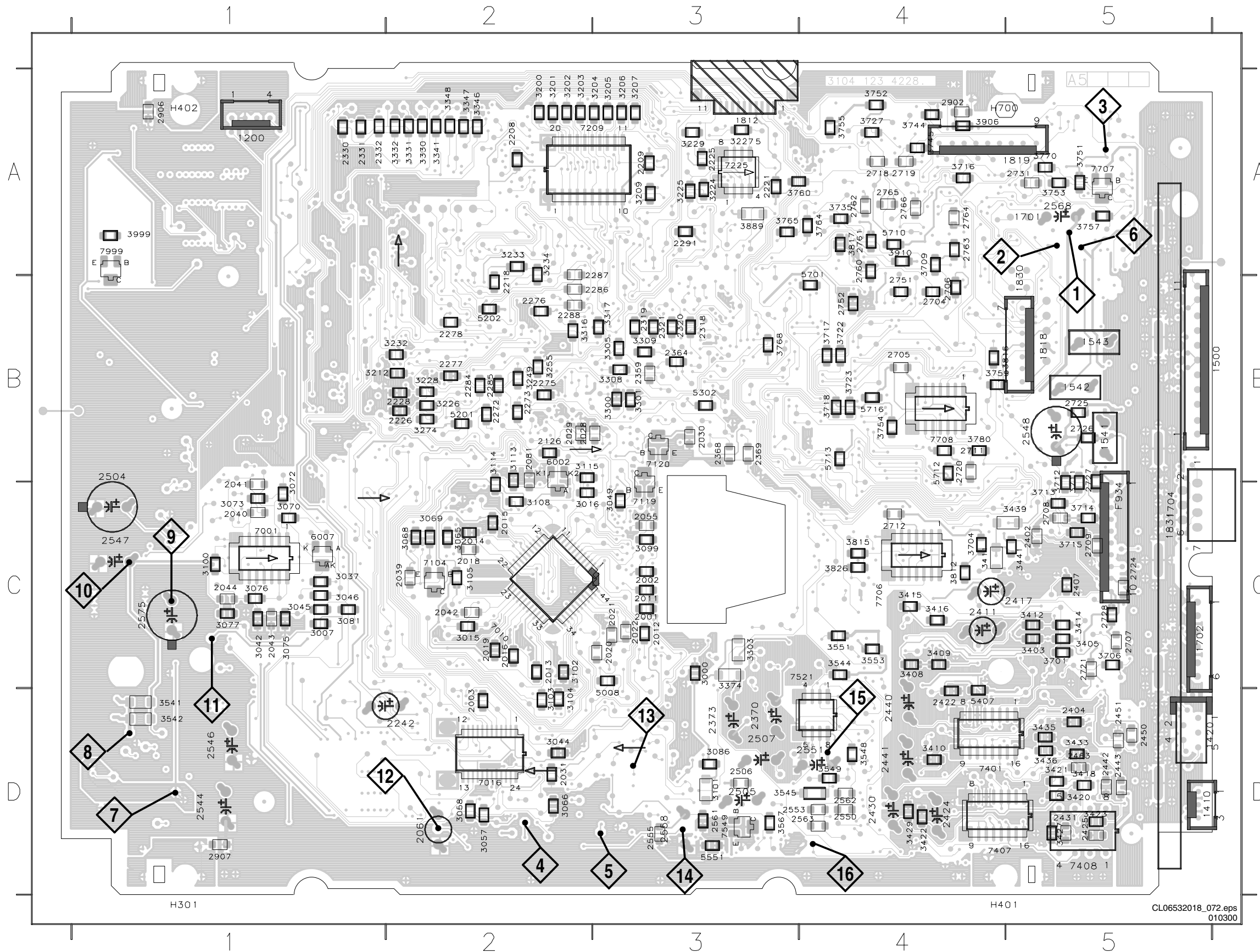


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| 2711 | 2712 | 2713 | 2714 | 2715 | 2716 | 2717 | 2718 | 2719 | 2720 | 2721 | 2722 | 2723 | 2724 | 2725 | 2726 | 2727 | 2728 | 2729 | 2730 | 2731 | 2732 | 2733 | 2734 | 2735 | 2736 | 2737 | 2738 | 2739 | 2740 | 2741 | 2742 | 2743 | 2744 | 2745 | 2746 | 2747 | 2748 | 2749 | 2750 | 2751 | 2752 | 2753 | 2754 | 2755 | 2756 | 2757 | 2758 | 2759 | 2760 | 2761 | 2762 | 2763 | 2764 | 2765 | 2766 | 2767 | 2768 | 2769 | 2770 | 2771 | 2772 | 2773 | 2774 | 2775 | 2776 | 2777 | 2778 | 2779 | 2780 | 2781 | 2782 | 2783 | 2784 | 2785 | 2786 | 2787 | 2788 | 2789 | 2790 | 2791 | 2792 | 2793 | 2794 | 2795 | 2796 | 2797 | 2798 | 2799 | 2800 | 2801 | 2802 | 2803 | 2804 | 2805 | 2806 | 2807 | 2808 | 2809 | 2810 | 2811 | 2812 | 2813 | 2814 | 2815 | 2816 | 2817 | 2818 | 2819 | 2820 | 2821 | 2822 | 2823 | 2824 | 2825 | 2826 | 2827 | 2828 | 2829 | 2830 | 2831 | 2832 | 2833 | 2834 | 2835 | 2836 | 2837 | 2838 | 2839 | 2840 | 2841 | 2842 | 2843 | 2844 | 2845 | 2846 | 2847 | 2848 | 2849 | 2850 | 2851 | 2852 | 2853 | 2854 | 2855 | 2856 | 2857 | 2858 | 2859 | 2860 | 2861 | 2862 | 2863 | 2864 | 2865 | 2866 | 2867 | 2868 | 2869 | 2870 | 2871 | 2872 | 2873 | 2874 | 2875 | 2876 | 2877 | 2878 | 2879 | 2880 | 2881 | 2882 | 2883 | 2884 | 2885 | 2886 | 2887 | 2888 | 2889 | 2890 | 2891 | 2892 | 2893 | 2894 | 2895 | 2896 | 2897 | 2898 | 2899 | 2900 | 2901 | 2902 | 2903 | 2904 | 2905 | 2906 | 2907 | 2908 | 2909 | 2910 | 2911 | 2912 | 2913 | 2914 | 2915 | 2916 | 2917 | 2918 | 2919 | 2920 | 2921 | 2922 | 2923 | 2924 | 2925 | 2926 | 2927 | 2928 | 2929 | 2930 | 2931 | 2932 | 2933 | 2934 | 2935 | 2936 | 2937 | 2938 | 2939 | 2940 | 2941 | 2942 | 2943 | 2944 | 2945 | 2946 | 2947 | 2948 | 2949 | 2950 | 2951 | 2952 | 2953 | 2954 | 2955 | 2956 | 2957 | 2958 | 2959 | 2960 | 2961 | 2962 | 2963 | 2964 | 2965 | 2966 | 2967 | 2968 | 2969 | 2970 | 2971 | 2972 | 2973 | 2974 | 2975 | 2976 | 2977 | 2978 | 2979 | 2980 | 2981 | 2982 | 2983 | 2984 | 2985 | 2986 | 2987 | 2988 | 2989 | 2990 | 2991 | 2992 | 2993 | 2994 | 2995 | 2996 | 2997 | 2998 | 2999 | 3000 | 3001 | 3002 | 3003 | 3004 | 3005 | 3006 | 3007 | 3008 | 3009 | 3010 | 3011 | 3012 | 3013 | 3014 | 3015 | 3016 | 3017 | 3018 | 3019 | 3020 | 3021 | 3022 | 3023 | 3024 | 3025 | 3026 | 3027 | 3028 | 3029 | 3030 | 3031 | 3032 | 3033 | 3034 | 3035 | 3036 | 3037 | 3038 | 3039 | 3040 | 3041 | 3042 | 3043 | 3044 | 3045 | 3046 | 3047 | 3048 | 3049 | 3050 | 3051 | 3052 | 3053 | 3054 | 3055 | 3056 | 3057 | 3058 | 3059 | 3060 | 3061 | 3062 | 3063 | 3064 | 3065 | 3066 | 3067 | 3068 | 3069 | 3070 | 3071 | 3072 | 3073 | 3074 | 3075 | 3076 | 3077 | 3078 | 3079 | 3080 | 3081 | 3082 | 3083 | 3084 | 3085 | 3086 | 3087 | 3088 | 3089 | 3090 | 3091 | 3092 | 3093 | 3094 | 3095 | 3096 | 3097 | 3098 | 3099 | 3100 | 3101 | 3102 | 3103 | 3104 | 3105 | 3106 | 3107 | 3108 | 3109 | 3110 | 3111 | 3112 | 3113 | 3114 | 3115 | 3116 | 3117 | 3118 | 3119 | 3120 | 3121 | 3122 | 3123 | 3124 | 3125 | 3126 | 3127 | 3128 | 3129 | 3130 | 3131 | 3132 | 3133 | 3134 | 3135 | 3136 | 3137 | 3138 | 3139 | 3140 | 3141 | 3142 | 3143 | 3144 | 3145 | 3146 | 3147 | 3148 | 3149 | 3150 | 3151 | 3152 | 3153 | 3154 | 3155 | 3156 | 3157 | 3158 | 3159 | 3160 | 3161 | 3162 | 3163 | 3164 | 3165 | 3166 | 3167 | 3168 | 3169 | 3170 | 3171 | 3172 | 3173 | 3174 | 3175 | 3176 | 3177 | 3178 | 3179 | 3180 | 3181 | 3182 | 3183 | 3184 | 3185 | 3186 | 3187 | 3188 | 3189 | 3190 | 3191 | 3192 | 3193 | 3194 | 3195 | 3196 | 3197 | 3198 | 3199 | 3200 | 3201 | 3202 | 3203 | 3204 | 3205 | 3206 | 3207 | 3208 | 3209 | 3210 | 3211 | 3212 | 3213 | 3214 | 3215 | 3216 | 3217 | 3218 | 3219 | 3220 | 3221 | 3222 | 3223 | 3224 | 3225 | 3226 | 3227 | 3228 | 3229 | 3230 | 3231 | 3232 | 3233 | 3234 | 3235 | 3236 | 3237 | 3238 | 3239 | 3240 | 3241 | 3242 | 3243 | 3244 | 3245 | 3246 | 3247 | 3248 | 3249 | 3250 | 3251 | 3252 | 3253 | 3254 | 3255 | 3256 | 3257 | 3258 | 3259 | 3260 | 3261 | 3262 | 3263 | 3264 | 3265 | 3266 | 3267 | 3268 | 3269 | 3270 | 3271 | 3272 | 3273 | 3274 | 3275 | 3276 | 3277 | 3278 | 3279 | 3280 | 3281 | 3282 | 3283 | 3284 | 3285 | 3286 | 3287 | 3288 | 3289 | 3290 | 3291 | 3292 | 3293 | 3294 | 3295 | 3296 | 3297 | 3298 | 3299 | 3300 | 3301 | 3302 | 3303 | 3304 | 3305 | 3306 | 3307 | 3308 | 3309 | 3310 | 3311 | 3312 | 3313 | 3314 | 3315 | 3316 | 3317 | 3318 | 3319 | 3320 | 3321 | 3322 | 3323 | 3324 | 3325 | 3326 | 3327 | 3328 | 3329 | 3330 | 3331 | 3332 | 3333 | 3334 | 3335 | 3336 | 3337 | 3338 | 3339 | 3340 | 3341 | 3342 | 3343 | 3344 | 3345 | 3346 | 3347 | 3348 | 3349 | 3350 | 3351 | 3352 | 3353 | 3354 | 3355 | 3356 | 3357 | 3358 | 3359 | 3360 | 3361 | 3362 | 3363 | 3364 | 3365 | 3366 | 3367 | 3368 | 3369 | 3370 | 3371 | 3372 | 3373 | 3374 | 3375 | 3376 | 3377 | 3378 | 3379 | 3380 | 3381 | 3382 | 3383 | 3384 | 3385 | 3386 | 3387 | 3388 | 3389 | 3390 | 3391 | 3392 | 3393 | 3394 | 3395 | 3396 | 3397 | 3398 | 3399 | 3400 | 3401 | 3402 | 3403 | 3404 | 3405 | 3406 | 3407 | 3408 | 3409 | 3410 | 3411 | 3412 | 3413 | 3414 | 3415 | 3416 | 3417 | 3418 | 3419 | 3420 | 3421 | 3422 | 3423 | 3424 | 3425 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| 3569 | 3570 | 3571 | 3572 | 3573 | 3574 | 3575 | 3576 | 3577 | 3578 | 3579 | 3580 | 3581 | 3582 | 3583 | 3584 | 3585 | 3586 | 3587 | 3588 | 3589 | 3590 | 3591 | 3592 | 3593 | 3594 | 3595 | 3596 | 3597 | 3598 | 3599 | 3600 | 3601 | 3602 | 3603 | 3604 | 3605 | 3606 | 3607 | 3608 | 3609 | 3610 | 3611 | 3612 | 3613 | 3614 | 3615 | 3616 | 3617 | 3618 | 3619 | 3620 | 3621 | 3622 | 3623 | 3624 | 3625 | 3626 | 3627 | 3628 | 3629 | 3630 | 3631 | 3632 | 3633 | 3634 | 3635 | 3636 | 3637 | 3638 | 3639 | 3640 | 3641 | 3642 | 3643 | 3644 | 3645 | 3646 | 3647 | 3648 | 3649 | 3650 | 3651 | 3652 | 3653 | 3654 | 3655 | 3656 | 3657 | 3658 | 3659 | 3660 | 3661 | 3662 | 3663 | 3664 | 3665 | 3666 | 3667 | 3668 | 3669 | 3670 | 3671 | 3672 | 3673 | 3674 | 3675 | 3676 | 3677 | 3678 | 3679 | 3680 | 3681 | 3682 | 3683 | 3684 | 3685 | 3686 | 3687 | 3688 | 3689 | 3690 | 3691 | 3692 | 3693 | 3694 | 3695 | 3696 | 3697 | 3698 | 3699 | 3700 | 3701 | 3702 | 3703 | 3704 | 3705 | 3706 | 3707 | 3708 | 3709 | 3710 | 3711 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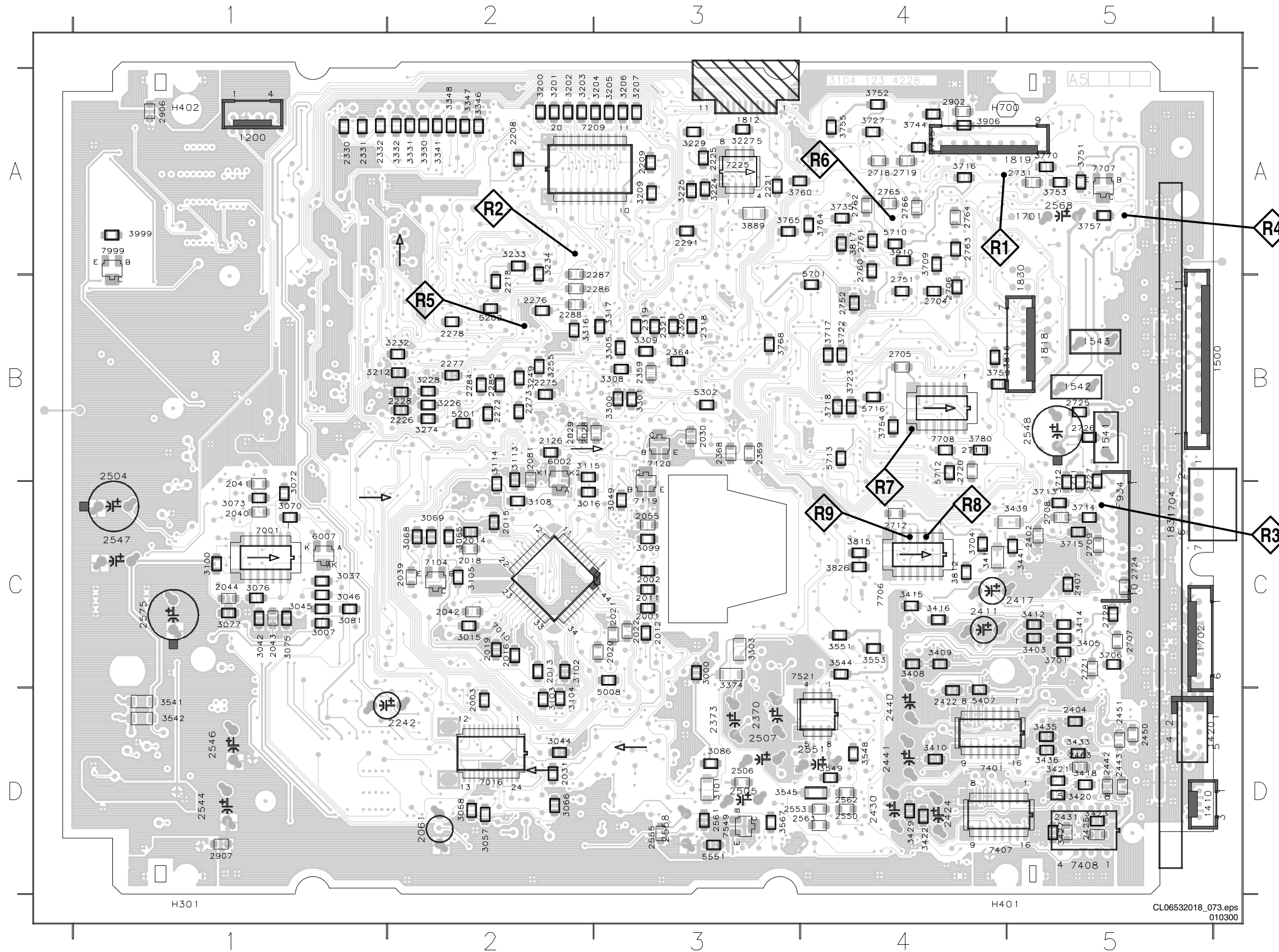
CDR-Mainboard PWB testpoints

CDR MAIN BOARD - BOTTOM VIEW : POWER PART TESTPOINTS



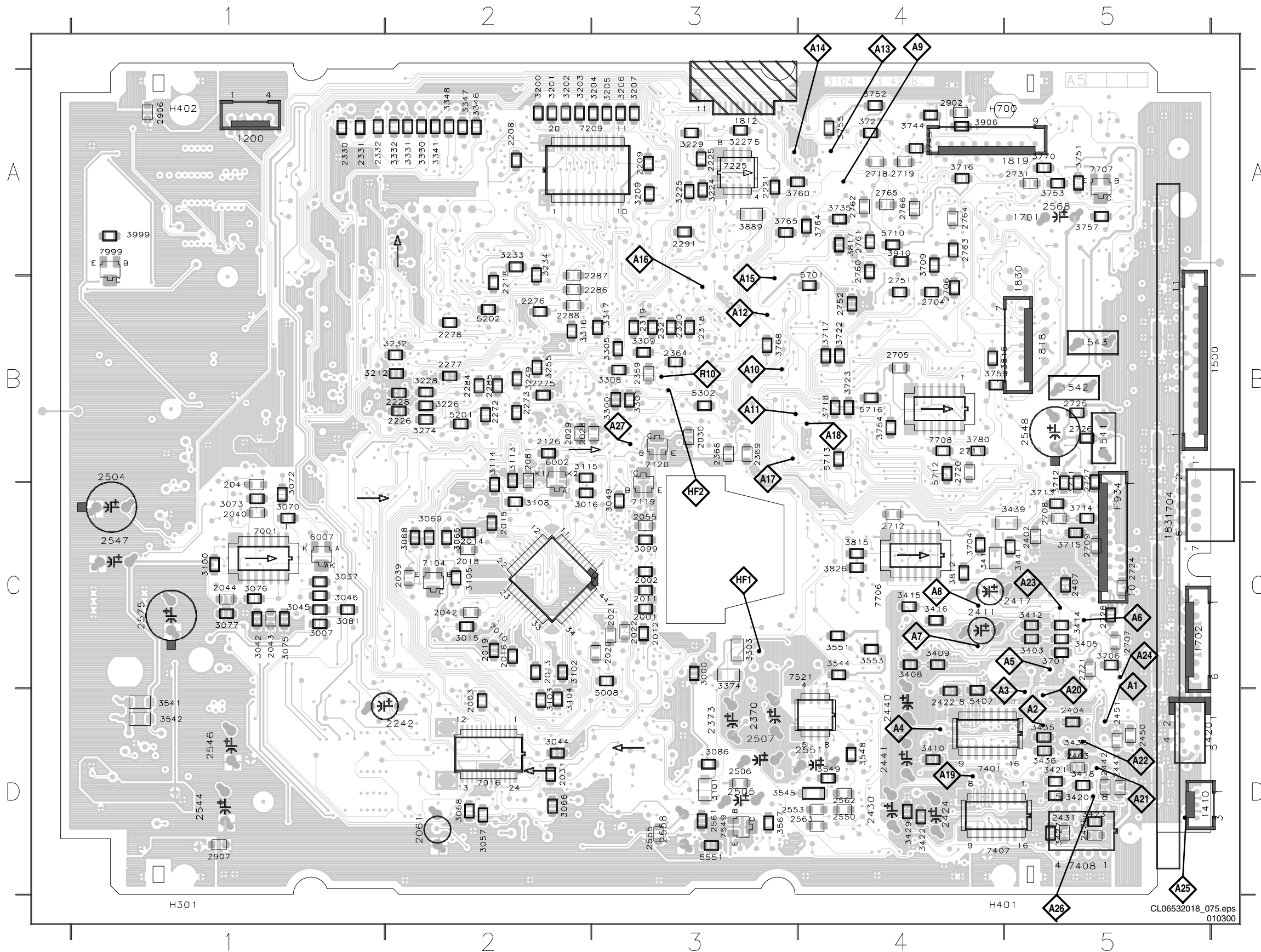
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| 8 | A74 |
| 9 | A74 |
| 10 | A74 |
| 11 | A74 |
| 12 | A74 |
| 13 | A74 |
| 14 | A74 |
| 15 | A74 |
| 16 | A74 |
| 1 | A76 |
| 2 | A76 |
| 3 | A76 |
| 4 | A76 |
| 5 | A76 |
| 6 | A76 |
| 7 | A76 |
| 8 | A76 |
| 9 | A76 |
| 10 | A76 |
| 11 | A76 |
| 12 | A76 |
| 13 | A76 |
| 14 | A76 |
| 15 | A76 |
| 16 | A76 |
| 1 | A78 |
| 2 | A78 |
| 3 | A78 |
| 4 | A78 |
| 5 | A78 |
| 6 | A78 |
| 7 | A78 |
| 8 | A78 |
| 9 | A78 |
| 10 | A78 |
| 11 | A78 |
| 12 | A78 |
| 13 | A78 |
| 14 | A78 |
| 15 | A78 |
| 16 | A78 |
| 1 | A80 |
| 2 | A80 |
| 3 | A80 |
| 4 | A80 |
| 5 | A80 |
| 6 | A80 |
| 7 | A80 |
| 8 | A80 |
| 9 | A80 |
| 10 | A80 |
| 11 | A80 |
| 12 | A80 |
| 13 | A80 |
| 14 | A80 |
| 15 | A80 |
| 16 | A80 |
| 1 | A82 |
| 2 | A82 |
| 3 | A82 |
| 4 | A82 |
| 5 | A82 |
| 6 | A82 |
| 7 | A82 |
| 8 | A82 |
| 9 | A82 |
| 10 | A82 |
| 11 | A82 |
| 12 | A82 |
| 13 | A82 |
| 14 | A82 |
| 15 | A82 |
| 16 | A82 |
| 1 | A84 |
| 2 | A84 |
| 3 | A84 |
| 4 | A84 |
| 5 | A84 |
| 6 | A84 |
| 7 | A84 |
| 8 | A84 |
| 9 | A84 |
| 10 | A84 |
| 11 | A84 |
| 12 | A84 |
| 13 | A84 |
| 14 | A84 |
| 15 | A84 |
| 16 | A84 |
| 1 | A86 |
| 2 | A86 |
| 3 | A86 |
| 4 | A86 |
| 5 | A86 |
| 6 | A86 |
| 7 | A86 |
| 8 | A86 |
| 9 | A86 |
| 10 | A86 |
| 11 | A86 |
| 12 | A86 |
| 13 | A86 |
| 14 | A86 |
| 15 | |

CDR MAIN BOARD - BOTTOM VIEW : RESET & CLOCK TESTPOINTS



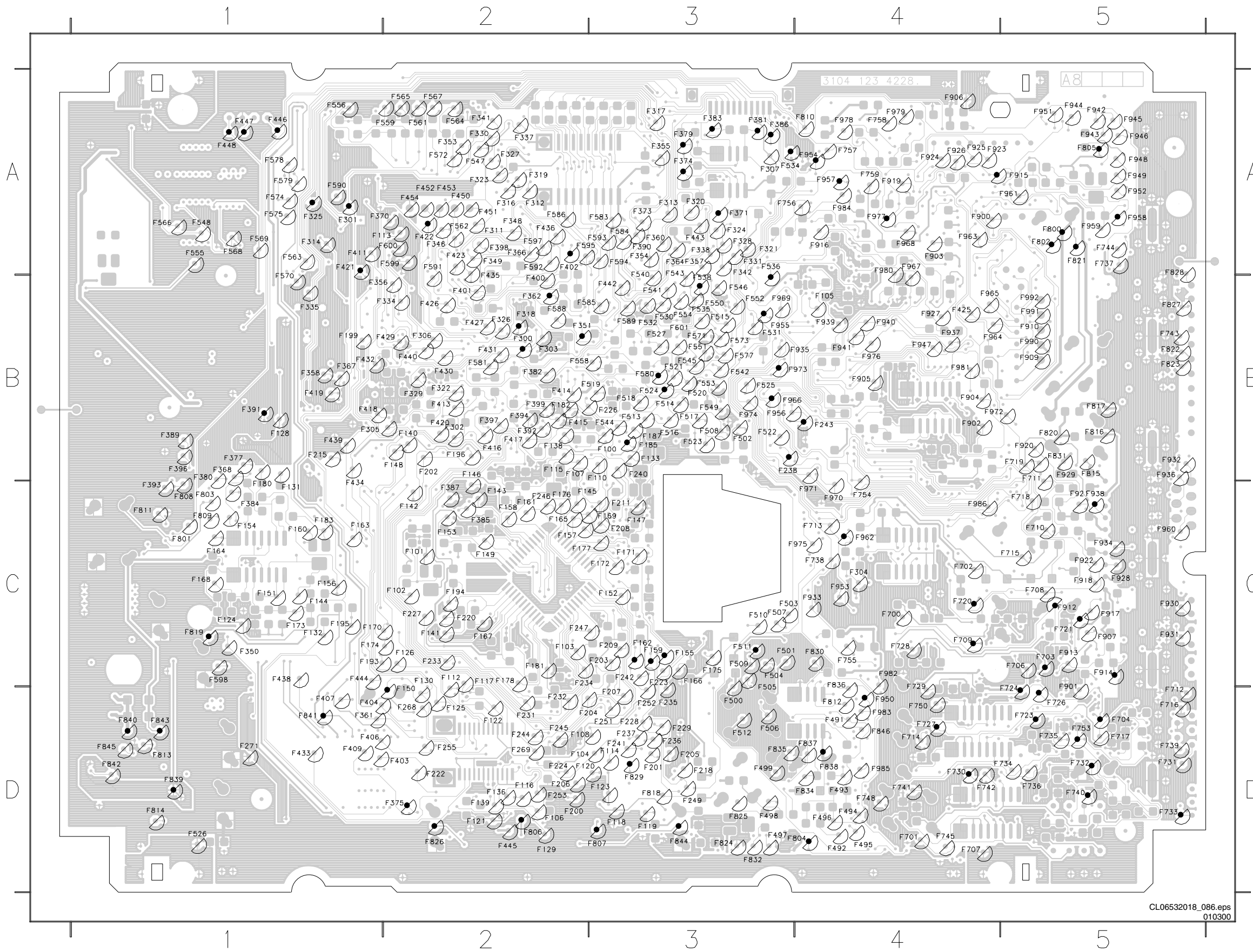
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|-----|------|----|-----|-----|----|
| 18 | 2720 | A2 | 57 | 712 | B4 |
| 19 | 2721 | A2 | 58 | 713 | B4 |
| 20 | 2722 | A2 | 59 | 714 | B4 |
| 21 | 2723 | A2 | 60 | 715 | B4 |
| 22 | 2724 | A2 | 61 | 716 | B4 |
| 23 | 2725 | A2 | 62 | 717 | B4 |
| 24 | 2726 | A2 | 63 | 718 | B4 |
| 25 | 2727 | A2 | 64 | 719 | B4 |
| 26 | 2728 | A2 | 65 | 720 | B4 |
| 27 | 2729 | A2 | 66 | 721 | B4 |
| 28 | 2730 | A2 | 67 | 722 | B4 |
| 29 | 2731 | A2 | 68 | 723 | B4 |
| 30 | 2732 | A2 | 69 | 724 | B4 |
| 31 | 2733 | A2 | 70 | 725 | B4 |
| 32 | 2734 | A2 | 71 | 726 | B4 |
| 33 | 2735 | A2 | 72 | 727 | B4 |
| 34 | 2736 | A2 | 73 | 728 | B4 |
| 35 | 2737 | A2 | 74 | 729 | B4 |
| 36 | 2738 | A2 | 75 | 730 | B4 |
| 37 | 2739 | A2 | 76 | 731 | B4 |
| 38 | 2740 | A2 | 77 | 732 | B4 |
| 39 | 2741 | A2 | 78 | 733 | B4 |
| 40 | 2742 | A2 | 79 | 734 | B4 |
| 41 | 2743 | A2 | 80 | 735 | B4 |
| 42 | 2744 | A2 | 81 | 736 | B4 |
| 43 | 2745 | A2 | 82 | 737 | B4 |
| 44 | 2746 | A2 | 83 | 738 | B4 |
| 45 | 2747 | A2 | 84 | 739 | B4 |
| 46 | 2748 | A2 | 85 | 740 | B4 |
| 47 | 2749 | A2 | 86 | 741 | B4 |
| 48 | 2750 | A2 | 87 | 742 | B4 |
| 49 | 2751 | A2 | 88 | 743 | B4 |
| 50 | 2752 | A2 | 89 | 744 | B4 |
| 51 | 2753 | A2 | 90 | 745 | B4 |
| 52 | 2754 | A2 | 91 | 746 | B4 |
| 53 | 2755 | A2 | 92 | 747 | B4 |
| 54 | 2756 | A2 | 93 | 748 | B4 |
| 55 | 2757 | A2 | 94 | 749 | B4 |
| 56 | 2758 | A2 | 95 | 750 | B4 |
| 57 | 2759 | A2 | 96 | 751 | B4 |
| 58 | 2760 | A2 | 97 | 752 | B4 |
| 59 | 2761 | A2 | 98 | 753 | B4 |
| 60 | 2762 | A2 | 99 | 754 | B4 |
| 61 | 2763 | A2 | 100 | 755 | B4 |
| 62 | 2764 | A2 | 101 | 756 | B4 |
| 63 | 2765 | A2 | 102 | 757 | B4 |
| 64 | 2766 | A2 | 103 | 758 | B4 |
| 65 | 2767 | A2 | 104 | 759 | B4 |
| 66 | 2768 | A2 | 105 | 760 | B4 |
| 67 | 2769 | A2 | 106 | 761 | B4 |
| 68 | 2770 | A2 | 107 | 762 | B4 |
| 69 | 2771 | A2 | 108 | 763 | B4 |
| 70 | 2772 | A2 | 109 | 764 | B4 |
| 71 | 2773 | A2 | 110 | 765 | B4 |
| 72 | 2774 | A2 | 111 | 766 | B4 |
| 73 | 2775 | A2 | 112 | 767 | B4 |
| 74 | 2776 | A2 | 113 | 768 | B4 |
| 75 | 2777 | A2 | 114 | 769 | B4 |
| 76 | 2778 | A2 | 115 | 770 | B4 |
| 77 | 2779 | A2 | 116 | 771 | B4 |
| 78 | 2780 | A2 | 117 | 772 | B4 |
| 79 | 2781 | A2 | 118 | 773 | B4 |
| 80 | 2782 | A2 | 119 | 774 | B4 |
| 81 | 2783 | A2 | 120 | 775 | B4 |
| 82 | 2784 | A2 | 121 | 776 | B4 |
| 83 | 2785 | A2 | 122 | 777 | B4 |
| 84 | 2786 | A2 | 123 | 778 | B4 |
| 85 | 2787 | A2 | 124 | 779 | B4 |
| 86 | 2788 | A2 | 125 | 780 | B4 |
| 87 | 2789 | A2 | 126 | 781 | B4 |
| 88 | 2790 | A2 | 127 | 782 | B4 |
| 89 | 2791 | A2 | 128 | 783 | B4 |
| 90 | 2792 | A2 | 129 | 784 | B4 |
| 91 | 2793 | A2 | 130 | 785 | B4 |
| 92 | 2794 | A2 | 131 | 786 | B4 |
| 93 | 2795 | A2 | 132 | 787 | B4 |
| 94 | 2796 | A2 | 133 | 788 | B4 |
| 95 | 2797 | A2 | 134 | 789 | B4 |
| 96 | 2798 | A2 | 135 | 790 | B4 |
| 97 | 2799 | A2 | 136 | 791 | B4 |
| 98 | 2800 | A2 | 137 | 792 | B4 |
| 99 | 2801 | A2 | 138 | 793 | B4 |
| 100 | 2802 | A2 | 139 | 794 | B4 |
| 101 | 2803 | A2 | 140 | 795 | B4 |
| 102 | 2804 | A2 | 141 | 796 | B4 |
| 103 | 2805 | A2 | 142 | 797 | B4 |
| 104 | 2806 | A2 | 143 | 798 | B4 |
| 105 | 2807 | A2 | 144 | 799 | B4 |
| 106 | 2808 | A2 | 145 | 800 | B4 |
| 107 | 2809 | A2 | 146 | 801 | B4 |
| 108 | 2810 | A2 | 147 | 802 | B4 |
| 109 | 2811 | A2 | 148 | 803 | B4 |
| 110 | 2812 | A2 | 149 | 804 | B4 |
| 111 | 2813 | A2 | 150 | 805 | B4 |
| 112 | 2814 | A2 | 151 | 806 | B4 |
| 113 | 2815 | A2 | 152 | 807 | B4 |
| 114 | 2816 | A2 | 153 | 808 | B4 |
| 115 | 2817 | A2 | 154 | 809 | B4 |
| 116 | 2818 | A2 | 155 | 810 | B4 |
| 117 | 2819 | A2 | 156 | 811 | B4 |
| 118 | 2820 | A2 | 157 | 812 | B4 |
| 119 | 2821 | A2 | 158 | 813 | B4 |
| 120 | 2822 | A2 | 159 | 814 | B4 |
| 121 | 2823 | A2 | 160 | 815 | B4 |
| 122 | 2824 | A2 | 161 | 816 | B4 |
| 123 | 2825 | A2 | 162 | 817 | B4 |
| 124 | 2826 | A2 | 163 | 818 | B4 |
| 125 | 2827 | A2 | 164 | 819 | B4 |
| 126 | 2828 | A2 | 165 | 820 | B4 |
| 127 | 2829 | A2 | 166 | 821 | B4 |
| 128 | 2830 | A2 | 167 | 822 | B4 |
| 129 | 2831 | A2 | 168 | 823 | B4 |
| 130 | 2832 | A2 | 169 | 824 | B4 |
| 131 | 2833 | A2 | 170 | 825 | B4 |
| 132 | 2834 | A2 | 171 | 826 | B4 |
| 133 | 2835 | A2 | 172 | 827 | B4 |
| 134 | 2836 | A2 | 173 | 828 | B4 |
| 135 | 2837 | A2 | 174 | 829 | B4 |
| 136 | 2838 | A2 | 175 | 830 | B4 |
| 137 | 2839 | A2 | 176 | 831 | B4 |
| 138 | 2840 | A2 | 177 | 832 | B4 |
| 139 | 2841 | A2 | 178 | 833 | B4 |
| 140 | 2842 | A2 | 179 | 834 | B4 |
| 141 | 2843 | A2 | 180 | 835 | B4 |
| 142 | 2844 | A2 | 181 | 836 | B4 |
| 143 | 2845 | A2 | 182 | 837 | B4 |
| 144 | 2846 | A2 | 183 | 838 | B4 |
| 145 | 2847 | A2 | 184 | 839 | B4 |
| 146 | 2848 | A2 | 185 | 840 | B4 |
| 147 | 2849 | A2 | 186 | 841 | B4 |
| 148 | 2850 | A2 | 187 | 842 | B4 |
| 149 | 2851 | A2 | 188 | 843 | B4 |
| 150 | 2852 | A2 | 189 | 844 | B4 |
| 151 | 2853 | A2 | 190 | 845 | B4 |
| 152 | 2854 | A2 | 191 | 846 | B4 |
| 153 | 2855 | A2 | 192 | 847 | B4 |
| 154 | 2856 | A2 | 193 | 848 | B4 |
| 155 | 2857 | A2 | 194 | 849 | B4 |
| 156 | 2858 | A2 | 195 | 850 | B4 |
| 157 | 2859 | A2 | 196 | 851 | B4 |
| 158 | 2860 | A2 | 197 | 852 | B4 |
| 159 | 2861 | A2 | 198 | 853 | B4 |
| 160 | 2862 | A2 | 199 | 854 | B4 |
| 161 | 2863 | A2 | 200 | 855 | B4 |
| 162 | 2864 | A2 | 201 | 856 | B4 |
| 163 | 2865 | A2 | 202 | 857 | B4 |
| 164 | 2866 | A2 | 203 | 858 | B4 |
| 165 | 2867 | A2 | 204 | 859 | B4 |
| 166 | 2868 | A2 | 205 | 860 | B4 |
| 167 | 2869 | A2 | 206 | 861 | B4 |
| 168 | 2870 | A2 | 207 | 862 | B4 |
| 169 | 2871 | A2 | 208 | 863 | B4 |
| 170 | 2872 | A2 | 209 | 864 | B4 |
| 171 | 2873 | A2 | 210 | 865 | B4 |
| 172 | 2874 | A2 | 211 | 866 | B4 |
| 173 | 2875 | A2 | 212 | 867 | B4 |
| 174 | 2876 | A2 | 213 | 868 | B4 |
| 175 | 2877 | A2 | 214 | 869 | B4 |
| 176 | 2878 | A2 | 215 | 870 | B4 |
| 177 | 2879 | A2 | 216 | 871 | B4 |
| 178 | 2880 | A2 | 217 | 872 | B4 |
| 179 | 2881 | A2 | 218 | 873 | B4 |
| 180 | 2882 | A2 | 219 | 874 | B4 |
| 181 | 2883 | A2 | 220 | 875 | B4 |
| 182 | 2884 | A2 | 221 | 876 | B4 |
| 183 | 2885 | A2 | 222 | 877 | B4 |
| 184 | 2886 | A2 | 223 | 878 | B4 |
| 185 | 2887 | A2 | 224 | 879 | B4 |
| 186 | 2888 | A2 | 225 | 880 | B4 |
| 187 | 2889 | A2 | 226 | 881 | B4 |
| 188 | 2890 | A2 | 227 | 882 | B4 |
| 189 | 2891 | A2 | 228 | 883 | B4 |
| 190 | 2892 | A2 | 229 | 884 | B4 |
| 191 | 2893 | A2 | 230 | 885 | B4 |
| 192 | 2894 | A2 | 231 | 886 | B4 |
| 193 | 2895 | A2 | 232 | 887 | B4 |
| 194 | 2896 | A2 | 233 | 888 | B4 |
| 195 | 2897 | A2 | 234 | 889 | B4 |
| 196 | 2898 | A2 | 235 | 890 | B4 |
| 197 | 2899 | A2 | 236 | 891 | B4 |
| 198 | 2900 | A2 | 237 | 892 | B4 |
| 199 | 2901 | A2 | 238 | 893 | B4 |
| 200 | 2902 | A2 | 239 | 894 | B4 |
| 201 | 2903 | A2 | 240 | 895 | B4 |
| 202 | 2904 | A2 | 241 | 896 | B4 |
| 203 | 2905 | A2 | 242 | 897 | B4 |
| 204 | 2906 | A2 | 243 | 898 | B4 |
| 205 | 2907 | A2 | 244 | 899 | B4 |
| 206 | 2908 | A2 | 245 | 900 | B4 |
| 207 | 2909 | A2 | 246 | 901 | B4 |
| 208 | 2910 | A2 | 247 | 902 | B4 |
| 209 | 2911 | A2 | 248 | 903 | B4 |
| 210 | 2912 | A2 | 249 | 904 | B4 |
| 211 | 2913 | A2 | 250 | 905 | B4 |
| 212 | 2914 | A2 | 251 | 906 | B4 |
| 213 | 2915 | A2 | 252 | 907 | B4 |
| 214 | 2916 | A2 | 253 | 908 | B4 |
| 215 | 2917 | A2 | 254 | 909 | B4 |
| 216 | 2918 | A2 | 255 | 910 | B4 |
| 217 | 2919 | A2 | 256 | 911 | B4 |
| 218 | 2920 | A2 | 257 | 912 | B4 |
| 219 | 2921 | A2 | 258 | 913 | B4 |
| 220 | 2922 | A2 | 259 | 914 | B4 |
| 221 | 2923 | A2 | 260 | 915 | B4 |
| 222 | 2924 | A2 | 261 | 916 | B4 |
| 223 | 2925 | A2 | 262 | 917 | B4 |
| 224 | 2926 | A2 | 263 | 918 | B4 |
| 225 | 2927 | A2 | 264 | 919 | B4 |
| 226 | 2928 | A2 | 265 | 920 | B4 |
| 227 | 2929 | A2 | 266 | 921 | B4 |
| 228 | 2930 | A2 | 267 | 922 | B4 |
| 229 | 2931 | A2 | 268 | 923 | B4 |
| 230 | 2932 | A2 | 269 | 924 | B4 |
| 231 | 2933 | A2 | 270 | 925 | B4 |
| 232 | 2934 | A2 | 271 | 926 | B4 |
| 233 | 2935 | A2 | 272 | 927 | B4 |
| 234 | 2936 | A2 | 273 | 928 | B4 |
| 235 | 2937 | A2 | 274 | 929 | B4 |
| 236 | 2938 | A2 | 275 | 930 | B4 |
| 237 | 2939 | A2 | 276 | 931 | B4 |
| 238 | 2940 | A2 | 277 | 932 | B4 |
| 239 | 2941 | A2 | 278 | 933 | B4 |
| 240 | 2942 | A2 | 279 | 934 | B4 |
| 241 | 2943 | A2 | 280 | 935 | B4 |
| 242 | 2944 | A2 | 281 | 936 | B4 |
| 243 | 2945 | A2 | 282 | 937 | B4 |
| 244 | 2946 | A2 | 283 | 938 | B4 |
| 245 | 2947 | A2 | 284 | 939 | B4 |
| 246 | 2948 | A2 | 285 | 940 | B4 |
| 247 | 2949 | A2 | 286 | 941 | B4 |
| 248 | 2950 | A2 | 287 | 942 | B4 |
| 249 | 2951 | A2 | 288 | 943 | B4 |
| 250 | 2952 | A2 | 289 | 944 | B4 |
| 251 | 2953 | A2 | 290 | 945 | B4 |
| 252 | 2954 | A2 | 291 | 946 | B4 |
| 253 | 2955 | A2 | 292 | 947 | B4 |
| 254 | 2956 | A2 | 293 | 948 | B4 |
| 255 | 2957 | A2 | 294 | 949 | B4 |
| 256 | 2958 | A2 | 295 | 950 | B4 |
| 257 | 2959 | A2 | 296 | 951 | B4 |
| 258 | 2960 | A2 | 297 | 952 | B4 |
| 259 | 2961 | A2 | 298 | 953 | B4 |
| 260 | 2962 | A2 | 299 | 954 | B4 |
| 261 | 2963 | A2 | 300 | 955 | B4 |
| 262 | 2964 | A2 | 301 | 956 | B4 |
| 263 | 2965 | A2 | 302 | 957 | B4 |
| 264 | 2966 | A2 | 303 | 958 | B4 |
| 265 | 2967 | | | | |

CDR MAIN BOARD - BOTTOM VIEW : AUDIO TESTPOINTS



| | | | |
|-----|---|------|----|
| 181 | A | 2720 | B4 |
| 182 | A | 2721 | B4 |
| 183 | A | 2722 | B4 |
| 184 | A | 2723 | B4 |
| 185 | A | 2724 | B4 |
| 186 | A | 2725 | B4 |
| 187 | A | 2726 | B4 |
| 188 | A | 2727 | B4 |
| 189 | A | 2728 | B4 |
| 190 | A | 2729 | B4 |
| 191 | A | 2730 | B4 |
| 192 | A | 2731 | B4 |
| 193 | A | 2732 | B4 |
| 194 | A | 2733 | B4 |
| 195 | A | 2734 | B4 |
| 196 | A | 2735 | B4 |
| 197 | A | 2736 | B4 |
| 198 | A | 2737 | B4 |
| 199 | A | 2738 | B4 |
| 200 | A | 2739 | B4 |
| 201 | A | 2740 | B4 |
| 202 | A | 2741 | B4 |
| 203 | A | 2742 | B4 |
| 204 | A | 2743 | B4 |
| 205 | A | 2744 | B4 |
| 206 | A | 2745 | B4 |
| 207 | A | 2746 | B4 |
| 208 | A | 2747 | B4 |
| 209 | A | 2748 | B4 |
| 210 | A | 2749 | B4 |
| 211 | A | 2750 | B4 |
| 212 | A | 2751 | B4 |
| 213 | A | 2752 | B4 |
| 214 | A | 2753 | B4 |
| 215 | A | 2754 | B4 |
| 216 | A | 2755 | B4 |
| 217 | A | 2756 | B4 |
| 218 | A | 2757 | B4 |
| 219 | A | 2758 | B4 |
| 220 | A | 2759 | B4 |
| 221 | A | 2760 | B4 |
| 222 | A | 2761 | B4 |
| 223 | A | 2762 | B4 |
| 224 | A | 2763 | B4 |
| 225 | A | 2764 | B4 |
| 226 | A | 2765 | B4 |
| 227 | A | 2766 | B4 |
| 228 | A | 2767 | B4 |
| 229 | A | 2768 | B4 |
| 230 | A | 2769 | B4 |
| 231 | A | 2770 | B4 |
| 232 | A | 2771 | B4 |
| 233 | A | 2772 | B4 |
| 234 | A | 2773 | B4 |
| 235 | A | 2774 | B4 |
| 236 | A | 2775 | B4 |
| 237 | A | 2776 | B4 |
| 238 | A | 2777 | B4 |
| 239 | A | 2778 | B4 |
| 240 | A | 2779 | B4 |
| 241 | A | 2780 | B4 |
| 242 | A | 2781 | B4 |
| 243 | A | 2782 | B4 |
| 244 | A | 2783 | B4 |
| 245 | A | 2784 | B4 |
| 246 | A | 2785 | B4 |
| 247 | A | 2786 | B4 |
| 248 | A | 2787 | B4 |
| 249 | A | 2788 | B4 |
| 250 | A | 2789 | B4 |
| 251 | A | 2790 | B4 |
| 252 | A | 2791 | B4 |
| 253 | A | 2792 | B4 |
| 254 | A | 2793 | B4 |
| 255 | A | 2794 | B4 |
| 256 | A | 2795 | B4 |
| 257 | A | 2796 | B4 |
| 258 | A | 2797 | B4 |
| 259 | A | 2798 | B4 |
| 260 | A | 2799 | B4 |
| 261 | A | 2800 | B4 |
| 262 | A | 2801 | B4 |
| 263 | A | 2802 | B4 |
| 264 | A | 2803 | B4 |
| 265 | A | 2804 | B4 |
| 266 | A | 2805 | B4 |
| 267 | A | 2806 | B4 |
| 268 | A | 2807 | B4 |
| 269 | A | 2808 | B4 |
| 270 | A | 2809 | B4 |
| 271 | A | 2810 | B4 |
| 272 | A | 2811 | B4 |
| 273 | A | 2812 | B4 |
| 274 | A | 2813 | B4 |
| 275 | A | 2814 | B4 |
| 276 | A | 2815 | B4 |
| 277 | A | 2816 | B4 |
| 278 | A | 2817 | B4 |
| 279 | A | 2818 | B4 |
| 280 | A | 2819 | B4 |
| 281 | A | 2820 | B4 |
| 282 | A | 2821 | B4 |
| 283 | A | 2822 | B4 |
| 284 | A | 2823 | B4 |
| 285 | A | 2824 | B4 |
| 286 | A | 2825 | B4 |
| 287 | A | 2826 | B4 |
| 288 | A | 2827 | B4 |
| 289 | A | 2828 | B4 |
| 290 | A | 2829 | B4 |
| 291 | A | 2830 | B4 |
| 292 | A | 2831 | B4 |
| 293 | A | 2832 | B4 |
| 294 | A | 2833 | B4 |
| 295 | A | 2834 | B4 |
| 296 | A | 2835 | B4 |
| 297 | A | 2836 | B4 |
| 298 | A | 2837 | B4 |
| 299 | A | 2838 | B4 |
| 300 | A | 2839 | B4 |
| 301 | A | 2840 | B4 |
| 302 | A | 2841 | B4 |
| 303 | A | 2842 | B4 |
| 304 | A | 2843 | B4 |
| 305 | A | 2844 | B4 |
| 306 | A | 2845 | B4 |
| 307 | A | 2846 | B4 |
| 308 | A | 2847 | B4 |
| 309 | A | 2848 | B4 |
| 310 | A | 2849 | B4 |
| 311 | A | 2850 | B4 |
| 312 | A | 2851 | B4 |
| 313 | A | 2852 | B4 |
| 314 | A | 2853 | B4 |
| 315 | A | 2854 | B4 |
| 316 | A | 2855 | B4 |
| 317 | A | 2856 | B4 |
| 318 | A | 2857 | B4 |
| 319 | A | 2858 | B4 |
| 320 | A | 2859 | B4 |
| 321 | A | 2860 | B4 |
| 322 | A | 2861 | B4 |
| 323 | A | 2862 | B4 |
| 324 | A | 2863 | B4 |
| 325 | A | 2864 | B4 |
| 326 | A | 2865 | B4 |
| 327 | A | 2866 | B4 |
| 328 | A | 2867 | B4 |
| 329 | A | 2868 | B4 |
| 330 | A | 2869 | B4 |
| 331 | A | 2870 | B4 |
| 332 | A | 2871 | B4 |
| 333 | A | 2872 | B4 |
| 334 | A | 2873 | B4 |
| 335 | A | 2874 | B4 |
| 336 | A | 2875 | B4 |
| 337 | A | 2876 | B4 |
| 338 | A | 2877 | B4 |
| 339 | A | 2878 | B4 |
| 340 | A | 2879 | B4 |
| 341 | A | 2880 | B4 |
| 342 | A | 2881 | B4 |
| 343 | A | 2882 | B4 |
| 344 | A | 2883 | B4 |
| 345 | A | 2884 | B4 |
| 346 | A | 2885 | B4 |
| 347 | A | 2886 | B4 |
| 348 | A | 2887 | B4 |
| 349 | A | 2888 | B4 |
| 350 | A | 2889 | B4 |
| 351 | A | 2890 | B4 |
| 352 | A | 2891 | B4 |
| 353 | A | 2892 | B4 |
| 354 | A | 2893 | B4 |
| 355 | A | 2894 | B4 |
| 356 | A | 2895 | B4 |
| 357 | A | 2896 | B4 |
| 358 | A | 2897 | B4 |
| 359 | A | 2898 | B4 |
| 360 | A | 2899 | B4 |
| 361 | A | 2900 | B4 |
| 362 | A | 2901 | B4 |
| 363 | A | 2902 | B4 |
| 364 | A | 2903 | B4 |
| 365 | A | 2904 | B4 |
| 366 | A | 2905 | B4 |
| 367 | A | 2906 | B4 |
| 368 | A | 2907 | B4 |
| 369 | A | 2908 | B4 |
| 370 | A | 2909 | B4 |
| 371 | A | 2910 | B4 |
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