

SERVICE MANUALS

SEARCHED

2F123

INDEXED FOR INDEXED

EQUIPMENT PA5K1/5S1

SERIES CODE 13 AND BELOW

SERIAL NUMBER 23363

MANUAL INFORMATION SHEET

REFER TO THE PREFACE IN HARDWARE MAINTENANCE MANUAL, VOLUME 1 FOR A COMPLETE LISTING OF MANUALS WHICH APPLY TO THIS EQUIPMENT. ORDERING INFORMATION IS ALSO CONTAINED IN THE PREFACE.

CHANGES REQUIRED (IF ANY) TO MAKE THE MANUALS REFLECT THIS EQUIPMENT ARE CONTAINED IN ENCLOSED PRELIMINARY REVISION PACKETS OR SUPPLEMENTS.

PRELIMINARY REVISION PACKET. SUBJECT TO CHANGE WITHOUT NOTICE.

Publication Title: PA5K1/PA5S1 HARDWARE MAINTENANCE MANUAL, VOLUME 1

Publication Number: 83324790 Manual Preliminary Revision E

Instructions: The attached pages contain replacement information. Insert the attached pages into the appropriate place. Do not discard current manual sheet (back-up page information is not supplied with this packet). All changes contained in this preliminary packet will be in the released revision.

REV	REWORK NUMBER	ECO/FCO NUMBER	DESCRIPTION	PAGES AFFECTED
01	4192	05891	REPLACE FPBX OPERATOR PANEL WITH HPBX. <i>CB 9-6-84</i>	
02	----	-----	Cancelled Rev E01 and incorporated changes into Rev C02. <i>CB 9-26-84</i>	
03		30014	Replaced BVCX board with FVCX board. <i>CB 1-11-85</i>	Incorporated in Revision D of manual.
04	4325	30102	Incorporated JVCX board. <i>CB 5-22-85</i>	4-26.
05	4353	30168	Incorporate KVCX board. <i>CB 7-16-85</i>	4-26.
06		30084	Add AVUX board to drive. <i>CB 8-16-85 CB 7-16-85</i>	Change deleted by Rev E10.
07		30046	Change base and r/w bracket. <i>CB 7-18-85</i>	4-11, 4-15.
08	A5004 A5003	30169 30170	JVCX to PVCX board. KVCX to RVCX board. <i>CB 8-2-85</i>	4-26. 4-26.
09		-----	Part number corrections. <i>CB 8-12-85</i>	4-28.
10		30197	Remove AVUX from drive. This revision cancels revision E06, and removes AVUX information from pages 4-11 and 4-26. <i>CB 8-16-85</i>	
11		30210	Replace RVCX board with UVCX board. <i>CB 9-17-85</i>	4-26.
12		30183	Replace DSZX board with ESZX board. <i>CB 9-24-85</i>	4-26.
13		30016	Change to power supply with low-leakage line filter. <i>CB 1-20-86</i>	4-27.

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10127111	SCREW, PHH, 6-32 x 1/4	
2	10125803	LOCKWASHER, #6	
3	94047001	WASHER, Special	
4	Spare	_UGX (R/W) BOARD	340 MB Drives
4	Spare	_VHX/_SUX (R/W) BOARD	515 MB Drives
5	51805802	BUMPER	
6	72857460	BRACKET, R/W Board	S/C 06 & Blw
6	72857462	BRACKET, R/W Board	S/C 07 & Abv
7	94385500	CHANNEL, Rubber	
8	Spare	_SWX (MOT SPD & PWR AMP) BOARD	
9	10127114	SCREW, PHH, 6-32 x 1/2	
10	92723601	SPACER	
11	10127113	SCREW, PHH, 6-32 x 3/8	

83324790

E07
E06

INDEX NO	PART NO	PART DESCRIPTION	NOTE
1	10127141	SCREW, PHH, 10-32 x 5/16	
2	Spare	MODULE ASSEMBLY	340 MB Drives
2	Spare	MODULE ASSEMBLY	515 MB Drives
3	10127113	SCREW, PHH, 6-32 x 3/8	
4	10125803	LOCKWASHER, #6	
5	94281477	GROUND CABLE	
6	10126401	LOCKWASHER, #6	
7	72859941	RETAINER, Shipping	
8	93568014	SHOCK MOUNT	
9	10125607	WASHER, #10	
10	93879001	JACK, Banana	
11	10126106	LOCKWASHER, 1/4	
12	94241019	CLIP, Cable	
13	41286580	PAD, Rubber	S/C 07 & Abv
14	72859950	RETAINER	S/C 06 & Blw
14	41286510	ISOLATOR	S/C 07 & Abv
15	72855912	GROMMET	S/C 06 & Blw
16	10126402	LOCKWASHER, #8	
17	10127120	SCREW, PHH, 8-32 x 1/4	
18	72857451	BASE	S/C 06 & Blw
18	72857452 ³	BASE	S/C 07 & Abv
19	10127142	SCREW, PHH, 10-32 x 3/8	
20	10126403	LOCKWASHER, #10	
21	10127111	SCREW, PHH, 6-32 x 1/4	
22	93148609	CLIP, Tension	

PVCX -- S/C 10 + Abv, & drives with ECO 30169 installed 54389314 54389315-19
 OK
 RVCX -- S/C 10-11 ; & drives with ECO 30170 installed 54389316 54389317-19

TABLE 4-1. MANUFACTURER'S RECOMMENDED SPARE PARTS

DESCRIPTION/NOTES	PART NUMBER	REPLACE-MENT PART NUMBER
FILTER, Primary	72852571	72852571
OPERATOR PANEL		
FPBX replacement kit (includes HPBX operator panel assembly, logic plugs 0 thru 7, lenses, and bracket)	54330905	17190500
HPBX--S/C 08 & Abv	54330907	54330907
_UQX (FAULT DISPLAY) BOARD		
BUQX--S/C 05 & Blw	54384501	54384503
DUQX--S/C 06 & Abv	54384503	54384503
_VCX (CONTROL) BOARD		
AVCX--S/C 06 & Blw	54389301	54389306*
BVCX--S/C 07-08	54389302	54389308 /6
FVCX--S/C 09 & Abv	54389306	54389308 /6
_SZX (I/O) BOARD		
CSZX--S/C 06 & Blw	54368502	54368502*
DSZX--S/C 07 & Abv -12	54368503	54368503/4
_SVX (MOTHER) BOARD		
BSVX--S/C 03 & Blw	54366901	54366902
CSVX--S/C 04 & Abv	54366902	54366902
_UGX (R/W) BOARD (340 MB Drives)		
BUGX--S/C 04 & Blw	54381301	54381305
CUGX--S/C 05-08	54381302	54381305
EUGX--S/C 09 & Abv	54381305	54381305
_VHX/_SUX (R/W) BOARD (515 MB Drives)		
CSUX--S/C 04 & Blw	54366502	54391300
AVHX--S/C 05 & Abv	54391300	54391300
_SWX (MOTOR SPD & PWR AMP) BOARD		
BSWX--S/C 01	54367301	54367304
CSWX--S/C 02-07	54367302	54367304
ESWX--S/C 08 & Abv	54367304	54367304
FAN ASSEMBLY	81235102	81235102
MODULE ASSEMBLY (340 MB Drives)	73090400	73090400
MODULE ASSEMBLY (515 MB Drives)		
S/C 07 & Blw	73089100	73089105
S/C 08 & Abv	73089105	73089105
BRAKE ASSEMBLY	72856100	72856100
MOTOR AND CABLE ASSEMBLY	94231901	94231901
GROUND SPRING ASSEMBLY	72854200	72854200
SOLENOID AND CONNECTOR ASSEMBLY	93012800	93012800

*CSZX I/O board is compatible with AVCX Control board only.
 AVCX Control board is compatible with CSZX I/O board only.

Table Continued on Next Page

UVCX -- S/C 11 + Abv, & drives with ECO 30210 installed

54389319 54389319

4-26

ESZX -- S/C 13 & Abv, & drives with ECO 30183 installed

54368504 54368504

83324790 D

E12
 E04
 E05
 E06
 E08
 E11

TABLE 4-1. MANUFACTURER'S RECOMMENDED SPARE PARTS (Contd)

DESCRIPTION/NOTES	PART NUMBER	REPLACE- MENT PART NUMBER
POWER SUPPLY, Remote		
S/C 03 & Blw	72896502	72896502
S/C 04 & Abv - 1 2	72896503	72896503
POWER SUPPLY, Integral		
Older (Standard) Power Supply	81542300	81542301
Newer (Short) Power Supply	81542301	81542301
DC POWER CABLE(P15/P40)(Remote P/S Drives)	92081500	92081500
DC POWER CABLE(P15/35)(Integral P/S Drives)	80547301	80547301
"A" CABLE, Internal		
PA5K1A, PA5S1A	73089200	73089200
PA5K1B, PA5S1B	73089201	73089201
"B" CABLE, Internal		
PA5K1A, PA5S1A	73089300	73089300
PA5K1B, PA5S1B	73089301	73089301
 S/c 13 & Abv	 72896504	 72896504

TABLE 4-2. ACCESSORIES

PART NUMBER	DESCRIPTION
12263496	STATIC GROUND WRIST STRAP, 6 1/2 to 8 inch wrist
12263632	STATIC GROUND WRIST STRAP, up to 6 1/2 inch wrist
12263024	STATIC SHIELDING BAG, 5 x 8 inch
12263625	STATIC SHIELDING BAG, 8 x 12 inch
12263626	STATIC SHIELDING BAG, 10 x 12 inch
12263499	STATIC SHIELDING BAG, 14 x 18 inch
12263627	STATIC SHIELDING BAG, 16 x 24 inch
81254600	I/O A CABLE, 5 foot (1.5 metre) long
81254601	I/O A CABLE, 10 foot (3.0 metre) long
81254602	I/O A CABLE, 15 foot (4.5 metre) long
81254603	I/O A CABLE, 20 foot (6.1 metre) long
81254604	I/O A CABLE, 25 foot (7.6 metre) long
81254605	I/O A CABLE, 30 foot (9.1 metre) long
81254606	I/O A CABLE, 40 foot (12.2 metre) long
81254607	I/O A CABLE, 50 foot (15.3 metre) long
81254608	I/O A CABLE, 100 foot (30.6 metre) long
92673800	I/O B CABLE, 5 foot (1.5 metre) long
92673801	I/O B CABLE, 10 foot (3.0 metre) long
92673802	I/O B CABLE, 15 foot (4.5 metre) long
92673803	I/O B CABLE, 20 foot (6.1 metre) long
92673804	I/O B CABLE, 25 foot (7.6 metre) long
92673805	I/O B CABLE, 30 foot (9.1 metre) long
92673806	I/O B CABLE, 40 foot (12.2 metre) long
92673807	I/O B CABLE, 50 foot (15.3 metre) long
92673808	I/O B CABLE, 100 foot (30.6 metre) long
75209300	I/O TERMINATOR, A Cable
93920490	I/O TERMINATOR, B Cable
81244502	DRIVE MOUNTING KIT (for mounting drive in a standard rack)
94356700	GROUND STRAP (specify length desired)
40125601	GROUND LUG
10126403	LOCKWASHER, #10 (for grounding)
93991802	DC POWER CABLE, 1 foot (0.3 metre) long
92081500	DC POWER CABLE, 5 foot (1.5 metre) long
92081501	DC POWER CABLE, 8 foot (3.0 metre) long

PRELIMINARY REVISION PACKET. SUBJECT TO CHANGE WITHOUT NOTICE.

Publication Title: PA 5K1/PA 5S1 HARDWARE MAINTENANCE MANUAL, VOLUME 1

Publication Number: 83324790 Manual Preliminary Revision F

Instructions: The attached pages contain replacement information. Insert the attached pages into the appropriate place. Do not discard current manual sheet (back-up page information is not supplied with this packet). All changes contained in this preliminary packet will be in the released revision.

REV	REWORK NUMBER	ECO/FCO NUMBER	DESCRIPTION	PAGES AFFECTED
01	A5144	DJ30240	Newly designed base and r/w bracket. <i>CA 11-1-85</i>	4-11,4-15.

INDEX NO	PART NO	PART DESCRIPTION	NOTE
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1	10127141	SCREW, PHH, 10-32 x 5/16	
2	Spare	MODULE ASSEMBLY	
3	10127113	SCREW, PHH, 6-32 x 3/8	
4	10125803	LOCKWASHER, #6	
5	94281477	GROUND CABLE	
6	10126401	LOCKWASHER, #6	
7	72859941	BAR, Retaining	
8	93568017	SHOCK MOUNT	
9	10125607	WASHER, #10	
10	93879001	JACK, Banana	
11	10126106	LOCKWASHER, 1/4	
12	94241019	CLIP, Cable	
13	41286580	PAD, Rubber	
14	41286510	DAMPER, Vibration	
15	94047052	WASHER, Special	
16	10126402	LOCKWASHER, #8	
17	10127120	SCREW, PHH, 8-32 x 1/4	
18	72857451	BASE	
18	72857453	BASE	
19	10127142	SCREW, PHH, 10-32 x 3/8	
20	10126403	LOCKWASHER, #10	
21	10127111	SCREW, PHH, 6-32 x 1/4	
22	93148609	CLIP, Tension	
23	10125805	LOCKWASHER, #10	

18

72857454 BASE

S/C 06 & Blw
S/C 07 & ~~Abv~~ -12

S/c 13 & Abv, +
units with E20
DJ30240 installed

INDEX NO	PART NO	PART DESCRIPTION	NOTE
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1	10127111	SCREW, PHH, 6-32 x 1/4	
2	10125803	LOCKWASHER, #6	
3	94047001	WASHER, Special	
4	Spare	READ/WRITE BOARD	
5	51805802	BUMPER	
6	72857460	BRACKET, R/W Board	S/C 06 & Blw
6	72857462	BRACKET, R/W Board	S/C 07 to Adv -12
7	94385500	CHANNEL, Rubber	
8	Spare	MOT SPD & PWR AMP BOARD	
9	10127114	SCREW, PHH, 6-32 x 1/2	
10	92723601	SPACER	
11	10127113	SCREW, PHH, 6-32 x 3/8	
6	72857463	BRACKET, R/W Board	

S/C 13 & Adv, &
 Units with E20
 DT30240 installed

FOI

PRELIMINARY REVISION PACKET. SUBJECT TO CHANGE WITHOUT NOTICE.

Publication Title: PA5K1/PA5S1 HARDWARE MAINTENANCE MANUAL, VOLUME 3

Publication Number: 83324810 Manual Preliminary Revision D

Instructions: The attached pages contain replacement information. Insert the attached pages into the appropriate place. Do not discard current manual sheet (back-up page information is not supplied with this packet). All changes contained in this preliminary packet will be in the released revision.

REV	REWORK NUMBER	ECO/FCO NUMBER	DESCRIPTION	PAGES AFFECTED
01	4353	30168	Incorporate KVCX (GSXX) board. <i>CB 7-16-85</i>	Added pages 1-75.1 thru 1-75.20.
02		30084	Add AVUX board to drive. <i>8-16-85 CB 7-17-85</i>	Change deleted by Rev D04.
03	A5004 A5003	30169 30170	JVCX to PVCX board. KVCX to RVCX board. <i>CB 8-2-85</i>	1-37. 1-75.1 thru 1-75.20.
04		30197	Remove AVUX board from drive. This revision cancels revision D02, and removes pages 1-9 and 1-127.1 from this packet. <i>CB 8-16-85</i>	
05		30210	Replace RVCX board with UVCX board. <i>CB 9-17-85</i>	1-75.1 thru 1-75.20.
06		30183	Replace DSZX board with ESZX board. <i>CB 9-24-85</i>	1-17,1-19.

PART NO. RANGE		REVISION RECORD			
REV	ECO	DESCRIPTION	DATE	BY	APP
A		RELEASED			
B	DJ08718	CONNECTION	11-12-64	MLC	
C	DJ09737	8SZR TO CS2X	11-12-64	JRL	
D	DJ09920	CS2X TO DS2X	11-12-64	JKL	

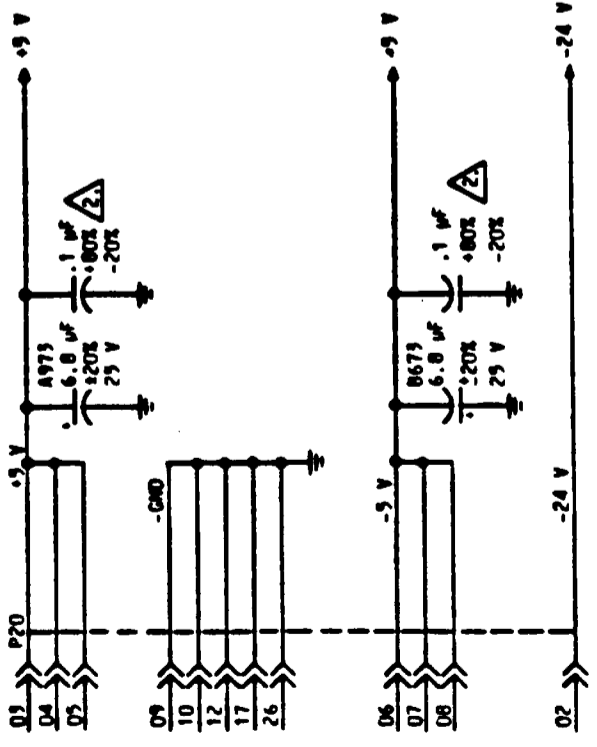
FILTER CAPS	
TYPE	VALUE
+5 V	B530
-5 V	B630
	B642
	B638
	C875
	C915
	C930
	E430
	E475
	F115
	F130
	F175
	F815
	F990
	F975
	M175
	M246
	M298
	J458

UNUSED LOGIC ELEMENTS		
TYPE	LOCATION	OUTPUT PINS
10101	C915	9, 11, 14, 15
10115	B130	2
10115	B815	2, 14
741S02	F330	13
741S02	G258	1, 4, 10
741S04	G746	6, 8, 10, 12
741S04	J073	6, 8, 10, 12
741S04	G773	10, 12
741S12	H436	8, 11
741S74	R773	5, 6
741S79	J058	9, 13

UNUSED RESISTOR PACKS		
VALUE	LOCATION	PIN(S)
1 kΩ	C215	4, 7, 8

NOTES:

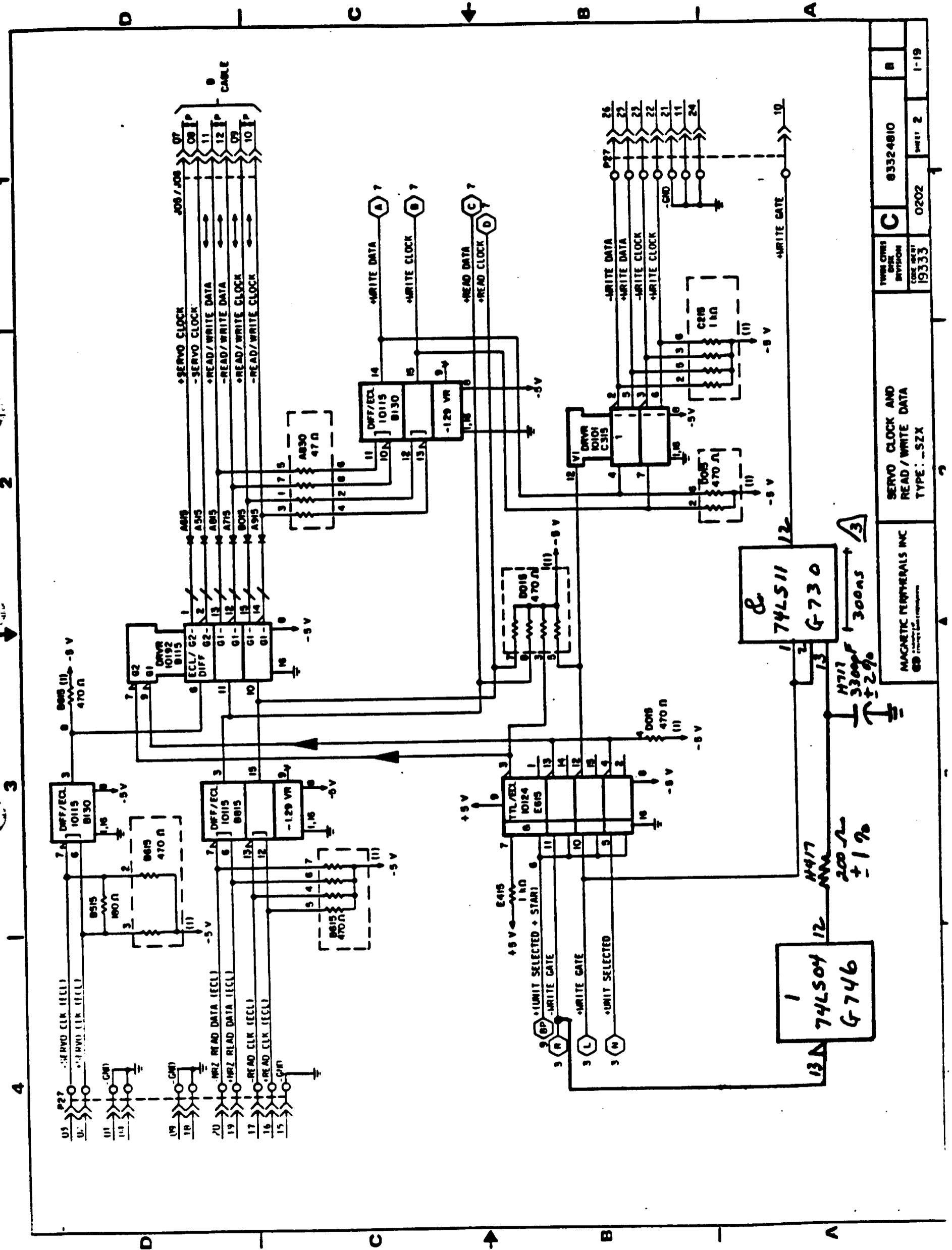
- ALL 14 PIN IC'S HAVE PIN 7 CONNECTED TO GROUND AND PIN 14 CONNECTED TO +5 V.
 - ALL 16 PIN IC'S HAVE PIN 8 CONNECTED TO GROUND AND PIN 16 CONNECTED TO +5 V.
 - ALL 20 PIN IC'S HAVE PIN 10 CONNECTED TO GROUND AND PIN 20 CONNECTED TO +5 V.
- ALL RESISTOR PACK RESISTORS, 1/8 W. ±5%.



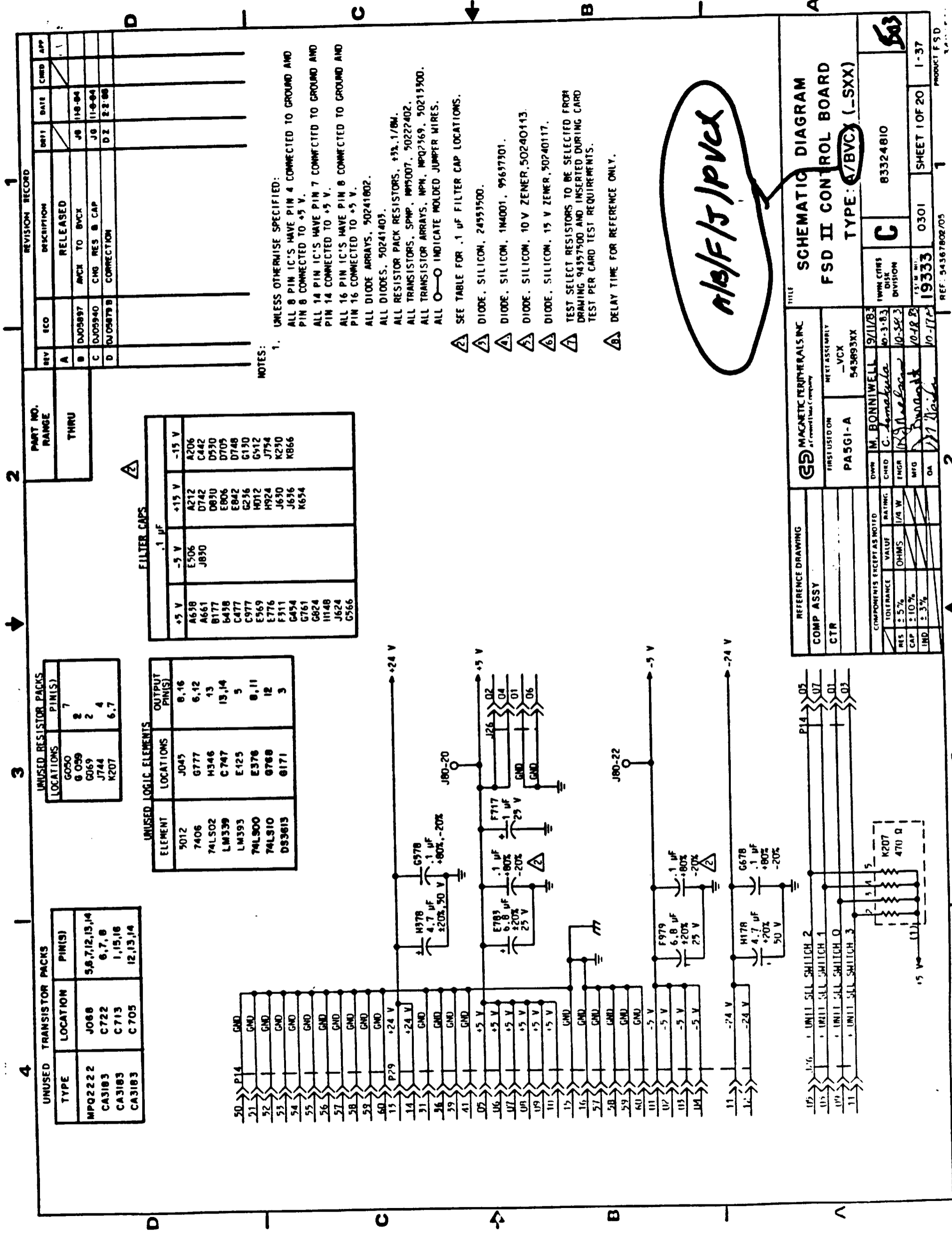
- SEE TABLE FOR .1 μF FILTER CAPACITOR LOCATIONS.
- DELAY TIME FOR REFERENCE ONLY.

REFERENCE DRAWING		MAGNETIC MATERIALS, INC.		TITLE	
COMP ASSY		PART USED ON	PA551-A/ PA5K1-A	SCHEMATIC DIAGRAM	
CTR		OWN	K. JOHNSON	I/O SDI	
COMPONENTS EXCEPT AS NOTED		DATE	11/15/63	TYPE: C/DSZX/ESX	
TOLERANCE	±5%	CHKD	11/15/63	TYPE CHG'D	
RES	±10%	ENGR	11/17/63	BASE	
CAP	±10%	MFG	2-6-63	DIVISION	B
		QA	12-11-63	TRN IN	
				19333	
				0201	SHEET 1 OF 10
					1-17

REF: 84300002/MS



TYPE	83324810	B
TYPE CHMS	0202	1-19
DRG DIVISION		
DATE	19333	
SERVO CLOCK AND READ / WRITE DATA		
TYPE: -SZX		
MAGNETIC PERIPHERALS INC		
68		



REVISION RECORD

REV	ECO	DESCRIPTION	DATE	CHKD	APP
A	DJ05897	RELEASED	J8 11-9-84		
B	DJ05940	AWCH TO BVCK	J8 11-9-84		
C	DJ05940	CHG RES & CAP	J8 11-9-84		
D	DJ05879 B	CORRECTION	DZ 2-2-88		

NOTES:

- UNLESS OTHERWISE SPECIFIED:
 ALL 8 PIN IC'S HAVE PIN 4 CONNECTED TO GROUND AND PIN 8 CONNECTED TO +5 V.
 ALL 14 PIN IC'S HAVE PIN 7 CONNECTED TO GROUND AND PIN 14 CONNECTED TO +5 V.
 ALL 16 PIN IC'S HAVE PIN 8 CONNECTED TO GROUND AND PIN 16 CONNECTED TO +5 V.
 ALL DIODE ARRAYS, 50241802.
 ALL DIODES, 50241403.
 ALL RESISTOR PACK RESISTORS, ±5%, 1/8W.
 ALL TRANSISTORS, SPMP, MPM007, 50222402.
 ALL TRANSISTOR ARRAYS, MPM, MPM02569, 50219500.
 ALL ○—○ INDICATE MOLDED JUMPER WIRES.
 SEE TABLE FOR .1 μF FILTER CAP LOCATIONS.
 △ DIODE, SILICON, 24553500.
 △ DIODE, SILICON, 1M4001, 95637301.
 △ DIODE, SILICON, 10 V ZENER, 50240413.
 △ DIODE, SILICON, 15 V ZENER, 50240117.
 △ TEST SELECT RESISTORS TO BE SELECTED FROM DRAWING 94357500 AND INSERTED DURING CARD TEST PER CARD TEST REQUIREMENTS.
 △ DELAY TIME FOR REFERENCE ONLY.

PART NO. RANGE

THRU

FILTER CAPS

+5 V	-5 V	+15 V	-15 V
A638 A661 B177 B438 C477 C977 E569 E776 F311 G454 G761 H148 J624 G566	E506 J830	A212 D742 E806 E842 G256 H924 J630 J636 K654	A206 C442 D530 D709 D748 G130 G512 J754 K230 K866

UNUSED TRANSISTOR PACKS

TYPE	LOCATION	PIN(S)
MPQ2222	J088	5, 8, 7, 12, 13, 14
CA3183	C722	6, 7, 8
CA3183	C713	1, 15, 16
CA3183	C705	12, 13, 14

UNUSED RESISTOR PACKS

LOCATIONS	PIN(S)
G050	7
B 058	2
G069	2
J744	4
K207	6, 7

UNUSED LOGIC ELEMENTS

ELEMENT	LOCATIONS	OUTPUT PIN(S)
5012	J045	8, 16
7406	G777	6, 12
74LS02	H346	13
LM339	C747	13, 14
LM393	E125	5
74LS00	E376	8, 11
74LS10	G768	12
D93613	G171	3

SCHEMATIC DIAGRAM

FSD II CONTROL BOARD

TYPE: A/BVC (-SXX)

83324810

0301

19333

1

1-37

PRODUCT FSD

REFERENCE DRAWING

COMP ASSY

CTR

COMPONENTS EXCEPT AS NOTED

TOLERANCE	VALUE	RATING
RES	± 5%	1/8 W
CAP	± 10%	
IND	± 3%	

MACNETIC PERIPHERALS INC
 A General Instrument Company

FIRST USED ON: PA5G1-A

NEXT ASSEMBLY: -VCK 543893XX

DESIGNER: M. BONNIWELL

DATE: 9/11/83

CHKD: C. Lombardi

ENGR: R. Neuman

MFG: D. Wright

QA: J. Nelson

9/11/83

10-3-83

10-54-3

10-18-B

10-17-C

15 V

UNIT ALL SWITCH 2

UNIT ALL SWITCH 1

UNIT ALL SWITCH 0

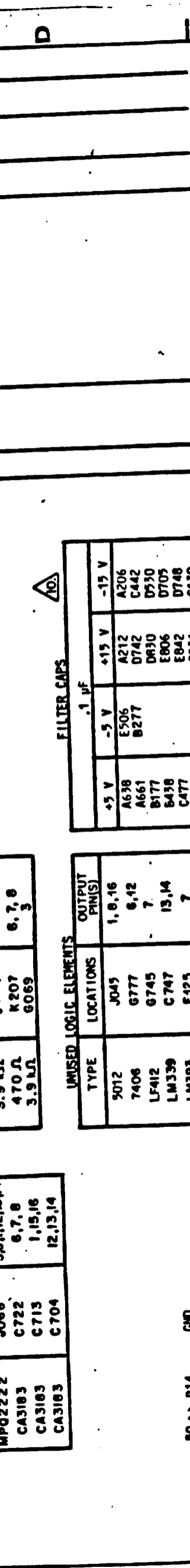
UNIT ALL SWITCH 3

K207 470 Ω

UN	TRANSISTOR PACKS	LOCATION	PIN(S)
MPQ222	J068	5, 8, 7, 12, 13, 14	2, 4
CA3183	C722	6, 7, 8	6, 7, 8
CA3183	C713	1, 15, 16	3
CA3183	C704	12, 13, 14	3

UN	RESISTOR PACKS	LOCATIONS	PIN(S)
		G059	2
		J744	4
		K207	6, 7, 8
		G069	3

UN	UNUSED LOGIC ELEMENTS	TYPE	LOCATIONS	OUTPUT PIN(S)
		5012	J045	1, 8, 16
		7406	G777	6, 12
		LF412	G745	7
		LM339	C747	13, 14
		LM393	E125	7
		G797	A264	3
		74LS10	G768	12
		75473	G171	3



REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

NOTES:

- UNLESS OTHERWISE SPECIFIED:
 - ALL 8 PIN IC'S HAVE PIN 4 CONNECTED TO GROUND AND PIN 8 CONNECTED TO +5 V.
 - ALL 14 PIN IC'S HAVE PIN 7 CONNECTED TO GROUND AND PIN 14 CONNECTED TO +5 V.
 - ALL 16 PIN IC'S HAVE PIN 8 CONNECTED TO GROUND AND PIN 16 CONNECTED TO +5 V.
 - ALL DIODE ARRAYS, 50241802.
 - ALL DIODES, 50241403.
 - ALL RESISTOR PACK RESISTORS, ±1%, 1/8W.
 - ALL TRANSISTORS, SPMP, MPQ2007, 50222402.
 - ALL TRANSISTOR ARRAYS, MPN, MPQ2369, 50219900.
 - ALL ○—○ INDICATE MOLDED JUMPER WIRES.
 - ALL 20 PIN IC'S HAVE PIN 10 CONNECTED TO GROUND AND PIN 20 CONNECTED TO +5 V.

△ DIODE, SILICON, 24535500.
 △ DIODE, SILICON, 1N4001, 99637901.
 △ TRANSISTOR, SPMP, 2N3645, 50211210.
 △ TRANSISTOR ARRAY, MPN, CA3183, 50213701.
 △ TEST SELECT RESISTORS TO BE SELECTED FROM DRAWING 94337500 AND INSERTED DURING CARD TEST PER CARD TEST REQUIREMENTS.
 △ DELAY TIME FOR REFERENCE ONLY.
 △ DRAWINGS WHERE TAB NUMBERS CREATE NEW COVER SHEET, TABS 00-99 ARE RESERVED.
 △ SEE TABLE FOR .1µF FILTER CAP LOCATIONS.
 △ TRANSISTOR ARRAY, MPN/MPM, CA3096E, 50213100.
 △ TRANSISTOR ARRAY, MPN, MPQ2222, 50212600.
 △ TRANSISTOR ARRAY, PNP, MPQ2907, 50212700.

COMP ASSY	54367706
CTR	54367906
COMPONENTS, EXCEPT AS NOTED	
TOLERANCE	VALUE
RES	±5%
CAP	±10%
IND	±3%

REFERENCE DRAWING	COMP ASSY	54367706
CTR	54367906	
COMPONENTS, EXCEPT AS NOTED		
TOLERANCE	VALUE	
RES	±5%	
CAP	±10%	
IND	±3%	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

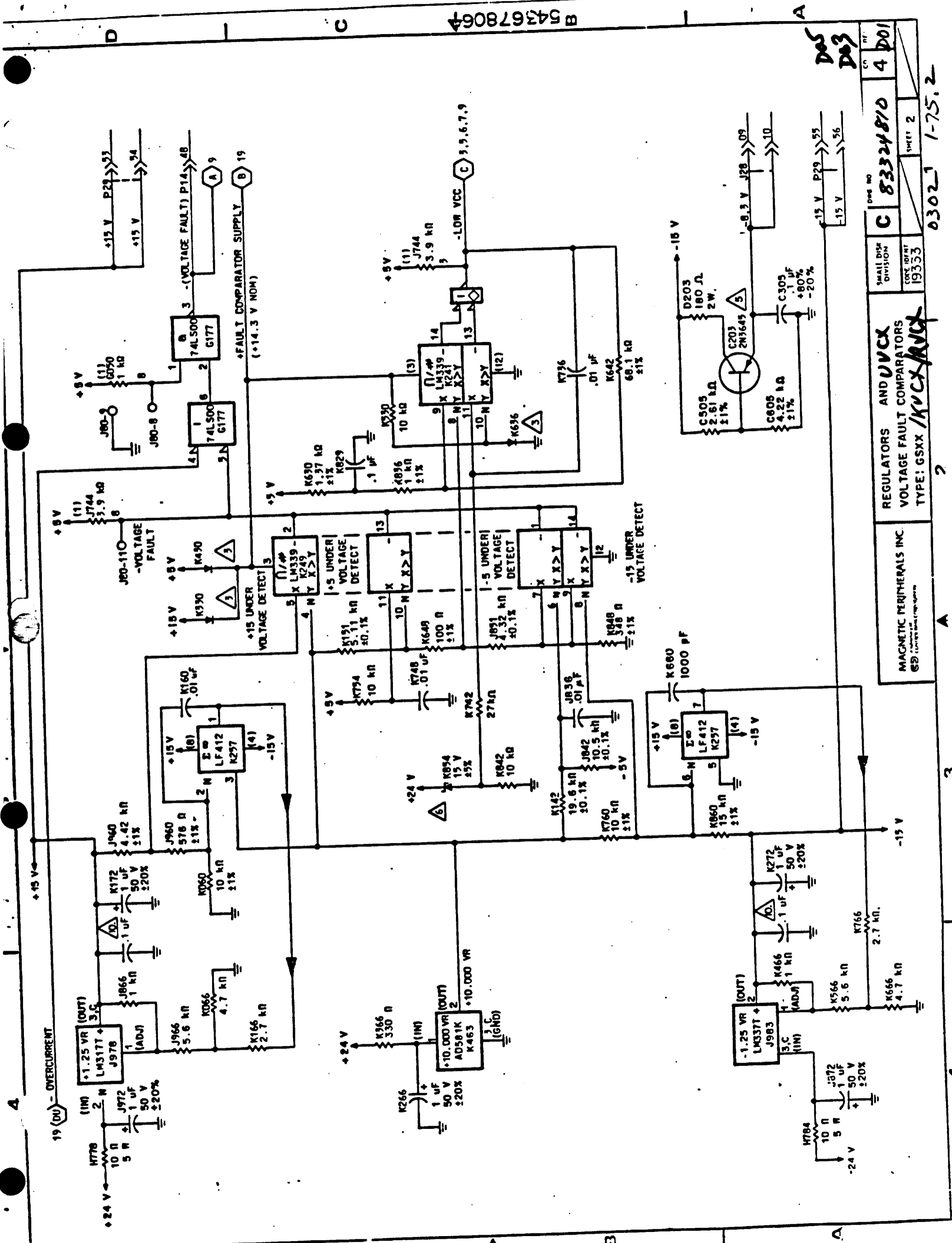
REV	REC	DESCRIPTION	DRFT	DATE	CHKD
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B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	

REV	REC	DESCRIPTION	DRFT	DATE	CHKD
A	DJ23000	RELEASED		3-15-85	
B	DJ3010A	CORR GSXX DOCS	BJP	5-22-85	



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A
 D05
 D03
 03021 1-75.2

REGULATORS AND VOLTAGE FAULT COMPARATORS	SMALL DISK DIVISION	DRG NO	4
TYPE: GSXX /KVCS/AVX	CORC ID# 19333	83324810	4 D01
MAGNETIC PERIPHERALS INC.	SHEET 2		

2

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4

19 (DU) - OVERCURRENT

±15 V P29

±15 V

±5 V

±5 V

±15 V

±5 V

±5 V

±15 V

±15 V

±15 V

±24 V

±10.000 VR

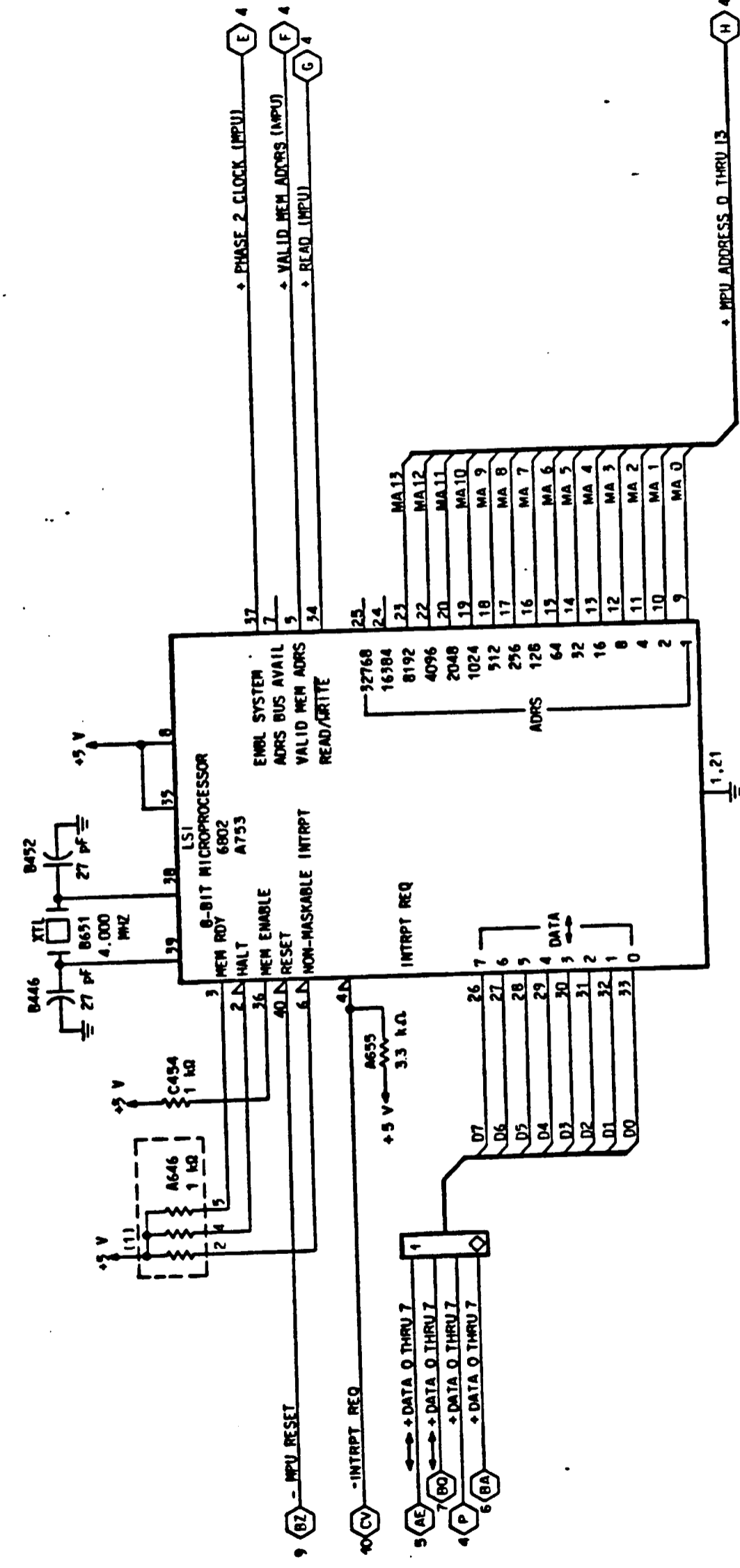
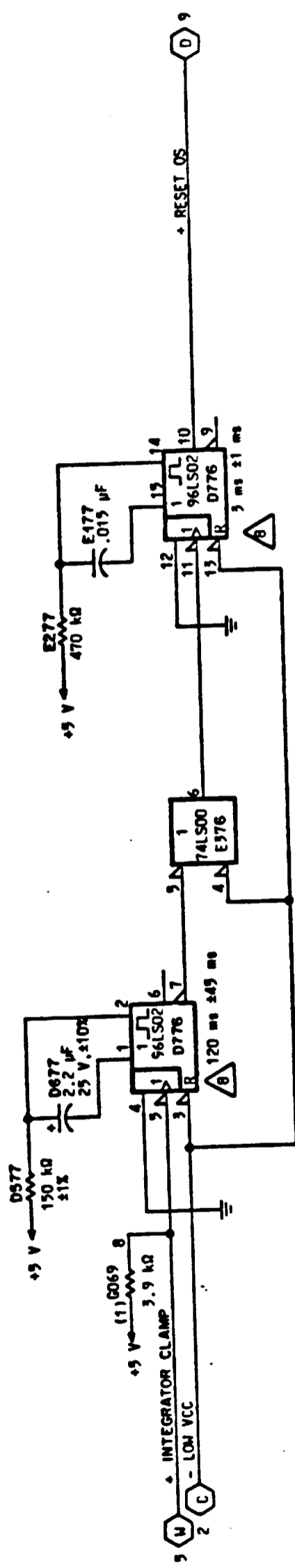
±10.000 VR

±15 V

±15 V

±15 V

±15 V



DOS
 D03

TWIN CITIES DISK DIVISION	C 833248/0	CO REV	4 001
COE IDENT	19333	SHEET	3

MICROPROCESSOR over
 TYPE: GSXX /KVCX/RVX
 MAGNETIC PERIPHERALS INC.
© 1978

0303 1 1-75.3
 2

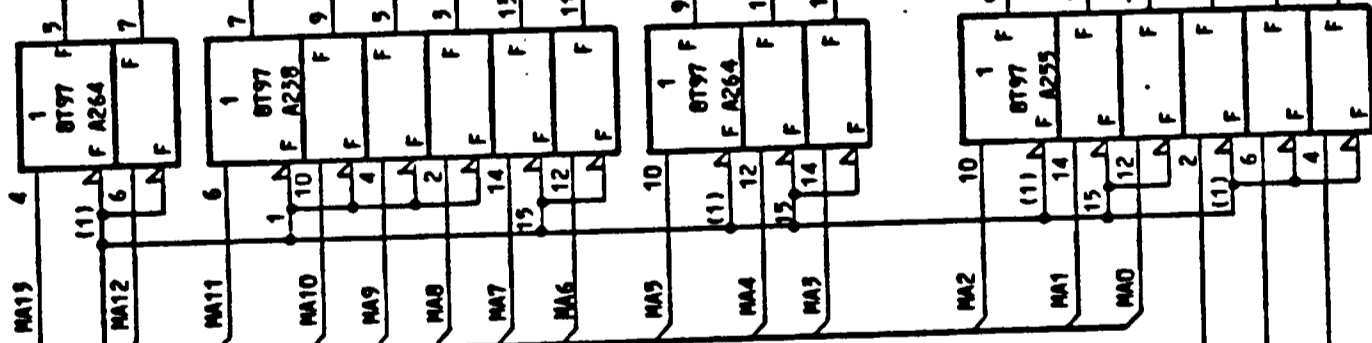
B54367805

U ADDRESS MA0 THRU MA12

+5 V

(1) IC469 7 1
1 KD

74LS04
A777

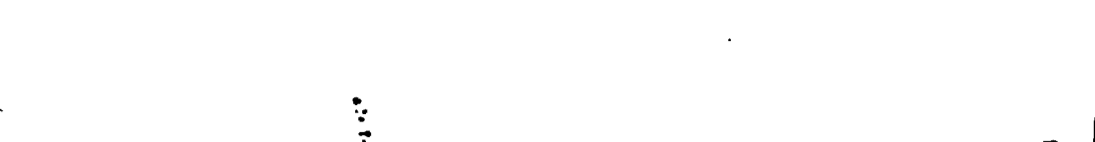
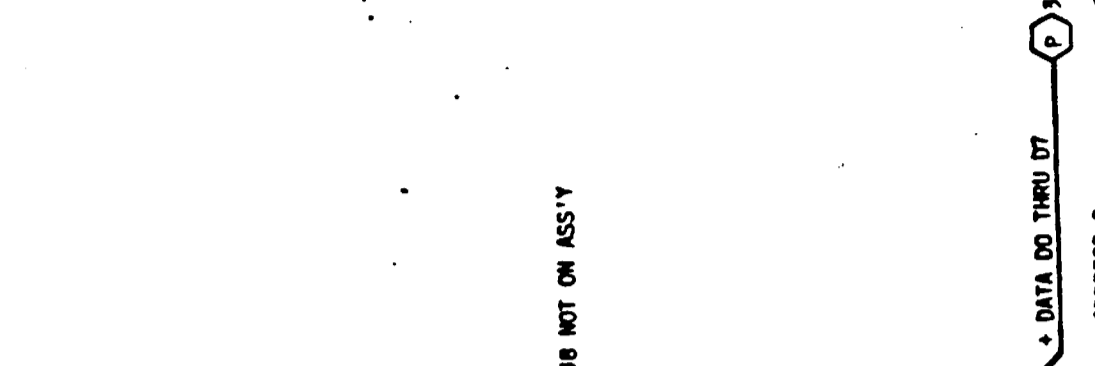
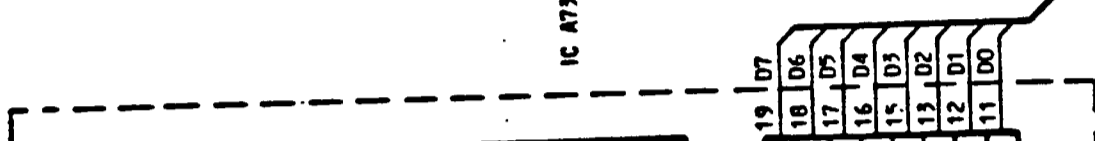
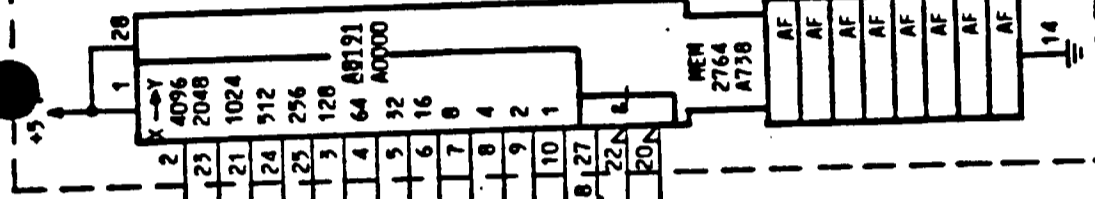
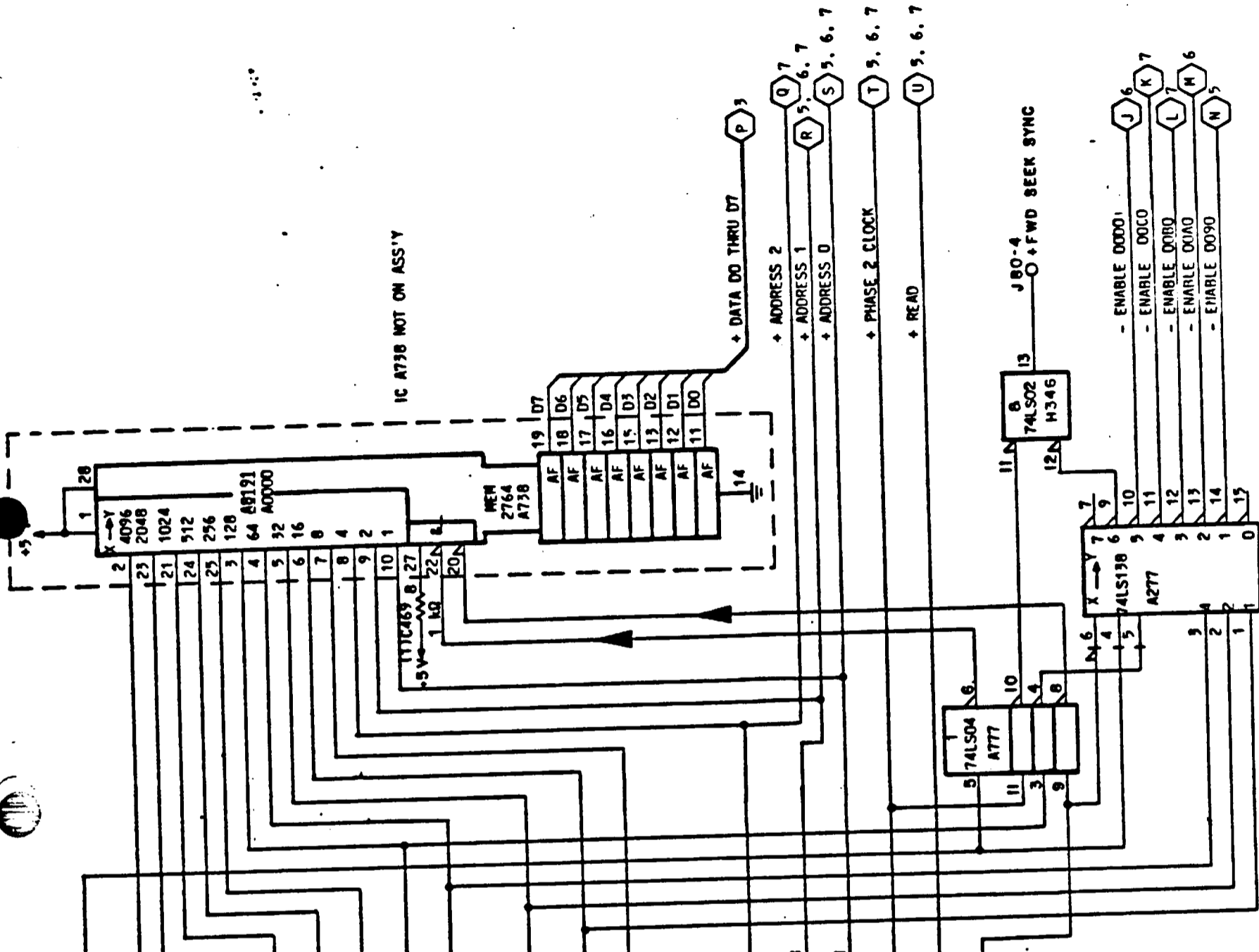


PHASE 2 CLOCK (MPU)

READ (MPU)

VALID MEM ADDRS (MPU)

IC A738 NOT ON ASS'Y



205
203

ADDRESS DECODE UVCX		TWIN CITIES DISK DIVISION	CD REV
TYPE: GSXX/KVCX/AVCX		19333	4 D01
MAGNETIC PERIPHERALS INC		C 83324810	SHEET 4

0304 1 1-75-4

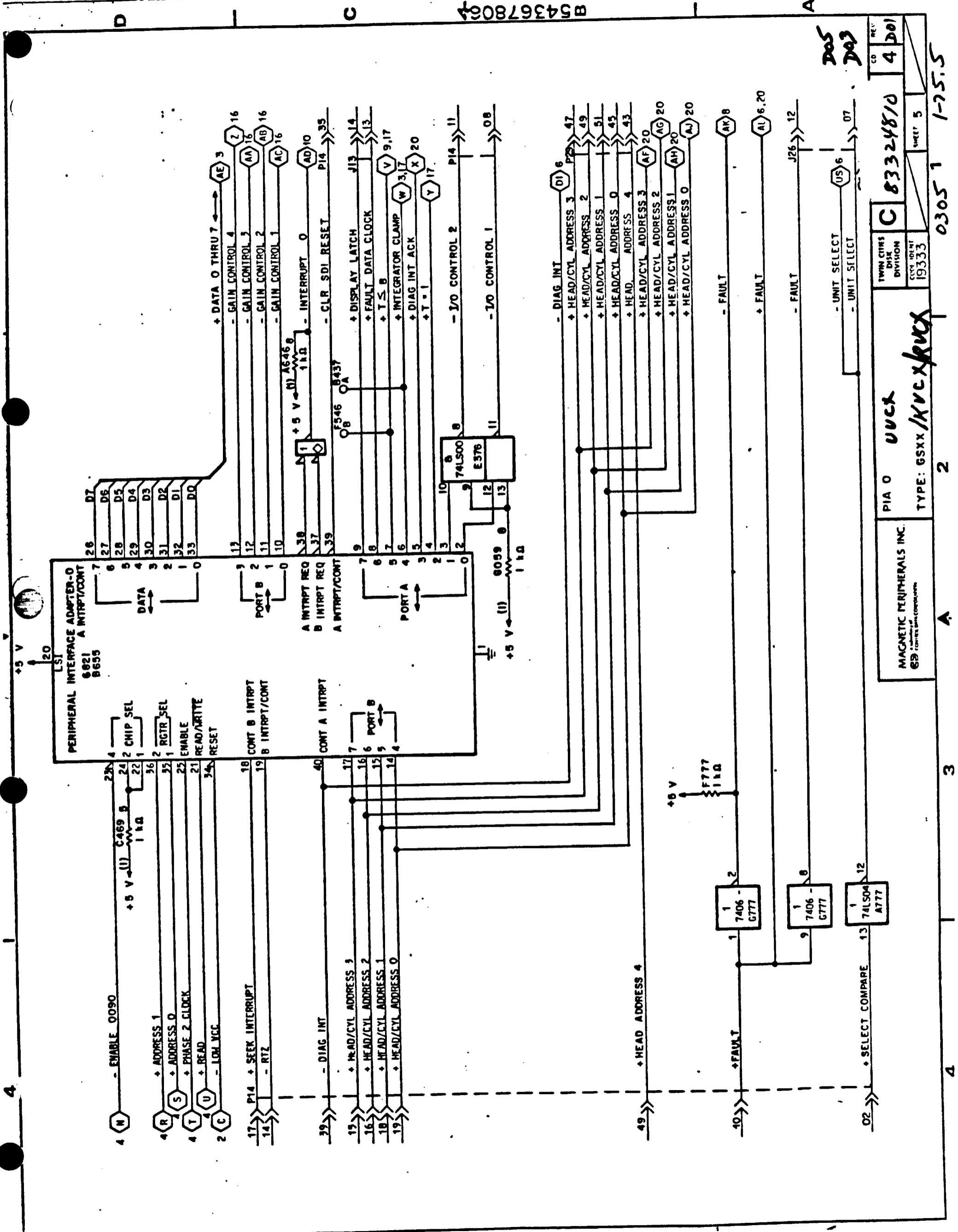
2

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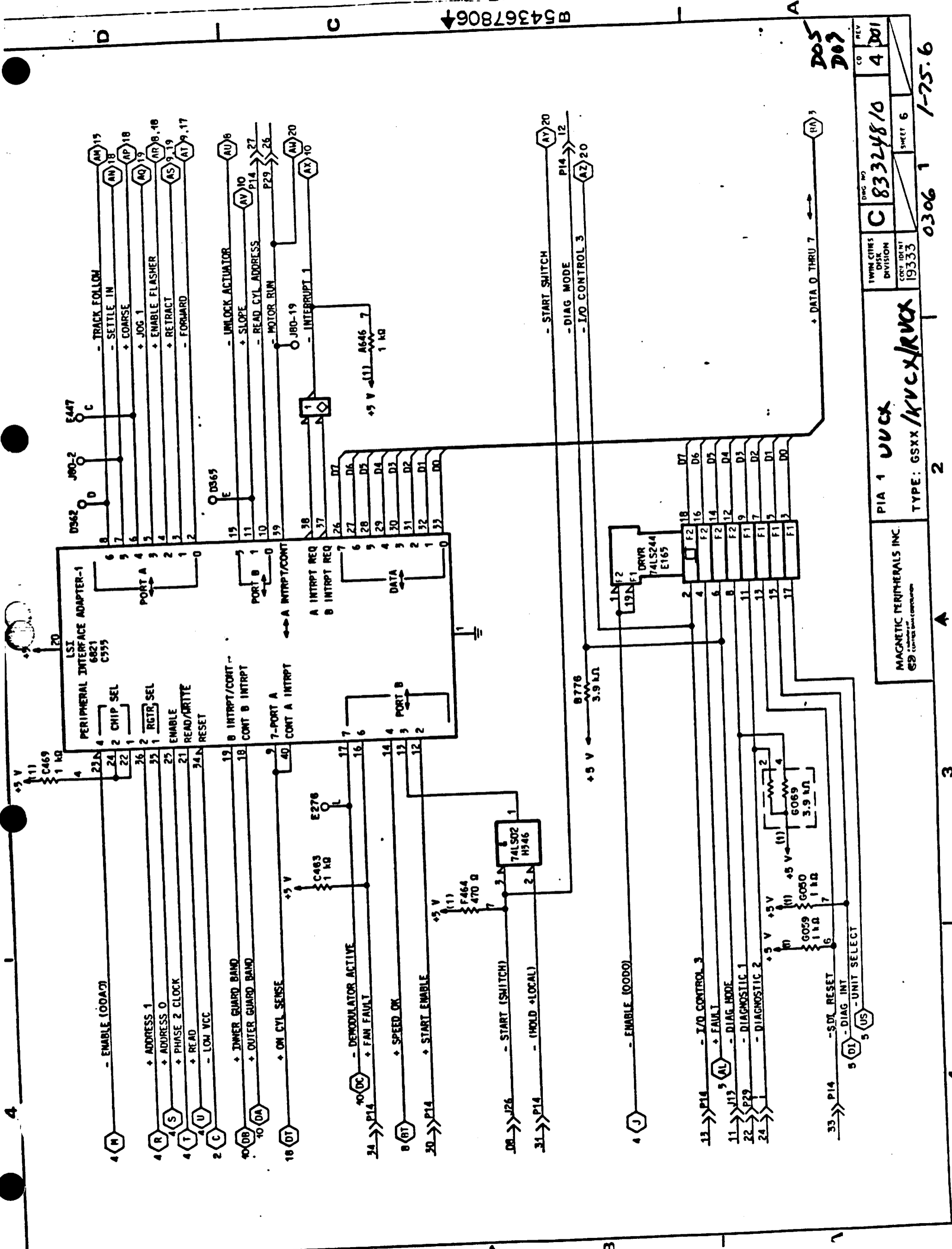
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MAGNETIC PERIPHERALS INC.		PIA 0 UUCX		TWIN DISK DIVISION		C 83324810		CD REV. 4 D01	
TYPE: GSXX/KVCX/PLUX		19333		CITY IDENT		SHEET 5			
								03051 1-75.5	

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DO3



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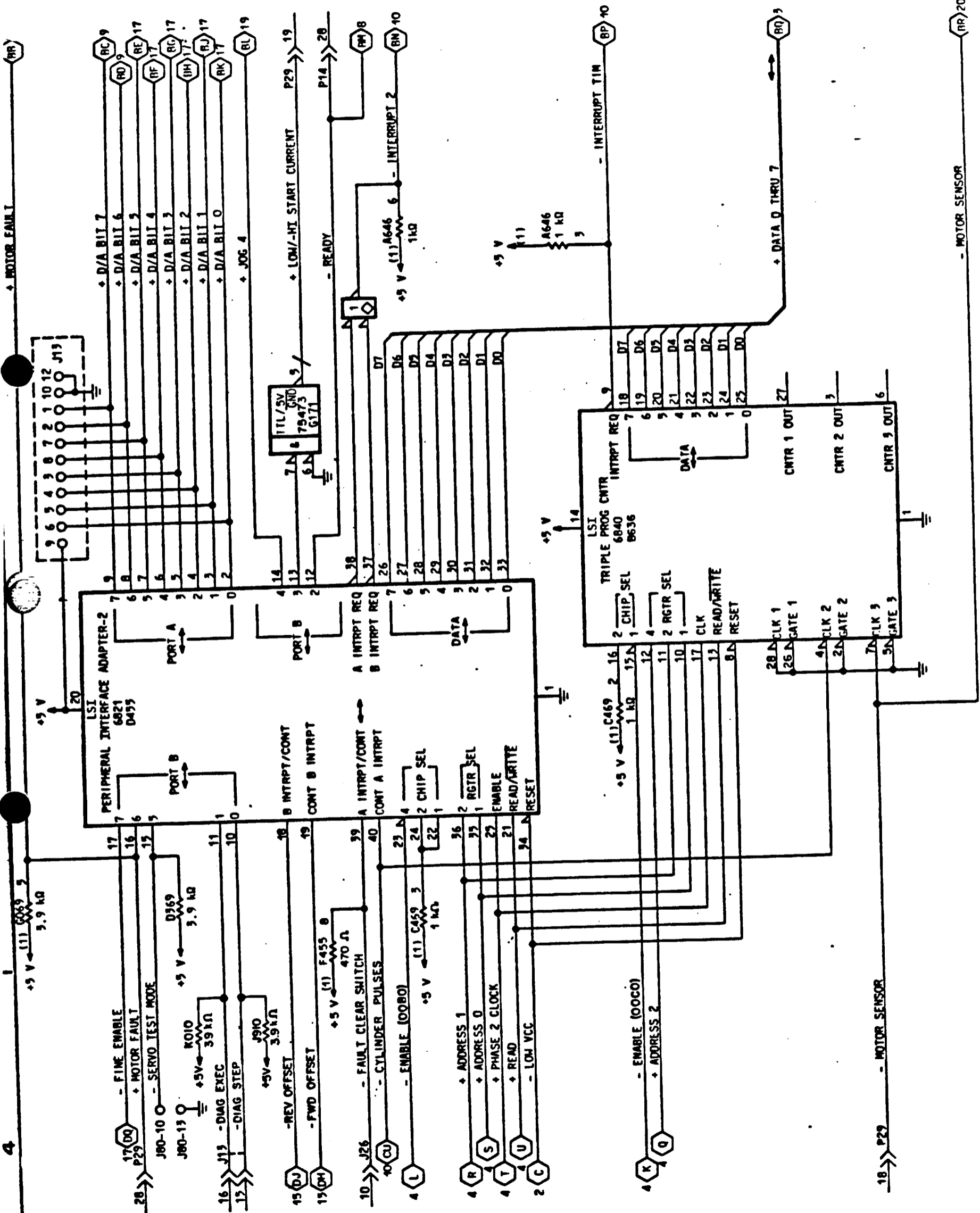
A

205
207

TWIN CITIES DISK DIVISION		DESIGN NO C 83324810	CO. REV 4 201
MAGNETIC PERIPHERALS INC. 69 (Circuit Board Company)		CONT. IDENT 19333	SHEET 6
PIA 1 UVCX		0306 1 1-75.6	
TYPE: GSXX/KVCX/RVUX		2	

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REV	CD	REV
4	4	4
DWG NO	C	83324810
TWIN CITIES DISK DIVISION	19333	SHEET 7

PIA 2 AND TIMER
 TYPE: GSXX/KVCX/KVCC
 MAGNETIC PERIPHERALS INC.
 68 CONTROL DATA CORPORATION

0307 1 1-75.7

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MOTOR SENSOR

MOTOR SENSOR

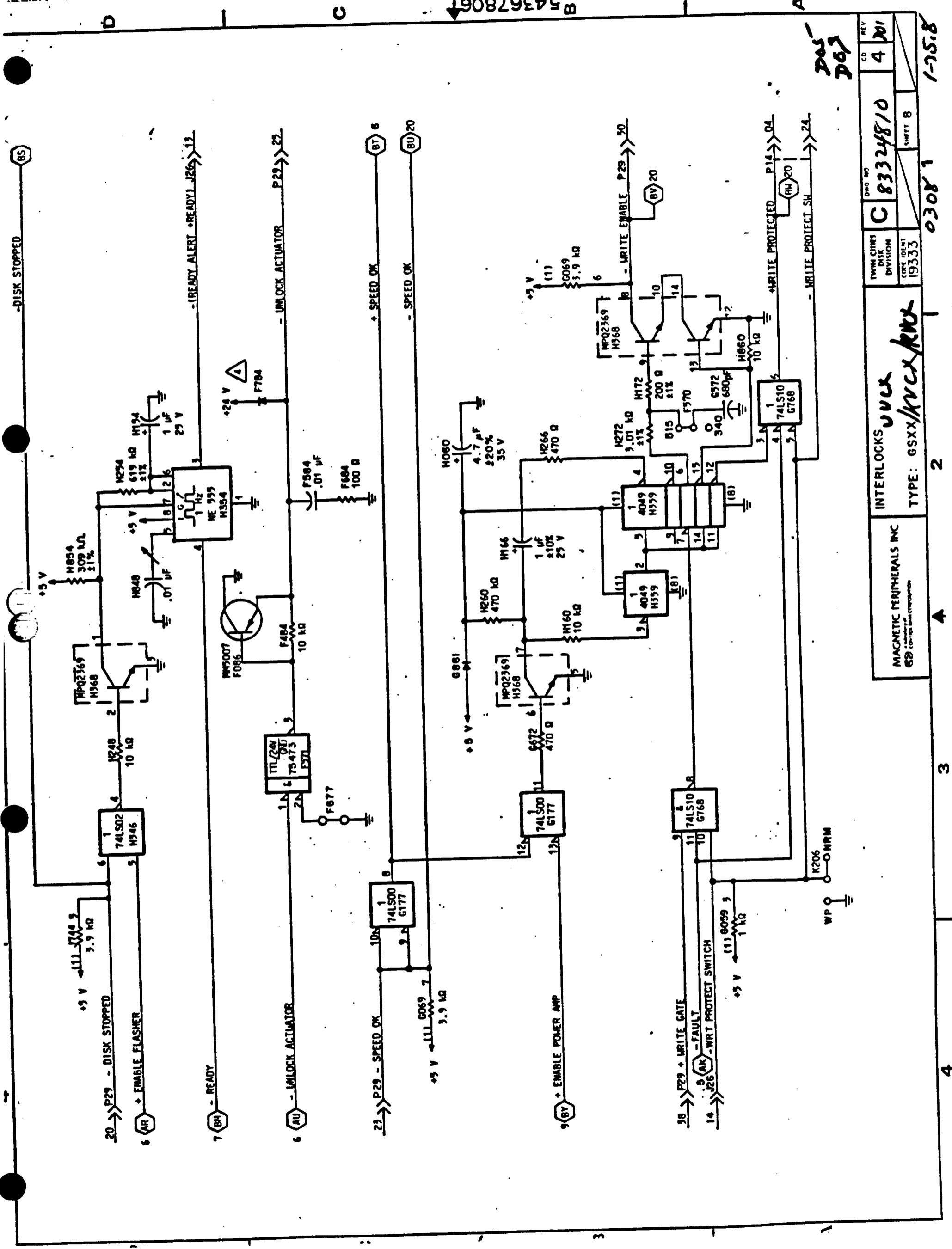
MOTOR SENSOR

MOTOR SENSOR

MOTOR SENSOR

MOTOR SENSOR

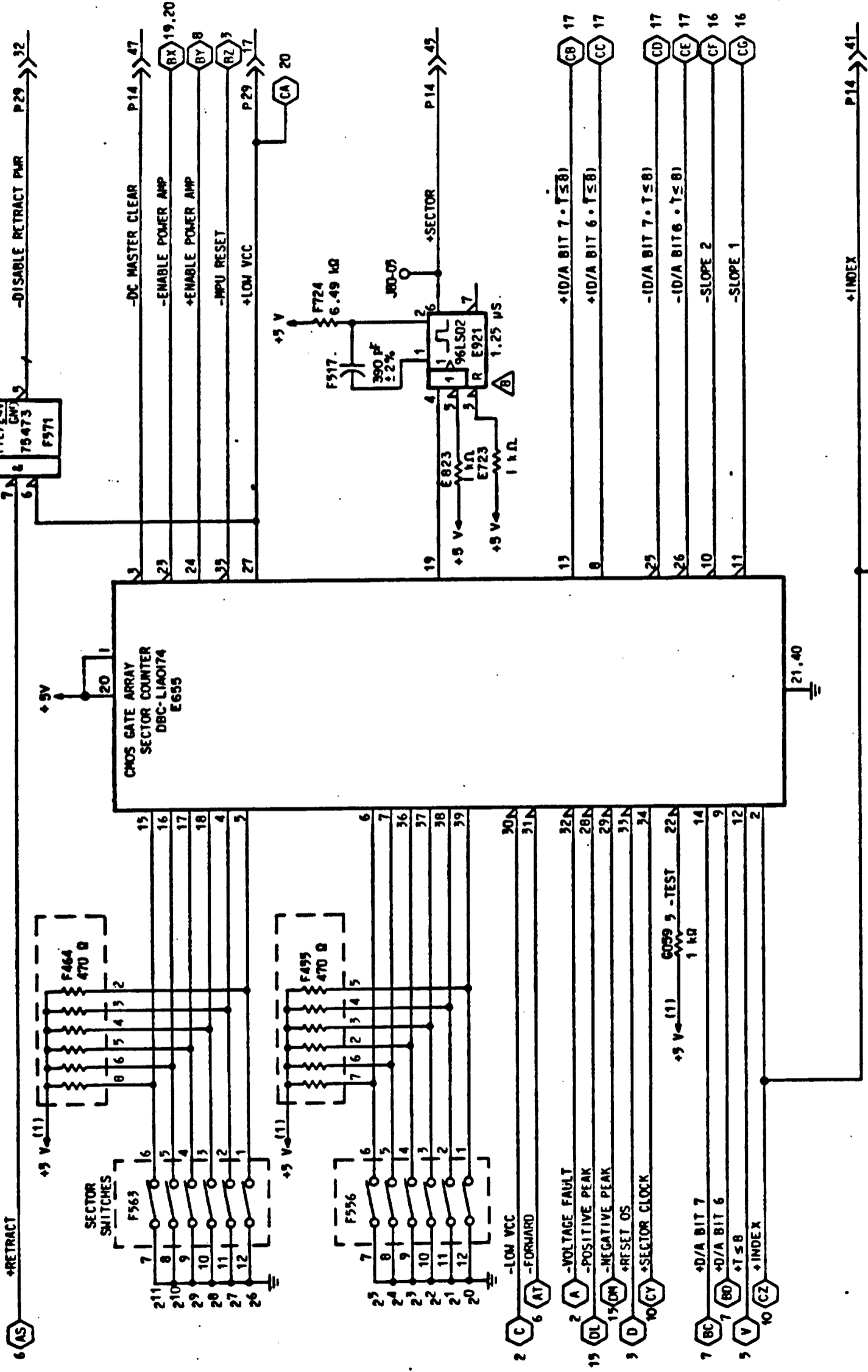
MOTOR SENSOR



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D67

TWIN DISK DIVISION	CORP IDENT	CO	REV
		83324810	4 01
INTERLOCKS		DWG NO	SHEET 8
MAGNETIC PERIPHERALS INC		03081	1-75.8
TYPE: GSXX/AVCX/RW		2	4



MAGNETIC PERIPHERALS INC.
 650
 10000
 10000

SECTOR COUNTER
 DBC-LIA0174
 TYPE: GSXX/KVCX/ROX

TWIN CTRNS
 DISK
 DIVISION
 19333

CD NO
 C 833248/0

REV
 4 201

SHEET 9

205
 203

1-75-9

0309 1

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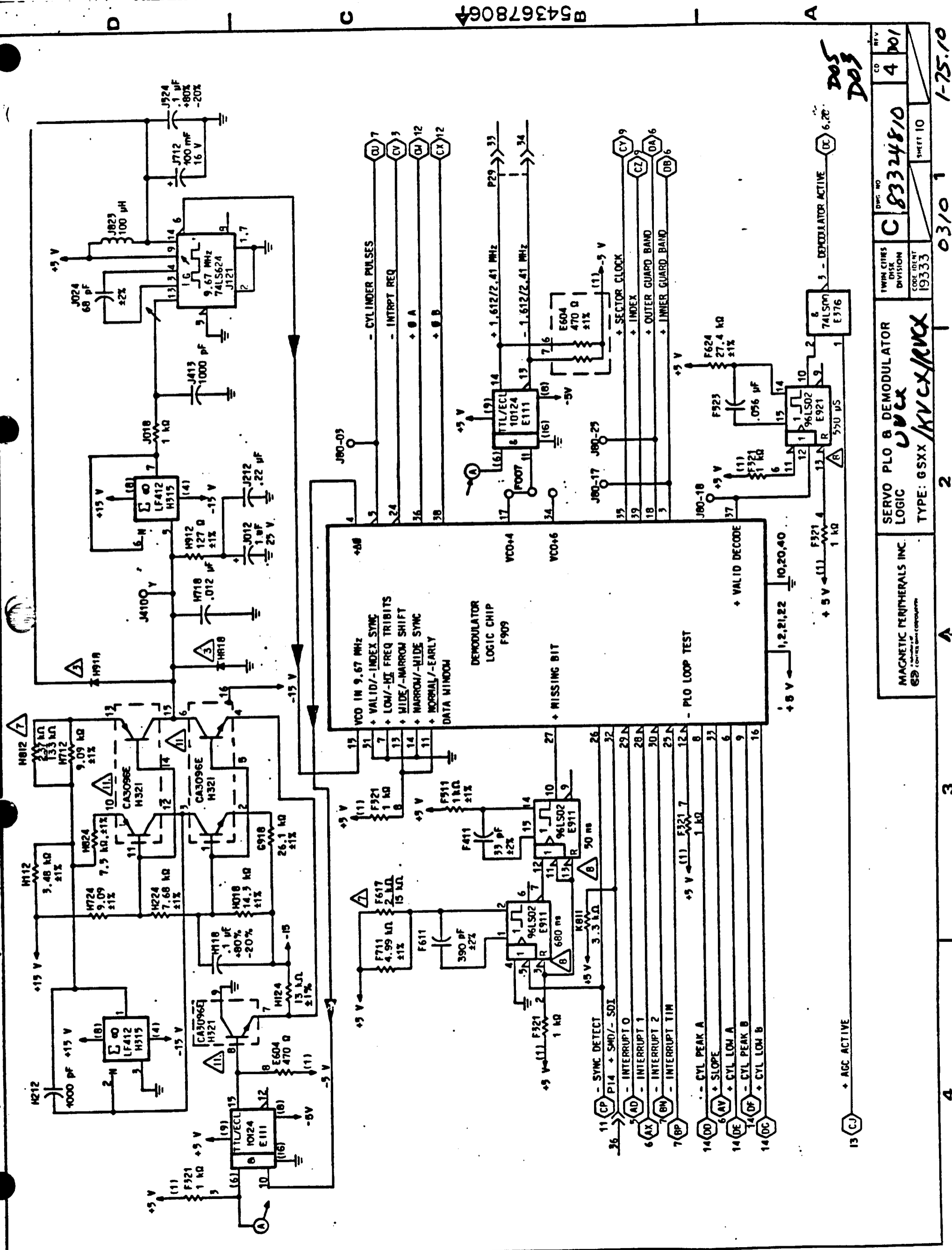
4

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CD REV	4	101
DWG NO	C 83324810	
TWIN CIRC DISK DIVISION	C 83324810	
CODE IDENT	19333	
SHEET 10		

SERVO PLO B DEMODULATOR LOGIC
TYPE: GSXX /KV CX/RVX

MAGNETIC PERIPHERALS INC.
623

1-75-10

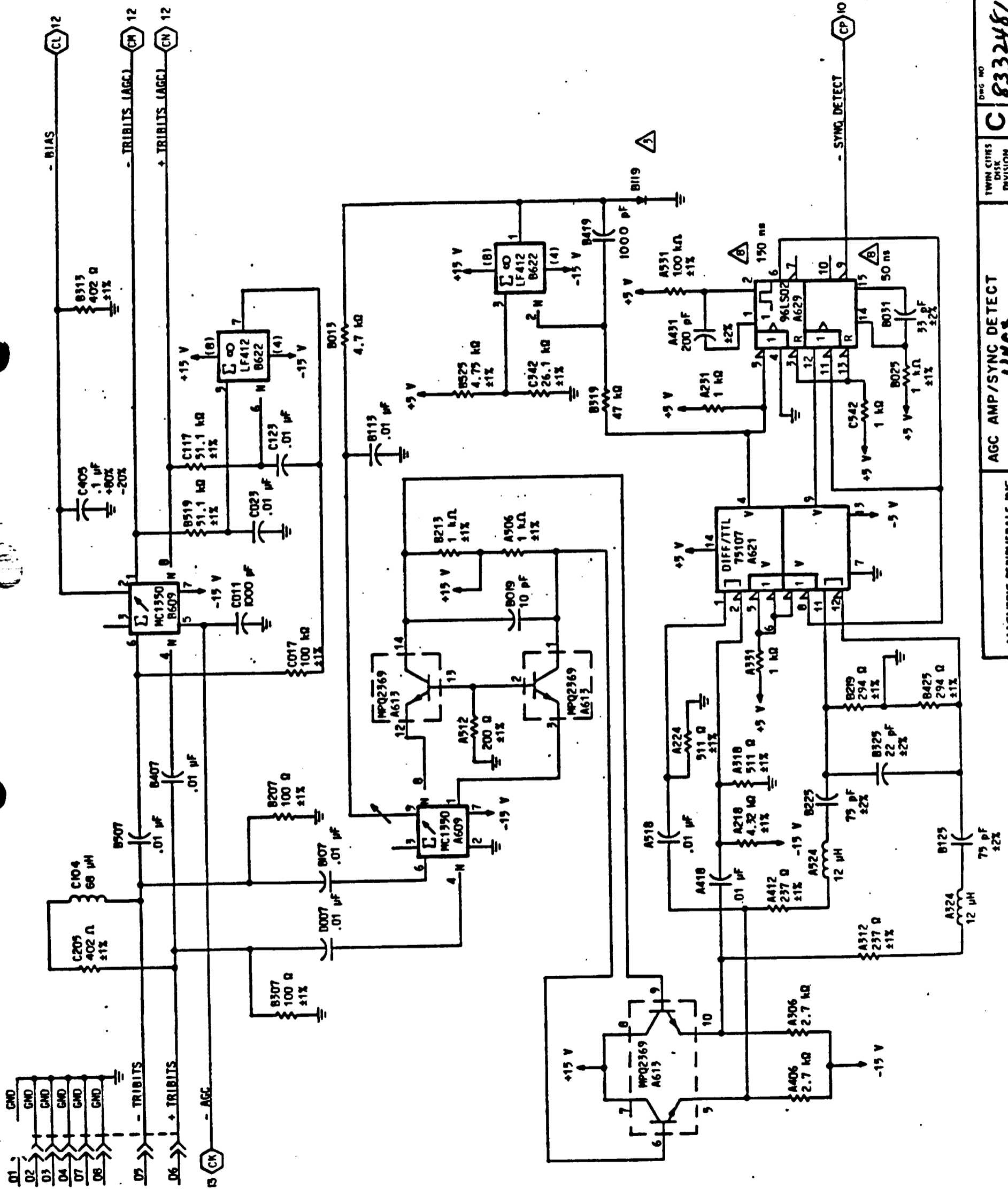
0310 1

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D03

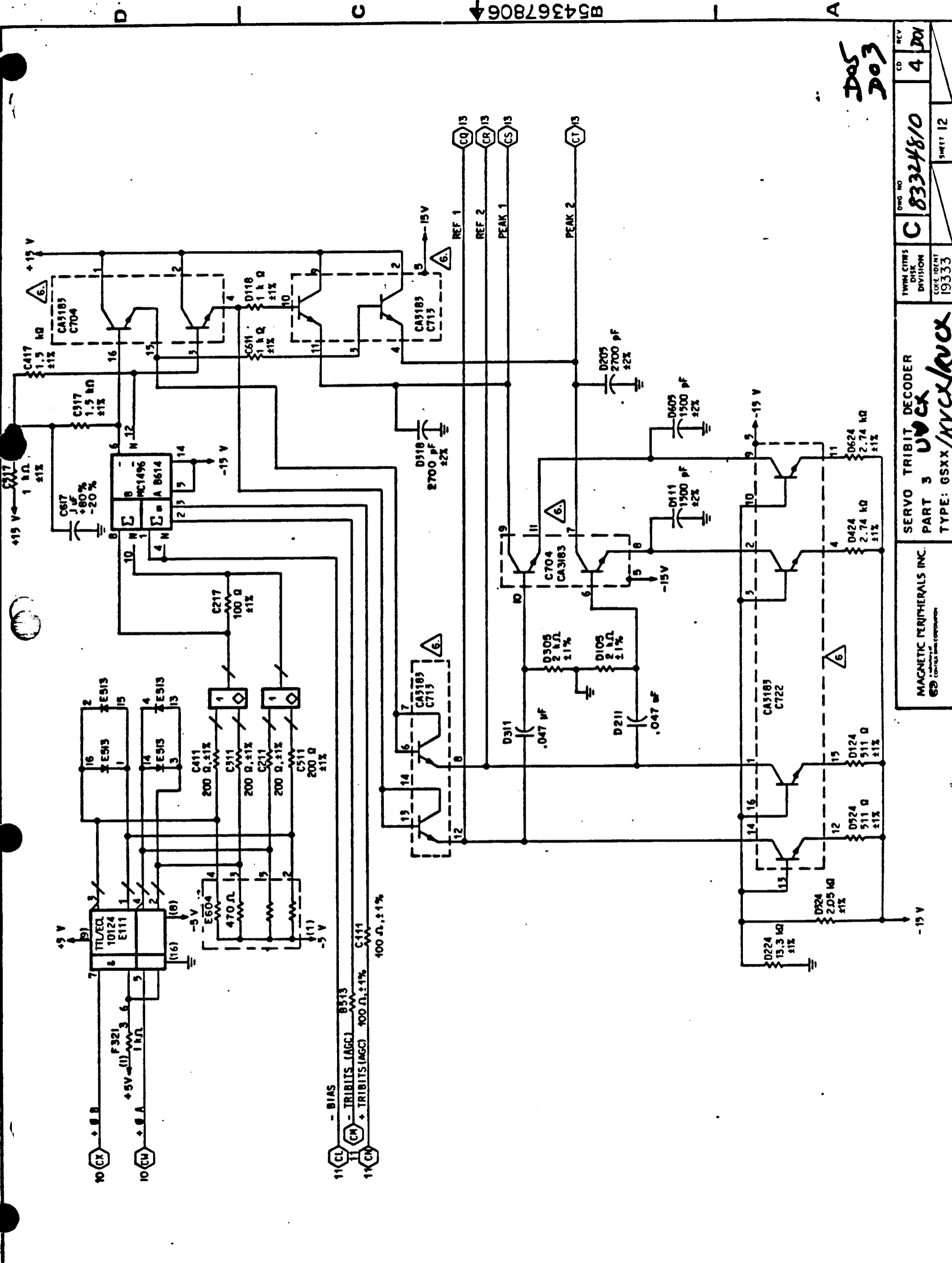
MAGNETIC PERIPHERALS INC. 650 EAST 12TH AVENUE DENVER, COLORADO 80202		TYPE: GSXX/KVEX/ARXX		AGC AMP/SYNG DETECT		DWG NO C 833248/0		REV 4	
SHEET 11		9333		DIVISION		TWIN CITIES DISK		CO REV	
0311 1		0311 1		0311 1		0311 1		0311 1	

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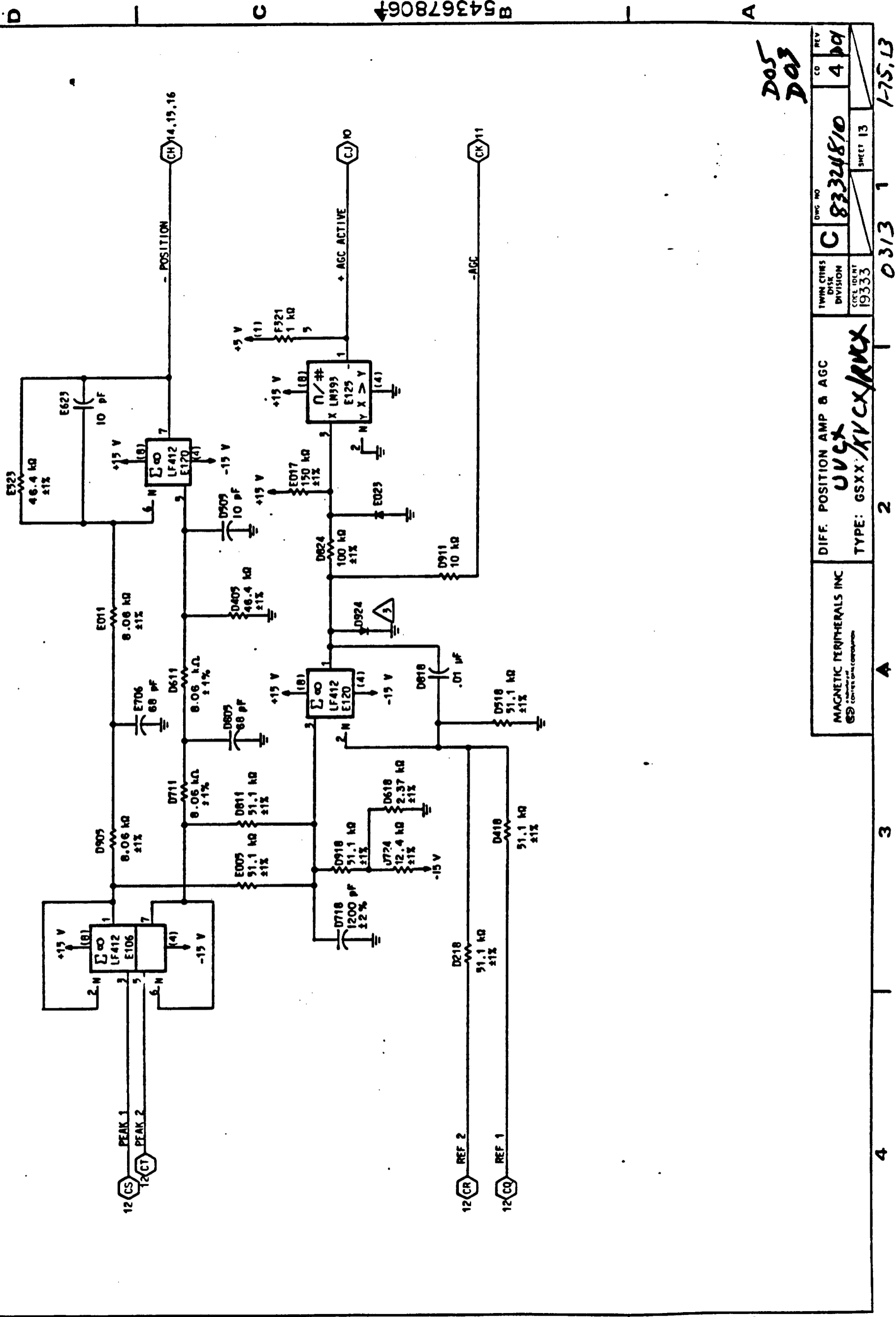


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203

REV	CD	DWG NO	TWIN CITIES DISK DIVISION	CD	REV
4	4	C 83324810	19333	0312-1	1-75-12
SERVO TRIBIT DECODER			MAGNETIC PERIPHERALS INC.		
PART 3			TYPE: GSXX/KVXX/RVXX		
SHEET 12			2		

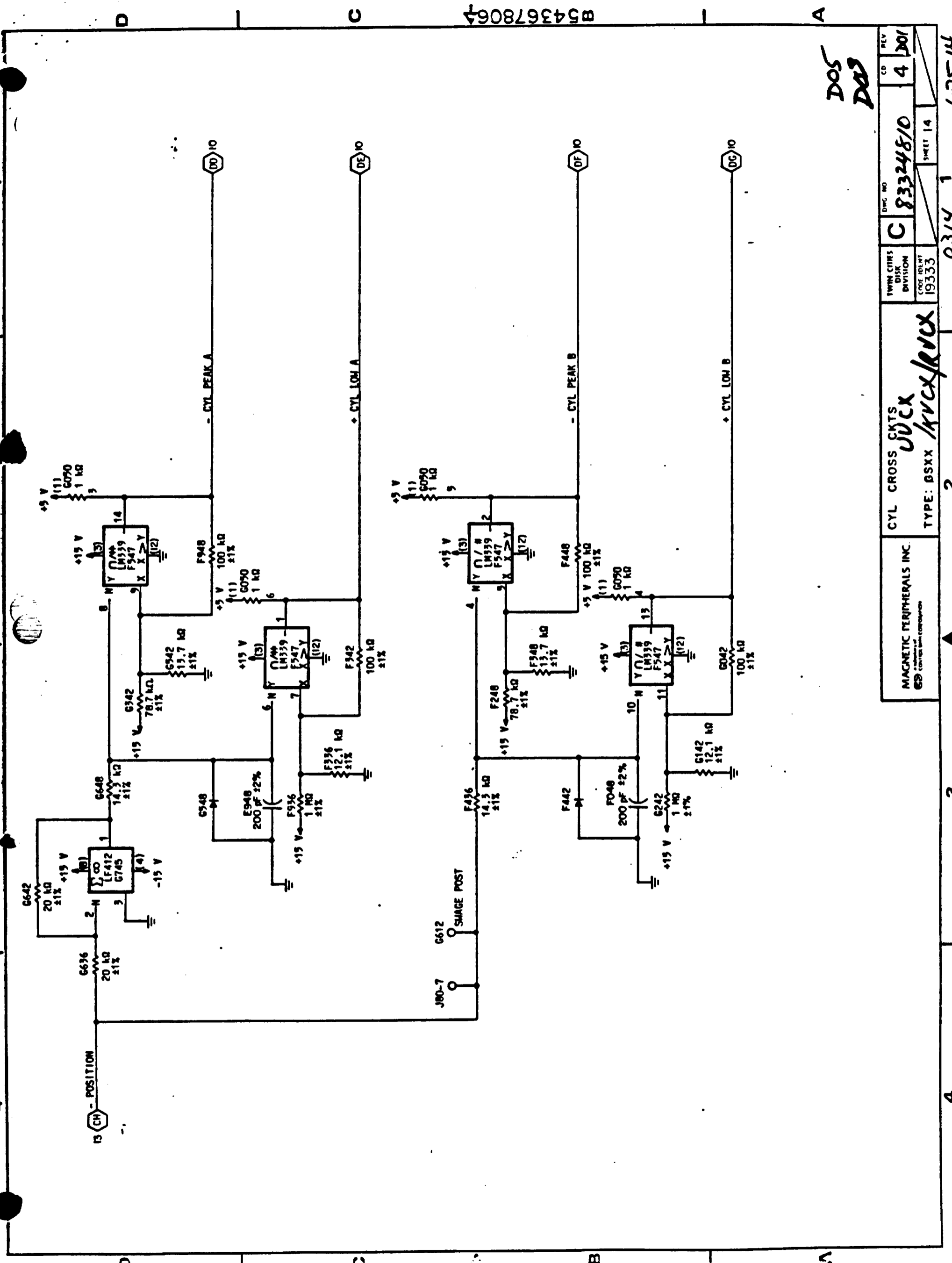
11(C) CL - BIAS
11(C) CM - TRIBITS (AGC) B513
11(C) CM + TRIBITS (AGC) 100 Ω, ±1% C111 100 Ω, ±1%



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205
203

MAGNETIC PERIPHERALS INC <small>CONTRACTORS</small>		DIFF. POSITION AMP & AGC		DWG NO		REV	
TYPE: GSXX / KVCX/RMX		UVGX		C 833248/0		4 09	
		C		SHEET 13		1-75.L3	
		0313 1					



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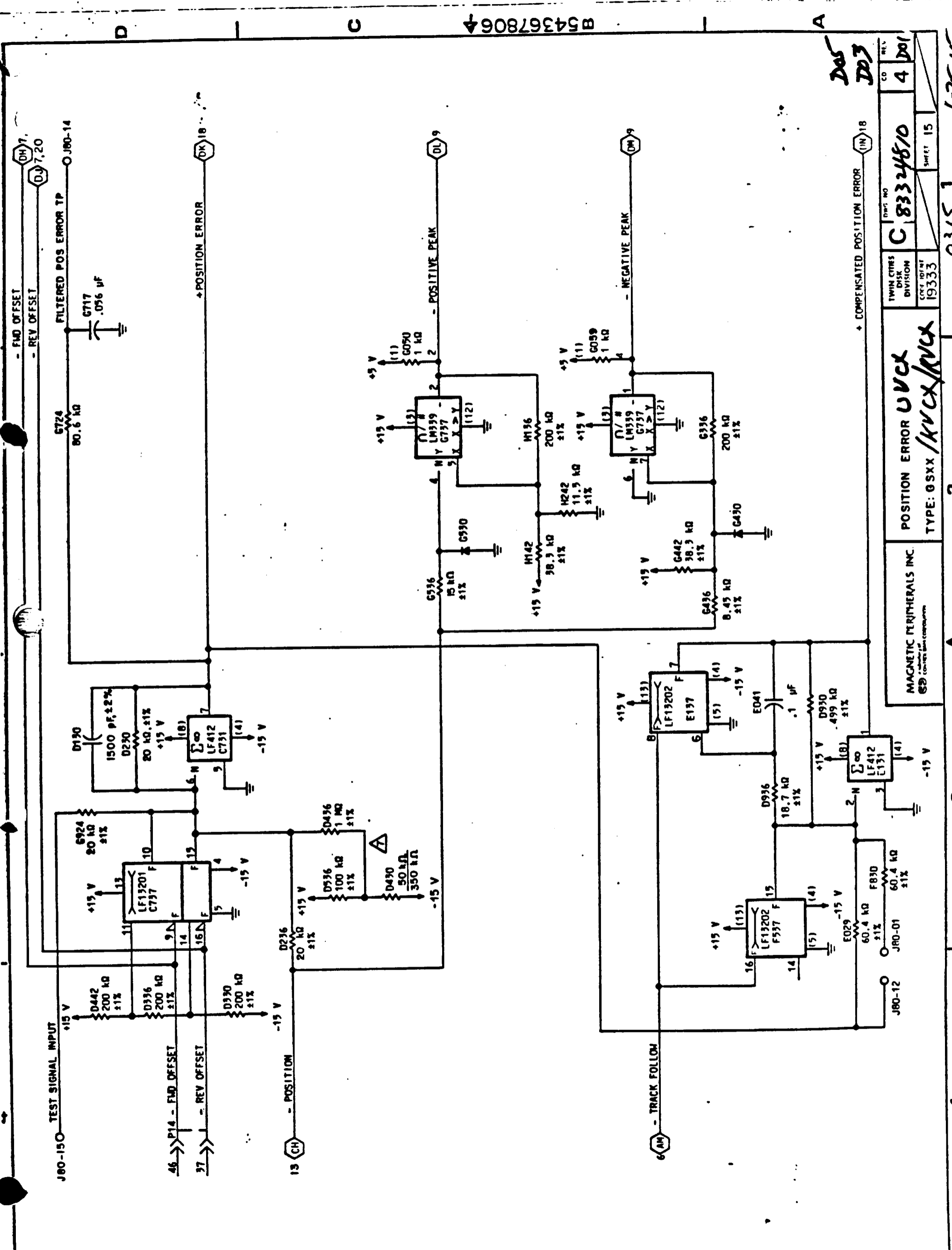
DOS
DAS

MAGNETIC PERIPHERALS INC. 625 CONVENT ROAD, CHICAGO, ILL. 60649		CYL CROSS CKTS JUCX / KVCX/RUCX		TYPE: GSXX	
TWIN CKTS DISK DIVISION 19333		DWG NO C 833248/0		REV 4 201	
SHEET 14		0314 1		1-75:14	

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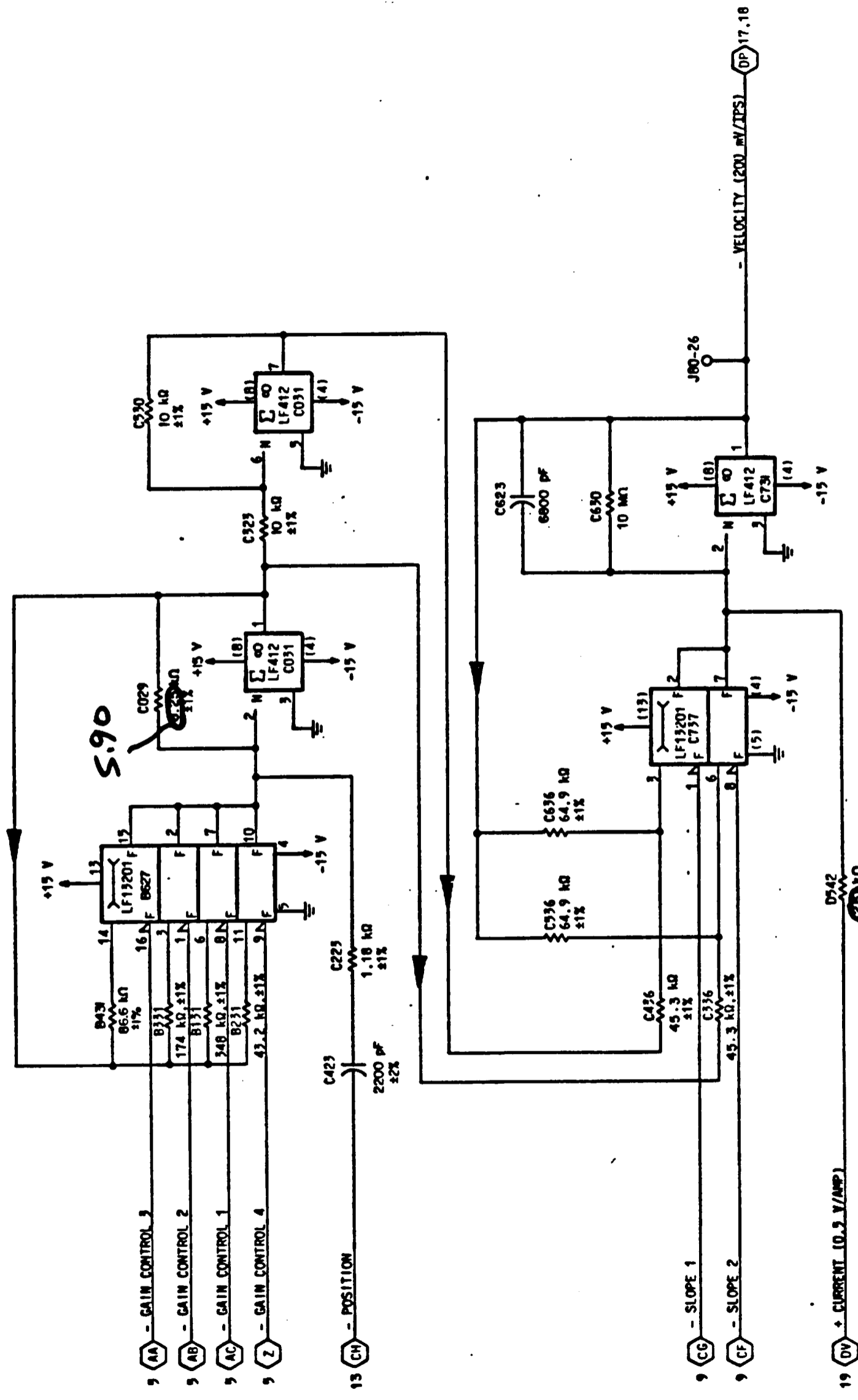


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D03

TWIN CIRCLES CHECK DIVISION		PART NO		CO. REC.	
CYCLE OFFSET		C 83324810		4 D01	
19333		SHEET 15		1-75.15	
MAGNETIC PERIPHERALS INC.			POSITION ERROR UNVX		
TYPE: GSXX /KVX/RVX			0315 1		
MAGNETIC PERIPHERALS INC.			2		

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MAGNETIC PERIPHERALS INC. 69 CONTROL DATA CORPORATION		VELOCITY UVCX / KVCX / KVCX		TWIN CTMS DISK DIVISION		C 83324810		DWG NO		CD RE	
		TYPE: GSXX / KVCX / KVCX		19333		SHEET 16				4 701	

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D05
D03
03/6 1
1-75/16

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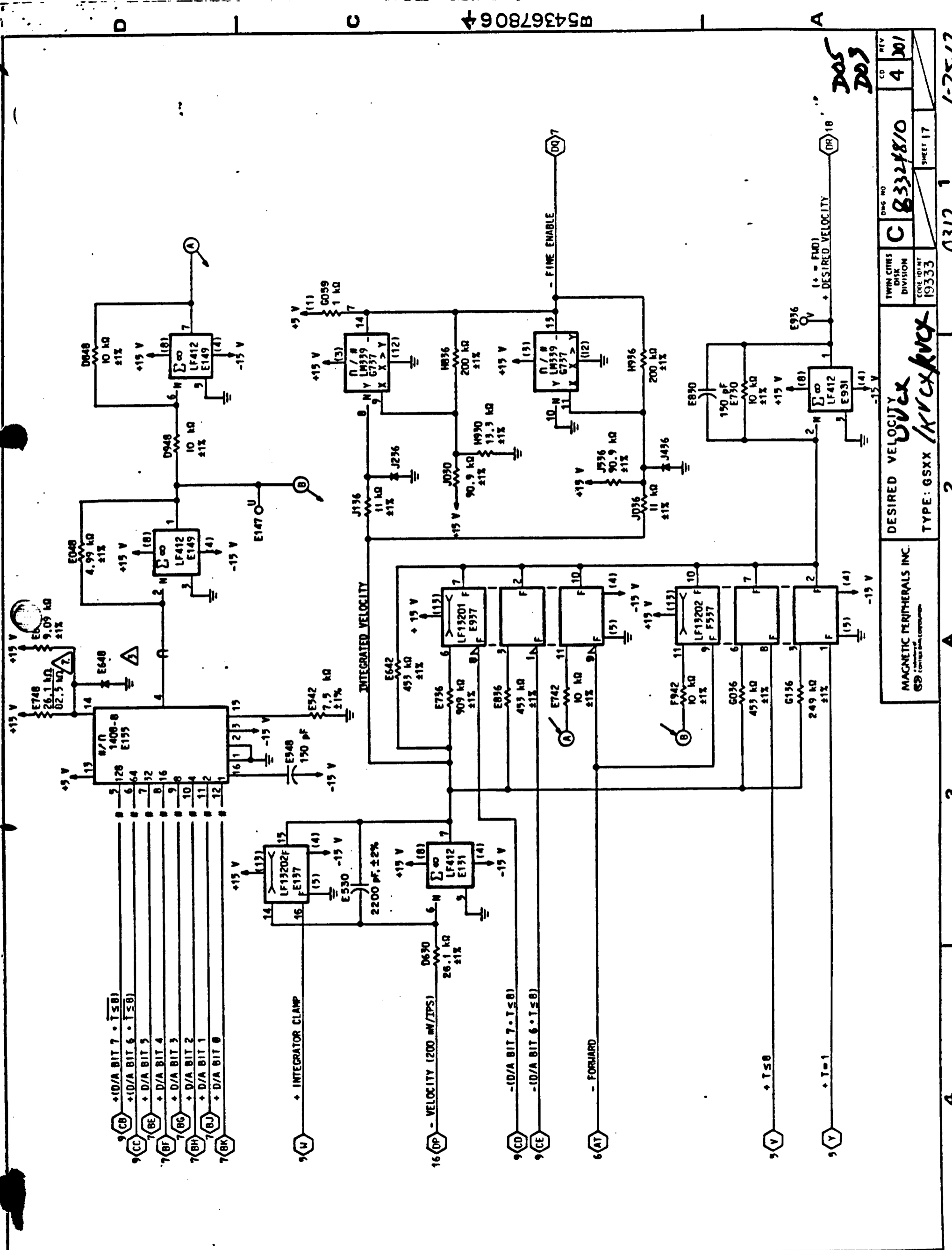
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03/6 1

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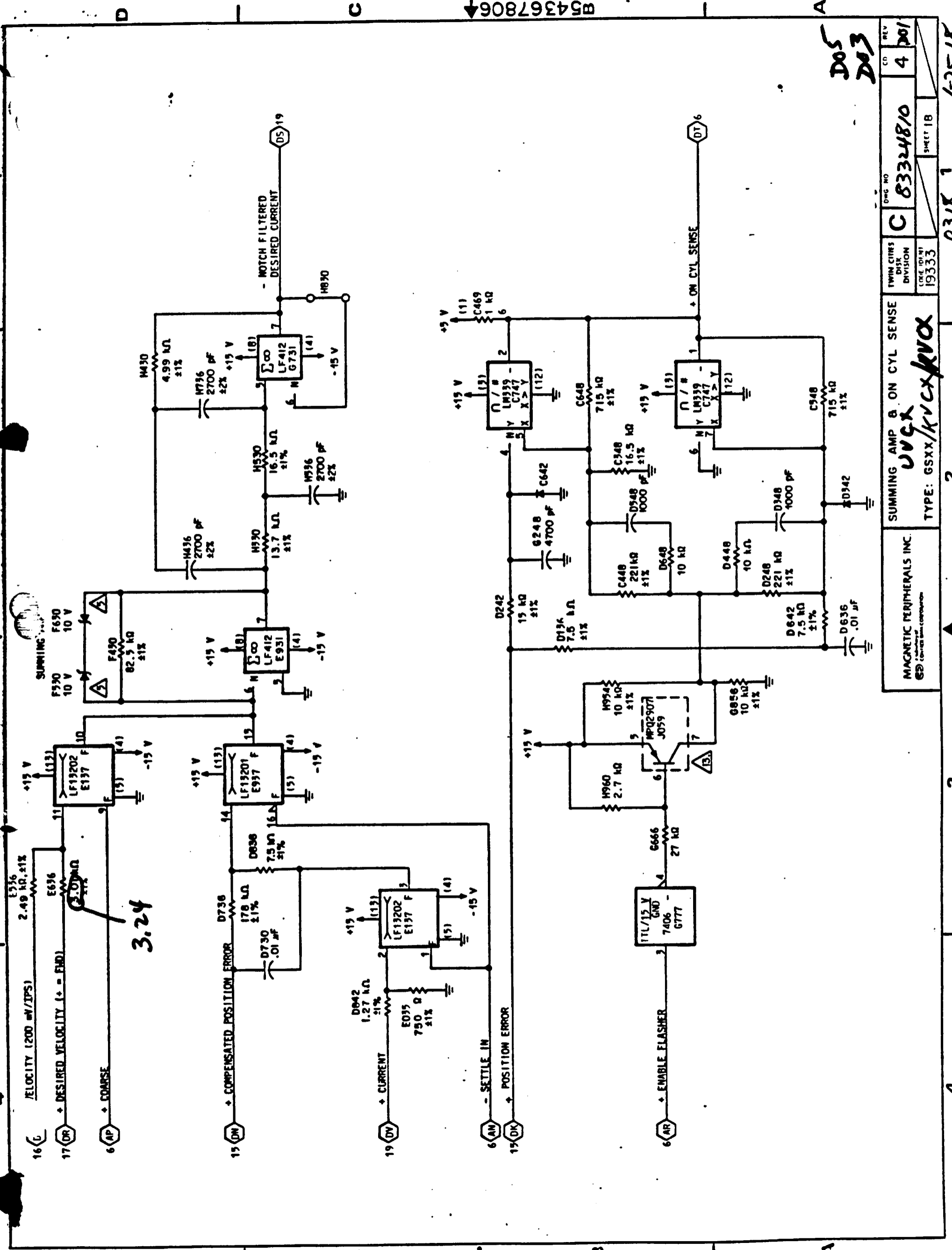


DESIRED VELOCITY		TYPE: GSXX		MAGNETIC PERIPHERALS INC.	
TWIN CTRES DISK DIVISION		CORE INT 19333		E9 CONTROL DATA CORPORATION	
CD REV	4	DWG NO	C 83324810	SHEET	17
DESIRED VELOCITY			0317 1		
TYPE: GSXX			2		
MAGNETIC PERIPHERALS INC.			4		
E9 CONTROL DATA CORPORATION			3		
DESIRED VELOCITY			4		
TYPE: GSXX			3		
MAGNETIC PERIPHERALS INC.			4		
E9 CONTROL DATA CORPORATION			3		
DESIRED VELOCITY			4		
TYPE: GSXX			3		
MAGNETIC PERIPHERALS INC.			4		
E9 CONTROL DATA CORPORATION			3		

1-75.17

DOS
DOS

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D05
D03

CD REV	4	REV	1-25-18
DWG NO	C 83324810	SHEET	18
TWIN CTRS	19333	DIVISION	
SUMMING AMP & ON CYL SENSE			
TYPE: GSXX/KVCX/RVX			
MAGNETIC PERIPHERALS INC.			
CONTRACT COMPANY			

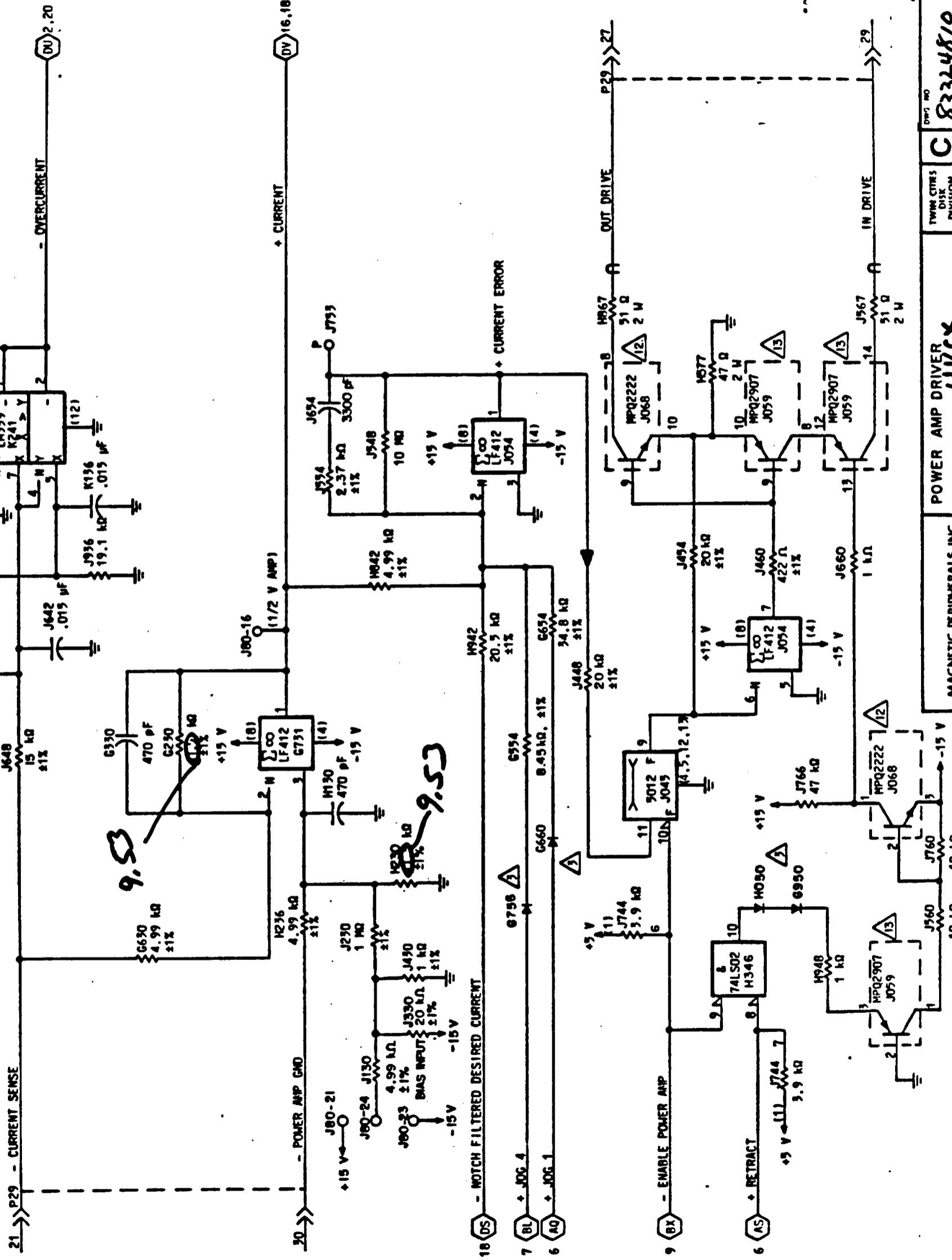
0318 1

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2 (6) ALAT COMPANATOR SUPPLY (+14.3 V NOM)



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MAGNETIC PERIPHERALS INC. 650 Central Expressway		TYPE: GSXX / <i>KVCX/rev</i>		DWG NO C 83324810		CD REV 4 201	
POWER AMP DRIVER		TWIN CITIES DIXIE DIVISION		C 83324810		SHEET 19	
MAGNETIC PERIPHERALS INC. 650 Central Expressway		TYPE: GSXX / <i>KVCX/rev</i>		DWG NO C 83324810		CD REV 4 201	

1-75,19

0319 1

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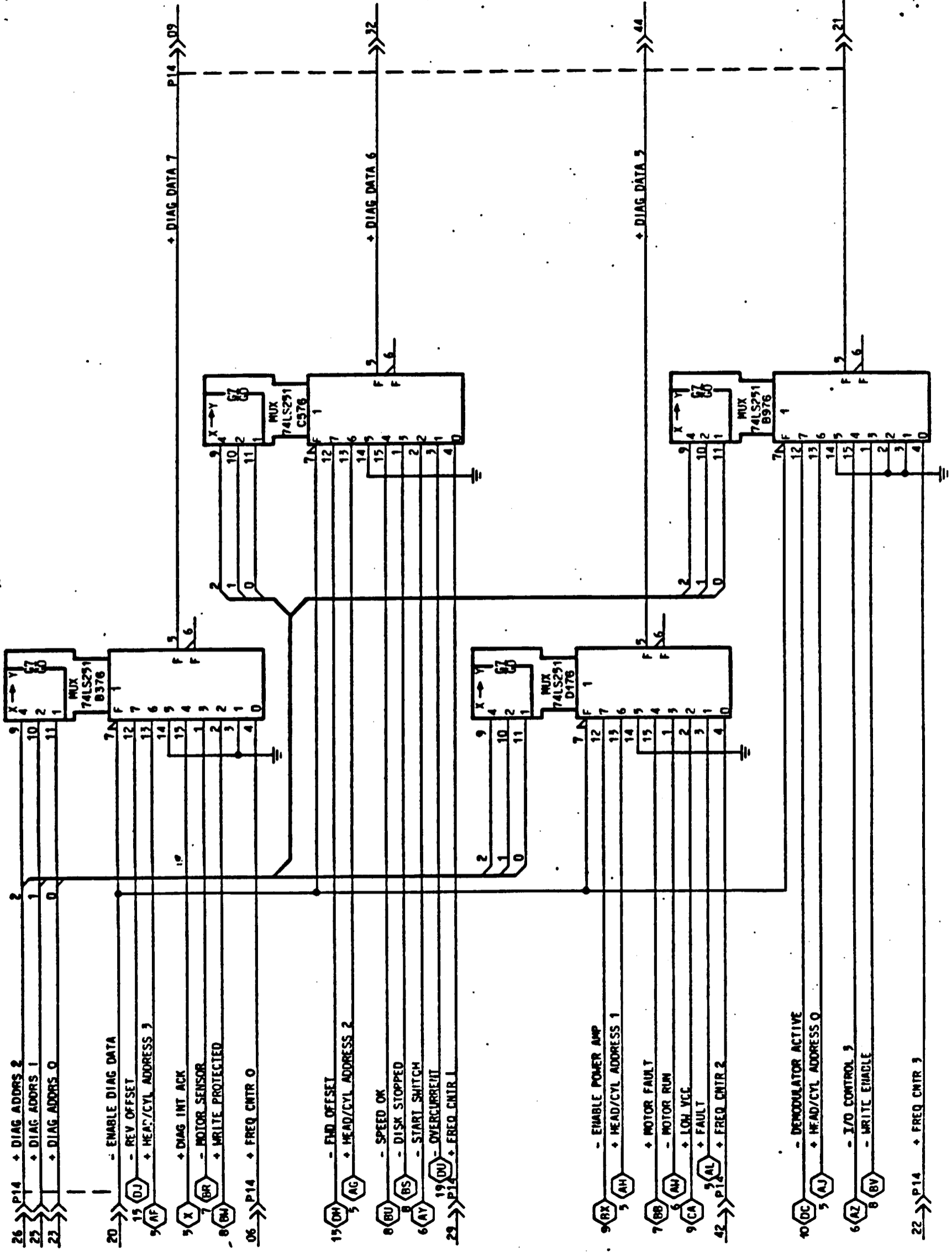
4

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DO3

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9.53

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203



MAGNETIC PERIPHERALS INC.
6200
Chicago, Ill. 60630

DIAGNOSTIC MUX
TYPE: GSXX/KVCX/KIX

TWIN CITIES
DISK
DIVISION
COPY ID# WT
19333

DWG NO
C 83324810

CD REV
4 201

SHEET 20

1-75-20

0320 1

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