

General Electric
Dr. Waggoner

~~PSH~~

VI4 - 900111
REVISION "B"
FUNCTIONAL INTEGRATED
SYSTEM SCHEMATICS

GUIDANCE AND NAVIGATION SUBSYSTEM
SPACECRAFT 011

VOLUME 5

DOWNEY & ETR

THIS DIAGRAM REPLACES
VI4-900111, VOLUME 5
DATED 8-12-65

DR BY	L. M. LEE	2/4/6	NORTH AMERICAN AVIATION, INC. SPACE and INFORMATION SYSTEMS DIVISION 12214 LAKEWOOD BLVD., DOWNEY, CALIFORNIA		
CHK BY	692-703	6205-6	FUNCTIONAL INTEGRATED SYSTEM SCHEMATICS GUIDANCE AND NAVIGATION SUBSYSTEM		
APPROVED BY					
R. KLEWENO			Rev 2-9-66		
W. T. BYSTAD					
W. T. BYSTAD			CODE IDENT NO.	SIZE	VI4 - 900111
			03953	A	
			SCALE	REVISION "B"	SHEET 5.1 OF 20



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SC-011 DOWNEY & ETR	CODE IDENT NO. 03953	SIZE A	V14 - 900111
	SCALE	REV. "B"	VOL. 5 SHEET 5.2

CURRENT SHEET LIST

SHEET NUMBERS ACTIVE AT:

INITIAL RELEASE	REV. "A"	REV. "B"	REV. "C"	REV. "D"		
5.1	5.1 A	5.1 B				
5.2	5.2 A	5.2 B				
5.3	5.3 A	5.3 B				
5.4	5.4 A	5.4 B				
5.5	5.5	5.5 B				
5.6	5.6	5.6 B				
5.7	5.7 A	5.7 B				
5.8	5.8	5.8 B				
5.9	5.9	5.9 B				
5.10	5.10	5.10 B				
5.11	5.11	5.11 B				
5.12	5.12	5.12 B				
5.13	5.13	5.13 B				
5.14	5.14	5.14 B				
5.15	5.15	5.15 B				
5.16	5.16	5.16 B				
5.17	5.17	5.17 B				
	5.18 A	5.18 B				
17	18	20				

TOTAL SHEETS

SC-011 DOWNEY & ETR	CODE IDENT NO. 03953	SIZE A	V14 - 900111		VOL. 5
	SCALE	REV. "B"	SHEET	5.3	

REVISIONS

SYM	DESCRIPTION	DATE	APPROVED
	1. MAY BE REWORKED 3. RECORD CHANGE 2. CANNOT BE REWORKED 4. NOW SHOP PRACTICE 5. PARTS MADE OK	DISPOS	
A	REVISION NUMBER 100. UPDATED SHEETS 5.1, 5.2, 5.3, 5.4 AND 5.7. TO MAKE CHANGE CONFIGURATION. ADDED SHEET 5.18.	3	8-12-65 <i>R. Harwood</i>
B	ADDED SHEETS G14 AND G14A, INCORPORATING PSAAM AND LATEST MEASUREMENT NUMBER CHANGES. INCORPORATED E.O.'s 389845, 489759, 389778.	3	2-3-66 <i>R. Harwood</i>

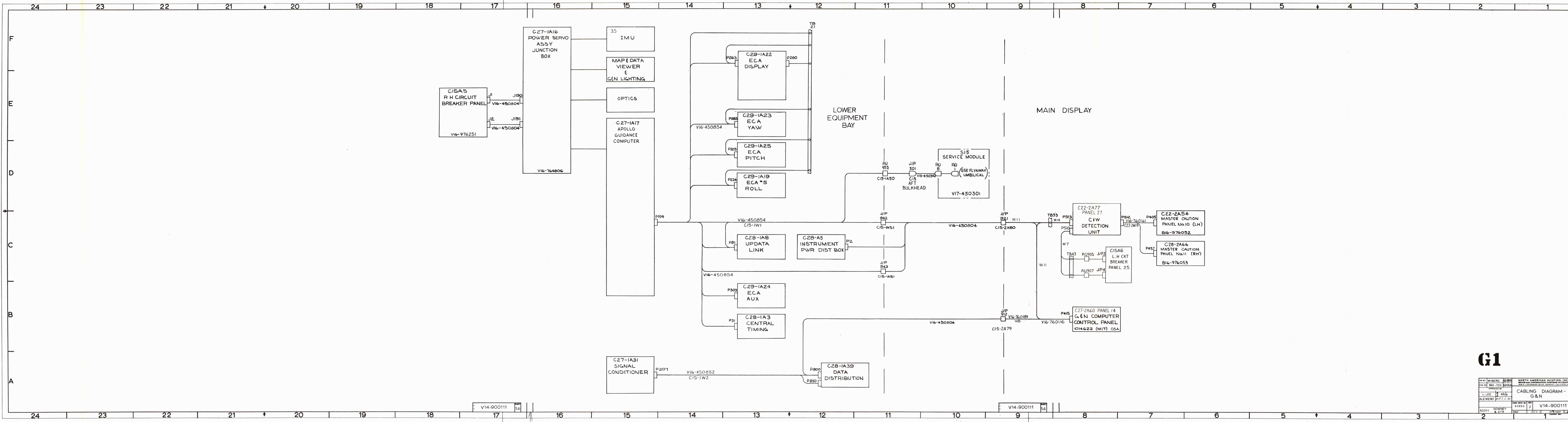


SC-011 DOWNEY & ETR	CODE IDENT NO. 03953	SIZE A	V14 - 900111
	SCALE	REV. "B"	VOL. 5 SHEET 5.4

NOTES

1. UNDERLINED LETTERS DENOTE LOWER CASE.
2. ALL RELAY CONTACTS ARE SHOWN IN THE DE-ENERGIZED OR UNLATCHED POSITION.
3. DIAGRAMS DEPICT DOWNEY CHECKOUT CONFIGURATION ONLY.
4. THIS DRAWING REQUIRES NO IDENTIFICATION AND TRACEABILITY REQUIREMENTS.
5. ALL SYMBOLOGY UTILIZES MIL-STD-15-1 SUPPLEMENTED BY B14-900005.
6. FOR SCHEMATIC COVERAGE OF OTHER BOILERPLATES AND SPACECRAFT REFER TO:
V14-900000.

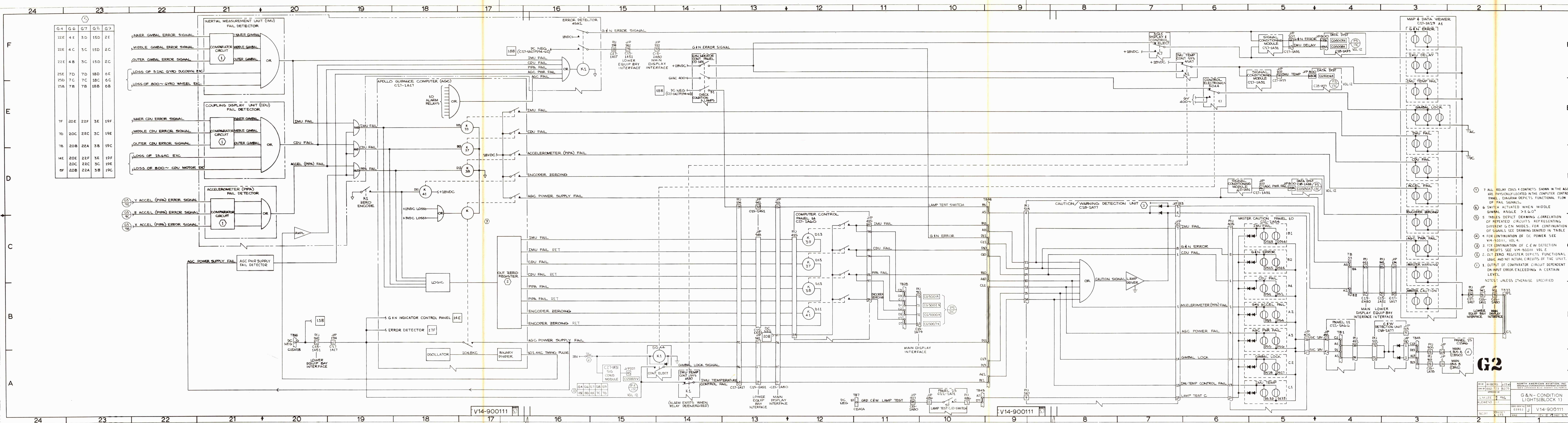
SC-011 DOWNEY & ETR	CODE IDENT NO. 03953	SIZE A	V14 - 900111	VOL. 5
	SCALE	REV. "B"	SHEET	5.5



G1

REV	DATE	BY	CHKD BY	APP'D BY	DESCRIPTION
1	03/22/66	WIBERG	WIBERG	WIBERG	INITIAL DESIGN
2	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
3	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
4	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
5	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
6	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
7	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
8	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
9	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
10	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
11	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
12	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
13	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
14	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
15	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
16	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
17	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
18	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
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20	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
21	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
22	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
23	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES
24	04/01/66	WIBERG	WIBERG	WIBERG	REVISED TO SHOW CHANGES

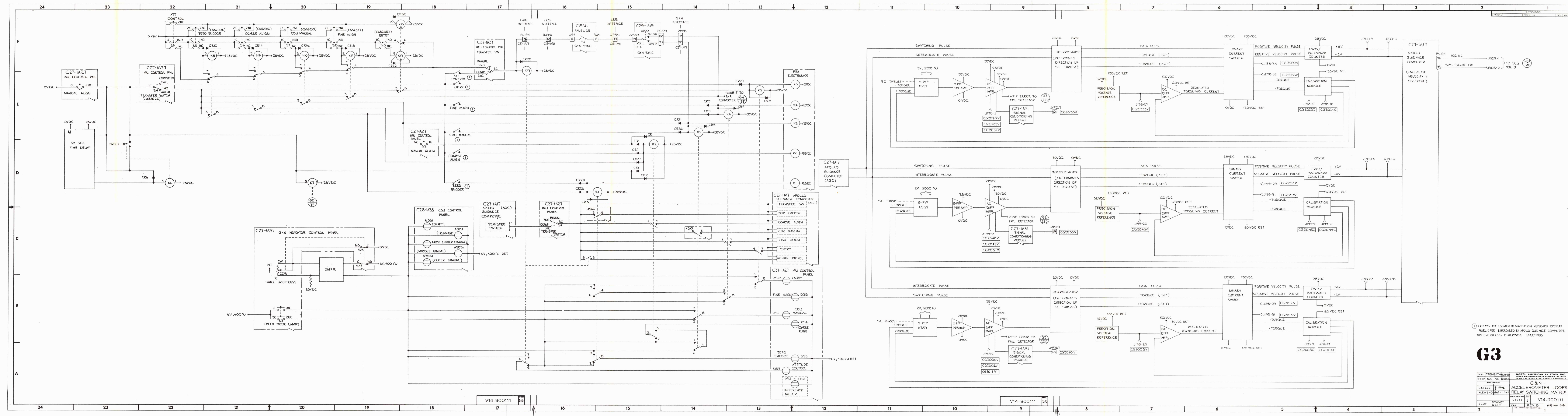
WIBERG NORTH AMERICAN AVIATION INC.
 LEE & WILSON
 KLEWENO
 SCOTT
 03/22/66
 J
 V14-900111
 5,6



① 7 ALL RELAY COILS & CONTACTS SHOWN IN THE AGC ARE PHYSICALLY LOCATED IN THE COMPUTER CONTROL PANEL. DIAGRAM DEPICTS FUNCTIONAL FLOW OF FAIL SIGNALS.
 ② 6 SWITCH ACTUATED WHEN MIDDLE GIMBAL ANGLE >±60°
 ③ 5 TABLES DEPICT DRAWING CORRELATION OF REPEATED CIRCUITS REPRESENTING DIFFERENT G & N MODES. FOR CONTINUATION OF SIGNALS SEE DRAWING DENOTED IN TABLE
 ④ 4 FOR CONTINUATION OF DC POWER SEE V14-900111 VOL 4
 ⑤ 3 FOR CONTINUATION OF C & W DETECTION CIRCUITS SEE V14-900111 VOL 2
 ⑥ 2 OUT ZERO REGISTER DEPICTS FUNCTIONAL LOGIC AND NOT ACTUAL CIRCUITS OF THE UNIT.
 ⑦ 1 OUTPUT OF COMPARATOR CIRCUIT DEPENDENT ON INPUT ERROR EXCEEDING A CERTAIN LEVEL
 NOTES: UNLESS OTHERWISE SPECIFIED

REV	DATE	BY	CHKD	DESCRIPTION
1	1968-07-23	WIBERO	J	INITIAL ISSUE
2	1968-07-23	WIBERO	J	REVISION
3	1968-07-23	WIBERO	J	REVISION
4	1968-07-23	WIBERO	J	REVISION
5	1968-07-23	WIBERO	J	REVISION
6	1968-07-23	WIBERO	J	REVISION
7	1968-07-23	WIBERO	J	REVISION
8	1968-07-23	WIBERO	J	REVISION
9	1968-07-23	WIBERO	J	REVISION
10	1968-07-23	WIBERO	J	REVISION
11	1968-07-23	WIBERO	J	REVISION
12	1968-07-23	WIBERO	J	REVISION
13	1968-07-23	WIBERO	J	REVISION
14	1968-07-23	WIBERO	J	REVISION
15	1968-07-23	WIBERO	J	REVISION
16	1968-07-23	WIBERO	J	REVISION
17	1968-07-23	WIBERO	J	REVISION
18	1968-07-23	WIBERO	J	REVISION
19	1968-07-23	WIBERO	J	REVISION
20	1968-07-23	WIBERO	J	REVISION
21	1968-07-23	WIBERO	J	REVISION
22	1968-07-23	WIBERO	J	REVISION
23	1968-07-23	WIBERO	J	REVISION
24	1968-07-23	WIBERO	J	REVISION

V14-900111 5.1
 G & N - CONDITION LIGHTS (BLOCK 1)
 NORTH AMERICAN AVIATION, INC.
 10000 WILSON AVENUE
 TOLSON, CALIFORNIA 94588
 DRAWING NO. 9793 J
 DATE 7-23-68
 SHEET 1 OF 1

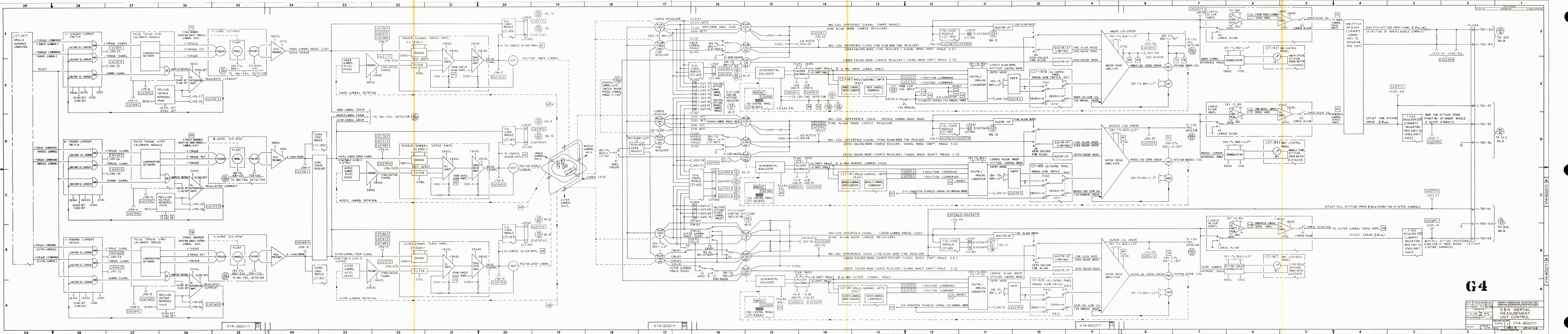


Ⓛ RELAYS ARE LOCATED IN NAVIGATION KEYBOARD DISPLAY PANEL & ARE ENERGIZED BY APOLLO GUIDANCE COMPUTER. NOTES UNLESS OTHERWISE SPECIFIED.

G3

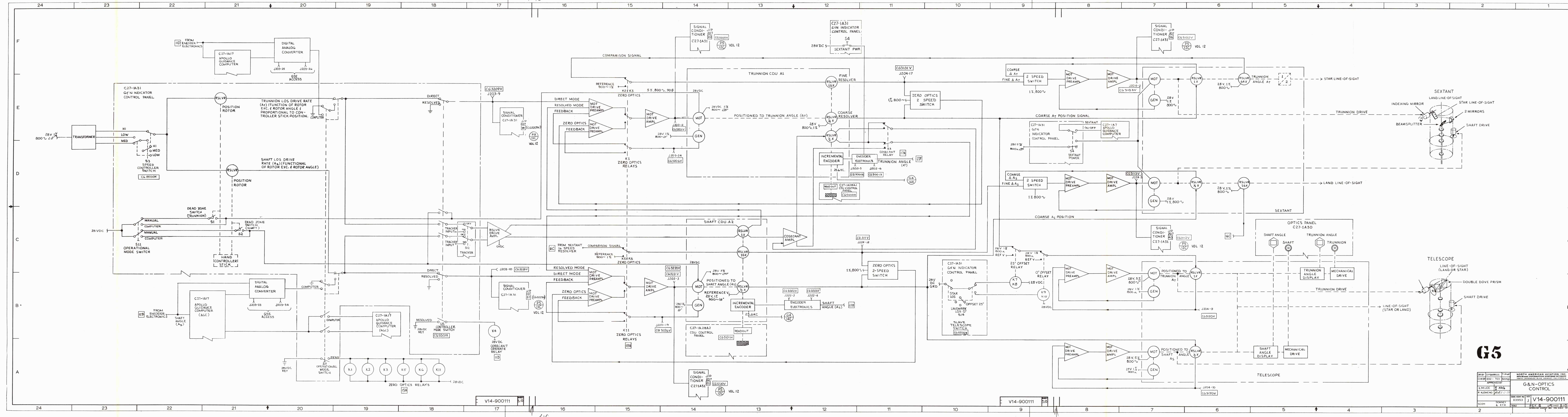
DRN: TREMBART 20498	DATE: 10/1/68	BY: G & N
CHKD BY: 592-703 20506	DATE: 10/1/68	BY: G & N
APPROVED BY: L.M. LEE	DATE: 10/1/68	BY: G & N
RELENGED BY: KLEWENO	DATE: 10/1/68	BY: G & N
DRWING NO: 03953	REV: J	DATE: 10/1/68
SC011	SOBNEY & ETR	DATE: 10/1/68

APOLLO GUIDANCE COMPUTER RELAY SWITCHING MATRIX
 NORTH AMERICAN AVIATION, INC.
 G & N - ACCELEROMETER LOOPS & RELAY SWITCHING MATRIX
 V14-900111



G4

NORTH AMERICAN AVIATION, INC.
 G & N INERTIAL MEASUREMENT UNIT CONTROL
 V14-900111
 1/1963



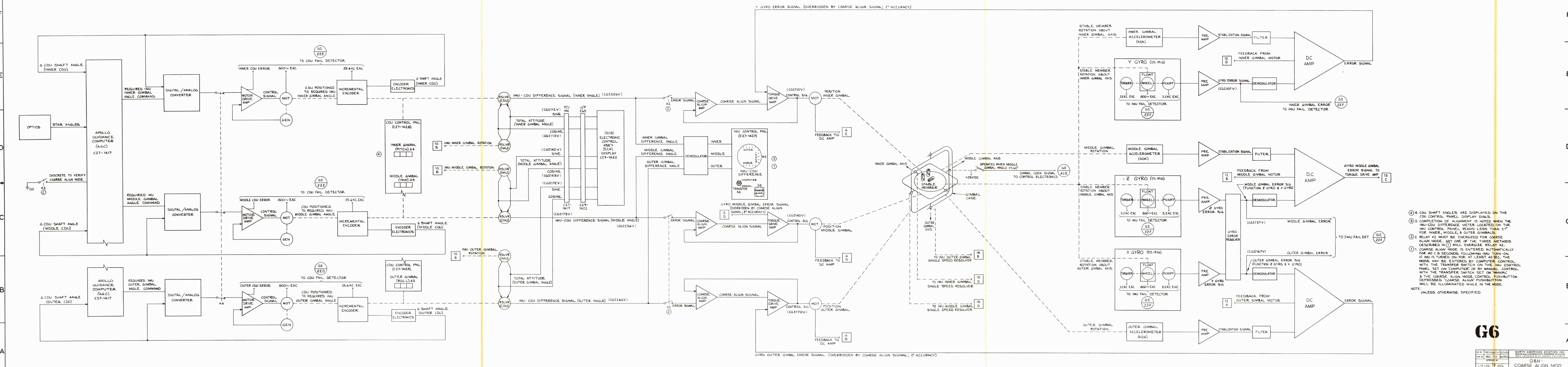
G5

DESIGNED BY	DATE	APPROVED BY	DATE
W. L. LEE	2/68	J. J. JONES	2/68
REVISIONS	BY	DATE	DESCRIPTION
1	J	2/68	INITIAL RELEASE
2	J	3/68	REVISED

NORTH AMERICAN AVIATION, INC.
 G&N-OPTICS CONTROL
 V14-900111
 03953

V14-900111 510

V14-900111 510



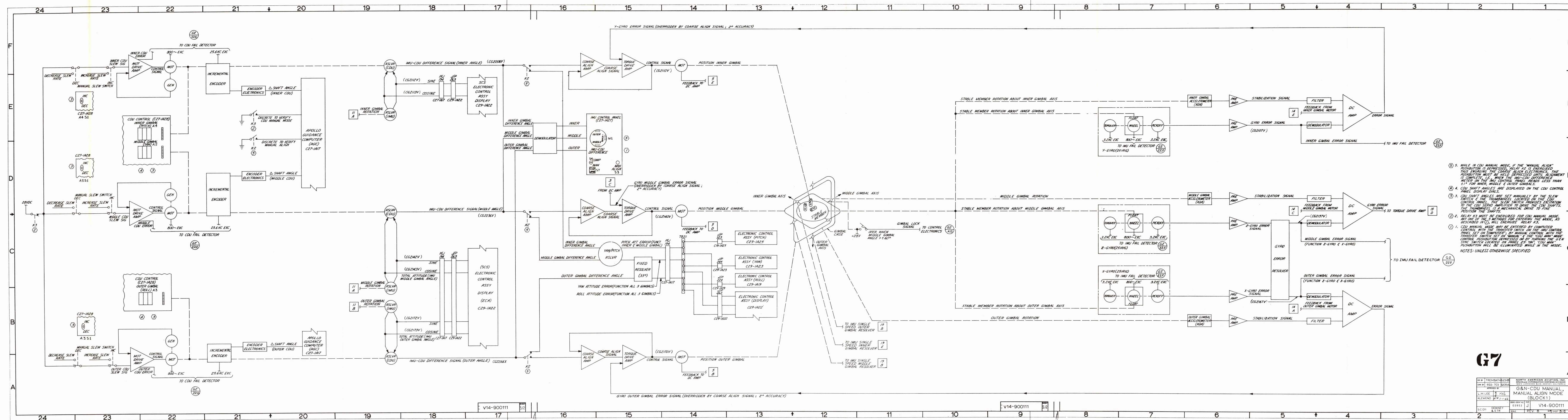
- NOTE:
- ① COARSE ALIGN MODE IS ENTERED AUTOMATICALLY FOR 40 ± 5 SECONDS FOLLOWING IMU TURN-ON. IF IMU IS TURNED ON FOR AT LEAST 40 SEC. THE MODE MAY BE ENTERED BY COMPUTER CONTROL WITH THE TRANSFER SWITCH ON THE IMU CONTROL PANEL SET ON 'COMPUTER' OR BY MANUAL CONTROL WITH THE TRANSFER SWITCH SET ON 'MANUAL' & THE COARSE ALIGN MODE CONTROL PUSHBUTTON DEPRESSED. 'COARSE ALIGN' PUSHBUTTON WILL BE ILLUMINATED WHILE IN THE MODE.
 - ② RELAY K2 MUST BE ENERGIZED FOR COARSE ALIGN MODE. ANY ONE OF THE THREE METHODS DESCRIBED IN ① WILL ENERGIZE RELAY K2.
 - ③ COMPLETION OF ALIGNMENT IS NOTED WHEN THE IMU-CDU DIFFERENCE METER LOCATED ON THE IMU CONTROL PANEL READS LESS THAN ±1° FOR INNER, MIDDLE, & OUTER GIMBALS.
 - ④ 4 CDU SHAFT ANGLES ARE DISPLAYED ON THE CDU CONTROL PANEL DISPLAY DIALS.

G6

V14-900111

V14-900111

DRN BY	TRN BY	CHK BY	APPROVED BY	DATE	REV	BY	DATE
			L. M. LEE	2/25/64	1		
NORTH AMERICAN AVIATION, INC.			G&N - COARSE ALIGN MOD (BLOCK 1)				
S. C. O'NEILL			V14-900111				



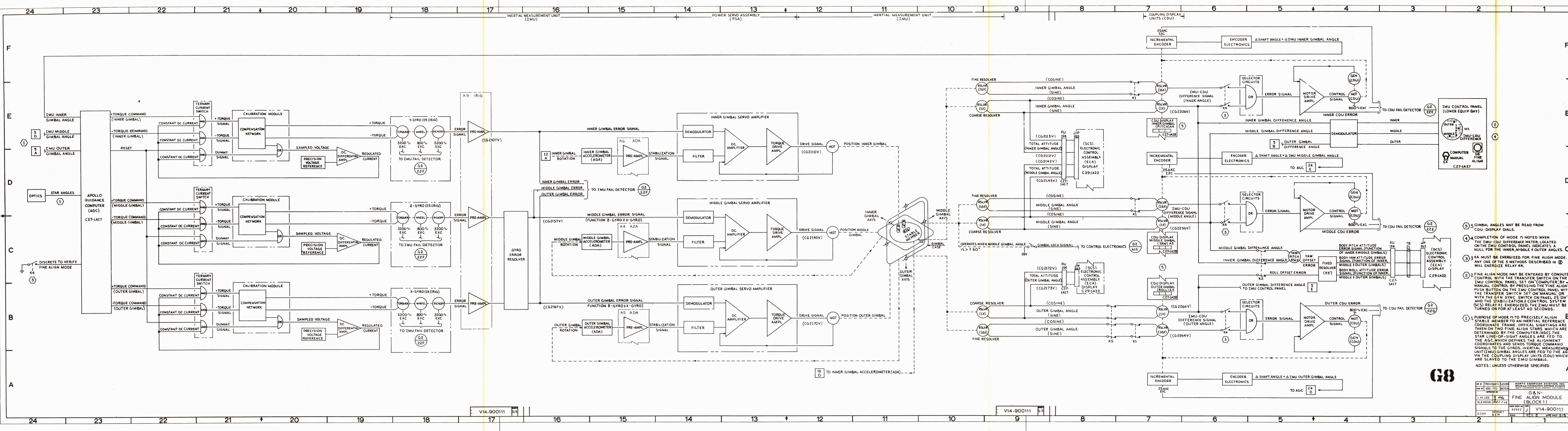
- ⑤ WHILE IN CDU MANUAL MODE, IF THE "MANUAL ALIGN" PUSHBUTTON IS DEPRESSED, RELAY K2 IS ENERGIZED. THIS ENERGIZES THE COARSE ALIGN ELECTRONICS. THE PUSHBUTTON MUST BE HELD DEPRESSED UNTIL ALIGNMENT IS COMPLETE. AFTER THE IMU-CDU DIFFERENCE METER ON THE IMU CONTROL PANEL READS LESS THAN 5.1° FOR INNER, MIDDLE & OUTER GIMBALS.
 - ④ CDU SHAFT ANGLES ARE DISPLAYED ON THE CDU CONTROL PANEL DISPLAY DIALS.
 - ③ CDU SHAFT ANGLES ARE SET MANUALLY BY THE SLEW SWITCH & THE THUMBWHEEL LOCATED ON THE CDU CONTROL PANEL. THE SLEW SWITCH PROVIDES DISTORTION TO THE CDU SERVO AMPLIFIER TO DRIVE THE CDU SHAFTS. THE THUMBWHEEL IS A MECHANICAL DRIVE TO FINE POSITION THE SHAFTS.
 - ② RELAY K3 MUST BE ENERGIZED FOR CDU MANUAL MODE. ANY ONE OF THE 3 METHODS FOR ENTERING THE MODE, AS DESCRIBED IN ①, WILL ENERGIZE RELAY K3.
 - ① CDU MANUAL MODE MAY BE ENTERED BY COMPUTER CONTROL WITH THE TRANSFER SWITCH ON THE IMU CONTROL PANEL SET ON "COMPUTER" BY MANUAL CONTROL WITH THE TRANSFER SWITCH SET ON "MANUAL" & THE "CDU MAN" MODE CONTROL PUSHBUTTON DEPRESSED OR BY TURNING THE "E-W SYNC" SWITCH LOCATED ON PANEL B5 ON "CDU MAN". PUSHBUTTON WILL BE ILLUMINATED WHILE IN THE MODE.
- NOTES: UNLESS OTHERWISE SPECIFIED

G7

REV 1	1983	J	J	V14-900111
REV 2	1983	J	J	V14-900111
REV 3	1983	J	J	V14-900111
REV 4	1983	J	J	V14-900111
REV 5	1983	J	J	V14-900111

V14-900111

V14-900111



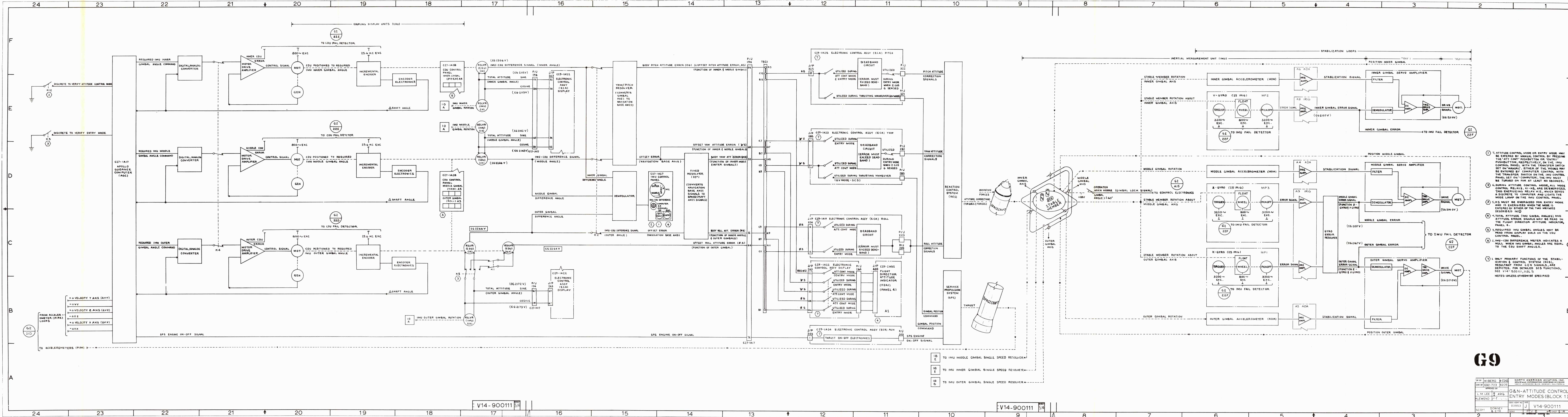
- 1 PURPOSE OF MODE IS TO PRECISELY ALIGN STABLE MEMBER TO AN INERTIAL REFERENCE COORDINATE FRAME. OPTICAL SIGHTINGS ARE TAKEN ON TWO FINE ALIGN STARS WHICH ARE DETERMINED BY THE COMPUTER (AGC). THE STAR LINE-OF-SIGHT ANGLES ARE FED TO THE AGC WHICH DEFINES THE ALIGNMENT COORDINATES AND SENDS TORQUE COMMAND SIGNALS TO THE GYROS. INERTIAL MEASUREMENT UNIT (IMU) GIMBAL ANGLES ARE FED TO THE AGC VIA THE COUPLING DISPLAY UNITS (CDU) WHICH ARE SLAVED TO THE IMU GIMBALS.
- 2 FINE ALIGN MODE MAY BE ENTERED BY COMPUTER CONTROL WITH THE TRANSFER SWITCH ON THE IMU CONTROL PANEL SET ON 'COMPUTER' BY MANUAL CONTROL BY PRESSING THE 'FINE ALIGN' PUSH BUTTON ON THE IMU CONTROL PANEL WITH THE TRANSFER SWITCH SET ON 'MANUAL' OR WITH THE 6 IN SYNC SWITCH ON PANEL 25 'ON' AND THE STABILIZATION CONTROL SYSTEM (SCS) RELAY K1 ENERGIZED. THE IMU MUST BE TURNED ON FOR AT LEAST 40 SECONDS.
- 3 K4 MUST BE ENERGIZED FOR FINE ALIGN MODE. ANY ONE OF THE 3 METHODS DESCRIBED IN 2 WILL ENERGIZE RELAY K4.
- 4 COMPLETION OF MODE IS NOTED WHEN THE IMU-CDU DIFFERENCE METER, LOCATED ON THE IMU CONTROL PANEL INDICATES A NULL FOR THE INNER, MIDDLE & OUTER ANGLES.
- 5 GIMBAL ANGLES MAY BE READ FROM CDU DISPLAY DIALS.

G8

REV. 1	17041847H	8/23/66	NORTH AMERICAN AVIATION, INC.
REV. 2	692-703	8/20/66	REVISION AND CORRECTIONS BY THE ORIGINAL DESIGNER.
REV. 3	REV. 1	REV. 1	REV. 1
REV. 4	REV. 1	REV. 1	REV. 1
REV. 5	REV. 1	REV. 1	REV. 1
REV. 6	REV. 1	REV. 1	REV. 1
REV. 7	REV. 1	REV. 1	REV. 1
REV. 8	REV. 1	REV. 1	REV. 1
REV. 9	REV. 1	REV. 1	REV. 1
REV. 10	REV. 1	REV. 1	REV. 1
REV. 11	REV. 1	REV. 1	REV. 1
REV. 12	REV. 1	REV. 1	REV. 1
REV. 13	REV. 1	REV. 1	REV. 1
REV. 14	REV. 1	REV. 1	REV. 1
REV. 15	REV. 1	REV. 1	REV. 1
REV. 16	REV. 1	REV. 1	REV. 1
REV. 17	REV. 1	REV. 1	REV. 1
REV. 18	REV. 1	REV. 1	REV. 1
REV. 19	REV. 1	REV. 1	REV. 1
REV. 20	REV. 1	REV. 1	REV. 1
REV. 21	REV. 1	REV. 1	REV. 1
REV. 22	REV. 1	REV. 1	REV. 1
REV. 23	REV. 1	REV. 1	REV. 1
REV. 24	REV. 1	REV. 1	REV. 1

V14-900111

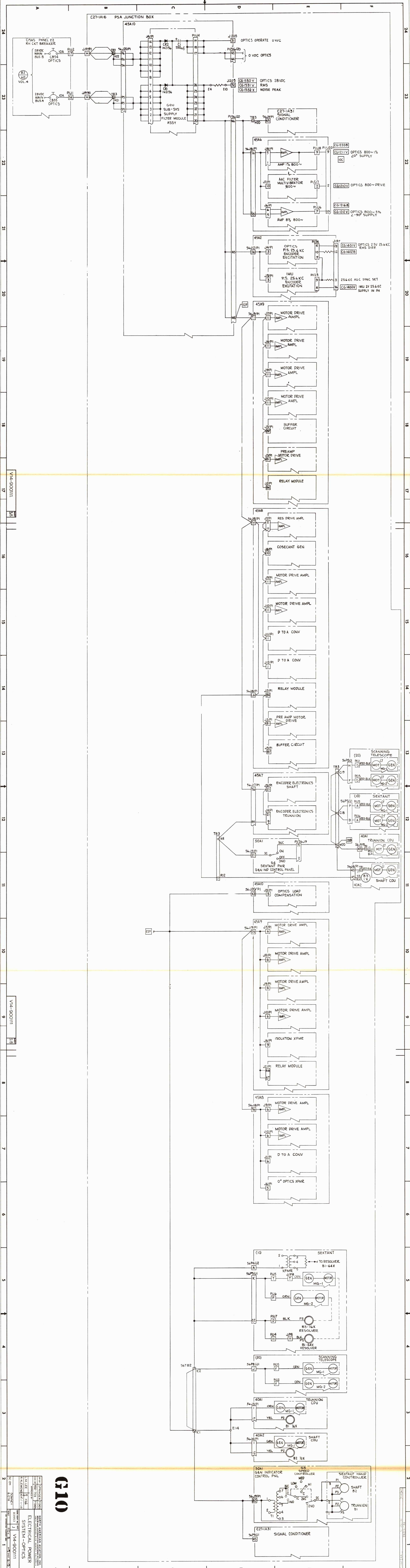
V14-900111



- ATTITUDE CONTROL MODE OR ENTRY MODE MAY BE ENTERED BY MANUAL CONTROL BY PRESSING THE "ATT CONT" POSITION OR "ENTRY" POSITION, RESPECTIVELY, ON THE IMU CONTROL PANEL. WITH THE TRANSFER SWITCH SET ON "MANUAL," EITHER OF THE MODES MAY BE ENTERED BY COMPUTER CONTROL. WITH THE TRANSFER SWITCH ON THE IMU CONTROL PANEL SET ON "COMPUTER," THE IMU MUST BE TURNED ON FOR AT LEAST 40 SECONDS.
- DURING ATTITUDE CONTROL MODE, ALL MODE CONTROL RELAYS, R1-N5, ARE DEENERGIZED. THIS ENERGIZING RELAY IS, WHICH SENDS A DISCRETE TO COMPUTER AND LIGHTS THE MODE LAMP ON THE IMU CONTROL PANEL. SET ON "COMPUTER," THE IMU MUST BE TURNED ON FOR AT LEAST 40 SECONDS.
- SPS MUST BE ENERGIZED FOR ENTRY MODE AND IS ENERGIZED WHEN THE MODE IS ENTERED BY EITHER OF THE TWO METHODS DESCRIBED IN (1).
- TOTAL ATTITUDE (IMU GIMBAL ANGLES) AND ATTITUDE ERROR SIGNALS MAY BE READ ON THE FLIGHT DIRECTOR ATTITUDE INDICATOR, PANEL 4.
- REQUIRED IMU GIMBAL ANGLES MAY BE READ FROM DISPLAY DIALS ON THE CDU CONTROL PANEL.
- IMU-CDU DIFFERENCE METER INDICATES A NULL WHEN IMU GIMBAL ANGLES ARE EQUAL TO THE CDU SHAFT ANGLES.
- ONLY PRIMARY FUNCTIONS OF THE STABILIZATION & CONTROL SYSTEM (SCS), RESULTANT FROM 4-6 SIGNALS, ARE DEPICTED. FOR DETAILED SCS FUNCTIONS, SEE V14-90011, 5.1.2.1. NOTES UNLESS OTHERWISE SPECIFIED.

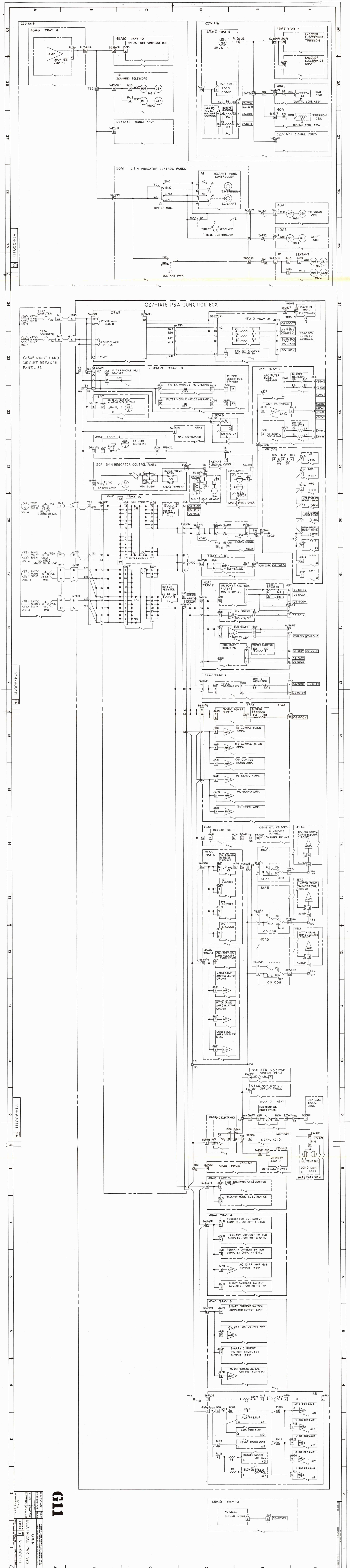
V14-90011 5.1.2.1

V14-90011 5.1.2.1



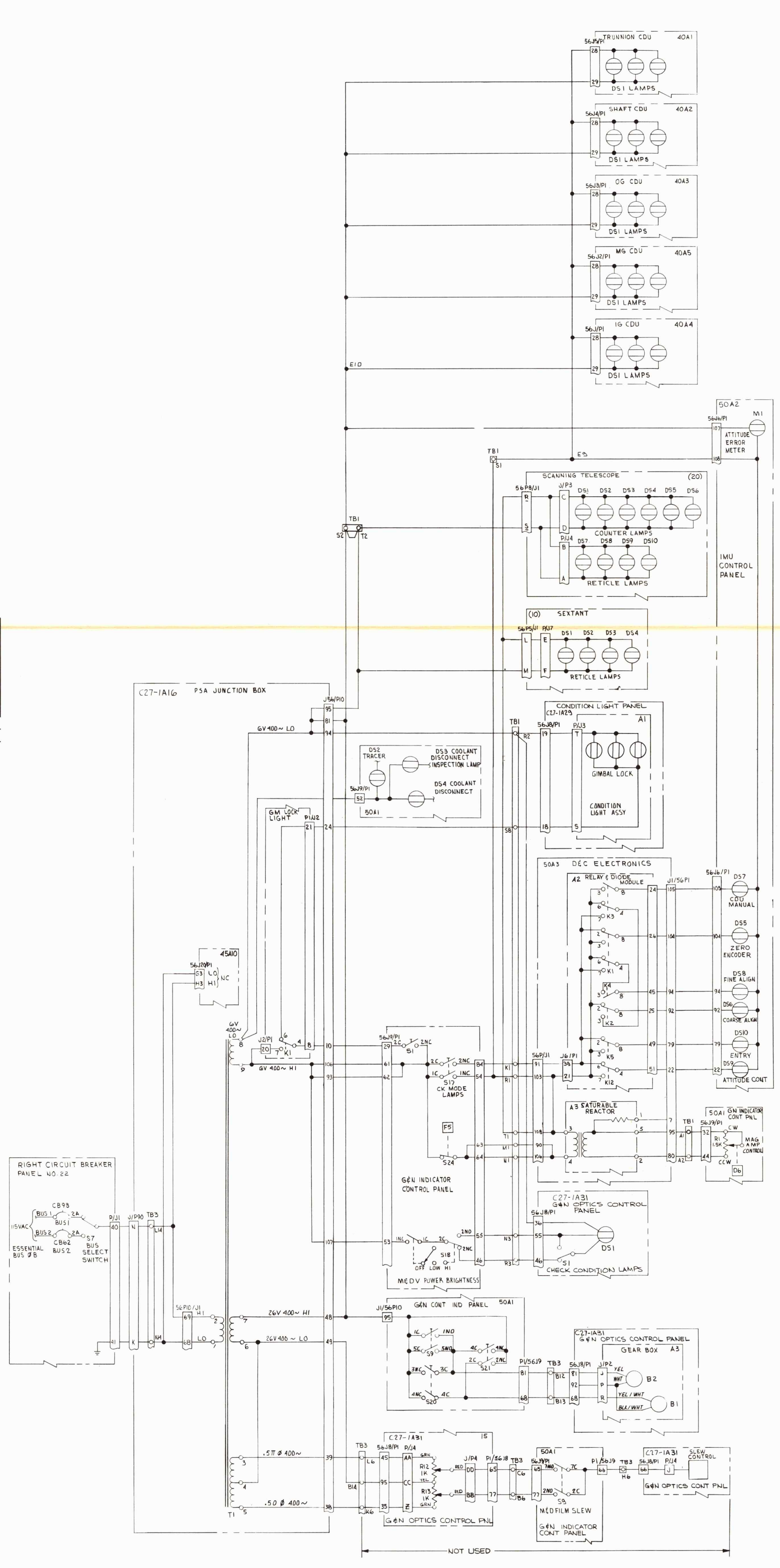
G10

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 EXCISE TAX LEAD 3 7962
 NORTH AMERICAN AVIATION, INC.
 10000 WILSON AVENUE
 WILSON, N.C. 27157
 03853 J V14-900111
 6 1978



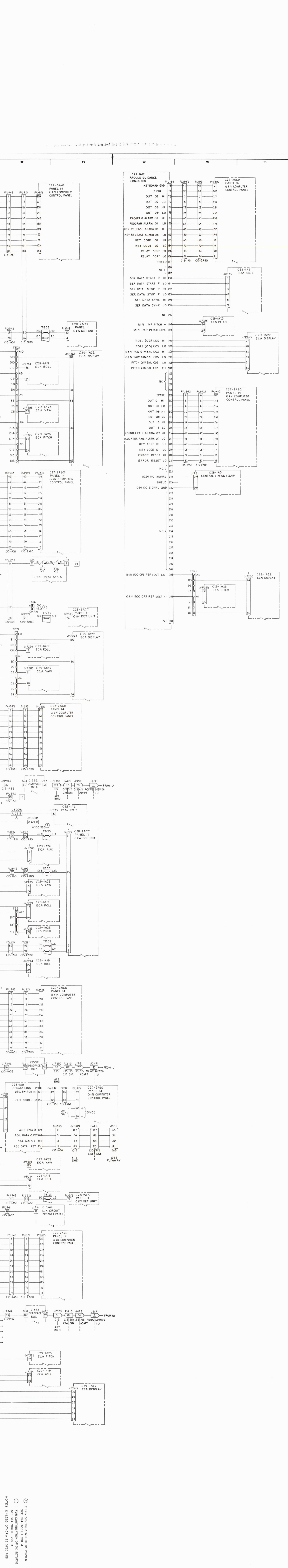
G11

G & N
 ELECTRICAL PWR SYS
 V14-900111
 REV. 1
 DATE: 10/11/66
 DRAWN BY: J.E.B.
 CHECKED BY: J.E.B.
 APPROVED BY: J.E.B.



G12

G & N
 400 CPS AC
 ROTARY DISTRIBUTION



24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

V14-900111

G13

APOLLO GUIDANCE COMPUTER - CSM INTERFACE

REVISED 7/73

DATE: 1/1/73

BY: J. J. V14-900111

SEC 011 DONNAN R. EMB

NOTES:
1. FOR CONTINUATION OF DC POWER SEE V14-900111 VOL 4
2. UNLESS OTHERWISE SPECIFIED

FOR CONTINUATION OF DC POWER SEE V14-900111 VOL 4

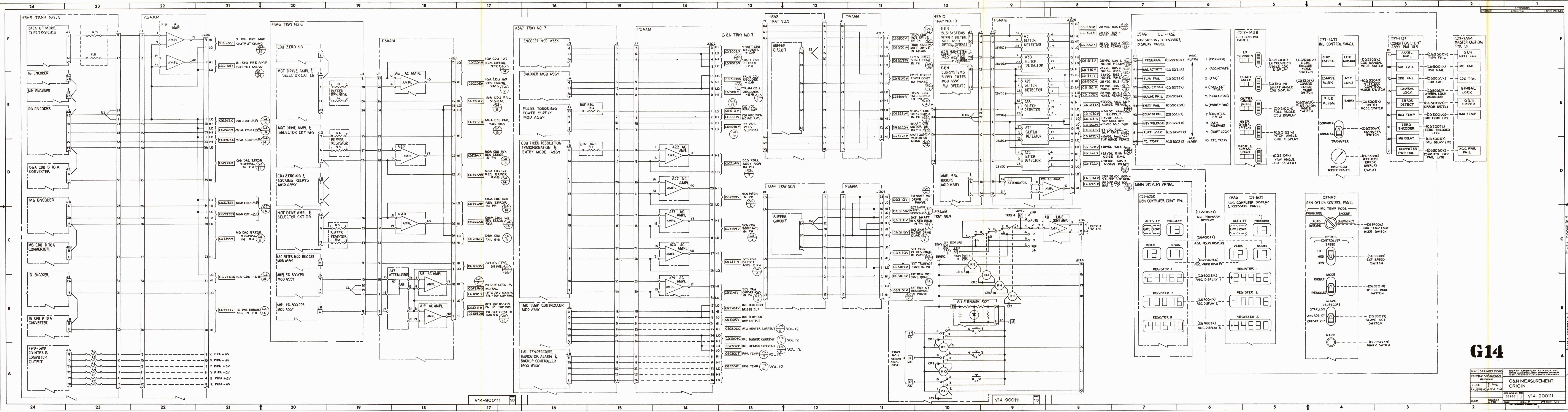
DATE: 1/1/73 BY: J. J. V14-900111

V14-900111

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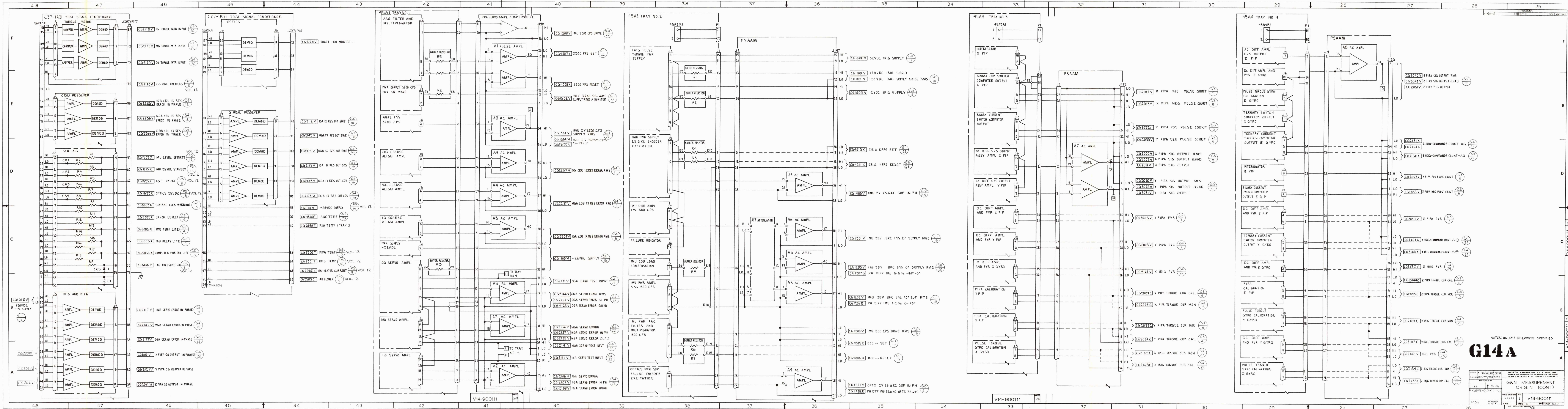


45A5 TRAY NO.5 BACK UP MODE ELECTRONICS 1G ENCODER MG ENCODER OG ENCODER OGA CDU D TO A CONVERTER MG ENCODER MG CDU D TO A CONVERTER IG ENCODER IG CDU D TO A CONVERTER FWD-BWD COUNTER & COMPUTER OUTPUT	45A6 TRAY NO.6 COU ZERDING MOT DRIVE AMPL & SELECTOR CKT 1G MOT DRIVE AMPL & SELECTOR CKT MG DAC FILTER MOD 800CPS MOD ASSY AMPL 5% 800CPS MOD ASSY AMPL 1% 800CPS MOD ASSY	45A7 TRAY NO.7 ENCODER MOD ASSY ENCODER MOD ASSY PULSE TORQUING POWER SUPPLY MOD ASSY COU FIXED RESOLUTION TRANSFORMATION & ENTRY MODE ASSY	G & N TRAY NO.7 SHAF T CDU DECODER SHAF T CDU DECODER TRUN CDU DECODER TRUN CDU DECODER TRUN CDU TACH OUTPUT IN PH SHAF T CDU TACH OUTPUT IN PH SHAF T CDU MOTOR DR IN PH SHAF T CDU MOTOR DR QUAD DE QUAD	45A8 TRAY NO.8 BUFFER CIRCUIT SHAF T CDU DECODER SHAF T CDU DECODER TRUN CDU DECODER TRUN CDU DECODER TRUN CDU TACH OUTPUT IN PH SHAF T CDU TACH OUTPUT IN PH SHAF T CDU MOTOR DR IN PH SHAF T CDU MOTOR DR QUAD DE QUAD	45A9 TRAY NO.9 BUFFER CIRCUIT SHAF T CDU DECODER SHAF T CDU DECODER TRUN CDU DECODER TRUN CDU DECODER TRUN CDU TACH OUTPUT IN PH SHAF T CDU TACH OUTPUT IN PH SHAF T CDU MOTOR DR IN PH SHAF T CDU MOTOR DR QUAD DE QUAD	05A6 C27-1A32 MAIN DISPLAY PANEL ACTIVITY PROGRAM VERB NOUN REGISTER 1 REGISTER 2 REGISTER 3	05A6 C27-1A28 AGC COMPUTER DISPLAY & KEYBOARD PANEL ACTIVITY PROGRAM VERB NOUN REGISTER 1 REGISTER 2 REGISTER 3	C27-1A27 IMU CONTROL PANEL ZERO ENCODE CDU MANUAL ATT CONIT ENTRY TRANSFER IMU-CDU REFERENCE	C27-1A29 CONDITION LIGHT ASSY PNL 103 ACCCEL FAIL IMU FAIL CDU FAIL GIMBAL LOCK ERROR DETECT IMU TEMP ZERO ENCODER IMU DELAY COMPUTER PWR FAIL	C27-2A5A MASTER CAUTION PNL LH ACCCEL FAIL IMU FAIL CDU FAIL GIMBAL LOCK ERROR DETECT IMU TEMP ZERO ENCODER IMU DELAY COMPUTER PWR FAIL
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NOTES: UNLESS OTHERWISE SPECIFIED
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