

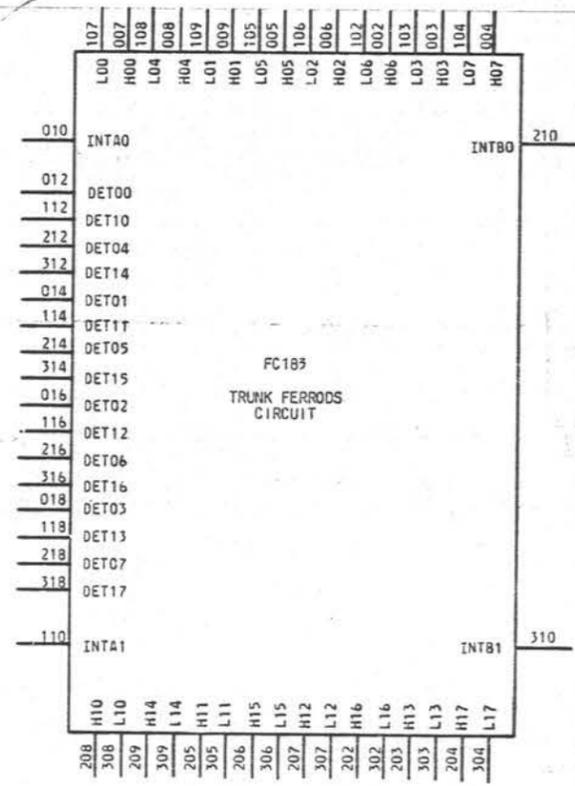
SHEET INDEX		
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SYMBOL

SYMBOL

TRUNK FERRODS
ELEMENT IDENT
A

TERM. MOD	FUNCT	TR. M.	LOC
H00	I	007	2A2
H01	I	009	2A3
H02	I	006	2A5
H03	I	003	2A7
H04	I	008	2A3
H05	I	005	2A4
H06	I	002	2A6
H07	I	004	2A8
H10	I	208	2H1
H11	I	205	2H3
H12	I	207	2H5
H13	I	203	2H7
H14	I	209	2H2
H15	I	206	2H4
H16	I	202	2H5
H17	I	204	2H7
INTA0	I	010	2B0
INTA1	I	110	2C0
INTB0	I	210	2B9
INTB1	I	310	2G9
L00	I	107	2A1
L01	I	109	2A3
L02	I	106	2A5
L03	I	103	2A7
L04	I	108	2A2
L05	I	105	2A4
L06	I	102	2A6
L07	I	104	2A7
L10	I	308	2H1
L11	I	305	2H3
L12	I	307	2H5
L13	I	303	2H6
L14	I	309	2H2
L15	I	306	2H4
L16	I	302	2H5
L17	I	304	2H7
DET00	Ø	012	2C0
DET01	Ø	014	2D0
DET02	Ø	016	2D0
DET03	Ø	018	2E0
DET04	Ø	212	2C0
DET05	Ø	214	2D0
DET06	Ø	216	2E0
DET07	Ø	218	2E0
DET10	Ø	112	2C0
DET11	Ø	114	2D0
DET12	Ø	116	2D0
DET13	Ø	118	2E0
DET14	Ø	312	2D0
DET15	Ø	314	2D0
DET16	Ø	316	2E0
DET17	Ø	318	2E0



RECORD OF CHANGES				
DWG ISS	PREV FURN	STD	MFR DISC	SEE NOTE

NOTES:

- UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MICROFARADS
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.
- POWER AND GROUND TERMINALS FOR
INTEGRATED CIRCUITS:

IC CODE	CRD TERM.			
- BATTERY AND GROUND TERMINALS FOR THIS
CIRCUIT PACK ARE AS FOLLOWS:

FUNCTION	TERMINAL
- FERROD SENSOR DETECTION LEADS SHOULD BE
COLINEAR AND SEPARATED FROM
A. TIP (T) AND RING (R) LEADS.
B. INTERROGATE (INT) LEADS.
- HORIZONTAL MOUNTING CENTERS ARE 0.75IN

SYSTEM USED ON	DESIGN CONTROL
NO. 3 ESS	IH

CURRENT DRAIN:

SHEET INDEX NOTES

- FOR SINGLE REISSUES, A
CHANGED OR NEW SHEET
WILL BE ASSIGNED THE
SAME ISSUE NUMBER AS
SHEET 1.
- FOR CONCURRENT REISSUES,
A CHANGED OR NEW SHEET
WILL BE ASSIGNED THE
HIGHEST ISSUE NUMBER
AFFECTING THAT SHEET.
- THE ISSUE NUMBER OF
SHEET 1 IS RECOGNIZED
AS THE ISSUE NUMBER OF
THE WHOLE DRAWING.

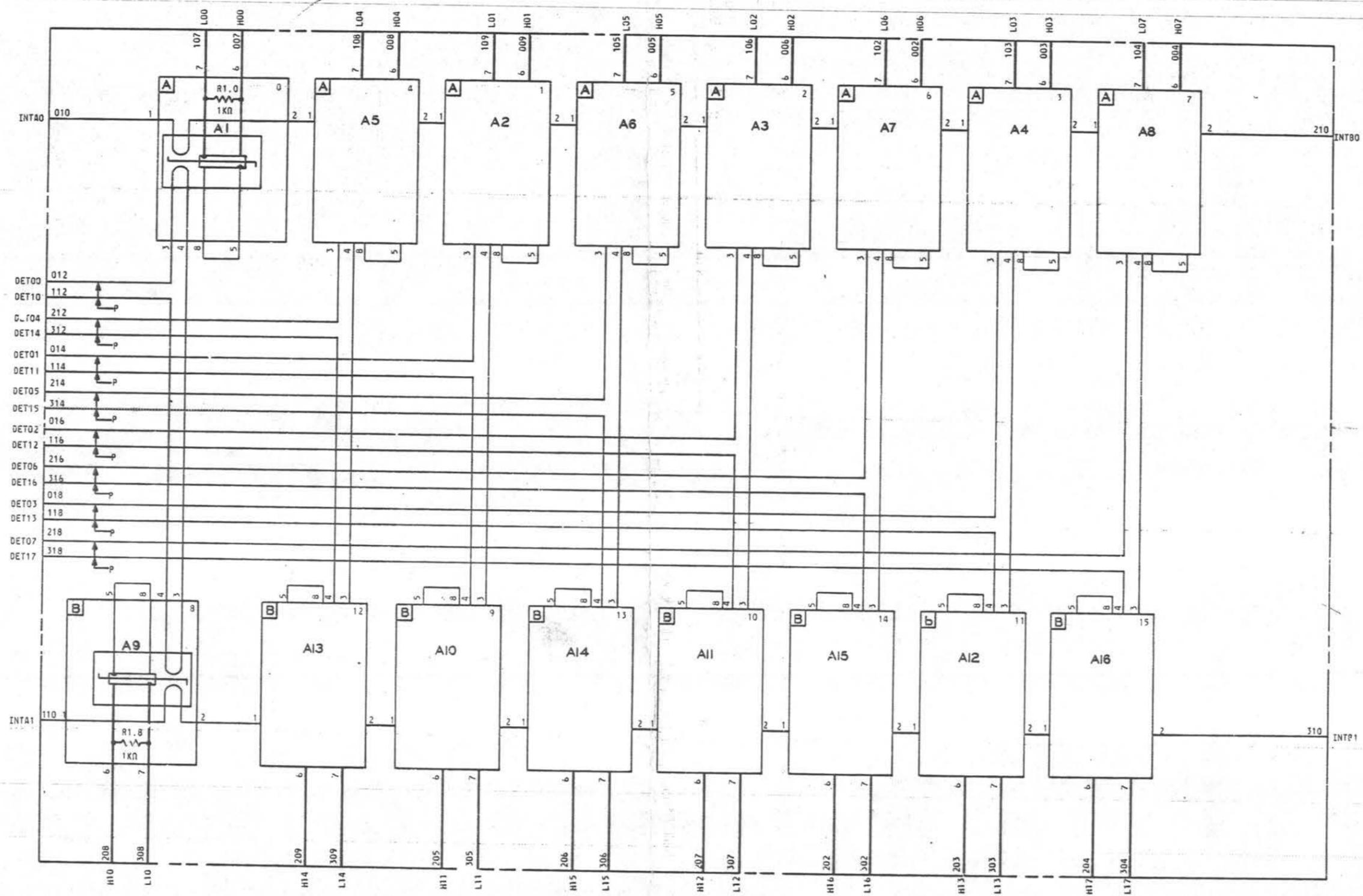
SUPPORTING INFORMATION

CATEGORY	NUMBER
CONNECTOR ON FRAME	947A, 947C OR 947E
CIRCUIT PACK INFOR- MATION DRAWING	
SERIES FOR LATEST CLASS "A" CHANGE	
ACCEPTABLE SERIES	1

NOTICE- NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL
SYSTEM EXCEPT UNDER WRITTEN AGREEMENT.

FC183 CIRCUIT PACK		1T11	AT&TC STANDARD
TRUNK FERRODS CIRCUIT			
DWG SIZE	ISSUE		
6S	2D1		
BELL LABORATORIES		CPS-FC183	3 SHEETS

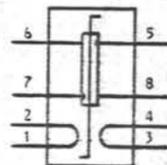
TRUNK FERRODS CIRCUIT



FC183 CIRCUIT PACK		ISSUE 2DI
BELL TELEPHONE LABORATORIES INCORPORATED		2 6S
CP5-FC183 SHEET 2		PRINTED IN U.S.A.

COMPONENT LIST

FERROD SENSOR



DESIG	LOC	CODE
A1	2B1	2C
A2	2B3	
A3	2B4	
A4	2B6	
A5	2B2	
A6	2B4	
A7	2B5	
A8	2B7	
A9	2F0	
A10	2F2	
A11	2F4	
A12	2F6	
A13	2F2	
A14	2F3	
A15	2F5	
A16	2F7	

RESISTORS

DESIG	CODE
[16] R1.0 - R1.15	KS-20616LIA, 1KΩ

CIRCUIT DESCRIPTION

PURPOSE OF CIRCUIT

THIS CIRCUIT PROVIDES 16 FERROD SCAN POINT ELEMENTS WHICH ARE USED TO FORM THE MASTER SCANNER MATRIX.

THE FC183 FERROD CIRCUIT PACK HAS 16 FERRODS (TYPE 2C) MOUNTED TO FORM A 2-BY-8 MATRIX. THE INTERROGATE WINDINGS OF THE (EIGHT) FERRODS WHICH FORM A HALF ROW ARE CONNECTED IN SERIES AND THE READOUT WINDINGS OF EACH FERROD IN ONE HALF ROW IS CONNECTED IN SERIES WITH THE READOUT WINDINGS OF THE CORRESPONDING FERROD IN THE OTHER HALF ROW. ALL CONTROL WINDINGS OF THE FERRODS ON THE FC183 FERROD PACK ARE ARRANGED INTERNALLY IN THE LOOP CONFIGURATION.

IN THE LOOP CONFIGURATION, THE FERROD CONTROL WINDINGS ARE CONNECTED IN A SERIES AIDING LOOP ON THE CIRCUIT PACK. BATTERY AND GROUND TO SATURATE THE FERRODS MUST BE SUPPLIED EXTERNALLY BY THE USING CIRCUIT. RESISTORS TO LIMIT THE CURRENT IN THE CONTROL WINDINGS MUST BE PROVIDED BY THE USING CIRCUIT.

A 1000 OHM RESISTOR IS PROVIDED IN PARALLEL WITH THE CONTROL WINDINGS OF EACH FERROD TO LIMIT THE VOLTAGE SURGE WHEN THE CURRENT TO THE CONTROL WINDINGS IS INTERRUPTED.

FUNCTIONAL DESCRIPTION

THE FERROD IS THE BASIC SCAN ELEMENT OF A SCANNER. IT CAN BE CONSIDERED A 2-WINDING TRANSFORMER WHOSE COUPLING (THE ABILITY TO INDUCE A SIGNAL FROM THE PRIMARY WINDING TO THE SECONDARY WINDING) IS CONTROLLED BY THE AMOUNT OF CURRENT IN THE CONTROL WINDINGS. THE PRIMARY AND SECONDARY WINDINGS OF THE TRANSFORMER ARE ASSOCIATED WITH THE INTERROGATE AND READOUT WINDINGS, RESPECTIVELY.

FC183 CIRCUIT PACK		ISSUE 2DI
BELL TELEPHONE LABORATORIES INCORPORATED		CPS-FC183 SHEET 3
DATE MADE 6S		PRINTED IN U.S.A.