CIRCUIT DESCRIPTION

CD-1A210-01
ISSUE 7D
APPENDIX 3D
DWG ISSUE 14D
DISTN CODE 1T99

FEB 25 1977

ELECTRONIC SWITCHING SYSTEMS

COMMON

REMOTE MASTER SCANNER APPLIQUE CIRCUIT

CHANGES

D. Description of Changes

D.1 Changed the rating of option W from A&M Only to AT&TCo Standard for No. 3 ESS only. Option W remains A&M Only for all other systems.

D.2 Added Circuit Note 111 which details the limited use of option W.

D.3 Changed Circuit Note 104 and FS 1 to reflect the changes in D.1.

D.4 Corrected a drawing error in Circuit Note 102.

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DEPT 5317-GJS-GH

Printed in U.S.A.

CIRCUIT DESCRIPTION

CD-1A210-01
ISSUE 7D
APPENDIX 2D
DWG ISSUE 13D

FEB 18 1975

ELECTRONIC SWITCHING SYSTEMS

NO. 1, 1A, 2, OR NO. 3 ARRANGED WITH 2-WIRE FEATURES

REMOTE MASTER SCANNER APPLIQUE CIRCUIT

CHANGES

D. Description of Changes

D.1 Revised FS 1 to show the necessary connecting information for the application of this circuit into ESS No. 3.

D.2 Corrected the lead index and Circuit Notes 102 and 104 on FS 1 and CAD 1 to reflect the changes in D.1.

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DEPT 5317-GJS-GH

CIRCUIT DESCRIPTION

CD-1A210-01
ISSUE 7D
APPENDIX 1B
DWG ISSUE 12B

FEB 24 1975

ELECTRONIC SWITCHING SYSTEMS

NO. 1 OR NO. 2
ARRANGED WITH 2-WIRE FEATURES

REMOTE MASTER SCANNER
APPLIQUE CIRCUIT

CHANGES

B. Changes in Apparatus

B.1 Added

CR10 through CR15 App Fig. 1	(6)	Diodes 446K -
CR20 through CR25 App Fig. 1	(6)	Diodes 446K -

D. Description of Changes

D.1 Revised FS 1 to show the addition of battery isolating diodes, option R. The diodes will eliminate circulating currents between paralleled battery plants caused by potential differences.

D.2 The option index, Circuit Notes 102 and 104, and App Fig. 1 have been corrected to reflect the addition of the battery isolating diodes.

D.3 Added Circuit Note 110 and Equipment Note 204.

F. Changes in Description of Operation

F.1 In Section II, under 4. BATTERY AND GROUND FOR OUTSIDE ESS OFFICE, add:

(d) Option R when the circuit is part of a multiple monitoring a single signal source in conjunction with other collocated No. 1 ESS offices.

F.2 In Section II, under 6. PURPOSE OF COMPONENTS, add:

6.03 Diodes CR1 and CR2 (option R) are provided to eliminate circulating currents between multipled No. 1 ESS offices resulting from battery potential differences.

BELL TELEPHONE LABORATORIES, INCORPORATED

DEPT 5317-GJS-GH

FEB 24 1975

ELECTRONIC SWITCHING SYSTEMS

NO. 1 OR NO. 2
ARRANGED WITH 2-WIRE FEATURES

REMOTE MASTER SCANNER APPLIQUE CIRCUIT

SECTION I - GENERAL DESCRIPTION

1. PURPOSE OF CIRCUIT

1.01 The purpose of this circuit is to provide means to connect miscellaneous circuits outside the central office to the master scanner or universal trunk scanner circuit.

2. GENERAL METHOD OF OPERATION

2.01 Connecting circuits requiring the use of this circuit must connect on a loop basis and be capable of opening or closing the loop.

2.02 Battery and ground can be supplied by either the No. 1 ESS or by the transmission facility, but not both.

2.03 When battery and ground is supplied by No. 1 ESS, it can be supplied either by the master scanner circuit or by this circuit, but not both.

2.04 The remote master scanner applique circuit can be used for connecting circuits within the office.

SECTION II - DETAILED DESCRIPTION

1. LOOP SIGNALS

1.01 Connecting circuits requiring the use of this circuit must supply an open or closed loop signal. An open loop provides no current; a closed loop produces current in the associated ferrod sensor control winding.

2. FERROD SENSOR

2.01 One ferrod sensor is associated with one applique circuit. The applique circuits are designated 0 through 7. There are eight circuits per unit.

3. MASTER SCANNER OR UNIVERSAL TRUNK SCANNER

3.01 The scanner circuit is under program control and reports the loop condition to the system.

4. BATTERY AND GROUND FACILITIES FOR OUTSIDE ESS OFFICE

4.01 Transmission facilities outside the central office should be compatible with one of the following options:

(a) Option Y when battery and ground is provided at the scanner circuit

(b) Option W when battery and ground is not provided at the scanner circuit or from the distant office

(c) Option Z when battery and ground is provided by the distant office.

5. BATTERY AND GROUND FACILITIES FOR INSIDE THE ESS OFFICE

5.01 Connecting circuits within the office should be compatible with one of the following options:

(a) Option W when battery and ground is not provided by the scanner circuit

(b) Option Y when battery and ground is provided by the scanner circuit.

6. PURPOSE OF COMPONENTS

6.01 Resistors R1 and R2 limit the current and provide lightning protection and a balanced loop for each circuit.

6.02 Contact protection network CP reduces the peak voltage across the ferrod sensor for each circuit.

SECTION III - REFERENCE DATA

1. WORKING LIMITS

1.01 Maximum external circuit resistance is 6.8 kilohms. Minimum insulation resistance is 30 kilohms.

1.02 Voltage limits:

Voltage	Minimum	Maximum
-48	42.75	52.5

2. FUNCTIONAL DESIGNATIONS

2.01 Associated Scanner Ferrod Sensors

Designation	Meaning
0 through 7	Ferrod sensors associated with this circuit are numerically designated for program reference.

3. FUNCTION

3.01 The basic function of this circuit is to provide the facilities for connecting miscellaneous circuits outside the central office to the master scanner or universal trunk scanner circuit.

4. CONNECTING CIRCUITS

4.01 When this circuit is listed on a keysheet, the information thereon is to be followed.

(a) Master Scanner Circuit - SD-1A118-01.

(b) Miscellaneous Circuits for all Frames - SD-1A129-01.

(c) Master Scanner Circuit - SD-1A209-01.

(d) Universal Trunk Scanner - SD-2H161-01.

(e) Route Transfer and Make Busy Circuits - SD-56048-01.

(f) Auxiliary Signal Circuit - SD-63842-01.

(g) Toll Switchboard No. 1, 3, or 3C Emergency Ringback Circuit - SD-64244-01.

(h) Alarm Circuit - SD-81223-01.

(i) Power Systems - SD-81626-01.

(j) N2 Carrier Group Alarm Circuit - SD-97118-01.

(k) N2 Carrier Group Alarm Circuit - SD-97166-01.

5. MANUFACTURING TESTING REQUIREMENTS

Intermediate Requirements

5.01 None.

End Requirements

5.02 This circuit should be tested to verify that it is wired in accordance with the schematic and wiring drawings, and that the circuit is capable of performing all functions stated in this circuit discription.

6. ALARM SYSTEMS

6.01 This circuit has a single fuse to the -48 volt supply in the bay fuse panel. There is one fuse for every eight circuits in a unit.

6.02 A blown fuse causes the FA relay to operate an alarm. In No. 1 ESS the FA relay is part of the miscellaneous circuit. In No. 2 ESS the FA relay is part of the trunk peripheral decoder circuit.

7. TAKING EQUIPMENT OUT OF SERVICE

7.01 Instructions for taking this circuit out of service can be found in BSP-231-130-301.

SECTION IV - REASONS FOR REISSUE

D. Description of Changes

D.1 Changed the CADs to provide means by which this circuit and non-ESS frames, in the same building, can be connected directly.

D.2 Corrected CAD 1 to show the A, B lead designations.

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