AMARS
NO. 1A AUTOMATIC MESSAGE ACCOUNTING RECORDING CENTER
DATA SET CONTROL AND CONNECTION CABINET INSTALLATION

CONTENTS

1. GENERAL INFORMATION

2. RECORDS AND REQUIREMENTS

. TEST EQUIPMENT

4. INSTALLATION OF THE CABINET

5. CABLING

6. FUSE AND POWER

1.   GENERAL INFORMATION

1.1   The primary DSCC cabinet contains an alarm unit, a data set interface and auxiliary function unit, and a data set connection unit. The cabinet provides data set control, data set interface, No. 1A AMARC status, and alarm conditions. Connections to the CPU's are made by cables per the Cable Plan, ED-5P285.

2.   RECORDS AND REQUIREMENTS

2.1   The E.S.S. Trouble Record form (SD-4-1391) should be used to record all troubles which are encountered when running the tests in this Handbook Section.

3.   TEST EQUIPMENT

3.1   1 ITE-5356 Digital Voltmeter (or equivalent).

4.   INSTALLATION OF THE CABINET

4.1   Data Set Control and Connection cabinet should be positioned in accordance with floor plan data requirements (824-100-105).

4.2   The two Lorain power supplies (or equivalent) should have been installed and tested. One LORAIN will power one tape cabinet, one processor cabinet, one disk cabinet, one memory cabinet, one asynchronous channel cabinet, and supplies power to the DSCC power transfer unit. Each LORAIN power plant supplies power for the Recording Center through six outlets. Verify that the output voltage at each outlet for each phase is 115 VAC. Measure voltage between phase and neutral leads.

4.3   The data sets associated with the No. 1A AMARC are housed in their own separate cabinet. The 202T data sets are housed by 40B1 mountings. The 202S data sets and the 801C automatic dialing units are housed in a 40A2 mounting. The 829A data auxiliary data sets are housed by 46A1 data mountings. These are installed and maintained by the telephone company.

5.   CABLING

NOTE: In connecting the ED-5P284-30 cables to the male connector on a DEC or WECO circuit board, the arrow ">" on the cables (female) connector should be inserted to mate with the "A" designation on the circuit board. In connecting the cables to male connectors on frame units, the arrows ">" on both connectors should mate.

5.01   Remove power by turning the ON/OFF switch on both programmer's console to OFF position.

5.02   Verify that the following interframe cabling is properly connected in the Data Set
       cabinet (per application Schematic SD-5P006-01). The following cables are ED-5P284-30,
       Grp. 8.

DESIG	STAMPED	CONNECTED TO	STAMPED	CONNECTED TO
CA1-0	J1-16B	P1-16B on Alarm Ckt.	J1-16A	P1 of JW175, 03-16 in DSIAF0
CA1-1	J1-11B	P1-11B on Alarm Ckt.	J1-11B	P1 of JW175, 03-11 in DSIAF1
CA2-0	J1-20A	P1-20A on DS Conn Ckt.	J1-20B	P1 of JW440, 03-20 in DISAF0
CA2-1	J1-07A	P1-07A on DS Conn Ckt.	J1-07B	P1 of JW440, 03-07 in DSIAF1
CA3-0	J1-19A	P1-19A on DS Conn Ckt.	J1-19B	P1 of JW440, 03-19 in DSIAF0
CA3-1	J1-08A	P1-08A on DS Conn Ckt.	J1-08B	P1 of JW440, 03-08 in DSIAF1
CA4-0	J1-22A	P1-22A on DS Conn Ckt.	J1-22B	P1 of JW172, 03-22 in DSIAF0
CA4-1	J1-05A	P1-05A on DS Conn Ckt.	J1-05B	P1 of JW172, 03-05 in DSIAF1
CA5-0	J1-21A	P1-21A on DS Conn Ckt.	J1-21B	P1 of JW172, 03-21 in DSIAF0
CA5-1	J1-06A	P1-06A on DS Conn Ckt.	J1-06B	P1 of JW172, 03-06 in DISAF1
CA6-0	J2-22A	P2-22A on DS Conn Ckt.	J2-22B	P2 of JW172, 03-22 in DISAF0
CA6-1	J2-05A	P2-05A on DS Conn Ckt.	J2-05B	P2 of JW172, 03-05 in DISAF1
CA7-0	J2-21A	P2-21A on DS Conn Ckt.	J2-21B	P2 of JW172, 03-21 in DISAF0
CA7-1	J2-06A	P2-06A on DS Conn Ckt.	J2-06B	P2 of JW172 03-06 in DSIAF1

NOTE: P1 and P2 connectors are BERG connectors mounted on circuit packs in given
       locations.

NOTE: Alarm circuit is J1P040BA unit, DSIAF is J1P040BB unit, DS Conn Circuit is
       J1P040BC unit.

5.03   Verify that the following cabling has been properly connected between the Data Set
       Connection Circuit and the data set mountings. These cords are M25 cords.

CONNECTION

DESIG	DS. CONN. CKT	TO	CHL #
CC20-0	P1-0	1st 202S Data Set	000
CC21-0	P2-0	1st 202T Data Set	001
CC22-0	P3-0	2nd 202T Data Set	002
CC23-0	P4-0	3rd 202T Data Set	003

5.03   (Cont'd)

DEISG.	DS. CONN. CKT	TO	CHL #
CC24-0	P5-0	4th 202T Data Set	004
CC25-0	P6-0	5th 202T Data Set	005
CC26-0	P7-0	6th 202T Data Set	006
CC27-0	P8-0	7th 202T Data Set	007
CC28-0	P9-0	8th 202T Data Set	010
CC29-0	P10-0	9th 202T Data Set	011
CC30-0	P11-0	10th 202T Data Set	012
CC31-0	P12-0	11th 202T Data Set	013
CC32-0	P13-0	12th 202T Data Set	014
CC33-0	P14-0	13th 202T Data Set	015
CC34-0	P15-0	14th 202T Data Set	016
CC35-0	P16-0	15th 202T Data Set	017
CC36-0	P17-0	1st 801C ACU	000
CC20-1	P1-1	2nd 202S Data Set	020
CC21-1	P2-1	16th 202T Data Set	021
CC22-1	P3-1	17th 202T Data Set	022
CC23-1	P4-1	18th 202T Data Set	023
CC24-1	P5-1	19th 202T Data Set	024
CC25-1	P6-1	20th 202T Data Set	025
CC26-1	P7-1	21st 202T Data Set	026
CC27-1	P8-1	22nd 202T Data Set	027
CC28-1	P9-1	23rd 202T Data Set	030
CC29-1	P10-1	24th 202T Data Set	031
CC30-1	P11-1	25th 202T Data Set	032
CC31-1	P12-1	26th 202T Data Set	033
CC32-1	P13-1	27th 202T Data Set	034
CC33-1	P14-1	28th 202T Data Set	035
CC34-1	P15-1	29th 202T Data Set	036
CC35-1	P16-1	30th 202T Data Set	037
CC36-1	P17-1	2nd 801C ACU	020

5.04   Before connecting leads per Fig. 5.04 from the Alarm Sending Unit (J1P040-BA, SD-5P007-01)
to the office alarm circuit, consult with TELCo personnel to see if these leads should
be connected now or at a later date. During installation testing, alarms will be
triggered. If these alarm leads are not connected at this point, correct voltages at
terminals specified in Fig. 5.04 will have to be verified instead of an audio verification.
The schematic drawings for the specific office alarm circuit should be available at the
installation location.

FROM ALARM SENDING UNIT (J1P040BA)

LEAD DESIGNATION	TERMINAL STRIP	TERMINAL	TO
MF	T.S.(A)	58	OFFICE ALARM CKT.
MJR	"	48	"
MJV	"	38	"
MJVR	"	28	"
MN	"	18	"
MNR	"	57	"
MNV	"	47	"
MNVR	"	37	"

FIG. 5.04

5.05   Connect the following intraframe cables (ED-5P284-30, GRP2) between Data Set Conn Ckt.
        and Processor 0's Asynchronous Channel Cabinet. (See Cabling NOTE under Paragraph 5)

DESIG	STAMPED	CONNECTED TO	STAMPED	CONNECTED TO
CA10-0	J5A-0	P5A-0 on D.S. Conn. Ckt.	J5B	DZ11B00 (MUX00) in J1P040K Cabinet (CP0)
CA11-0	J6A-0	P6A-0 on D.S. Conn. Ckt.	J6B	DZ11B01 (MUX01)
CA12-0	J7A-0	P7A-0 on D.S. Conn. Ckt.	J7B	DZ11B02 (MUX02)
CA13-0	J8A-0	P8A-0 on D.S. Conn. Ckt.	J8B	DZ11B03 (MUX03)

5.06   Connect the following intraframe cables (ED-5P284-30, GRP 3) between Data Set Conn Ckt
        and Processor 1's Asynchronous Channel Cabinet: (See Cabling NOTE under Paragraph 5)

DESIG	STAMPED	CONNECTED TO	STAMPED	CONNECTED TO
CA10-1	J5A-1	P5A-1 on DSCC	J5B	DZ11B00 (MUX00) in J1P040K Cabinet (CP1)
CA11-1	J6A-1	P6A-1 on DSCC	J6B	DZ11B01 (MUX01) in J1P040K Cabinet (CP1)
CA12-1	J7A-1	P7A-1 on DSCC	J7B	DZ11B02 (MUX02) in J1P040K Cabinet (CP1)
CA13-1	J8A-1	P8A-1 on DSCC	J8B	DZ11B03 (MUX03) in J1P040K Cabinet (CP1)

5.07   Connect the following intraframe cables (ED-5P284-30, GRP 1) between DS Control and
        Connection Cabinet and Processor 0's Asynchronous Channel Cabinet: (See Cabling NOTE
        under Paragraph 5)

DESIG	STAMPED	CONNECTED TO	STAMPED	CONNECTED TO
CA8-0	J11A-0	P11A-0 on DSIAF0	J11B	P1 of DR11C in J1P040K Cabinet (CP0)
CA9-0	J12A-0	P12A-0 on DSIAF0	J12B	P2 of DR11C in J1P040K Cabinet (CP0)
CA16-0	J3A	P3A on DSCC	J3B	P1 of DN11DA-00 in CP0
CA17-0	J4A	P4A on DSCC	J4B	P1 of DN11DA-01 in CP0

5.08 Connect the following intraframe cables (ED-5P284-30, GRP4) between DS Control and Connection Cabinet and Porcessor 1's Asynchronous Channel Cabinet: (See Cabling NOTE under Paragraph 5)

DESIG	STAMPED	CONNECTED TO	STAMPED	CONNECTED TO
CA8-1	J11A-1	P11A-1 on DSIAF	J11B	P1 of DR11C in J1P040K Cabinet (CP1)
CA9-1	J12A-1	P12A-1 on DSIAF	J12B	P2 of DR11C in J1P040K Cabinet (CP1)
CA16-1	J3C	P3C on DSCC	J3D	P1 of DN11DA-10 in CP1
CA17-1	J4C	P4C on DSCC	J4D	P1 of DN11DA-11 in CP1

5.09 Connect the following intraframe cables (ED-5P284-30, GRP 10) between DSIAF and Processor 0's Cabinet:

DESIG	CONNECTED FROM	CONNECTED TO	TITLE
CA18-0	P14-0	DMC11-MA transmit	TRNS CPO
CA19-0	P15-0	DM11C-MA receive	RCV CPO

5.10 Connect the following intraframe cables (ED-5P284-30, GRP 10) between DSIAF and Processor 1's CAbinet:

DESIG	CONNECTED FROM	CONNECTED TO	TITLE
CA18-1	P15-1	DMC11-MA transmit	TRNS CP1
CA19-1	P14-1	DMC11-MA receive	RCV CP1

5.11 Connect an M6AR cord between J8 connector on 230A repeater associated with alerting TTY and DL11A on CPU0. Connect the DL11B cable provided between J7 connector on 230A repeater associated with alerting TTY and DL11B on CPU1. Connect an M6AT cord between J5 connector on alerting 230A repeater and alerting TTY. (ACTIVE TTY).

5.12 Connect an M6AR cord between J8 connector on 230A repeater associated with analysis TTY and DL11A on CPU1. Connect the DL11B cable provided between J7 connector on 230A repeater associated with analysis TTY and DL11B on CPU0. Connect an M6AT cord between J5 connector on analysis 230A and analysis TTY. (STANDBY TTY)

5.13 Restore power by turning the ON/OFF switch on both processor's console to ON position.

6. FUSE AND POWER

6.1 Power Transfer Unit

6.11 Power for the Data Set Control and Connection Cabinet is supplied by the Power Transfer Unit. The Power Transfer Unit obtains power from a single-phase receptacle at the power distribution circuit. J0 and J1 receptacles on the unit receive plugs from power strip within cabinet. Do not connect power to the Power Transfer Unit until specified in the following paragraphs.

6.12 Remove all plugs from outlets on both sides of the Data Set Control and Connection Cabinet.

6.13 Disenagae all circuit packs in the DSIAF unit (J1P040BB) and the Data Set Connection Unit (J1P040BC).

6.14 Connect power cord P0 to the receptacle for the Data Set Control and Connection Cabinet associated with CPU0. Verify that 115VAC is obtained at all outlets on both sides of the Data Set Control and Connection Cabinet.

6.15 Remove power cord P0 from receptacle.

6.16 Connect power cord P1 to the receptacle for the Data Set Control and Connection Cabinet associated with CPU1. Verify that 115VAC is obtained at all outlets on both sides of the Data Set Control and Connection Cabinet.

6.17 Restore power cord P0 to the receptacle for the Data Set Control and Connection Cabinet.

6.2   Fan Plugs

6.21 Connect fan plugs into outlet 9 on both sides of DSCC Cabinet.

6.3   DISAF Power

6.31 Verify that the fuse in the DSIAF-0 and DSIAF-1 power supply (HEWLETT PACKARD 62000S-D59) are in place.

6.32 Connect the plug of the power supply for DSIAF-0 to outlet 8, CPU0 side.

6.33 Connect the plug of the power supply for DSIAF-1 to outlet 8, CPU1 side.

6.34 Use the Digital Voltmeter to adjust the ±12V and +5V outputs of the DISAF-0 and DSIAF-1 AC to DC power supply (H.P. #62000S-D59) as accurately as possible (at least no greater than ±1%). Verify these voltages at the terminals given in Fig. 6.3. Refer to SD-5P006-01, FS-1 if required. Do NOT use frame ground in making the measurements. Use the isolated ground bus (or the ground on terminal 104 of locations 03-20 or 30-07)

6.35 Turn the two power switches on the Hewlett Packard Power Supply for the DSIAF circuits to the OFF position. Insert all circuit packs in each DSIAF unit (J1P040BB) and the Data Set Connection Circuit unit (J1P040BC). Restore power using the two switches in the Hewlett Packard supply.

6.4   Data Sets and Equipment should be powered from both outlets on Data Set Control and Connection Cabinet.

6.5   Control Consoles (J1P040E) should be powered from both outlets 4 on Data Set Control and Connection Cabinet.

6.6   Connect power for the 230A repeaters to outlets 3 on both sides of the cabinet.

TERMINAL ON DSIAF UNIT (J1P040BB)

VOLT	RANGE	UNIT	LOCATION	TERMINAL
+5	+4.95 to +5.05	DSIAF0	03-20	101
+5	+4.95 to +5.05	DSIAF1	03-07	101
-12	-11.85 to -12.15	DSIAF0	03-20	106
-12	-11.85 to -12.15	DSIAF1	03-07	106
+12	+11.85 to +12.15	DSIAF0	03-20	102
+12	+11.85 to +12.15	DSIAF1	03-07	102

NOTE: Output voltages must be adjusted as accurately as physically possible to +5V and ±12V. There is a potentiometer on the panel that can be used for adjustments.

FIG. 6.3

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