

**MULTIFREQUENCY PULSING  
RECEIVER FRAME  
EQUIPMENT DESIGN REQUIREMENTS  
NO. 1 AND TANDEM CROSSBAR SYSTEMS**

**1. GENERAL**

**SCOPE**

**1.01** This specification, together with the supplementary information listed herein, covers the general design requirements to be used in the engineering, manufacturing, and installation of the multifrequency pulsing receiver frame.

**CAPACITY**

**1.02** The MF pulsing receiver frame is designed to mount 19- (J99337A) MF pulsing receiver units, each of which consists of a 6- by 23-inch shelf in which a maximum of two receiver circuits may be mounted.

**DESCRIPTION**

**1.03** The MF pulsing receiver frame, when equipped with MF pulsing receiver units, has provisions via the MF receiver circuits to receive and convert multifrequency pulses into direct current (dc) pulses to operate various code combinations of relays in the associated circuit.

**1.04** The 2-out-of-6 (2/6) MF signaling code, used by the MF pulsing receiver circuit, consists of six voice frequencies which are pulsed two frequencies at a time for each signal, yielding 12 possible combinations per signal. Of these, ten are for digits 1 to 0 and two for control information

for the receiver and its connecting circuit. See Tables A and B (items 1.05 and 1.06) for frequency designations and assignments.

**1.05** The frequencies and their respective designations, used by the MF pulsing receiver circuits, are given in Table A.

TABLE A

FREQUENCY	DESIGNATION
700 Hz	0
900 Hz	1
1100 Hz	2
1300 Hz	4
1500 Hz	7
1700 Hz	10

**1.06** The frequency assignments used by the MF pulsing receiver circuits are given in Table B.

TABLE B

FREQUENCIES OF PULSED SIGNAL	2/6 ADDITIVE CODE	NUMERICAL DIGIT
700 + 900	0 + 1 =	1
700 + 1100	0 + 2 =	2
900 + 1100	1 + 2 =	3
700 + 1300	0 + 4 =	4
900 + 1300	1 + 4 =	5
1100 + 1300	2 + 4 =	6
700 + 1500	0 + 7 =	7
900 + 1500	1 + 7 =	8
1100 + 1500	2 + 7 =	9
1300 + 1500	4 + 7 =	0
1100 + 1700	2 + 10	CONTROL SIGNALS
		KP
1500 + 1700	7 + 10	ST

1.08 The fuse panel unit, J25151AA, is mounted at the top of the frame. The jack, key, lamp, and alarm relay unit, J25151AB, is located between the eighth and ninth MF pulsing receiver units.

1.09 The fuse panel unit, J25151AA, is a 2- by 23-inch mounting plate equipped with fuse blocks, resistors, diodes, and lamps.

1.10 A battery feeder to supply the fuses associated with the even numbered receiver circuits and a separate battery feeder to supply the fuses associated with the odd numbered receiver circuits is required.

1.11 The jack, key, lamp, and alarm relay unit, J25151AB, is a 2- by 23-inch mounting plate, equipped with a D- type terminal strip, alarm relays, and a combination connector block comprised of jacks, keys, lamps, and test posts.

1.12 A frame local cable connects the MF pulsing receiver unit terminal strip and the associated jack, key, lamp, and alarm relay unit to the fuse panel unit on the frame. Switchboard cables are run behind the left frame upright.

1.07 The MF pulsing receiver frame is a single bay bulb-angle frame, 11 feet 6 inches high and 2 feet 0-5/8 inches wide.

1.13 The MF pulsing receiver frame should be located in the same lineup as the associated sender frames.

SUBDIVISIONS OF EQUIPMENT AND DETAILED INDEX

WE J drawings should be ordered by referring to the prefix and base number and requesting the current dash (—) number.

EQUIPMENT CODE	RATING OF UNIT	TITLE	EQUIPMENT DRAWING	CIRCUIT DRAWING
J25151A	AT&TCo Std	MFR Frame	J25151A-( )	SD-28064-01
J25151AA	AT&TCo Std	Fuse Panel Unit	J25151AA-( )	SD-28064-01
J25151AB	AT&TCo Std	Jk, Key, Lp, and Alm. Rel Unit	J25151AB-( )	SD-28064-01
J99337A	AT&TCo Std	MF Rcvr Unit	J99337A-( )	SD-99493-01

**2. SUPPLEMENTARY INFORMATION**

816-000-000—No. 1 Crossbar System Index  
 817-000-000—Tandem Crossbar System Index  
 Floor Plan Data—Section 9.1, Sheet 95

**3. DRAWINGS**

**Keysheet**

SD-25000-01—No. 1 Crossbar System  
 SD-25435-01—Crossbar System Tandem Office

**Framework**

ED-91710-73—Frame Assembly  
 ED-91210-51—Combination Connector Block, Jack,  
 and Lamp Mounting

**Equipment**

J99337—Multifrequency Pulsing Receiver

**Wiring and Cabling**

ED-27853-01—Switchboard Cable Details for the  
 Multifrequency Pulsing Receiver  
 Frame.  
 ED-25346-16—Method of Running Power Feeders

**4. EQUIPMENT**

***J25151A—AT&TCo Std—Multifrequency Pulsing Receiver Frame***

Equipment—J25151A-( )

*List 1*—Framework, assembly, and wiring for one MF pulsing receiver frame arranged to mount nineteen MF pulsing receiver units (J99337A), one fuse panel unit (J25151AA), and one jack, key, lamp, and alarm relay unit (J25151AB). (See Note A.)

**Note**

A. Local cable contains battery and ground wiring for 38 MF pulsing receiver circuits.

***J25151AA—AT&TCo Std—Fuse Panel Unit***

Equipment—J25151AA-( )

*List 1*—Assembly, wiring, and equipment per SD-28064-01, Fig. 1, for one fuse panel unit. (See Note A.)

**Note**

A. A separate battery supply lead is required for each half of the fuse panel.

***J25151AB—AT&TCo Std—Jack, Key, Lamp, and Alarm Relay Unit***

Equipment—J25151AB-( )

*List 1*—Assembly, wiring, and equipment per SD-28064-01, Fig. 2, for one jack, key, lamp, and alarm relay unit.

TABLE C

MULTIFREQUENCY PULSING RECEIVER FRAME J25151A EQUIPMENT				
UNIT		QUANTITY TO BE PROVIDED		DESCRIPTION OF FEATURE OR OPTION
J CODE	LIST	ALWAYS	FOR OPTION INDICATED	
J25151AA	1	1		Fuse Panel Unit
J25151AB	1	1		Jack, Key, Lamp, and Alarm Relay Unit
J99337A	See Note 1	1	As Req'd	Multifrequency Receiver

**Note**

1. MF receivers are to be provided in accordance with J specification, J99337, and job application. (Maximum of 38 receiver circuits per frame.)

**5. GENERAL NOTES**

- 5.01 A frame designation card is provided for connecting circuit to receiver circuit association.
- 5.02 Codes J25151B through J25151Z and J25151AC through J25151AZ are unassigned.

**Wiring and Cabling**

- 5.03 For general requirements, for the receiver circuit, concerning critical lead lengths, refer to SD-99498-01, Note 1.06.

- 5.04 The wire gauge and type of insulation to be used in the manufacturing and installation of the frames and associated units described in this specification shall be as follows:

USE	GAUGE	TYPE
Local Cable	24	BU
Swbd Cable	22, 24	BU

- 5.05 The maximum lead length, unless otherwise specified by the connecting circuit, is 800 feet, and is not to be exceeded by variances in the gauge of wiring used.

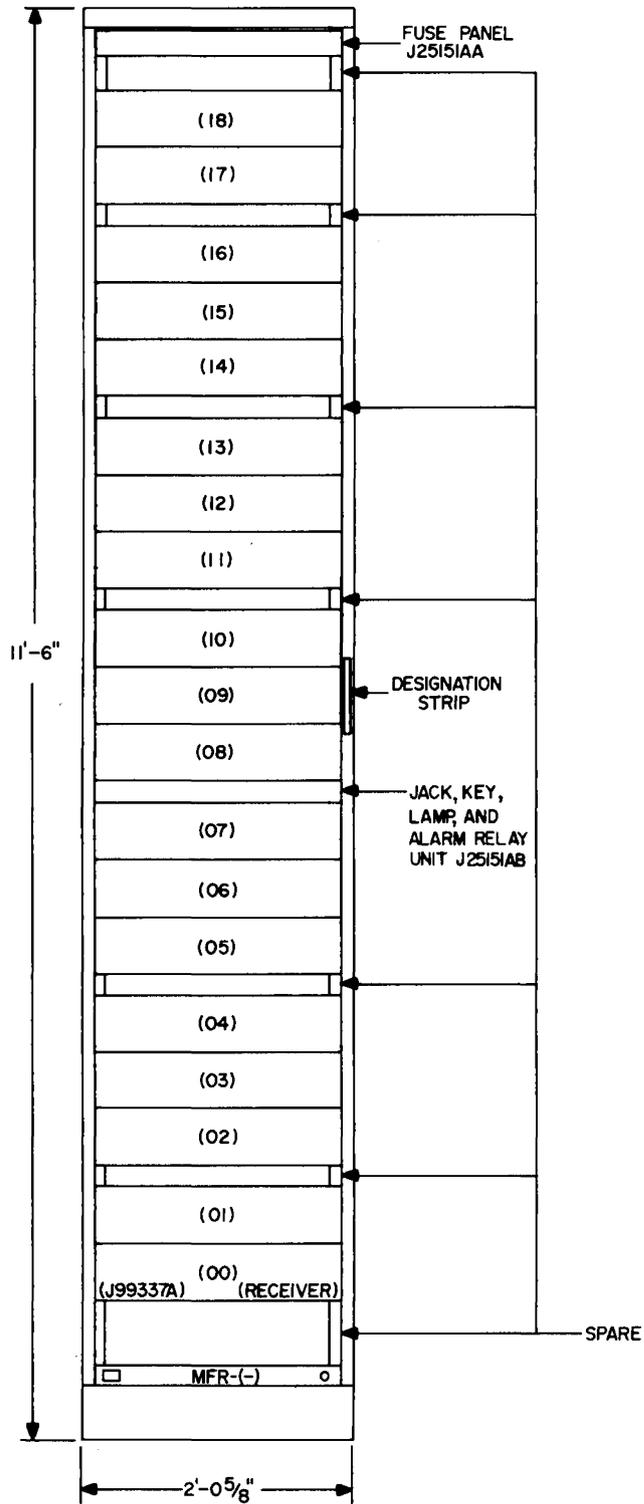


Fig. 1—Multifrequency Pulsing Receiver Frame

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