MULTIFREQUENCY PULSING
RECEIVER
EQUIPMENT DESIGN REQUIREMENTS
COMMON SYSTEMS

1. GENERAL

Scope

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

1.02 This specification is reissued to change the ratings of the specification and the equipment from AT&TCo Provisional and AT&TCo Special to AT&TCo Standard.

Description

1.03 The J99337A multifrequency pulsing receiver is designed to convert incoming voice-frequency ac signals to dc pulses. These pulses are generally used to operate the digit relays in the associated senders and registers. The MF pulsing receiver is also used with key monitoring and other test equipment to check the integrity of MF pulse signals originating in operator keysets and senders.

1.04 The incoming signals to the MF pulsing receiver consist of various combinations of two of six possible frequencies. The receiver output then provides for 15 possible combinations of dc signals to convey digital or control information between installations. The frequency combinations used are given in Table A.

1.05 The MF pulsing receiver occupies 6 inches of vertical mounting space on a 23-inch framework. The sheet metal mounting shelf provides nylon runners for mounting the plug-in printed wiring board assemblies as well as connectors, terminal strips, and wiring for two receivers. There are eight plug-in printed wiring board assemblies in each receiver. Faceplates are provided on each plug-in unit; these faceplates lock into the mounting shelf when the unit is inserted. The faceplates also serve as disengaging handles for the plug-in units when they are removed. Test points are provided where necessary on the plug-in units with access to the test points from the front of the receiver. Three sets of mounting holes are provided in the sideplates of the mounting shelf to permit mounting in sheet metal frameworks and bulb-angle frameworks with 10- or 12-inch guard rails. The mounting brackets may be used on frameworks drilled on 2-inch mounting centers.

1.06 Where an MF pulsing receiver unit is provided with its associated register, sender, or test frame, the detailed arrangements are as covered in the specifications for those equipments.

1.07 The J99337A multifrequency pulsing receiver unit is a 6- by 23-inch shelf in which a maximum of two receivers may be mounted. Each receiver consists of eight plug-in units. One terminal strip is provided for incoming and outgoing leads; all options appear on a second terminal strip on each receiver. This unit weighs 19 pounds 9 ounces equipped with one receiver, and 28 pounds 10 ounces equipped with two receivers.

1.08 The J99337AA power supply and input transformer unit provides the input transformer to isolate the receiver from dc signals. This unit also includes the power supply for −12 volts, −18 volts, and −27 volts. All components are mounted on a printed wiring board and the unit plugs into the mounting shelf. Weight of this unit is 1 pound 4 ounces.

1.09 The J99337AB is a variolosser and AGC amplifier unit. It serves to standardize signal levels from varying input signals to a fixed output level. This unit is a plug-in printed wiring board assembly that weighs 11 ounces.

TABLE A

SIGNAL	FREQUENCY					
	700 (0)	900 (1)	1100 (2)	1300 (4)	1500 (7)	1700 (10)
KP			X			X
0				X	X	
1	X	X				
2	X		X			
3		X	X			
4	X			X		
5		X		X		
6			X	X		
7	X				X	
8		X			X	
9			X		X	
ST					X	X
Code 11	X					X
Code 12		X				X
KP 2				X		X

1.10 The J99337AC is the SP-KP logic unit. This unit provides detection of the KP (receiver enabling) signal and provides detection of the presence of a signal (SP). The SP detection feature provides the necessary delay in signal recognition to avoid false operation on transients and also provides protection from double registration of signals of long duration. The unit is a plug-in printed wiring board and weighs 1 pound.

1.11 The J99337AD is the channel detector unit. It provides threshold detection and output gates for the recognition of three of the signaling frequencies. Two channel detector units are required for a receiver, and each unit is a plug-in printed wiring board assembly weighing 9 ounces.

1.12 The J99337AE is the channel relays unit. It contains six channel output relays and checking circuitry to verify reception of dual frequencies, plus another relay to generate a reorder signal in the event of reception of three or more frequencies. The unit is a plug-in printed wiring board assembly weighing 1 pound 8 ounces.

2. SUPPLEMENTARY INFORMATION

AA128.002—Checking List—Equipment Design Requirements

800-600-000—List of General Equipment Requirement Sections
801-000-000—Equipment Design and General Equipment Requirements and Engineering Information—Common Systems
X-78108—Manufacturing Testing Requirements for Multifrequency Pulsing Receiver
Current Drain Data—SD-99493-01

3. DRAWINGS

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

Circuits

SD-99493-01—Multifrequency Pulsing Receiver

Equipment

J99337A-( )—Multifrequency Pulsing Receiver Unit
J99337AA-( )—Power Supply and Input Transformer Unit
J99337AB-( )—Variolosser and AGC Amplifier Unit
J99337AC-( )—SP-KP Logic Unit
J99337AD-( )—Channel Detectors Unit
J99337AE-( )—Channel Relays Unit

4. EQUIPMENT

J99337A—AT&TCo Standard—Multifrequency Pulsing Receiver Unit

Equipment—J99337A-( )

List 1—Framework, assembly, wiring, connectors, and terminal strips required for two multifrequency pulsing receivers per SD-99493-01, CADs 1 and 2.
List 2—Equipment required in addition to list 1 to provide plug-in units for one multifrequency pulsing receiver per SD-99493-01, App Fig. 1. A maximum of two list 2 may be used with each list 1. (See Note A.)

Note

A. The plug-in units required for one multifrequency pulsing receiver are:

1—J99337AA-( )—Power Supply and Input Transformer Unit

1—J99337AB-( )—Variolosser and AGC Amplifier Unit

1—J99337AC-( )—SP-KP Logic Unit

2—J99337AD-( )—Channel Detectors Unit

1—J99337AE-( )—Channel Relays Unit

1—1016A Filter

1—1016B Filter

J99337AA—AT&TCo Standard—Power Supply and Input Transformer Unit

Equipment—J99337AA-( )

List 1—Printed wiring board assembly and faceplate required for one power supply and input transformer unit per SD-99493-01, CPS 1.

J99337AB—AT&TCo Standard—Variolosser and AGC Amplifier Unit

Equipment—J99337AB-( )

List 1—Printed wiring board assembly and faceplate required for one variolosser and AGC amplifier unit per SD-99493-01, CPS 2.

J99337AC—AT&TCo Standard—SP-KP Logic Unit

Equipment—J99337AC-( )

List 1—Printed wiring board assembly and faceplate required for one SP-KP logic unit per SD-99493-01, CPS 3.

J99337AD—AT&TCo Standard—Channel Detectors Unit

Equipment—J99337AD-( )

List 1—Printed wiring board assembly and faceplate required for one channel detectors unit per SD-99493-01, CPS 4.

J99337AE—AT&TCo Standard—Channel Relays Unit

Equipment—J99337AE-( )

List 1—Printed wiring board assembly and faceplate required for one channel relays unit per SD-99493-01, CPS 5.

5. GENERAL NOTES

5.01 Codes J99337B through J99337Y and J99337AF through J99337AY are unassigned.

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