"TOUCH-TONE®" CALLING RECEIVER
TYPE A3
EQUIPMENT DESIGN REQUIREMENTS
COMMON SYSTEM

1. GENERAL

Scope

1.01 This specification, together with the supplementary information listed herein, covers the equipment and circuits to be used in the manufacture and installation of TOUCH-TONE receivers to accept TOUCH-TONE calling tone signals.

1.02 This specification is reissued to add List 2 to J99289A and to add information on the * and # symbols.

Description

1.03 The TOUCH-TONE calling receiver is designed to be bridged across the input terminals of a dial pulse subscriber sender, originating register, or equivalent common dial pulse equipment without interfering with normal operation on dc dial pulses. The receiver is designed to respond to two simultaneous voice-frequency tones, one from a high group and one from a low group of frequencies generated by the operation of a button on a TOUCH-TONE calling subscriber set or similar device. The use of two widely separated frequencies for each digit provides for various operating features and permits less severe design requirements for the subscriber set tone oscillator. The assignment of the signaling frequencies is as follows:

Low Group (Hz)	High Group (Hz)
L1 697	H1 1209
L2 770	H2 1336
L3 852	H3 1477
L4 941	H4 1633 (optional)

1.04 The frequency combination for indicating individual digits are shown below:

Digit	Frequency	Digit	Frequency
1	L1 - H1	7	L3 - H1
2	L1 - H2	8	L3 - H2
3	L1 - H3	9	L3 - H3
4	L2 - H1	*	L4 - H1
5	L2 - H2	0	L4 - H2
6	L2 - H3	#	L4 - H3

1.05 The circuit components of the receiver are mounted on modular-type circuit packs which plug into a cabinet. The circuit packs are printed wiring boards on which the circuit elements are mounted and include the plugs which are an integral part of the printed circuit. Each circuit pack is mounted between nylon slides which are attached to the upper and lower shelves of the receiver cabinet. Test points are mounted on each circuit pack and are easily reached when the receiver cover is removed. All circuit packs are individually removable to facilitate maintenance and test.

1.06 The TOUCH-TONE calling receiver mounting shelf occupies 6 inches of a standard 23-inch relay rack and is 10 inches deep. The mounting shelf is capable of holding two complete receivers. Each receiver is individually removable as a unit for maintenance and test purposes. The mounting shelf is not removable since all connections to the register are made by solderless-wrapped connections to a 298A terminal strip.

1.07 The only power supply required is the regular −48 volt central office battery. All other operating voltages required are derived from the −48 volt supply within the receiver.

1.08 The TOUCH-TONE calling receiver in itself is not sufficient to adapt an existing office for TOUCH-TONE calling. In addition to the receiver, a converter designed to accept the output of the receiver is necessary to pass the calling pulses to the existing dial machine. This converter is of necessity different for each type of switching machine and is covered in separate specifications associated with the specific switching system.

2. SUPPLEMENTARY INFORMATION

AA128.002—List of Equipment Design Requirements Sections
800-600-000—List of General Equipment Requirement Sections
801-000-000—Equipment Design and General Equipment Requirements and Engineering Information—Common Systems
J27907—815-035-150—Panel Systems—TOUCH-TONE Converters Frame
J27951—816-502-150—Crossbar No. 1—Originating Sender Frame
J27962—819-403-150—Crossbar System No. 5—Originating Register Frame
J27971—819-404-150—Crossbar System No. 5—4-Wire Originating Register
J33024—814-320-150—Step-by-Step System Converter Frame
J38922—814-321-150—Step-by-Step System—TOUCH-TONE Converter Frame With Common Control
X-77090—Manufacturing Testing Requirements for J99289 TOUCH-TONE Calling Receiver.

3. DRAWINGS

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

Circuits

SD-95148-01—TOUCH-TONE Calling Receiving Circuit

Equipment

J99289A-( )—TOUCH-TONE Calling Receiver Mounting Shelf
J99289B-( )—TOUCH-TONE Calling Receiver Unit

4. EQUIPMENT

J99289A—AT&TCo Std—TOUCH-TONE Calling Receiver Mounting Shelf

Equipment—J99289A-( )

List 1—Framework, assembly, and wiring for one TOUCH-TONE calling receiver mounting shelf per SD-98148-01, CAD 1 capable of holding two receivers.
List 2—Cable assembly required in addition to List 1 for interconnection to 800A PBX per SD-98148-01, CAD 2.

J99289B—AT&TCo Std—TOUCH-TONE Calling Receiver Unit

Equipment—J99289B-( )

List 1—Cabinet assembly, wiring, band elimination filter, and circuit packs required for 7-channel operation of one TOUCH-TONE calling receiver per SD-98148-01, FS1, Option Y.

Notes

A. Comes equipped with the following circuit packs:

B1—Input Amplifier Circuit

B2—Group Limiter Circuit

B3—Channel Circuit (697 Hz +770 Hz)

B4—Channel Circuit (852 Hz +941 Hz)

B5—Channel Circuit (1209 Hz +1336 Hz)

B7—Channel Circuit (1477 Hz)

B9—Output Timer and Detector Bias Circuit

B19—Signal Timer and Steering Circuit

(B8—Signal Timer and Steering Circuit rated Mfr Disc.)

SD-98148-01, CPS1 through CPS6

List 2—Cabinet assembly, wiring, band elimination filter, and circuit packs required for

8-channel operation of one TOUCH-TONE calling receiver per SD-98148-01, FS1, Option Z.

Notes

A. Comes equipped with the following circuit packs:

B1—Input Amplifier Circuit

B2—Group Limiter Circuit

B3—Channel Circuit (697 Hz +770 Hz)

B4—Channel Circuit (852 Hz +941 Hz)

B5—Channel Circuit (1209 Hz +1336 Hz)

B6—Channel Circuit (1477 Hz +1633 Hz)

B9—Output Timer and Detector Bias Circuit

B19—Signal Timer and Steering Circuit

(B8—Signal Timer and Steering Circuit rated Mfr Disc.)

SD-98148-01, CPS1 through CPS6

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5. GENERAL NOTES

5.01 Codes J99289C through J99289Y are unassigned.