APARTMENT DOOR ANSWERING SERVICE
EQUIPMENT DESIGN REQUIREMENTS
COMMON SYSTEMS

1. GENERAL

SCOPE

1.01 This specification, together with the supplementary information listed herein, covers the equipment design requirements for the framework, equipment, and circuits to be used in the manufacture and installation of the Apartment Door Answering Service (ADAS).

1.02 This specification is issued to:

(a) Add NJ02506A, Lists 9 and 10.

(b) Add equipment codes NJ02506E and NJ02506F.

1.03 This specification provides a TOUCH-TONE® dial service to be used as a selective intercommunicating link between an apartment house entrance telephone station and the desired apartment house unit telephone set.

CAPACITY

1.04 The maximum capacity of a complete system is as follows:

(a) Entrance telephone stations—8

(b) Apartment line circuits—400

1.05 ***Operating Ranges:*** Without the range extension amplifier, the operating range is determined by the transmission losses of the line. The maximum line loss is 3 dB. With the range extension amplifier, the maximum operating range is determined by the dc supervision. The maximum range is 1500 ohms loop.

DESCRIPTION

1.06 The Apartment Door Answering Service is an entrance station to apartment communications system which includes an apartment building door opening feature activated by the tenants' telephones. This service can be arranged to work with individual or two-party lines on either flat rate or message rate service associated with the following systems: battery cut-off panel, ground cut-off panel, step-by-step, No. 1 crossbar, No. 5 crossbar, ESS No. 1, and ESS No. 2.

1.07 By using an apartment telephone, the tenant can identify visitors before they are permitted to enter the building. Using the TOUCH-TONE telephone set at an entrance station, the visitor dials the selected apartment directory number. A distinctively different ringing is applied to the apartment telephone set to differentiate it from an incoming central office (CO) call. Audible ringing tone is returned to the entrance station during ringing of the apartment. The ringing signal continues until the call is answered by the tenant, abandoned by the visitor, or times out. After conversing with the visitor at the entrance station, the tenant dials the digit "4" to unlock the entrance station door. The entrance station door may be opened any time within a 5-second interval after the tenant dials the digit "4." If the apartment telephone set is busy, a call waiting tone is applied across the selected apartment line circuit. The tenant upon hearing the tone can terminate the CO call or can notify the caller to hold on. By operating the switchhook, the apartment line is connected to the entrance telephone station and the CO call is placed on hold. While the call is being held, the call waiting tone remains superimposed on the line as a reminder to the tenant that he is holding another call. After conversation with the entrance station, the tenant reconnects the CO call by operating the switchhook again. If the tenant forgets to reconnect the CO call and disconnects in error, ringing is applied to the apartment telephone set to notify the tenant of the failure to recall. If the tenant is communicating with an entrance station and an incoming CO call is received, the call waiting tone is applied to the apartment line circuit. The tenant can terminate the entrance station call or place the entrance

station call on hold and transfer to the CO call by operating the switchhook.

1.08 When this circuit is utilized to serve more than one entrance station, the various entrances are served on a one-at-a-time basis. If a dial tone request is made at an entrance station while the circuit is busy handling another entrance station call, 60 IPM tone will be returned to the waiting station. When the control circuit becomes available, the 60 IPM tone is removed and dial tone will be returned to previously waiting entrance station. With multidoor operation, when the tenant dials the digit "4" to unlock the door, only that door mechanism associated with the particular entrance station which originated the call will be activated.

1.09 A 36- or 48-second timing interval is provided for the tenant to answer, timed from the entrance station telephone off-hook. Upon answering, the timer is recycled to allow an interval of 36- or 48-seconds for conversation. A warning tone is applied for 5 seconds before cutoff. These timing arrangements are necessary to prevent one entrance station from monopolizing the system, and also discourages the soliciting of sales or other annoyance calls.

1.10 When a tenant has more than one CO line, the service is provided with only one line and all extensions associated with that line which are located in the apartment. When a tenant does not have regular telephone service or an apartment is vacant, a standard telephone set is provided in the apartment for communicating with the entrance station.

1.11 Tenants with party line service may receive calls from the entrance station telephone even though the other party is using the CO line. Party lines must be CO bridged.

1.12 The 2755A telephone set has been developed for use at the entrance station. This set is equipped with a TOUCH-TONE dial and is mounted on a stainless steel panel. It is intended to be installed in a recessed telephone company owned and customer installed 118A apparatus box. The top of the box is to be located 63 inches from the floor surface. The telephone set is equipped with a P-269601 Instruction Card.

1.13 A KS-16626, list 12 relay is required for each entrance station door equipped with a 2755A telephone set to provide the closure to operate the customer owned door latch circuitry. The contacts of the relay have a maximum current carrying capacity of 5 amperes at 115 volts, 60 Hertz.

1.14 The ADAS apparatus is mounted on 2- by 23-inch mounting plates and located on a miscellaneous relay rack in the central office. It consists of two basic pieces of equipment: the common control unit and the apartment unit. The common control unit contains a TOUCH-TONE receiver and entrance station telephone trunk unit and is arranged to serve a maximum of four entrance stations. Six entrance station and eight entrance station units are optionally available to increase the system capacity to a maximum of eight entrance stations. The apartment unit contains the "cut through" relays associated with each apartment. For less complex installations, the required number of apartment units can be determined from Table A. For more complex installations, apartment code and assignments must be considered when determining the apartment unit capacity to be provided. Code grouping must be assigned in multiples of ten units. Two examples are as follows:

Example A (See Fig. 1):

(a) One apartment house with 208 apartments having two entrances (phones "A" and "B") each having access to an elevator bank serving 104 apartments and one garage entrance (phone "C") having access to all 208 apartments. Apartments are assigned codes in two groups; apartments associated with entrance station phone "A" are assigned codes 100 to 203, and apartments associated with entrance station phone "B" are assigned codes 300 to 403.

(b) Provide one common control unit, NJ02506A, list 1, 2, or 3 and list 4 or 5; two 70 apartment units, NJ02506D, list 1; one 50 apartment unit, NJ02506C, list 1; and one 30 apartment unit, NJ02506B, list 1.

(c) Since no apartments are assigned to codes 204-209 and 404-409, these codes are multed to the vacant code (VC) terminal. The codes 210-299 and 410-499 are multed to the (VTB)

terminal. Wiring and cross-connecting information is described in NS-02506-01.

Example B (Not Shown):

(a) One apartment house with 255 apartments, a party room, pool deck, and building manager's office having three entrances (phones "A," "B," and "C") each having access to an elevator bank serving 85 apartments but with common access to the party room, pool deck, and building manager's office. Also a receiving room entrance (phone "D") having access to all apartments and locations. Apartments and locations are assigned codes in four groups: apartments associated with entrance station phone "A" are assigned codes 100 to 184; apartments associated with entrance station phone "B" are assigned codes 200 to 284; apartments associated with entrance station phone "C" are assigned codes 300 to 384; and the three locations are assigned codes 400, 401, and 402.

(b) Provide one common control unit, NJ02506A, list 1, 2, or 3, list 4 or 5, and list 6 or 7; and four 70 apartment units, NJ02506D, list 1.

(c) Since no apartments are assigned to codes 185-189, 285-289, 385-389, and 403-409, these codes are multed to the vacant code (VC) terminal. The codes 190-199, 290-299, 390-399, and 410-499 are multed to the (VTB) terminal. Wiring and cross-connecting information is described in NS-02506-01.

1.15 A typical central office installation is shown in Fig. 1 and wiring for the apartment house lobby is shown in Fig. 2. For installation in an ESS central office on 25-inch relay-racks, the necessary adapters are ordered separately as required.

2. SUPPLEMENTARY INFORMATION

463-120-100—Power Relay Sets
463-121-110—Apparatus Boxes 113-, 114-, and 118-Type
800-000-000—General Equipment Requirements for Installation and Manufacturing
800-600-000—Checking List—Division 800
822-000-000—Equipment Design and General Equipment Requirements and Engineering Information
KS-16626—Relay
J58844B—809-140-152—TOUCH-TONE Calling Receiver
J1A048A—820-031-151—Miscellaneous Power Frame

3. DRAWINGS

WE NJ drawings should be ordered by referring to the prefix and base numbers and requesting the current dash (-) number.

CIRCUITS

NS-02506-01—Apartment Door Answering Service
SD-66734-01—Alarm, Transfer, Test, Traffic Register, and Ringing Leads Circuit
SD-67027-01—TOUCH-TONE Calling Receiver Circuit
SD-94820-01—Time Delay Control Circuit
SD-99361-01—Relay Delay Timer
SD-99482-01—Solid State Ringing Detector
SD-1A129-01—ESS No. 1 or No. 2 Miscellaneous Circuit

EQUIPMENT

ED-94859-30—Amplas Component Assemblies
ED-94859-40—Amplas Component Assemblies
ED-99556-12—Relay Delay Timer Unit
ED-1A192-50—Adapter Details
ED-5E021-30—Solid State Ringing Detector Wire-in Amplas Board
NJ02506A-( )—Common Control Unit
NJ02506B-( )—30 Apartment Unit
NJ02506C-( )—50 Apartment Unit
NJ02506D-( )—70 Apartment Unit
NJ02506E-( )—6 Entrance Station Units
NJ02506F-( )—8 Entrance Station Units

4. EQUIPMENT

NJ02506A (WECo Appd)—Common Control Unit (Ten 2-Inch Mounting Plates)

Equipment—NJ02506A-( )

List 1—Assembly, wiring, and equipment for one common control unit equipped for 400 apartments and 2 entrance stations per NS-02506-01, App Fig. 1, 7, and ZF option (see Notes A and H).

List 2—Assembly, wiring, and equipment for one common control unit equipped for 400 apartments and 2 entrance stations per NS-02506-01, App Fig. 1, 6, and ZF option

TABLE A - APARTMENT HOUSE UNIT COMBINATIONS
(SEE EXAMPLES A & B IN TEXT)

NUMBER OF APARTMENTS SERVED BY ONE COMMON CONTROL UNIT	NUMBER OF APARTMENT UNITS REQUIRED			STAMP HTB RELAYS FROM 10 TO	STAMP CT RELAYS FROM 100 TO
	30 APTS NJ02506B-( )	50 APTS NJ02506C-( )	70 APTS NJ02506D-( )		
30 OR LESS	1			12	129
31 TO 50		1		14	149
51 TO 60	2			15	159
61 TO 70			1	16	169
71 TO 80	1	1		17	179
81 TO 90	3			18	189
91 TO 100	1		1	19	199
101 TO 110	2	1		20	209
111 TO 120		1	1	21	219
121 TO 130	2		1	22	229
131 TO 140			2	23	239
141 TO 150	1	1	1	24	249
151 TO 160	3		1	25	259
161 TO 170	1		2	26	269
171 TO 180	2	1	1	27	279
181 TO 190		1	2	28	289
191 TO 200	2		2	29	299
201 TO 210			3	30	309
211 TO 220	1	1	2	31	319
221 TO 230	3		2	32	329
231 TO 240	1		3	33	339
241 TO 250	2	1	2	34	349
251 TO 260		1	3	35	359
261 TO 270	2		3	36	369
271 TO 280			4	37	379
281 TO 290	1	1	3	38	389
291 TO 300	3		3	39	399
301 TO 310	1		4	40	409
311 TO 320	2	1	3	41	419
321 TO 330		1	4	42	429
331 TO 340	2		4	43	439
341 TO 350			5	44	449
351 TO 360	1	1	4	45	459
361 TO 370	3		4	46	469
371 TO 380	1		5	47	479
381 TO 390	2	1	4	48	489
391 TO 400		1	5	49	499

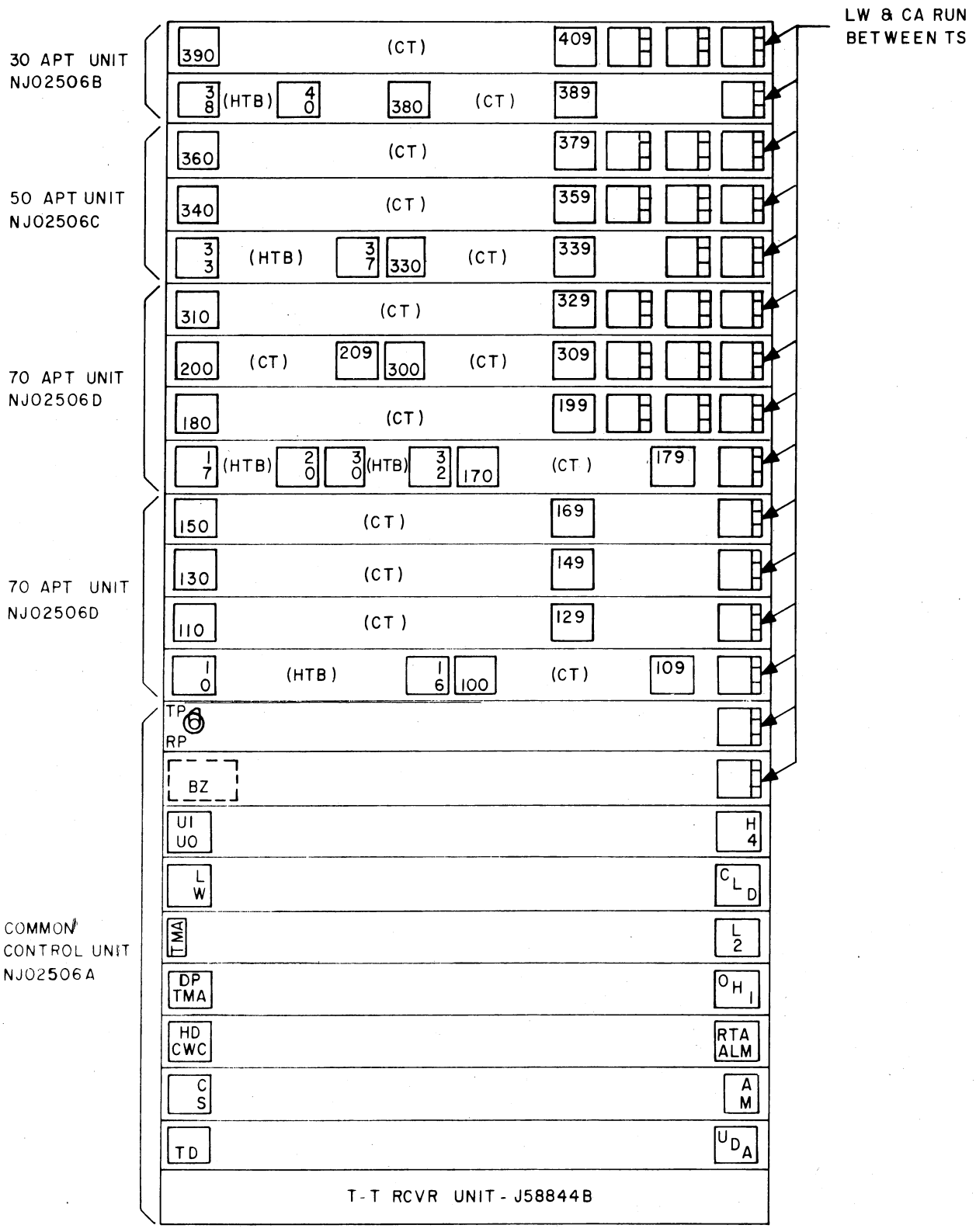

Fig. 1—Central Office Installation (Typical)

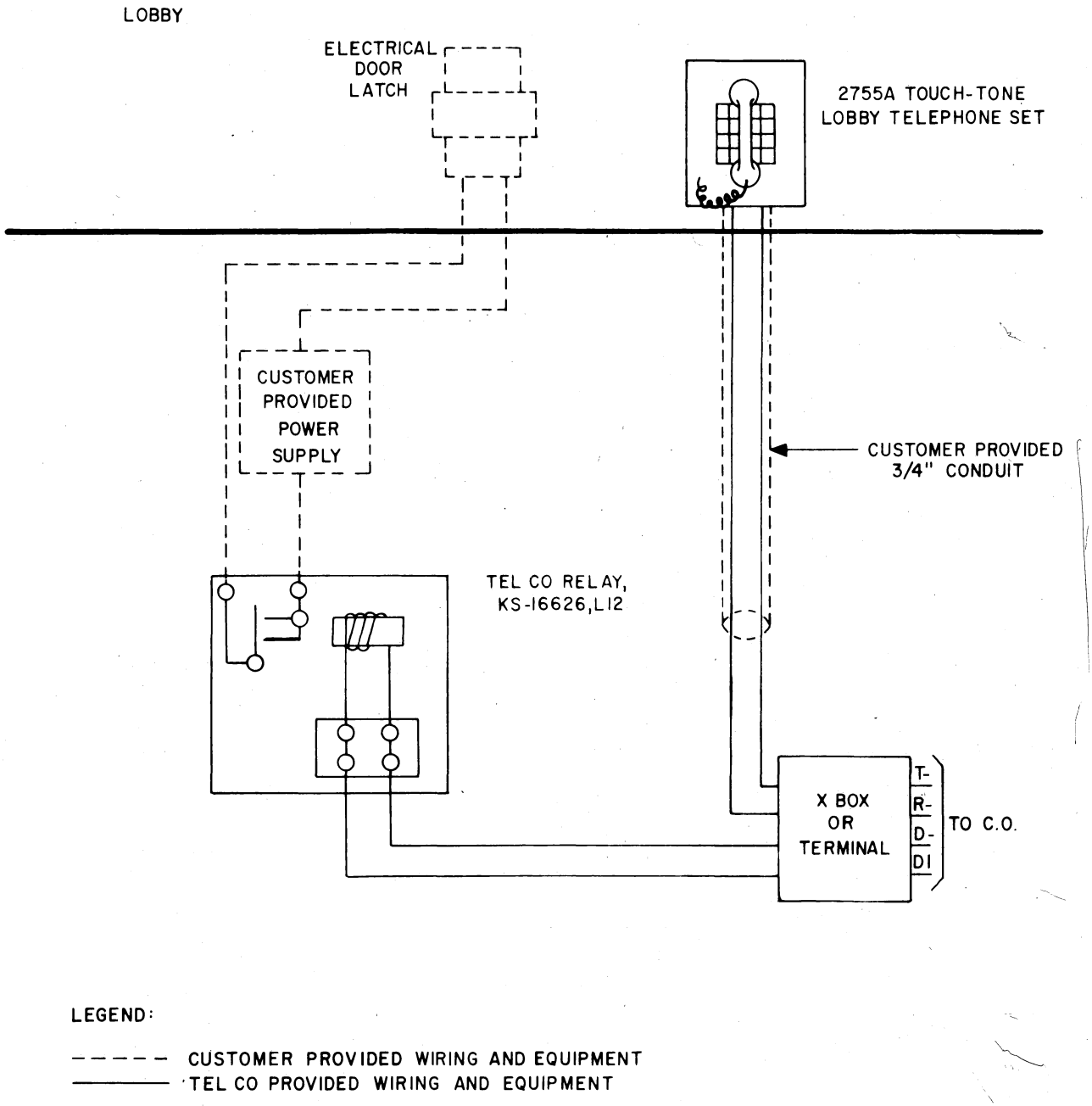

Fig. 2—Apartment House Lobby Connections (Typical)

(see Notes B and H).

List 3—Assembly, wiring, and equipment for one common control unit equipped for 400 apartments and 2 entrance stations per NS-02506-01, App Fig. 1, 6, 8, and ZF option (see Notes C, D, and H).

List 4—Wiring and equipment required in addition to list 1 for third entrance station per NS-02506-01, App Fig. 4, 11, and ZG option (see Note A).

List 5—Wiring and equipment required in addition to list 2 or 3 for third entrance station per NS-02506-01, App Fig. 4, 9, and ZG option (see Notes B and C).

List 6—Wiring and equipment required in addition to list 1 for fourth entrance station per NS-02506-01, App Fig. 5, 12, and ZH option (see Notes A and F).

List 7—Wiring and equipment required in addition to list 2 or 3 for fourth entrance station per NS-02506-01, App Fig. 5, 10, and ZH option (see Notes B, C, F, and H).

List 8—Wiring and equipment required in addition to list 1, 2, or 3 for range extension amplifier per NS-02506-01, App Fig. 13.

List 9—Wiring and equipment required in addition to list 4 or 5 to arrange unit for double gated entrance station queue per NS-02506-01, App Fig. 14, less ZF and ZG options (see Note E).

List 10—Wiring and equipment required in addition to list 9 when unit is in ESS No. 1 or No. 2 central office per NS-02506-01, App Fig. 21.

Notes

A. Equipment is for installation in and use with electromechanical central offices. When an apartment building is served by both an electromechanical and ESS CO, provide J option less K option.

B. Equipment is for installation in electromechanical central offices and for use with ESS No. 1 or No. 2 central offices. The ADAS equipment must be powered from a power supply that is independent of the ESS power supply.

C. Equipment is for installation in and use with ESS No. 1 or No. 2.

D. When the unit is to be mounted on a 25-inch ESS frame, the ED-1A192-50, G8 adapters shall be ordered separately as required.

E. Double gated entrance station queue is required when ADAS is shared by two or more apartment building entities.

F. ZH option is not required when ADAS unit is arranged for double gated entrance station queue.

G. ZI option is required when adding fifth and sixth entrance stations.

H. ZJ option is required when adding fourth entrance station on ADAS unit arranged for double gated entrance station queue.

NJ02506B (WECo Appd)—30 Apartment Unit (Two 2-Inch Mounting Plates)

Equipment—NJ02506B-( )

List 1—Assembly, wiring, and equipment for one apartment unit equipped with thirty circuits per NS-02506-01, App Fig. 2 and 3 (see Notes A and B).

Notes

A. When the unit is to be mounted on a 25-inch ESS frame, the ED-1A192-50, G22 adapters shall be ordered separately as required.

B. CT— designation to be stamped in accordance with directory assignment.

NJ02506C (WECo Appd)—50 Apartment Unit (Three 2-Inch Mounting Plates)

Equipment—NJ02506C-( )

List 1—Assembly, wiring, and equipment for one apartment unit equipped with fifty circuits per NS-02506-01, App Fig. 2 and 3 (see Notes A and B).

Notes

A. When this unit is to be mounted on a 25-inch ESS frame, the ED-1A192-50, G1 adapters shall be ordered separately as required.

B. CT—designation to be stamped in accordance with directory assignment.

NJ02506D (WECo Appd)—70 Apartment Unit (Four 2-Inch Mounting Plates)

Equipment—NJ02506D-( )

List 1—Assembly, wiring, and equipment for one apartment unit equipped with seventy circuits per NS-02506-01, App Fig. 2 and 3 (see Notes A and B).

Notes

A. When this unit is to be mounted on a 25-inch ESS frame, the ED-1A192-50, G2 adapter shall be ordered separately as required.

B. CT—designation to be stamped in accordance with directory assignment.

NJ02506E (WECo Appd)—Six Entrance Stations Unit (One 2-Inch Mounting Plate)

Equipment—NJ02506E-( )

List 1—Assembly, wiring, and equipment for one six entrance stations unit per NS-02506-01, App Fig. 15 and 17 (electromechanical central offices) (see Note A).

List 2—Wiring and equipment required in addition to List 1 for ESS offices per NS-02506-01, App Fig. 19 less App Fig. 17 (see Note B).

Notes

A. This unit increases ADAS entrance station capacity from four to six.

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B. When this unit is to be mounted on a 25-inch ESS frame, the ED-1A192-50, G21 adapters shall be ordered separately as required.

NJ02506F (WECo Appd)—Eight Entrance Stations Unit (Two 2-Inch Mounting Plates)

Equipment—NJ02506F-( )

List 1—Assembly, wiring, and equipment for one eight entrance stations unit per NS-02506-01, App Fig. 15, 16, 17, and 18 (electromechanical central offices) (see Note A).

List 2—Wiring and equipment required in addition to list 1 for ESS offices per NS-02506-01, App Fig. 19 and 20 less App Fig. 17 and 18 (see Note B).

Notes

A. This unit increases ADAS entrance station capacity from four to eight.

B. When this unit is to be mounted on a 25-inch ESS frame, the ED-1A192-50, G22 adapters shall be ordered separately as required.

5. GENERAL NOTES

5.01 In an ESS No. 1 or No. 2 central office, refer to J1A048A-( ) for framework, filter, fuse panel, and fuse alarm required.

5.02 In an ESS No. 1 or No. 2 central office, the common control unit and all associated apartment units should be mounted on the same framework.

5.03 The ADAS lobby telephone set features TOUCH-TONE operation; therefore, precise dial tone must be used with ADAS. In offices which are not equipped with precise dial tone, a 404-C tone generator equipped with a KS-14528, L1 connector may be used.