

TO: ALL HOLDERS OF TELEPHONE ASSEMBLY OVERHAUL MANUAL, 23-02-14

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DESCRIPTION OF CHANGE	D & 0	D/Assy	Cleaning	Insp/Chk	Repair	Assy	F/C	Test	T/Shooting	S/Tools	Storage	IPL	L/Overhaul
Issued new Subject 23-02-14 covering Telephone Assembly part numbers 65V11226-1, -2, -3, -41, -55													



TELEPHONE ASSEMBLY 23-02-14

BOEING P/N 65V11226-1, -2, -3, -41, -55

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
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LIST OF EFFECTIVE PAGES

* Indicates pages revised, added or deleted in latest revision

	F Indicates foldout pages - print one side only							
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^{*[1]} Use applicable procedures in 20-11-04 and standard industry practices.

^{*[2]} Special instructions not required.



TELEPHONE ASSEMBLY

1. <u>DESCRIPTION AND OPERATION</u>

A. Description

- (1) The telephone assemblies contain a handset with spring-loaded cradle in a recessed pan assembly. The units also contain various indicator switches for initiating calls, alerting to calls, or alerting attendants. Some units contain a reading light on/off switch, or a room control unit for selection and volume control of audio channels. The units contain ringers or buzzers for alerting to calls. Hookswitch, relays, and diodes associated with the telephone circuitry are mounted on the back.
- (2) The units are designed for mounting in a recessed wall panel or in the arm of airplane seating.

B. Operation

(1) 65V11226-41

- (a) This unit contains a latching relay associated with the call indicator. 28 volts do is connected at pin 10. Ground is connected at pin 9. Relay Kl has coil ground through the hookswitch when the handset is on hook.
- (b) When the caller depresses a call button, 28 volts do is connected at pin 2 until the button is released. While the 28 volts is present, the sonalert sounds to signal an incoming call. At the same time, the 28-volt do signal is passed through CR2 and CR1 to S2 indicator.
- (c) The incoming 28 volts energizes K1 thru CR3. K1 is latched energized by the pin 10 input through its own contacts. In addition, 28 volts is passed to S2 indicator. When the input call button is released, the sonalert output ceases, but the S2 indicator remains illuminated.
- (d) When the handset is lifted, Kl loses coil ground, relaxes, and S2 indicator is extinguished.

2. REPAIR

- A. All repair may be accomplished with standard industry practices and procedures in 20-11-04 except as noted in the following:
 - (1) When replacing indicator legends (230-240, Fig. 4) (265-270 Fig. 5) cut legend from transparency and insert under clear lens except:
 - (a) 65V11226-1, -2, -3:



- 1) For DS1, insert under translucent (white) lens. Insert red lens under WAIT and green lens under SECURE.
- 2) For DS2, insert under translucent (white) lens.
- (2) Hookswitch actuator adjustment (111, Fig. 4) (225, Fig. 5)
 - (a) The actuator is depressed by the handset when placed on hook. The adjustment screw is located in the end of the actuator opposite the handset. Remove hookswitch assembly (10, Fig. 4, 5) to gain access to the adjustment screw, and replace hookswitch assembly to check adjustment.
 - (b) Adjustment may be made by changing the length of the screw, or by setting the screw to bottom and then backing it out sufficient turns to make switch actuate. When adjustment point is determined, apply Loctite primer, Grade T, and nutlock compound 74 (Loctite Corporation, 705 North Mountain Road, Newington, Connecticutt O6111) to threads per manufacturer's instructions, and re-insert screw to proper adjustment point.
 - (c) Adjustment is correct when continuity or no continuity is obtained as follows:
 - 1) 65V11226-1, -2, -3, -55: Continuity pin 26 to 27 when on hook, no continuity when off hook.
 - 2) 65V11226-41: No continuity pin 8 to 9 when on hook, continuity when off hook.

3. TESTING

- A. Test Equipment
 - (1) Power Supply: 28 volts dc
 - (2) Multimeter: Simpson 260 or equivalent
 - (3) Audio Signal Generator (65V11226-1, -2, -3 only): Hewlett-Packard 205 AG or equivalent
 - (4) Resistors (65V11226-1, -2, -3 only): 150 ohms ±5%, 1/4 watt (2 required, R1, R2)

- (5) Test Connectors (with identified pigtail leads): ITT Cannon Electric, 666 E. Dyer Road, Santa Ana, California 92705)
 - (a) 65V11226-1, -2, -3:

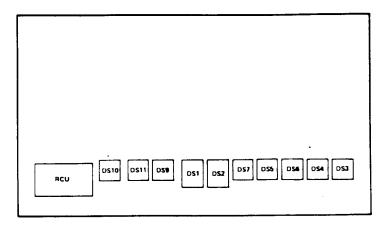
DDC50S (mate with room control unit connector, label J2) DC37S (mate with connector J1)

- (b) 65V11226-41: DEMA15S, mate with J1
- (c) 65V11226-55: DCMA37P, mate with J1

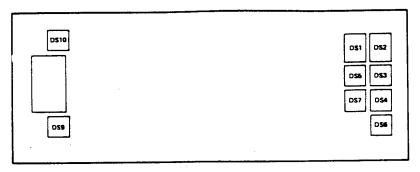
B. Testing

- (1) Connect telephone assembly with test connectors.
- (2) Perform functional test listed in Fig. 2. Component locations are shown by reference designator in Fig. 1. Check for even illumination over indicator lenses. Uneven illumination indicates bulb failure.
 - NOTE: In each four-bulb indicator, only two diagonally opposed bulbs are wired. The red/green indicator is an exception where all four are wired, but only two illuminate at a time.
- (3) Test the telephone handsets after installation and connection to the airplane system.

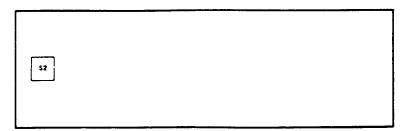




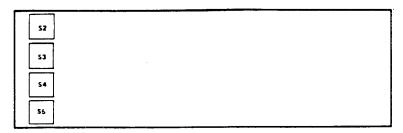
65V11226-1



65-11226-2,-3



65V11226-41



65V11226-55



Component	B	Decided Decides
Tested	Procedure	Required Results
	All pins listed are on connector	Jl unless otherwise noted
	65V11226-1, -2, -3	
DS1	Set handset on hook Connect 28 v dc to pin 19 Connect pin 23 to ground Connect pin 31 to ground Disconnect 23, 31	DS1 red (WAIT) illuminated DS1 green (SECURE) illuminated DS1 extinguished
DS2	Connect pin 18 to ground Disconnect pin 18	DS2 illuminated DS2 extinguished
DS3	Connect pin 16 to ground Disconnect pin 16	DS3 illuminated DS3 extinguished
DS4	Connect pin 14 to ground Disconnect pin 14	DS4 illuminated DS4 extinguished
DS5	Connect pin 8 to ground Disconnect pin 8	DS5 illuminated DS5 extinguished
DS6	Connect pin 12 to ground Disconnect pin 12	DS6 illuminated DS6 extinguished
DS7.	Connect pin 10 to ground Disconnect pin 10	DS7 illuminated DS7 extinguished
DS9/DS10	Connect J2-36 to 28 v dc Connect ground: (65V11226-1, -2) J2-39 (65V11226-3) J2-40	DS9, DS10 extinguished DS9, DS10 extinguished
	NOTE: If DS10 not extinguished, It should extinguish.	depress once and release.
DS9	Depress DS9, release Depress DS10, release Depress DS10 again, release Disconnect J2-36, J2-39, J2-40	Illuminated while depressed DS10 illuminated DS10 extinguished
DS8	Connect J1-21 to ground Connect J1-20 to 28 v dc Disconnect J1-20, J1-21	Buzzer shall sound Buzzer shall cease



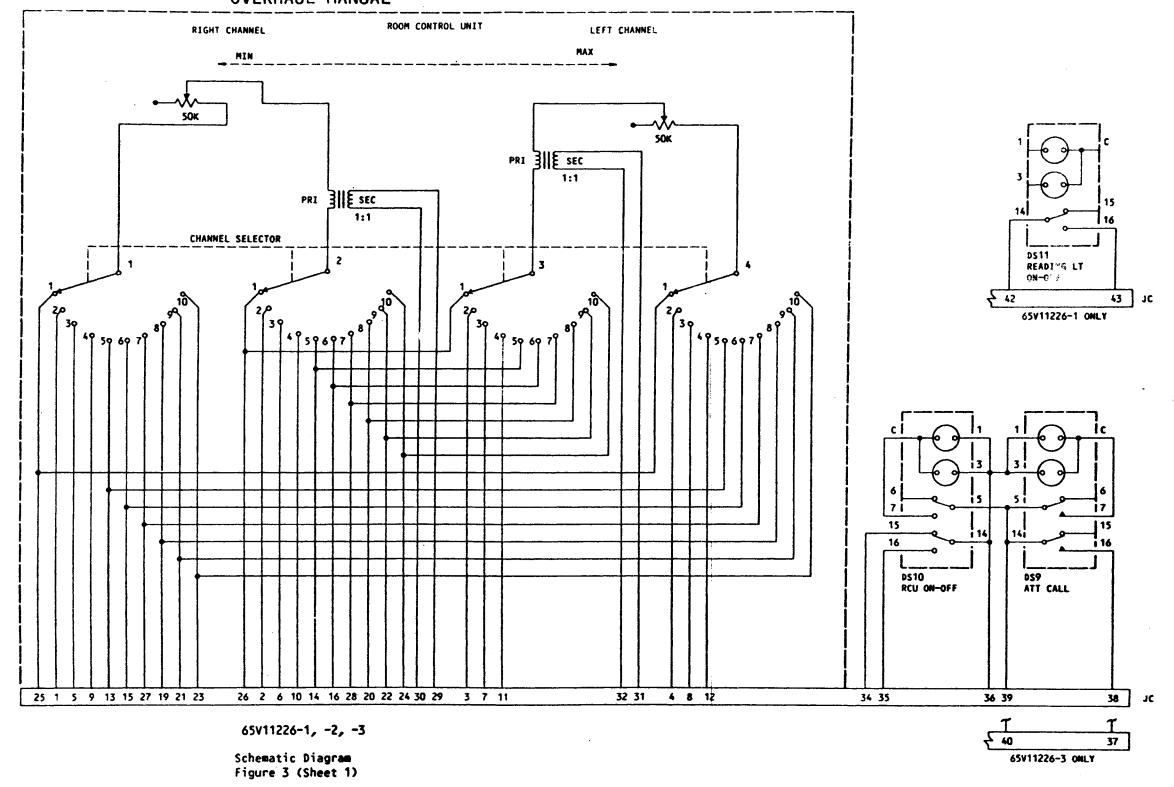
Component Tested	Procedure		Required Results
165 064			Y 0 11 11-
KI	Measure between pins:	22 to 24	No Continuity
		25 to 24 2 to 1	Continuity No Continuity
		2 to 3	Continuity
		21 to 28	Continuity
	Connect pin 21 to grou		0011 0111111 0
	Lift handset from hook		
Sla/Kl		21 to 28	No Continuity
DS5/Kl	Depress and hold DS5	21 to 26	Continuity
DS5	Release DS5	21 to 26	No Continuity
K1		24 to 22	Continuity
		24 to 25	No Continuity
	·	2 to 1	Continuity
	- 1, 11 pgr	2 to 3	No Continuity Continuity
	Depress and hold DS5	21 to 26	No Continuity
	Disconnect pin 21	21 66 20	NO CONCINCTOR
	Release DS5 Connect pin 21 to grou	na l	
nea	Depress and hold DS3	21 to 26	Continuity
DS3	Release DS3	21 to 26	No Continuity
	Disconnect pins 19, 21		·
	Depress DS3, release	17 to 1	Continuity while depressed
DS4	Depress DS4, release	15 to 1	Continuity while depressed
DS5	Depress DS5, release	9 to 1	Continuity while depressed
DS6	Depress DS6, release	13 to 1	Continuity while depressed
DS7	Depress DS7, release	11 to 1	Continuity while depressed
SIB		26 to 27	No Continuity
	Set handset on hook	26 to 27	Continuity
		J2 Pins	
DS10		36 to 34	Continuity
10210		36 to 35	No Continuity
	Depress DS10, release		Continuity
		36 to 34	No Continuity
	Depress DS10, release	36 to 34	Continuity
	65V11226-1,-2 (J2 Pins)	
DS9	Depress DS9, release	39 to 38	Continuity while depressed
	65V11226-3 (J2 Pins)		
DS9	Depress DS9, release	40 to 37	Continuity while depressed
1			1

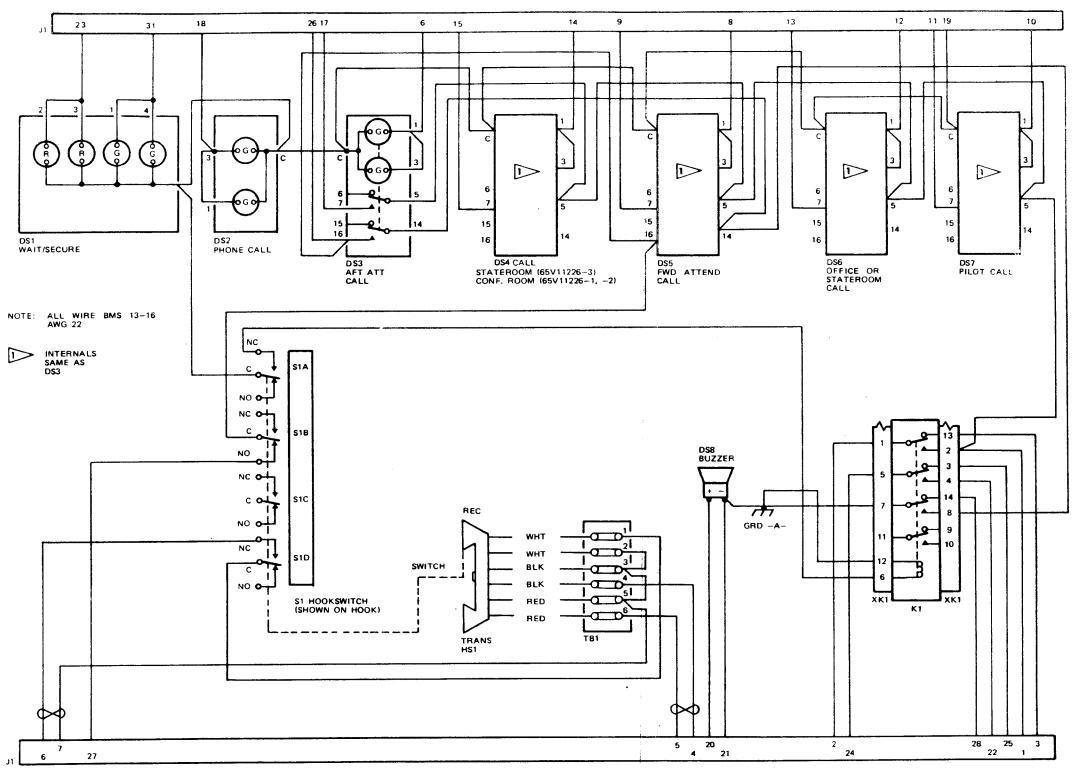
Component		
Tested	Procedure	Required Results
	65V11226-1 (J2 Pins)	
DS11	Depress DS11, release, and repeat 42 to 43	Alternating con and no con
<u>Step</u>	65V11226-1, -2, -3 (Room Control Un	nit Tests, all J2 pins)
1 2 3	Set RCU channel select to 2 Connect chmmeter pin 1 to pin 2 Rotate volume control through its full range	Chmmeter must vary smoothly from less than 100 ohms (large dot in window) to 50k (small dot in window)
4 5 6 7	Connect ohmmeter pin 3 to pin 4 Rotate volume control through its full range Set volume control to minimum Set channel selector, and measure between listed pins:	Ohmmeter must indicate same as above Ohmmeter must indicate 50k ±10%
	<u>Channel</u> <u>Pins</u>	
	3 5 to 6 3 7 to 8 4 9 to 10 4 11 to 12 1 25 to 26 5 13 to 14 6 15 to 16 7 27 to 28 3 19 to 20 9 21 to 22 10 23 to 24	50k ±10% 50k ±10% 50k ±10% 25k ±10% 25k ±10% 25k ±10% 25k ±10% 25k ±10% 25k ±10% 25k ±10% 25k ±10%
8 9 10 11 12 13	Set signal generator for 1000 Hz, I l-volt ac output Connect Rl between pins 29 and 30, Ground pins 29 and 31 Connect signal generator input acrosset channel selector to 1, volume of (large dot in window) Measure volts ac	and R2 between pins 31 and 32



Component Tested	Procedure	Required Results
S1C/S2 S1A S1B/R1 S1B S1A S1B S2 S2 S2 S2 S2	Set handset on hook Measure between pins 10 to 11 9 to 8 6 to 7 Lift handset from hook 6 to 7 9 to 8 10 to 11 Set handset on hook 10 to 3 Depress S2, release 10 to 3 Depress S2, release 10 to 11 Connect 28 v dc to pin 10 Connect ground to pin 9 Connect 28 v dc to pin 2 for one to 2 seconds, disconnect	No continuity No continuity 6.2k ±5% No continuity Continuity Continuity No continuity Continuity No continuity Continuity while depressed Continuity while depressed Sonalert shall sound and S2 illuminate when connection made. Sound shall stop at disconnect, but S2 shall remain illuminated
S1	Lift handset from hook Connect 28 v dc momentarily to pin 2 Remove all connections 65V11226-55	S2 shall extinguish S2 shall illuminate and sonalert shall sound while connection in place
S2 S3 S4 S5	Set handset on hook Connect 28 v dc to pin 19 Connect pin 18 to ground Connect pin 10 to ground Connect pin 8 to ground Connect pin 16 to ground Remove all ground connections	S2 illuminated S3 illuminated S4 illuminated S5 illuminated Indicators extinguished
RI SID KI	Measure between pins 21 to 28 2 to 3 2 to 1 Connect pin 21 to ground 2 to 1 Lift handset from hook 2 to 1 2 to 3 21 to 28	Continuity Continuity No Continuity No Continuity Continuity No Continuity No Continuity

Component Tested	Procedure		Required Results
S4/K1 S4/S5 S5 K1	Depress S4, hold Release S4 Depress S5, hold Disconnect pin 21 Release S5	21 to 26	Continuity No Continuity Continuity No Continuity
S4 S5 S3 S1C S1A S1C	Depress S4, release Depress S5, release Depress S3, release Set handset on hook Connect pin 20 to 28 v	1 to 17 1 to 11 24 to 22 24 to 25 26 to 27 26 to 27 24 to 25 24 to 22	Continuity while depressed Continuity while depressed Continuity while depressed Continuity No Continuity No Continuity Continuity Continuity No Continuity Sonalert shall sound
MI.	Connect pin 21 to grou Disconnect pins 20, 21	ınd	Sonalert shall sound



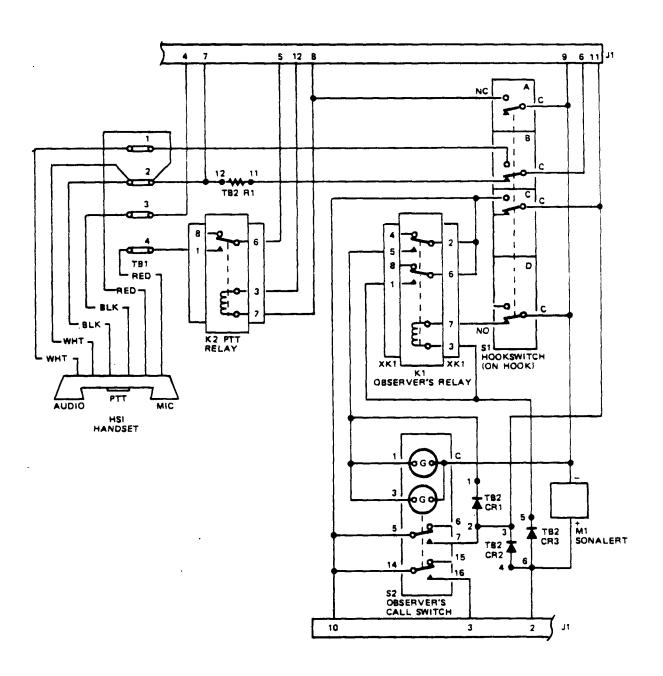


65V11226-2,-3

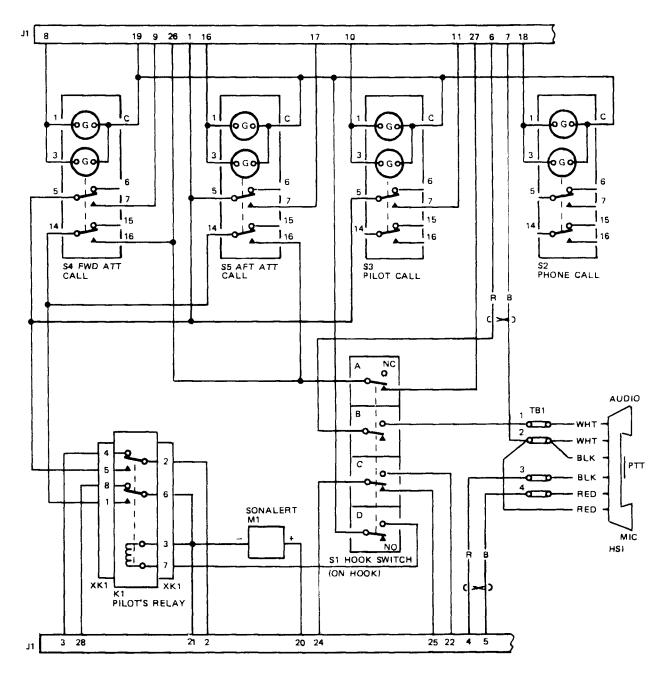
Schematic Diagram Figure 3 (Sheet 2)

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65V11226-41



65V11226-55



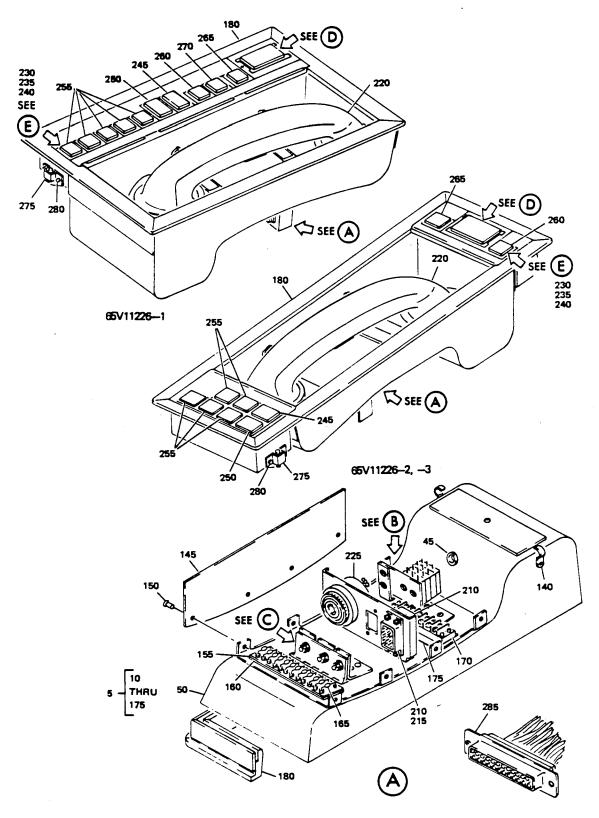
4. ILLUSTRATED PARTS LIST

VENDORS

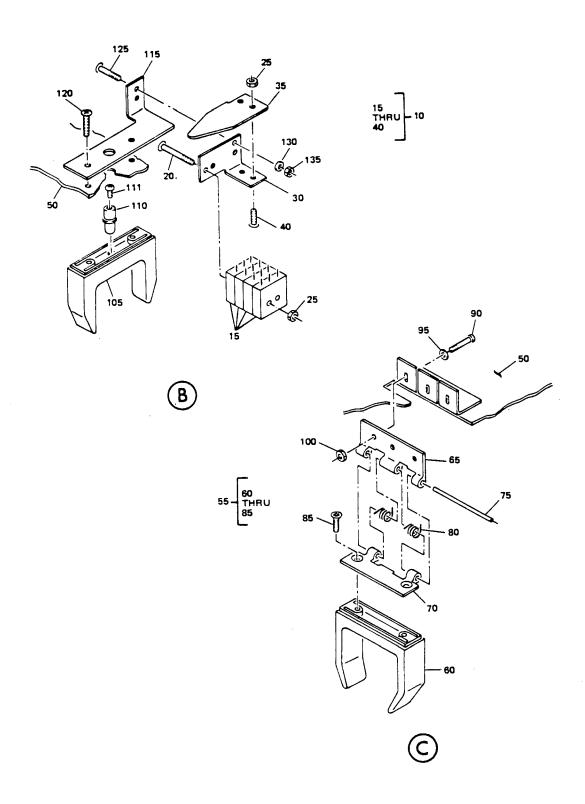
V08205	RENTON COIL SPRING CO., P.O. BOX 328, 325 BURNETT NORTH, RENTON, WASHINGTON 98055
V10875	CARTER ENGINEERING CO., 232 SOUTH GLASGOW, INGLEWOOD, CALIFORNIA 90301
V12522	STACOSWITCH INC., 1139 BAKER ST., COSTA MESA, CALIFORNIA 92626
V7146 8	ITT CANNON ELECTRIC, 666 E DYER ROAD, SANTA ANA, CALIFORNIA 92705
v 75382	KULKA ELECTRIC CORP., 633 S. FULTON AVE., MT. VERNON, NEW YORK 10550
v83014	HARTWELL CORP., 900 S. RICHFIELD ROAD, PLACENTIA, CALIFORNIA 92670
v89231	GREYBAR ELECTRIC, 1911 UNION, OAKLAND, CALIFORNIA 94607
V 90303	MALLORY BATTERY CO., SO. BROADWAY, TARREYTOWN, NEW YORK 10591
v91 663	ARMEL ELECTRONICS, 1601 - 75TH ST., NORTH BERGEN, NEW JERSEY 07047
v 91833	KEYSTONE ELECTRONICS CORP., 49 BLEEKER ST., NEW YORK, NEW YORK 10012



65V11226



Telephone Assembly Figure 4 (Sheet 1)



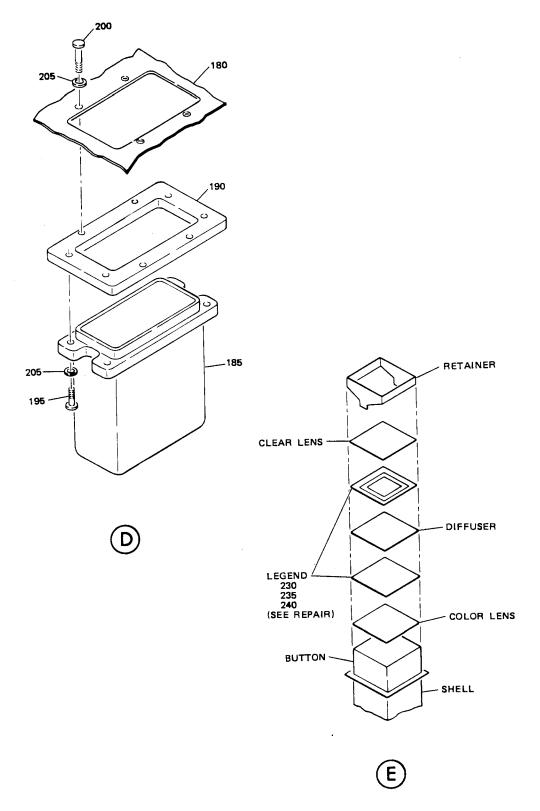


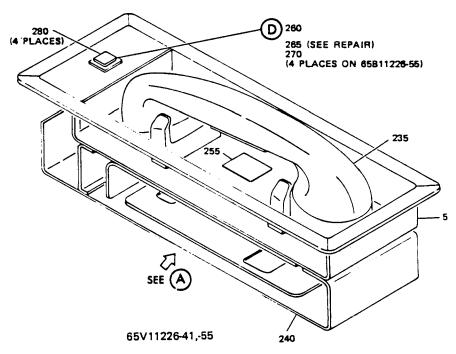


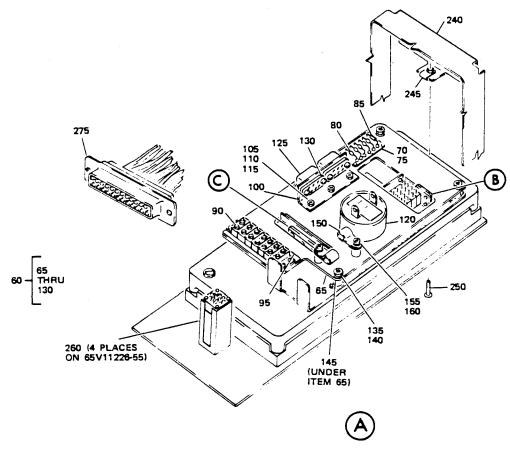


FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	USE CODE	QTY PER ASSY
180 65 180 65 180 65 180 65 190 65 190 65 190 80 205 AI 210 80 215 80 225 230 65 235 65 240 65 245 21 250 25 260 25 260 25 270 25 280 80 285 80 285 80 285 80 285 80 285 80 285 80 285 80 285 80 285 80 285 80 285 80 285 80	5V11224-2 5V11224-1 5V11224-1 5V11224-12 5V11223-15 ACS12BE02-3 ACS12BE02-5 N960PD3L ACR13CE2 RCC5KM E525-15-1 C628 5V10905-14 5V10905-16 RO1-2C60X8- RCXX-XXXX RC1-2C10X8- GXXX-XXXX S2A-2C10X8- AXXX-XXXX S2B-2C10X8- BXXX-XXXX		FRAME ASSY, TELEPHONE FRAME ASSY, TELEPHONE FRAME ASSY, TELEPHONE CONTROL, IFE ESCUTCHEON SCREW SCREW WASHER RELAY SCOKET, V91663 HANDSET, V10875 SONALERT, V90303 LEGEND LEGEND LEGEND LEGEND INDICATOR, V12522 INDICATOR, V12522 SWITCH-INDICATOR, MOMENTARY, V12522 SWITCH-INDICATOR, ALTERNATE, V12522 SWITCH-INDICATOR, ALTERNATE, V12522 SWITCH-INDICATOR, ALTERNATE, V12522 NYLATCH, V83014 SCREW CONNECTOR, V71468 LAMP LAMP	A B C A A B C	11114 81111111 1 5 1 1 1 24144



FIG. 4 REFERENCE DESIGNATION INDEX (SEE SCHEMATIC DIAGRAM)			
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.	
DSL DS2 DS3 THRU DS7 DS9 DSLO	2R01-2C60X8-RGXX-XXXX 2R01-2C10X8-GXXX-XXXX 2S2A-2C10X8-GXXX-XXXX 2S2A-2C10X8-AXXX-XXXX 2S2B-2C10X8-BXXX-XXXX	245 250 255 260 265	
DS11 HS1 J1 K1 TB1	2S2B-2C10X8-WXXX-XXXX CE525-15-1 DC37P BACR13CE2 600A6	270 220 285 210 170	
TB1 XK1	600-6 hrcc5km	170 215	
D S 8	sc628	225	
SLA THRU SLD	ISXLH58	15	





Telephone Assembly Figure 5 (Sheet 1)

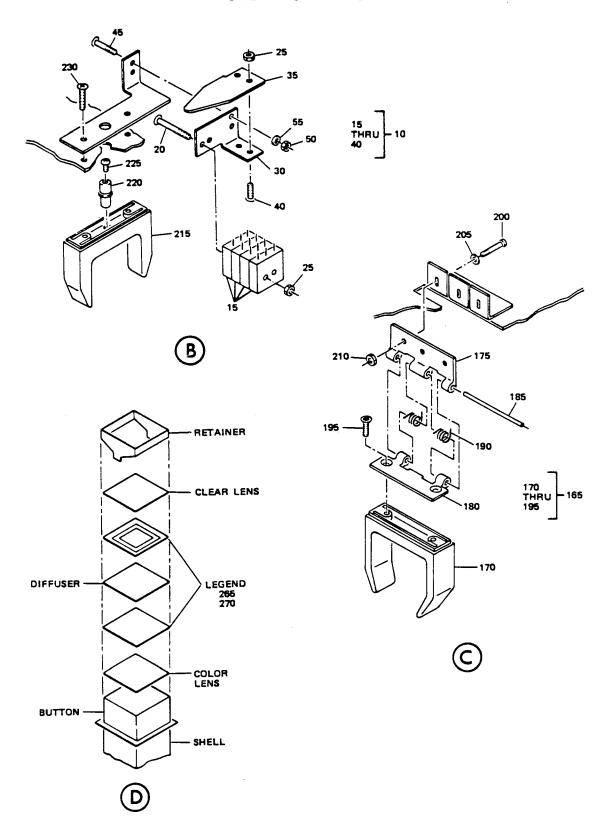


FIG. & ITEM P. NO.	ART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	USE CODE	QTY PER ASSY
1 65VI 5 65VI 10 65VI 15 1SXI 20 BACS 25 BACN 30 65VI 35 65VI 40 BACS 45 BACS 50 BACN 55 MASS 60 65VI 70 65VI 70 65VI 70 65VI 70 65VI 70 65VI 1N50 85 RLOT 90 600- 90 MSS 110 BACN 120 BACS 120 BACS 125 BACR 126 BACR 127 BACS 128 BACR 129 BACR 120 BACS 120 BACS 125 BACR 135 BACS 140 AN96 145 BACS 150 BACS 150 BACS 150 BACS 150 BACS 160 BACS 170 AN96 170 AN96 170 AN96	12BF02-16 10DN26 1223-8 1223-9 12BF02-4 12BF02-4 10DN26 20-2 1226-42 1223-26 1226-38 1226-39 61 06200GM 66 0-6XP1A 0206-3 12CB06-5 0PD6L 10JC06		TELEPHONE ASSY FRAME ASSY FRAME ASSY HOOKSWITCH ASSY SCREW NUT BRACKET SPRING SCREW NUT WASHER COMPONENT ASSY PLATE, MOUNTING TERMINAL BOARD INSULATOR DIODE RESISTOR, 6.2k ±2%, 1/4w TERMINAL BOARD, V75382 T	A B	114041100001111151111133310044AR1111111



FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	USE CODE	QTY PER ASSY
5- 1995 1995 2005 2015 2015 2015 2015 2015 2015 201	RCS3381 NAS514P1032-6 BACS12CB04-6 AN960PD4 BACN10JC04 65V11223-7 65V11223-6 NAS600-4P NAS514P1032-8 CE525-45-1 CE525-15-1 65V11223-22 BACN10FX61 NAS514P632-5 BAC27DPA2746 2S2A1C10X8- GXXX-XXXX 2S2A1C10X8- GXXX-XXXX 65V10905-12 65V10905-13 DEMA15PWS DCMA37SWS 387 387		SPRING, VO8205 SCREW . SCREW . WASHER . NUT . HANGAR, FIXED . ACTUATOR . SCREW . SCREW . HANDSET, VLO875 . HANDSET, VLO875 . PAN ASSY . CLIPNUT . SCREW . LABEL . SWITCH-INDICATOR, MOMENTARY, V12522 . SWITCH-INDICATOR, MOMENTARY, V12522 . LEGEND . LEGEND . LEGEND . LEGEND . CONNECTOR, V71468 . CONNECTOR, V71468 . LAMP . LAMP	AB ABBABAB	233331112112211 4 111146



FIG. 5 REFERENCE DES	SIGNATION INDEX (SEE SCHEMATIC DIAGRAM	<u> </u>
REFERENCE DESIGNATION	PART NUMBER	ITEM NO.
CR1-CR5	1N5061	80
HS1	CE525-45-1	225
HS1	CE525-15-1	225
J1	DEMA15PWS	265
J1	DCMA37SWS	265
KL, K2	BACR13CD2	125
ML	SC628	120
RL	RLO7C6200GM	85
SLA-SLD	ISX1H58	15
S2-S5	2S2A1C10X8-GXXX-XXXX	250
TBl	600A6	90
TBl	600-6	90
TB2	65V11226-38	70
XKl, XK2	HRCC17KM	130