BELL SYSTEM PRACTICES Station Operations Manual Coin Stations

SECTION C39.023 Issue 1, February, 1959 AT&TCo Standard

# COIN COLLECTORS

## **IDENTIFICATION AND ASSEMBLY OF PARTS**

#### 1.00 INTRODUCTION

This section covers general information pertaining to the assembly of coin collector equipment and related identifying code numbers.

#### 2.00 GENERAL

2.01 The coin collector consists of a steel lower housing mounted on a cast iron or aluminum backplate, and a steel upper housing which locks in place on the backplate and lower housing. The lower housing includes a cash compartment, equipped with a steel door and lock, and a coinreturn chute.

2.02 Component parts are assembled on the backplate and lower housing and either on or in the upper housing. Circuit connections between the removable upper housing and the backplate are made by means of spur-type contacts on the upper housing, and contact springs on the backplate.

2.03 Since the introduction of the first 50-type coin collectors, they have followed the same basic design. However, they lend themselves to modification, conversion, and interchange of parts to meet changing requirements. The result is the variety of types currently in use (see Fig. 1).



Fig. 1 - Various Types of Coin Collectors

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#### SECTION C39.023

## 3.00 ASSEMBLY OF PARTS - GENERAL

**3.01** The components associated with each type coin collector are listed in the appropriate connection section.

## Type of Wiring

3.02 Early-type coin collectors made use of a wood terminal strip for station wiring with separately mounted switchhook and transfer spring assemblies, as shown in Fig. 2. Later designs make use of a combined switchhook and transfer spring assembly as shown in Fig. 3, 4, and 5. The antisidetone induction coil and related capacitor of the talking circuit were mounted on the backplate for 180 and 190 series coin collectors, as shown in Fig. 3 and 4. The ringing bridge is provided by a separately mounted subscriber set. All network-type and earlier induction-coil types use an externally mounted subscriber set for both talking and ringing features (see Fig. 2 and 5).



Fig. 2 – Wood Terminal Strip with External Induction Coil and Capacitor



Fig. 4 – Combined Assembly with Induction Coil and Capacitor



Fig. 5 – Combined Assembly with External Network

### Cording

3.03 Cording shall be arranged in a manner which will eliminate the possibility of interference with gongs, coin channels, or any moving part. Spade tip or wire connections shall not touch any framework or termination point other than the one intended. Examples of cord clamps and wire guides, clamps, and holders are shown in several figures in this section. Handset cords at the present time are secured by P-12A096 clamps as shown in Fig. 4 and 5. Previously, they were anchored by stay loops, hooks, or cords.

### 4.00 UPPER HOUSING

## Coin Gauge and Washer-reject Mechanism

4.01 The coin gauge is riveted to the upper housing and is not replaced in the field.

When provided, the washer rejector and associated coin-release push-button mechanism are also riveted or permanently attached to the upper housing and are an integral part of the assembly, as shown in Fig. 10.

#### **Dial and Adapter**

4.02 All new coin collectors are equipped with 6-type dials. Shop-reissued coin collectors are equipped with 6-type dials when so specified by the telephone company. The assembly of a 6-type dial is shown in Fig. 6. The 63A adapter incorporates a coin-deflector feature to prevent dropped coins from lodging behind dial.

4.03 The 5-type dial may be used for replacement of 5-type dials if consistent with zoning practices (see Fig. 7). The apparatus and parts associated with a 5-type dial are not interchangeable with those used with a 6-type dial. A P-14A544 coin deflector may be used with the 5-type dial and its associated 56A dial adapter. This deflector cannot be used on coin collectors equipped with washer-reject mechanisms. The 5-type dial and 56A dial adapter are mounted in the dial cup by three P-240420 screws.



Fig. 6 – Assembly of 6-type Dial



Fig. 7 – Transmitter-Receiver Type

4.04 Replacement of dials and associated equipment is covered in the C Section entitled Coin Collectors, Maintenance, General.

### **Apparatus Blank**

4.05 The P-81C900-type apparatus blank assembly is used to cover the dial cup on coin collectors equipped for manual service. The 50C apparatus blank may be used provided the coin collector is not equipped with washer-reject and coin-release push-button mechanism (see Fig. 1). Apparatus blanks are secured from the rear by three P-242938 screws.

4.06 The P-81C900 or 50C apparatus blank may be used as instruction cardholder on dial coin collectors (see Fig. 8). Two mounting holes are provided in upper housing below dial. Apparatus blanks are mounted by two P-122977 0.112-36 by 1/4 inch RH machine screws. When not used, holes are plugged with P-243217 RH slotless machine screws, P-92383 hexagon nuts, and P-423631 external-tooth lock washers.



### Cardholders

4.07 Coin collectors may be ordered equipped with 8B cardholders. Cardholders are mounted on top of upper housing behind coin gauge as shown in Fig. 8. The cardholder is held in place by three P-243217 RH slotless machine screws, P-92383 hexagon nuts, and P-423631 external-tooth lock washers. The 8B cardholder replaces earlier 1B and 8A cardholders.

#### **Coin-chute Assembly**

**4.08** Coin chutes or coin-chute assemblies are mounted inside the upper housing. Assemblies associated with the washer-reject feature use

two P-12A680 screws, two P-12A681 restoring springs, and one P-339521 screw, as shown in Fig. 9. Coin chutes not associated with washerreject mechanisms are mounted by three P-339521 screws.

**4.09** Coin chutes and coin-chute assemblies are shown in Table A according to types of service, coin features, and equipment.

4.10 Coin collectors using coin-chute assemblies equipped with a P-349754 gong assembly have the 452-type capacitor, which is associated with the electromagnet, mounted on the upper housing underneath the coin chute with a P-347181 clip as shown in Fig. 10.



Fig. 9 - Upper Housing, Rear View



T.	Λ	D	E.	C	•	
	m	D	Ŀ	5	~	

c	hute Only			Service		
U.S.	U.S. and Canadian	See Note	U.S.	U.S. and Canadian	See Note	
P-338883	P-338884		P-338899	P-338900	3	Manual Postpay
P-339526		1	P-339528		4	10¢ Prepay
P-339526	P-339527	1	P-340222	P-340223	3	10¢ Prepay
P-340042		2	P-340044		4	10¢ CDO Postpay
P-340042	P-340043	2	P-340224	P-340225	3	10¢ CDO Postpay
P-20A119	P-20A120	1	P-20A125	P-20A126	3	10¢ Prepay (Washer Reject)
P-20A121	P-20A122	2	P-20A127	P-20A128	3	10¢ CDO Postpay (Washer Reject)

### COIN CHUTES AND COIN-CHUTE ASSEMBLIES

Notes:

1. Equipped with a nonpolarized electromagnet.

2. Equipped with a polarized electromagnet.

3. Equipped with a P-349754 gong assembly.

4. Equipped with a 452B capacitor.

4.11 Coin-chute assemblies not equipped with a P-349754 gong assembly are used on coin collectors having the gongs mounted on the sides of the upper housing or mounted on a swing-type bracket attached to the upper housing. Coin-chute assemblies equipped with a 452B capacitor are used only in upper housings having the gongs mounted on the sides of the housing.

4.12 Manual postpay coin collectors may use a 10-cent coin chute or coin-chute assembly when the chute is equipped with a P-339098 cutover clip to hold the electromagnet arm in its operated position (see Fig. 11).



Fig. 11 — Prepay Coin Chute Equipped with Cutover Clip for 5-cent Service

## TABLE B

## UPPER HOUSING ASSEMBLIES FOR COIN COLLECTORS

	U.S. Coi	ins	U.S. and Canadian Coins			
Service	Coin Collectors	Equipped Upper Housings	Coin Collectors	Equipped Upper Housings		
	150K, 162A, 162C	BA-220492C	150L, 162B, 162D	BA-220492H		
Manual	152C, 164C	BA-220493C	152D, 164D	BA-220493D		
Postpay	182C, CN	BA-220494C	182D, DN	BA-220494D		
	200C	P-81B803	200D	P-81B903		
	158G, 168G	BA-220496G	158H, 168H	BA-220496H		
L	177G, 178G	BA-220498G	177H, 178H	BA-220498H		
10¢	193G	BA-220500G	193H	BA-220500H		
Dial	193GN, 210G	P-81C403	193HN, 210H	P-81C503		
CDO	198G	BA-220502G or P-10E126	198H	BA-220502H		
	198GN, 212G	P-81B603	198HN, 212H	P-81B703		
	155C, 166C	BA-220495C	155D, 166D	BA-220495D		
	174C, CS, CT 176C, CS, CT	BA-220497C	174D, DS, DT 176D, DS, DT	BA-220497D		
	191C, CS, CT 195C, CS, CT	BA-220499C	191D, DS, DT 195D, DS, DT	BA-220499D		
10¢ Manual Prepay	191CN, CNS, CNT 195CN, CNS, CNT 220C, CT, 230C	P-81C003	191DN, DNS, DNT 195DN, DNS, DNT 220D, DT, 230D	P-81C103		
	196C, CS, CT 197C, CS, CT	BA-220501C	196D, DS, DT 197D, DS, DT	BA-220501D		
	196CN, CNS, CNT 197CN, CNS, CNT 223C, CT, 233C	P-81B203	196DN, DNS, DNT 197DN, DNS, DNT 223D, DT, 233D	P-81B303		
	155G, D-178457 166G, D-178875	BA-200495G	155H, 166H	BA-220495H		
	174G, GS, GT D-178940 176G, GS, GT D-178942	BA-220497G	174H, HS, HT 176H, HS, HT	BA-220497H		
	191G, GS, GT D-179432 195G, GS, GT D-179433	BA-220499G	191H, HS, HT 195H, HS, HT	BA-220499H		
10¢ Dial Prenav	191GN, GNS, GNT 195GN, GNS, GNT 220G, GT, 230G	P-81C203	191HN, HNS, HNT 195HN, HNS, HNT 220H, HT, 230H	P-81C303		
Ticpay	196G, GS, GT D-179532 197G, GS, GT D-179533	BA-220501G or P-13A766	196H, HS, HT 197H, HS, HT	BA-220501H		
	196GN, GNS, GNT 197GN, GNS, GNT	P-81B403	196HN, HNS, HNT 197HN, HNS, HNT	P-81B503		
	223G, GT, 233G See Note	P-81B403 or P-81B451 or P-81B460	223H, HT, 233H	P-81B503		

Note: P-81 assembly numbers are assigned from a block of numbers which indicate color significance. The last two digits of the number indicate the type of finish, ie, 03 black, 51 moss green, 60 light beige.

**4.13** A radio-frequency suppression filter, although it is attached to the coin chute, is not considered a part of the chute assembly. The filter when used is mounted on the rear side of the coin chute at the lower left corner. A mounting hole is provided as shown in Fig. 9. Dial postpay coin collectors are normally equipped with 61R filters. Dial prepay coin collectors when equipped with 61R filters should be identified by a red dot located on the back of the coin gauge.

#### **Upper Housing Assemblies**

**4.14** Fully equipped upper housing assemblies used on the various types of coin collectors are shown in Table B.

#### 5.00 LOWER HOUSING

### **Cash Compartment**

5.01 The self-locking coin receptacle and 1A coin-collector door equipped with lock for the cash compartment are controlled according to arrangements with the Commercial Department. The self-locking receptacle consists of a 1B coin receptacle equipped with a 1C coin-receptacle cover. The use of the self-locking coin receptacle requires a 1A coin-receptacle rail on the bottom of the mechanism base in the cash compartment (see Fig. 8).

### **Return Chute**

5.02 The lower part of the coin-return chute is located in the lower housing to the left of the cash compartment. When a pull bucket is provided, it acts as a receptacle for returned coins. To remove coins, pull bucket is opened by handle marked COIN RETURN, PULL. The pull bucket in both the closed and open positions prevents access to the return chute. The assembly of the pull bucket is covered in the C Section entitled Coin Collectors, Pull Buckets, Maintenance.

#### **Backplate Assembly**

5.03 Various typical combinations of parts mounted on the backplate are illustrated in Fig. 2, 3, 4, and 5.

#### Mechanism-unit Assembly

5.04 The mechanism-unit assembly is mounted

on top of the lower housing. Four types are provided: manual postpay, Fig. 12; dial postpay, Fig. 13; manual or dial prepay equipped with 2-coil coin relay, Fig. 14; and manual or dial prepay equipped with single-coil slow-release relay, Fig. 15.



Fig. 12 - Manual Postpay











Fig. 15 — Manual or Dial Prepay, Single-coil Slow-release Coin Relay

## 6.00 COIN COLLECTOR CODE NUMBERS

6.01 Numerical codes in association with alphabetical suffixes are used to identify the various types of coin collectors. D specification numbers are used to identify sets made for limited usage.

#### **Color Coin-collector Apparatus**

6.02 Coin-collector apparatus for dial service,

which is available in color, and its identifying code suffix are listed in Table C. All orders for coin-collector apparatus shall include the appropriate suffix.

## TABLE C

## COLOR APPARATUS CODES

	Color						
Apparatus	Black Moss Lig Green Bei						
	Code Suffix						
223G Coin Collector 233G Coin Collector 1A Door	-3 -3 -3	-51 -51 -51	-60 -60 -60				
8B Cardholder 14B Lock 19C Leeb	-3 -3	-51 -51	-60 -60				
158B Number plate 63A Dial Adapter	3 3 3	-51 -51 -51	-60 -60 -60				
G1BR Handset G3FR Handset	-3	-51	-60				

**Note:** Moss green and light beige coin collectors have clear plastic finger wheels on 6M-3 dials and P-11E152 chrome-plated switchhooks. The phenol plastic pull bucket is black on all sets.

#### **Historical Development**

6.03 The historical development of prepay coin collectors and their basic features are shown in Fig. 16.

#### **Code Number Characters**

6.04 The characters in 200 series coin collector code numbers have the following signifiance:

First digit — telephone circuit

2 — 425B, network-type telephone circuit

#### Second digit - service

- 0 Manual postpay, 5-cent coin chute
- 1 10-cent dial postpay (CDO)
- 2 10-cent prepay, 4-spring dial shorting coin relay
- 3 10-cent prepay, slow-release singlecoil dial shorting coin relay. Coin collector has corrosion-resistant finish.

#### Third digit — features

- 0 Basic collector
- 2 Washer reject
- 3 Pull bucket and washer reject

### Letter - service and coins

- C Manual, U.S. coins
- D Manual, U.S. and Canadian coins
- G Dial, U.S. coins (B-type numberplate)
- H Dial, U.S. and Canadian coins (B-type numberplate)

All 200 series coin collectors have cast aluminum backplates. Lower numbered codes have cast iron backplates.

6.05 No one definite plan or arrangement can be applied to lower-numbered codes or the relationship between old code numbers and converted code numbers. However, 2-digit numbers indicate sidetone telephone circuits and 3-digit numbers indicate antisidetone telephone circuits.

6.06 Code numbers for 180 and 190 series coin collectors use the same general coding plan with special features available on the 191 and 193 types. Other converted coin collectors, if applicable, are also coded to this plan. The 180 series was arranged for 5-cent initial deposit; the 190 series, for 10-cent initial deposit. Both are handset types. Characters having common meaning are as follows:

Third digit — service and special features

(1 - Prepay)

180

or

190

Series

190

Series

Only

Not

Re-

issued

- 2 Postpay manual
- 3 Postpay dial (CDO)
  - 5 Prepay equipped with pull bucket
  - 6 Prepay equipped with washer reject
  - 7 Prepay equipped with pull bucket and washer reject
  - 8 Postpay dial equipped with washer reject (CDO)

#### First letter — service and coin features

- C Manual, U.S. coins
- D Manual, U..S and Canadian coins
- E Dial, U.S. coins (A-type numberplate)
  - F Dial, U.S. and Canadian coins (A-type numberplate)
  - G Dial, U.S. coins (B-type numberplate)
  - H Dial, U.S. and Canadian coins (B-type numberplate)

Second, or second and third letters — features

- N 425B network-type telephone circuit
- S 4-spring dial shorting coin relay
- T Slow-release, single-coil dial shorting coin relay
- R Spring cord (stamped on carton only)
- L Local battery talking, common battery signaling (obsolete)

**6.07** When required, coin collectors are generally arranged for local battery talking in the field in accordance with the appropriate circuit diagram in the connection sections.

6.08 Coin collector codes with their related features are shown in Table D.



### Fig. 16-Historical Development of Prepay Coin Collectors

T

COIN-COI

	ologina na n								
5.969 - 11.			Features		Coin Relay				
Transmission				Cada	P-145749				
		Type			Manual Dial				
Tunsi	11331011	Wiring	Pull Bucket	No.		Co	ins		
			and Washer Reject		U.S.	U.S. and Canadian	U.S.	U.S. and Canadian	
						Code	Letters		
		B <u>Extended Antibiotic Propagation Constant Constant</u>	None	191					
			Pull Bucket	195			GN	HN	
			Washer Reject	196	CN	DN			
Handset	External Network	Combined Switch- hook and Transfer Spring Assembly	Pull Bucket and Washer Reject	197					
G туре			None						
			Pull Bucket and Washer Reject						
	Internal Induction Coil and Capacitor		None	191	С	D	G	н	
			Pull Bucket	195					
			Washer Reject	196					
Handset F Type			Pull Bucket and Washer Reject	197					
	External Induction Coil and Capacitor	l m Wood Ter- minal Strip r	None	176					
				174					
Separate	External	Combined Assembly	None	166					
Transmitter- Receiver	Coil and Capacitor	Wood Ter- minal Strip		155					

\*.Wired and equipped for future dial shorting.

† Equipped with mechanism unit P-10E683, having increased coin-hopper capacity and P-10E786 slow-release Coin collector and accessory items have corrosion resistant finish.

‡ Washer reject only.

## LE D

## CTOR CODES

cent Prepay					10-cent			Manual Postpay			
		Coin R	elay — Di	– Dial Shorting Dial Postpay				(5-cent type			
Code	P-	D-96590	(CDO)			coin chute)					
	Manual* Dial Coins					Coins			Coins		
No.						Code	le		Code		
	U.S.	U.S. and Canadian	U.S.	U.S. and Canadian	U.S.	No.	U.S.	U.S. and Canadian	No.	U.S.	U.S. and Canadian
		Code	Letters		Code No.		Cod	e Letters		Cod	e Letters
191						193			182		
195											
196	CNS CNT	DNS DNT	GNS	HNS HNT		198	GN	HN		CN	DN
197	on a	2111	GITT	11111							
220	C, CT	D, DT	G, GT	H, HT		910			200		1201
230†	C	D	G	н		210	~		200	a	
223	C, CT	D, DT	G, GT	H, HT		0104	G	н		C	D
233†	C	D	G	Н		2121					
191					D-179432	193			182		
195					D-179433						
196					D-179532	198					
197	CS CT	DS DT	GS GT	HS HT	D-179533		G	н		С	D
176					D-178942	178			164		
174					D-178940	177			152		
					D-178875	168			162		
					DIROURE	150			162	A	В
					D-178457	158			150	K	L

single-coil, dial shorting relay.