ELCOTEL INC.

SERVICE & INSTALLATION MANUAL

MODEL 1200-3

WESTERN ELECTRIC
CASE

ELCOTEL INC.

MODEL 12ØØ-3 PAY TELEPHONE

DESCRIPTION AND INSTALLATION

TABLE 1

MODIFICATION TO STANDARD WESTERN ELECT. 1D2 WITH 70C (ELECTRONIC) KEYPAD

1. MOVE GREEN-WHITE WIRE (TT) FROM TB2-1 TO TB2-12

2. MOVE ORANGE-BLACK, BLUE-BROWN, VIOLET WIRES (ALL TT) FROM TB2-10 TO TB2-13

3. MOVE ORANGE-RED WIRE (TT) FROM TB2-15 TO TB2-1

4. MOVE ORANGE-WHITE WIRE (TT) FROM TB2-13 TO TB2-10

5. MOVE SLATE-WHITE WIRE (HOOKSWITCH) FROM TB2-14 TO TB2-8

6. MOVE YELLOW WIRE (HANDSET) FROM TB2-8 TO TB2-14

7. MOVE WHITE-BLUE WIRE (TT) FROM TB2-8 TO TB2-4

8. MOVE WHITE WIRE (TT) FROM TB2-4 TO TB2-14

9. MOVE BLACK WIRE (HANDSET) FROM TB2-6 TO TB2-2

10. MOVE RED-GREEN WIRE (TT) FROM TB2-2 TO TB2-6

MODIFICATION TO STANDARD WESTERN ELECT. 1D2 WITH 70A OR 70B KEYPAD

1. MOVE GREEN WIRE FROM TB2-8 TO TB2-14

2. MOVE SLATE/WHITE WIRE FROM TB2-14 TO TB2-8

NOTE: TB2 IS LOCATED ON THE BACK OF THE KEYPAD.

FROM
WALL
TRANSFORMER

COIN
DETECT
UNIT

FEED
TELEPHONE
LINE
THROUGH
HERE

J3
ALARM
OPTION

J4
POWER

J2
CARD
READER
OPTION

THREADED
STUD FOR
CAPTIVE
NUT

U7

PIN 1

COIN
RELAY

J5
TO
TELE
LINE

J4
POWER

RATING
CHIP

CAPTIVE
NUT
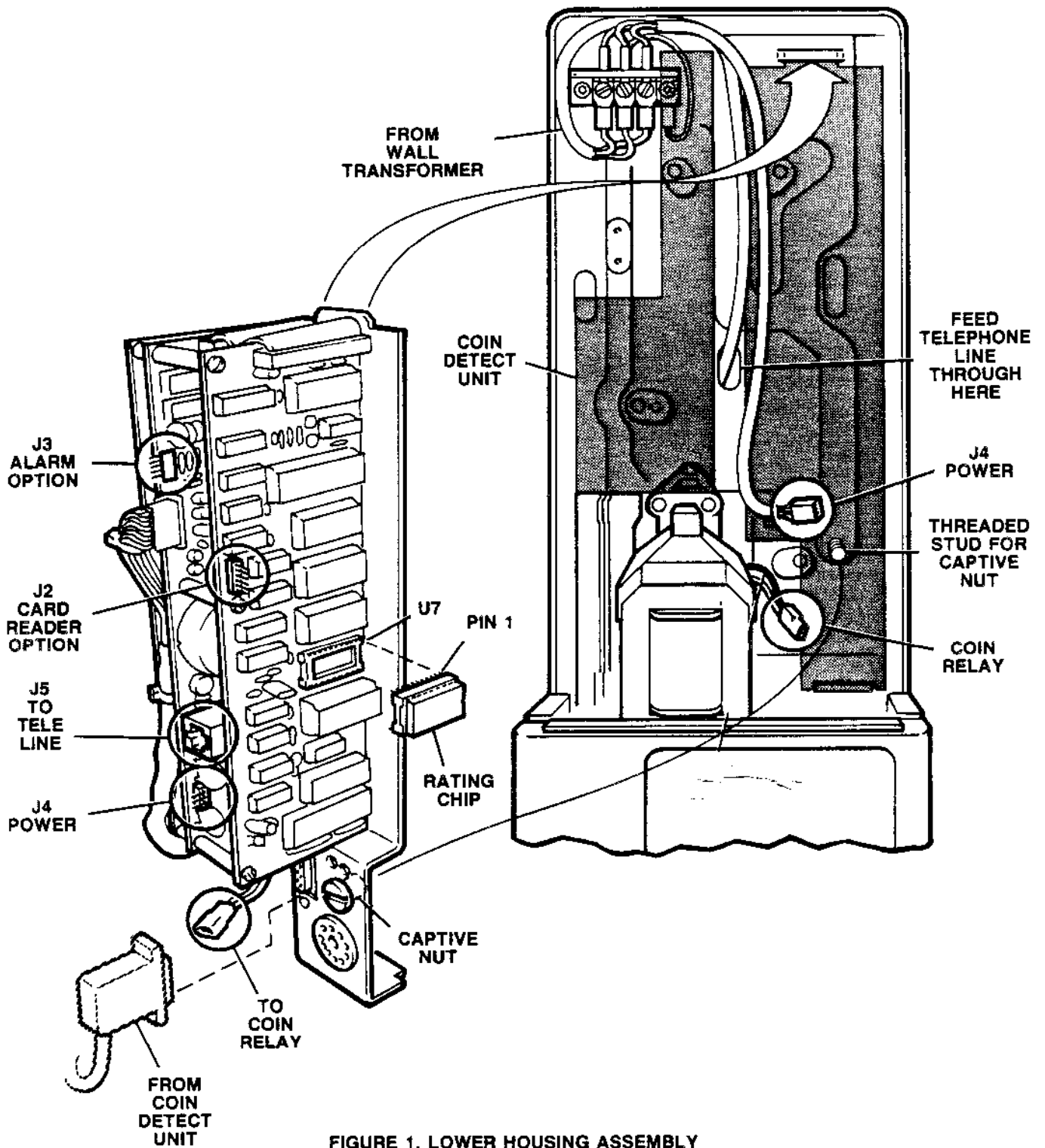
TO
COIN
RELAY

FROM
COIN
DETECT
UNIT

FIGURE 1. LOWER HOUSING ASSEMBLY

FIGURE 2. COIN RELAY CABLE CONNECTION
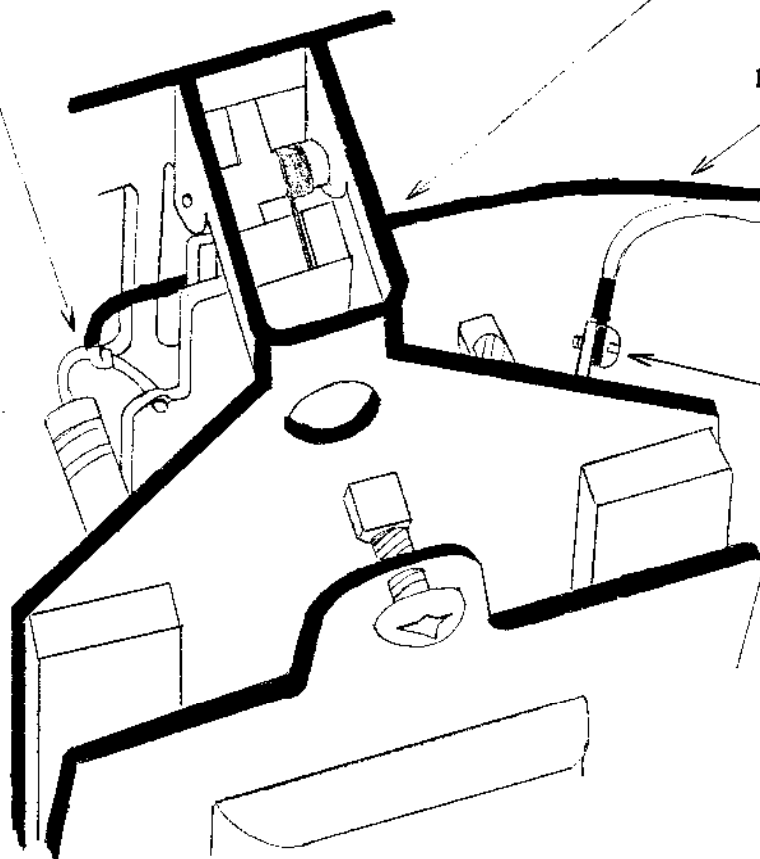
SOLDER BLACK WIRE
TO RESISTOR LEAD

WIRE ROUTING MUST NOT
INTERFERE WITH RELAY
OPERATION

BLACK

TO PCM-3
CHASSIS

WHITE

LOWER TERMINAL

MODIFICATION TO STANDARD WESTERN ELECT. (1C2) KEYPAD

1. MOVE GREEN WIRE FROM TB2-4 TO TB2-1

2. MOVE WHITE WIRE FROM TB2-2 TO TB2-4

3. MOVE RED WIRE FROM TB2-12 TO TB2-9

4. MOVE ORANGE-BLACK WIRE FROM TB2-11 TO TB2-3

5. MOVE BLACK (HANDSET) WIRE FROM TB2-3 TO TB2-2

6. MOVE SLATE-WHITE WIRE FROM TB2-14 TO TB2-8

7. MOVE YELLOW (HANDSET) WIRE FROM TB2-8 TO TB2-14

8. MOVE ORANGE-WHITE WIRE FROM TB2-12 TO TB2-3

NOTE: TB2 IS LOCATED ON THE BACK OF THE KEYPAD.

TABLE 2

COMPLETE WIRING OF TB2 FOR THE WESTERN ELECT. AFTER THE MODIFICATION SHOWN
IN TABLE 1.

1D2 WITH 70C KEYPAD

TB2-1	ORANGE-RED (KEYPAD)
TB2-2	(HANDSET MIC, COLORS VARY)
TB2-3	(HANDSET MIC, COLORS VARY), RED (KEYPAD), YELLOW (SWITCH HOOK)
TB2-4	WHITE-BLUE (KEYPAD), (HANDSET RCVR, COLORS VARY)
TB2-5	NONE
TB2-6	RED-GREEN (KEYPAD)
TB2-7	BROWN, BROWN (BOTH KEYPAD)
TB2-8	WHITE (SWITCH HOOK), SLATE-WHITE (SWITCH HOOK)
TB2-9	ORANGE (SWITCH HOOK)
TB2-10	ORANGE-WHITE (KEYPAD)
TB2-11	ORANGE (SWITCH HOOK)
TB2-12	GREEN-WHITE (KEYPAD), GREEN, GRAY, RED (ALL SWITCH HOOK)
TB2-13	VIOLET, ORANGE-BLACK, BLUE-BROWN (ALL KEYPAD)
TB2-14	(HANDSET RCVR, COLORS VARY), WHITE (KEYPAD)
TB2-15	NONE
TB2-16	GREEN (KEYPAD)

1D2 WITH 70A OR 70B KEYPAD

TB2-1	BLACK, GREEN (KEYPAD)
TB2-2	RED-GREEN (KEYPAD)
TB2-3	YELLOW (SWITCH HOOK), RED (KEYPAD), (HANDSET MIC, COLOR VARIES)
TB2-4	WHITE (KEYPAD)
TB2-5	ORANGE-RED (KEYPAD)
TB2-6	(HANDSET MIC, COLOR VARIES)
TB2-7	WHITE-BLUE (KEYPAD), (HANDSET RCVR, COLORS VARY)
TB2-8	WHITE (SWITCH HOOK), SLATE-WHITE (SWITCH HOOK)
TB2-9	ORANGE, BROWN (ALL SWITCH HOOK)
TB2-10	ORANGE-WHITE, ORANGE-BLACK (BOTH KEYPAD)
TB2-11	ORANGE (SWITCH HOOK), BROWN (SWITCH HOOK)
TB2-12	RED, SLATE, GREEN (ALL SWITCH HOOK)
TB2-13	VIOLET (KEYPAD)
TB2-14	(HANDSET RCVR, COLORS VARY)

TABLE 2
(continued)

1C2

TB2-1	BLACK, GREEN (KEYPAD)
TB2-2	(HANDSET MIC, COLORS VARY)
TB2-3	YELLOW (SWITCH HOOK), ORANGE-WHITE (KEYPAD), ORANGE-BLACK (KEYPAD)
TB2-4	WHITE (KEYPAD)
TB2-5	(HANDSET MIC, COLORS VARY), RED (KEYPAD)
TB2-6	RED-GREEN (KEYPAD)
TB2-7	WHITE-BLUE (KEYPAD), (HANDSET RCVR, COLORS VARY)
TB2-8	WHITE (SWITCH HOOK), SLATE-WHITE (SWITCH HOOK)
TB2-9	RED, GREEN, SLATE, ORANGE, BROWN (ALL SWITCH HOOK)
TB2-10	ORANGE-RED (KEYPAD)
TB2-11	ORANGE (SWITCH HOOK), BROWN (SWITCH HOOK)
TB2-12	NONE
TB2-13	VIOLET (KEYPAD)
TB2-14	(HANDSET RCVR, COLORS VARY)

MODEL 1200-3 PAY TELEPHONE DESCRIPTION AND INSTALLATION

GENERAL

This document describes and provides operational information for the Model 1200-3 payphone, installation, field maintenance and test procedures are also included.

The Elcotel model 1200-3 coin telephone is a "smart" pay phone which provides normal prepay service using a standard business phone line with an RJ11C interface.

OPERATIONAL FEATURES

Local and Remote programming of all options and parameters affecting the operation of the payphone by means of the voice circuitry and tone keypad (Voice Telemetry) plus data telemetry to perform the same functions under control of a remote computer equipped with the Elcotel Payphone Network Manager software package.

The PCM-3 can be programmed to direct all Coin/Toll calls to OCC's (Other Common Carriers) and all 0+ calls to Operator Assisted Long Distance Service (OALDS) Switches.

Easy installation of plug-in Rating Chip which contains site specific parameters and rate tables.

Increased resistance to vandalism due to metal push button touch calling unit (TCU), metal hook-switch tongue, and permanently bonded handset caps.

Increased serviceability due to accessibility and modularity of major component assemblies.

MECHANICAL FEATURES

All steel housing construction, except for the bright-work in the facia of the unit, extra heavy steel vault door.

Tongue-and-groove construction for mating surfaces of the upper and lower housing, and a lower housing cash vault door. Protection of the cash vault door with hardened steel bars.

Foolproof latching mechanism and lock for the upper housing and cash vault door.

The telephone is equipped with metal hook-switch actuator and metal TCU push buttons to resist burning.

ELECTRICAL FEATURES

The Payphone Control Module (PCM-3) is equipped with a Microprocessor to monitor and control all functions of the payphone, including handset, tone keypad, telco line, coin relay and coin detect.

Local programming by means of the touch-tone keypad and voice circuitry to monitor and select the various options and to set all operational parameters affecting the payphone.

Voice telemetry to enable the owner to monitor and adjust all options and operational parameters affecting the pay phone by means of a touch tone equipped phone from any remote location.

Optional clock/calendar to enable the unit to provide time of day discount where required, adjustable discount periods and rates.

Optional Bell 1Ø3 compatible modem to enable the owner to perform all monitor and control functions remotely under control of a Personal Computer equipped with the Elcotel Payphone Network Manager software package, including the ability to poll all payphones for status, receive calls from the payphones when alarm thresholds are crossed and to download a new set of variables to any remote payphone.

Optional alarm cable and switch assembly to sense when the vault or the upper housing are opened, and to bring one additional external alarm contact.

Sophisticated algorithms to enable the model 12ØØ-3 to determine when the remote party has answered (call completion detection) and to prevent fraudulent calls.

High quality digitally recorded voice instructions to inform the customer of the cost of the call, and to report the status of the options, registers and variables which define the performance characteristics of the unit.

Site specific parameters stored in plug-in Rating Chip, such as PBX access number, speed dialing numbers, coin free and emergency numbers, restricted numbers or exchanges, information numbers, and charges for all local and long distance calls.

External wall outlet mounted power module provides intrinsically safe voltage to operate the unit.

DESCRIPTION

The telephone housing provided is a Western Electric 1D2, or a Western Electric 1C2 retrofited with a 47A2 electronic coin detect unit. The wiring of TB2 (coin dial unit) has been modified from the standard unit (see Table 1).

The electronics and associated chassis assembly is mounted to the right side of the lower housing and is retained by a tab and one captive screw. Electrical inter-connections to other assemblies is made by connectors mounted on this chassis (see Fig. 1). An 11-pin connector provides access to the keyboard, handset and hook-switch. A 15-pin connector provides connection to the coin detect unit. A 2-pin connector provides connection to the coin relay and a 3-pin connector provides connection to the terminal block mounted at the left top of the lower housing where operating power and ground are terminated. An RJ11C jack provides connection to the telco line.

MODEL 12ØØ-3 OPERATION

Power Supply: The Model 12ØØ-3 is powered by an externally mounted wall plug-in transformer rated at 16 Volts, 1 Ampere. The transformer is provided with four screw terminals, three are the center tapped secondary while the fourth is connected to the AC ground terminal. The ground terminal must be connected to the center tap with a jumper. The transformer may be located up to 5Ø feet away from the phone if No. 18 or larger gauge wire is used. The three conductor power cable must be routed to the phone, fed through the back of the

unit and terminated in the terminal block installed at the top of the lower housing. The center terminal of the block is wired to the metal enclosure thereby effectively grounding the cabinet. A three-terminal connector ended cable is supplied with the cabinet which in turn is connected to the three-pin terminal in the lower end of the PCM-3 (see Fig. 1).

Radio Interference

In some locations near radio broadcasting antennas, if a 50-foot power line is used, it may be necessary to bring a special ground wire from a nearby water pipe to insure that the radio signal does not interfere with the call completion detect circuit. This special ground may be connected directly to the center (ground) terminal in the lower housing, along with the center tap from the power transformer.

Telco Interface

The telephone line must be terminated with an RJ11C plug, routed through one of the entry holes in the back of the unit and then connected to the RJ11C jack mounted on the PCM-3.

Telco Loop Supervision

The Model 1200-3 monitors the telephone line for reverse battery supervision, Incoming Ring, Central Office (C.O.) Dial Tone, C.O. Busy Tone, C.O. Ring-Back Tone, and Special Information Tones.

Coin Detect

The Model 1200-3 constantly monitors the coin detect mechanism and keeps track of amounts deposited during any given call.

Coin Relay

The Model 1200-3 supplies the voltage necessary to operate the Coin Relay. The polarity of the voltage applied determines if the coinage is to be returned or collected.

Handset

The Model 1200-3 monitors the hook switch to determine when a customer initiates or terminates a call. When the customer goes off-hook, the Model 1200-3 generates dial tone into the receiver, turns on the keypad and turns off the microphone.

Call Initiation

The same procedure used to make calls in standard phones is used with the model 1200-3. Upon hearing dial tone, the customer uses the keypad to enter the desired number. Dial tone is removed immediately after the first digit is dialed. The Model 1200-3 analyzes the number dialed, determines the initial period charge and uses the voice circuit to inform the customer of the cost and time purchased.

Dialing

When the customer deposits the amount required for the call, the Model 1200-3 turns off the receiver and keypad and goes off-hook towards the telco line and monitors for dial tone. When dial tone is detected, and if the Tone Dial option is on, the Model 1200-3 starts tone dialing the number, else, it will pulse dial the number. When the number has been dialed, the receiver will be turned on and if the OCC switch option is on, the keypad will be turned on to

allow the customer to use a locally accessed Long Distance Service. If no digits are dialed after call completion, the keypad will be turned off after a brief time.

Call Completion Detection

The Model 1200-3 is equipped with three methods of detecting call completion to enable it to determine the call completion. 1. VOICE DETECTION - A sophisticated Voice Detect Algorithm is used to determine the end of ring-back and the beginning of conversation. Because this method of call completion detection is extremely sensitive to the content of the signals in the phone line, the microphone in the handset is turned off until call completion is established. 2. REVERSE BATTERY SUPERVISION - In those locations where the telephone company extends reverse battery supervision to the local loops, the Model 1200-3 will detect it and use that as the call completion event. 3. KEY PAD - In the event that a customer dials a Long Distance Service (LDS), when LDS answers with its dial tone, the customer may start dialing immediately after hearing the LDS dial tone, and the call is deemed to be completed at that moment.

Call Termination

The call is terminated when the customer goes back on-hook, or if the time purchased runs out, at this point, the Model 1200-3 collects the coinage in the escrow box. Calls may also be aborted or terminated if no answer or busy answer in which case the Model 1200-3 returns the coinage.

Call Pricing

The Model 1200-3 makes use of rating tables stored in the Rating Chip to obtain proper rates for the initial period and for subsequent periods. In addition, the 1200-3 allows access to all rate tables to enable the owner to add or change rates, exchanges and area codes.

Rating Chip

The Rating Chip is a 28-pin EPROM which plugs into PCM-3 (see Fig. 1). It is intended to be owner installable. The rating chip contains all known Area Codes, all known Intra Lata/Inter Lata exchanges and all known special NPAs, Exchanges, and rates necessary to accurately determine the cost of a call from where the phone is installed. The Rating Chip contains site specific parameters such as:

o All default values for options and registers
o Coin Free and Emergency Numbers
o Restricted Numbers/Exchanges
o Information Numbers
o PBX Access Code Number

Voice Instruction Set

The Model 1200-3 is equipped with a high quality digitally recorded voice instruction set stored in PROM and played back through D/A circuitry into the receiver. This instruction set contains all normally used sentences used by the telco operator to request payment for a call and to inform the customer of the time purchased in minutes when applicable. In addition, when 30 seconds remain on the call and again when 10 seconds remain on the call, the Model 1200-3 will request additional coinage to be deposited for a given time period. Only the customer hears the messages.

Alarm Inputs

The Model 1200-3 is equipped with four alarm inputs which can be connected to three external contacts with a common return. These contacts can be connected to the 1200-3 through a five-contact connector and cable (suggested connector: Molex crimp terminal housing No. 22-01-2057 and standard crimp terminals No. 08-50-0114). This cable is supplied when the alarm switch option is ordered. The alarm switch option is used to monitor the upper housing access, the handset (in case someone pulls it off the phone), the cash vault and one spare alarm which can be connected to any external contact such as a vending machine or an intruder detection device.

Variables

The Model 1200-3 is equipped with battery-backed memory used to store all rating data from the Rating Module, Options, Totals, phone numbers, etc. These variables and the clock/calendar can be accessed locally through the keypad or remotely through either DTMF signalling from a remote phone, or with a P.C. equipped with the Elcotel Payphone Network Manager software package. These variables are identified by three-digit numbers grouped as follows:

120-199	Options
220-299	Registers
320-399	Auto Dialer/Free Numbers
420-479	Local Band Charges
480-499	Local Band Exceptions
520-579	Intra Lata Band Charges
580-599	Intra Lata Band Exceptions
620-679	Inter Lata Band Charges
680-699	Inter Lata Band Exceptions
720-779	Special NPA Band Charges
780-799	Special NPA List
820-899	Inter State Band Charges
920-959	Alarms
960-999	Maintenance

INSTALLATION

This equipment complies with Part 68 of the FCC Rules. The label affixed to this equipment contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. The telephone company must be given notification prior to connection of this device to comply with state tariff requirements (in some states, prior approval of the State Public Utility or Public Service Commission may be required). Connection of unregistered customer-owned coin phones requires the use of VP couplers.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you have trouble with this equipment, please contact us at the address below for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

The following jacks must be ordered from the telephone company in order to interconnect this product with the public communication network: 17-Q Interface for an RJ11 hook-up.

This equipment may not be used on coin service lines provided by the telephone company. Connections to party lines are subject to state tariffs.   Contact your local telephone company if you plan to use this equipment on party lines.

Refer to the field maintenance instructions for troubleshooting steps which you may make yourself in the event of equipment problems.

This product is not field repairable.   Units in need of service must be returned to us at the address below.   A return authorization number must be obtained from us before each lot is shipped.

This product is hearing-aid compatible (HAC) per Section 68.316, FCC Rules and Regulations.

Telephone companies generally will require registration numbers for customer-provided coin telephones or COCOTS (registration class CX), Protective Couplers (registration classes HP, WP, and VP), Data Equipment (registration classes DM, DP, DT, and MD) and systems. Signal power and wiring affidavits may also be required.

This information will be used to assure that the customer orders the correct services, facilities, and jacks; and to assure network protection and tariff compliance.

The telephone is furnished equipped for prepay operation and coin free emergency calling. The shipping container will contain the completely assembled telephone, power transformer, rating chip, documentation and keys. The PCM-3 assembly must be removed to allow access to two mounting bolts in the back of the unit during installation.

Warning: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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Site Preparation

Before mounting the phone, the upper housing must be removed from the lower housing by performing the following steps:

Insert key into the upper housing lock and rotate it one-fourth turn in counterclockwise.

Insert the T-wrench into the opening in the upper housing and turn it on eight turn clockwise.

Grasp both sides of the upper housing and slide it forward. At the same time that the upper housing is being removed, reach around it and disconnect the jack-ended cables that connect the upper housing to the PCM-3. Set the upper housing aside. Remove the PCM-3 Assembly by disconnecting the connector ended cables from the Coin Chute, Coin Relay, and Power terminal. Loosen the captive screw located at the bottom of the assembly and pull the bottom of the assembly out to clear the mounting bolt. Lower the assembly to disengage the tab in the upper part of the chassis, and remove the assembly. Set the PCM-3 Assembly aside.

When installing the telephone, a perfectly vertical mounting surface is very desirable. A tilt greater than 1-1/2 degrees in any direction will cause a malfunction of the coin rejector mechanism. A vertical surface may be determined by proceeding as follows.

Place a spirit level vertically against the mounting surface with the top end of the level at required height of the telephone.

Move the top or bottom end of the level away from the mounting surface as required to obtain a vertical reading. When a vertical reading is obtained, the end of the level opposite the point of contact should be no further than 5/8" for a 24" level, or 15/16" for a 36" level.

Ensure that a vertical position is obtained in both directions.

If mounting surface deviation from a vertical plan exceeds 1-1/2 degrees, level the booth or other mounting surface to bring the telephone to a perfectly vertical position.

Backboard

The mounting surface for the backboard must be strong enough to support the backboard and telephone. In addition, the surface must be flat and devoid of any peaks or valleys which may create gaps large enough to allow the backboard to be pried loose. The backboard is used where a pre-drilled mounting surface is not available.

Mounting height of the backboard, as measured from the floor to the top of the backboard is as follows:

Without seat, 63 inches
With a seat, 52 inches

If the installation site is in an environment or the coin telephone will be accessed by the wheel-chaired physically handicapped, 54 inches. If a shelf is installed, the shelf must be 30 inches from the floor. A coin telephone in such a location must never be installed in a corner and must not have any obstacles within 3 feet of its front or sides.

Mounting

There are 10 mounting holes (5 on each side) in the Backboard. The mounting screws used must be of the proper size and type for the mounting surface. Guidance for mounting the telephone are as follows:

If the wiring is run on the surface, position the wires so that they will lay flat in the channels and grooves of the backboard and emerge from the backboard entrance hole. If the wires are run through the wall, ensure that the backboard entrance hole aligns with the final position of the wires.

Mount the backboard with the mounting screws when it is level in all directions.

Install and tighten the four security studs in the threaded holes on the back of the telephone.

Align the telephone with the backboard and run the wires from the backboard into the telephone's wire entrance hole. Position the telephone's security studs over the backboard's key slots. Push the telephone back until the security studs engage the key slots. Allow the telephone to slide in place.

Two screws are mounted on the right side, underneath the PCM-3 assembly. Install and tighten these screws. Mount the PCM-3 Assembly and plug in the connector terminated cables from the Coin Chute, Coin Relay, and power block.

Connect the power wires to the terminal block at the left top of the lower housing (see Fig. 1). The center wire is ground and is connected to the telephone set housing. Be sure and connect the AC to the outside terminals and the ground to the middle terminal.

Connect the RJ11C plug terminated telephone cable to the jack provided in the PCM-3 Assembly.

Local Access

Local access to the variables stored in the 1200-3 will be permitted only after the phone is off-hook and the owner bypass code #XXX (pound sign plus three digits) has been entered and recognized.

High Security

More stringent security measures can be enabled by turning on the "high security" option (135). This will deny local access unless the upper housing is removed after entering the owner bypass code and alarm number 1 is temporarily activated (option 131 must be on also) by momentarily shorting pins 1 and 2 of J3 with a coin, screw driver or other small metal tool. If the unit is equipped with the optional alarm switch assembly to sense the opening of the upper housing, all that is needed is to unlock the upper housing, pull the upper housing assembly about 1/2 inch, then push it back.

OPTIONS REGISTERS AND PARAMETERS

All options registers and parameters used in the operation of the 1200-3 can be monitored, changed and additions made either locally or remotely by use of the keypad in the payphone, or remotely by means of a touch tone phone. An optional 300 baud modem can also be used to perform these functions under control of a P.C. equipped with the Elcotel Payphone Network Manager software package.

Dialing For Local Access

When digits are entered, the 1200-3 will respond in the same manner as when doing a dialed digit sequence analysis of a normal call to discourage intruders as follows:

Digit Timer

The unit will return dial tone if no digits are entered for ten seconds (the ten-second timer will reset after each entry).

Wrong Code Entered

If the wrong code is entered, the 1200-3 will return dial tone after ten seconds if no other digits are dialed. If additional digits are dialed, the unit will analyze the digits as if it were a legitimate call attempt and return dial tone when it determines that the sequence does not match any predetermined valid sequence. The unit will look for the owner bypass code sequence each time the "#" is entered, but will apply the same rules as above after each "#" entry.

Excess Digits

The unit will return "busy" if more than ten digits are entered after the "#" is entered.

Correct Sequence

When the correct code sequence is entered, starting with the "#", the ten-second timer will start and will be reset with each subsequent entry. The 1200-3 will not acknowledge proper entry of the owner bypass code to discourage intruders. After the correct owner bypass code sequence has been recognized, local access is enabled. If the "high security"

option is enabled, the ten-second timer will be disabled and the unit will wait until alarm 4 is on momentarily to enable the local access function. The ten-second timer will not be activated until the first digit of the variable is entered.

Local Voice Response

If a valid three-digit number is entered three seconds after the proper owner bypass code has been entered, the unit will use the voice response circuitry to send the following message: The three-digit number, pause, the contents of the variable defined by the three-digit number.

Wrong Variable Entered

If an invalid three-digit variable is received, the unit will deliver the following message: "Please Dial Again, Thank You," three seconds after the last digit dialed.

Excess Digits in Variable

If four or more digits are received, the unit will report the contents of the variable then stop, and return dial tone in ten seconds.

Local Access Termination

Local access can be terminated by putting the phone back on-hook.

Voice Remote Access

Voice Remote Access or Voice Telemetry is enabled by turning on Option 129. The payphone can be called from any remote location, and DTMF signalling (touch-tone) must be used to make inquiries, changes and additions.

Response to Incoming Call

If the phone has been optioned to receive incoming calls (Option 122), the payphone will answer on the fifth ring to allow anyone to answer the phone. If Option 122 is off, the phone will go off-hook on the first ring, no voice response will be given to discourage intruders. If no DTMF entries are received within 20 seconds, the payphone will hang up.

Owner Bypass Code

The remote caller must enter the correct owner bypass code (#XXX pound sign plus three digits) wait three seconds then enter the three-digit variable desired. If the caller gets no response within three seconds, it can be assumed that he has entered the wrong code, and he must start all over again with the bypass code.

When the correct code is received, the payphone will give the appropriate voice response to any three-digit variable dialed as described in Local Access above.

If no inquiries are made for 20 seconds, the payphone will go on-hook and terminate the call.

Modem Remote Access

When the payphone is equipped with the optional modem (3ØØ baud, Bell 1Ø3 compatible) and if the Modem Telemetry option is ON (option 13Ø), the unit will respond to an incoming call in the same manner as in voice telemetry, except that when the payphone answers it will turn on its carrier (loud high frequency pitch). When the Payphone Network Manager detects this carrier, it transmits its owner bypass code to the payphone.

When the payphone detects the correct owner bypass code, it automatically transmits a status message in ASCII. A sample of the format and a sample of a typical message follow:

cr lf bell NNNN MM/dd HH:mm $DDD.cc LLL SSS TTT UUU XXXX YZ cr lf bell

3942 Ø7/1Ø 14:27 $151.75 348 Ø23 Ø12 Ø18 ØØØØ Ø1

The actual ASCII characters transmitted and their meaning is as follows: CR=Carriage Return, LF=Line Feed, Bell, NNNN (four-digit station Identification code), MM/dd (Date in month/day format where M=month and d=day), SP (space), HH:mm (Time in hour/minute format where H=hour and m=minute), SP, $DDD.cc (Cashbox total since last service call where D=dollars and c=cents), SP, LLL (three digits for number of local calls since the last service call), SP, SSS (three-digit number for number of long distance calls since the last service call), SP, TTT (three digits for number of 0-Plus calls since the last service call), UUU (three-digit number for the number of miscellaneous calls since the last service call), SP, XXXX (four digits for the status of the active alarm inputs, Ø=off or disabled and 1=on), SP, YZ (Y represents the status of the battery backed RAM: Ø=normal, 1=Ram has default values from the Rating module, all changes and additions are missing and must be reentered. Z represents the status of the cashbox: Ø=normal, 1=80% full trigger level has been exceeded, 2=95% full trigger level has been exceeded), Carriage Return, Line Feed, Bell.

The above format was selected so that if a Payphone Network Manager is not available, a simple 3ØØ baud auto answer modem and a printer can be used at the home station to monitor incoming alarm reports from the payphones in the field. Note that in this configuration the home cannot call the payphones. Sample 2 above shows that payphone 3942 called home to report that the cashbox crossed the $15Ø.ØØ threshold.

Variables

The following is a list of the three-digit variables stored by the 12ØØ-3 grouped by function. All default values are shown in parenthesis at the end of the variable description when applicable.

OPTIONS GROUP

Options may be enabled or disabled by means of the "*" push button in the tone dialing keypad. The voice circuitry will report enabled as "on" and disabled as "off," depressing the "*" key once during the voice report flips the status from on to off or from off to on, and the voice reports the change within 3 seconds. Depressing the "*" twice causes the voice to report without delay. Several options require a value to be set in the register section (2.5.2) of the variables, for example: If operator only calls are enabled, register 248 must contain a Ø for no charge or an amount in cents if the call is to be charged.

120 OPERATOR ONLY CALLS (set value in 248 if on). (ON)

121 OPERATOR ASSISTED CALLS (set value in 249 if on). (ON)

122 INCOMING CALLS. (ON)

123 ACCESS TO OCC THROUGH LOCAL CALL. Keeps keypad alive so that the customer can use his own account number with an OCC. See note 1. (ON)

124 OPERATION THROUGH PBX (set digit in 229 if on). (OFF)

125 PULSE DIALING. (OFF)

126 REVERSE BATTERY SUPERVISION. (OFF) WINK DETECT

127 KEYPAD ON AFTER DIALING FOR FIXED PERIOD (for certain pocket pagers). See note 1. (ON)   AT FIRST RING BACK

128 PHONE EQUIPPED WITH CREDIT CARD READER OPTION. (OFF)

129 VOICE TELEMETRY. (ON)

130 MODEM TELEMETRY. (OFF)

131 ALARM 1. (OFF) UPPER HOUSING

132 ALARM 2. (OFF) HANDSET MONITOR   OPTIONAL ALARM KIT MUST BE ORDERED TO TAKE ADVANTAGE OF THESE FUNCTIONS

133 ALARM 3. (OFF) CASH VAULT ACCESS

134 ALARM 4. (OFF) EXTERNAL CONTACT

135 HIGH SECURITY. (OFF) REQUIRES UPPER HOUSING ALARM KIT

136 TIME OF DAY DISCOUNT (set values in registers 234-238). (OFF)

137 DISABLE UNLISTED NXX TIMER. (OFF)

138 0-AOS, Operator only calls routed through AOS switch. (OFF)

139 0+AOS, Operator assisted calls routed through AOS switch. (OFF)

140 AOS LOCAL, AOS switch is located in local calling area of payphone.
     (OFF) *AOS ACCESS: DIRECT = ON / VIA OCC = OFF*

141 DELETE FIRST DIGIT, Deletes leading "0" in the destination number in
     AOS applications. (OFF)

142 DIAL TONE AFTER AUTH. CODE, the payphone will look for dial tone after
     auth. code has been sent in AOS applications. (OFF)

143 EQUAL ACCESS, All coin/toll calls routed through OCC (set registers
     260 and 261 if on). (OFF) *ENABLE OCC 1+ COIN/TOLL CALLS ROUTED THRU OCC*

144 DIAL TONE AFTER AOS ANSWERS, The payphone will look for dial tone
     after the AOS answers. (OFF)

145 KEYPAD/ON *ALWAYS* AFTER DIALING. See note 1. (OFF)

146 INSERT LEADING "1", If a 10-digit number is dialed, the payphone will
     insert a 1 before the digit string. (OFF)

NOTE 1: Any time the keypad is left on after dialing, you are exposed to
fraudulent "chain dialing" in location where the CO returns dial tone when
the called party hangs-up.

149 ANSWER DETECT SENSITIVITY: LOW = OFF   HIGH = ON

REGISTERS GROUP

The registers contain values ranging from one to eleven digits, Regis-
ters 220 to 225 can only be monitored, all other registers can both be
monitored and changed. Registers 221 to 225 can all be reset through
maintenance code 962. It is good procedure to have the maintenance man
reset these registers whenever the cashbox is serviced. When the content of
a register is changed, the "*" button in the keypad must be depressed at the
beginning and at the end of the entry. For example:

The "owner bypass code" must be changed to 345. Enter 230*345*.

220 CASH VAULT TOTALIZER. Amount collected by the payphone from day of
     shipment. Non resettable. *IN 5-CENT INCREMENTS*

221 CASH VAULT TOTAL. Amount collected since last service call.

222 LOCAL CALLS. Total number of local calls since the last service call.

223 LONG DISTANCE CALLS. Total number of long distance calls (does not
     include 800 or 900 calls) since the last service call.

224 0-PLUS CALLS. Total number of Operator assisted calls since the last
     service call.

225 TOTAL NUMBER OF CALLS. The sum total of 222 through 224 since the last
     service call.

226 *Noise* ~~VOICE~~ FILTER 1. Integration factor for the leading edge of the voice filter, Ø=minimum, 3=maximum. (Ø)

227 *Noise* ~~VOICE~~ FILTER 2. Integration factor for the trailing edge of the voice filter, Ø=minimum, 3=maximum. (Ø)

228 FIRST RING DETECT. Integration factor for the leading edge of the voice filter when looking for the first ringback, Ø=minimum, 3=maximum. (Ø)

229 PBX ACCESS CODE. Single digit required to access "outside line." (9)

230 OWNER BYPASS CODE. Three-digit number. (999)

231 AOS DELAY. Single-digit number used to set the time in seconds for the delay between the phone ID and the Destination number in AOS applications. (Ø)

232 HOLD OFF. Two-digit number used to set the time in seconds after call completion detection at which the call is considered completed. (Ø)

233 CASH VAULT TRIGGER LEVEL. Amount in dollars at which the phone will initiate a call home, three digits. (15Ø)

234 START PREMIUM PERIOD. Hours and minutes in 24-hour format (HH:mm). All four digits must be entered. (Ø8ØØ)

235 START FIRST DISCOUNT PERIOD. Hours and minutes in 24-hour format (HH:mm). All four digits must be entered. (17ØØ)

236 START SECOND DISCOUNT PERIOD. Hours and minutes in 24-hour format (HH:mm). All four digits must be entered. (23ØØ)

237 FIRST DISCOUNT. Amount of first discount in percent. When applicable, it is usually 4Ø percent. (4Ø)   *3o*

238 SECOND DISCOUNT. Amount of second discount in percent. When applicable, it is usually 6Ø percent. (6Ø)   *3o*

239 DAY OF WEEK. Single-digit number, Sunday=1, Monday=2, etc. *SET/READ*

240 READ/SET CLOCK. Hours and minutes in 24-hour format (HH:mm). All four digits must be entered. (eg. 1445 for 2:45 p.m.)

241 READ/SET CALENDAR. Month and Day (MM/dd). All four digits must be entered. (eg. Ø62Ø for June 2Ø)

242 READ/SET YEAR. Two-digit number. (eg. 86 for 1986)

243 HOME PRIMARY NUMBER. Phone number for Home, up to 11 digits. (Ø)

244 HOME SECONDARY NUMBER. Alternate phone number for Home, up to 11 digits. (Ø)

245 STATION ID NUMBER. Four-digit number assigned to this specific phone/location. (0000)

246 800 CHARGE. Three-digit number for amount in cents. (0)

247 900 CHARGE. Three-digit number for amount in cents. (50)

248 OPERATOR ONLY CHARGE. Three-digit number for amount in cents. (0)

249 0-PLUS CHARGE. Three-digit number for amount in cents. (0)

250 LOCAL INFORMATION CHARGE. Three-digit number for amount in cents. (0)

251 INTRA NPA INFORMATION CHARGE (1+555-1212). Three-digit number for amount in cents. (50)

252 INTER NPA INFORMATION CHARGE (1+NPA-555-1212). Three-digit number for amount in cents. (50)

253 LOCAL INFORMATION NUMBER. Up to eleven-digit number. (411)

254 INTRA LATA SURCHARGE. Three-digit number for amount in cents.

255 INTER LATA SURCHARGE. Three-digit number for amount in cents.

256 SPECIAL NPA SURCHARGE.

257 INTERSTATE SURCHARGE.

258 ACCESS ATTEMPTS. Number of attempts at accessing the unit since the last service call. Two digits, resettable through 962.

259 MISCELLANEOUS CALLS. Total number of miscellaneous calls (800, 900, free calls, etc.) since the last service call.

260 OCC ACCESS NUMBER, up to 12 digits (10XXX, 950-XXXX etc.). (0)

261 OCC AUTHORIZATION CODE, up to 11 digits. (0)

262 AOS SWITCH PHONE NUMBER, up to 11 digits. (0)

263 0+ID, Identification number for AOS 0+ calls, up to 12 digits. (0)

264 DESTINATION NUMBER TERMINATOR. Up to 11-digit number to be added to the destination number when required.

265 CREDIT CARD ACCESS NUMBER. Phone number required to access the CCC call processor, up to 11 digits. (0)

266 CCC PAYPHONE ID. Identification number associated with the Credit Card reader equipped payphone owner. Up to 11 digits. (0)

267 DELAY RINGBACK DETECT.   Number of seconds after last digit dialed before the payphone looks for ringback tones, can be set from 0 to 9. (Ø) *FoR Noisy C.O.*

268 VOICE MAILBOX PHONE NO., up to 11 digits, Ø disables the feature. (Ø)

269 COIN OPERATED OALDS PHONE NO., up to 11 digits, Ø disables the feature. (Ø)

270 976 CHARGE, three-digit number for amount in cents. Access to this exchange is restricted when charge is 9.95. (995)

271 NUMBER OF TIMES "NOT A BILLABLE NUMBER" MESSAGE is delivered. One-digit number. (Ø)

272 NUMBER OF TIMES PHONE WILL RING BEFORE TELEMETRY ANSWERS, one-digit number. (5)

AUTOMATIC DIALER GROUP

The owner of the payphone must provide a directory of auto dialed and free numbers so that the customer can take advantage of this feature. The list must contain the name of the party to be dialed automatically followed by a three-digit number between #20 and #79. For example:

Acme Cab Co. ($.65 charge)......................................#25

Up to fifty phone numbers may be stored in the 1200-3 automatic dialer. Each number can be selected to charge normally, or to be free of charge. To enter a new number (or to change an old one), selected the variable number, then enter a "*" before the phone number. If the number is to be charged normally, then enter a "#" after the last digit. If the number is to be dialed free of charge, enter a "*" after the last digit. Note that the Auto dialer number the customer uses corresponds to the two least significant digits of the Variable where they are stored.

Example 1: The number 1+756-4583 is to be accessed through auto dial #25, the call is to be charged normally: Enter 325*17564583#

Example 2: The number 345-2746 is to be accessed through auto dial #20, the call is to be free of charge: Enter 320*3452746*

Example 3: The number stored in auto dial #27 is to be deleted: Enter 327*0*

320   FIRST PHONE NUMBER IN AUTOMATIC DIALER. Up to 11 digits (0)

369   LAST PHONE NUMBER IN AUTOMATIC DIALER. Up to 11 digits. (0)

LOCAL BAND CHARGES GROUP

The model 1200-3 provides up to fifteen "bands" for pricing local calls, each band used contains the Initial Rate (IR), Initial Period (IP), Subsequent Rate (SR) and Subsequent Period (SP). Rates are stored in cents (three digits) and period is stored in minutes, Ø=unlimited time.

One or more of these bands will contain local charge data as determined by the rating chip installed. Before adding new information, be sure you are storing it into an empty band. Use the following chart as a convenient way to keep track of the rates and periods.

Note: Local Rates are not discounted.

BAND 1
420 IR ___ ___ ___
421 IP ___ ___
422 SR ___ ___ ___
423 SP ___ ___

BAND 2
424 IR ___ ___ ___
425 IP ___ ___
426 SR ___ ___ ___
427 SP ___ ___

BAND 3
428 IR ___ ___ ___
429 IP ___ ___
430 SR ___ ___ ___
431 SP ___ ___

BAND 4
432 IR ___ ___ ___
433 IP ___ ___
434 SR ___ ___ ___
435 SP ___ ___

BAND 5
436 IR ___ ___ ___
437 IP ___ ___
438 SR ___ ___ ___
439 SP ___ ___

BAND 6
440 IR ___ ___ ___
441 IP ___ ___
442 SR ___ ___ ___
443 SP ___ ___

BAND 7
444 IR ___ ___ ___
445 IP ___ ___
446 SR ___ ___ ___
447 SP ___ ___

BAND 8
448 IR ___ ___ ___
449 IP ___ ___
450 SR ___ ___ ___
451 SP ___ ___

BAND 9
452 IR ___ ___ ___
453 IP ___ ___
454 SR ___ ___ ___
455 SP ___ ___

BAND 10
456 IR ___ ___ ___
457 IP ___ ___
458 SR ___ ___ ___
459 SP ___ ___

BAND 11
460 IR ___ ___ ___
461 IP ___ ___
462 SR ___ ___ ___
463 SP ___ ___

BAND 12
464 IR ___ ___ ___
465 IP ___ ___
466 SR ___ ___ ___
467 SP ___ ___

BAND 13
468 IR ___ ___ ___
469 IP ___ ___
470 SR ___ ___ ___
471 SP ___ ___

BAND 14
472 IR ___ ___ ___
473 IP ___ ___
474 SR ___ ___ ___
475 SP ___ ___

BAND 15
476 IR ___ ___ ___
477 IP ___ ___
478 SR ___ ___ ___
479 SP ___ ___

LOCAL BAND EXCEPTIONS GROUP

All known local exchanges and rates associated with the exchange where the payphone is located are stored in the rating chip at the time of manufacture however, new exchanges are created all the time, and the rates associated with some exchanges may change in time. In addition, it is possible to restrict a whole exchange.

To enter a new exchange, or to correct an already existing one, enter a "*", three digits for the exchange, two digits for the local band number and a "*". To restrict an exchange, enter a 00 in place of the band number. The Exceptions group will have priority over the data stored in the rating chip.

Example 1: Exchange 377 must be added and rated in accordance to band 5 and you want to store it in variable No. 483 (exception 4): Enter 483*37705*

Example 2: Exchange 956 is to be restricted and you want to store it in variable No. 487 (exception 9): Enter 487*95600*

Example 3: Exception 14 must be deleted: Enter 493*0*

Use the following chart to keep track of the exceptions associated with this specific location.

480 Exception 1. _ _ _ _ _   490 Exception 11. _ _ _ _ _

481 Exception 2. _ _ _ _ _   491 Exception 12. _ _ _ _ _

482 Exception 3. _ _ _ _ _   492 Exception 13. _ _ _ _ _

483 Exception 4. _ _ _ _ _   493 Exception 14. _ _ _ _ _

484 Exception 5. _ _ _ _ _   494 Exception 15. _ _ _ _ _

485 Exception 6. _ _ _ _ _   495 Exception 16. _ _ _ _ _

486 Exception 7. _ _ _ _ _   496 Exception 17. _ _ _ _ _

487 Exception 8. _ _ _ _ _   497 Exception 18. _ _ _ _ _

488 Exception 9. _ _ _ _ _   498 Exception 19. _ _ _ _ _

489 Exception 10. _ _ _ _ _   499 Exception 20. _ _ _ _ _

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INTRA LATA BAND CHARGES GROUP

There are fifteen bands available for pricing Intra lata calls, each band contains the Initial Rate (IR), Initial Period (IP), Subsequent Rate (SR) and Subsequent Period (SP). Rates are stored in cents (three digits) and period is stored in minutes, Ø=unlimited time.

One or more of these bands will contain Intra lata charge data as determined by the rating chip installed. Before adding new information, be sure you are storing it into an empty band. Use the following chart as a convenient way to keep track of the rates and periods.

Note: Intra Lata call prices include all surcharges and may be subject to discounts.

BAND 16
520 IR __ __ __
521 IP __ __ __
522 SR __ __
523 SP __ __ __

BAND 17
524 IR __ __ __
525 IP __ __ __
526 SR __ __
527 SP __ __ __

BAND 18
528 IR __ __ __
529 IP __ __ __
530 SR __ __
531 SP __ __ __

BAND 19
532 IR __ __ __
533 IP __ __ __
534 SR __ __
535 SP __ __

BAND 2Ø
536 IR __ __ __
537 IP __ __
538 SR __ __ __
539 SP __ __

BAND 21
54Ø IR __ __ __
541 IP __ __ __
542 SR __ __
543 SP __ __ __

BAND 22
544 IR __ __ __
545 IP __ __ __
546 SR __ __
547 SP __ __

BAND 23
548 IR __ __ __
549 IP __ __
550 SR __ __
551 SP __ __ __

BAND 24
552 IR __ __ __
553 IP __ __
554 SR __ __ __
555 SP __ __

BAND 25
556 IR __ __ __
557 IP __ __
558 SR __ __
559 SP __ __

BAND 26
56Ø IR __ __ __
561 IP __ __ __
562 SR __ __
563 SP __ __ __

BAND 27
564 IR __ __ __
565 IP __ __ __
566 SR __ __
567 SP __ __ __

BAND 28
568 IR __ __ __
569 IP __ __ __
570 SR __ __
571 SP __ __

BAND 29
572 IR __ __ __
573 IP __ __ __
574 SR __ __ __
575 SP __ __

BAND 3Ø
576 IR __ __ __
577 IP __ __
578 SR __ __ __
579 SP __ __

INTRA LATA EXCEPTIONS GROUP

All known intra lata exchanges and rates associated with the exchange where the payphone is located are stored in the rating chip at the time of manufacture however, new exchanges are created all the time, and the rates associated with some exchanges may change in time. In addition, it is possible to restrict a whole exchange.

To enter a new exchange, or to correct an already existing one, enter a "*", three digits for the area code, three digits for the exchange, two digits for the intra lata band number and a "*". To restrict an exchange, enter a 00 in place of the band number. The Exceptions group will have priority over the data stored in the rating module.

Example 1: Exchange 377 in area code 215 must be added, and rated in accordance to band 25 and stored in variable 586 (exception 7): Enter 586*21537725*

Example 2: Exchange 956 in area code 914 is to be restricted and you want to store it in variable 597 (exception 18): Enter 597*91495600*

Example 3: Exception 7 must be deleted: Enter 586*0*

580 Exception 1.	_ _ _ _ _ _ _ _	590 Exception 11.	_ _ _ _ _ _ _ _
581 Exception 2.	_ _ _ _ _ _ _ _	591 Exception 12.	_ _ _ _ _ _ _ _
582 Exception 3.	_ _ _ _ _ _ _ _	592 Exception 13.	_ _ _ _ _ _ _ _
583 Exception 4.	_ _ _ _ _ _ _ _	593 Exception 14.	_ _ _ _ _ _ _ _
584 Exception 5.	_ _ _ _ _ _ _ _	594 Exception 15.	_ _ _ _ _ _ _ _
585 Exception 6.	_ _ _ _ _ _ _ _	595 Exception 16.	_ _ _ _ _ _ _ _
586 Exception 7.	_ _ _ _ _ _ _ _	596 Exception 17.	_ _ _ _ _ _ _ _
587 Exception 8.	_ _ _ _ _ _ _ _	597 Exception 18.	_ _ _ _ _ _ _ _
588 Exception 9.	_ _ _ _ _ _ _ _	598 Exception 19.	_ _ _ _ _ _ _ _
589 Exception 10.	_ _ _ _ _ _ _ _	599 Exception 20.	_ _ _ _ _ _ _ _

INTER LATA BAND CHARGES GROUP

There are fifteen bands available for pricing inter lata calls, each band contains the Initial Rate (IR), Initial Period (IP), Subsequent Rate (SR) and Subsequent Period (SP). Rates are stored in cents (three digits) and period is stored in minutes, Ø=unlimited time.

One or more of these bands will contain inter lata charge data as determined by the rating chip installed. Before adding new information, be sure you are storing it into an empty band. Use the following chart as a convenient way to keep track of the rates and periods.

Note: Inter Lata Band Charges include all surcharges, and may be subject to discount.

BAND 31
620 IR __ __ __
621 IP __ __ __
622 SR __ __ __
623 SP __ __ __

BAND 32
624 IR __ __ __
625 IP __ __
626 SR __ __ __
627 SP __ __ __

BAND 33
628 IR __ __ __
629 IP __ __ __
630 SR __ __ __
631 SP __ __ __

BAND 34
632 IR __ __ __
633 IP __ __
634 SR __ __ __
635 SP __ __ __

BAND 35
636 IR __ __ __
637 IP __ __
638 SR __ __ __
639 SP __ __ __

BAND 36
640 IR __ __ __
641 IP __ __
642 SR __ __ __
643 SP __ __ __

BAND 37
644 IR __ __ __
645 IP __ __
646 SR __ __ __
647 SP __ __ __

BAND 38
648 IR __ __ __
649 IP __ __
650 SR __ __ __
651 SP __ __

BAND 39
652 IR __ __ __
653 IP __ __
654 SR __ __ __
655 SP __ __

BAND 40
656 IR __ __ __
657 IP __ __
658 SR __ __ __
659 SP __ __

BAND 41
660 IR __ __ __
661 IP __ __ __
662 SR __ __ __
663 SP __ __

BAND 42
664 IR __ __ __
665 IP __ __
666 SR __ __ __
667 SP __ __ __

BAND 43
668 IR __ __ __
669 IP __ __
670 SR __ __ __
671 SP __ __ __

BAND 44
672 IR __ __ __
673 IP __ __
674 SR __ __ __
675 SP __ __

BAND 45
676 IR __ __ __
677 IP __ __
678 SR __ __ __
679 SP __ __ __

INTER LATA EXCEPTIONS GROUP

All known inter lata exchanges and rates associated with the exchange where the payphone is located are stored in the rating chip at the time of manufacture, however, new exchanges are created all the time, and the rates associated with some exchanges may change in time. In addition, it is possible to restrict a whole exchange.

To enter a new exchange, or to correct an already existing one, enter a "*", three digits for the area code, three digits for the exchange, two digits for the inter lata band number and a "*". To restrict an exchange, enter a 00 in place of the band number. The Exceptions group will have priority over the data stored in the rating chip.

Example 1: Exchange 756 in area code 301 must be added, and rated in accordance to band 32 and you want to store it in variable 685 (exception 6): Enter 685*30175632*

Example 2: Exchange 975 in area code 203 must be restricted and you want to store it in variable 693 (exception 14): Enter 693*20397500*

Example 3: Exception 9 must be deleted: Enter 688*0*

680 Exception 1. _ _ _ _ _ _ _ _	690 Exception 11. _ _ _ _ _ _ _ _
681 Exception 2. _ _ _ _ _ _ _ _	691 Exception 12. _ _ _ _ _ _ _ _
682 Exception 3. _ _ _ _ _ _ _ _	692 Exception 13. _ _ _ _ _ _ _ _
683 Exception 4. _ _ _ _ _ _ _ _	693 Exception 14. _ _ _ _ _ _ _ _
684 Exception 5. _ _ _ _ _ _ _ _	694 Exception 15. _ _ _ _ _ _ _ _
685 Exception 6. _ _ _ _ _ _ _ _	695 Exception 16. _ _ _ _ _ _ _ _
686 Exception 7. _ _ _ _ _ _ _ _	696 Exception 17. _ _ _ _ _ _ _ _
687 Exception 8. _ _ _ _ _ _ _ _	697 Exception 18. _ _ _ _ _ _ _ _
688 Exception 9. _ _ _ _ _ _ _ _	698 Exception 19. _ _ _ _ _ _ _ _
689 Exception 10. _ _ _ _ _ _ _ _	699 Exception 20. _ _ _ _ _ _ _ _

SPECIAL NPA BAND CHARGES GROUP

There are fifteen bands available for pricing special NPA calls, each band contains the Initial Rate (IR), Initial Period (IP), Subsequent Rate (SR) and Subsequent Period (SP). Rates are stored in cents (three digits) and period is stored in minutes, 0=unlimited time.

One or more of these bands will contain special NPA charge data as determined by the rating chip installed. Before adding new information, be sure you are storing it into an empty band. Use the following chart as a convenient way to keep track of the rates and periods.

Note: Special NPA Band Charges include all surcharges and may be subject to discount.

BAND 46
720 IR __ __ __
721 IP __ __
722 SR __ __
723 SP __ __

BAND 47
724 IR __ __ __
725 IP __ __
726 SR __ __
727 SP __ __

BAND 48
728 IR __ __ __
729 IP __ __
730 SR __ __
731 SP __ __

BAND 49
732 IR __ __ __
733 IP __ __
734 SR __ __
735 SP __ __

BAND 50
736 IR __ __ __
737 IP __ __
738 SR __ __
739 SP __ __

BAND 51
740 IR __ __ __
741 IP __ __
742 SR __ __
743 SP __ __

BAND 52
744 IR __ __ __
745 IP __ __
746 SR __ __
747 SP __ __

BAND 53
748 IR __ __ __
749 IP __ __
750 SR __ __
751 SP __ __

BAND 54
752 IR __ __ __
753 IP __ __
754 SR __ __
755 SP __ __

BAND 55
756 IR __ __ __
757 IP __ __
758 SR __ __
759 SP __ __

BAND 56
760 IR __ __ __
761 IP __ __
762 SR __ __
763 SP __ __

BAND 57
764 IR __ __ __
765 IP __ __
766 SR __ __
767 SP __ __

BAND 58
768 IR __ __ __
769 IP __ __
770 SR __ __
771 SP __ __

BAND 59
772 IR __ __ __
773 IP __ __
774 SR __ __
775 SP __ __

BAND 60
776 IR __ __ __
777 IP __ __
778 SR __ __
779 SP __ __

SPECIAL NPA EXCEPTIONS GROUP

All known special Area Codes (NPA's) such as corridor exceptions etc. and the rates associated with the Area Code and exchange where the payphone is located are stored in the rating chip at the time of manufacture however, new NPA's are created all the time, and the rates associated with some NPA's may change in time. In addition, it is possible to restrict a whole NPA.

To enter a new NPA or to correct an already existing one, enter a "*", three digits for the area code, two digits for the special NPA band number and a "*". To restrict an NPA enter 00 in place of the band number. The Exceptions group will have priority over the data stored in the rating chip.

Example 1: Area code 503 must be added, and rated in accordance to band 47 and you want to store it in variable No. 782 (exception 3): Enter 782*50347*

Example 2: Area code 809 must be restricted and you want to store it in variable No. 792 (exception 13): Enter 792*80900*

Example 3: Exception 12 must be deleted: Enter 791*0*

780 Exception 1. _ _ _ _ _	790 Exception 11. _ _ _ _ _
781 Exception 2. _ _ _ _ _	791 Exception 12. _ _ _ _ _
782 Exception 3. _ _ _ _ _	792 Exception 13. _ _ _ _ _
783 Exception 4. _ _ _ _ _	793 Exception 14. _ _ _ _ _
784 Exception 5. _ _ _ _ _	794 Exception 15. _ _ _ _ _
785 Exception 6. _ _ _ _ _	795 Exception 16. _ _ _ _ _
786 Exception 7. _ _ _ _ _	796 Exception 17. _ _ _ _ _
787 Exception 8. _ _ _ _ _	797 Exception 18. _ _ _ _ _
788 Exception 9. _ _ _ _ _	798 Exception 19. _ _ _ _ _
789 Exception 10. _ _ _ _ _	799 Exception 20. _ _ _ _ _

INTERSTATE BAND CHARGES GROUP

All known area codes (NPA's) which are outside of the state where the payphone is located are stored in the rating chip at the time of manufacture, however, new NPA's are created all the time and the rates between some NPA's may change in time. When a new NPA is created, the owner must add the new NPA to the special NPA exceptions group (section 2.5.11). When rates change or if it is desired to change the initial time from 1 minute to say 3 minutes, the owner must use the interstate band charges group.

Note: Interstate Band Charges include all surcharges, and can be subject to discounts.

There are ten bands available for pricing Interstate calls, each band contains the Initial Rate (IR), Initial Period (IP), Subsequent Rate (SR) and Subsequent Period (SP). Rates are stored in cents (three digits) and period is stored in minutes, 0=unlimited time.

One or more of these bands will contain local charge data as determined by the rating chip installed. Before adding new information, be sure you are storing it into an empty band. Use the following chart as a convenient way to keep track of the rates and periods.

BAND 1
820 IR __ __ __
821 IP __ __
822 SR __ __ __
823 SP __ __

BAND 2
824 IR __ __ __
825 IP __ __
826 SR __ __ __
827 SP __ __

BAND 3
828 IR __ __ __
829 IP __ __
830 SR __ __ __
831 SP __ __

BAND 4
832 IR __ __ __
833 IP __ __
834 SR __ __ __
835 SP __ __

BAND 5
836 IR __ __ __
837 IP __ __
838 SR __ __ __
839 SP __ __

BAND 6
840 IR __ __ __
841 IP __ __
842 SR __ __ __
843 SP __ __

BAND 7
844 IR __ __ __
845 IP __ __
846 SR __ __ __
847 SP __ __

BAND 8
848 IR __ __ __
849 IP __ __
850 SR __ __ __
851 SP __ __

BAND 9
852 IR __ __ __
853 IP __ __
854 SR __ __ __
855 SP __ __

BAND 10
856 IR __ __ __
857 IP __ __
858 SR __ __ __
859 SP __ __

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ALARMS GROUP

The Alarms group consists of a series of registers containing the status of the various alarms in the system. Variables 920 through 923 contain registers that can be monitored but not changed since their contents are a function of external events. All other alarms can be reset through maintenance code 962. To obtain the status of any alarm input, dial the valid owner bypass code, wait three seconds and dial three-digit variable.

920 ALARM NO. 1. Normally associated with upper housing access. (OFF)

921 ALARM NO. 2. Associated with handset monitor. (OFF) *SERIES 3 + 4 BOARDS ONLY*

922 ALARM NO. 3. Normally associated with vault access. (OFF)

923 ALARM NO. 4. Normally associated with an external contact such as may be found in vending machines (empty indicators), or in intrusion detectors. A contact closure to ground indicates an alarm condition. (OFF)

924 ALARM NO. 5. Battery backed RAM status. On if RAM has been loaded with the default values from the Rating Module, but the changes and additions have not been loaded. (OFF)

925 ALARM NO. 6. Cashbox 80% full level has been exceeded. (OFF)

926 ALARM NO. 7. Cashbox 95% full level has been exceeded. (OFF)

927   NO ACTIVITY ALARM

928   NO COINS ALARM

929   BAD EEPROM BURN ALARM

MAINTENANCE GROUP

The Maintenance group consists of commands used by the maintenance man locally or remotely to initiate specific actions in the payphone. These maintenance commands are initiated by dialing the three-digit only.

960 TRANSPARENT MODE. Causes the payphone to be connected to the Telephone Company line without restrictions, or requiring payment. Requires that the telco line be a tone dialing line since the payphone's keypad will be connected directly to the line. This mode of operation is terminated when the payphone is returned on-hook.

961 CALL HOME. Causes the payphone to initiate a call to the "Home" base and report the alarm status with voice telemetry if option 129 is on. If option 130 is on and the unit is equipped with the optional modem, the payphone calls home and delivers a status report. This command should be used by the maintenance man upon arrival at the payphone site during a service call in which the cashbox is to be serviced.

962 RESET ALL COUNTERS. This command is to be used by the maintenance man upon departure after a maintenance call in which the cashbox has been serviced.

963 TERMINATE TELEMETRY MODE. Will cause the payphone to go back on-hook to terminate a telemetry link.

964 RELOAD BATTERY-BACKED RAM. Will clear the RAM of all changes and additions and will load default values from the Rating Chip. This command is normally used when a new rating chip is installed, it may be necessary to make changes and additions.

LONG DISTANCE SERVICE OPERATION

The model 1200-3 will interface with several types of Long Distance Service (LDS) switches. The unit may be optioned to route all coin/toll (1+) calls through an OCC (Other Common Carrier) such as MCI or US/Sprint (Equal Access), while Operator only (0-) and Operator assisted (0+) calls can be routed through an Operator Assisted LDS (OALDS). In addition, the 1200-3 can be equipped with an optional Commercial Credit Card (CCC) reader to route all 1+CCC calls through a CCCLDS switch such as a Summa Four PTSS 1000.

COIN/TOLL CALLS THROUGH AN OCC

If Option 143 (EQUAL ACCESS) is off, the 1200-3 will route all coin/toll calls (toll calls paid for in coins) through the Local Central Office (LCO).

If Option 143 is on, and 10-XXX service is available where the payphone is located, the payphone will dial the 10-XXX number stored in register 260 (OCC ACCESS NUMBER) to access the OCC followed by the destination number. If 10-XXX service is not available, the number stored in register 260 (950-XXX or any other number desired) will be dialed, then the unit will detect answer back followed by OCC dial tone and the payphone then dials the authorization code stored in register 261 (OCC AUTHORIZATION CODE), followed by the destination number. The 1200-3 will then monitor the line for call completion to determine when to start timing the call.

0- and 0+ CALLS
THROUGH AN OALDS

If Options 138 (0+LDS) and 139 (0-LDS) are OFF, the payphone will route all operator calls through the LCO. If either 138 or 139 is ON, the payphone will route the call through the OALDS switch whose access telephone number is stored in register 262 (OALDS SWITCH PHONE NUMBER).

Because there are several types of OALDS, there are several interface requirements which must be met to properly operate the 1200-3 into these switches. In addition, the OALDS may be located outside the local calling zone of the payphone which would require that the call go through an OCC first, or use an in-wats line (1+800).

a) __10-XXX operation__

When the OALDS is located outside the local access zone (140 OFF), the payphone will dial the 10-XXX number stored in register 260 (OCC ACCESS NUMBER), followed by (d) below.

b) __950-XXXX operation__

When 10-XXX service is not available from the LCO serving the payphone, the 1200-3 will dial the 950-XXX number stored in register 260 (OCC ACCESS NUMBER), when it detects answer supervision followed by 400 Hz dial tone, then the payphone will dial the authorization number stored in register 261 (OCC AUTHORIZATION CODE), followed by (d) below.

c) __1+800 operation__

When the OALDS uses in-wats lines to handle calls from outside the local zone, the 1200-3 will dial the 1+800-XXX-XXXX number stored in register 260 (OCC ACCESS NUMBER). When it detects answer supervision followed by 400 Hz dial tone, then the payphone will dial the identification number

stored in register 263 (OCC
AUTHORIZATION CODE), followed by
the destination number and open
the mike so that the customer may
speak to the OALDS operator.

d) OALDS in local zone

When the OALDS is located
within the local calling zone, or
if either (a), (b) or (c) above
have been completed, the payphone
will dial the access number stored
in register 262 (OALDS SWITCH PHONE
NUMBER), when it detects answer
supervision followed by 400 Hz
dial tone, the payphone will dial
the identification number stored
in register 263 (O+ ID). If option
141 (DELETE FIRST DIGIT) is ON, the
payphone will delete the leading
0 in the destination number, else
it will leave the destination as
dialed by the customer. The
payphone will then wait a number of
seconds as specified by the
contents of register 231 (LDS
DELAY), or not wait at all if 231
contains 0, then dial the destina-
tion number and open the mike so
that the customer may speak to the
OALDS operator.

COMMERCIAL CREDIT
CARD CALLS

When the 1200-3 is equipped
with a Commercial Credit Card
(CCC) reader, and option 128 is ON
(PAYPHONE IS EQUIPPED WITH CREDIT
CARD READER OPTION), the unit will
operate with either coins or
CCC's. If the customer dials the
destination number first, the
voice circuitry will request the
proper amount to be deposited or
for the credit card to be inserted.
If the customer inserts the credit
card first, the 1200-3 will read
the contents of the card and
process the call as follows:

The payphone will go off-hook
towards the LCO and dial the

contents of register 265 (CREDIT
CARD CALL PROCESSOR ACCESS NUMBER),
then it will detect call comple-
tion and 400 Hz tone from the call
processor. Then the unit transmits
the contents of register 266 (CCC
PHONE ID), the call processor
acknowledges the ID with dial tone
and the 1200-3 then dials the card
number, account number, expiration
date, and checksum. The call
processor acknowledges this data by
returning dial tone and the 1200-3
then dials the destination number
and opens the mike.

INSTALLATION TESTS

When the Model 1200-3 is
shipped from the factory, it is
programmed in accordance to re-
sponses to a questionnaire made at
the time of purchase. You should
verify these values at this time.
All other variables will be set to
their default value as shown above.

Local Call Test: Go off-hook
and listen for dial tone, dial a
known local number such as the time
or weather forecast.

Voice Response: After the
number is dialed, you will hear
"please deposit 25 cents for the
next minute" (assuming the local
call charge is 25 cents and that
this is a metered location) if no
coins are deposited within five
seconds, you will hear "please
deposit 25 cents" repeated every 3
seconds.

Deposit the amount required and
note that as you deposit coins:

If three seconds or more elapse
between coins, the Model 1200-3
will calculate the remaining
difference and you will be prompted
to deposit the amount required.
When the exact amount is deposited
you will hear "thank you."

The Model 1200-3 will turn off the receiver and the keypad then it will go off-hook toward the central office and look for dial tone. When it detects dial tone, it will dial the number. If no dial tone is detected, the Model 1200-3 will wait 12 seconds, go back on-hook and off-hook again, if no dial tone is detected, the Model 1200-3 will go back on-hook towards the Central Office, return the coinage and return dial tone to the receiver.

When the Model 1200-3 successfully completes dialing, the receiver will be turned on again and you should hear the call progress through the telephone company equipment. Some "pops" and other switching noises will be heard, then ring back.

NOTE: Many older Telephone Central Offices are equipped with electromechanical switching equipment which generates excessive noise between the end of dialing and the first ringback. Because of this, you may have to set registers 226, 227, and 228 to a value which consistently allows normal operation.

The Model 1200-3 will monitor the ringback and will turn on the microphone when the phone is answered and speech is present. If you hang up before call completion, the Model 1200-3 will return the coinage.

The Model 1200-3 is equipped with a "SIT" tone detector which detects the three-tone sequence preceding the Telephone Company messages. Dial any number which you know will result in a telco message containing this tone sequence, and note that you can listen to the message as long as you want, the mike is kept off and the coinage returned when you hang up.

Long Distance Calls: The Rating Chip will price all Toll calls, test this feature by dialing any Long distance number. You will hear the amount required and time purchased. Verify this amount with the charges shown in the phone book.

You may proceed with the call or abort it at this time or allow the Model 1200-3 to dial the number and terminate the call before it is answered.

• Coin-Free and Emergency Numbers: The Model 1200-3 is normally programmed to allow 911 to be dialed free of charge, however other emergency or coin-free numbers may be programmed at the site. Test each number as follows: Proceed as above and note that after dialing the number, or after dialing the auto dial code, the Model 1200-3 will immediately go off-hook toward the C.O. and start dialing. You may abort the call before completion or complete it to verify proper programming.

Restricted Numbers/Exchanges: The Model 1200-3 can be programmed on site to restrict certain numbers or whole exchanges. When a restricted number or exchange is dialed, the Model 1200-3 will return dial tone to the receiver.

Special Charges: The 1200-3 can be programmed with special charges or restrictions for information calls, Operator only calls, Operator assisted calls, 800 and 900 number calls and Intra Lata Calls. These charges can be tested by initiating calls as listed, the calls can be aborted after the voice circuitry states the charge required.

FIELD MAINTENANCE

Field maintenance of the Model 1200-3 is normally limited to cleaning or replacing defective components and subassemblies. Units in need of service must be returned to Elcotel at the address below. A return authorization number must be obtained from Elcotel's Customer Service at the address below or by telephone before each lot is shipped.

Prior to performing specific troubleshooting procedures, perform the following routine inspections:

Check the Power terminal block, check for loose connections and/or bad crimping of the wires. If bad crimping exists, replace the cable assembly. Measure 16 VAC across the outer terminals. Turn power off and measure continuity between the center terminal and the metal chassis.

Check the telephone cable, make sure it is firmly seated in the RJ11C jack located on the PC assembly. Verify that the telephone line is in operation by using an RJ11C terminated "butt-set."

Check all connector terminated cables attached to the assembly, make sure they are firmly seated, check for broken wires, if broken wire exists replace the defective assembly.

Check for proper installation of the rating chip (see Fig. 1).

Check for damaged components, if damage exists, replace the entire assembly.

Ensure that the entire PCM-3 assembly is installed properly and is fully seated.

Coin Relay Hopper and Coin Chute Assembly: Check for jammed coins in the coin chute assembly. If coins are found, remove them by removing the coin chute assembly and turn it upside down. If this does not clear the coins, replace the entire assembly.

Check for coins jammed in the hopper. If coins are found dislodge them by using an orange stick or similar object, taking care not to damage the door, latch, or latch springs.

Ensure that the assembly locking tab in the back of the coin chute is properly seated in its groove.

Check for foreign particles beween the relay armature and the pole piece. If particles are found, remove them.

If necessary, replace the coin chute assembly.

Verify that the coin relay contact springs operate fully on the coin drop and are fully restored when the relay is operated. Verify that no interface with the covers exists. If necessary replace the entire coin relay-hopper assembly.

Coin Rejector Assembly: Ensure that the coin rejector is vertical within 1-1/2 degrees. If it is not vertical, correct the angle by adjusting the backboard or booth.

Ensure that the rejector is clean and free of foreign matter. If not, clean it with a lint-free rag. Also clean the nickel bounce tester using a rag wrapped around an orange stick or screwdriver. Do not allow the gate to slam shut.

Verify that parts have not been damaged or have not fallen off (cradles, counterweights, etc.). If any have fallen off, replace the entire assembly.

Ensure that the nickel bounce tester mounting screw is tightened, if not, tighten it but do not over torque.

Check for free operation of the linkage. If binding is detected, clean the unit or replace the entire assembly.

Check the coin release lever on the upper housing assembly for proper operation. If a problem is detected, replace the entire upper housing.

Hook-switch, Dial, and Display Assembly: Verify that the hook-switch cam is not damaged, if it is, replace the entire assembly. Check to ensure that the hook-switch contacts are operating properly, if not, replace the entire assembly.

Verify that the armored cord mounting bracket is in place. If its screw is stripped, replace the entire hook-switch and dial housing assembly. Check for a damaged handset and replace if necessary.

Check for binding or sticky Touch Call Unit push buttons, verify that the TCU operates properly when push buttons are depressed. If not, replace the TCU Assembly.

WARRANTY STATEMENT

Elcotel warrants that the electronic modules of its Products operate within their published specifications and shall be free from defects in material and workmanship for a period of one (1) year from the date of shipment by Elcotel. The non-electronic portion of the Product shall bear the warranty of the manufacturer thereof.

CUSTOMER may return to Elcotel during the applicable warranty period, at CUSTOMER'S shipping expense, any Product sold by Elcotel to CUSTOMER which is defective. Elcotel shall return to CUSTOMER, as promptly as possible but not later than thirty (30) days after receiving a defective item as described above which is under warranty coverage, a working replacement or the original product repaired. The correction of such defective Product(s) shall be at no cost to CUSTOMER except for the expense of shipping the defective Product(s) to Elcotel which CUSTOMER will pay. The cost of shipping repaired or replacement Product(s) back to customer shall be paid by Elcotel.

THE CORRECTION OF SUCH DEFECTS BY REPAIR OR REPLACEMENT IN THE MANNER SET FORTH ABOVE SHALL CONSTITUTE THE SOLE AND EXCLUSIVE REMEDY OF CUSTOMER AND SHALL CONSTITUTE FULFILLMENT OF ALL THE OBLIGATIONS OF ELCOTEL WITH RESPECT TO ANY WARRANTY GIVEN HEREIN OR IMPLIED RELATING TO ANY PRODUCT SOLD OR DELIVERED BY ELCOTEL.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES WHETHER ORAL, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ELCOTEL shall have no obligation to repair, replace, or correct any Product manufactured by it which has been subjected to misuse, mishandling, neglect, accident, or abuse, or has been subjected to alteration or repair by persons other than ELCOTEL. ELCOTEL SHALL NOT BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, CONTINGENT OR INCIDENTAL DAMAGE WHATSOEVER.