SLC 96 / SPOTS CHANNELS

MEMORANDUM

September 20, 1985

This is a brief memo on the mystery of "SPOTS".

There are now two SLC 96 channel units available for use on certain switched type of Special Service circuits. They are, a WP36 for use in the central office and a WP37 for use in the remote terminal. (BSP attachment enclosed.)

Some typical USOC codes applicable to SPOTS use:

TK = PBX TRK
WI = 800 SVC TRK
WO = WATS LINE OUT
WS = WATS TRUNK OUT
WX = 800 SVC LINE
WY = WATS TRUNK 2 WAY
WZ = WATS LINE 2 WAY

"SPOTS" channel units can not be used on a service where battery reversal is a requirement. (Toll diverting, etc.) Also, there is a phenomenon peculiar to a demension PBX where a ground on the tip will signal the console that there is an incoming call. When a digroup with SPOTS channel units fails, it puts a ground on the tip to the PBX and causes a signal at the console. This will also happen if the central office removes the central office SPOTS channel unit.

Same benefits of "SPOTS" are:

SPOTS dual channels used in a MODE 1 SLC provide two channels verses one channel for a D4 unit.

SPOTS channel units are a fixed design. No switches, automatic ground or loop start service.

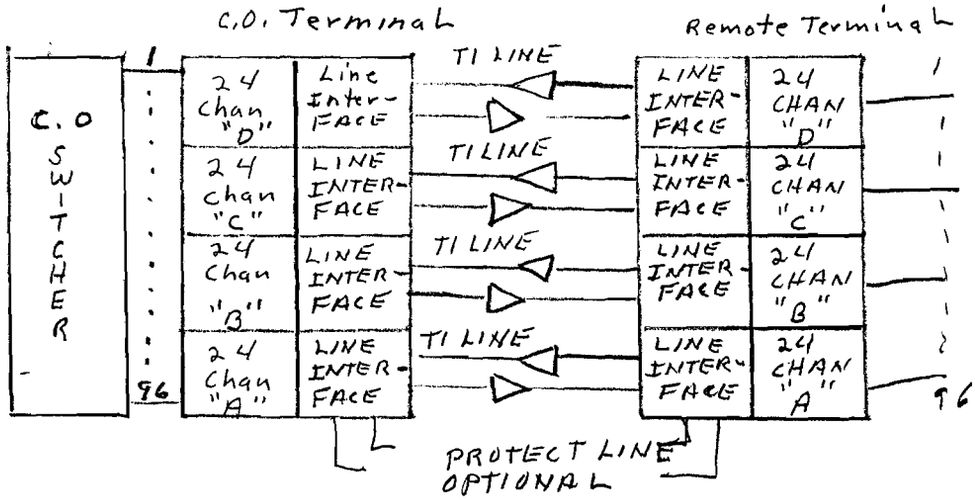
You are able to use the Pair Gain Test Controller to sectionalize troubles.

They are compatible with connection to a 5 ESS.

Also, attached is a brief explanation of SLC 96 in MODE 1, II or III. If you need more information please contact Herb Lythjohan on 735-3819.

Herb Lythjohan

# TYPICAL SYSTEM LAYOUT MODE 1



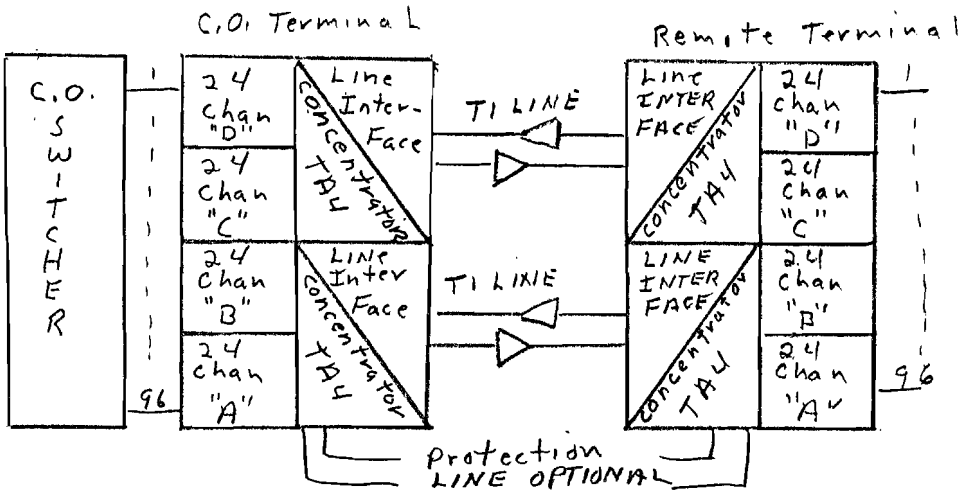

Mode 1 was intended for message telephone customers only. Each shelf has slots For (12) cards. Each "POTS" or "SPOTS" card carries (2) customers. Note that each shelf has a Line InterFace card and interfaces with a "T1" Line. When using other than "POTS" or "SPOTS" cards in one of the shelves you physically reduce channel capacity by (½).

With "POTS" or "SPOTS" units installed, the "Pair Gain Test Controller" can be used to do all testing and sectionalize the troubles.

When you use D4 cards in Mode 1 operation you have to dispatch to sectionalize any trouble. The Pair Gain Test Controller can not test on any line other than "POTS" or "SPOTS"

At the time of system installation a request has to be made to the equipment engineer if you want E & M leads brought out to your IDF.

# TYPICAL SYSTEM LAYOUT MODE 2

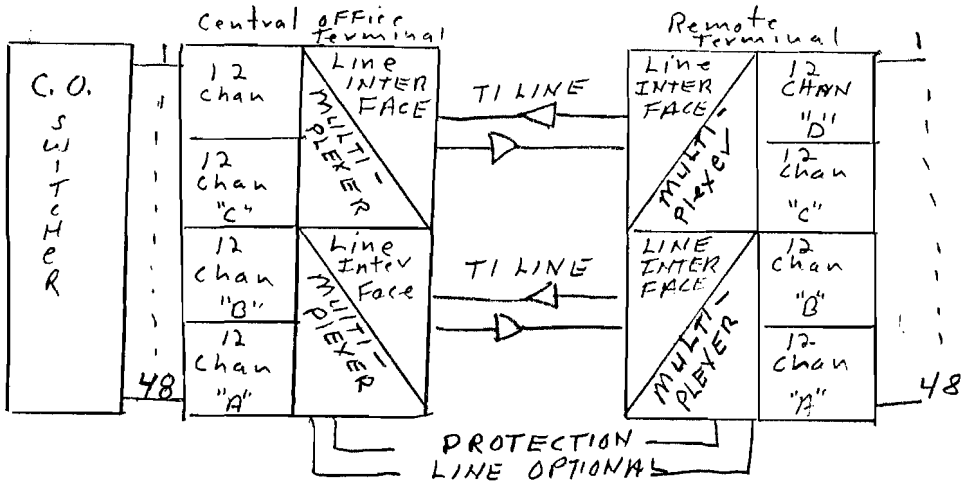



Mode 2 is intended for message telephone customers who can take some concentration. There is a (TAU CARD) Time Assignment Unit that assigns time or concentrates shelf "A" and "B", and "C" and D. IF you were to use D4 channel units you can only assign to the (4) right card slots on each system.

You would not use "SPOTS" cards in Mode 2, do to the TAU card making both channels on the "SPOTS" busy even though only one channel was in use.

At the time of system installation a request has to be made to the equipment engineer IF you want E & M leads brought out to your IDF.

TYPICAL SYSTEM LAYOUT MODE 3




Mode 3 operation was designed For Special Service only. You have (12) slots For D4 type cards on each shelF. ShelF "A" + "B" and "C" + "D" Feed a (MX) Multiplexer card that combines the shelves and assigns them to their respective T1 Line. You will have E + M Leads brought out to your IDF For signaling purposes.

The "Pair Gain Test Controller" can not do any testing on this system.

You <u>would not</u> use "SPOTS" channels in this Mode 3 operation.

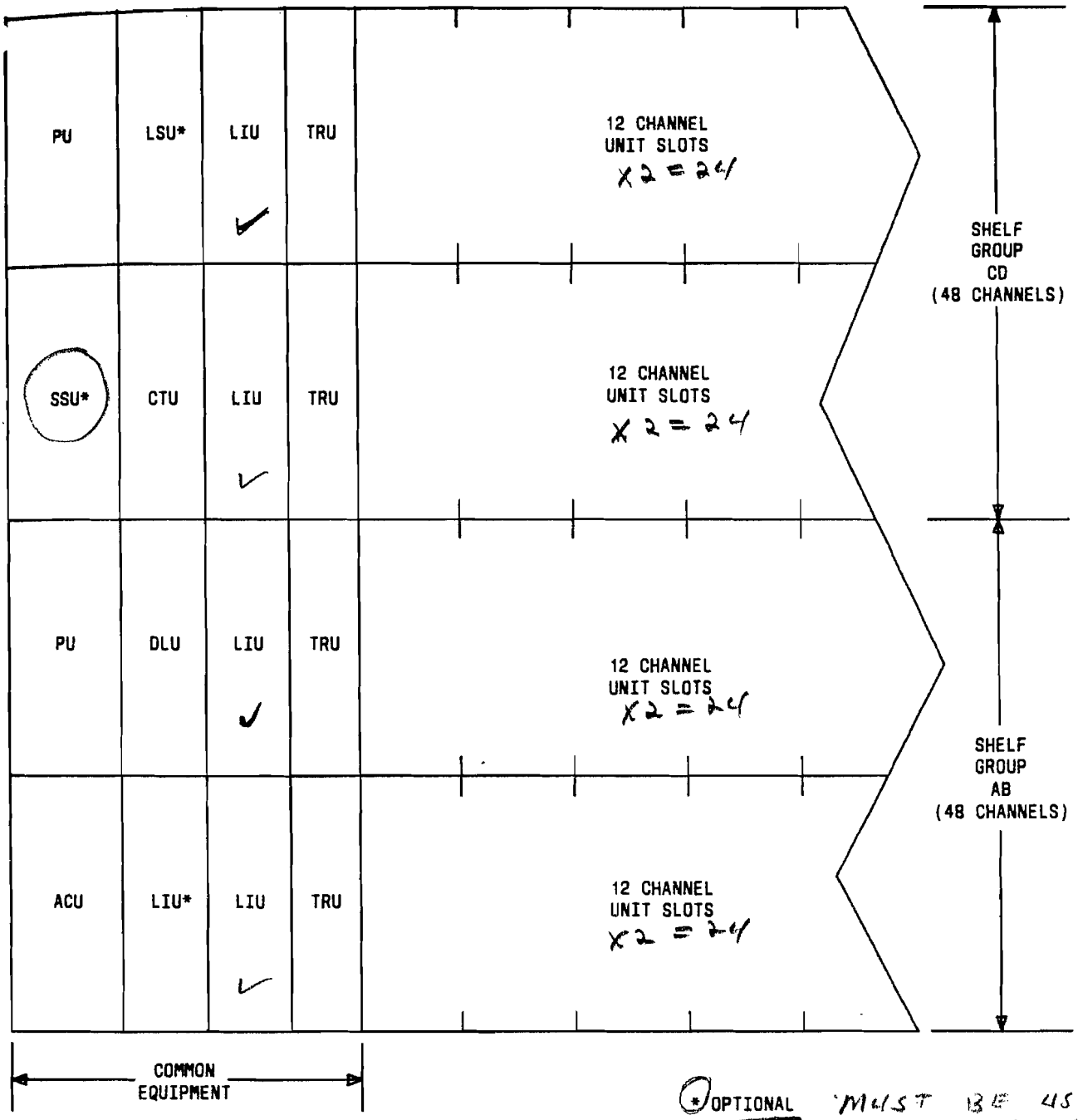



Fig. 2—Common Equipment Locations for Mode 1 Operation

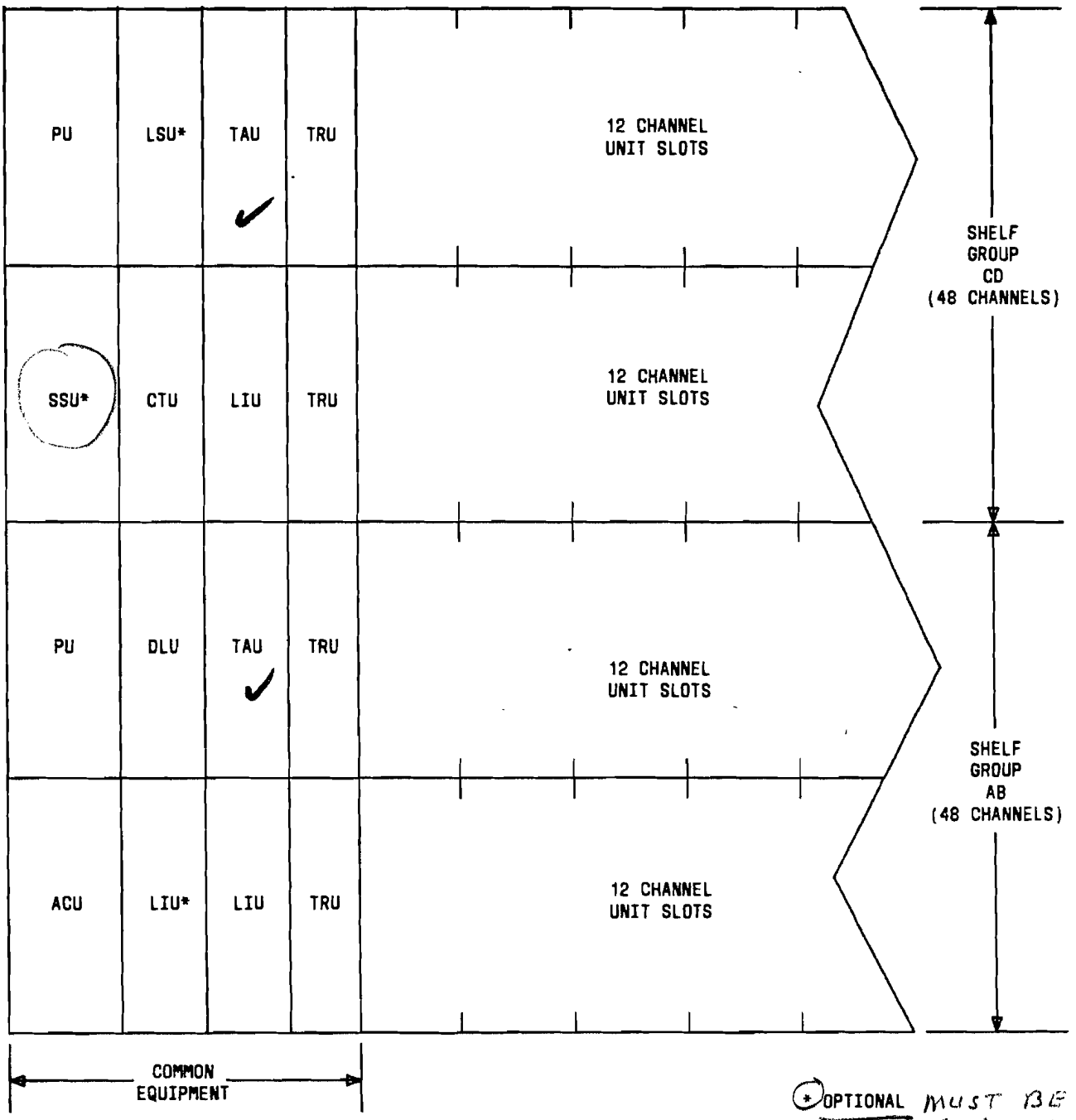



Fig. 3—Common Equipment Locations for Mode 2 Operation

TAU = TIME ASSIGNMENT UNIT
Concentrates (2) shelves onto
(1) T Line

D4

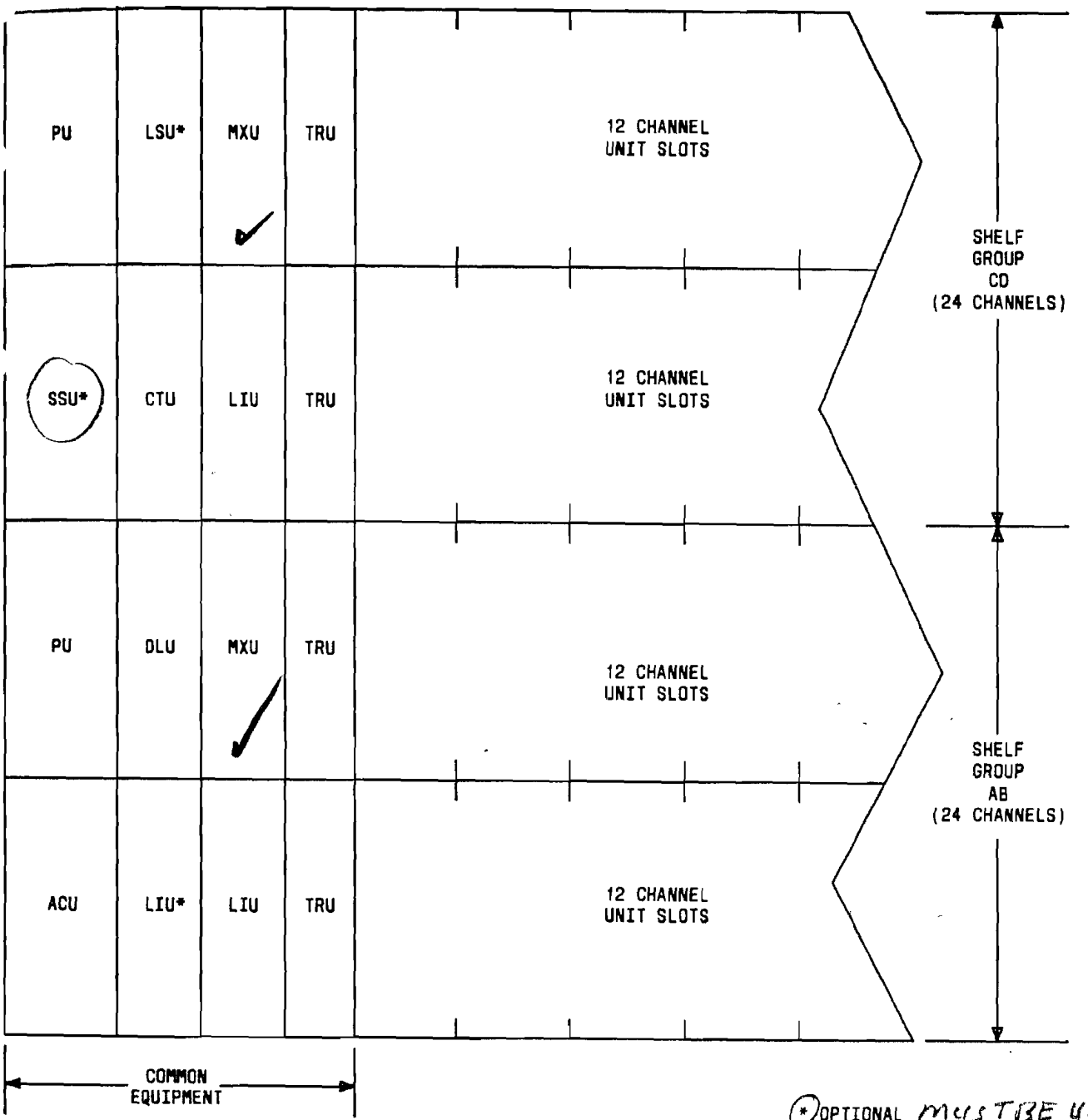



Fig. 4—Common Equipment Locations for Mode 3 Operation

*OPTIONAL MUST BE USED IF ANY CHANNELS ARE: COIN DATA PORT D4

MXU = MULTIPLEXER
multiplexes (2) shelves onto (1) T Line

# WP36 CP "SPOTS*" COT CHANNEL UNIT S9CD171AXX

## DATA SHEET

## "SLC*" 24 AND "SLC" 96 CARRIER SYSTEMS

The WP36 SPOTS channel unit (CU) is a current sink unit designed to serve most 2-wire locally switched special services in either loop-start or ground-start applications. The SPOTS channel units are capable of supporting the following types of application: local PBX trunk, WATS trunk, or WATS line. The CU provides two channels per plug-in and is testable with the pair gain test controller (PGTC). The WP36 is located in the central office terminal (COT) bank. Figure 1 is a functional block diagram of the unit, and Fig. 2 shows the board and faceplate features.

* Trademark of AT&T Technologies.

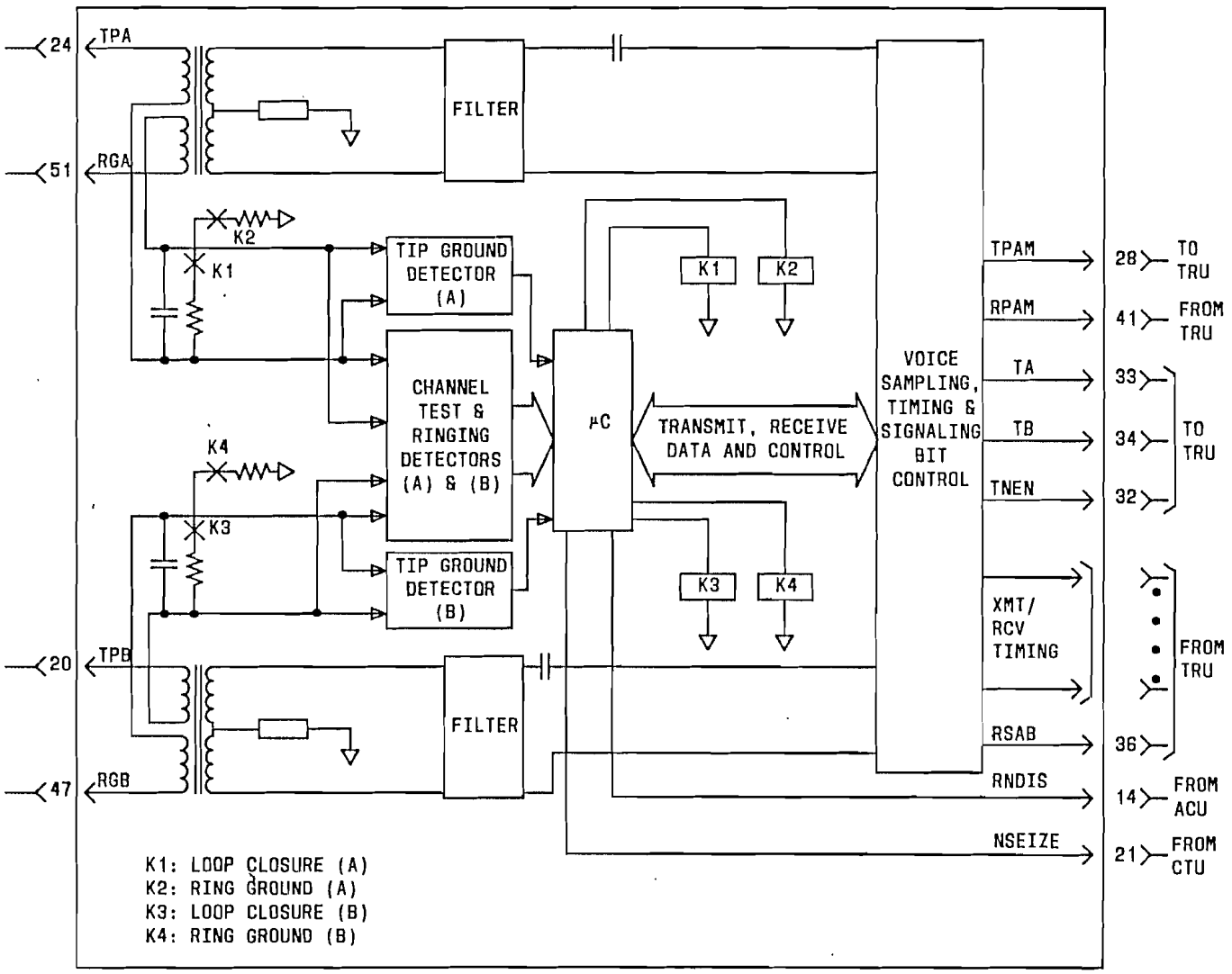



**Fig. 1—WP36 Functional Diagram**

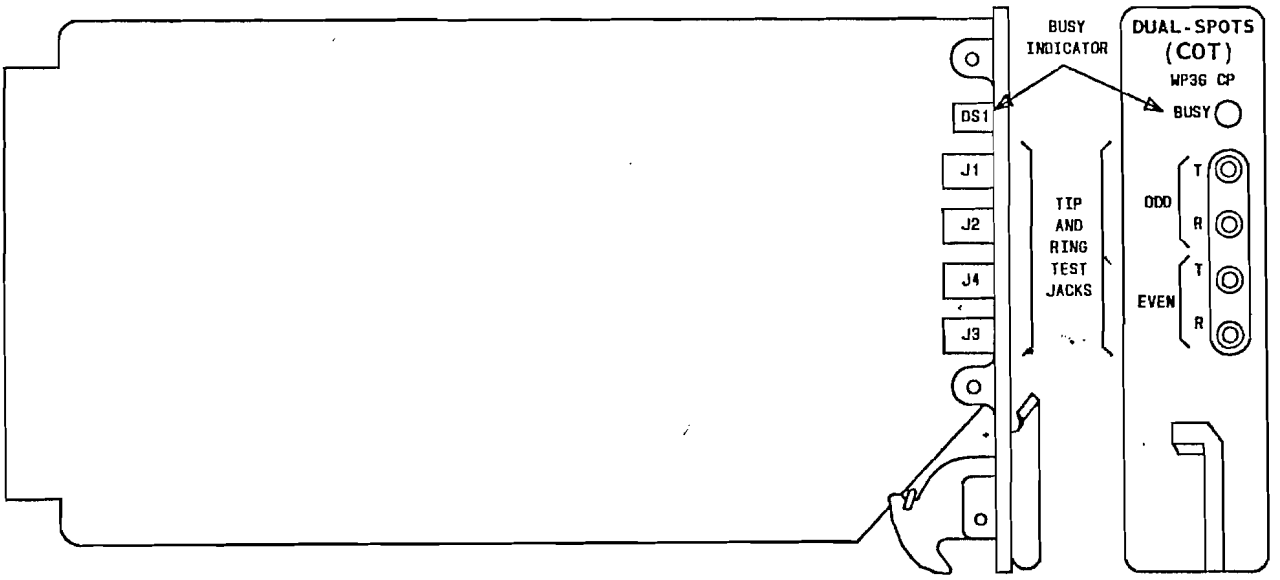



Fig. 2—WP36 Board and Faceplate Diagram

SPOTS channel units are designed for use in mode I only, and are compatible with 5ESS* switch (universal or integrated SLC 96 carrier system arrangements).

The WP36 CU is a voice-frequency unit providing 0 dB gain in both the transmit and receive directions. The transformer coupled voice path is designed with an impedance of 900 ohms (to provide a high return loss against 900 ohms), in series with 2.16 $\mu$F. The WP36 provides an off-hook dc resistance of 1000 ohms and a ring-to-ground signaling resistance of 1000 ohms for ground-start applications.

* Trademark of AT&T Technologies.

No options or gain settings exist on this channel unit and the signaling type (loop-start or ground-start) is automatically selected.

*BUSY INDICATOR (RED LED):* Indicates that one of the channel circuits is in use when lighted.

*(J1, J2, J3, J4) TIP AND RING TEST JACKS:* J1, J2, J3, and J4 are faceplate mounted pin jacks that are used to monitor the input of the TIP and RING leads of the channels. J1 and J2 are used to monitor the odd channel, and J3 and J4 monitor the even channel. It is recommended that a KS-19531 type plug or the KS-14510, L8 test leads which include this plug be used with the KS-19427 type pin jack.

Remote Terminal

# WP37 CP "SPOTS*" RT CHANNEL UNIT S9CP271AXX

## DATA SHEET

## "SLC®" 24 AND "SLC" 96 CARRIER SYSTEMS

The WP37 SPOTS channel unit (CU) is a current feed unit designed to serve most 2-wire locally switched special services in either loop-start or ground-start applications. The SPOTS channel units are capable of supporting the following types of application: local PBX trunk, WATS trunk, or WATS line. The CU provides two channels per plug-in and is testable with the pair gain test controller (PGTC). The WP37 is located in the remote terminal (RT) bank. When the SPOTS WP36 CU is in place at the central office terminal (COT) bank, the WP37 will provide open switching interval protection and forward disconnect capabilities. Figure 1 is a functional block diagram of the unit, and Fig. 2 shows the board and faceplate features.

* Trademark of AT&T Technologies.

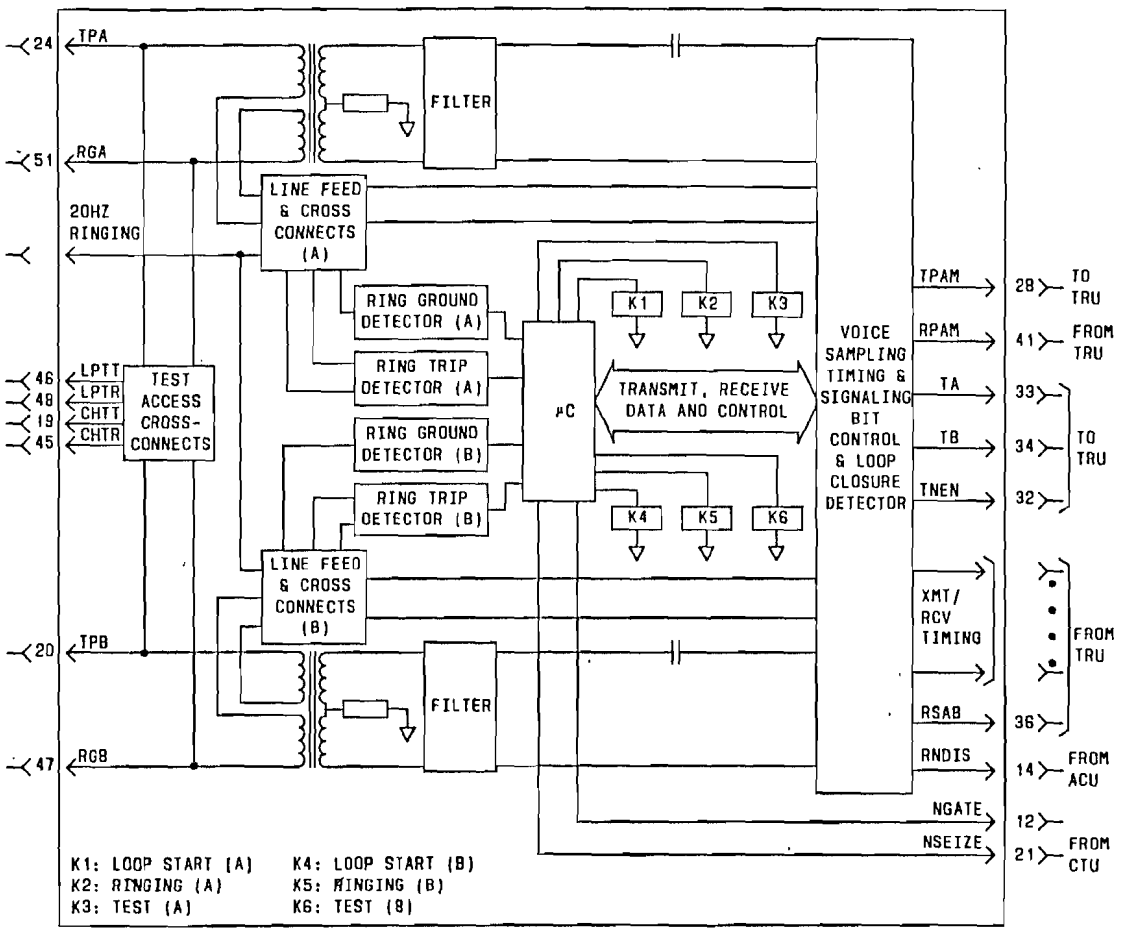



**Fig. 1—WP37 Functional Diagram**

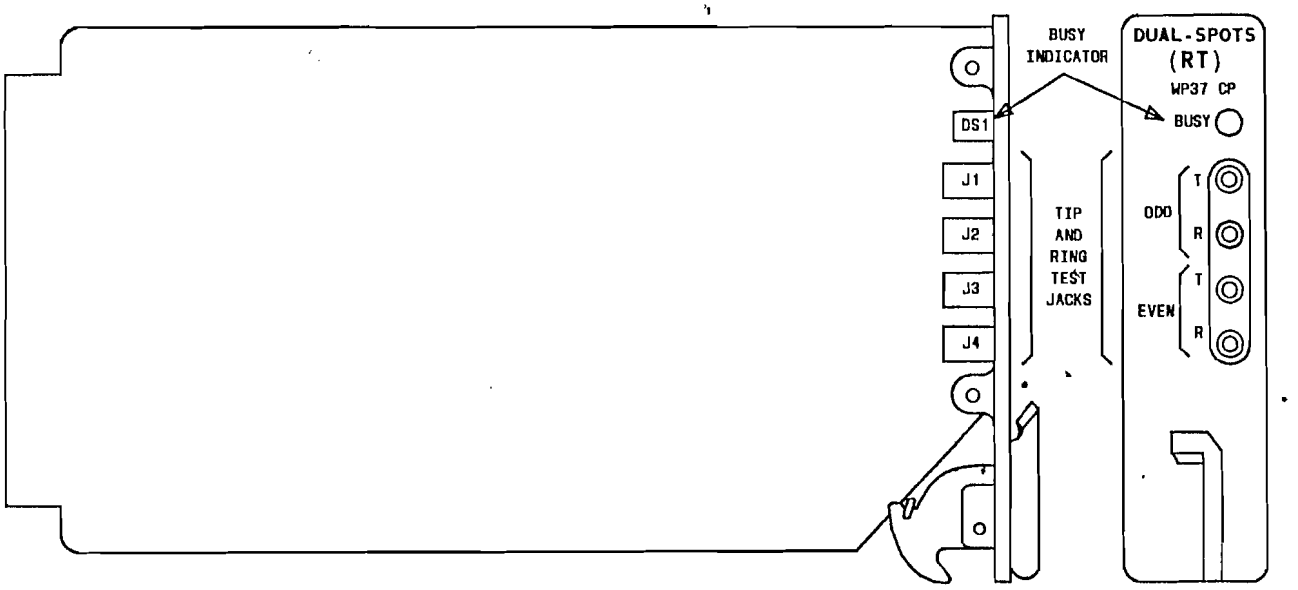



**Fig. 2—WP37 Board and Faceplate Diagram**

SPOTS channel units are designed for use in mode I only, and are compatible with 5ESS* switch (universal or integrated SLC 96 carrier system arrangements).

The WP37 CU is a voice-frequency unit providing 0 dB gain in both the transmit and receive directions. The transformer coupled voice path is designed with an impedance of 600 ohms to provide high return loss against 600 ohms in series with 2.16 μF. The WP37 is designed for the carrier serving area and requires non-loaded cable.

* Trademark of AT&T Technologies.

No options or gain settings exist on this channel unit and the signaling type, loop-start or ground-start, is automatically selected.

*BUSY INDICATOR (RED LED):* Indicates that one of the channel circuits is in use when lighted.

*(J1, J2, J3, J4) TIP AND RING TEST JACKS:* J1, J2, J3, and J4 are faceplate mounted pin jacks that are used to monitor the input of the TIP and RING leads of the channels. J1 and J2 are used to monitor the odd channel, and J3 and J4 monitor the even channel. It is recommended that a KS-19531 type plug or the KS-14510,L8 test leads which include this plug be used with the KS-19427 type pin jack.