MARK 64 TT LITTON MARK READER
DESCRIPTION AND INSTALLATION

1. GENERAL

1.01 This section describes the interface arrangement for the Litton Mark Optical Reader to a 33- or 35-type teletypewriter (TTY) equipped with a 101C-type data set.

1.02 Equipment, as well as installation procedures, described herein are for use on Pacific Company (PAC) premises only, and are not designed for on-line transmission usage.

2. DESCRIPTION

2.01 The Litton Mark Reader is a terminal device designed to read coded marks or punched holes from compatible cards, interpreting these into useful machine language.

2.02 Through the use of coded program cards, the sorting function of the reader can be readily changed, thus providing a great variety of sorting formats.

2.03 While reading, the reader can separate incorrectly completed cards from an offered stack, while at the same time producing a message made up of data from valid cards.

2.04 Added features permit the reader to insert specified characters into the output message which did not appear in the input card.

2.05 Counters on each of the two output stackers can be used to count cards for various purposes.

2.06 Cards may be passed through the reader several times, with different sorting formats used for each cycle.

2.07 The reader is equipped with an alarm to indicate an empty or jammed card input stacker.

2.08 The reader interfaces to a TTY equipped with a 101C data set. The TTY may be used at any time with or without the reader. Or, the reader may be used without the TTY when the program in the reader does not output.

2.09 Specific items which the reader operator must be familiar with are as follows:

- **Control Panel** — This panel contains four pushbuttons (PROGRAM, RUN, HALT/SC, and POWER), an indicator labeled SELECTED, and two bin counters. All indicators are mounted on the right side of the panel.

- **Wait Station Clear Button** — This button allows the operator to manually eject a card when the machine is in the stall condition.

- **Audible Alarm** — This alarm sounds when the input stacker is empty and the reader is in the RUN mode. To turn off, depress the HALT/SINGLE CYCLE button.

- **Primary and Secondary Stackers** — These stackers have pressure sensitive cutoff devices that operate when the stackers are full to stop the reader.

  Note: Primary and secondary stacker counters record the number of cards deposited within their respective stackers. Stacker counters can be reset by depressing the corresponding counter button.

- **Modes of Operation** — The reader has eight modes of operation: halt, single cycle, run, stall, program halt, program single cycle, program run, and program stall. The mode of operation in use is indicated by the status of three indi-

cator lights which serve dual functions as control switches. The three are: run, halt/single cycle (HSC), and program.

- The reader also has a power on-off indicator/control and a Device Selector Indicator.

2.10 The indicator light status of each mode of operation is as follows:

	PROG INDR	RUN INDR	HSC INDR	DEVICE SELECT INDR
HALT	OFF	OFF	ON	ON
SINGLE CYCLE	OFF	ON	ON	ON
RUN	OFF	ON	OFF	ON
STALL	OFF	OFF	OFF	ON
PROGRAM HALT	ON	OFF	ON	ON
PROGRAM SINGLE CYCLE	ON	ON	ON	ON
PROGRAM RUN	ON	ON	OFF	ON
PROGRAM STALL	ON	OFF	OFF	ON
DEVICE UNSELECTED	ON/OFF	ON/OFF	ON/OFF	OFF

3. INSTALLATION

3.01 Prior to the installation of the reader, the telephone company (TELCo) must provide:

- A separate fused (20 amp) power supply of 115-volt 60 Hz.
- Sufficient room for both the reader and TTY.

3.02 The supplier of the Litton Mark Reader shall install the reader.

3.03 TELCo shall:

1. Mount a 6017B key (cut off key) or equivalent where it will be convenient for the operator.

   Note: The cut off key is used to determine the location of trouble if it should occur.

2. Connect a D25C-61 cord assembly, as follows (Fig. 1B of Exhibit 1), to the 6017B key.

   a. W-BL lead to punching 1.

   b. BR-W lead to punching 3.

   c. BL-W lead to punching 6.

3. Using quad inside wire, make the following connections to connect the 6017B key to the 101C data set.

   a. Punching 2 of key to terminal D79 (BK).

   b. Punching 3 of key to terminal D80 (R).

   c. Punching 6 of key to terminal D58 (G).

   Note: Retain Y (yellow) as a spare.

3.04 On some 101C data sets a G-W lead will be wired to terminal D80 with a strap to terminal D79. When this occurs, remove strap and wire per Step 3 of 3.03.

3.05 Occasionally the factory will place the G-W lead on 79 along with the W-BR lead. When this is the case, move the G-W lead to D80 and wire per Step 3 of 3.03. The W-BR lead must remain on D79.

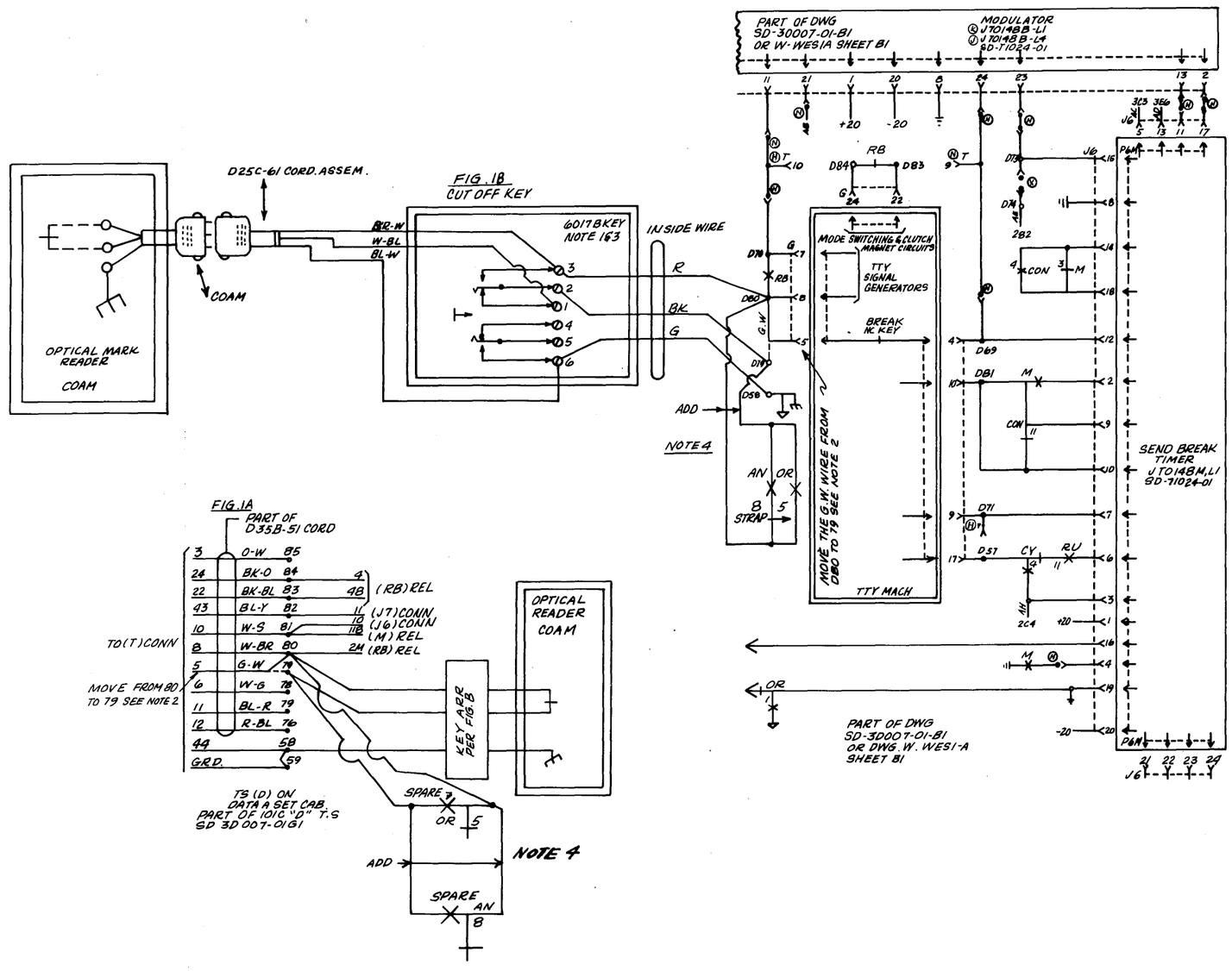
3.06 To ensure there will be no on-line transmission, strap as follows:

1. Strap 5 of the originate relay to 8 of the answer relay (fixed contacts) and wire to D80 of the 101C "D" TS.

2. Strap 5 make of the originate relay to 8 make of the answer relay and wire to D79 of the 101C "D" TS. (See Fig. 1A of Exhibit 1.)

Note: On either placing or answering a call, the operation of the "ANS" or "ORG" relays will shunt the optical reader and prevent on-line transmission.

INITIAL ISSUE 10-31-72			
MA	HK		1
		11-10-72	
PK	HK		2
		12-5-72	
GB	HK		3



NOTES:

1. MOUNT THE 6017 KEY WHERE IT WILL BE CONVENIENT FOR THE OPERATOR.
2. ON SOME 101C DATA SETS THE GW LEAD WILL BE WIRED TO DB0 WITH A STRAP BETWEEN D79 & DB0, OR THE W-BR & GW LEADS WILL BE ON DB0 WITH STRAP TO D79. IN EITHER CASE ARRANGE PER FIG. A.
3. CUT OFF KEY TO BE USED AS A DEMARK POINT. ALSO MAY BE USED BY THE ATTENDANT TO DETERMINE IF A TROUBLE CONDITION EXISTS IN THE CPU OR TEL CO EQUIP.
4. THE 5M CONTACT OF THE "ORG" AND THE 8M CONTACT OF THE "ANS" RELAY ARE SPARE CONTACTS. STRAP 5 & 8 FIXED CONTACTS OF THE "AN" AND "OR" RELAYS - TOGETHER AND WIRE TO DB0 OF THE 101C "D" T.S. STRAP THE 5M AND 8M CONTACTS OF THE "AN" & "OR" RELAYS TOGETHER AND WIRE TO D79 SEE FIGURE. "A" OPERATION OF EITHER THE ORIGINATE OR ANSWER RELAYS (INCOMING - OUT-GOING CALLS) WILL PREVENT THE OPTICAL READER FROM TRANSMITTING ON LINE.

NOTE: EXISTING WIRING ON THE ABOVE CONTACTS SHALL BE REMOVED, TURNED BACK AND TAPED.

MATERIAL

1-6017 B KEY
1-D25C-61 CORD ASSEM.

THE PACIFIC TEL. & TEL. CO. OFFICE OF THE CHIEF ENGINEER CUSTOMER SERVICE ENGINEER - DESIGN CENTRAL COUNTIES AREA SAN JOSE CA	APPROVED RC Benner
INTERFACE ARR FOR OPTICAL READER TO 35 OR 33 TTY E I W 101C DATA SET	ENGINEER H. Kielhorn
	DRAWING CSE 10277

Exhibit 1