



INTERCOM SYSTEM

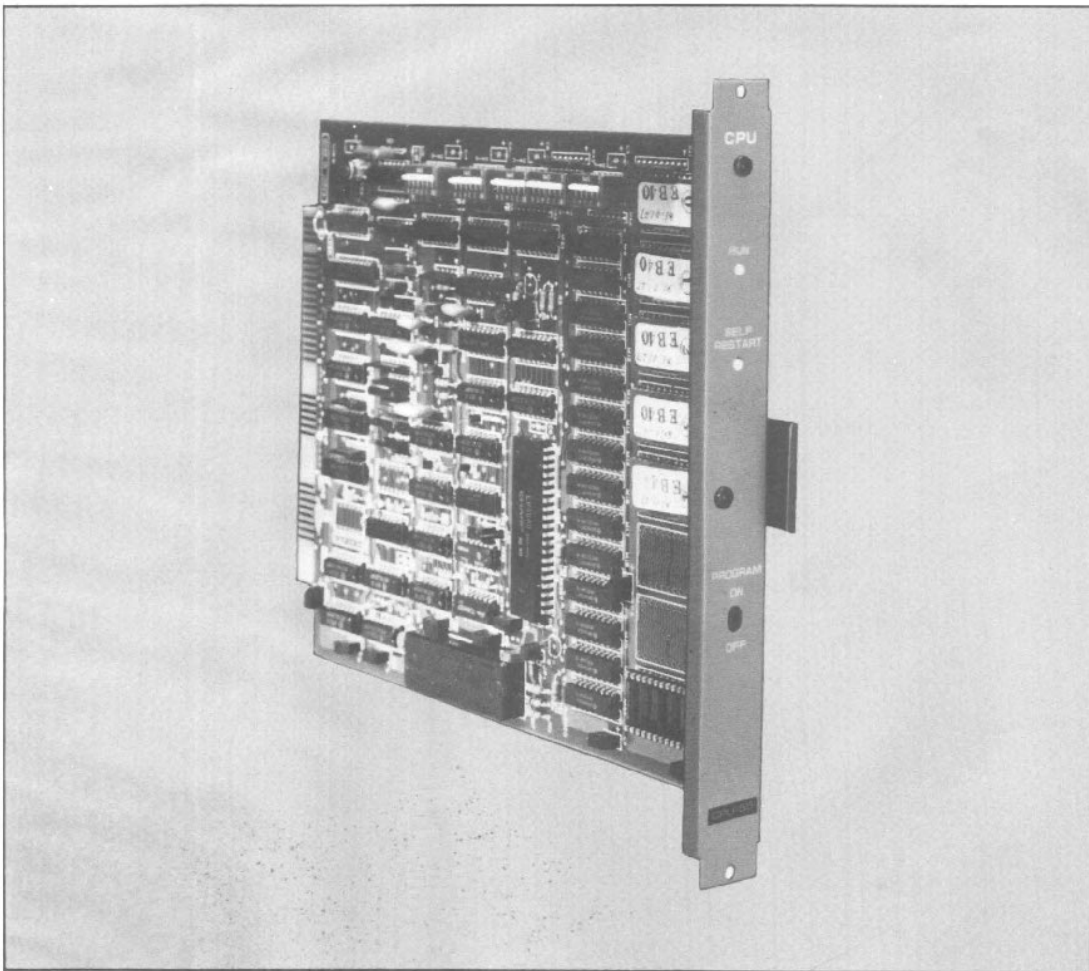
EXES-5000 CPU-55

TOA EXES-5000 INTERCOM SYSTEM

Central Processing Unit

CPU-55

INSTALLATION HAND BOOK



TOA ELECTRIC CO., LTD.
KOBE, JAPAN

133-21-005-5

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• INTRODUCTION TO THE OPERATION MANUAL FOR EXES - 5000

This manual forms part of the Installation Manual for TOA INTERCOM SYSTEM EXES-5000.

You may add the CPU-55 to your TOA INTERCOM SYSTEM EXES-5000, according to your specific needs, to obtain various other functions. Correct operation of these additional functions are not available by only connection of the additional equipments/devices.

Provision of such additional functions requires the following:

- (1) connection of the additional equipment, as required,
- (2) selection of functions which satisfy your needs and setting up these functions in the respective equipment.

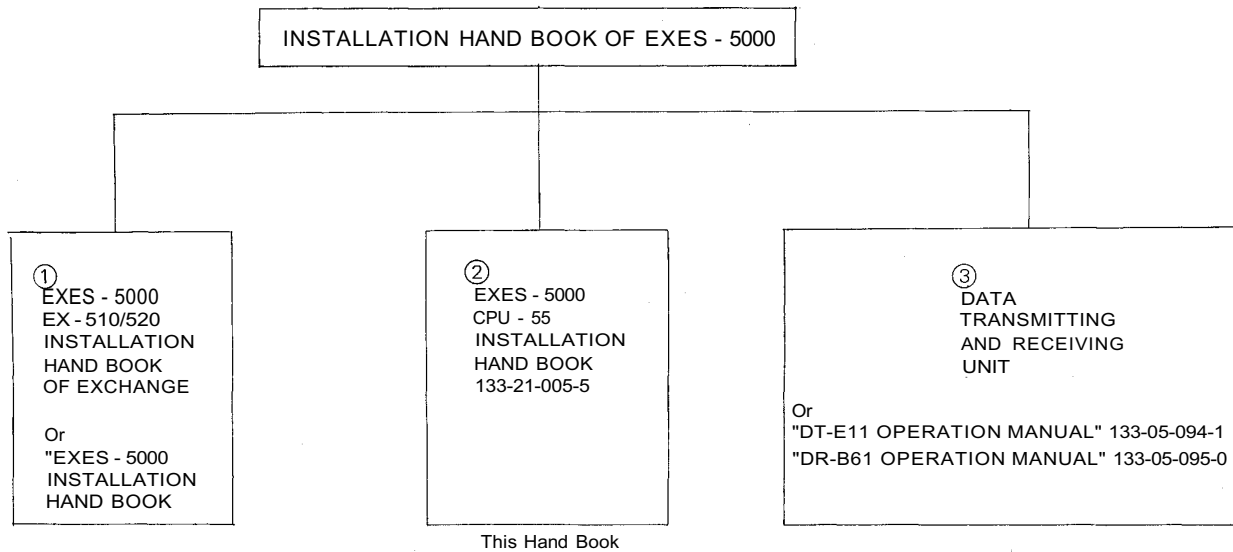
For (1) Connections of Equipment, etc., refer to ① Installation Handbook of Model EX-510/520 EXCHANGE or ③ "Manual for Installation of Data Transmitting and Receiving Units", etc.

This "Installation Handbook of CPU-55" deals principally with (2) selection of functions and setting up of respective equipment.

There are certain minimum installation requirements to be met even though you may not need many additional functions or additional equipment, it is still necessary to read "2. Initial CPU-55 Set Up (Page 6)." When you may use only some of the additional functions or equipments, it is not necessary to read instructions on unrequired functions. Make sure, however, that careful study of the necessary parts of this booklet should be done before proceeding further.

Note 1; Refer to Installation handbook of CPU-52A", when installing a standard call and Paging system, using CPU-52A.

Note 2; Refer to respective manuals when other types of CPU and connection equipment/devices are used.



| SYSTEMS OF EXES - 5000 | REQUIRED INSTALLATION HANDBOOK | | | |
|--|--------------------------------|-----------------------|-----------------------|--|
| | ① EX-510/520 EXCHANGE | ② CPU-55 | CPU-52A | ③ DATA TRANSMITTING AND RECEIVING UNIT |
| Ⓐ System using CPU-55 | <input type="radio"/> | <input type="radio"/> | | |
| Ⓑ System with Display and Control functions using CPU-55 | <input type="radio"/> | <input type="radio"/> | | <input type="radio"/> |
| Ⓒ System using CPU-52A | <input type="radio"/> | | <input type="radio"/> | |

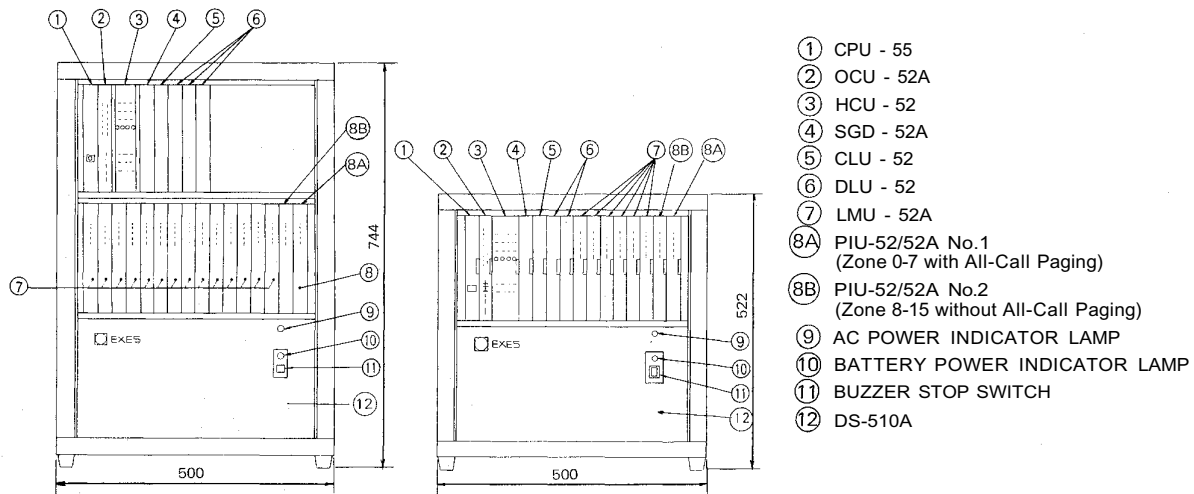
• FUNCTIONS WHICH REQUIRE ADDITIONAL UNITS

Those functions of the CPU-55 which require either the addition of specific units or processing in existing units are as mentioned below. Before installation and adjustment of equipment, make sure to check your system.

(For Data Transmitting and Receiving units, refer to Part 2. "Function Selection for Data Transmitting and Receiving units" Page 34.)

| Function | Additional Equipment Required | Unit Model Nos. | Remarks |
|---|-------------------------------|--------------------|---|
| Talk-Back from paging speaker | Talk-Back Unit | TKU-11 | Optional amplifier (10W max.) may be required depending on application |
| Conference | Conference Unit | CLU-52 | |
| External PA Paging | Paging Interface Unit | PIU-52/52A | External PA Equipment is required. |
| Station Paging (including priority paging). | Paging Interface Unit | PIU-52/52A | 1. Wiring of "Station Paging Assignment Plug" located at the back of the frame of the Exchange. 2. Cutting of LMU jumper wire to split station paging system. (Refer to Service Manual for LMU-52/52A, PIU-52/52A). |
| All call plus 15 individual paging zones | Paging Interface Unit | PIU-52/52A (2 pcs) | 1. PIU No. 1 is for All Call plus 7 paging zones (No. 0 ~ 7). 2. PIU No. 2 is for 8 paging zones. (No. 8 ~ 15) Adjusting jumper wire on PIU is required). 3. Wiring of "Station Paging Assignment Plug" is required. (Connection of all call signal on 2 PIUs). 1. For EX-510, (64 stations) Connect "P0" and "256". 2. For EX-520, (128 stations) Connect "PO" and "312". |
| | Output Control Unit | OCU-52A | OCU-52 must be modified. (Add M9, M17 and TTL IC 7475 2 pcs.) |
| Combination Paging | Paging Interface Unit | PIU-52A | PIU-52 can not be used. |
| Emergency All Call Paging | Paging Interface Unit | PIU-52/52A | Operate by the privacy switch on station No. 247, or by a circuit to control "OFF/ON" status of loop current when voice signals are externally generated. |

Position of PIU Units for All-Call Paging and 15 Individual Zone Paging

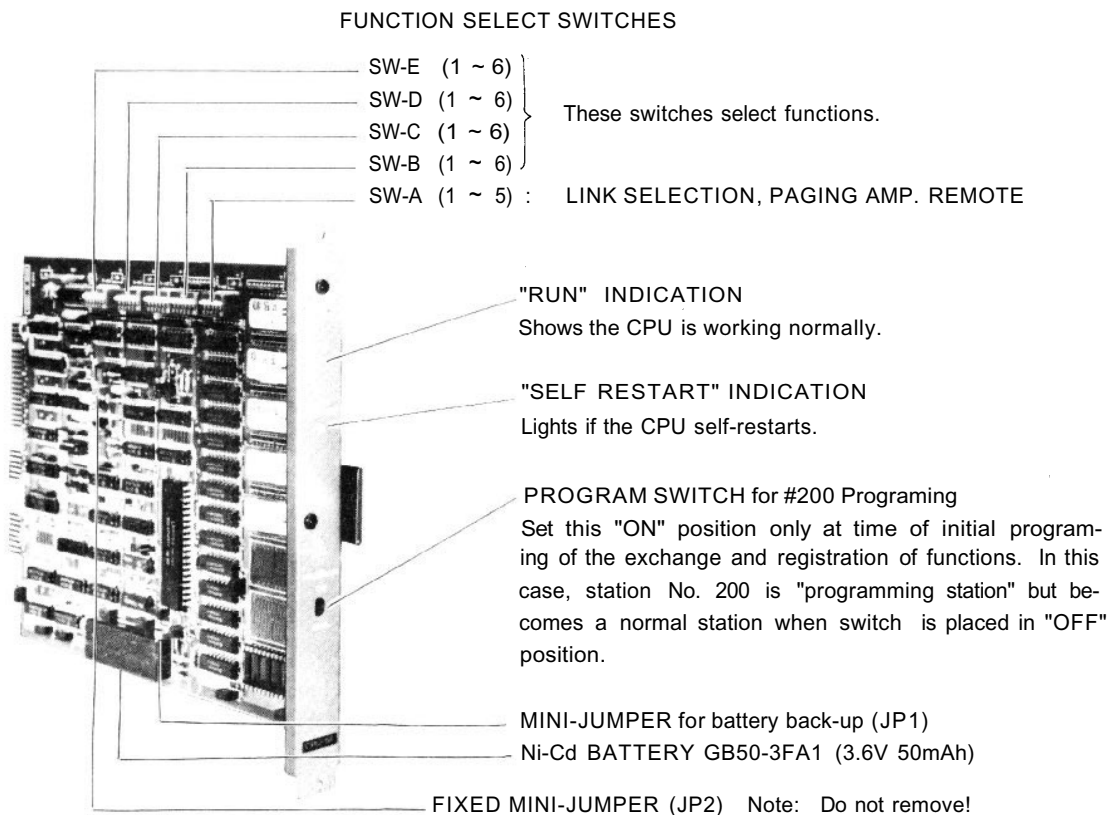


PART 1. OPERATING OF CPU UNIT AND NO. 200 PROGRAMMING

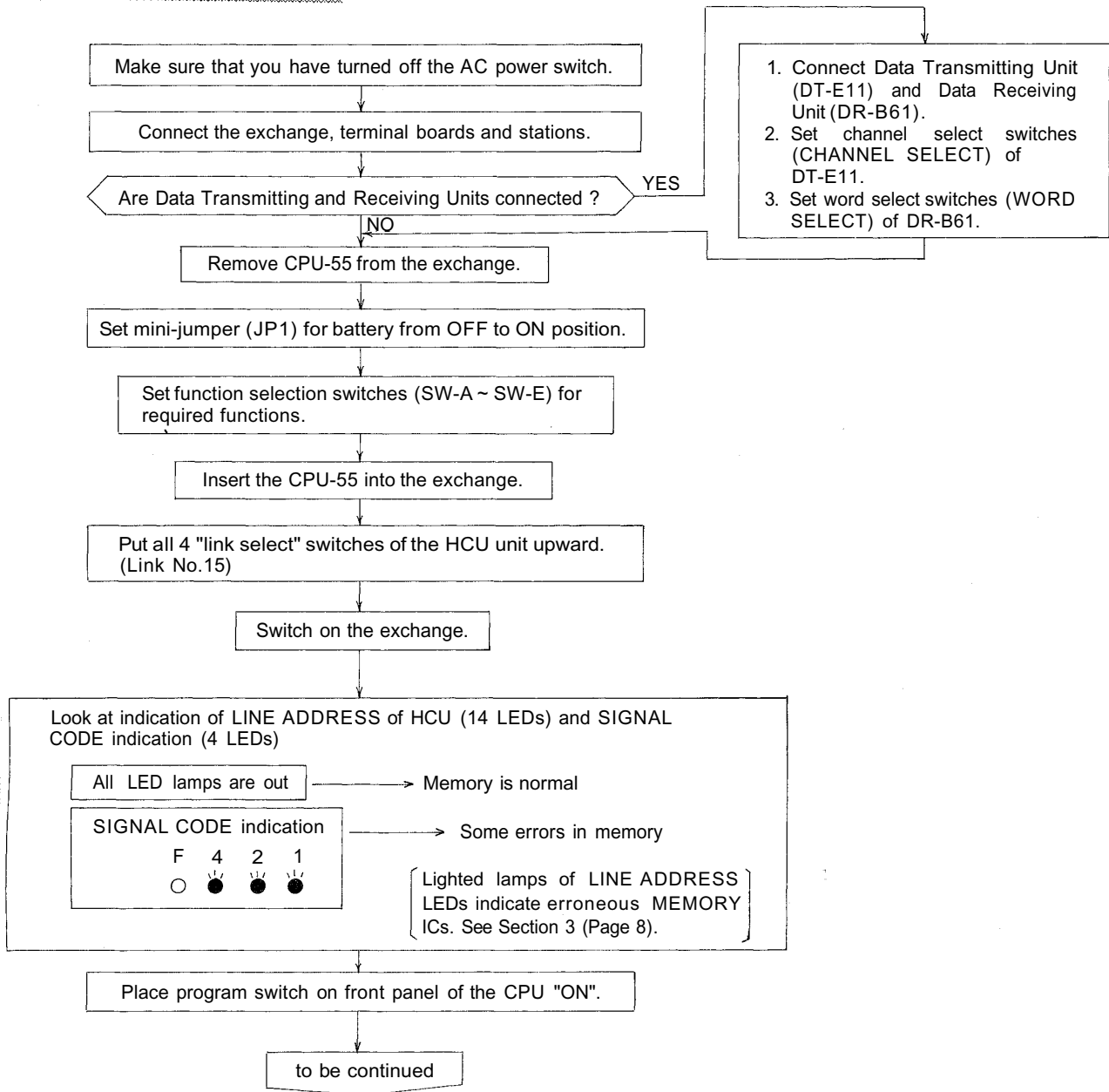
1. PRECAUTIONS FOR INSTALLATION OF CPU-55

Please read following instructions carefully to ensure proper operation of the CPU-55.

1. Be careful about damage by static electricity as the CPU-55 incorporates CMOS IC's. Do not touch components and connectors.
2. Turn off the AC power switch when you take out or insert the CPU-55 unit, or any other unit.
3. Always insert the CPU-55 unit into the "CPU" slot. Otherwise, there is a danger that the unit will be damaged.
4. Make sure mini-jumper for battery back-up is always placed in ON position each time it is used.
5. Incorrect setting of function select switches may lead to incorrect performance.
6. Even if you do not need programming functions, be sure to carry out initial programming and registration at station No. 200 when you install the new unit. Otherwise, some other functions may not work properly.
7. The Ni-Cd battery GB50-3FA1 is capable of saving important memory registration data even at times of power failure and we suggest you replace it at least every 4 years.
8. When shipping the CPU-55 unit independently, place the mini-jumper for battery back-up in "OFF" position. Then cover CPU back with cardboard, wrap connector section in aluminium foil and put it in a conductive bag.



2. INITIAL CPU-55 SET UP



Dial operation from station No. 200.

— Initial programming of the exchange —

Dial the Following:

1. C ; Dial tone will be heard (Station No.200 becomes a programming station)
2. 5 5 5 ; Confirmation tone will be heard.
10 times (Clears function group A)
3. 6 6 6 ; Confirmation tone will be heard.
10 times (Clears function group B)
4. 7 7 7 ; Confirmation tone will be heard.
10 times (Clears function group C)
5. 8 8 8 ; Confirmation tone will be heard.
10 times (Clears function group D)
6. 9 9 9 ; Confirmation tone will be heard.
10 times (Clears function group E)
7. 0 0 0 ; Confirmation tone will be heard.
10 times (Clears personal numbers and single digit dial numbers)

Program necessary functions
(Refer to separate instructions for each function)

Remark: If there is any error in CMOS memory, you hear calling tone instead of confirmation tone.

Place program switch on front panel of the CPU in "OFF" position.

Dial operation from station No. 200.

C (Station No. 200 becomes a normal station.)

3. TROUBLE SHOOTING

3-1 Check of ROM & NMOS-RAM - No calls on the system.

1. Put the 4 "LINK SELECT" switches of the HCU upward (Link No. 15 SELECT) and switch on the AC power of the exchange.
2. If there is no error, the indication lamps will not light.
3. In the event of a memory error, the lamps may light as shown in the example of Fig. 1.
4. The error indications will remain on until you use Link No. 15 for communications.

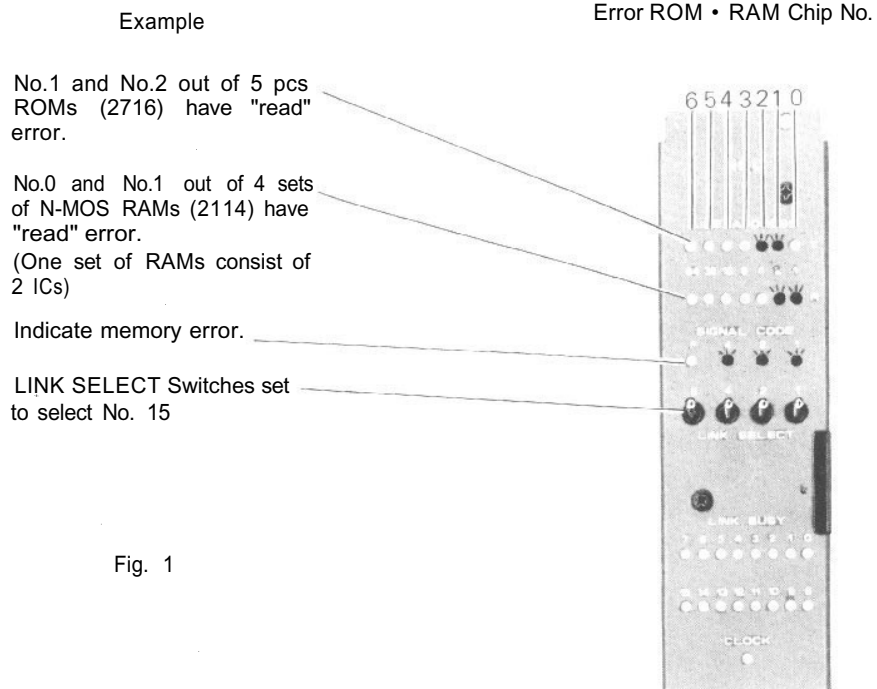


Fig. 1

3-2 Check of CMOS-RAM (Programmed data memory)

At the time of initial programming and registration using station No. 200,

1. You hear calling tone instead of confirmation tone, if there is CMOS memory error when registering single digit number or personal number.
2. Indication on front panel of the CPU.

"RUN" LED indicator

When the system is working normally, LED is "on".

Check its condition when the system fails to work normally.

"SELF RESTART" LED indicator

This does not light when the system is working normally. Even if the high noise from the outside of the exchange causes the CPU to work abnormally, the CPU "self-restarts" and the system keeps on working normally. Once the CPU "self-restarts", the LED indicator is on, but it does not affect system. If you again cycle the AC power source, the LED indicator is turned off.

3-3 Dial receiving test

If you place all "LINK SELECT" switches (1 ~ 4) of SW-A on the CPU-55 in "OFF" position, conversation is impossible but the dial code from each station is indicated on the LED's of the PIU as dialed. Use this to find the cause of any fault of receiving dial information.

DIP switches
(SW-A of the CPU)

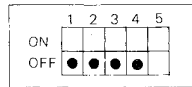


Fig. 2

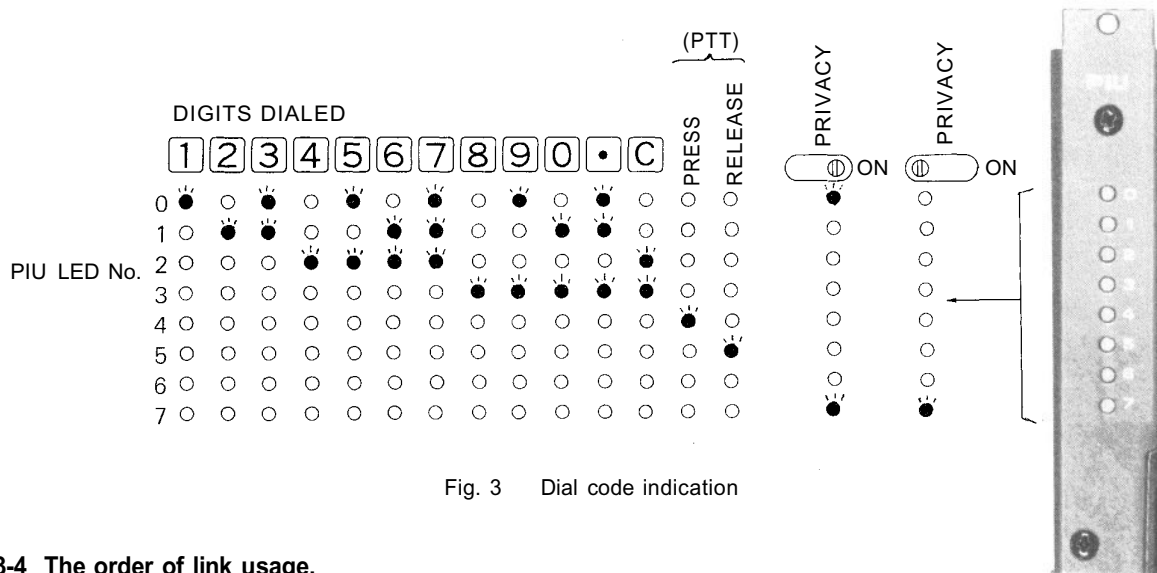


Fig. 3 Dial code indication

3-4 The order of link usage.

After power is on, links are used in numerical order for each communication. Remember this to help you when problems are found with specific links.









Remarks:

1. Be sure to avoid mistake at time of DIP switch installation and No. 200 Programming since such mistake may lead to trouble later.
2. Be sure to make "No. 200 Programming" after "Function Registration List" (attached to this manual) is filled out. Keep the finished "Function Registration List" (Initial Checking Sheet for the System 133-21-024-4) as a part of complete drawings for each installation.

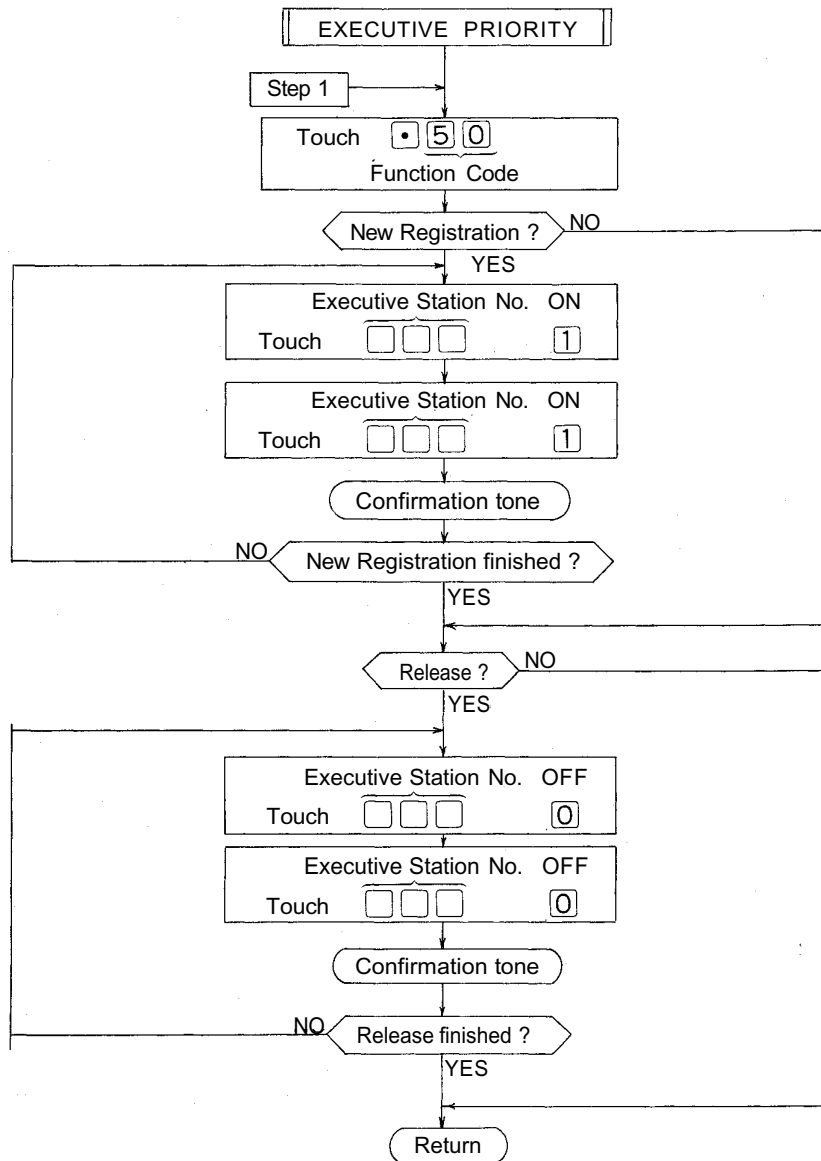
4. CPU-55 DIP SWITCH FUNCTION SELECTION

| | | Functions | On | Off |
|------|--|--|----------|--------------|
| SW-A | OFF ON <input checked="" type="checkbox"/> <input type="checkbox"/> 1 | Link Selection ; Link No. 0 ~ 3 | Activate | Not Activate |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 2 | Link Selection ; Link No. 4 ~ 7 | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 3 | Link Selection ; Link No. 8 ~ 11 | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 4 | Link Selection ; Link No. 12 ~ 15 | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 5 | Time Interval Adjustment before Paging Pre-announce tone | 1 Sec. | None |
| SW-B | OFF ON <input checked="" type="checkbox"/> <input type="checkbox"/> 1 | Conference | Activate | Not Activate |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 2 | Call Transfer | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 3 | Priority & Executive Priority | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 4 | Paging, Paging During Normal Calls | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 5 | Calling tone Duration Selection | 0.7 Sec. | 1.3 Sec. |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 6 | System Size Selection | EX-520 | EX-510 |
| SW-C | OFF ON <input checked="" type="checkbox"/> <input type="checkbox"/> 1 | Paging Pre-announce Tone Duration Selection | 1 Sec. | 2 Sec. |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 2 | Emergency All-Call | Activate | Not Activate |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 3 | Paging Priority | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 4 | Combination Paging | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 5 | 15 Individual Paging Zones | 15 Zones | 7 Zones |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 6 | 2-Digit Dialing (#20 ~ #99) | Activate | Not Activate |
| SW-D | OFF ON <input checked="" type="checkbox"/> <input type="checkbox"/> 1 | Stations Allowed Access to All Call | Activate | Not Activate |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 2 | Stations Allowed Access to Conference | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 3 | Stations Allowed Access to General Purpose Control | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 4 | Group Blocking | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 5 | Programmable Station Numbering (#20 ~ #99 or #200 ~ #999) | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 6 | General Purpose Control | | |
| SW-E | OFF ON <input checked="" type="checkbox"/> <input type="checkbox"/> 1 | Off | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 2 | Off | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 3 | Off | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 4 | Pager (240 Contacts Output) | Activate | Not Activate |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 5 | Off | | |
| | <input checked="" type="checkbox"/> <input type="checkbox"/> 6 | Continuous Calling Tone | Activate | Not Activate |

5. Function Code Table for Station No. 200 Programming

| Function Group | Function | Function Code | 1st Parameter | 2nd Parameter | 3rd Parameter | OPERATING FOR PROGRAMMING |
|----------------|--|--------------------|---|--|-----------------------------------|--|
| A | Executive Priority | 50 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | X |  Confirmation tone Station No. 1/0 (2nd) Repeat |
| | Continuous Calling Tone | 51 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | | |
| | Station Allowed Access to All Call | 52 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | | |
| | Stations Allowed Access to Conference | 53 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | | |
| | Stations Allowed Access to One Shot Make Output | 56 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | | |
| | Stations Allowed Access to Make/Break Output | 57 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | | |
| | Stations Allowed Access to 8 Selectable/Decimal Output | 58 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | | |
| | Stations Allowed Access to 4 Decimal Digits Output | 59 | Station No. (200 ~ 327) (20 ~ 99) | ON/OFF (1/0) | | |
| | B | Secretary Transfer | 60 | Executive Station No. | | |
| Master/Sub | | 61 | Sub Station No. | Master Station No. | |  Confirmation tone Station No. (1st) Station No. (2nd) Repeat |
| C | Paging Response, Paging Priority | 70 | Zone No. (01 ~ 15) | The First Station No. of the Zone | The Last Station No. of the Zone |  Confirmation tone Zone No. 01 ~ 15 The 1st Station No. Group No. 1 ~ 8 Repeat |
| | Group Blocking: Establishment of each group | 71 | Group No. (1 ~ 8) | The First Station No. of the Group | The Last Station No. of the Group |  Confirmation tone Zone No. 01 ~ 15 The 1st Station No. Group No. 1 ~ 8 Repeat |
| | Combination Paging | 80 | Combination Zone No. (90 ~ 99) | Zone No. (s) (01 ~ 15) (Plural) | |  Confirmation tone Zone No. 01 ~ 15 The 1st Station No. Group No. 1 ~ 8 Repeat |
| D | Group Blocking: Allowing Calls Among Groups | 81 | Calling Group No. (1 ~ 8) | Called Group No. (s) (Plural) | (1 ~ 8) |  Confirmation tone Paging Zone No. (00 ~ 15, 90 ~ 99) Group No(s) (1 ~ 8) Repeat |
| | Group Blocking: Allowing Access to Paging Zones | 82 | Paging zone No. of paged group (00-1 5,90-99) | Paging Group No. (s) (Plural) | (1 ~ 8) |  Confirmation tone Paging Zone No. (00 ~ 15, 90 ~ 99) Group No(s) (1 ~ 8) Repeat |
| E | Programmable Station Numbering | 90 | Hardwired Station No. (200 ~ 327) (20 ~ 99) | Programmed Station No. (200 ~ 999) (20 ~ 99) | |  Confirmation tone Hardwired Station No. (200 ~ 327) Programmed Station No. (200 ~ 999) Repeat |

6. STATION NO. 200 PROGRAMMING FOR EACH FUNCTION
6-1 EXECUTIVE PRIORITY (FUNCTION CODE 50)



NOTES

1. To register all stations at one time,

Touch **5011...1**
 10 times

(Confirmation tone will be heard.)

2. To release all registered stations at one time,

Touch **5000...0**
 10 times

(Confirmation tone will be heard.)

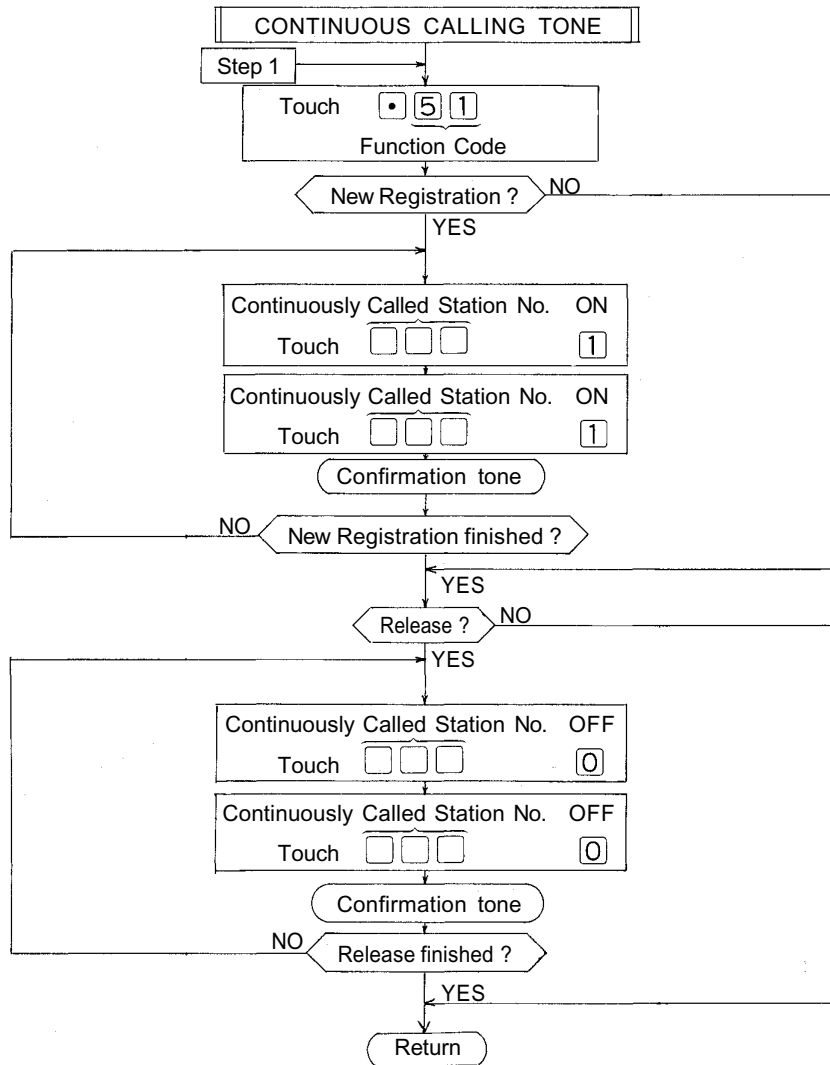
3. Re-start at Step 1 when mis-dialing occurs.

(All other registrations remain valid.)

4. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

5. CPU DIP switch B-3 must be "ON" to employ this function.

6-2 CONTINUOUS CALLING TONE (FUNCTION CODE 51)



NOTES

1. To register all stations at one time,

Touch • 5 1 1 1 ... 1

10 times

(Confirmation tone will be heard.)

2. To release all registered stations at one time,

Touch • 5 1 0 0 ... 0

10 times

(Confirmation tone will be heard.)

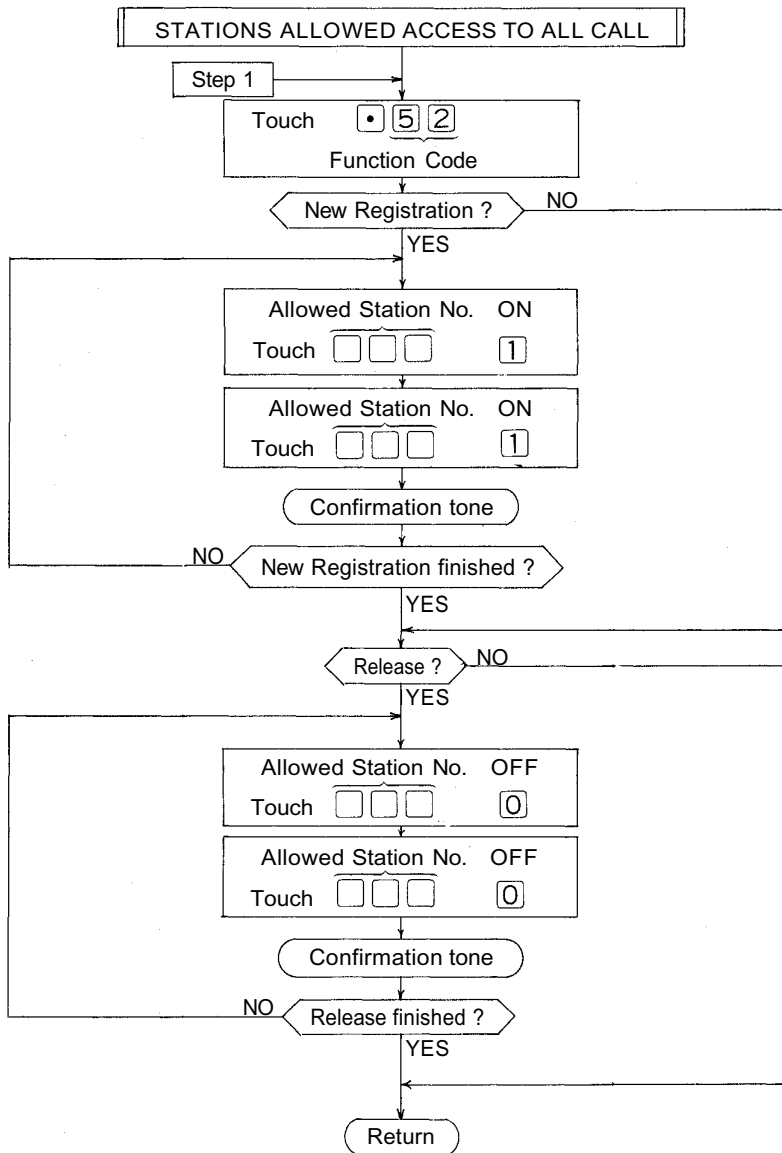
3. Re-start at Step 1 when mis-dialing occurs.

(All other registrations remain valid.)

4. Station No. should be 2 digits in length, when 2 Digit Dialing function is employed.

5. CPU DIP switch E-6 must be "ON" to employ this function.

6-3 STATIONS ALLOWED ACCESS TO ALL CALL (FUNCTION CODE 52)



NOTES

1. To register all stations at one time,

Touch • 5 2 1 1 ... 1
10 times

(Confirmation tone will be heard.)

2. To release all registered stations at one time,

Touch • 5 2 0 0 ... 0
10 times

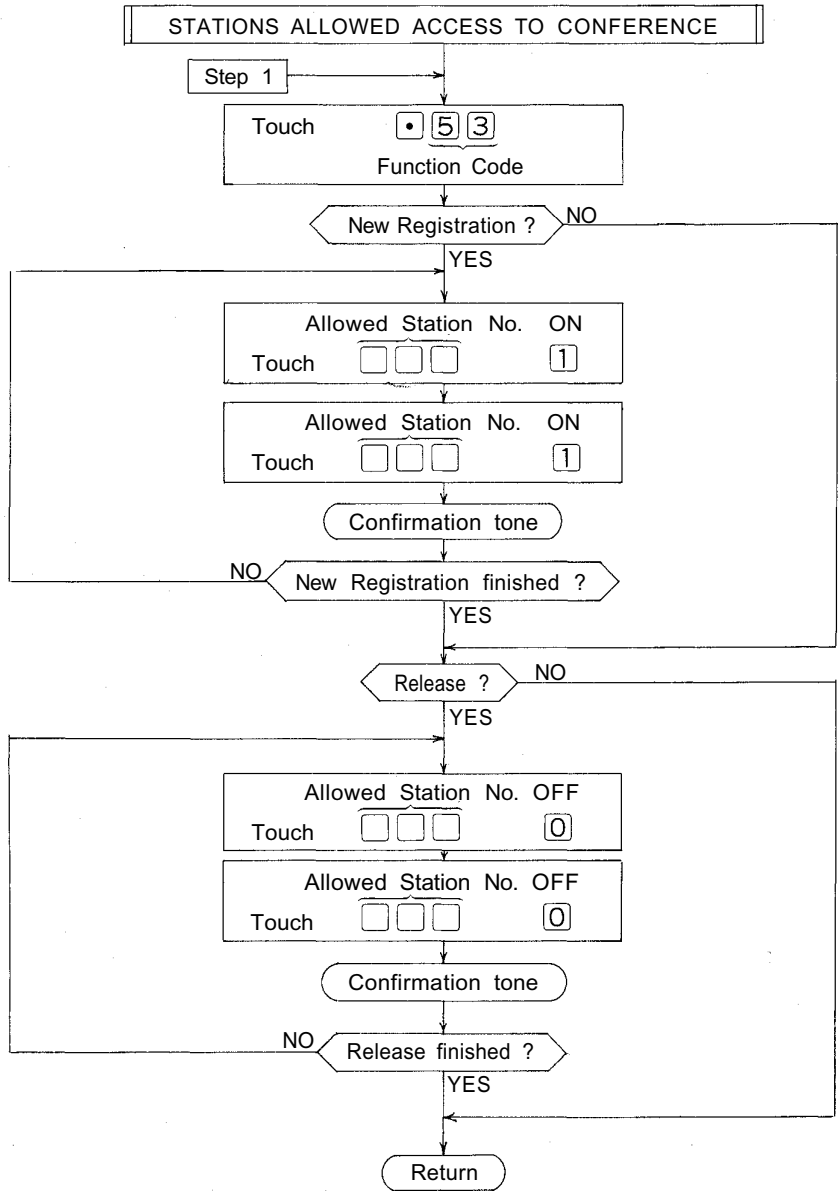
(Confirmation tone will be heard.)

3. Re-start at Step 1 when mis-dialing occurs.
(All other registrations remain valid.)

4. Station No. should be 2 digits in length, when 2 Digit Dialing function is employed.

5. Programming is necessary only if CPU DIP switch D-1 is "ON".

6-4 STATIONS ALLOWED ACCESS TO CONFERENCE (FUNCTION CODE 53)



NOTES

1. To register all stations at one time,

Touch 5 3 1 1 ... 1
10 times

(Confirmation tone will be heard.)

2. To release all registered stations at one time,

Touch 5 3 0 0 ... 0
10 times

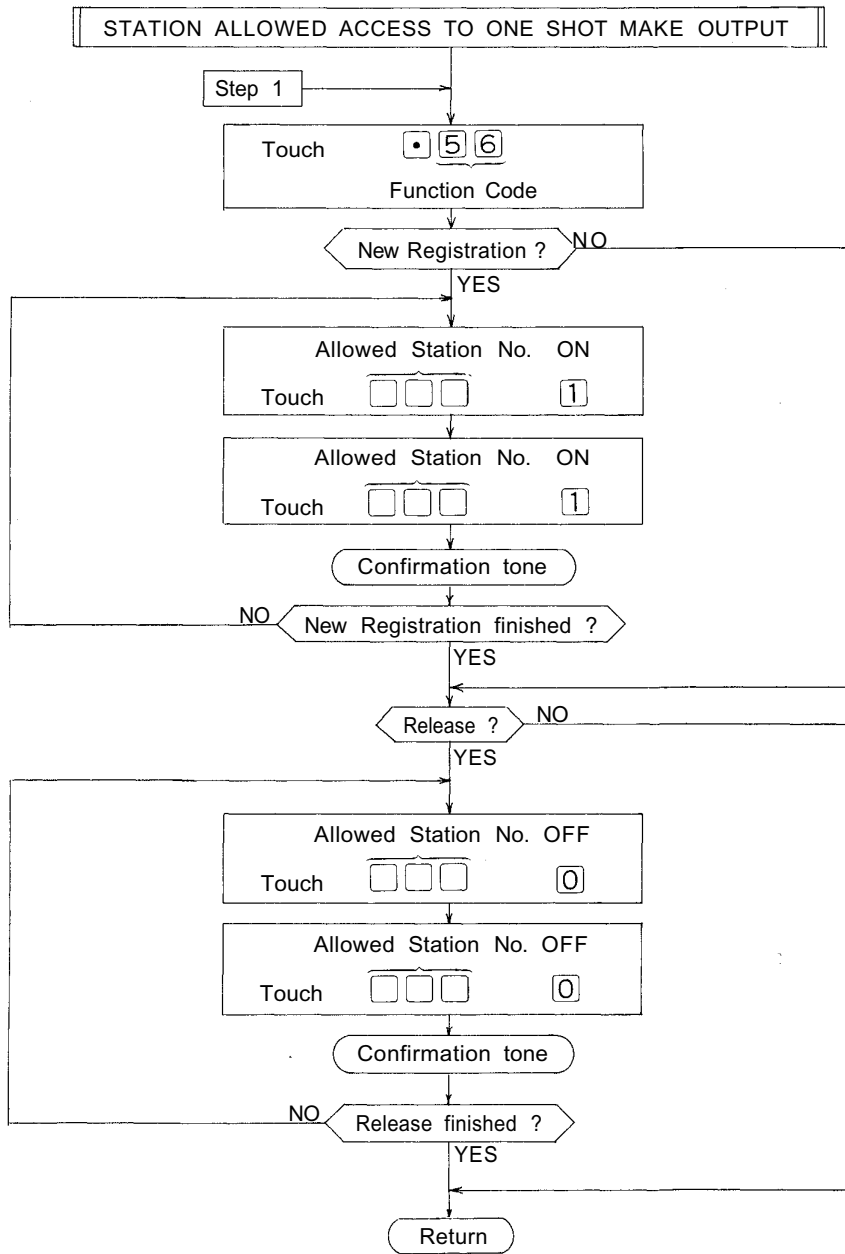
(Confirmation tone will be heard.)

3. Re-start at Step 1 when mis-dialing occurs.
(All other registrations remain valid.)

4. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

5. Programming is necessary only if CPU DIP switch D-2 is "ON". Switch B-1 must be "ON" to employ this function.

6-5 STATIONS ALLOWED ACCESS TO ONE SHOT MAKE OUTPUT (FUNCTION CODE 56)



NOTES

1. To register all stations at one time,
 Touch $\square \cdot \square 5 \square 6 \square 1 \square 1 \dots \square 1$
 10 times
 (Confirmation tone will be heard.)

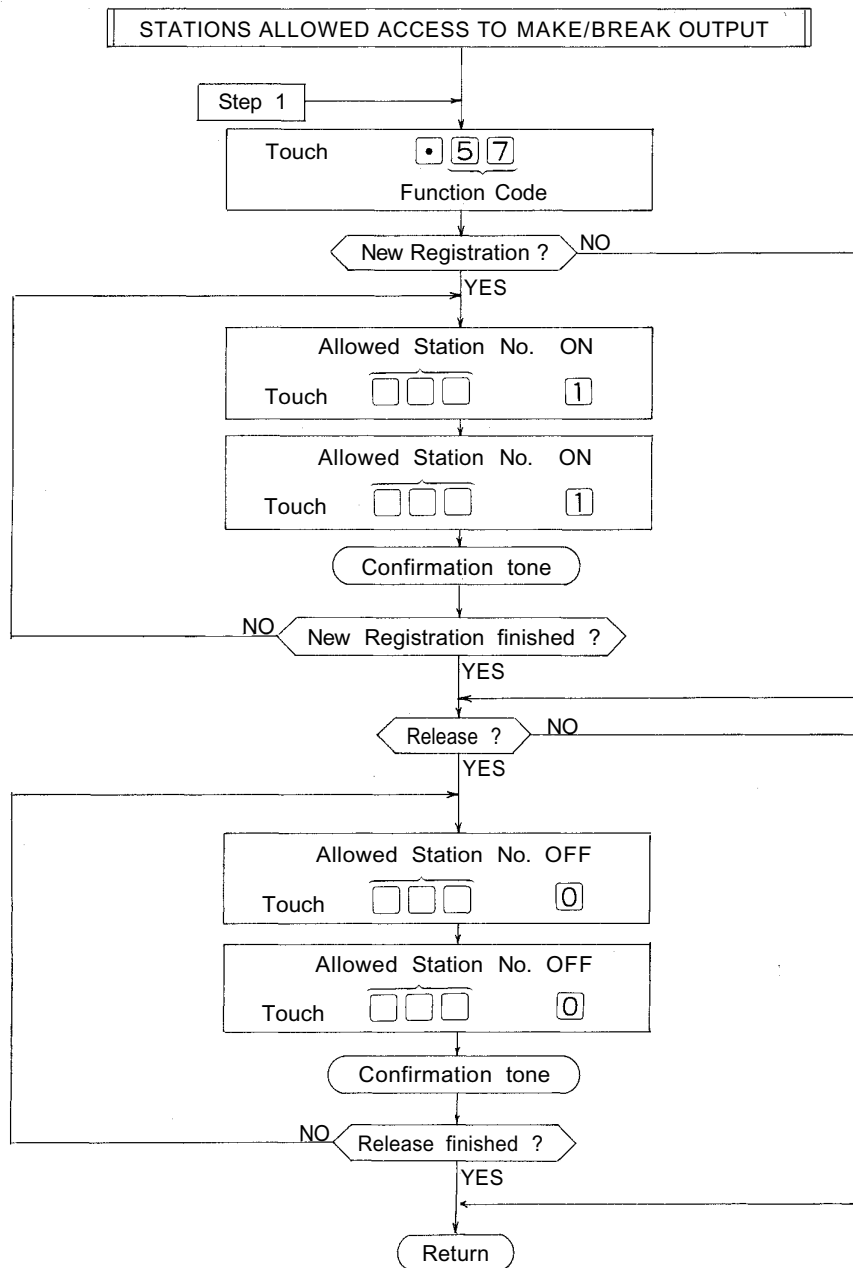
2. To release all registered stations at one time,
 Touch $\square \cdot \square 5 \square 6 \square 0 \square 0 \dots \square 0$
 10 times
 (Confirmation tone will be heard.)

3. Re-start at Step 1 when mis-dialing occurs.
 (All other registrations remain valid.)

4. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

5. Programming is necessary only if CPU DIP switch D-3 is "ON". Switch D-6 must be "ON" to employ this function.

6-6 STATIONS ALLOWED ACCESS TO MAKE/BREAK OUTPUT (FUNCTION CODE 57)



NOTES

1. To register all stations at one time,
 Touch [5] [7] [1] [1] ... [1]
 10 times
 (Confirmation tone will be heard.)

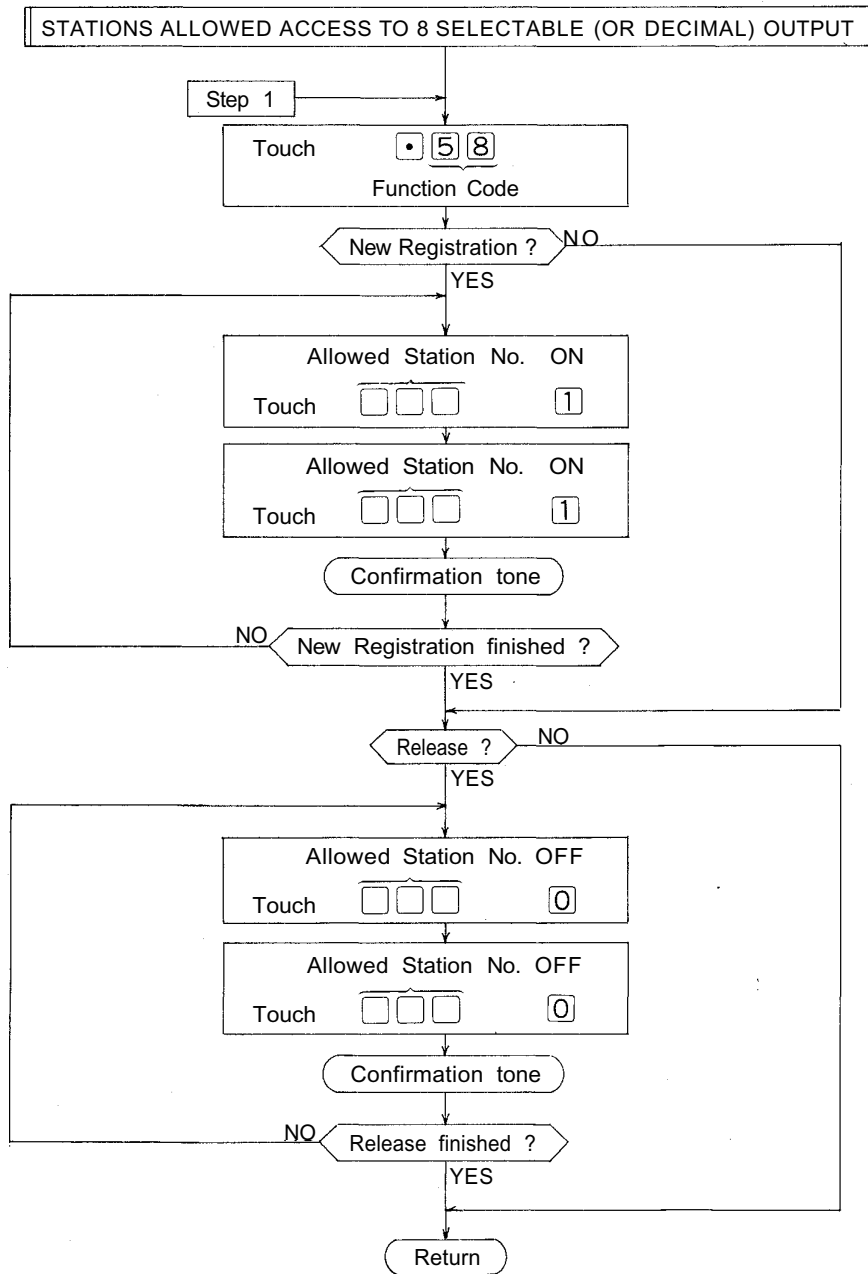
2. To release all registered stations at one time,
 Touch [5] [7] [0] [0] ... [0]
 10 times
 (Confirmation tone will be heard.)

3. Re-start at Step 1 when mis-dialing occurs.
 (All other registrations remain valid.)

4. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

5. Programming is necessary only if CPU DIP switch D-3 is "ON". Switch D-6 must be "ON" to employ this function.

6-7 STATIONS ALLOWED ACCESS TO 8 SELECTABLE (OR DECIMAL) OUTPUT (FUNCTION CODE 58)



NOTES

1. To register all stations at one time,

Touch [5][8][1][1]...[1]
10 times

(Confirmation tone will be heard.)

2. To release all registered stations at one time,

Touch [5][8][0][0]...[0]
10 times

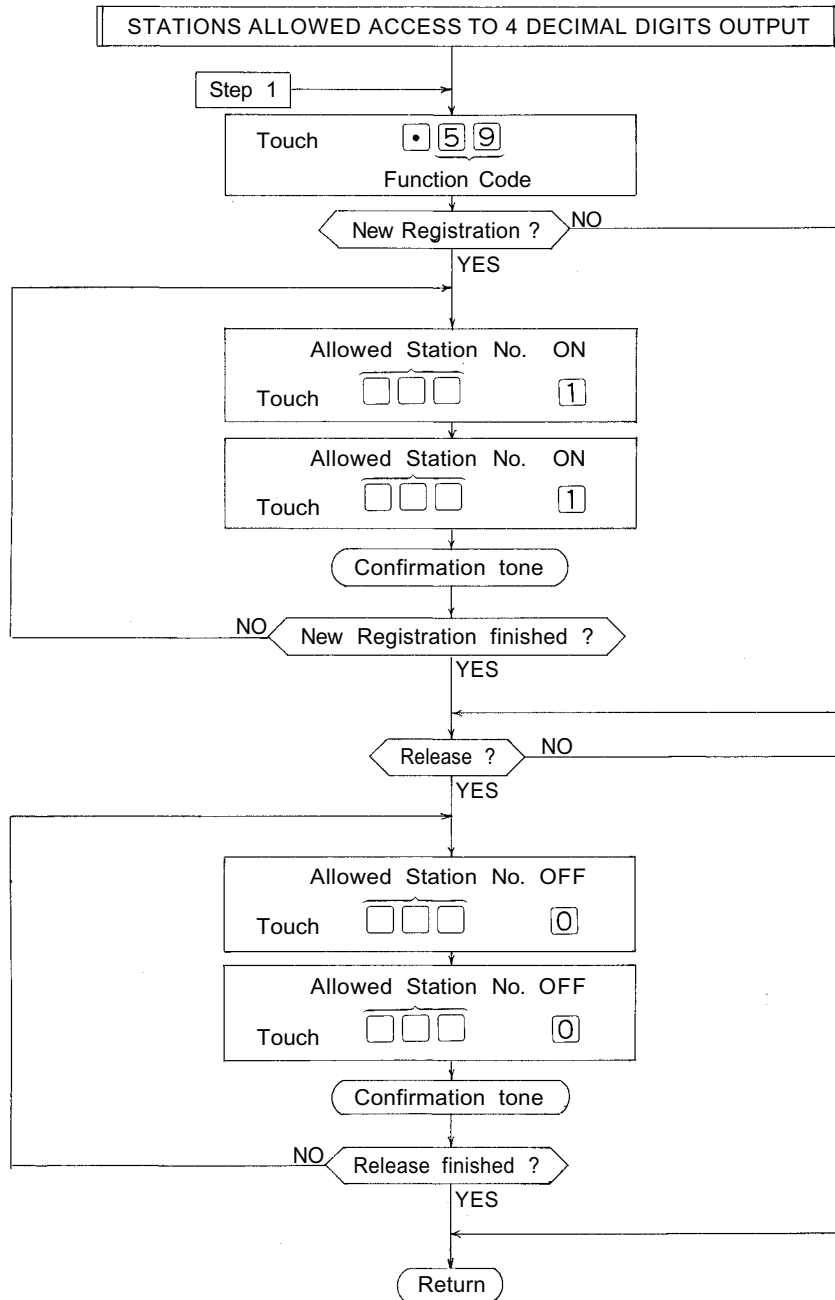
(Confirmation tone will be heard.)

3. Re-start at Step 1 when mis-dialing occurs.
(All other registrations remain valid.)

4. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

5. Programming is necessary only if CPU DIP switch D-3 is "ON". Switch D-6 must be "ON" to employ this function.

6-8 STATIONS ALLOWED ACCESS TO 4 DECIMAL DIGITS OUTPUT (FUNCTION CODE 59)



NOTES

1. To register all stations at one time,

Touch 5 9 1 1 ... 1
10 times

(Confirmation tone will be heard.)

2. To release all registered stations at one time,

Touch 5 9 0 0 ... 0
10 times

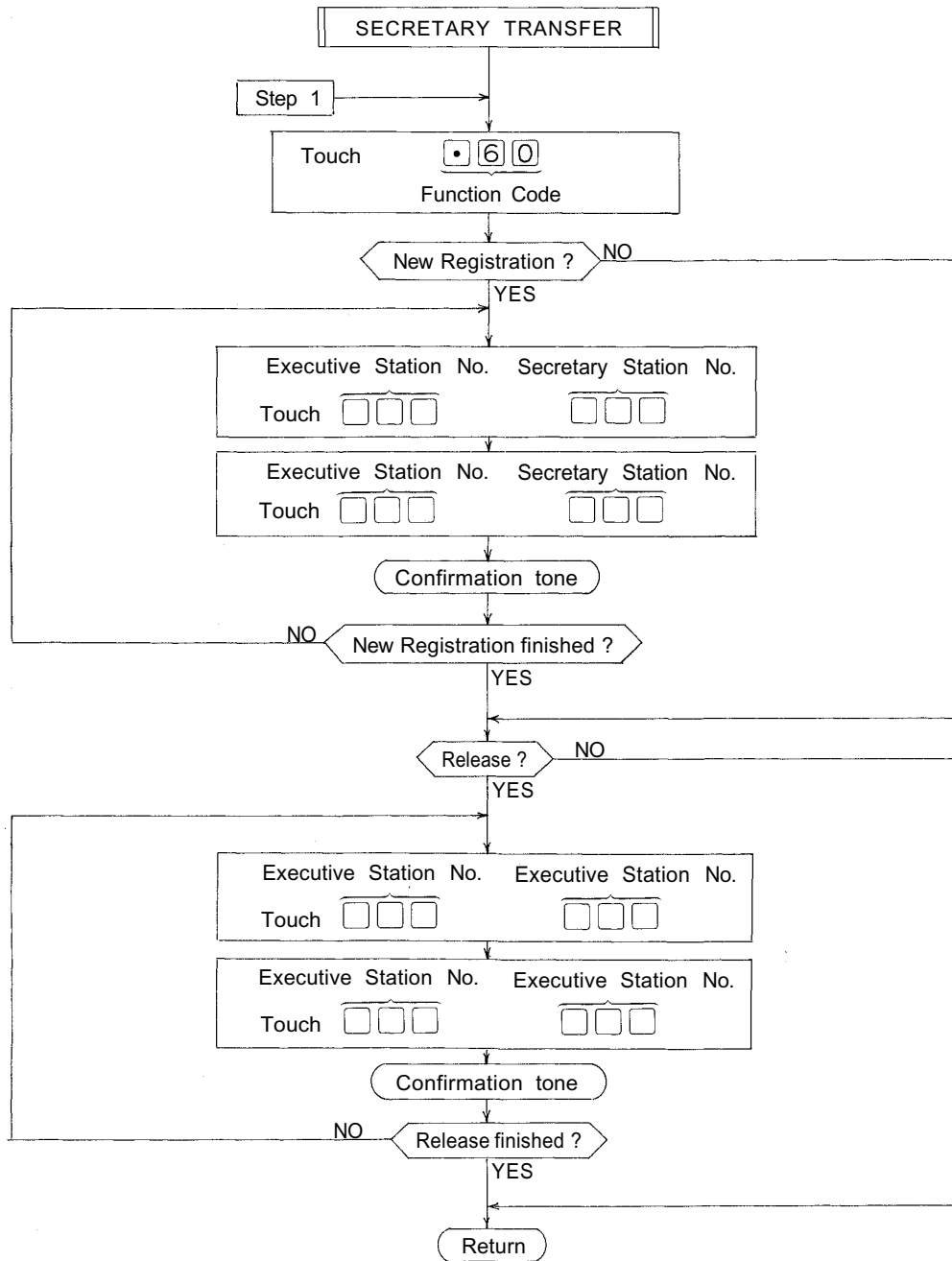
(Confirmation tone will be heard.)

3. Re-start at Step 1 when mis-dialing occurs.
 (All other registrations remain valid.)

4. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

5. Programming is necessary only if CPU DIP switch D-3 is "ON". Switch D-6 must be "ON" to employ this function.

6-9 SECRETARY TRANSFER (FUNCTION CODE 60)



NOTES

1. To release all registered stations at one time,

Touch *60000...0
10 times

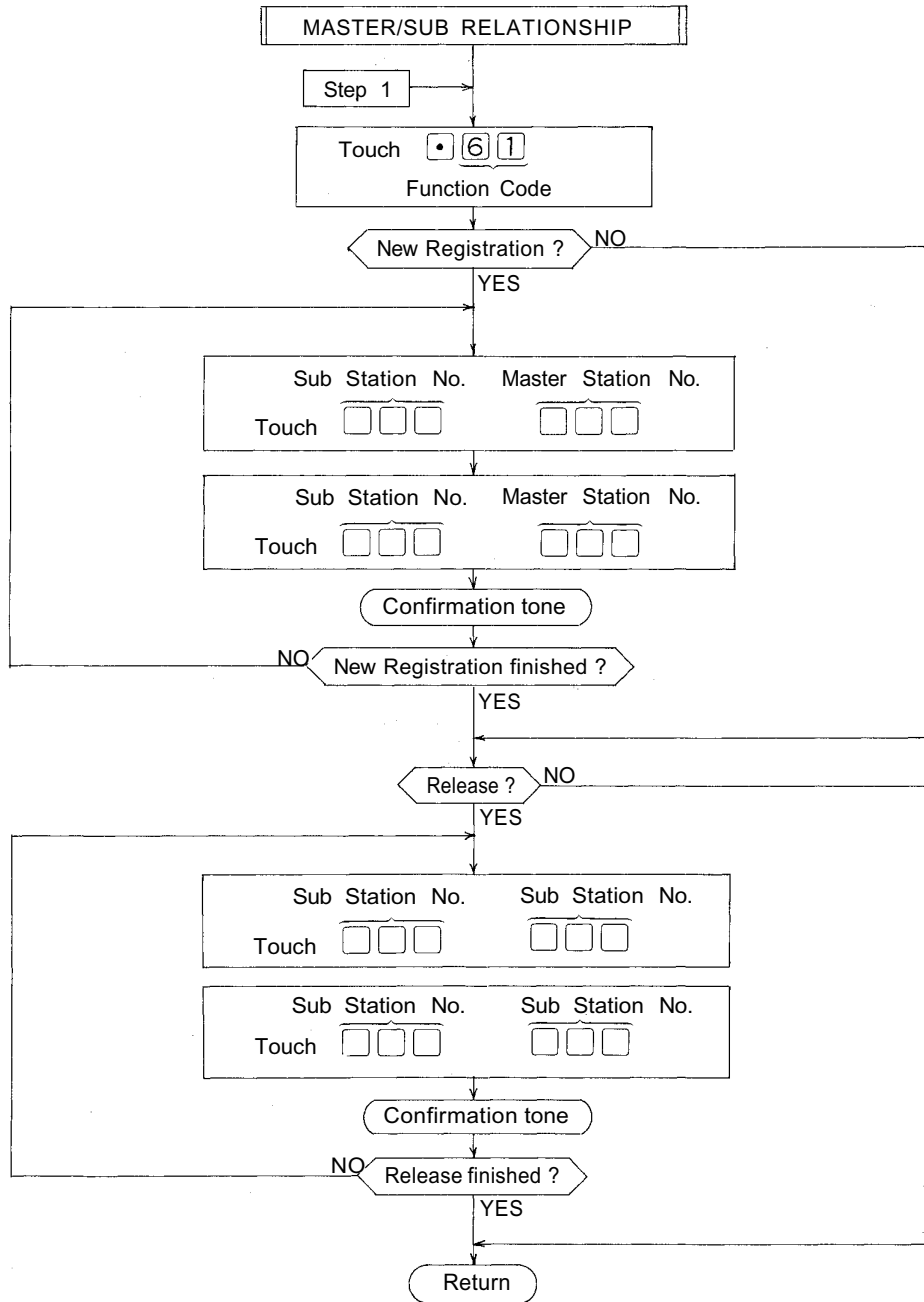
(Confirmation tone will be heard.)

2) Re-start at Step 1 when mis-dialing occurs.

(All other registrations remain valid.)

3) Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

6-10 MASTER/SUB RELATIONSHIP (FUNCTION CODE 61)



NOTES

- To release all registered stations at one time,

Touch *6100...0

10 times

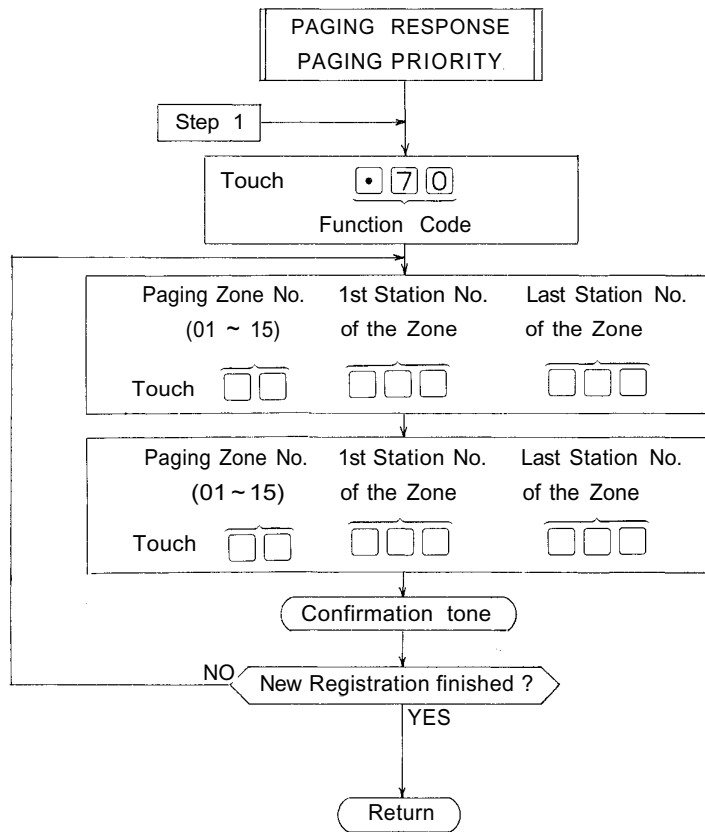
(Confirmation tone will be heard.)

- Re-start at Step 1 when mis-dialing occurs.

(All other registrations remain valid.)

- Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

6-11 PAGING RESPONSE AND PAGING PRIORITY (FUNCTION CODE 70)



NOTES

1. To release all registered Zones at one time,

Touch • 7 0 0 0 ... 0
 10 times
 (Confirmation tone will be heard.)

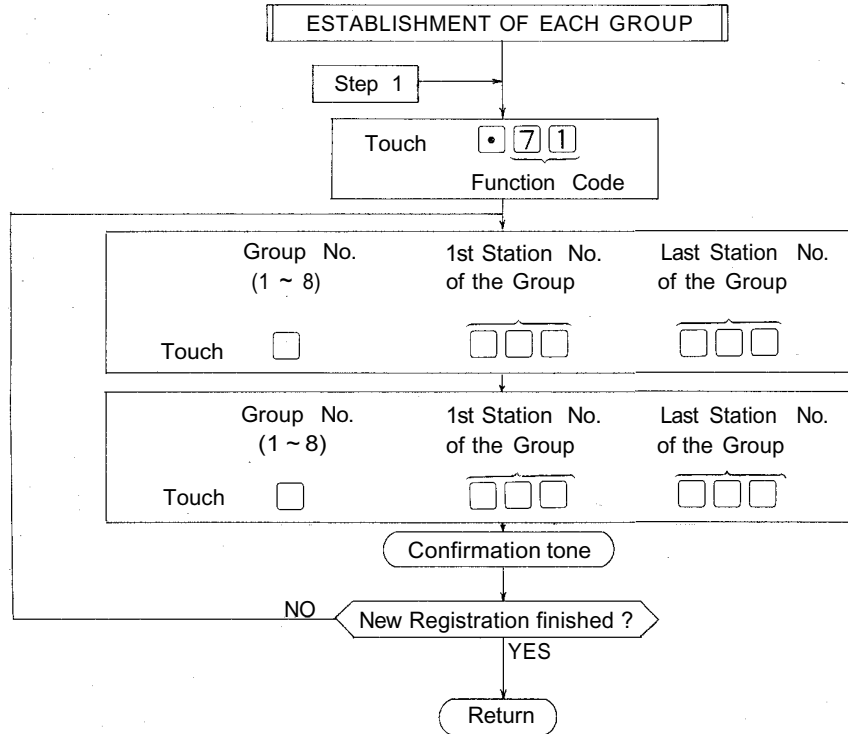
2. Re-start at Step 1 when mis-dialing occurs.
 (All other registrations remain valid.)

3. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

4. Switch B-4 must be "ON" to employ this function.

6-12 GROUP BLOCKING ; ESTABLISHING GROUPS (FUNCTION CODE 71)

GROUP BLOCKING 1



NOTES

1. To release all registered Zones at one time,

Touch • 7 1 0 0 ... 0

10 times

(Confirmation tone will be heard.)

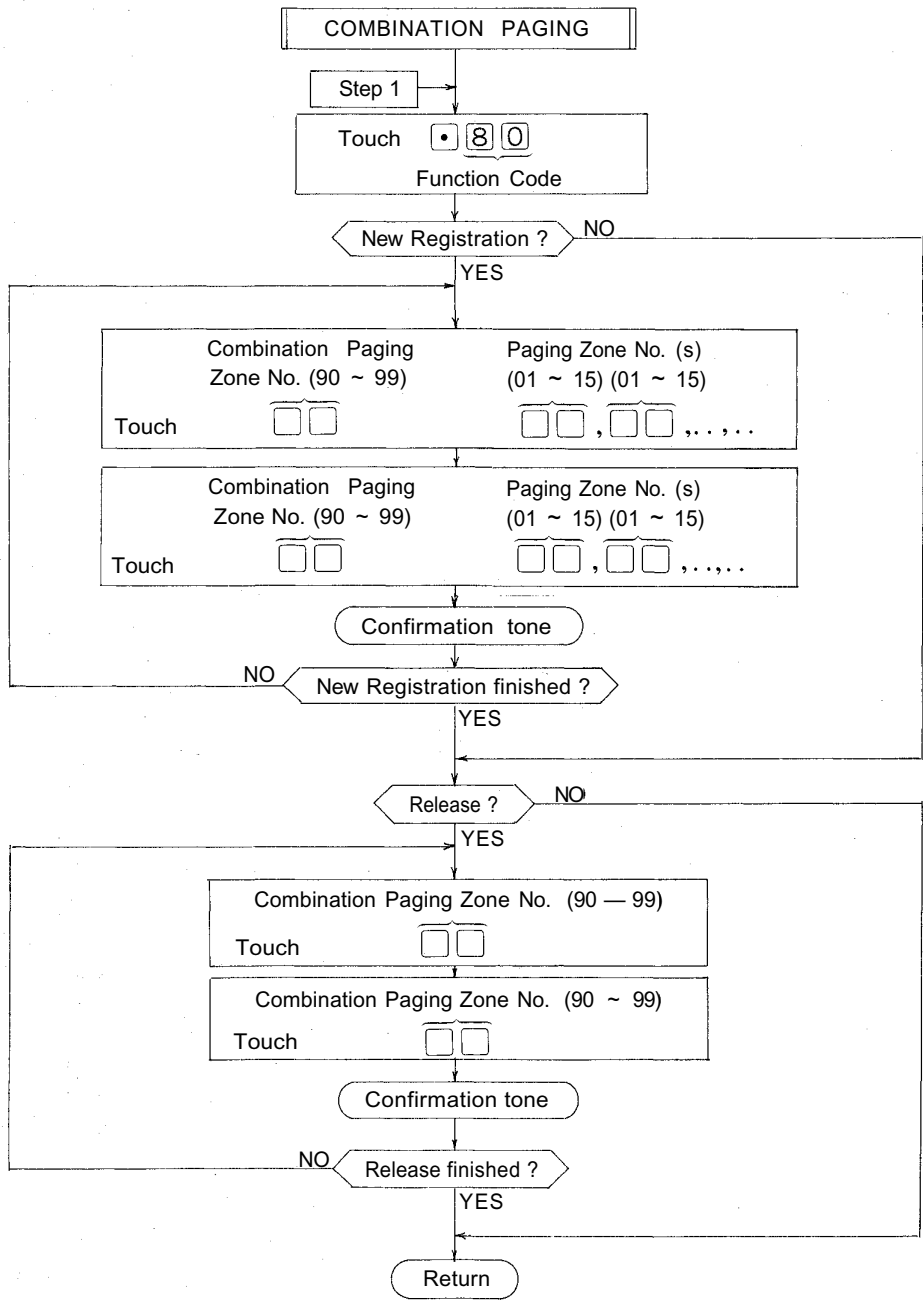
2. Re-start at Step 1 when mis-dialing occurs.

(All other registrations remain valid.)

3. Station No. should be 2 digits in length when 2 Digit Dialing function is employed.

4. CPU DIP switch D-4 must be "ON" to employ this function.

6-13 COMBINATION PAGING (FUNCTION CODE 80)



NOTES

- 1. To release all registered Combination Paging Zones at one time,

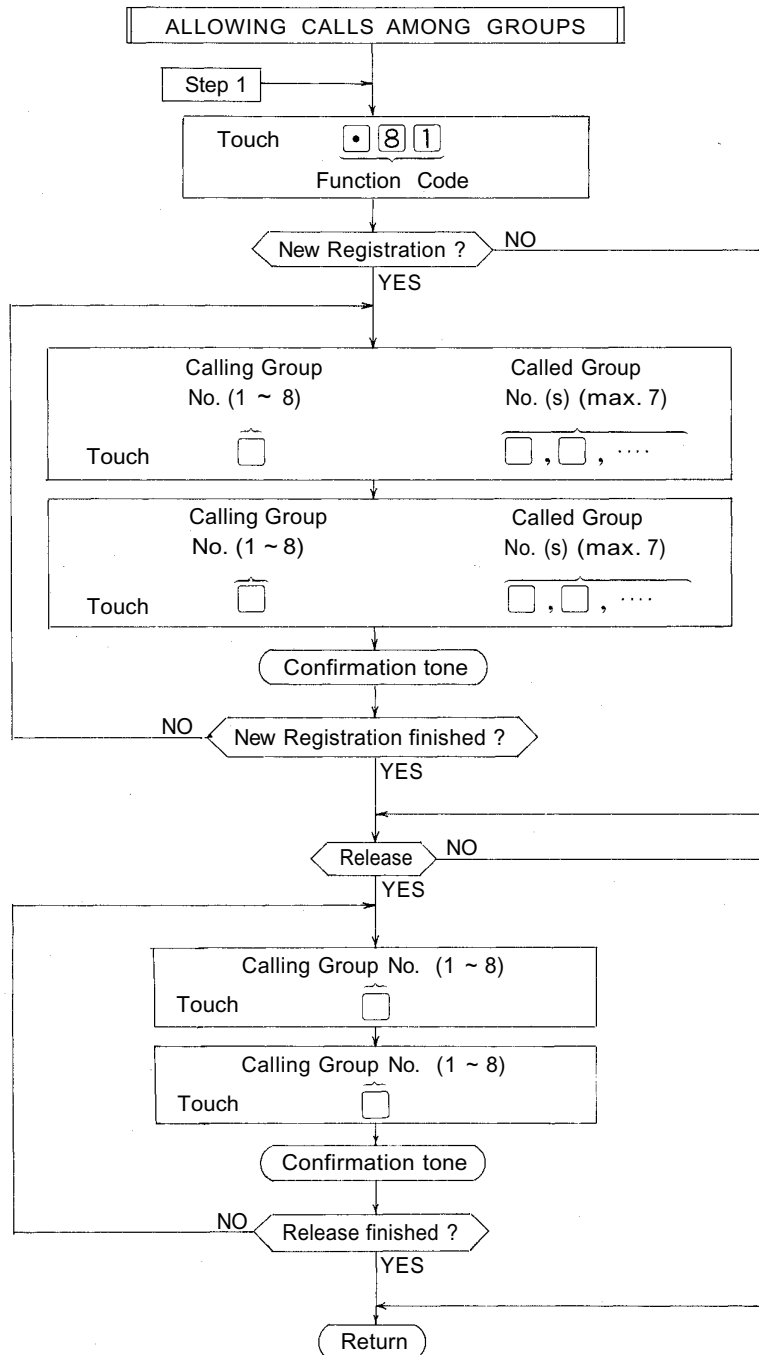
Touch 8 0 0 0 0 ... 0
 10 times

(Confirmation tone will be heard.)

- 3. CPU DIP switch B-4 and C-4 must be "ON" to employ this function.

- 2. Re-start at Step 1 when mis-dialing occurs.
 (All other registrations remain valid.)

GROUP BLOCKING 2



NOTES

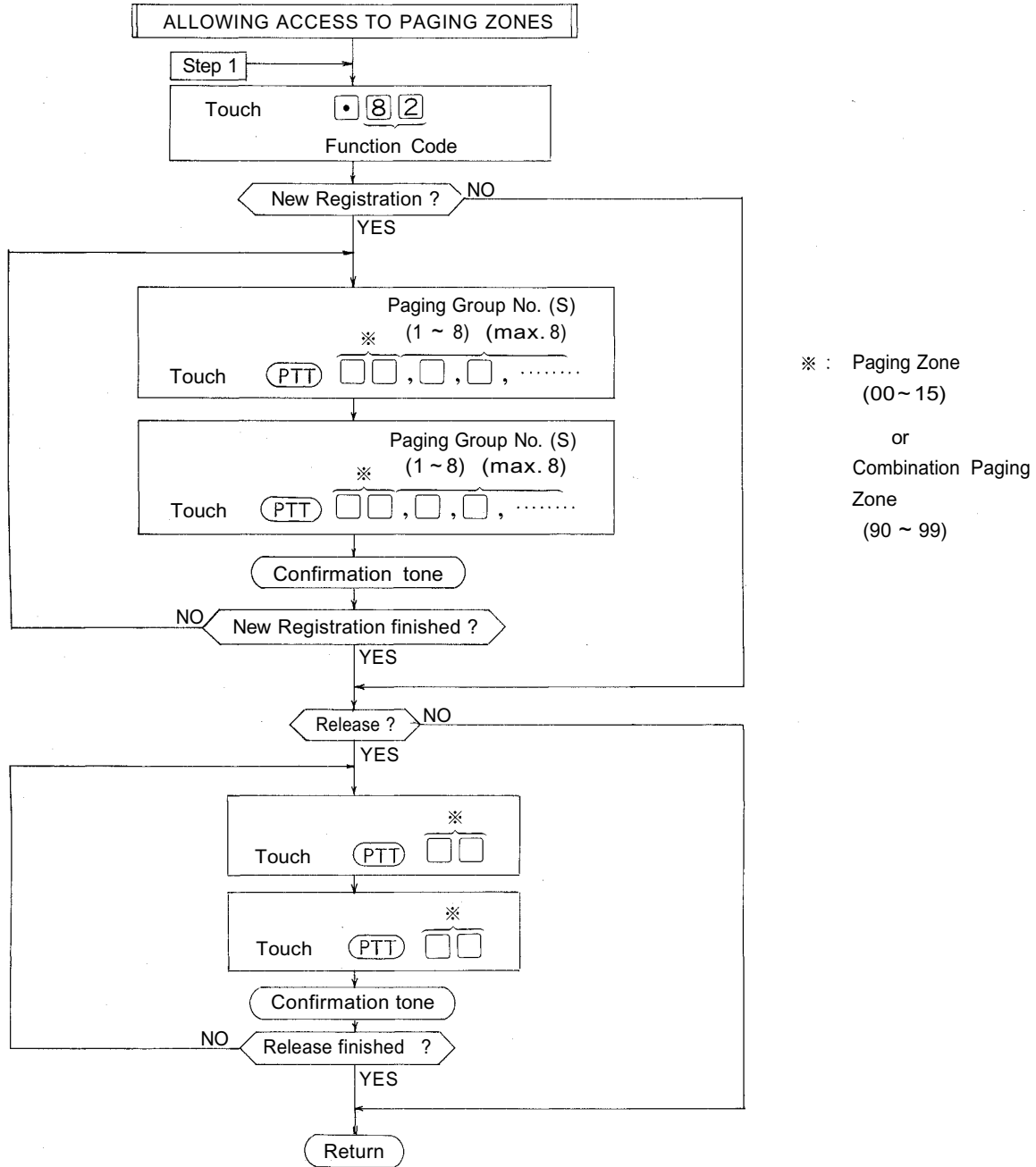
1. To release all registered Calling Groups at one time,
 Touch * 8 1 0 0 ... 0
 10 times
 (Confirmation tone will be heard.)

2. Re-start at Step 1 when mis-dialing occurs
 (All other registrations remain valid.)

3. Do not register a Group to call itself.

4. CPU DIP switch D-4 must be "ON" to employ this function.

GROUP BLOCKING 3



NOTES

1. To release all registered Paging Zones at one time,

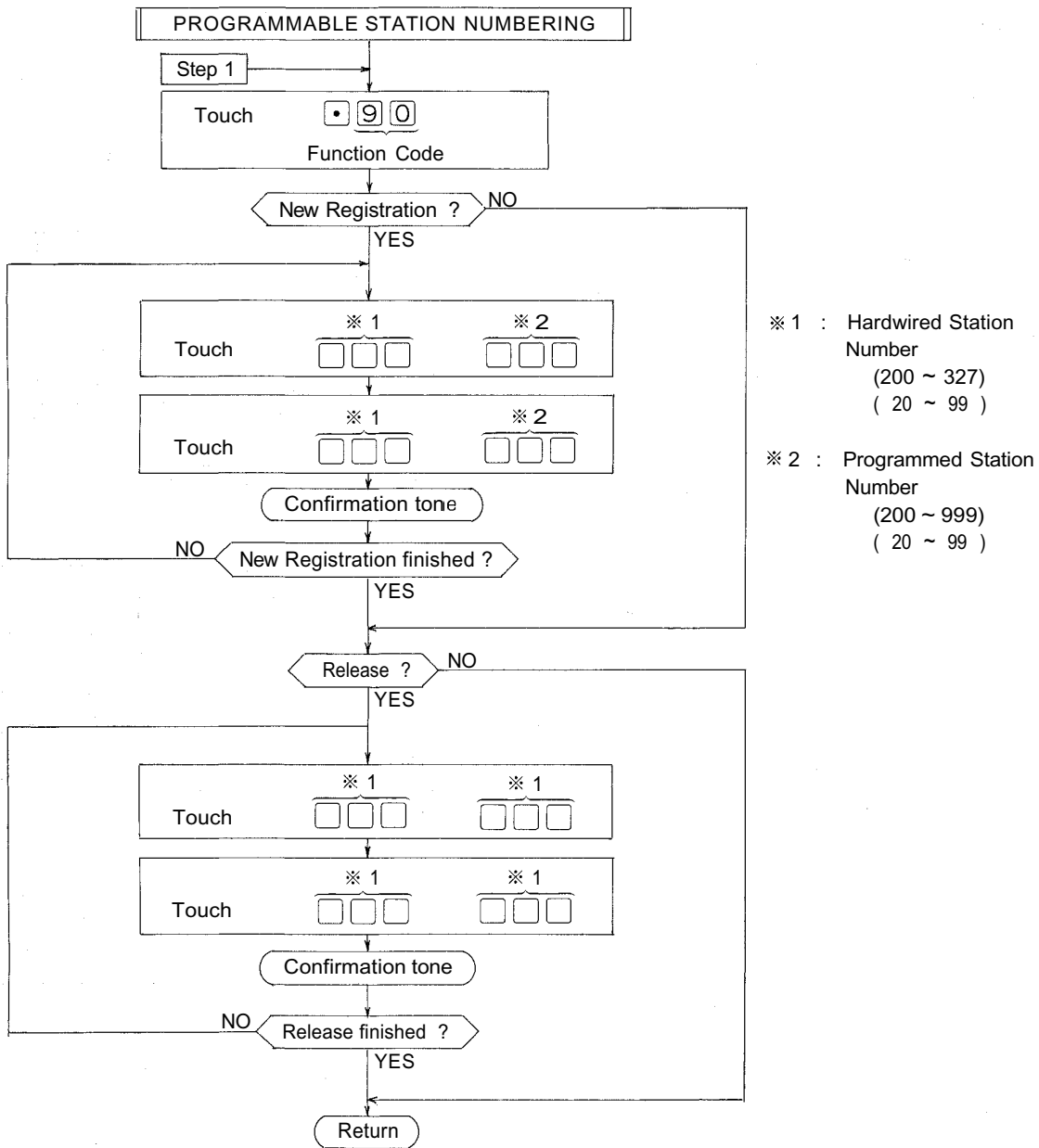
Touch 8 2 0 0 ... 0
10 times

(Confirmation tone will be heard.)

2. Re-start at Step 1 when mis-dialing occurs
(All other registrations remain valid.)

3. CPU DIP switch D-4 must be "ON" to employ this function.

6-16 PROGRAMMABLE STATION NUMBERING (FUNCTION CODE 90)



NOTES

1. To release all registered Programmed Station No. at one time,

Touch 90000...0
10 times

(Confirmation tone will be heard.)

2. Re-start at Step 1 when mis-dialing occurs.
(All other registrations remain valid.)

3. Any one Programmed Station No. cannot be assigned to more than one Hardwired Station.

4. CPU DIP switch D-5 must be "ON" to employ this function.

7. PROGRAMMING LIST FOR FUNCTIONS

Use these tables to keep a record of those functions assigned to each station.

Function Table for Stations (1)

| Function Group | | A | | | | | | | | B | | C | | E |
|----------------|-----------------------|--------------------|-------------------------|-------------------------------------|---------------------------------------|---|--|---|--|-----------------------|--------------------|-----------------|------------------------------|------------------------|
| Name | Function Code | Executive Priority | Continuous Calling Tone | Stations Allowed Access to All Call | Stations Allowed Access to Conference | Stations Allowed Access to One Shot Make Output | Stations Allowed Access to Make/Break Output | Stations Allowed Access to 1/8 Select (or Decimal) Output | Stations Allowed Access to 4 Decimal Digits Output | Secretary Station No. | Master Station No. | Paging Zone No. | Group No. for Group Blocking | Programmed Station No. |
| | Function | | | | | | | | | * | * | | | |
| | Hardwired Station No. | 50 | 51 | 52 | 53 | 56 | 57 | 58 | 59 | 60 | 61 | 70 | 71 | 90 |
| | 200 (20) | | | | | | | | | | | | | |
| | 201 (21) | | | | | | | | | | | | | |
| | 202 (22) | | | | | | | | | | | | | |
| | 203 (23) | | | | | | | | | | | | | |
| | 204 (24) | | | | | | | | | | | | | |
| | 205 (25) | | | | | | | | | | | | | |
| | 206 (26) | | | | | | | | | | | | | |
| | 207 (27) | | | | | | | | | | | | | |
| | 208 (28) | | | | | | | | | | | | | |
| | 209 (29) | | | | | | | | | | | | | |
| | 210 (30) | | | | | | | | | | | | | |
| | 211 (31) | | | | | | | | | | | | | |
| | 212 (32) | | | | | | | | | | | | | |
| | 213 (33) | | | | | | | | | | | | | |
| | 214 (34) | | | | | | | | | | | | | |
| | 215 (35) | | | | | | | | | | | | | |
| | 216 (36) | | | | | | | | | | | | | |
| | 217 (37) | | | | | | | | | | | | | |
| | 218 (38) | | | | | | | | | | | | | |
| | 219 (39) | | | | | | | | | | | | | |
| | 220 (40) | | | | | | | | | | | | | |
| | 221 (41) | | | | | | | | | | | | | |
| | 222 (42) | | | | | | | | | | | | | |
| | 223 (43) | | | | | | | | | | | | | |
| | 224 (44) | | | | | | | | | | | | | |
| | 225 (45) | | | | | | | | | | | | | |
| | 226 (46) | | | | | | | | | | | | | |
| | 227 (47) | | | | | | | | | | | | | |
| | 228 (48) | | | | | | | | | | | | | |
| | 229 (49) | | | | | | | | | | | | | |
| | 230 (50) | | | | | | | | | | | | | |
| | 231 (51) | | | | | | | | | | | | | |

* Register using Hardwired Station No.

Function Table for Stations (2)

| Function Group | | A | | | | | | | | B | | C | | E |
|----------------|---------------|--------------------|-------------------------|-------------------------------------|---------------------------------------|---|--|---|--|-------------------------|----------------------|-----------------|------------------------------|------------------------|
| Name | Function Code | Executive Priority | Continuous Calling Tone | Stations Allowed Access to All Call | Stations Allowed Access to Conference | Stations Allowed Access to One Shot Make Output | Stations Allowed Access to Make/Break Output | Stations Allowed Access to 1/8 Select (or Decimal) Output | Stations Allowed Access to 4 Decimal Digits Output | Secretary Station No. * | Master Station No. * | Paging Zone No. | Group No. for Group Blocking | Programmed Station No. |
| | Function | 50 | 51 | 52 | 53 | 56 | 57 | 58 | 59 | 60 | 61 | 70 | 71 | 90 |
| | 232 (52) | | | | | | | | | | | | | |
| | 233 (53) | | | | | | | | | | | | | |
| | 234 (54) | | | | | | | | | | | | | |
| | 235 (55) | | | | | | | | | | | | | |
| | 236 (56) | | | | | | | | | | | | | |
| | 237 (57) | | | | | | | | | | | | | |
| | 238 (58) | | | | | | | | | | | | | |
| | 239 (59) | | | | | | | | | | | | | |
| | 240 (60) | | | | | | | | | | | | | |
| | 241 (61) | | | | | | | | | | | | | |
| | 242 (62) | | | | | | | | | | | | | |
| | 243 (63) | | | | | | | | | | | | | |
| | 244 (64) | | | | | | | | | | | | | |
| | 245 (65) | | | | | | | | | | | | | |
| | 246 (66) | | | | | | | | | | | | | |
| | 247 (67) | | | | | | | | | | | | | |
| | 248 (68) | | | | | | | | | | | | | |
| | 249 (69) | | | | | | | | | | | | | |
| | 250 (70) | | | | | | | | | | | | | |
| | 251 (71) | | | | | | | | | | | | | |
| | 252 (72) | | | | | | | | | | | | | |
| | 253 (73) | | | | | | | | | | | | | |
| | 254 (74) | | | | | | | | | | | | | |
| | 255 (75) | | | | | | | | | | | | | |
| | 256 (76) | | | | | | | | | | | | | |
| | 257 (77) | | | | | | | | | | | | | |
| | 258 (78) | | | | | | | | | | | | | |
| | 259 (79) | | | | | | | | | | | | | |
| | 260 (80) | | | | | | | | | | | | | |
| | 261 (81) | | | | | | | | | | | | | |
| | 262 (82) | | | | | | | | | | | | | |
| | 263 (83) | | | | | | | | | | | | | |

* Register using Hardwired Station No.

Function Table for Stations (3)

| Function Group | | A | | | | | | | | B | | C | | F |
|----------------|---------------|--------------------|-------------------------|--------------------------------------|---------------------------------------|---|--|---|--|-------------------------|----------------------|-----------------|------------------------------|------------------------|
| Name | Function Code | Executive Priority | Continuous Calling Tone | Stations Allowed Access to All Call. | Stations Allowed Access to Conference | Stations Allowed Access to One Shot Make Output | Stations Allowed Access to Make/Break Output | Stations Allowed Access to 1/8 Select (or Decimal) Output | Stations Allowed Access to 4 Decimal Digits Output | Secretary Station No. * | Master Station No. * | Paging Zone No. | Group No. for Group Blocking | Programmed Station No. |
| | Function | | | | | | | | | | | | | |
| | | 50 | 51 | 52 | 53 | 56 | 57 | 58 | 59 | 60 | 61 | 70 | 71 | 90 |
| | 264 (84) | | | | | | | | | | | | | |
| | 265 (85) | | | | | | | | | | | | | |
| | 266 (86) | | | | | | | | | | | | | |
| | 267 (87) | | | | | | | | | | | | | |
| | 268 (88) | | | | | | | | | | | | | |
| | 269 (89) | | | | | | | | | | | | | |
| | 270 (90) | | | | | | | | | | | | | |
| | 271 (91) | | | | | | | | | | | | | |
| | 272 (92) | | | | | | | | | | | | | |
| | 273 (93) | | | | | | | | | | | | | |
| | 274 (94) | | | | | | | | | | | | | |
| | 275 (95) | | | | | | | | | | | | | |
| | 276 (96) | | | | | | | | | | | | | |
| | 277 (97) | | | | | | | | | | | | | |
| | 278 (98) | | | | | | | | | | | | | |
| | 279 (99) | | | | | | | | | | | | | |
| | 280 | | | | | | | | | | | | | |
| | 281 | | | | | | | | | | | | | |
| | 282 | | | | | | | | | | | | | |
| | 283 | | | | | | | | | | | | | |
| | 284 | | | | | | | | | | | | | |
| | 285 | | | | | | | | | | | | | |
| | 286 | | | | | | | | | | | | | |
| | 287 | | | | | | | | | | | | | |
| | 288 | | | | | | | | | | | | | |
| | 289 | | | | | | | | | | | | | |
| | 290 | | | | | | | | | | | | | |
| | 291 | | | | | | | | | | | | | |
| | 292 | | | | | | | | | | | | | |
| | 293 | | | | | | | | | | | | | |
| | 294 | | | | | | | | | | | | | |
| | 295 | | | | | | | | | | | | | |

* Register using Hardwired Station No.

Function Table for Stations (4)

| Name | Hardwired Station No. | Function Code | Function | A | | | | | | B | | C | | E | | |
|------|-----------------------|---------------|----------|--------------------|-------------------------|-------------------------------------|---------------------------------------|---|--|---|--|-------------------------|----------------------|-----------------|------------------------------|------------------------|
| | | | | Executive Priority | Continuous Calling Tone | Stations Allowed Access to All Call | Stations Allowed Access to Conference | Stations Allowed Access to One Shot Make Output | Stations Allowed Access to Make/Break Output | Stations Allowed Access to 1/8 Select (or Decimal) Output | Stations Allowed Access to 4 Decimal Digits Output | Secretary Station No. * | Master Station No. * | Paging Zone No. | Group No. for Group Blocking | Programmed Station No. |
| | | | | 50 | 51 | 52 | 53 | 56 | 57 | 58 | 59 | 60 | 61 | 70 | 71 | 90 |
| | 296 | | | | | | | | | | | | | | | |
| | 297 | | | | | | | | | | | | | | | |
| | 298 | | | | | | | | | | | | | | | |
| | 299 | | | | | | | | | | | | | | | |
| | 300 | | | | | | | | | | | | | | | |
| | 301 | | | | | | | | | | | | | | | |
| | 302 | | | | | | | | | | | | | | | |
| | 303 | | | | | | | | | | | | | | | |
| | 304 | | | | | | | | | | | | | | | |
| | 305 | | | | | | | | | | | | | | | |
| | 306 | | | | | | | | | | | | | | | |
| | 307 | | | | | | | | | | | | | | | |
| | 308 | | | | | | | | | | | | | | | |
| | 309 | | | | | | | | | | | | | | | |
| | 310 | | | | | | | | | | | | | | | |
| | 311 | | | | | | | | | | | | | | | |
| | 312 | | | | | | | | | | | | | | | |
| | 313 | | | | | | | | | | | | | | | |
| | 314 | | | | | | | | | | | | | | | |
| | 315 | | | | | | | | | | | | | | | |
| | 316 | | | | | | | | | | | | | | | |
| | 317 | | | | | | | | | | | | | | | |
| | 318 | | | | | | | | | | | | | | | |
| | 319 | | | | | | | | | | | | | | | |
| | 320 | | | | | | | | | | | | | | | |
| | 321 | | | | | | | | | | | | | | | |
| | 322 | | | | | | | | | | | | | | | |
| | 323 | | | | | | | | | | | | | | | |
| | 324 | | | | | | | | | | | | | | | |
| | 325 | | | | | | | | | | | | | | | |
| | 326 | | | | | | | | | | | | | | | |
| | 327 | | | | | | | | | | | | | | | |

* Register using Hardwired Station No.

Paging Priority and/or Paging Response Table

| Function Code 70 | Station Paging Zone | | 1st Station No. | Last Station No. | For Paging Priority |
|------------------|---------------------|-----|-----------------|------------------|---------------------|
| | Department | No. | | | |
| | | 01 | | | |
| | | 02 | | | |
| | | 03 | | | |
| | | 04 | | | |
| | | 05 | | | |
| | | 06 | | | |
| | | 07 | | | |
| | | 08 | | | |
| | | 09 | | | |
| | | 10 | | | |
| | | 11 | | | |
| | | 12 | | | |
| | | 13 | | | |
| | | 14 | | | |
| | 15 | | | | |

Combination Paging Table

| Function Code 80 | Selected Paging Zone | | Combination Paging Zone | | | | | | | | | | | | | | |
|------------------|----------------------|-----|-------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| | Department | No. | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | 90 | | | | | | | | | | | | | | | |
| | | 91 | | | | | | | | | | | | | | | |
| | | 92 | | | | | | | | | | | | | | | |
| | | 93 | | | | | | | | | | | | | | | |
| | | 94 | | | | | | | | | | | | | | | |
| | | 95 | | | | | | | | | | | | | | | |
| | | 96 | | | | | | | | | | | | | | | |
| | | 97 | | | | | | | | | | | | | | | |
| | | 98 | | | | | | | | | | | | | | | |
| | | 99 | | | | | | | | | | | | | | | |

Tables for Group Blocking

① Group Blocking for each Group

| Function Code 71 | Group | No. | 1st Station No. | Last Station No. |
|------------------|-------|-----|-----------------|------------------|
| | | 1 | | |
| | | 2 | | |
| | | 3 | | |
| | | 4 | | |
| | | 5 | | |
| | | 6 | | |
| | | 7 | | |
| | | 8 | | |

② Group Blocking among Groups

| Function Code 81 | Calling Group No. | Called Group No. | | | | | | | | Others | | |
|------------------|-------------------|------------------|---|---|---|---|---|---|---|--------|--|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | |
| | | 1 | ※ | | | | | | | | | ※ |
| | | 2 | | ※ | | | | | | | | ※ |
| | | 3 | | | ※ | | | | | | | ※ |
| | | 4 | | | | ※ | | | | | | ※ |
| | | 5 | | | | | ※ | | | | | ※ |
| | | 6 | | | | | | ※ | | | | ※ |
| | | 7 | | | | | | | ※ | | | ※ |
| 8 | | | | | | | | ※ | ※ | | | |
| Others | | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | ※ | | |

③ Group Blocking for Paging Groups

| Function Code 82 | Paging Zone | | Paging Group No. | | | | | | | | Others | |
|--------------------------|-------------|-----|------------------|---|---|---|---|---|---|---|--------|---|
| | Department | No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | |
| All Call | | 00 | | | | | | | | | | ※ |
| Individual Paging Zones | | 01 | | | | | | | | | | ※ |
| | | 02 | | | | | | | | | | ※ |
| | | 03 | | | | | | | | | | ※ |
| | | 04 | | | | | | | | | | ※ |
| | | 05 | | | | | | | | | | ※ |
| | | 06 | | | | | | | | | | ※ |
| | | 07 | | | | | | | | | | ※ |
| | | 08 | | | | | | | | | | ※ |
| | | 09 | | | | | | | | | | ※ |
| | | 10 | | | | | | | | | | ※ |
| | | 11 | | | | | | | | | | ※ |
| | | 12 | | | | | | | | | | ※ |
| | | 13 | | | | | | | | | | ※ |
| | | 14 | | | | | | | | | | ※ |
| | 15 | | | | | | | | | | ※ | |
| Combination Paging Zones | | 90 | | | | | | | | | | ※ |
| | | 91 | | | | | | | | | | ※ |
| | | 92 | | | | | | | | | | ※ |
| | | 93 | | | | | | | | | | ※ |
| | | 94 | | | | | | | | | | ※ |
| | | 95 | | | | | | | | | | ※ |
| | | 96 | | | | | | | | | | ※ |
| | | 97 | | | | | | | | | | ※ |
| | | 98 | | | | | | | | | | ※ |
| | 99 | | | | | | | | | | ※ | |

※ : No need to register.

PART 2. FUNCTION SELECTION FOR DATA TRANSMITTING AND RECEIVING UNITS

8. SETTING OF CHANNEL SELECT SWITCH OF TRANSMITTING UNIT (DT-E11) AND WORD SELECT SWITCH OF RECEIVING UNIT (DR-B61)

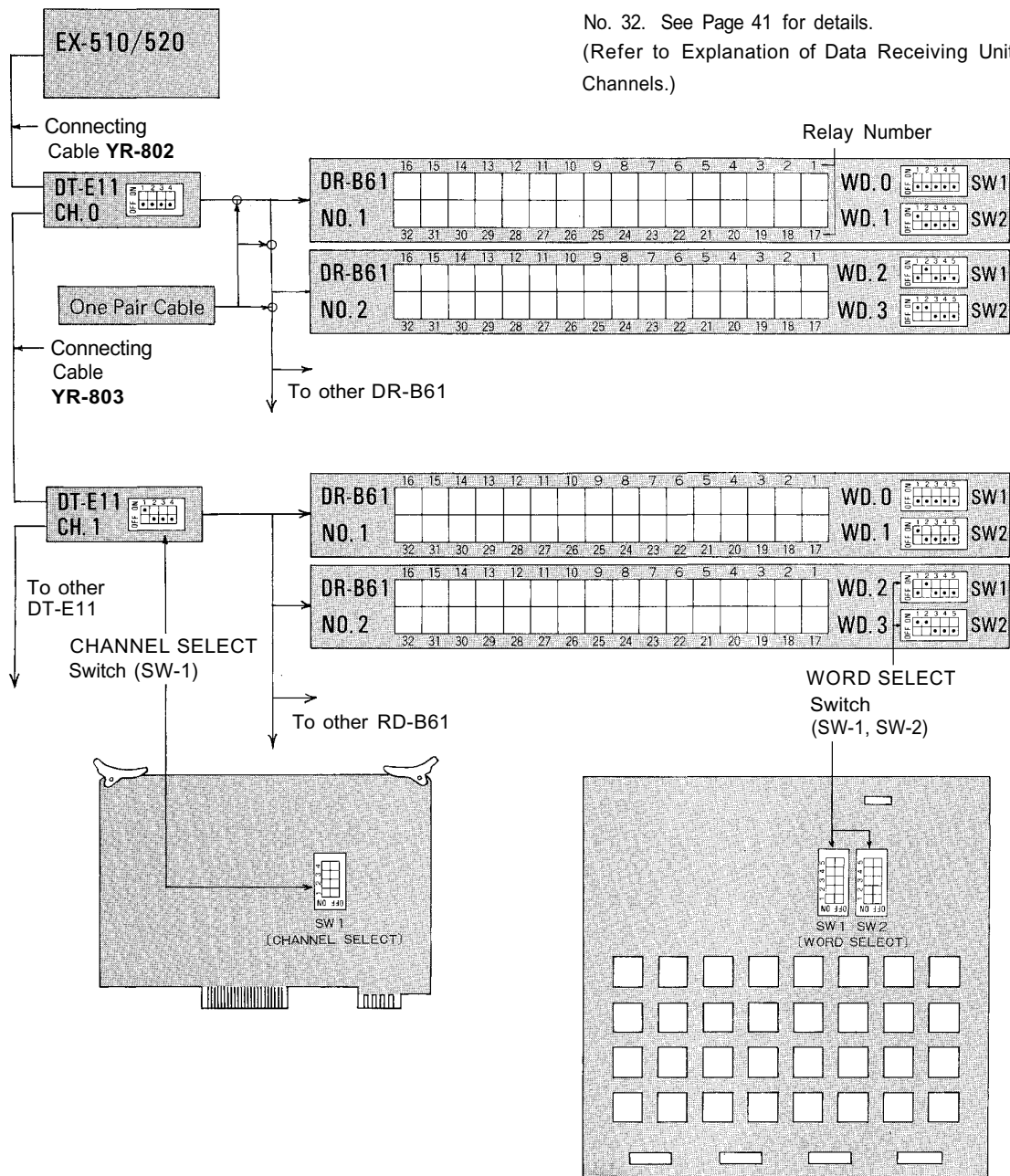
NOTE

1. Connect the DT-E11 and DR-B61 to Exchange correctly. (Refer to installation manuals of DT-E11 and DR-B61.)
2. Set the function select switches (DIP SWITCH) on CPU-55 correctly and be sure to enter initial programming and function registration at programming station No. 200.
3. Remove the front panel of Data Transmitting Unit (DT-E11) and take out the printed circuit board. Then

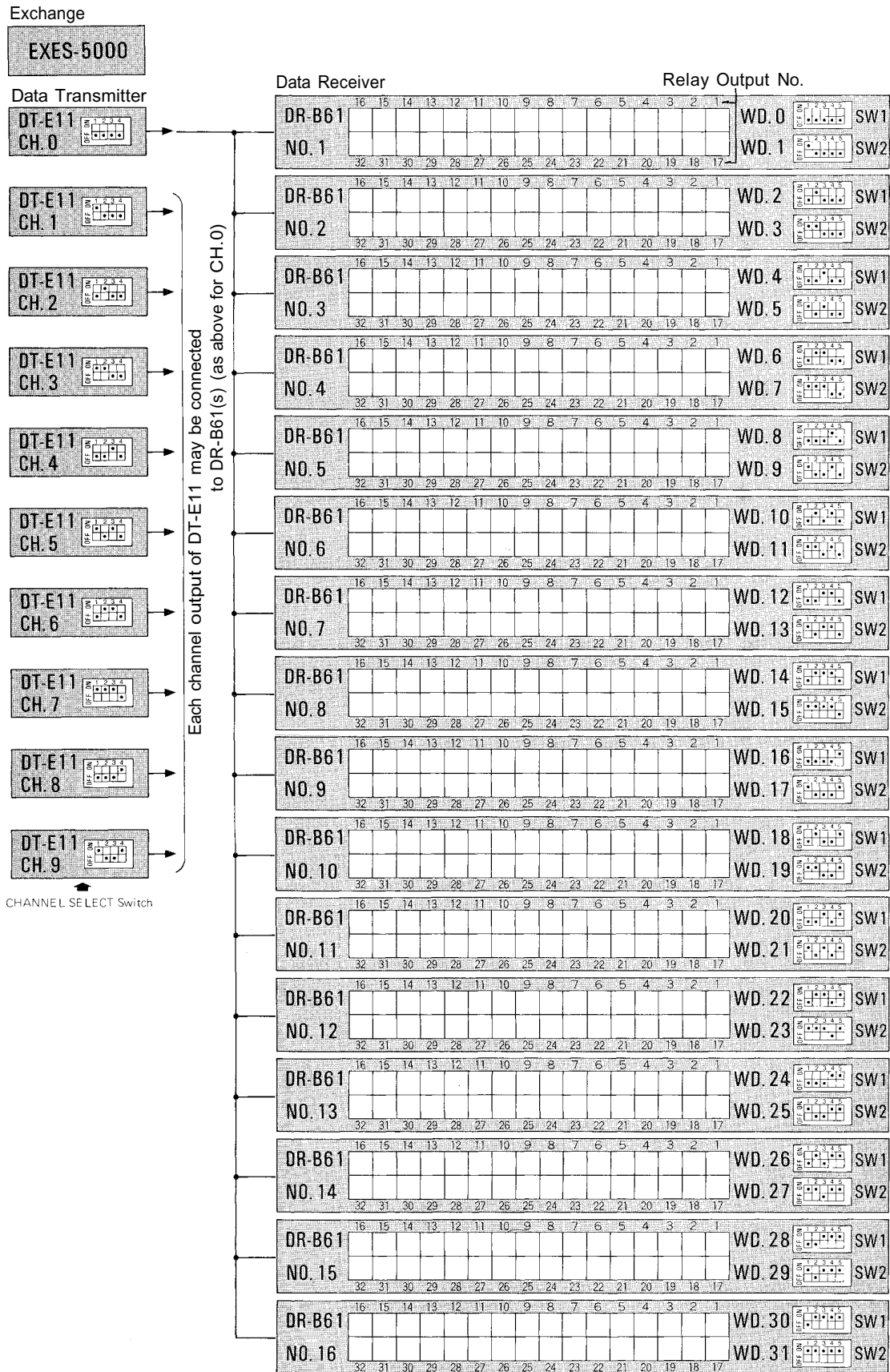
set the channel select switches located on the printed circuit board, according to the necessary functions such as IN/OUT Annunciation, Calling Party Indication etc, and replace in the Unit.

(Refer to 12, Explanation of Data Transmitting Unit Output Channels, Page 39).

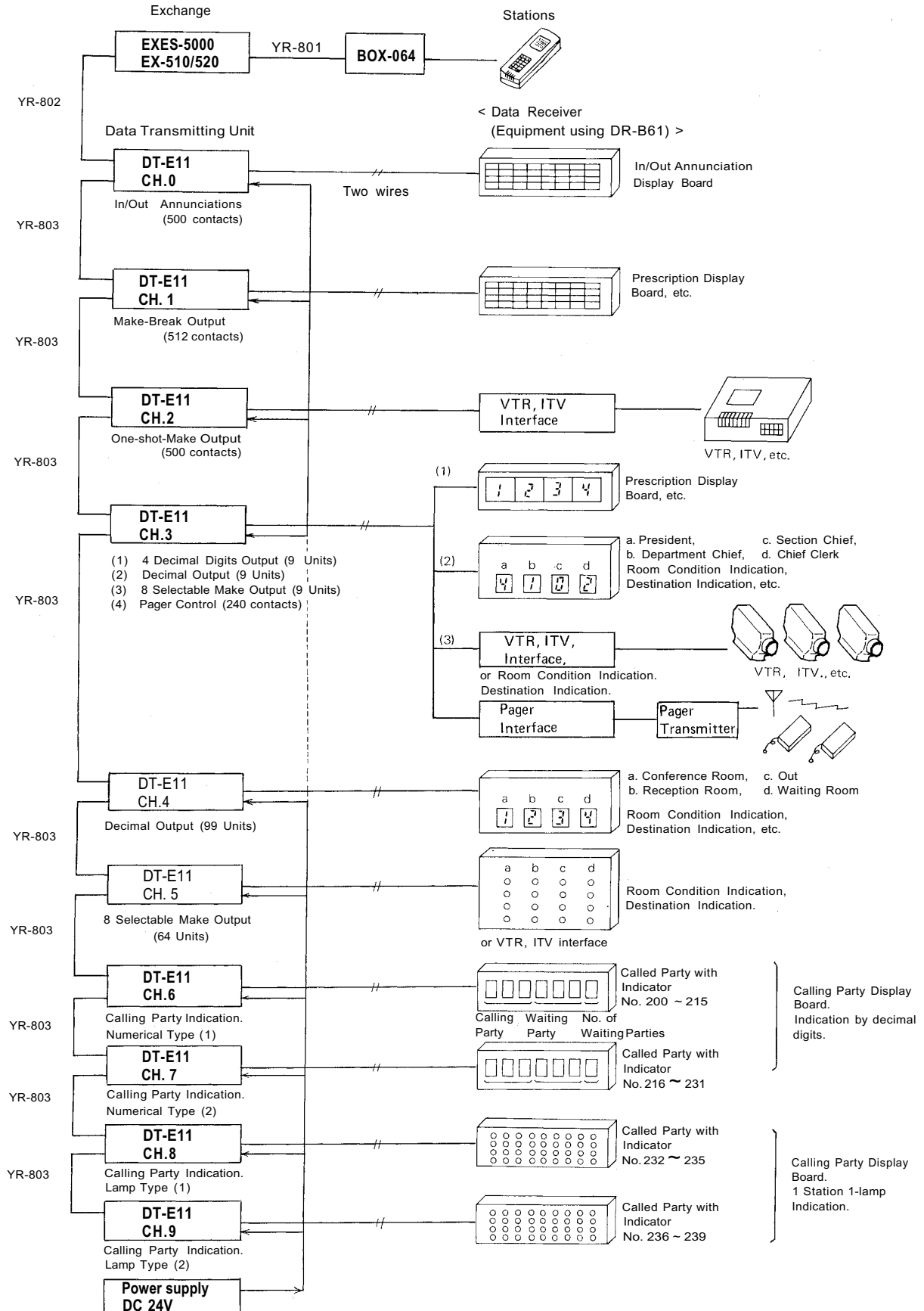
4. The DT-E11 sends out 512 bit data (16 bit x 32 words) to control relays on Data Receiving Unit (DR-B61). Therefore set the two word select switches on DR-B61, according to necessary output mode. SW-1 is for Relay No.1 to No.16 and SW-2 is for Relay No.17 to No. 32. See Page 41 for details.
(Refer to Explanation of Data Receiving Unit Output Channels.)

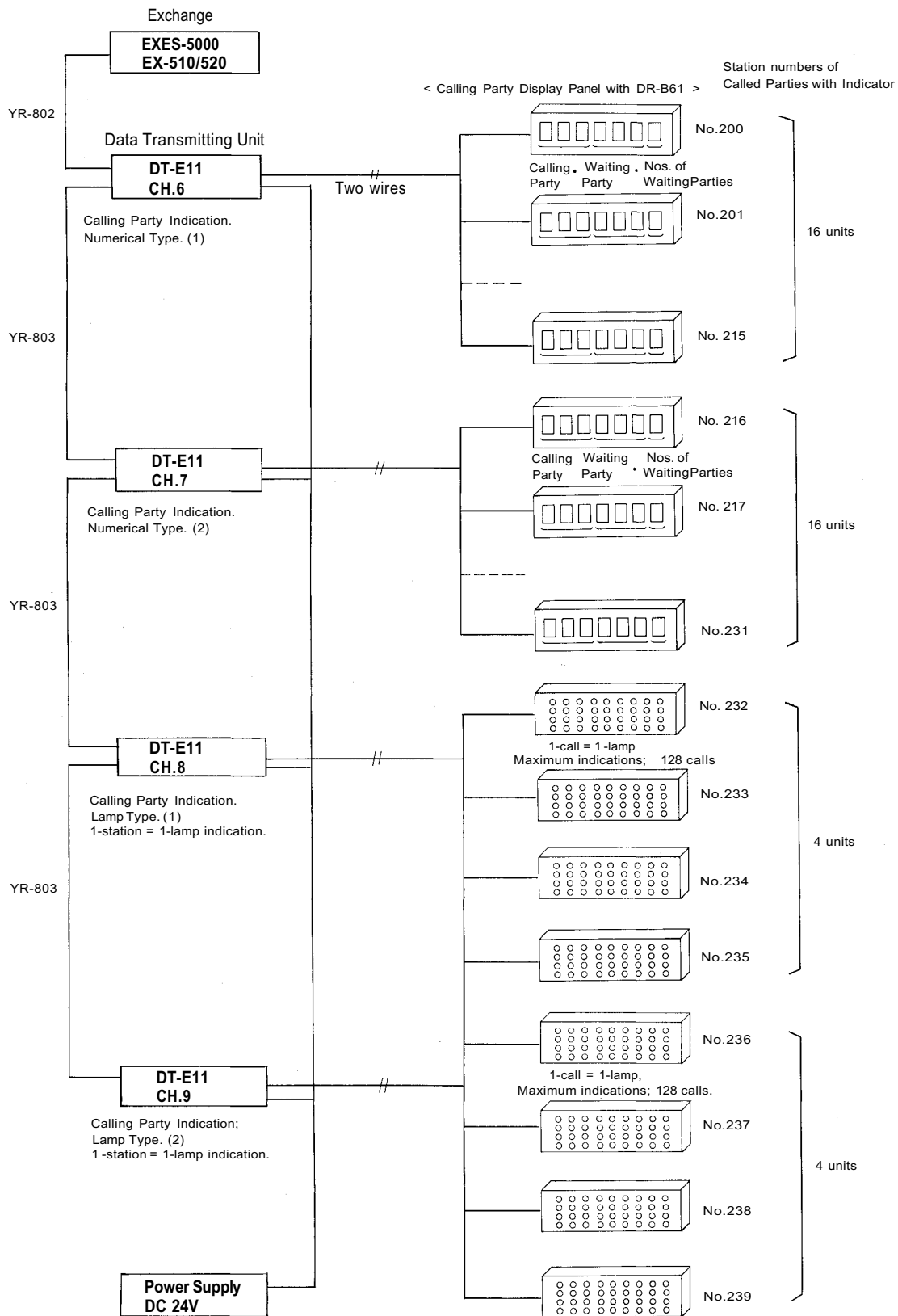


< DIP SWITCH CHART OF DATA TRANSMITTING AND RECEIVING UNIT >




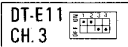
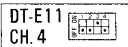
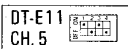

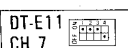
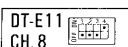
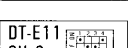


10. System Diagram of Data Transmitting and Receiving Units





11. EXPLANATION OF DATA TRANSMITTING UNIT OUTPUT CHANNELS

| CHANNEL SELECT | FUNCTIONS | DESCRIPTION | APPLICATION |
|--|---|--|--|
| CH.0  | IN/OUT Annunciation | Personnel in and out registration can be accomplished at any Master station by using personal numbers Max. 500 IN/OUT annunciations may be done. | <ul style="list-style-type: none"> • IN/OUT Annunciation |
| CH.1  | Make/Break Output | 512 Make/Break contacts can be available at any Master station. | <ul style="list-style-type: none"> • Door Remote • IN/OUT Annunciation |
| CH.2  | One-shot Make Output | 500 One-shot make contacts can be available at any Master station. | <ul style="list-style-type: none"> • ITV camera select • VTR control |
| CH.3  | (1) 4 Decimal digits output (9 unit blocks) (2) Decimal Output (9 unit blocks) (3) 8 Selectable Make Output (4) Pager Control Output | Indicate by 7 segments LEDs. 10 Selectable Decimal Outputs are available with 7 segments LEDs. One contact out of 8 selectable make output is obtained. Make output (240 contacts) are available for pager control. | <ul style="list-style-type: none"> • Prescription annunciation • Room condition indication. • Destination indication • Pager |
| CH.4  | Decimal Output (99 unit blocks) | 10 Selectable Decimal Outputs are available with 7 segments LEDs. | <ul style="list-style-type: none"> • Room condition indication, • Destination indication. |
| CH.5  | 8 Selectable make Output | One contact out of 8 selectable make output is obtained. | Same as above |
| CH.6  | Calling Party Indication Numerical-type (1) | When a station with a Display Board is called, calling party number is indicated until the conversation is over and also when the called station is busy or in privacy. | • The number of called stations are No. 200 ~ No. 215. |
| CH.7  | Calling Party Indication Numerical-type (2) | | • The number of called stations are No. 216 ~ No. 231. |
| CH.8  | Calling Party Indication (One Station; One Lamp) | Max. 128 Calling station numbers can be indicated when designated called station with Display Board is called. | • The number of called stations are No. 232 ~ No. 235. |
| CH.9  | Calling Party Indication (One Station; One Lamp) | Same as above except called station number | • The number of called stations are No. 236 ~ No. 239. |

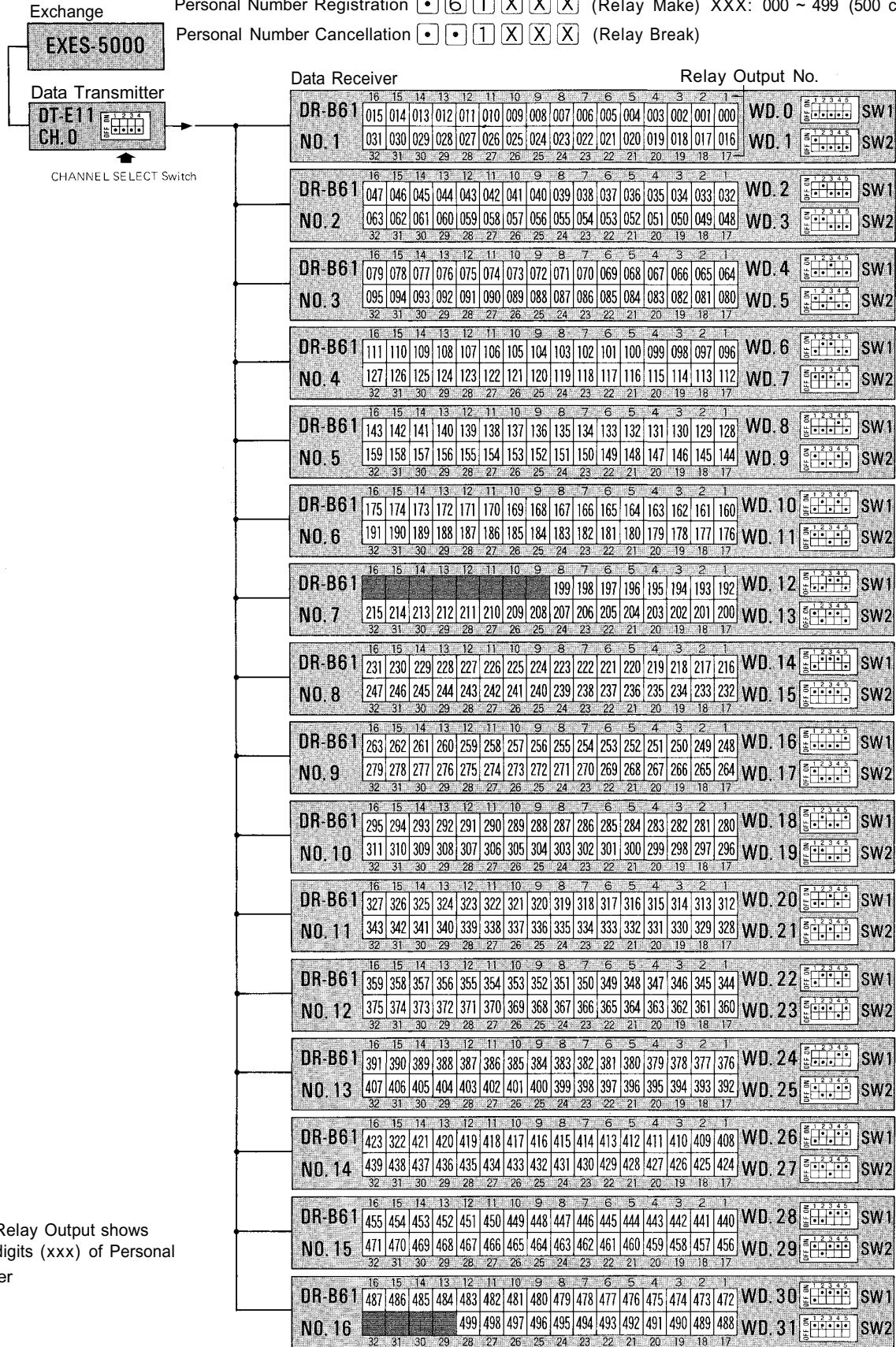
12. EXPLANATION OF DATA RECEIVING UNIT OUTPUT CHANNELS

12-1 Channel 0 (CH. 0) In/Out Annunciation

(Dial Operation)

Personal Number Registration 6 1 X X X (Relay Make) XXX: 000 ~ 499 (500 contacts)

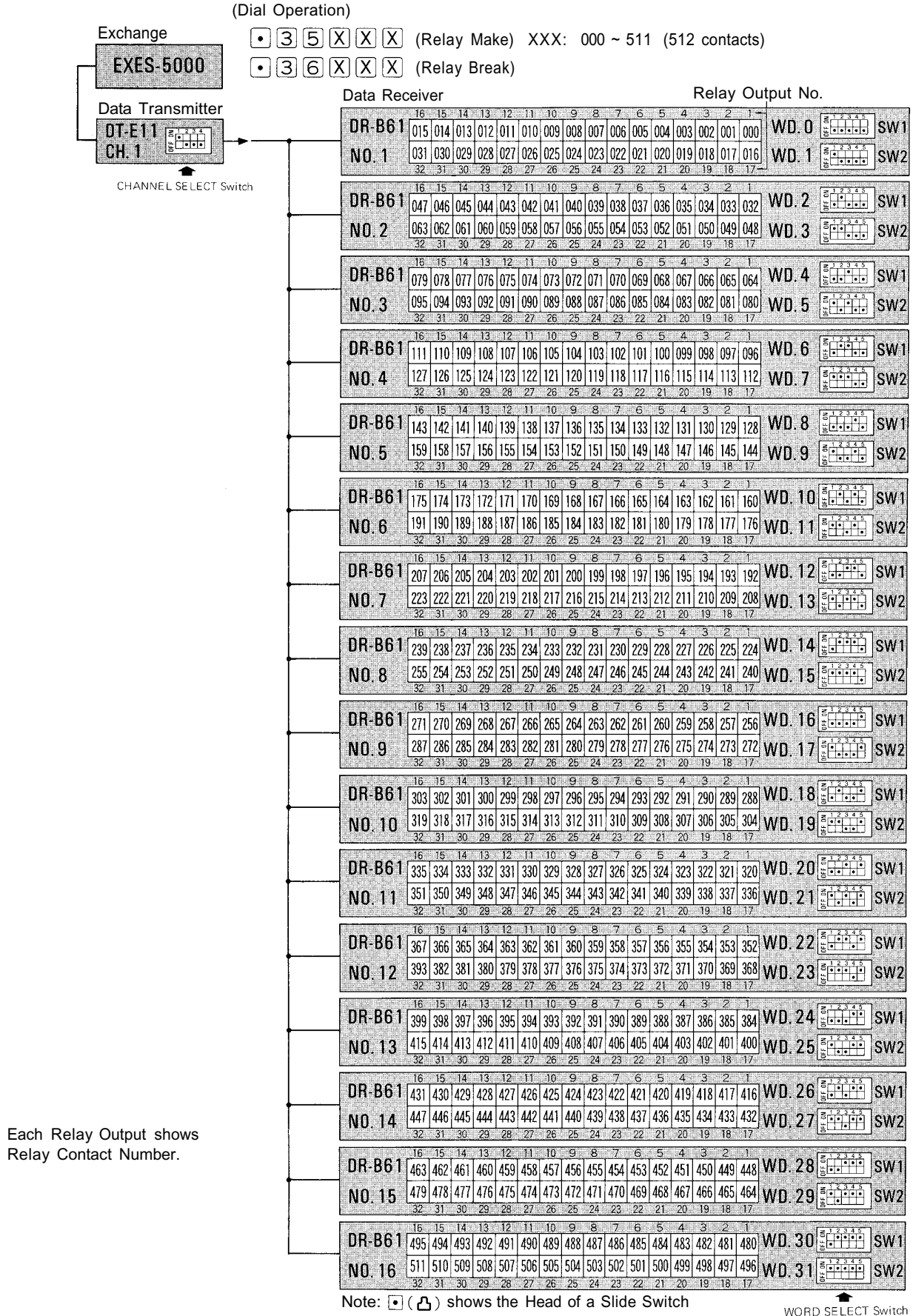
Personal Number Cancellation 1 X X X (Relay Break)



Each Relay Output shows last 3 digits (xxx) of Personal Number

WORD SELECT Switch

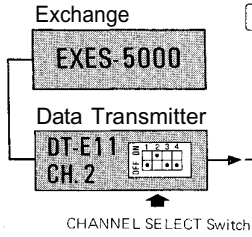
12-2 Channel 1 (CH. 1) Make/Break Output



12-3 Channel 2 (CH. 2) One-Shot Make Output

(Dial Operation)

• 3 X X X (Relay Make min. 1ms max. 2ms) XXX : 000 ~ 499 (500 contacts)



| | | Data Receiver | | | | | | | | | | | | | | | | Relay Output No. | |
|------------------|---|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|--------|
| DR-B61 NO. 1 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 015 | 014 | 013 | 012 | 011 | 010 | 009 | 008 | 007 | 006 | 005 | 004 | 003 | 002 | 001 | 000 | WD. 0 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 031 | 030 | 029 | 028 | 027 | 026 | 025 | 024 | 023 | 022 | 021 | 020 | 019 | 018 | 017 | 016 | WD. 1 | SW2 |
| DR-B61 NO. 2 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 047 | 046 | 045 | 044 | 043 | 042 | 041 | 040 | 039 | 038 | 037 | 036 | 035 | 034 | 033 | 032 | WD. 2 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 063 | 062 | 061 | 060 | 059 | 058 | 057 | 056 | 055 | 054 | 053 | 052 | 051 | 050 | 049 | 048 | WD. 3 | SW2 |
| DR-B61 NO. 3 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 079 | 078 | 077 | 076 | 075 | 074 | 073 | 072 | 071 | 070 | 069 | 068 | 067 | 066 | 065 | 064 | WD. 4 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 095 | 094 | 093 | 092 | 091 | 090 | 089 | 088 | 087 | 086 | 085 | 084 | 083 | 082 | 081 | 080 | WD. 5 | SW2 |
| DR-B61 NO. 4 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 111 | 110 | 109 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 100 | 099 | 098 | 097 | 096 | WD. 6 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 127 | 126 | 125 | 124 | 123 | 122 | 121 | 120 | 119 | 118 | 117 | 116 | 115 | 114 | 113 | 112 | WD. 7 | SW2 |
| DR-B61 NO. 5 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 143 | 142 | 141 | 140 | 139 | 138 | 137 | 136 | 135 | 134 | 133 | 132 | 131 | 130 | 129 | 128 | WD. 8 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 159 | 158 | 157 | 156 | 155 | 154 | 153 | 152 | 151 | 150 | 149 | 148 | 147 | 146 | 145 | 144 | WD. 9 | SW2 |
| DR-B61 NO. 6 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 175 | 174 | 173 | 172 | 171 | 170 | 169 | 168 | 167 | 166 | 165 | 164 | 163 | 162 | 161 | 160 | WD. 10 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 191 | 190 | 189 | 188 | 187 | 186 | 185 | 184 | 183 | 182 | 181 | 180 | 179 | 178 | 177 | 176 | WD. 11 | SW2 |
| DR-B61 NO. 7 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 207 | 206 | 205 | 204 | 203 | 202 | 201 | 200 | 199 | 198 | 197 | 196 | 195 | 194 | 193 | 192 | WD. 12 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 223 | 222 | 221 | 220 | 219 | 218 | 217 | 216 | 215 | 214 | 213 | 212 | 211 | 210 | 209 | 208 | WD. 13 | SW2 |
| DR-B61 NO. 8 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 239 | 238 | 237 | 236 | 235 | 234 | 233 | 232 | 231 | 230 | 229 | 228 | 227 | 226 | 225 | 224 | WD. 14 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 255 | 254 | 253 | 252 | 251 | 250 | 249 | 248 | 247 | 246 | 245 | 244 | 243 | 242 | 241 | 240 | WD. 15 | SW2 |
| DR-B61 NO. 9 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 271 | 270 | 269 | 268 | 267 | 266 | 265 | 264 | 263 | 262 | 261 | 260 | 259 | 258 | 257 | 256 | WD. 16 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 287 | 286 | 285 | 284 | 283 | 282 | 281 | 280 | 279 | 278 | 277 | 276 | 275 | 274 | 273 | 272 | WD. 17 | SW2 |
| DR-B61 NO. 10 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 303 | 302 | 301 | 300 | 299 | 298 | 297 | 296 | 295 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | WD. 18 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 319 | 318 | 317 | 316 | 315 | 314 | 313 | 312 | 311 | 310 | 309 | 308 | 307 | 306 | 305 | 304 | WD. 19 | SW2 |
| DR-B61 NO. 11 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 335 | 334 | 333 | 332 | 331 | 330 | 329 | 328 | 327 | 326 | 325 | 324 | 323 | 322 | 321 | 320 | WD. 20 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 351 | 350 | 349 | 348 | 347 | 346 | 345 | 344 | 343 | 342 | 341 | 340 | 339 | 338 | 337 | 336 | WD. 21 | SW2 |
| DR-B61 NO. 12 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 367 | 366 | 365 | 364 | 363 | 362 | 361 | 360 | 359 | 358 | 357 | 356 | 355 | 354 | 353 | 352 | WD. 22 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 393 | 382 | 381 | 380 | 379 | 378 | 377 | 376 | 375 | 374 | 373 | 372 | 371 | 370 | 369 | 368 | WD. 23 | SW2 |
| DR-B61 NO. 13 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 399 | 398 | 397 | 396 | 395 | 394 | 393 | 392 | 391 | 390 | 389 | 388 | 387 | 386 | 385 | 384 | WD. 24 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 415 | 414 | 413 | 412 | 411 | 410 | 409 | 408 | 407 | 406 | 405 | 404 | 403 | 402 | 401 | 400 | WD. 25 | SW2 |
| DR-B61 NO. 14 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 431 | 430 | 429 | 428 | 427 | 426 | 425 | 424 | 423 | 422 | 421 | 420 | 419 | 418 | 417 | 416 | WD. 26 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 447 | 446 | 445 | 444 | 443 | 442 | 441 | 440 | 439 | 438 | 437 | 436 | 435 | 434 | 433 | 432 | WD. 27 | SW2 |
| DR-B61 NO. 15 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 463 | 462 | 461 | 460 | 459 | 458 | 457 | 456 | 455 | 454 | 453 | 452 | 451 | 450 | 449 | 448 | WD. 28 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 479 | 478 | 477 | 476 | 475 | 474 | 473 | 472 | 471 | 470 | 469 | 468 | 467 | 466 | 465 | 464 | WD. 29 | SW2 |
| DR-B61 NO. 16 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 495 | 494 | 493 | 492 | 491 | 490 | 489 | 488 | 487 | 486 | 485 | 484 | 483 | 482 | 481 | 480 | WD. 30 | SW1 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | | | | | | | | | | | | | | 499 | 498 | 497 | 496 | WD. 31 |

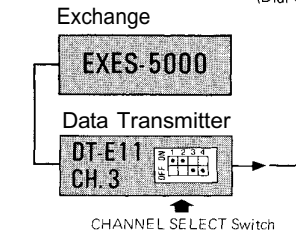
Each Relay Output shows Relay Contact Number.

Note: □ (▢) shows the Head of a Slide Switch

WORD SELECT Switch

12-4 Channel 3 (CH. 3)

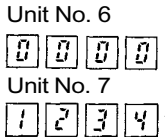
- (1) 4 Decimal Digits Output
 - (2) Decimal Output
 - (3) 8-Selectable Make Output
 - (4) Pager Control Output
- (Dial Operation) (1) 4 Decimal Digits Output $\square \square \square \square$ (Unit No. 4 Decimal Digits) x: 1~9 YYY: 0000~9999



- (2) (3) 8-Selectable Make or Decimal Output $\square \square \square \square$ (Unit No. Condition No.)
- (4) Pager Control Output $\square \square \square \square$ (Pager No. xxx: 000~239 (240 Pager))

| | | |
|---------|-----|-----|
| Display | X | Y |
| 8-Sel | 1~9 | 0~7 |
| Decimal | 1~9 | 0~9 |

(Example)
(1) 4 Decimal Digits Output

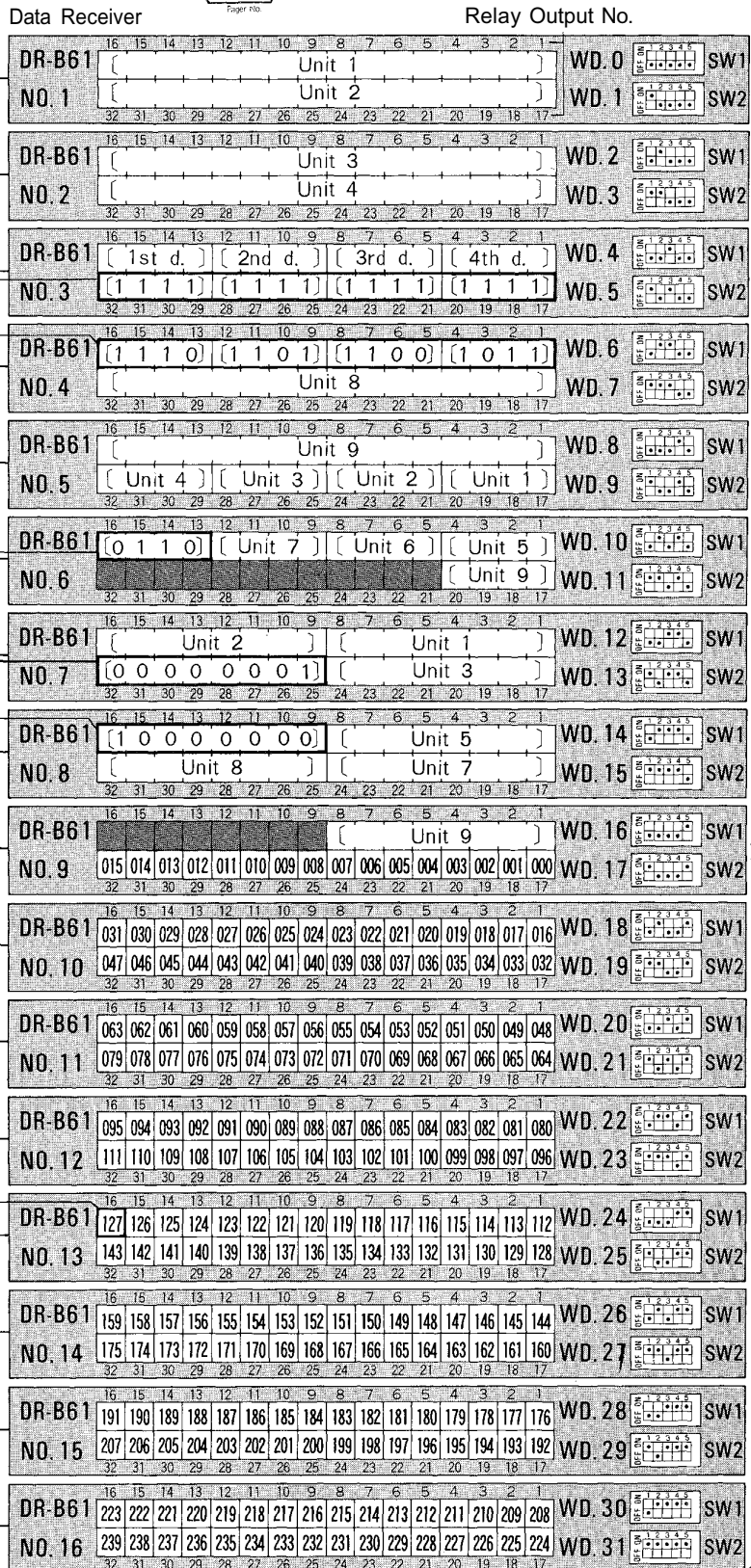


(2) Decimal Output
Unit No. 8 Condition "9"
Binary Negative Logic Output

(3) 8 Selectable Make Output
Unit No. 4 Condition "0"
Unit No. 6 Condition "7"
1: Relay Make
0: Relay Break

(4) Pager Control Output
Pager No. 127 is being called.

Each Relay Output shows
Relay Contact Number.



- (1) 4 Decimal Digits Output [9 Units]
- (2) Decimal Output [9 Units]
- (3) 8-Selectable Make Output [9 Units]
- (4) Pager Control Output [240 Contacts]

Note: \square (\square) shows the Head of a Slide Switch

WORD SELECT Switch

12-5 Channel 4 (CH. 4) Decimal Output (99 Units)

(Dial Operation)

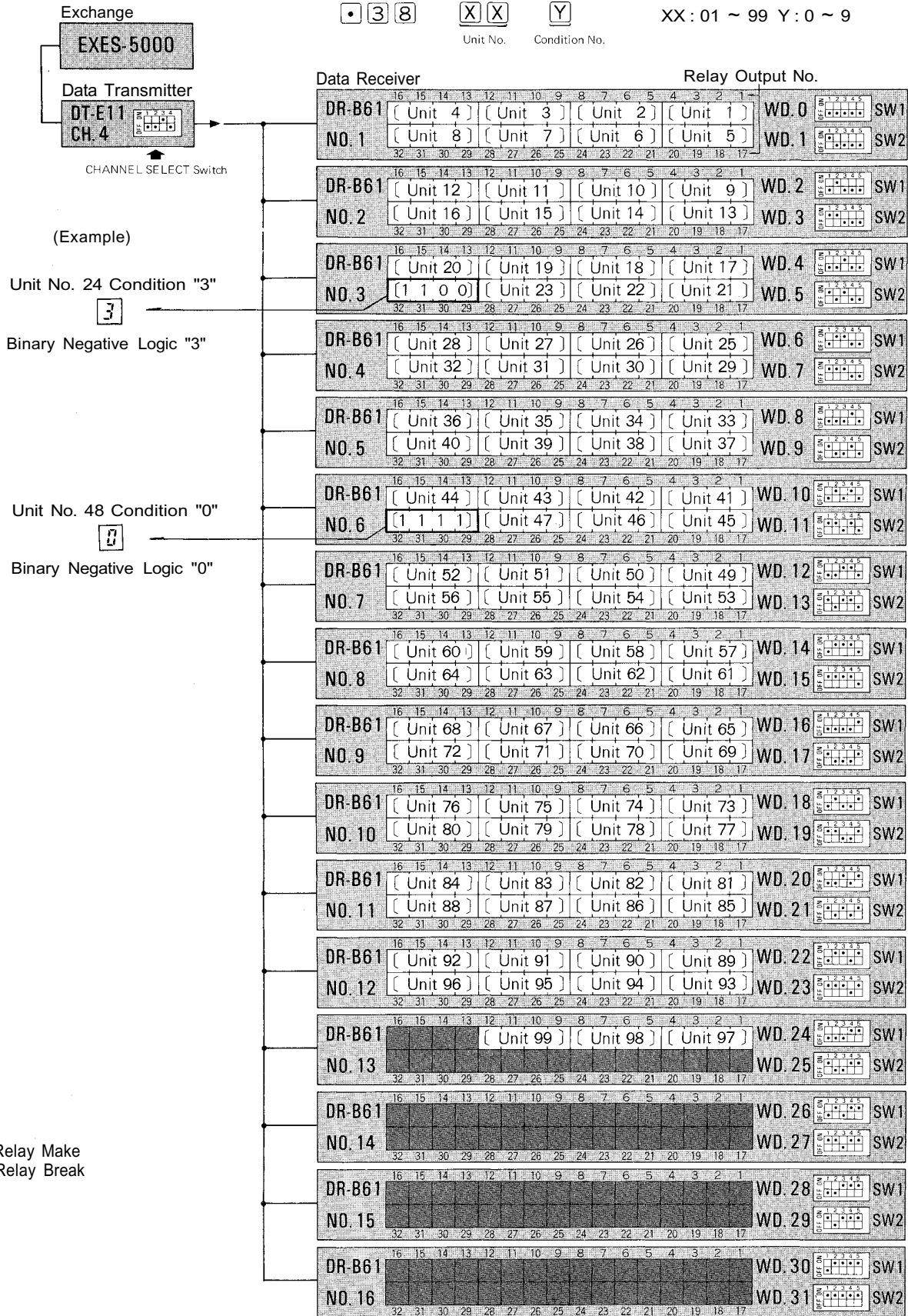
◻ 3 8

◻ X X

◻ Y

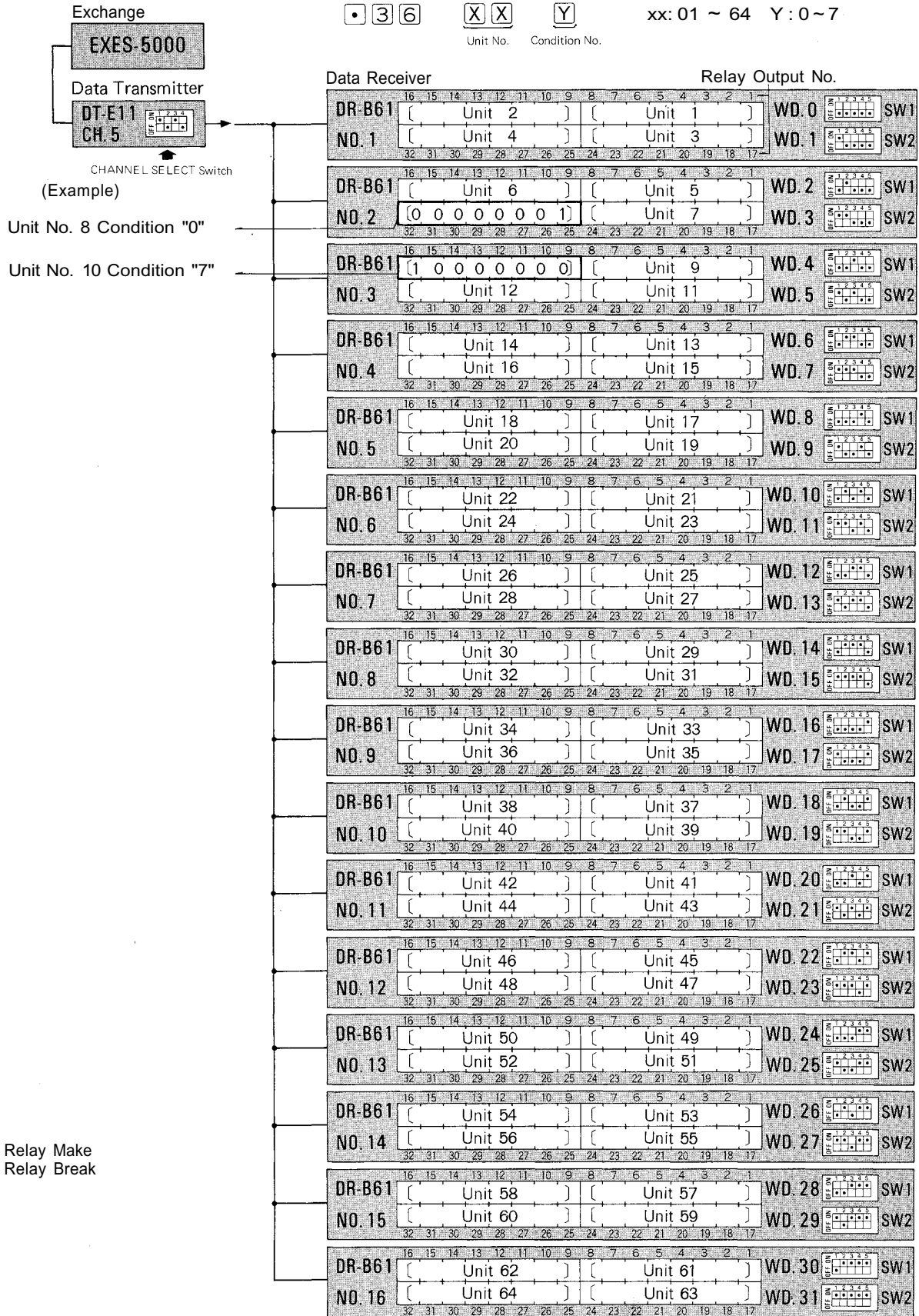
XX : 01 ~ 99 Y : 0 ~ 9

Unit No. Condition No.



12-6 Channel 5 (CH. 5) 8-Selectable Make Output (64 Units)

(Dial Operation)

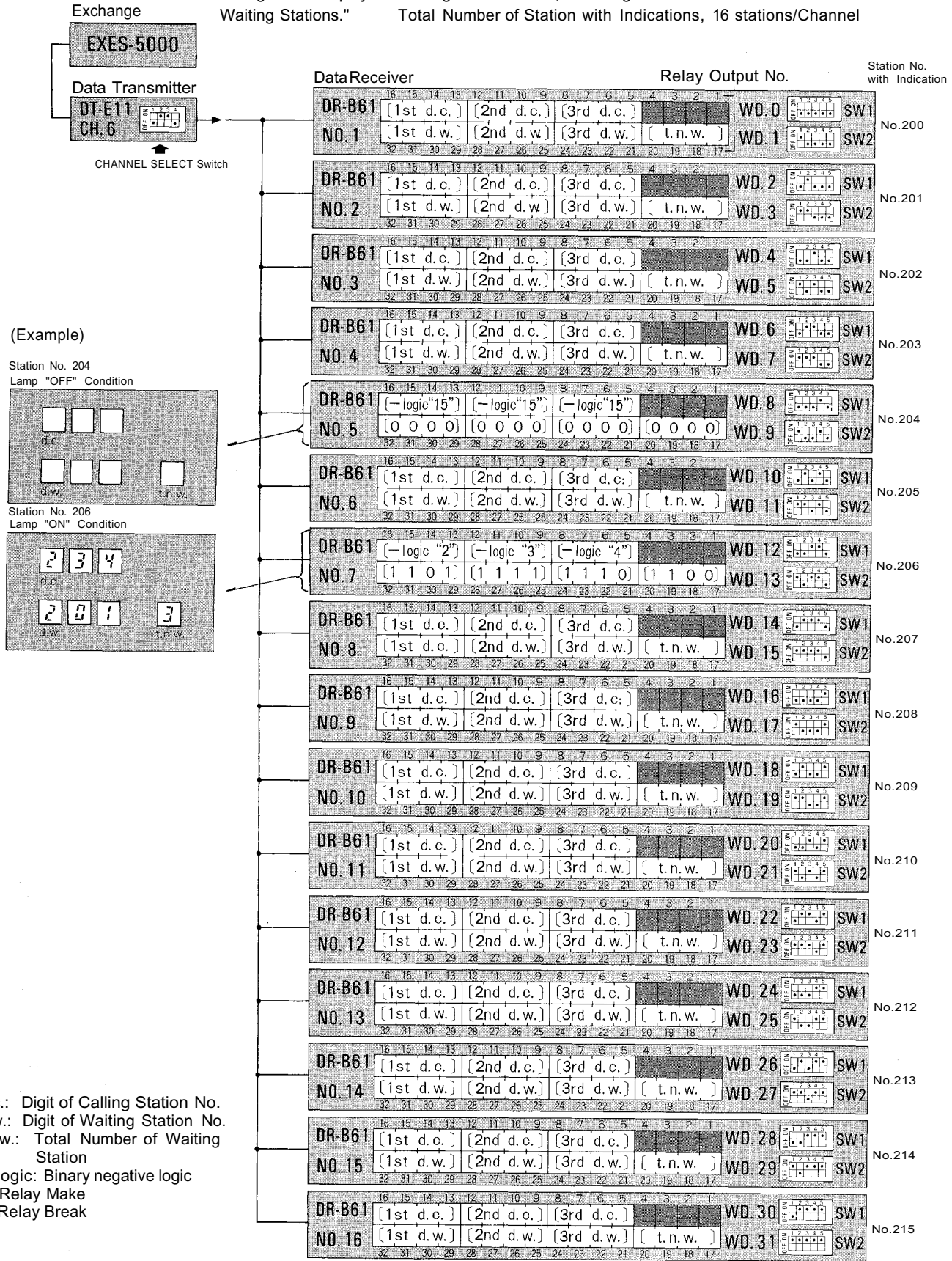


Note: \square (\square) shows the Head of a Slide Switch

WORD SELECT Switch

12-7 Channel 6 (CH. 6) Calling Party Indication Numerical Type (1)

7 Segments Display of "Calling Station No. ", "Waiting Station No." and "Total Number of Waiting Stations." Total Number of Station with Indications, 16 stations/Channel



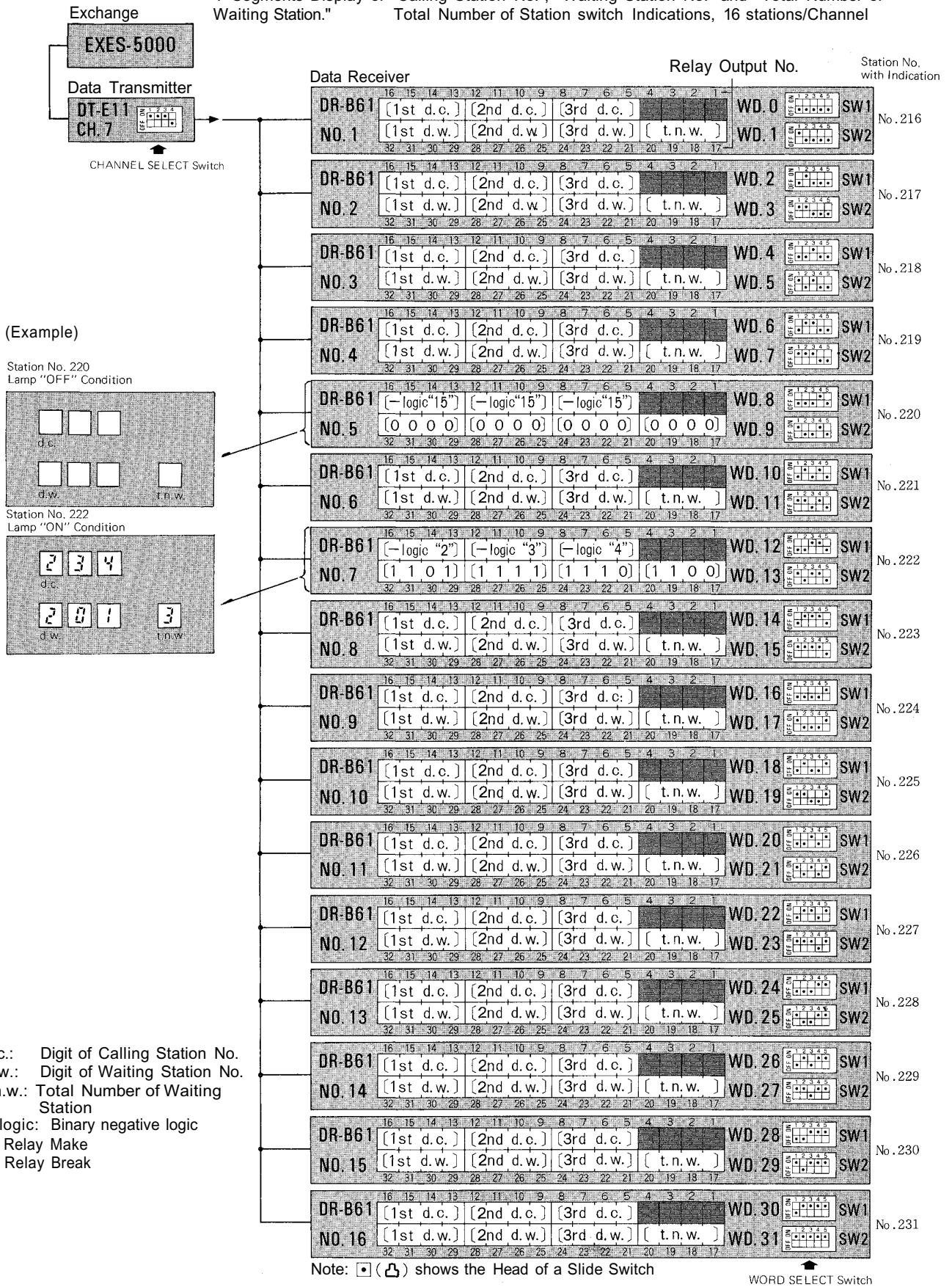
d.c.: Digit of Calling Station No.
d.w.: Digit of Waiting Station No.
t.n.w.: Total Number of Waiting Station
—logic: Binary negative logic
1: Relay Make
0: Relay Break

Note: () shows the Head of a Slide Switch

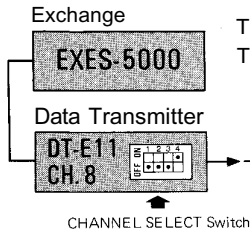
WORD SELECT Switch

12-8 Channel 7 (CH. 7) Calling Party Indication Numerical Type (2)

7 Segments Display of "Calling Station No.," "Waiting Station No." and "Total Number of Waiting Station."
Total Number of Station switch Indications, 16 stations/Channel



12-9 Channel 8 (CH. 8) Calling Party Indication Lamp Type (1)



Each "Calling Station" or "Waiting Station" is shown by Each Lamp of Indication.
 Total Number of Station with Indications : 4 Stations/Channel (8 Stations/2 Channels)
 Total Number of Calling Stations : Max. 128 Stations/Each Indication

| Data Receiver | | Relay Output No. | | | | | | | | | | Station No. with Indication | | | | | | | | |
|------------------|---|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|-----|--------|-----|---------|
| DR-B61 NO. 1 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 215 | 214 | 213 | 212 | 211 | 210 | 209 | 208 | 207 | 206 | 205 | 204 | 203 | 202 | 201 | 200 | WD. 0 | SW1 | No. 232 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 231 | 230 | 229 | 228 | 227 | 226 | 225 | 224 | 223 | 222 | 221 | 220 | 219 | 218 | 217 | 216 | WD. 1 | SW2 | |
| DR-B61 NO. 2 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 247 | 246 | 245 | 244 | 243 | 242 | 241 | 240 | 239 | 238 | 237 | 236 | 235 | 234 | 233 | 232 | WD. 2 | SW1 | No. 232 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 263 | 262 | 261 | 260 | 259 | 258 | 257 | 256 | 255 | 254 | 253 | 252 | 251 | 250 | 249 | 248 | WD. 3 | SW2 | |
| DR-B61 NO. 3 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 279 | 278 | 277 | 276 | 275 | 274 | 273 | 272 | 271 | 270 | 269 | 268 | 267 | 266 | 265 | 264 | WD. 4 | SW1 | No. 232 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 295 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 | 286 | 285 | 284 | 283 | 282 | 281 | 280 | WD. 5 | SW2 | |
| DR-B61 NO. 4 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 311 | 310 | 309 | 308 | 307 | 306 | 305 | 304 | 303 | 302 | 301 | 300 | 299 | 298 | 297 | 296 | WD. 6 | SW1 | No. 232 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 327 | 326 | 325 | 324 | 323 | 322 | 321 | 320 | 319 | 318 | 317 | 316 | 315 | 314 | 313 | 312 | WD. 7 | SW2 | |
| DR-B61 NO. 5 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 215 | 214 | 213 | 212 | 211 | 210 | 209 | 208 | 207 | 206 | 205 | 204 | 203 | 202 | 201 | 200 | WD. 8 | SW1 | No. 232 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 231 | 230 | 229 | 228 | 227 | 226 | 225 | 224 | 223 | 222 | 221 | 220 | 219 | 218 | 217 | 216 | WD. 9 | SW2 | |
| DR-B61 NO. 6 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 247 | 246 | 245 | 244 | 243 | 242 | 241 | 240 | 239 | 238 | 237 | 236 | 235 | 234 | 233 | 232 | WD. 10 | SW1 | No. 233 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 263 | 262 | 261 | 260 | 259 | 258 | 257 | 256 | 255 | 254 | 253 | 252 | 251 | 250 | 249 | 248 | WD. 11 | SW2 | |
| DR-B61 NO. 7 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 279 | 278 | 277 | 276 | 275 | 274 | 273 | 272 | 271 | 270 | 269 | 268 | 267 | 266 | 265 | 264 | WD. 12 | SW1 | No. 233 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 295 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 | 286 | 285 | 284 | 283 | 282 | 281 | 280 | WD. 13 | SW2 | |
| DR-B61 NO. 8 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 311 | 310 | 309 | 308 | 307 | 306 | 305 | 304 | 303 | 302 | 301 | 300 | 299 | 298 | 297 | 296 | WD. 14 | SW1 | No. 233 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 327 | 326 | 325 | 324 | 323 | 322 | 321 | 320 | 319 | 318 | 317 | 316 | 315 | 314 | 313 | 312 | WD. 15 | SW2 | |
| DR-B61 NO. 9 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 215 | 214 | 213 | 212 | 211 | 210 | 209 | 208 | 207 | 206 | 205 | 204 | 203 | 202 | 201 | 200 | WD. 16 | SW1 | No. 234 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 231 | 230 | 229 | 228 | 227 | 226 | 225 | 224 | 223 | 222 | 221 | 220 | 219 | 218 | 217 | 216 | WD. 17 | SW2 | |
| DR-B61 NO. 10 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 247 | 246 | 245 | 244 | 243 | 242 | 241 | 240 | 239 | 238 | 237 | 236 | 235 | 234 | 233 | 232 | WD. 18 | SW1 | No. 234 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 263 | 262 | 261 | 260 | 259 | 258 | 257 | 256 | 255 | 254 | 253 | 252 | 251 | 250 | 249 | 248 | WD. 19 | SW2 | |
| DR-B61 NO. 11 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 279 | 278 | 277 | 276 | 275 | 274 | 273 | 272 | 271 | 270 | 269 | 268 | 267 | 266 | 265 | 264 | WD. 20 | SW1 | No. 234 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 295 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 | 286 | 285 | 284 | 283 | 282 | 281 | 280 | WD. 21 | SW2 | |
| DR-B61 NO. 12 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 311 | 310 | 309 | 308 | 307 | 306 | 305 | 304 | 303 | 302 | 301 | 300 | 299 | 298 | 297 | 296 | WD. 22 | SW1 | No. 234 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 327 | 326 | 325 | 324 | 323 | 322 | 321 | 320 | 319 | 318 | 317 | 316 | 315 | 314 | 313 | 312 | WD. 23 | SW2 | |
| DR-B61 NO. 13 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 215 | 214 | 213 | 212 | 211 | 210 | 209 | 208 | 207 | 206 | 205 | 204 | 203 | 202 | 201 | 200 | WD. 24 | SW1 | No. 235 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 231 | 230 | 229 | 228 | 227 | 226 | 225 | 224 | 223 | 222 | 221 | 220 | 219 | 218 | 217 | 216 | WD. 25 | SW2 | |
| DR-B61 NO. 14 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 247 | 246 | 245 | 244 | 243 | 242 | 241 | 240 | 239 | 238 | 237 | 236 | 235 | 234 | 233 | 232 | WD. 26 | SW1 | No. 235 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 263 | 262 | 261 | 260 | 259 | 258 | 257 | 256 | 255 | 254 | 253 | 252 | 251 | 250 | 249 | 248 | WD. 27 | SW2 | |
| DR-B61 NO. 15 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 279 | 278 | 277 | 276 | 275 | 274 | 273 | 272 | 271 | 270 | 269 | 268 | 267 | 266 | 265 | 264 | WD. 28 | SW1 | No. 235 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 295 | 294 | 293 | 292 | 291 | 290 | 289 | 288 | 287 | 286 | 285 | 284 | 283 | 282 | 281 | 280 | WD. 29 | SW2 | |
| DR-B61 NO. 16 | 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 | 311 | 310 | 309 | 308 | 307 | 306 | 305 | 304 | 303 | 302 | 301 | 300 | 299 | 298 | 297 | 296 | WD. 30 | SW1 | No. 235 |
| | 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 | 327 | 326 | 325 | 324 | 323 | 322 | 321 | 320 | 319 | 318 | 317 | 316 | 315 | 314 | 313 | 312 | WD. 31 | SW2 | |

Each Relay Output shows "Calling Station No."

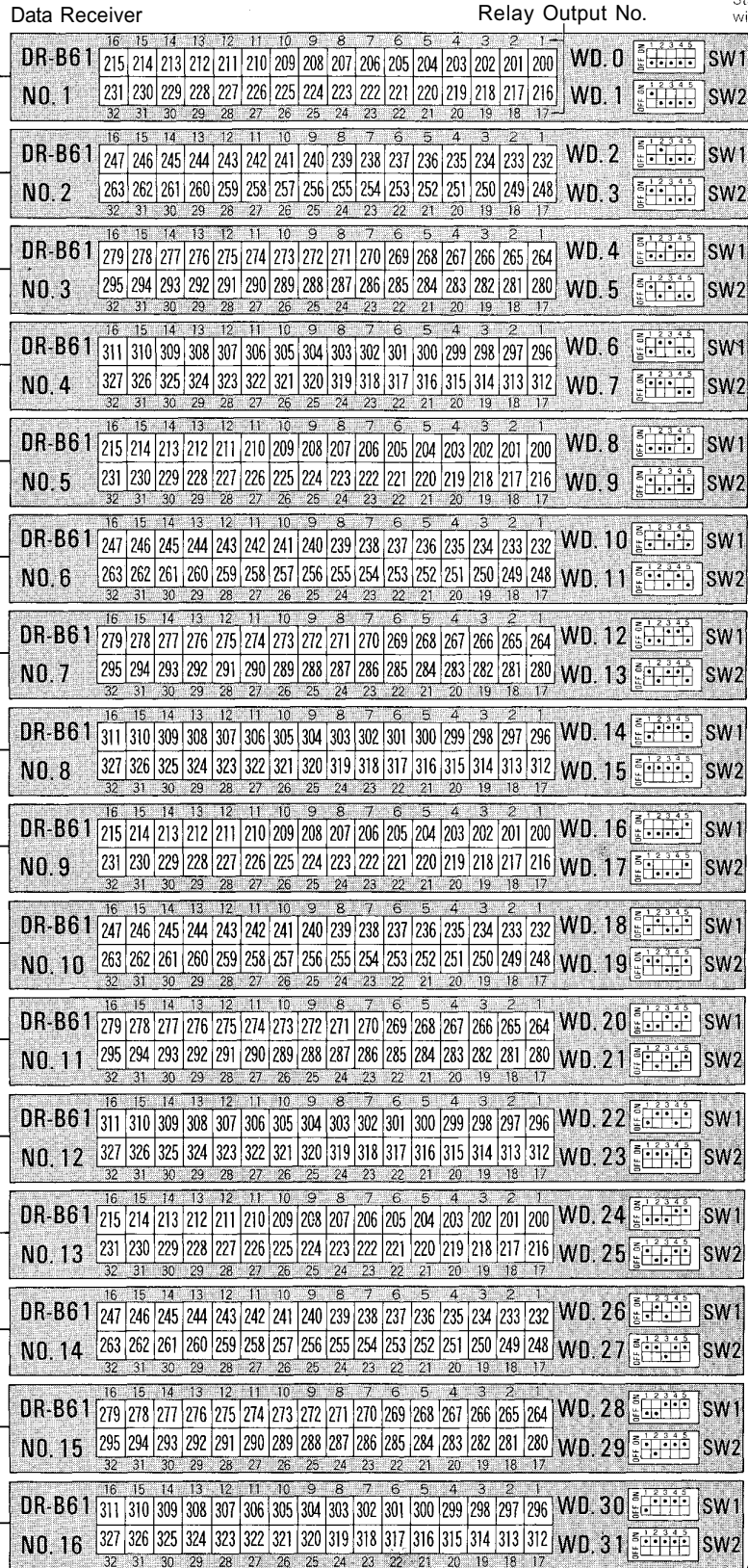
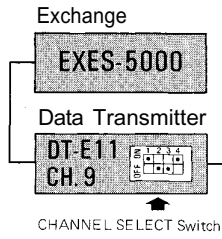
Note: () shows the Head of a Slide Switch

WORD SELECT Switch

12-10 Channel 9 (CH. 9) Calling Party Indication Lamp Type (2)

Each "Calling Station" or "Waiting Station" is shown by Each Lamp of Indication.

Total Number of Station with Indications : 4 Stations/Channel (8 Stations/2 Channels)
 Total Number of Calling Stations : Max. 128 Stations/Each Indication



Station No. with Indication

No. 236

No. 237

No. 238

No. 239

Each Relay Output shows "Calling Station No."

Note: □ (▢) shows the Head of a Slide Switch

WORD SELECT Switch



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