



INSTALLATION MANUAL

DIRECT SELECT INTERFACE

DI-100

DI-110

Please follow the instructions in this manual to obtain the optimum results from these units.
We also recommend that you keep this manual handy for future reference.

TOA Electronics, Inc.

WARNING : (For USA only)

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 Subject J of Part 15 of FCC Rules, which are designed to provide reasonable protection from 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.

CONTENTS

1.	INSTALLATION PRECAUTIONS	2
2.	GENERAL DESCRIPTION	3
3.	SYSTEM CONFIGURATION	3
4.	PRINCIPLE OF OPERATION AND BLOCK DIAGRAM	4
4.1	Principle of Operation	
4.2	Block Diagram	
5.	SYSTEM DESIGNING PROCEDURE	4
6.	INSTALLATION	
6.1	DI-100's Address Setting.....	5
6.2	DI-110's Address Setting and Card Connection.....	5 ~ 6
6.3	Wiring the LED's.....	7
6.4	Control Panel Switch Wiring.....	7 ~ 8
6.5	Wiring of Relay Outputs.....	8
6.6	Wiring to the AS-110.....	8
6.7	Wiring to the AS-100A.....	9
6.8	Wiring to the LU Cards.....	9
6.9	Power Supply Connection.....	9
7.	PERFORMANCE TESTING	
7.1	Test Program Initiation.....	9
7.2	Testing Contents.....	10
8.	PROGRAMMING	
8.1	Equipment Connection.....	10
8.2	Programming with the IBM Personal Computer.....	11
8.3	AS-100A/AS-110 Programming.....	11
9.	OPERATION	
9.1	Calling.....	12
9.2	Being Called (When in Continuous Call Tone Mode).....	12
9.3	To Terminate the Conversation.....	12
9.4	Other Functions.....	12
10.	PROGRAMMING SHEET	13 ~ 18
11.	SPECIFICATIONS	19

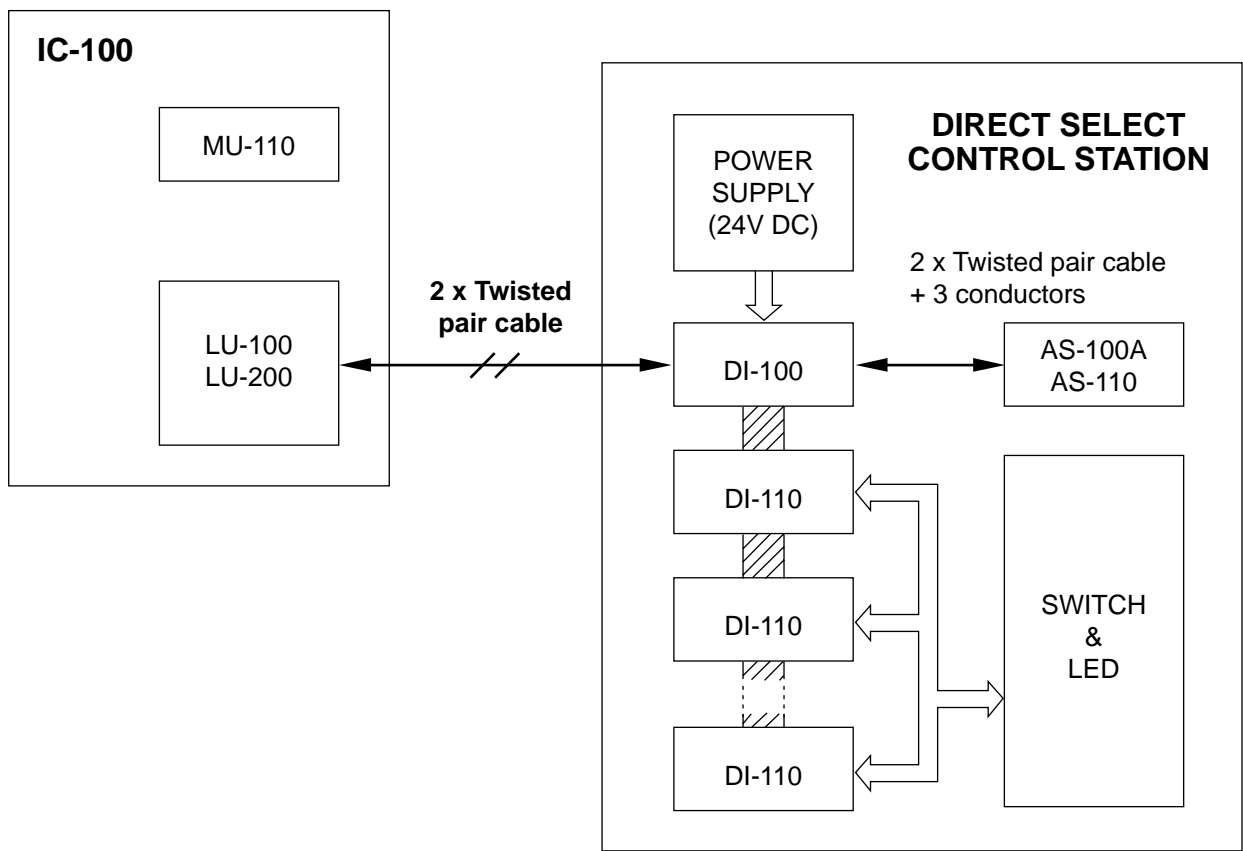
1. INSTALLATION PRECAUTIONS

- Use a regulated power supply (24V DC, +/- 4 volts) to ensure correct operation without overload.
- Wire only the rated switches to the switch terminals, or damage could result.
- Wire only LED's to the LED terminals, or damage could result.
- Do not exceed voltage rating to the relays, or severe damage could result.

2. GENERAL DESCRIPTION

The DI-100 and DI-110 interface boards are designed to be used in conjunction with the IC-100 Institutional Communication System and AS-100A/AS-110 Control Stations. This will allow a control station operator to make or receive calls from other stations with the push of (1) switch on custom or off-the-shelf control panels. Calls to or from corresponding sub-stations can be announced by flashing LED's on the control panel or numerically in the associated AS-100A or AS-110.

3. SYSTEM CONFIGURATION



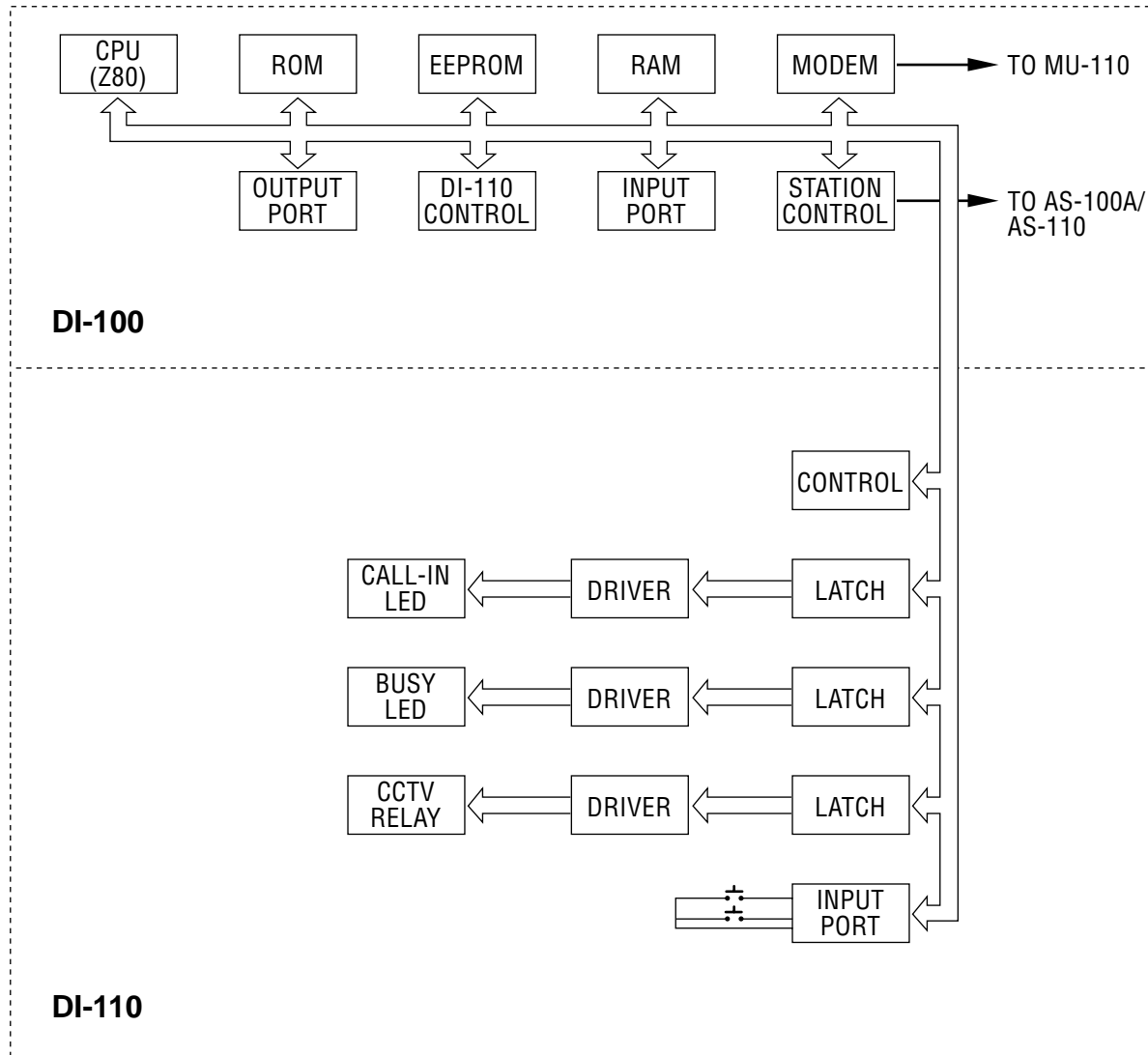
(Fig. 1)

4. PRINCIPLE OF OPERATION AND BLOCK DIAGRAM

4.1 Principle of Operation

The DI-100 outputs dial pulse to the AS-100A/AS-110 according to control data transmitting from the MU-110. The DI-100 also transmits a flashing or steady LED signal, relay control signal, etc. to the DI-110, and can periodically scan the control panel switches.

4.2 Block Diagram



(Fig. 2)

5. SYSTEM DESIGNING PROCEDURE

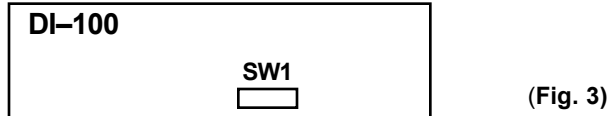
- (1) Determine number of ports needed in the system. (LED indications, relay outputs, etc.)
- (2) Determine number of the DI-110 cards needed.
- (3) Calculate power requirements and select a power supply.
- (4) Select LED's and switches to be used.
- (5) Fill out the programming sheet. (See pages 13~18.)

6. INSTALLATION

WARNING : TURN OFF ALL POWER TO THE SYSTEM BEFORE UNPLUGGING OR PLUGGING IN CONNECTORS TO THE CARDS. THESE CARDS CONTAIN CMOS IC'S AND MAY BE DAMAGED BY STATIC DISCHARGE. IT IS ADVISABLE TO WEAR AN EARTH GROUNDED WRIST STRAP WHEN HANDLING THE CARDS.

6.1 DI-100's Address Setting

Set SW1 corresponding to the LU card number connected to the DI-100, referring to Fig. 3 and Table 1.



LU Card No.	SW 1	LU Card No.	SW 1
1	OFF	5	OFF
2	OFF	6	OFF
3	OFF	7	OFF
4	OFF	8	OFF

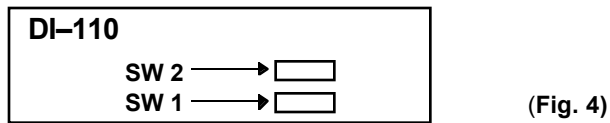
(SW1 is factory-preset to the LU card's No. 1.)

(Table 1)

6.2 DI-110's Address Setting and Card Connection

(1) DI-110's Address Setting

Set SW1 and SW2 corresponding to the DI-110 card number, referring to Fig. 4 and Table 2.



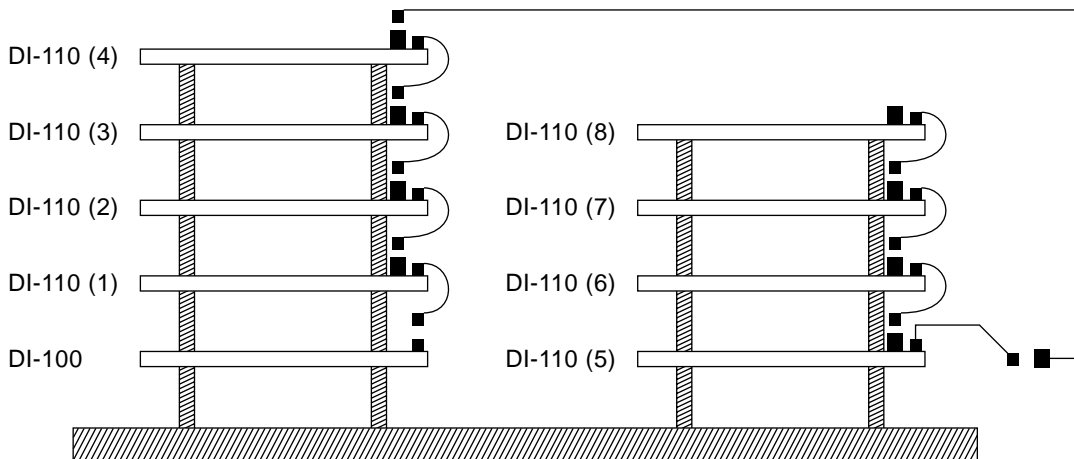
DI-110 No.	SW 1	SW 2	DI-110 No.	SW 1	SW 2	DI-110 No.	SW 1	SW 2
1			13			25		
2			14			26		
3			15			27		
4			16			28		
5			17			29		
6			18			30		
7			19			31		
8			20			32		
9			21			33		
10			22			34		
11			23			35		
12			24			36		

(SW1 and SW2 are factory-preset to the DI-110 No. 1.)

(Table 2)

(2) DI-100/DI-110 Card Rack Installation

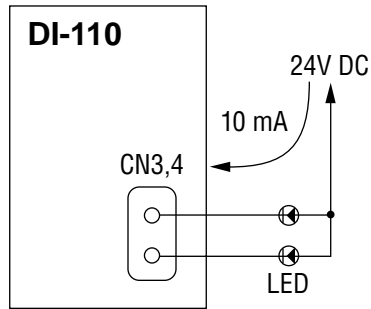
Install the DI-100/DI-110's inside the control panel shown in Fig. 5 with stand-offs or use the CK-100 and install at the equipment rack. Connect the cards with the ribbon cables as shown below.



(Fig. 5)

6.3 Wiring the LED's

Wire the CALL-IN and BUSY LED's as shown in Fig. 6 and Tables 3 and 4



(Fig. 6)

CALL-IN LED No.	CONNECTOR PIN No.	CALL-IN LED No.	CONNECTOR PIN No.	CALL-IN LED No.	CONNECTOR PIN No.
1	CN3-1	11	CN3-11	21	CN3-21
2	CN3-2	12	CN3-12	22	CN3-22
3	CN3-3	13	CN3-13	23	CN3-23
4	CN3-4	14	CN3-14	24	CN3-24
5	CN3-5	15	CN3-15	25	CN3-25
6	CN3-6	16	CN3-16	26	CN3-26
7	CN3-7	17	CN3-17	27	CN3-27
8	CN3-8	18	CN3-18	28	CN3-28
9	CN3-9	19	CN3-19	29	CN3-29
10	CN3-10	20	CN3-20	30	CN3-30

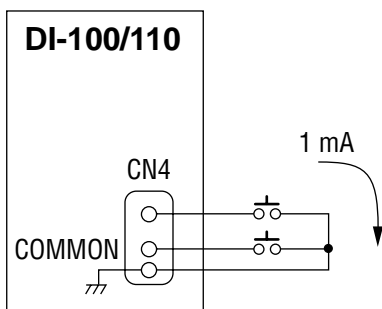
(Table 3)

Busy LED No.	CONNECTOR PIN No.	Busy LED No.	CONNECTOR PIN No.	Busy LED No.	CONNECTOR PIN No.
1	CN3-33	11	CN3-43	21	CN4-3
2	CN3-34	12	CN3-44	22	CN4-4
3	CN3-35	13	CN3-45	23	CN4-5
4	CN3-36	14	CN3-46	24	CN4-6
5	CN3-37	15	CN3-47	25	CN4-7
6	CN3-38	16	CN3-48	26	CN4-8
7	CN3-39	17	CN3-49	27	CN4-9
8	CN3-40	18	CN3-50	28	CN4-10
9	CN3-41	19	CN4-1	29	CN4-11
10	CN3-42	20	CN4-2	30	CN4-12

(Table 4)

6.4 Control Panel Switch Wiring

Wire switches (PTT, indication reset to the DI-100 and direct call, response, etc. to the DI-110) as shown in Fig 7 and Tables 5 and 6. Use an alternate (locked) type switch for the INHIBIT switch.



(Fig. 7)

SW NAME	CONNECTOR PIN No.
PTT	CN4-4
Indication Reset	CN4-5
Common	CN4-6

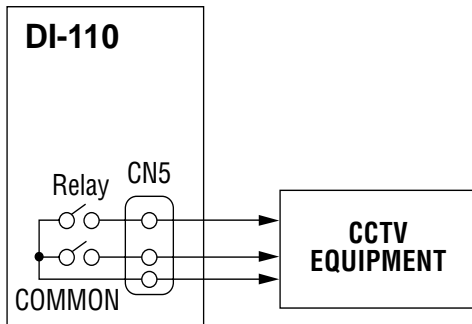
(Table 5)

SELECT SW No.	CONNECTOR PIN No.	SELECT SW No.	CONNECTOR PIN No.	SELECT SW No.	CONNECTOR PIN No.
1	CN4-15	11	CN4-25	21	CN4-35
2	CN4-16	12	CN4-26	22	CN4-36
3	CN4-17	13	CN4-27	23	CN4-37
4	CN4-18	14	CN4-28	24	CN4-38
5	CN4-19	15	CN4-29	25	CN4-39
6	CN4-20	16	CN4-30	26	CN4-40
7	CN4-21	17	CN4-31	27	CN4-41
8	CN4-22	18	CN4-32	28	CN4-42
9	CN4-23	19	CN4-33	29	CN4-43
10	CN4-24	20	CN4-34	30	CN4-44
INHIBIT	CN4-45				
INDICATION TEST	CN4-46				
COMMON	CN4-47~50				

(Table 6)

6.5 Wiring of Relay Outputs

Wire relay outputs to the DI-110 as shown in Fig. 8 and Table 7.



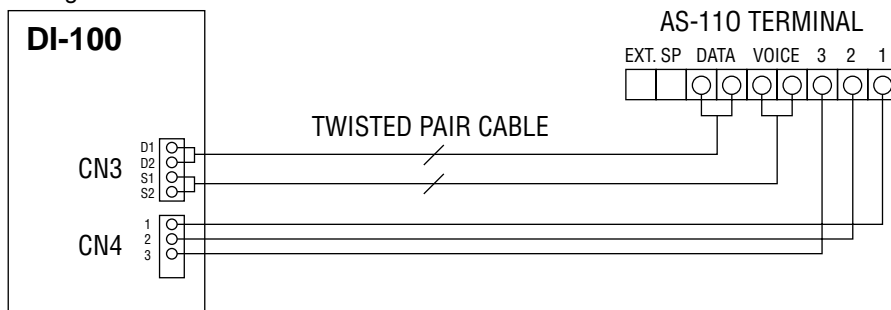
(Fig. 8)

CONTROL OUTPUT No.	CONNECTOR PIN No.	CONTROL OUTPUT No.	CONNECTOR PIN No.	CONTROL OUTPUT No.	CONNECTOR PIN No.
1	CN5-1	11	CN5-11	21	CN5-21
2	CN5-2	12	CN5-12	22	CN5-22
3	CN5-3	13	CN5-13	23	CN5-23
4	CN5-4	14	CN5-14	24	CN5-24
5	CN5-5	15	CN5-15	25	CN5-25
6	CN5-6	16	CN5-16	26	CN5-26
7	CN5-7	17	CN5-17	27	CN5-27
8	CN5-8	18	CN5-18	28	CN5-28
9	CN5-9	19	CN5-19	29	CN5-29
10	CN5-10	20	CN5-20	30	CN5-30
COMMON	CN5-31~50				

Table 7)

6.6 Wiring to the AS-110

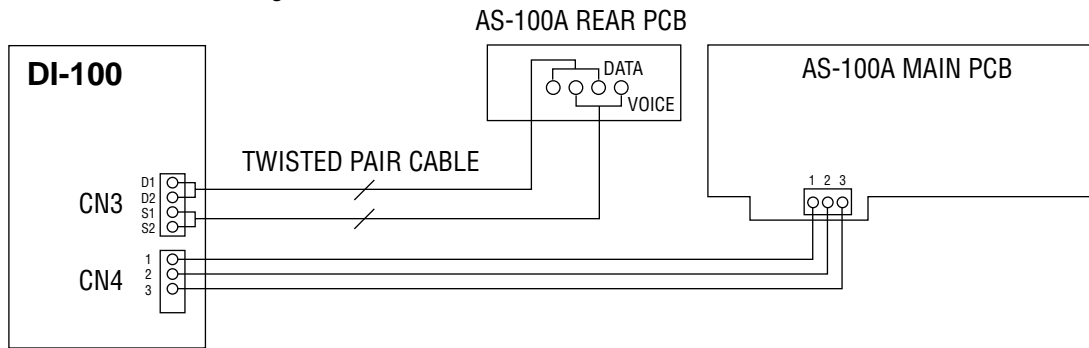
Wire as shown in Fig. 9



(Fig. 9)

6.7 Wiring TO THE AS-100A

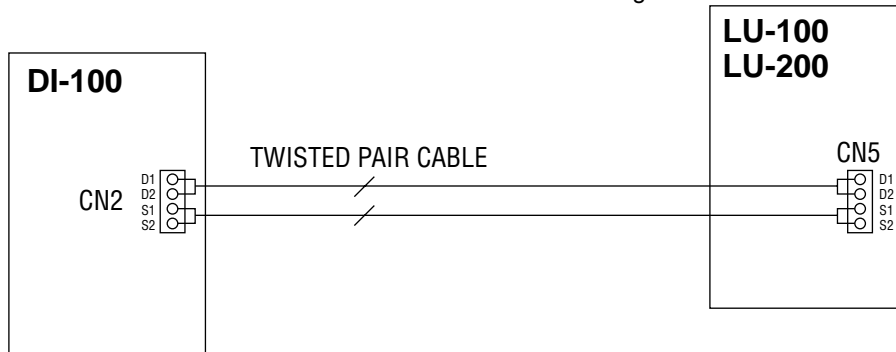
Wire as shown in Fig. 10



(Fig. 10)

6.8 Wiring to the LU Cards

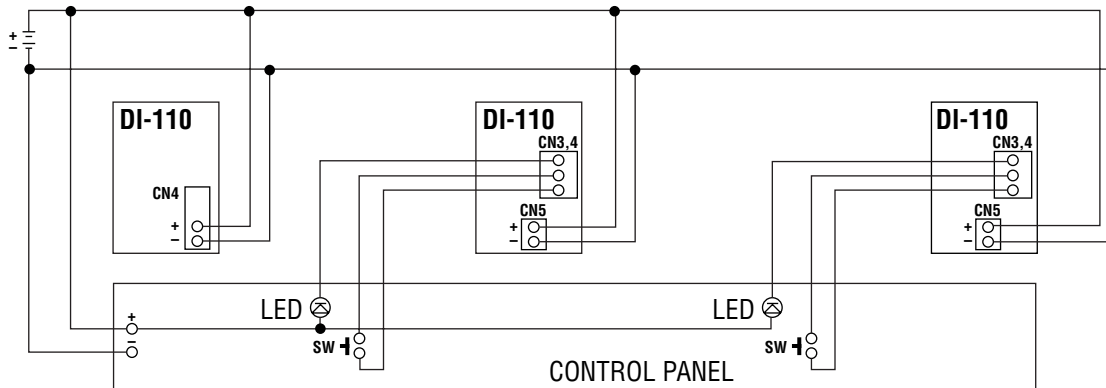
Wire between the DI-100 and the LU card as shown in Fig. 11



(Fig. 11)

6.9 Power Supply Connection

24V ± 4V



(Fig. 12)

7. PERFORMANCE TESTING

The DI-100 provides a diagnostic program for testing all LED's, switches, relays, etc. to assure correct connection.

7.1 Test Program Initiation

(1) General Switch, LED, and Relay Wiring Confirmation Test Program

Wire the DI-100's CN-5 (No. 2 pin) to ground, and turn the power on.

(2) CALL-IN and BUSY LED Wiring Confirmation Test Program

Wire the DI-100's CN-5 (No. 2 pin) to ground, and turn the power on while holding down the PTT switch.

(3) Relay Wiring Confirmation Test Program

Wire the DI-100's CN-5 (No. 2 pin) to ground, and turn the power on while holding down the INDICATION RESET switch.

(4) Registered Data Confirmation Test Program

Connect the MU-110, and wire the DI-100's CN-5 (No. 2 pin) to ground, then turn the power on while holding down both the PTT and INDICATION RESET switches.

7.2 Testing Contents

(1) General Switch, LED, and Relay Wiring Test

Press the switch to light the corresponding CALL-IN and BUSY LED's, closing their relay contacts.

(2) CALL-IN and BUSY LED Wiring Test

All CALL-IN and BUSY LED's are tested in sequence from 1 to 30. Holding down the PTT switch advances testing from one LED to the next at one-second intervals. Releasing the PTT switch stops progress at the current LED.

(3) Relay Control Output Wiring Test

Relays 1–30 are tested for each of the DI–110 cards wired to the DI–100. Holding down the INDICATION RESET switch advances testing from relay to relay at one-second intervals. Releasing the INDICATION RESET switch stops progress at the current relay until the INDICATION RESET switch is pressed again.

(4) Registered Data Test

The corresponding registered data for each depressed switch is displayed on the AS–110 LCD display.

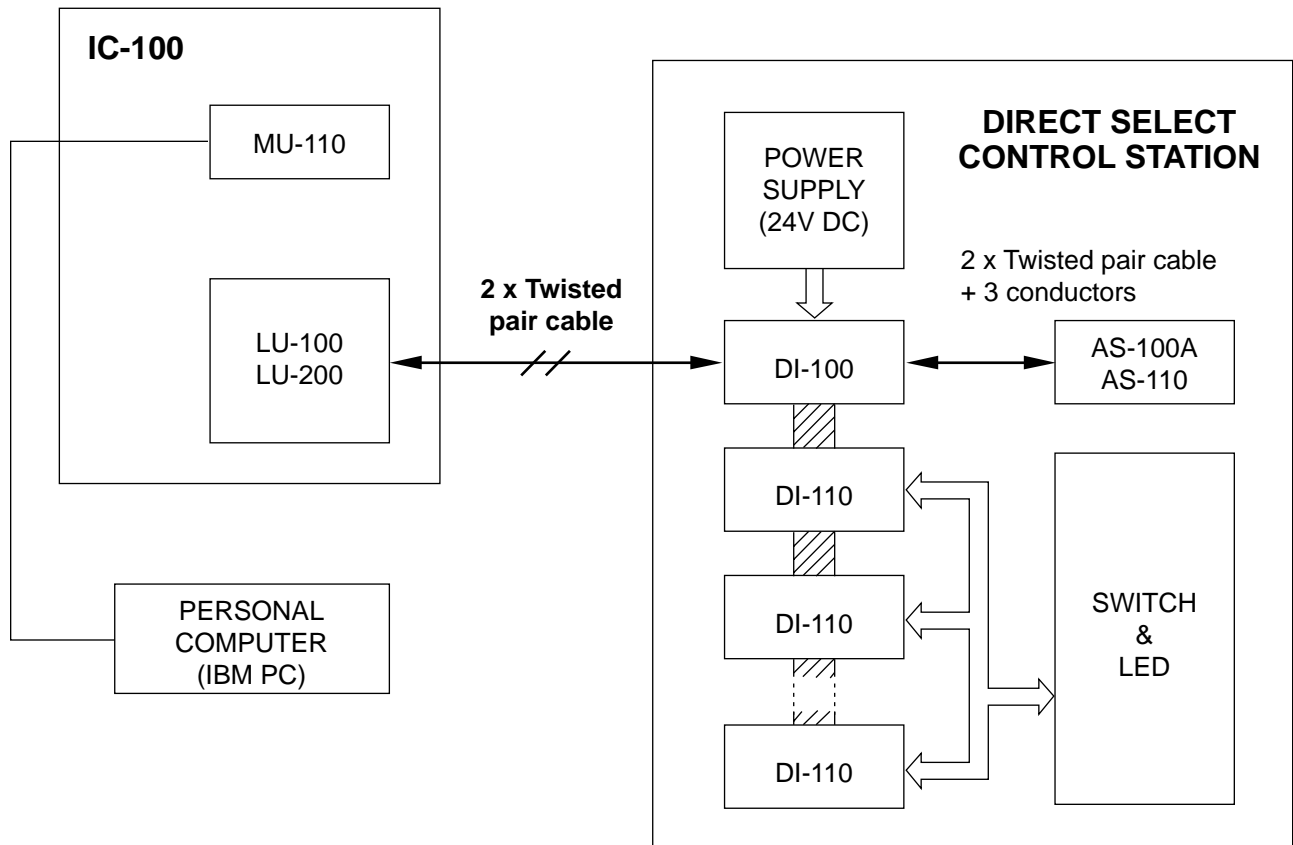
Select Switch : * 1 : (X X) X X (XX) XX : Register No.

8. PROGRAMMING

8.1 Equipment Connection

Direct select switches are programmed to a designated number. (Refer to pages 13–18 Programming Sheet.)

Programming can be performed with either the AS–100A/AS–110 control station or a personal computer.



(Fig. 13)

8.2 Programming with the IBM Person Computer

Perform programming according to 'IC-100 Control Software V2.00' manual.

8.3 AS-100A/AS-110 Programming

• System Programming

- 1) Station digit number registration
- 2) Relay output mode setting
- 3) Registration of number of DI-100 cards to be connected to the DI-100
- 4) Switch/station number assignment

• Registration

- 1) Station digit number registration

* 1 1 X : [X : 2,3,4 (initial setting = 3)
2 : 2-digit, 3 : 3-digit, 4 : 4-digit

- 2) Relay output mode setting

* 7 1 X [X : 1,2 (initial setting = 1)
1 : Dry contact at conversation start
2 : Dry contact at CALL-IN reception

- 3) Registration of number of DI 11- cards to be connected to the DI-100
Whenever programming each DI-100, register number of DI-110 cards to be connected to the DI-100

* 7 2 d d dd : Number of DI-110's (01 ~ 36, initial setting = 01)
01 ~ 03 (01 ~ 90) 2-digit
04 ~ 33 (001 ~ 990) 3-digit
34 ~ 36 (0001 ~ 1080) 4-digit

- 4) Switch/station number assignment (individual registration)

* 7 3 D (X X) X X (Y Y) Y Y
D : di-100 NO. (1 ~ 8)
(XX)XX : FIRST SWITCH NO. [(00)01 ~ 1080)
(YY)YY : FIRST STATION NO. [(00)00 ~ (99)99]
(SS)SS : LAST SWITCH NO. [(00)01 ~ 1080)

• Cancellation

<input type="checkbox"/> *	<input type="checkbox"/> 7	<input type="checkbox"/> 0	<input type="checkbox"/> c	PTT	(Cancellation of function code 70)
<input type="checkbox"/> *	<input type="checkbox"/> 7	<input type="checkbox"/> 1	<input type="checkbox"/> c	PTT	(Cancellation of function code 71)
<input type="checkbox"/> *	<input type="checkbox"/> 7	<input type="checkbox"/> 2	<input type="checkbox"/> c	PTT	(Cancellation of function code 72)
<input type="checkbox"/> *	<input type="checkbox"/> 7	<input type="checkbox"/> 3	<input type="checkbox"/> c	PTT	(Cancellation of function code 73)

9. OPERATION

9.1 Calling

- (1) Dial the desired station number with dial keys, or
- (2) Press the corresponding SELECT switch on the control panel (instantaneous call).

9.2 Being Called (When in Continuous Call Tone Mode)

- (1) The corresponding CALL-IN LED flashes simultaneously with a call tone. Flashing speed differs depending on the priority level assigned to each station.
- (2) To answer
 - (1) Lift the handset
 - (2) Press the **PUSH TO TALK** key, or
 - (3) Press the SELECT switch corresponding to a flashing LED. (When there are two or more simultaneous incoming calls, as indicated on the panel, by simply pressing this switch, the desired station can be instantaneously selected for answer.) The calling party's CALL-IN LED and BUSY LED will both light.

9.3 To Terminate the Conversation

- (1) Replace the handset,
- (2) Press the **C/#** key, or
- (3) Press the conversation partner's SELECT switch as indicated by its corresponding CALL-IN LED.

9.4 Other Functions

(1) BUSY LED

This LED lights to indicate that its station is busy. When speech links wishing to use are occupied, however, a busy tone is heard from the called station even if its BUSY LED does not light.

(2) INHIBIT switch

Setting this switch to ON disables all SELECT switches. Operations by the control station's dial keys or **PUSH TO TALK** key are still possible.

(3) Indication test switch

As long as this switch is pressed, all LED's on the control panel light connected to the DI-110. No test can be performed during conversation or while receiving CALL-IN.

10. PROGRAMMING SHEET

DI-110 (1)		DI-110 (2)		DI-110 (3)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
1		31		61	
2		32		62	
3		33		63	
4		34		64	
5		35		65	
6		36		66	
7		37		67	
8		38		68	
9		39		69	
10		40		70	
11		41		71	
12		42		72	
13		43		73	
14		44		74	
15		45		75	
16		46		76	
17		47		77	
18		48		78	
19		49		79	
20		50		80	
21		51		81	
22		52		82	
23		53		83	
24		54		84	
25		55		85	
26		56		86	
27		57		87	
28		58		88	
29		59		89	
30		60		90	

DI-110 (4)		DI-110 (5)		DI-110 (6)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
91		121		151	
92		122		152	
93		123		153	
94		124		154	
95		125		155	
96		126		156	
97		127		157	
98		128		158	
99		129		159	
100		130		160	
101		131		161	
102		132		162	
103		133		163	
104		134		164	
105		135		165	
106		136		166	
107		137		167	
108		138		168	
109		139		169	
110		140		170	
111		141		171	
112		142		172	
113		143		173	
114		144		174	
115		145		175	
116		146		176	
117		147		177	
118		148		178	
119		149		179	
120		150		180	

DI-110 (7)		DI-110 (8)		DI-110 (9)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
181		211		241	
182		212		242	
183		213		243	
184		214		244	
185		215		245	
186		216		246	
187		217		247	
188		218		248	
189		219		249	
190		220		250	
191		221		251	
192		222		252	
193		223		253	
194		224		254	
195		225		255	
196		226		256	
197		227		257	
198		228		258	
199		229		259	
200		230		260	
201		231		261	
202		232		262	
203		233		263	
204		234		264	
205		235		265	
206		236		266	
207		237		267	
208		238		268	
209		239		269	
210		240		270	

DI-110 (10)		DI-110 (11)		DI-110 (12)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
271		301		331	
272		302		332	
273		303		333	
274		304		334	
275		305		335	
276		306		336	
277		307		337	
278		308		338	
279		309		339	
280		310		340	
281		311		341	
282		312		342	
283		313		343	
284		314		344	
285		315		345	
286		316		346	
287		317		347	
288		318		348	
289		319		349	
290		320		350	
291		321		351	
292		322		352	
293		323		353	
294		324		354	
295		325		355	
296		326		356	
297		327		357	
298		328		358	
299		329		359	
300		330		360	

DI-110 (13)		DI-110 (14)		DI-110 (15)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
361		391		421	
362		392		422	
363		393		423	
364		394		424	
365		395		425	
366		396		426	
367		397		427	
368		398		428	
369		399		429	
370		400		430	
371		401		431	
372		402		432	
373		403		433	
374		404		434	
375		405		435	
376		406		436	
377		407		437	
378		408		438	
379		409		439	
380		410		440	
381		411		441	
382		412		442	
383		413		443	
384		414		444	
385		415		445	
386		416		446	
387		417		447	
388		418		448	
389		419		449	
390		420		450	

DI-110 (16)		DI-110 (17)		DI-110 (18)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
451		481		511	
452		482		512	
453		483		513	
454		484		514	
455		485		515	
456		486		516	
457		487		517	
458		488		518	
459		489		519	
460		490		520	
461		491		521	
462		492		522	
463		493		523	
464		494		524	
465		495		525	
466		496		526	
467		497		527	
468		498		528	
469		499		529	
470		500		530	
471		501		531	
472		502		532	
473		503		533	
474		504		534	
475		505		535	
476		506		536	
477		507		537	
478		508		538	
479		509		539	
480		510		540	

DI-110 (19)		DI-110 (20)		DI-110 (21)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
541		571		601	
542		572		602	
543		573		603	
544		574		604	
545		575		605	
546		576		606	
547		577		607	
548		578		608	
549		579		609	
550		580		610	
551		581		611	
552		582		612	
553		583		613	
554		584		614	
555		585		615	
556		586		616	
557		587		617	
558		588		618	
559		589		619	
560		590		620	
561		591		621	
562		592		622	
563		593		623	
564		594		624	
565		595		625	
566		596		626	
567		597		627	
568		598		628	
569		599		629	
570		600		630	

DI-110 (22)		DI-110 (23)		DI-110 (24)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
631		661		691	
632		662		692	
633		663		693	
634		664		694	
635		665		695	
636		666		696	
637		667		697	
638		668		698	
639		669		699	
640		670		700	
641		671		701	
642		672		702	
643		673		703	
644		674		704	
645		675		705	
646		676		706	
647		677		707	
648		678		708	
649		679		709	
650		680		710	
651		681		711	
652		682		712	
653		683		713	
654		684		714	
655		685		715	
656		686		716	
657		687		717	
658		688		718	
659		689		719	
660		690		720	

DI-110 (25)		DI-110 (26)		DI-110 (27)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
721		751		781	
722		752		782	
723		753		783	
724		754		784	
725		755		785	
726		756		786	
727		757		787	
728		758		788	
729		759		789	
730		760		790	
731		761		791	
732		762		792	
733		763		793	
734		764		794	
735		765		795	
736		766		796	
737		767		797	
738		768		798	
739		769		799	
740		770		800	
741		771		801	
742		772		802	
743		773		803	
744		774		804	
745		775		805	
746		776		806	
747		777		807	
748		778		808	
749		779		809	
750		780		810	

DI-110 (28)		DI-110 (29)		DI-110 (30)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
811		841		871	
812		842		872	
813		843		873	
814		844		874	
815		845		875	
816		846		876	
817		847		877	
818		848		878	
819		849		879	
820		850		880	
821		851		881	
822		852		882	
823		853		883	
824		854		884	
825		855		885	
826		856		886	
827		857		887	
828		858		888	
829		859		889	
830		860		890	
831		861		891	
832		862		892	
833		863		893	
834		864		894	
835		865		895	
836		866		896	
837		867		897	
838		868		898	
839		869		899	
840		870		900	

DI-110 (31)		DI-110 (32)		DI-110 (33)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
901		931		961	
902		932		962	
903		933		963	
904		934		964	
905		935		965	
906		936		966	
907		937		967	
908		938		968	
909		939		969	
910		940		970	
911		941		971	
912		942		972	
913		943		973	
914		944		974	
915		945		975	
916		946		976	
917		947		977	
918		948		978	
919		949		979	
920		950		980	
921		951		981	
922		952		982	
923		953		983	
924		954		984	
925		955		985	
926		956		986	
927		957		987	
928		958		988	
929		959		989	
930		960		990	

DI-110 (34)		DI-110 (35)		DI-110 (36)	
SW No.	SUBSTATION No.	SW No.	SUBSTATION No.	SW No.	SUBSTATION No.
991		1021		1051	
992		1022		1052	
993		1023		1053	
994		1024		1054	
995		1025		1055	
996		1026		1056	
997		1027		1057	
998		1028		1058	
999		1029		1059	
1000		1030		1060	
1001		1031		1061	
1002		1032		1062	
1003		1033		1063	
1004		1034		1064	
1005		1035		1065	
1006		1036		1066	
1007		1037		1067	
1008		1038		1068	
1009		1039		1069	
1010		1040		1070	
1011		1041		1071	
1012		1042		1072	
1013		1043		1073	
1014		1044		1074	
1015		1045		1075	
1016		1046		1076	
1017		1047		1077	
1018		1048		1078	
1019		1049		1079	
1020		1050		1080	

11. SPECIFICATIONS

Master stations	Used with DI-100/DI-110 : AS-100A/AS-110
Maximum number of interface cards	DI-100 : 8 per CK-100 exchange; 72 per system (9 tie-lined exchanges) DI-110 : 4 per CK-100 exchange; 36 per system (9 tie-lined exchanges)
Maximum number of ports per DI-110	30
Maximum number of ports per system	1080
Maximum distance, exchange to DI-100/DI-110 and to AS-100A/AS-110	3000 ft. (1km) 22 AWG
DI-100 inputs	(a) Dry contact : 1 for PTT switch 1 for indication reset switch (b) Control lines : 1 for exchange (LU card) 1 for station connection (AS-100A/AS-110) (c) Power supply : 24V DC
DI-100 outputs	(a) Open collector : 2 for corridor lamp control (24V DC, approx. 10mA). 1 for buzzer control (24V DC, approx. 50mA).
DI-110 inputs	(a) Dry contact : 30 for calling and response switch connection 1 for inhibit switch 1 for indication test switch (b) Power supply : 24V DC
DI-110 outputs	(a) Open collector : 30 for LED indication of calling, response to call, priority level. (24V DC, approx. 10mA) (b) Open collector: 30 for LED indication of busy ports. 24V DC, approx. 10mA) (c) N/O relay contact : 30 for general purpose control rating : 30V DC, 10mA (resistive load) (d) Power supply : 24V DC
Power requirement	(a) Voltage : 24V DC (+/- 4 volts) (b) Current : DI-100 (500mA) DI-110 (300mA)
Custom or off-the-street control panel switch rating	(a) Operating voltage : 5V DC (b) Operating Current : 1mA (c) Contact resistance : less than 50
Functions	(a) Calling/priority level indication : Determined by LED flash rate. (b) Call make/response : Steady LED (c) Busy indication : Steady LED (d) Selected station's signal output (selected station, response, PTT and termination signal) : 140pps dial pulse (programming station number/select switch relationship) (e) Exchange/station interface function
Terminations	(a) Screwless terminal : DI-100 to switches, power supply, AS-100A/AS-110 DI-110 to power supply (b) Ribbon cable connector : DI-100 to DI-110, DI-110 to DI-110 (c) "CHAMP®" IDC connector : DI-110 to switches, LED's, control outputs

* Specifications are subject to change without notice.

