Operating Instructions

For Model ___ 326AB---287C or 171C

Packed as this

GALAXIAN

MIDWAY

	SL2			START 2		SR2			5V
LLP	SL1	SL5	SL3	LRP		RLP	SR1 SR5	SR3	RRP ON OFF
		SL4			START1		SR4		
SL6			SL7		COIN	SR6	SR7		POWER
									ON OFF
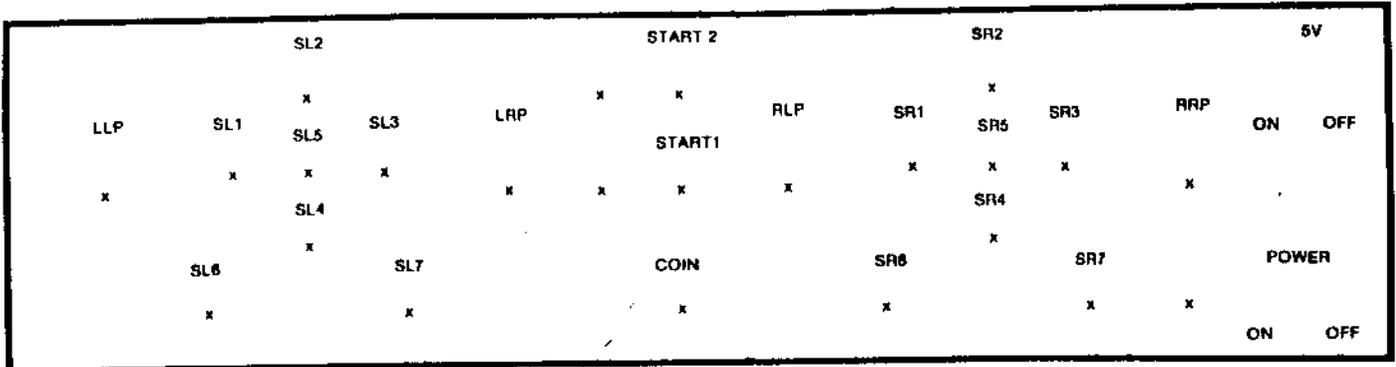
1. Insert 326B card into program "B" connector, number side up.

2. Insert 326A card into program "A" connector, number side up.

3. Insert 287C card into test fixture.

4. Insert Galaxian game board into 287C card.

5. Connect a speaker to the speaker leads.

6. Select "Table" or "Upright" on 326A card.

7. Turn on AC power.

8. Push COIN or SR-6 to coin game.

9. PUSH: START 1 for 1 Player,   START 2 for 2 Player.

UPRIGHT		TABLE
SL-1	#1L	SL-1
SL-3	#1R	SL-3
SL-5	#1 FIRE	SL-5
SL-1	#2L	SR-1
SL-3	#2R	SR-3
SL-5	#2 FIRE	SR-5

10. To check for all three colors, check for a low-going-high signal with a logic probe at pins 16, T, and U of the edge connector.

NOTE: This card set is programmed to use the black and white monitor through the TF-650........

Roms UVWY
Clock Cpu - 21 ⌐
Gnd Cpu - 29
Start Rom U 20 ⌐
Stop Rom U 20 ⌐

ROM Z
CLOCK CPU-21 ⌐
GND CPU-29
START ROM-Z 20 ⌐
STOP ROM-Z 20 ⌐

GALAXIAN ROM BUS

Data Taken on 5 9316 Romson
Rom Board A082 - 9153 - A866

PIN	SIGNATURE	ADDRESS		IC	8F	8H		IC	9B
9	F4AA	D0	OHAB	3	7F6P	36HU		2	7F6P
10	67AC	D1	HIH8	6	U9OH	FFC7		3	FFC7
11	U9OH	D2	8682	10	F4AA	36U6		4	53PA
13	53PA	D3	5AF8	13	678C	53PA		5	37U6
14	7F6P	D4	4214					6	U9OH
15	FFC7	D5	293C					7	36HU
16	37U6	D6	6U0C					8	F4AA
17	36HU	D7	U					9	678C

GALAXIAN ADDRESS BUS

Use Z-80 Nop,Start⌐CPU 5,
Stop⌐CPU-5, Clock CPU 21
Gnd 29 - Vcc= 0001

ADDRESS	SIGNATURE	PIN CPU	8E	8P	8N	8M	9N	*7H	*7K	*7L	7P	7N	4E	5E	2E	3E	2F	9L	9M&N
A0	UUUU	30	-	-	-	-	1	8	8	8	15	15	14	-	-	-	-	1	1
A1	5555	31	-	-	-	-	2	7	7	7	13	13	2	-	-	-	-	2	2
A2	CCCC	32	-	-	-	3	3	6	6	6	6	6	-	14	-	14	2	3	3
A3	7F7F	33	-	-	-	-	1	5	5	5	5	5	-	2	-	-	-	1	-
A4	5H21	34	-	-	-	-	-	4	4	4	4	4	5	-	-	2	-	-	-
A5	0AFA	35	-	-	-	-	-	3	3	3	3	3	11	-	14	-	-	-	-
A6	UPFH	36	-	-	-	-	-	2	2	2	14	14	-	11	-	-	-	-	-
A7	52F8	37	-	-	-	-	-	1	1	1	1	1	11	-	-	-	5	-	-
A8	HC89	38	-	-	-	-	-	23	23	23	2	2	-	-	-	-	14	-	-
A9	2H70	39	-	-	-	-	-	22	22	22	7	7	-	-	-	-	11	-	-
A10	HPPO	40	-	-	-	-	-	19	19	19		-	-	-	-	-	-	-	-
A11	1293	1	-	1	1	1	-	18	18	18		-	-	-	-	-	-	-	-
A12	HAP7	2	-	2	2	2	-	21	21	21		-	-	-	-	-	-	-	-
A13	3C96	3	-	3	3	3	-	-	-	-		-	-	-	-	-	-	-	-
A14	3827	4	2	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-
A15	757P	5	3	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-

* For on Roms Mounted on main PcBoard.
For Roms on Board AQ82 - 9135 - A866

Pin	U	V	W	Y	Z
1B	U364	2982	PJU6	3611	1293
19	HPPO	HPPO	HPPO	HPPO	HPPO
20	6H49	6H49	6H49	6H49	HPPO
21	0001	0001	6H49	19	6H49
			0001	6H49	0001
				0001	

GALAXIAN VERTICAL COUNT BUS

Vsync 6A - 11 = 34UC

Clock 6C - 11 ⊓
Start 6A -11 ⊓ , Stop 6A -11 ⊓
Gnd 6C - 7 , Vcc = 3405
NOTE. Put Board In " Test " Mode

PIN	6C	5A	6A	6E	5D	5C	6D	6F	6B	5B	4N	5N
1	-	-	-	0102	-	-	-	-	253C	PH99	PA05	5CUP
2	-	-	3507	3507	-	-	-	-	0000	0000	0000	0000
3	-	-	-	-	PA05	253C	-	-	253C	PH99	PA05	5CUP
4	-	-	-	-	F79B	-	-	-	F79B	PF03	253C	PF03
5	-	-	-	-	CP59	AB82	3405	-	0000	0000	253C	PF03
6	-	-	-	-	655F	9FB7	9FB7	-	F79B	PF03	0000	0000
7	-	3U0H	-	-	-	-	-	-	CP59	P02A	-	-
8	H806	-	-	-	-	-	-	-	-	-	-	-
9	PF03	3507	3507	-	-	-	-	3405	CP59	P02A	0000	0000
10	-	PF03	3U0H	-	-	-	-	05C2	0000	0000	CP59	P02A
11	-	253C	34UC	-	-	-	-	9FB7	PA05	5CUP	0000	0000
12	-	P02A	CP59	-	-	-	-	0000	PA05	5CUP	CP59	P02A
13	-	PH99	P79B	-	-	-	-	3405	0000	0000	F79B	PH99
14	-	5CUP	PA05	-	-	-	-	-	-	-	-	-
15	-	3U0H	0102	-	-	-	-	-	-	-	0000	0000
16	-	-	-	-	-	-	-	-	-	-	-	-

GALAXIAN HORIZONTAL COUNT BUS

H Sync 6F - 6 = PPA9

PIN	4R	5R
11	C259	40FU
12	017F	4F34
13	3P59	7FP7
14	7CCH	8529
15	8U31	8FF7

PIN	6C	3A	4A	6E	8L	6F	6H	3B	4B	6J	5E	4E
1	-	-	-	-	-	-	-	-	-	6PCP	D96H	D96H
2	-	-	-	-	-	-	-	-	-	CC34	U	D96H
3	-	-	-	C3F2	-	ICC4	-	-	-	2321	969P	0FPP
4	-	-	CAAU	CAAU	-	6PCP	-	-	-	6H2P	969P	0FPP
5	0724	-	-	HC17	-	P7F4	P7F4	AUA6	-	AUA6	U	U
6	0P49	-	-	H8VA	-	PPA9	-	-	-	55FA	6PCP	HIC7
7	-	0724	CCA3	-	-	-	-	-	-	0FPP	6PCP	HIC7
8	-	-	-	-	-	-	-	-	CC34	-	-	-
9	-	096H	CAAU	-	-	-	-	-	CC34	-	-	-
10	-	0724	CCA3	-	-	-	-	-	CO3A	CO3A	0000	6H2P
11	-	1CC4	67H3	F932	-	-	-	-	-	02P3	-	6H2P
12	-	AUA6	CC34	6PCP	H8VA	-	-	-	969P	55FH	U	U
13	-	55FH	HIC7	67H3	969P	-	67H3	-	969P	-	1CC4	CO3A
14	-	02P3	969P	-	-	-	-	-	0000	-	1CC4	ICC4
15	-	CCA3	C3F2	-	-	-	-	-	-	-	U	CO3A

CPU Control Bus

Use Z-80 Nop , Clock 21⌐,
Ground 8m - 5 , Start / Stop 5⌐
Gnd - 29, Vcc - 0001

PIN	8M	8U	8P	2N	7P	7N	4M&5M	4K,4J&5J	2P	3E	4E&5E	4F&5F	3F&3H	9J	9L	9H	9N	8L	8R
1	1293	1293	1293	-	-	-	2FF3	7807	-	-	-	-	-	-	-	-	-	-	-
2	HAP7	HAP7	HAP7	-	-	-	-	-	7807	-	-	-	-	-	-	-	-	-	-
3	3C96	3C96	3C96	-	-	-	-	-	7807	-	-	-	-	-	-	-	-	-	-
4	1181	1181	1181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	0000	0000	1181	71H4	-	-	-	-	-	-	2FF3	-	-	-	-	-	-	-	-
6	0001	0001	0001	71H4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	7A71	7A71	71H4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	0000	0000	0000	-	71H4	71H4	-	-	-	-	-	-	-	-	-	-	-	-	7807
9	U81U	U81U	U81U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7871	-
10	8F14	8F14	8F14	-	-	-	-	-	-	-	-	-	7807	-	-	-	-	-	-
11	PF2P	PF2P	PF2P	-	-	-	2FF3	-	-	7807	-	-	-	7A71	-	-	-	-	-
12	2FF3	2FF3	2FF3	-	-	-	-	7807	-	-	2FF3	-	-	-	-	-	-	-	-
13	7807	7807	7807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	H6F4	H6F4	H6F4	-	-	-	-	-	-	-	-	-	-	-	8F14	PFP2	U81U	-	-
15	71H4	71H4	71H4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	0001	0001	0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pin 20 = 2FF3