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AS/2 AUTO SWITCH

AS-401PII/AS-402PII

User's Manual

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Manual Part No. PAPE-0094-200

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NOTICE

This manual is written for the Auto Switch AS-401PII and AS-402PII. General operations of these two models are the same and differences will be specified for related models.

In this manual, '**AS/2**' is used to represent both models of AS-401PII and AS-402PII. When you purchase this product it should contain the following items.

PACKAGE CHECKLIST

- An **AS/2**(any one of AS-401PII/AS-402PII)
- The Power Adapter spec. depends on the following product model

Model	Spec.
AS-401PII	DC 9V 200mA*
AS-402PII	DC 9V 200mA

*Adapter comes with buffer card

- A 5 1/4" (or 3 1/2") Floppy Diskette with **AS/2-WARE**, Hot Key Control Programs (suitable for IBM PC/XT/AT, DOS V 3.0 or later)

NOTE: **AS/2-WARE** is offered for AS-402PII only.

- An **AS/2** Auto Switch User's Manual

QUICK LOOK INTERFACE TABLE

MODEL	INPUT PORT	OUTPUT PORT	**AS/2-WARE** SUPPORTED
AS-401PII	4 CENTRONICS Female	1 CENTRONICS Female	No
AS-402PII	4 CENTRONICS Female	2 CENTRONICS Female	Yes

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1 FUNCTION OVERVIEW

1-1 INTRODUCTION

The **AS/2** is a high performance and low cost printer sharing device which can operate in either auto switching mode or manual switching mode. The **AS/2** has buffer card option. In the auto switching mode the **AS/2** automatically locks on and services the source device that requests to link to the common destination device. However, in the manual switching mode the **AS/2** works exactly the same way as the conventional data switch.

1-1-1 AS-401PII

AS-401PII is a 4-input-1-output Centronics auto switch, which does not require additional power supply should no buffer card installed and needs DC 9V adapter if installed. Also, it is not AS/2-WARE supported.

1-1-2 AS-402PII

AS-402PII is a 4-input-2-output Centronics auto switch, and is AS/2-WARE supported, which enables user to choose output port by simple Hot Key controls. AS-402PII is powered by one DC 9V adapter with or without buffer.

The **AS/2** tremendously improves the efficiency of your switching applications. We suggest that you take a few moments to carefully read the following instructions to ensure the maximum benefits and convenience your **AS/2** offers. The following figures are the **AS/2**'s front views and rear views.

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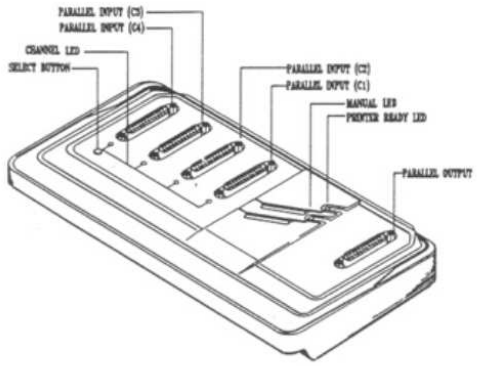


Fig. 1-1-1 AS-401PII's Front View

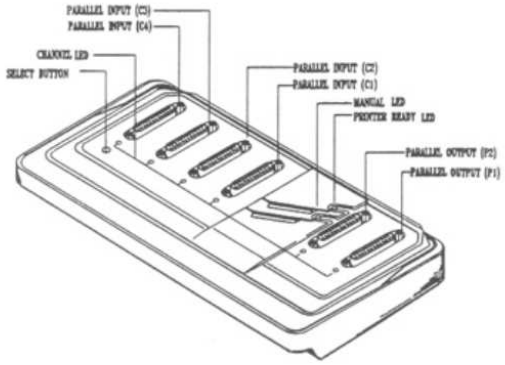


Fig. 1-1-2 AS-402PII's Front View

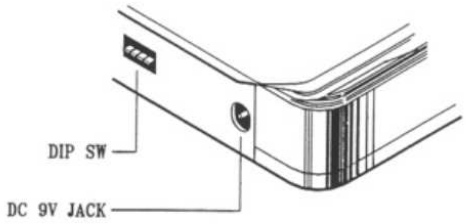


Fig. 1-1-5 AS/2's Rear View

NOTE: The rear view of AS/2 is identical to all models

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1-2 FUNCTION SPECIFICATIONS

FUNCTIONS		PARALLEL MODEL	
		AS-401PII	AS-402PII
Power Supply		Non-powered*	DC 9V, 200mA
Cable Distance		9 M	
CONNECTOR	INPUT	4 CENTRONICS	
(DB-25)Female	OUTPUT	1 CENTRONICS	2 CENTRONICS
LED	Input Status	4	4
	Output Status	None	2
	Printer Ready	1	1
	Manual	1	1
Buffer Card (Optional)		256K/1M/2M Bytes (Support output port #1 only)	
Input Arbitration		First Come, First Serve	
Function Key		Manual Select	
Input Port Selection		Auto or Manual	
Output Port Selection		None	DIP SW & **AS/2 -WARE**
Time out Selection		5 - 60 sec.	
Auto Form Feed		Enabled/Disabled	
Operation Temp.		5°c - 40°c	
Stock Temp.		-20°c - 60°c	
Humidity		0% - 80%	
Enclosure		Plastic and Metal.	
Weight		1Kg	
Dimensions		270x145x34.5 mm^3	

* AS-401PII needs DC 9V 300mA adapter if buffer card installed.

Fig. 1-2-1 AS-401PII/AS-402PII's Function Specifications

1-3 PRODUCT LIMITATION

AS/2 is a well designed quality product. Its maximum performance and limitation is described as follows.

- **AS/2**'s Manual Switching Mode is suitable for all kinds of Hand-shaking Modes.
- For model AS-402PII and AS-401PII, the cable length is limited to no more than 9 meters.
- The parallel interface mentioned on this manual are Centronics interfaces (please refer to appendix B).
- **AS/2** is IBM PC/AT/XT compatible.
- Buffer card installed in AS-402PII is to support output port #1 only.

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2 INSTALLATION

2-1 INSTALLATION PROCEDURE

2-1-1 Cable Connection Table

AS-401PII	4 IN/1 OUT	see Fig. 2-1-1 on page 7
AS-402PII	4 IN/2 OUT	see Fig. 2-1-2 on page 7

2-1-2 Parallel Port Cabling

Device's Pin #		25-pin/25-pin cable or 36-pin/25-pin cable	AS/2 Auto Switch
DB-25	C-36		DB-25
1	1	$\overline{\text{STROBE}}$	1
2-9	2-9	D0 -- D7	2-9
10	10	$\overline{\text{ACK}}$	10
11	11	BUSY	11
12	12	PE	12
13	13	SLCT	13
14	14	$\overline{\text{AUTOFEED-XT}}$	14
15	32	$\overline{\text{ERROR}}$	15
16	31	$\overline{\text{INIT}}$	16
17	36	$\overline{\text{SLCT-IN}}$	17
18-25	19-30	GND	18-25

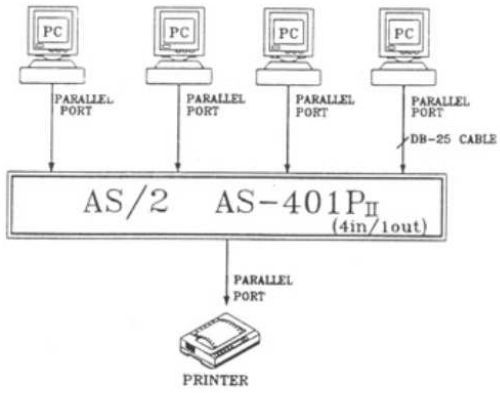


Fig. 2-1-1 AS-401PII's 4 IN/1 OUT Configuration

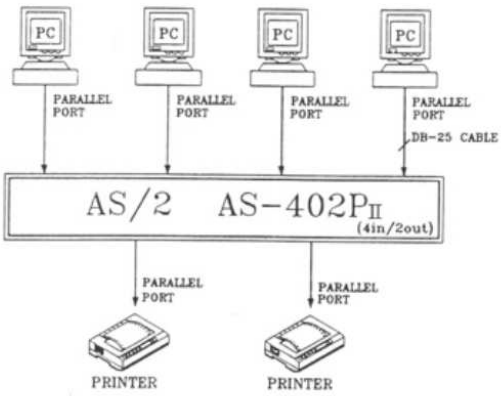
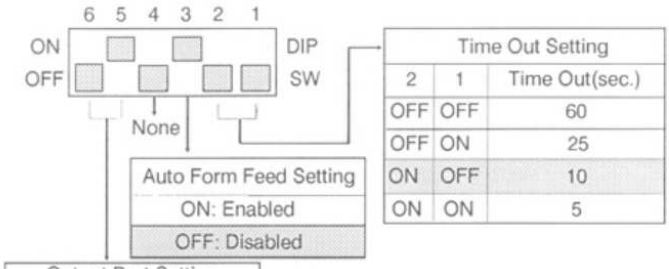


Fig. 2-1-2 AS-402PII's 4 IN/2 OUT Configuration

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2-2 DIP SWITCH SETTING

While the **AS/2** powers on, it reads the status of the DIP switch and executes to the function setting which is shown in the following figure. The Default Setting of the **AS/2** is marked by shadow area. The Output Port Setting is only available to the AS-402PII. The Output Port Setting is effective only at power on. The user may change the Output Port Setting at any time by using the **AS/2-WARE**. For detailed information please refer to Section 4-1, 4-2.



Time Out Setting		
2	1	Time Out(sec.)
OFF	OFF	60
OFF	ON	25
ON	OFF	10
ON	ON	5

Auto Form Feed Setting
ON: Enabled
OFF: Disabled

Output Port Setting		
6	5	Port Selected
OFF	OFF	Port 1
OFF	ON	Port 1
ON	OFF	Port 2
ON	ON	Broadcast

Fig 2-2-1 **AS/2** Auto Switch's DIP Switch Setting

NOTE: The DIP Switch Setting with the shadow marks are the **AS/2**'s defaults.

2-3 AS Buffer Card Installation

AS buffer card has 64K, 256K or 1M bytes of memory and is used to expand the buffer memory of AS-401PII and AS-402PII auto switches.

Installation procedures are the same for different memory size buffer cards:

1) Unscrew the 5 screws pointing to by arrows on the metal chassis.
2) Place the plastic cover up side down as in Fig. 2.3
3) Find the 14 x 2 gold pin connector on the PCB of the AS auto switch.
4) Connect the AS buffer card's 14 x 2 gold pin connector to that of the AS auto switch's.
5) Secure the two plastic spacers to both PCBs.
6) Place the plastic cover back to the metal chassis and secure the 5 screws back to complete the buffer card installation.

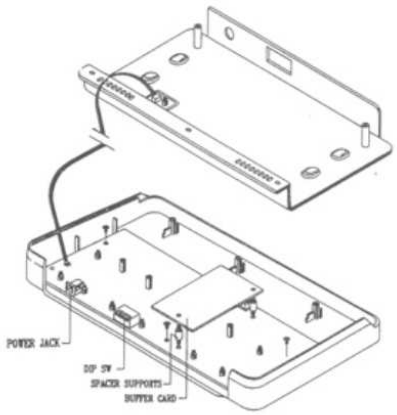


Fig. 2.3 Place the plastic cover

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3 POWER ON PROCEDURE

3-1 POWER ON PROCEDURE

1) To reset the AS-402PII and AS-401PII (w/buffer card), simply unplug the DC 9V power adapter from the power jack and plug it in again. AS-401PII (w/o buffer card) can be reset by recycling printer power while it is hooked to a printer.

Caution: Make sure you are using the right power adapter as listed in the section 1-2 Function Specifications.

2) After power is reset, the input channel's service LEDs are on. Meanwhile, the **AS/2** is ready for operation and it enters the auto switching mode automatically.

3-2 AUTO SWITCHING MODE

1) In auto switching mode, the user will see all the input channel's service LEDs turn on. That means the **AS/2** stands by to get data from all channels.

2) If any channel of 'C1', 'C2', 'C3' and 'C4' requests to be served, the requested channel's LED will be on and the **AS/2** will lock on to that channel. At this moment the output port of **AS/2** will only serve the locked input channel until all the input data from the requested channel has been sent out and also the time out period is up. The time out setting depends on the current DIP Switch's Setting on **AS/2**.

3) When the 'READY' LED turns off, it indicates
Connectors are not properly connected,
Printer(or output device) is not switched on,
Printer is not in ON-LINE status,
or, Printer is out of paper.
If buffer card installed for output 1 'READY' LED reflects buffer readiness.

The user is therefore requested to make corrections accordingly before going any further with the procedures.

4) When the **AS/2** is serving a certain input channel, it does not switch to serve another channel even though the printing gets interrupted by the printer power off or out of paper, etc.

NOTE: Only in the Manual Switching Mode user can force the AS/2 to switch to and service another input channel.

3-3 MANUAL SWITCHING MODE

Press 'SELECT' several times to instruct AS/2 cycles through manual switching mode and auto switching modes in the following sequence: 1-2-3-4-5-1-2-3.....

Cycle#	Function	'C1' LED	'C2' LED	'C3' LED	'C4' LED	MANUAL LED
1	Auto	ON	ON	ON	ON	OFF
2	Manual C#1	ON	OFF	OFF	OFF	ON
3	Manual C#2	OFF	ON	OFF	OFF	ON
4	Manual C#3	OFF	OFF	ON	OFF	ON
5	Manual C#4	OFF	OFF	OFF	ON	ON

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4 AS/2 -WARE (For AS-402PII Only)

4-1 AS/2-WARE, HOT KEY CONTROL PROGRAMS

The **AS/2-WARE** contains few resident execution files which function like a hot key controller. It performs functions like selecting the desired port for user's application and broadcasting the input data to all output ports by pressing two or three specified keys at the same time. The detailed information will be explained in the next section.

4-2 HOW TO USE THE AS/2-WARE

There is a diskette named **AS/2-WARE** which is enclosed within the product. This section will instruct you on how to use the **AS/2-WARE** with the **AS/2.**

Assuming your floppy disk drive is in drive "A", insert the diskette into the floppy drive A and type:

A: AS-2P_1 <Enter> or AS-2P_1 2<Enter> where the '2' means the 'LPT2'.

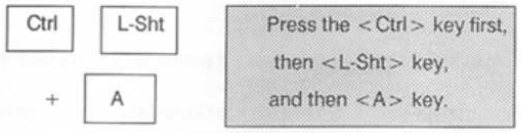
When the AS/2-WARE program is loaded, user can press the Hot Keys to switch the output port to the desired one at any time.

There are three kinds of choices the user has to switch the AS/2 Auto Switch by using the AS/2-WARE. They are

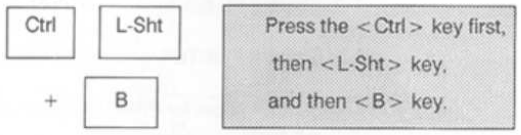
- Switch output port to Port A,
- Switch output port to Port B, and
- Broadcast data to two output ports, Port A and Port B.

The **AS/2-WARE** supports more than three sets of Hot Keys for the user in case of some applications using the same keys. The following descriptions are one set of Hot Keys and their operating methods.

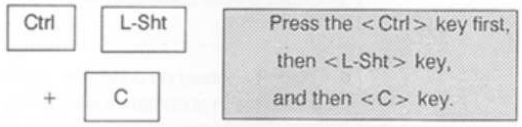
A) Switch to Port A:



B) Switch to Port B:



C) Broadcast to Port A and Port B:



The more detailed information about **AS/2-WARE** is saved in 'READ.ME' file which can be found in the **AS/2-WARE** floppy diskette.

If the user has any product support issues or questions, please call your dealer for assistance.

Note: <L-Sht> means the Left Shift key.

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APPENDIX A

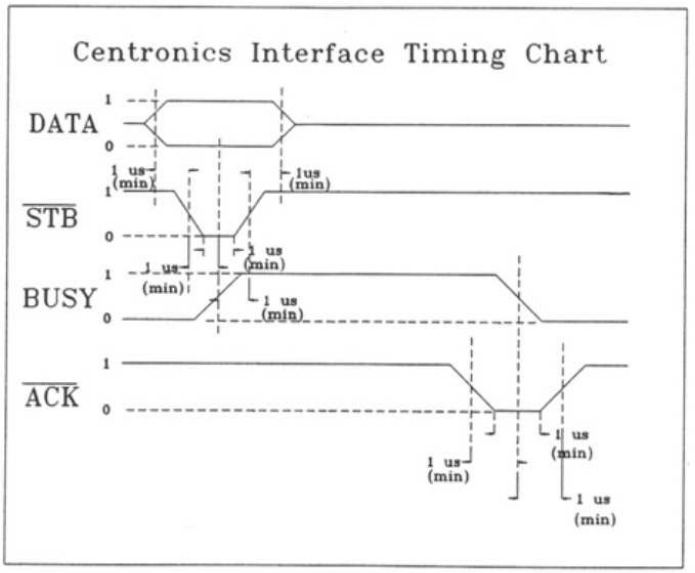
TROUBLE SHOOTING

PROBLEM	SOLUTIONS
LED fails to light up	Check if power is turned ON or not
Failure of data transmission	1. Check if the Connector of each cable is well plugged or not. 2. Check if PC is turned ON or not. 3. Check if PRINTER is turned ON or not. 4. Check if paper for PRINTER is well prepared or not. 5. Check if Print command on PC is correct or not. 6. Check if connect on computer end has been connected in accordance with menu.

If failure of printing is still exists upon aforesaid solutions, please contact your dealer for help.

APPENDIX B

CENTRONICS INTERFACE TIMING CHART



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APPENDIX C

PREVENTING RADIO & TV INTERFERENCE

Warning this equipment generates, uses and radiates radio frequency energy and if not installed and used in accordance with the instruction manual may cause interference to radio and television reception. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart J of Part 15 of FCC Pules, which are designed to provide reasonable protection against 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.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient the reveiving antenna.
2. Relocate the computer with respect to the receiver.
3. Move the computer away from the receiver.
4. Plug the computer into a different outlet so that computer and receiver and on different branch circuits.
5. Ensure that the mounting screws, attachment connector screws and ground wires are tightly secured.
6. Ensure that good quality, shielded and grounded cables are used for data communications.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

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