

AS/2 AUTO SWITCH

AS-401PII/AS-402PII

User's Manual

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Manual Part No. PAPE-0094-200

NOTICE

This manual is written for the Auto Switch AS-401P_{II} and AS-402P_{II}. 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-401P_{II} and AS-402P_{II}. When you purchase this product it should contain the following items.

PACKAGE CHECKLIST

- An AS/2 (any one of AS-401P_{II}/AS-402P_{II})
- The Power Adapter spec. depends on the following product model

| Model | Spec. |
|-----------------------|--------------|
| AS-401P _{II} | DC 9V 200mA* |
| AS-402P _{II} | 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-402P_{II} only.

- An AS/2 Auto Switch User's Manual

QUICK LOOK INTERFACE TABLE

| MODEL | INPUT PORT | OUTPUT PORT | AS/2-WARE SUPPORTED |
|-----------------------|---------------------|---------------------|---------------------|
| AS-401P _{II} | 4 CENTRONICS Female | 1 CENTRONICS Female | No |
| AS-402P _{II} | 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-401P^{II}

AS-401P^{II} 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-402P^{II}

AS-402P^{II} 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-402P^{II} 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.

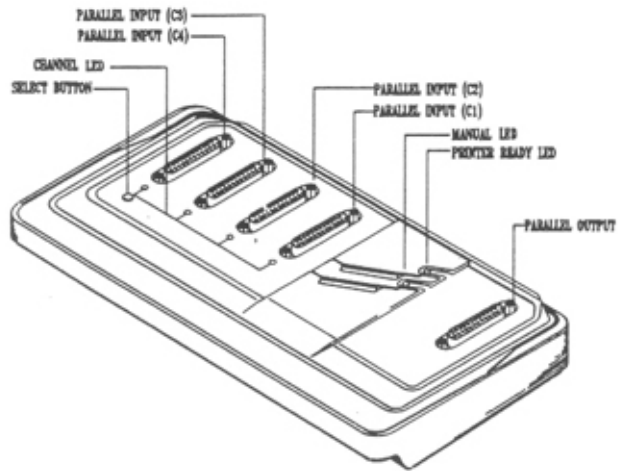


Fig. 1-1-1 AS-401PI's Front View

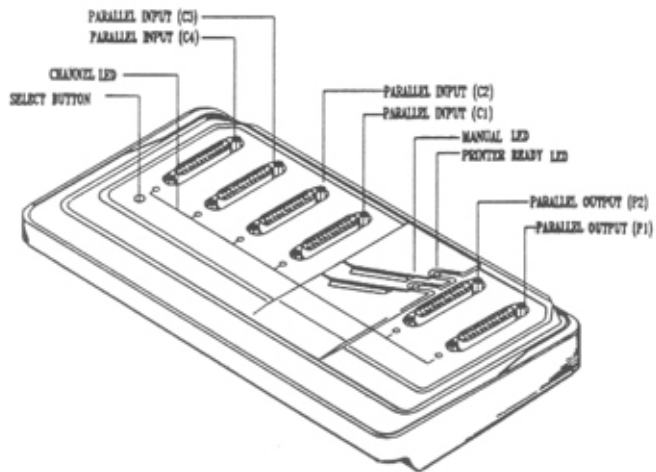


Fig. 1-1-2 AS-402PI's Front View

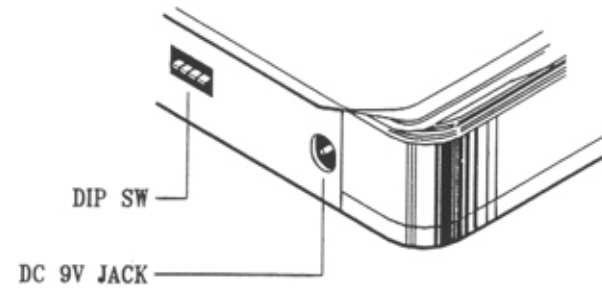


Fig. 1-1-5 AS/2's Rear View

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

1-2 FUNCTION SPECIFICATIONS

| FUNCTIONS | | PARALLEL MODEL | |
|----------------------------|---------------|---|---------------------|
| | | AS-401P \parallel | AS-402P \parallel |
| Power Supply | | Non-powered* | DC 9V, 200mA |
| Cable Distance | | 9 M | |
| CONNECTOR (DB-25)Female | INPUT | 4 CENTRONICS | |
| | 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-401P \parallel needs DC 9V 300mA adapter if buffer card installed.

Fig. 1-2-1 AS-401P \parallel /AS-402P \parallel '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-402P \parallel and AS-401P \parallel , 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-402P \parallel is to support output port #1 only.

2 INSTALLATION

2-1 INSTALLATION PROCEDURE

2-1-1 Cable Connection Table

| | | |
|-----------------------|------------|--------------------------|
| AS-401P _{II} | 4 IN/1 OUT | see Fig. 2-1-1 on page 7 |
| AS-402P _{II} | 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 | DB-25 |
| 1 | 1 | STROBE | 1 | 1 |
| 2-9 | 2-9 | D0 -- D7 | 2-9 | 2-9 |
| 10 | 10 | ACK | 10 | 10 |
| 11 | 11 | BUSY | 11 | 11 |
| 12 | 12 | PE | 12 | 12 |
| 13 | 13 | SLCT | 13 | 13 |
| 14 | 14 | AUTOFEED-XT | 14 | 14 |
| 15 | 32 | ERROR | 15 | 15 |
| 16 | 31 | INIT | 16 | 16 |
| 17 | 36 | SLCT-IN | 17 | 17 |
| 18-25 | 19-30 | GND | 18-25 | 18-25 |

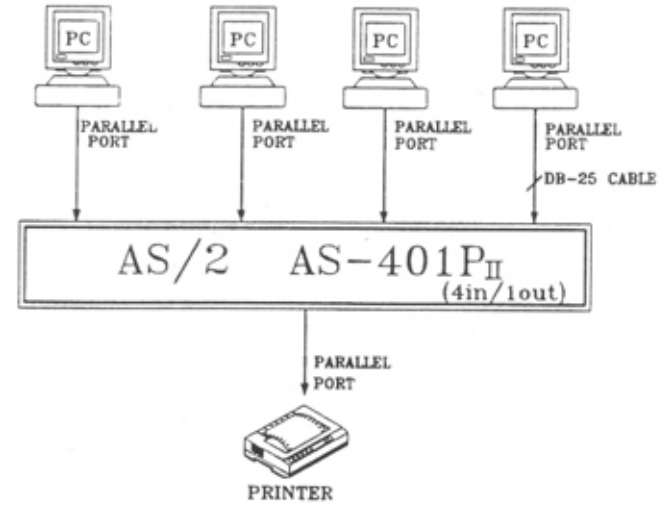


Fig. 2-1-1 AS-401P_{II}'s 4 IN/1 OUT Configuration

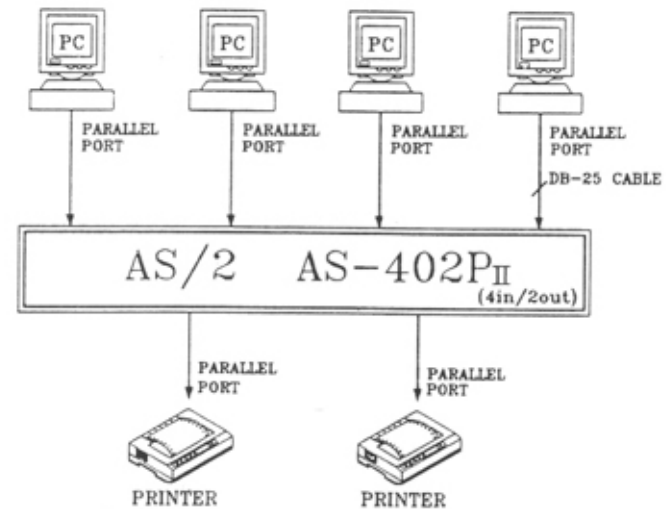


Fig. 2-1-2 AS-402P_{II}'s 4 IN/2 OUT Configuration

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-402P^{II}. 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.

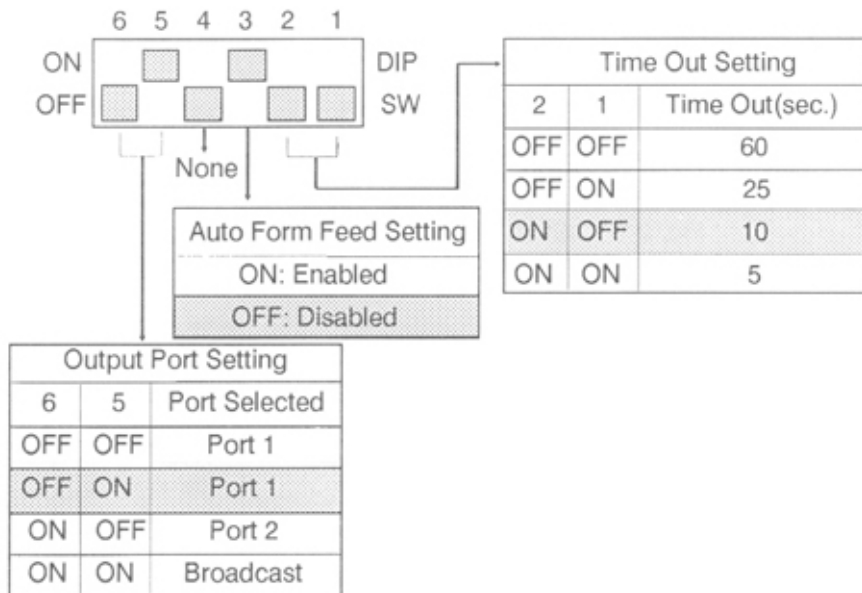


Fig 2-2-1 AS/2 Auto Switch's DIP Switch Setting

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-401P^{II} and AS-402P^{II} 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.

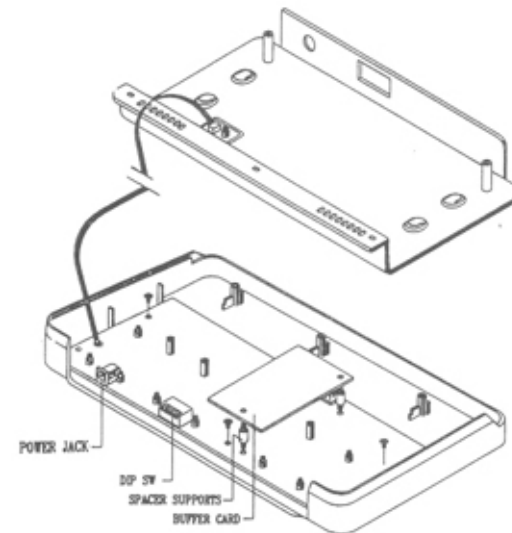


Fig. 2.3 Place the plastic cover

3 POWER ON PROCEDURE

3-1 POWER ON PROCEDURE

- 1) To reset the AS-402P \parallel and AS-401P \parallel (w/buffer card), simply unplug the DC 9V power adapter from the power jack and plug it in again. AS-401P \parallel (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 |

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'.

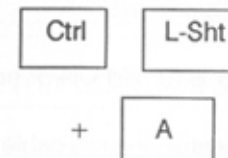
When the **AS/2-WARE** program is loaded, user can press the Hot Keys to switch the output port to the desired one at any time.

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.

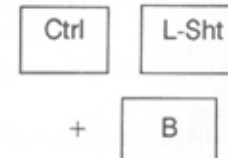
The **AS/2-WARE** supports more than three sets of Hot Keys for the user in case of some applications using the same keys. The following descriptions are one set of Hot Keys and their operating methods.

A) Switch to Port A:



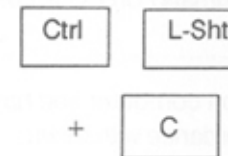
Press the <Ctrl> key first, then <L-Sht> key, and then <A> key.

B) Switch to Port B:



Press the <Ctrl> key first, then <L-Sht> key, and then key.

C) Broadcast to Port A and Port B:



Press the <Ctrl> key first, then <L-Sht> key, and then <C> key.

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.

APPENDIX A

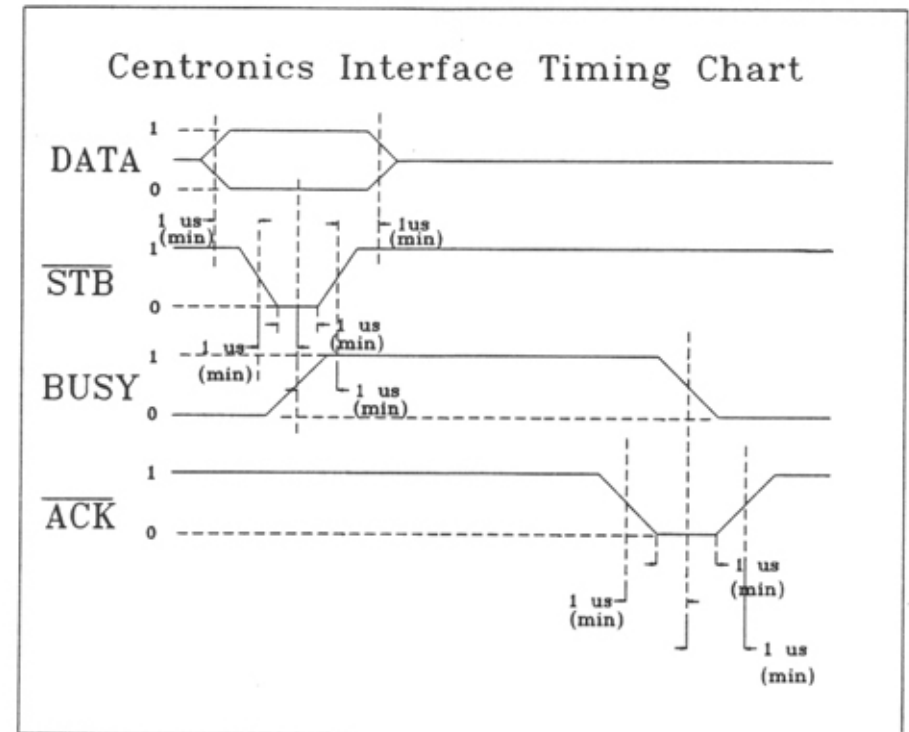
TROUBLE SHOOTING

| PROBLEM | SOLUTIONS |
|------------------------------|---|
| LED fails to light up | Check if power is turned ON or not |
| Failure of data transmission | <ol style="list-style-type: none"> 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



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 Rules, 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 receiving 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 are 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.