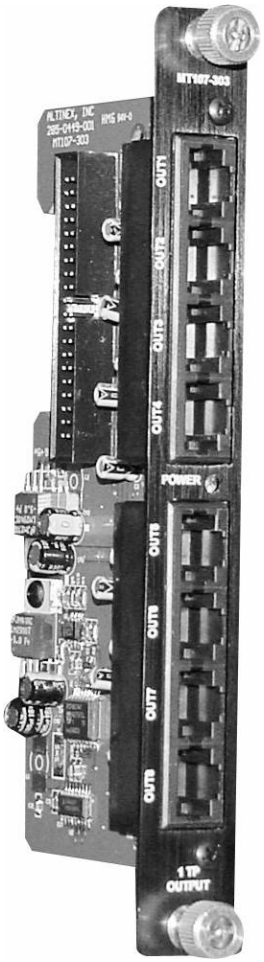

Multi Tasker®

MANUAL PART NUMBER: 400-0372-005

MT107-303

8-OUT, TWISTED PAIR, SINGLE CHANNEL OUTPUT CARD FOR MATRIX SWITCHER

USER'S GUIDE

ALTINEX®

SIGNAL MANAGEMENT SOLUTIONS®

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PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MT107-303**. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **MT107-303** and to prevent fire and shock hazards. Please read them carefully and heed all warnings.

1.1 GENERAL

- Qualified ALTINEX service personnel or their authorized representatives must perform all service.

1.2 INSTALLATION

- To prevent fire or shock, do not expose this unit to water or moisture. Do not place the **MT107-303** in direct sunlight, near heaters, or heat-radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Handle the **MT107-303** carefully. Dropping or jarring can damage the card.
- Do not pull any cables that are attached to the **MT107-303.**
- Insert the card carefully into the slots of the MultiTasker without bending any edges.

1.3 CLEANING

- Clean only the connector area with a dry cloth. Never use strong detergents or solvents such as alcohol or thinner. Do not use a wet cloth or water to clean the card. Do not clean or touch any component or PCB.

1.4 FCC NOTICE

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions found herein, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Any changes or modifications to the unit not expressly approved by ALTINEX, Inc. could void the user's authority to operate the equipment.

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ABOUT YOUR MT107-303 2

MT107-303
8-Out, Twisted Pair, Single Channel

The **MT107-303** is an 8 Output expansion card for use with the MT107-104 64X64 Matrix Engine. The **MT107-303** outputs are single channel differential outputs for use over long cable lengths. The Twisted Pair signals from the **MT107-303** may be easily combined into a single CAT-5 cable using ALTINEX MS8704TP adapter cables. The CAT-5 cable is then run to an ALTINEX Twisted Pair receiver such as the DA1931CT.

Each **MT107-303** connects to an output connector on the MT107-104 Matrix Engine. Up to 8 **MT107-303** cards may be connected to the engine and each card is connected with the engine via specially provided, high-bandwidth video cables.

As part of the MT107-104 Matrix Engine, the **MT107-303** has special built-in features. Signal detection circuitry allows the user to determine the presence of an output signal on any channel.

Output signals are driven by high-speed, high-bandwidth differential amplifiers.

ALTINEX's software and hardware allow for the switching of any input to output combination and prevents illegal switching combinations that may damage components.

The latest generation of Twisted Pair devices uses an innovative, patented technology* developed by ALTINEX. The new signal processing technology allows transmitting and receiving fully equalized computer video signals, stereo, and audio signals over long distances.

* US Patent 7,065,190

TECHNICAL SPECIFICATIONS 3

Specifications are subject to change.
See www.altinex.com for up-to-date information.

FEATURES/ DESCRIPTION	MT107-303
GENERAL	
Input	
Twisted Pair	Internal Box Header (1)
Output Connectors	
Twisted Pair	RJ-45 female (8)
Compatibility	
Signal Types	ALTINEX Standard for Twisted Pair
Video Signal Resolutions	VGA through UXGA 480p through 1080i
Recommended Max. Cable Lengths *Note: Measurements made using ALTINEX low-skew cable, CB3150PV.*	VGA: 640x480@60Hz 900 ft (274 m) XGA: 1024x768@60Hz 700 ft (213 m) SXGA: 1280x1024@60Hz 650 ft (198 m) UXGA: 1600x1200@60Hz 600 ft (183 m)

Table 1. **MT107-303** General

MECHANICAL	MT107-303
Enclosure Slots Required	1
Weight	0.4 lb (0.18 kg)
Connector Panel	Black Anodized
T° Operating	10°C-50°C
T° Maximum	75°C
Humidity	90% non-condensing
MTBF (calc.)	38,000 hrs

Table 2. **MT107-303** Mechanical

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ELECTRICAL	MT107-303
Output	
Twisted Pair	Video/Sync/Audio Signals ALTINEX Standard
Analog Signal Level	1.5 Vp-p max.
Input	
Bus from Matrix Engine	0 dB gain
Power Consumption	*(from enclosure)*
+6V	0.225 A (1.3 W)
-6V	0.190 A (1.1 W)
Total Power	2.4 W max.

Table 3. **MT107-303** Electrical

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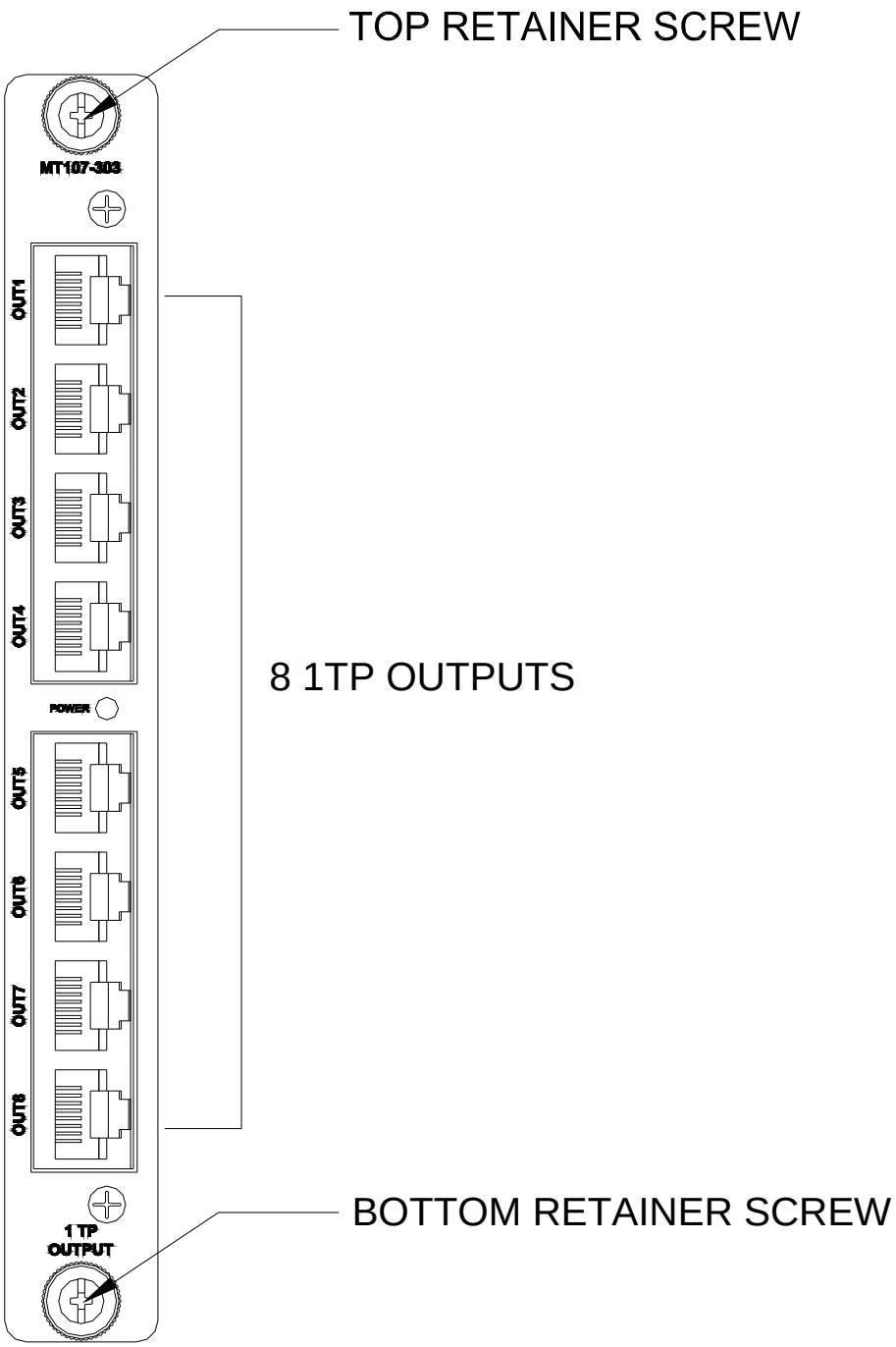
PRODUCT DESCRIPTION 4



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APPLICATION DIAGRAMS 5

DIAGRAM 1: TYPICAL SETUP

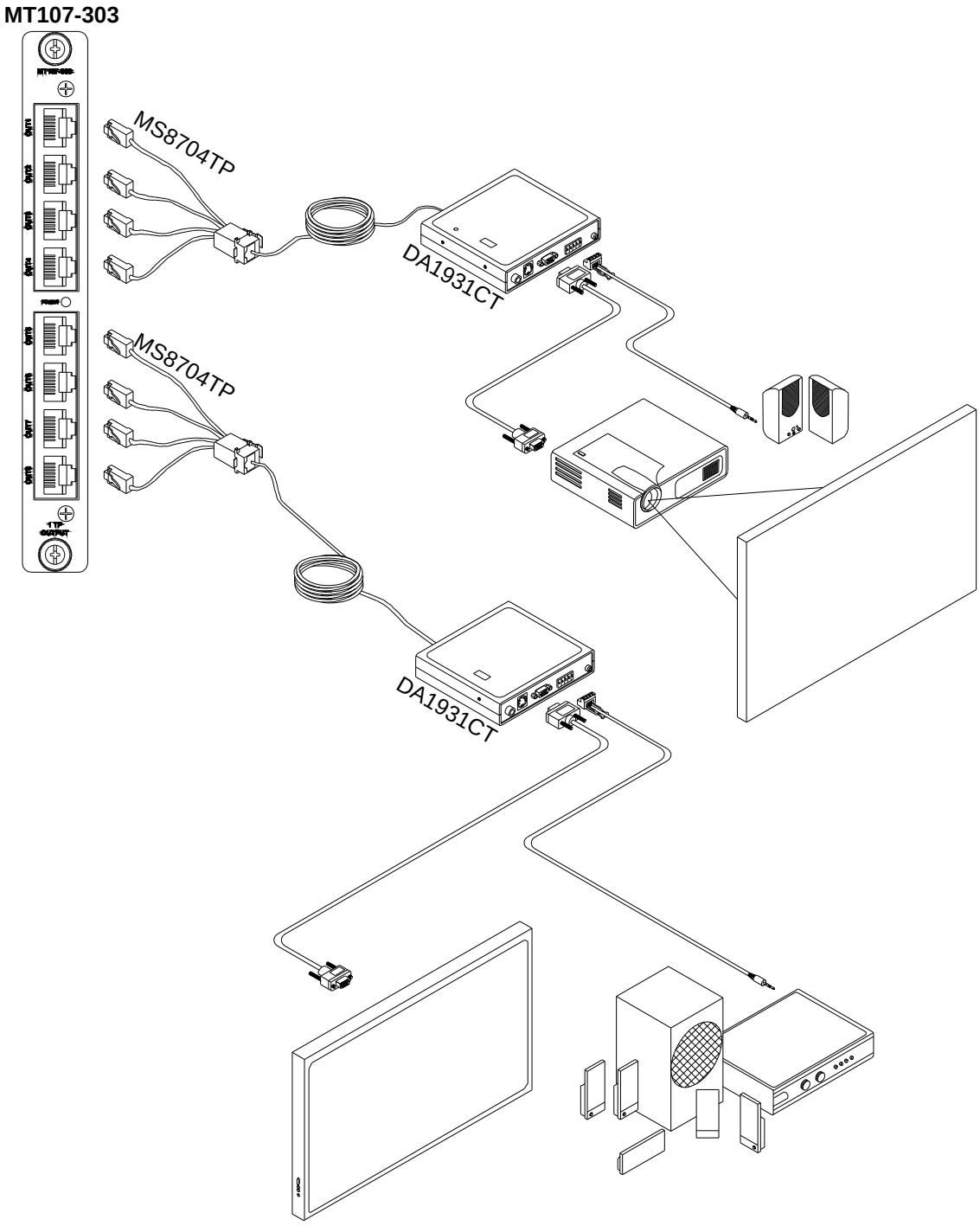
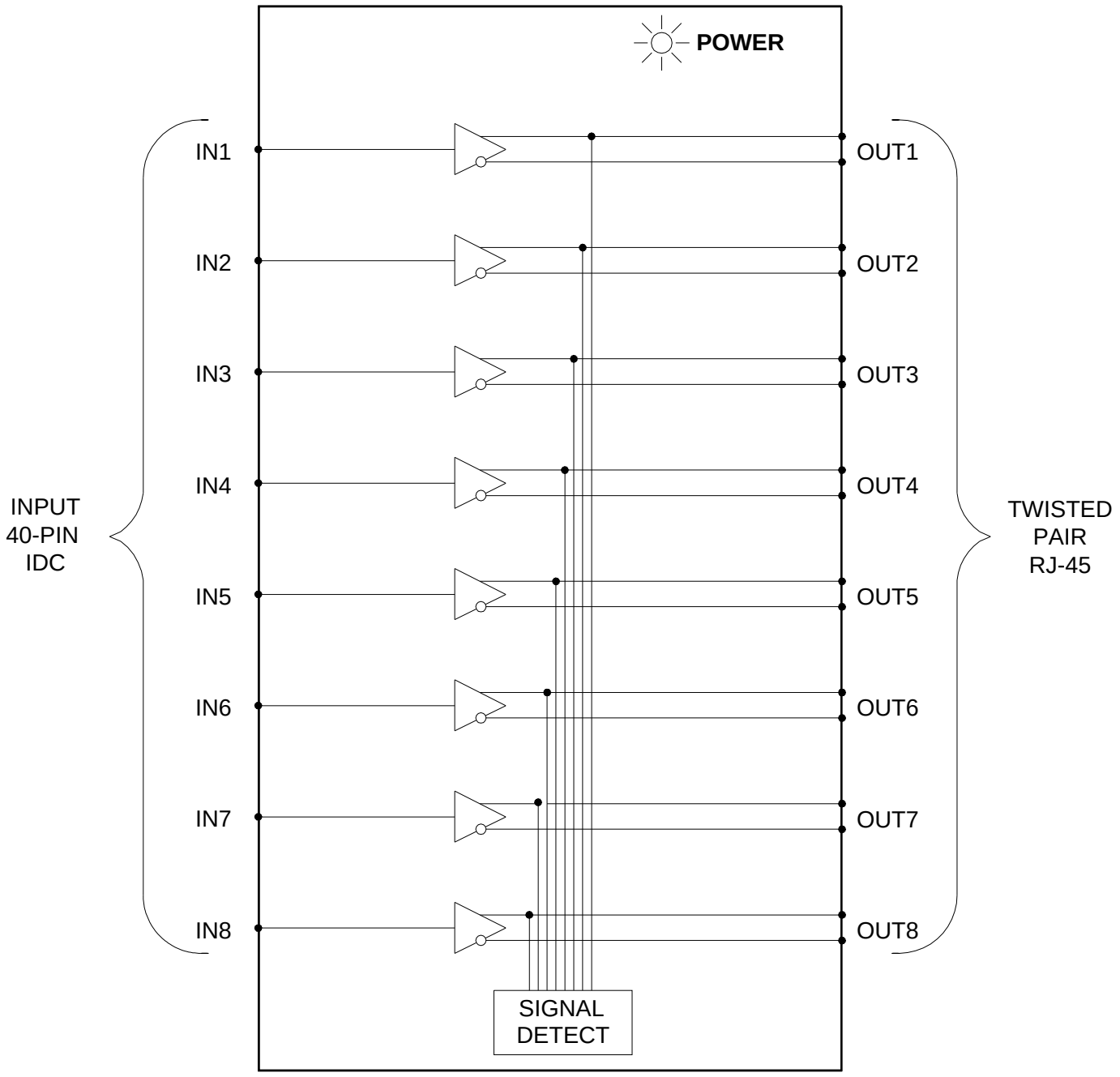


DIAGRAM 2: INTERNAL VIEW



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INSTALLING YOUR MT107-303 6

Step 1. Turn off power to the MultiTasker enclosure and remove the input AC power cord.

Step 2. Locate the MT107-104 currently installed in the MultiTasker. Verify there is an empty slot in the enclosure for the new **MT107-303** card.

The **MT107-303** must be installed directly to the right of the MT107-104 Matrix Engine. For example, if the engine is installed in slots 9 and 10, the first **MT107-303** output card should be installed in slot 11, the second in slot 12, and so on.

Step 3. Route the ribbon cables through the notch in the add-on boards and connect to the MT107-104 base assembly using the special high-bandwidth cables provided with the engine. Make sure the cable connector is secured in the socket of the output connector card.

Step 4. Attach the opposite end of the ribbon cable to the card and carefully slide the **MT107-303** into the empty slot in the MultiTasker enclosure.

Step 5. Secure the card by tightening the retainer screws at the top and bottom.

Step 6. Connect the output of the **MT107-303** to the input of a Twisted Pair receiver using ALTINEX cable part number MS8704TP.

Step 7. Restore AC power to the enclosure.

Step 8. The **MT107-303** is now ready for operation.

OPERATION 7

7.1 RS-232 CONTROL

The **MT107-303** has many advanced remote-control capabilities as part of an MT107-104 Matrix Switcher. These capabilities are accessible through standard RS-232 communication. The actual controlling can be accomplished through a computer control system or any other device capable of sending RS-232 commands.

7.2 DESCRIPTION OF COMMANDS

Please see the MT107-104 User's Guide for a full listing of commands available for the **MT107-303** as part of a MultiTasker Matrix Switcher.

TROUBLESHOOTING GUIDE 8

We have carefully tested and found no problems in the supplied **MT107-303.** However, we would like to offer suggestions for the following:

8.1 NO DISPLAY

Cause 1: The source has a problem.

Solution: Check the source and make sure that there is a signal present and all source connections are correct. If the source is working and there is still no display, see Cause 2.

Cause 2: The input signal is not detected.

Solution 1: In AVSnap®, or other control software, send the [SDI] command. This command is detailed in the MT107-104's User Guide. Verify a signal is detected for the output number in question. If a signal is not detected, see Solution 2.

Solution 2: Verify the **MT107-303** is connected to the MT107-104 and that the cable is in good condition. If a signal is detected, see Cause 3. If there is no signal detected, please call ALTINEX at (714) 990-2300.

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Cause 3: The path is not selected.

Solution: Make sure the input to output path is correctly selected.

For example, Input 2 is connected to Output 1 in the Matrix Engine status. Physically, the source signal should be connected to Input 2 and the display cable should be connected to Output 1. See RS-232 accessible commands in Section 7 of the MT107-104 User's Guide for command details.

If no display is present, see Cause 4.

Cause 4: Cable connections are incorrect.

Solution: Make sure that cables are properly connected. Also, make sure that the continuity and wiring are good. If there is still no display present, see Cause 5.

Cause 5: The display has a problem.

Solution: Make sure the display is powered and is turned on. If there is still no display, please call ALTINEX at (714) 990-2300.

ALTINEX POLICIES 9

9.1 LIMITED WARRANTY/RETURN POLICIES

Please see the ALTINEX website at www.altinex.com for details on warranty and return policies.

9.2 CONTACT INFORMATION

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