

Six- and Twelve-Channel Expansion Module

Miscellaneous Instructions

For Integration Units

Part Number 800-1811-42, Rev. A

Models:

5000E/6	5000E/12
5000E/6A	5000E12LD
5000E6DMA	

November 1995

Notice of Filing

Declaration of CE Conformance (for International sales)

A Declaration of CE Conformance is on file at the MICOM addresses shown below. The declaration lists the models described in this manual. If the unit carries the CE mark, this declaration certifies that it meets the specific EMC standards required for CE marking. If the product is a module, the module is CE-compliant only if it is placed in a MICOM CE-marked base unit.

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Any units not carrying the CE approval are not CE-compliant. Modules placed in these units may not meet emission standards for CE compliance.

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Notice

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Safety Warnings and Cautions

Various safety agencies request statements of warning or caution to help you in the safe operation of the MICOM unit. These statements also apply to any and all modules installed within the unit.

To ensure adequate cooling of the equipment a 2.0 inch unobstructed space must be maintained around all sides of the unit.

The ac power socket shall be installed near the equipment and shall be easily accessible.

Access to the interior of this unit shall be made only by a qualified technician.

Connection to the network is to be disconnected before the (mains) plug is removed.

Warning

Remove power plug from the power socket before performing any service work on the unit.

Lithium Battery Caution

Danger of explosion if battery is incorrectly replaced. Replace only with the same type or equivalent battery, as recommended by the manufacturer. Discard used batteries according to manufacturer's instructions.

The power supply is auto-ranging in this model.

The power supply cordset to be supplied in Europe must have 0.75²mm, 3 conductor "HAR" cord type H05VV-F, terminated in a grounding type Shucko plug on one end and a molded - on IEC 320 connector on the other end.

Technical Data

Input Volts	: 100-240 Vac -5%, +10%
Input Current	
Marathon	
5K Turbo, 10K, 20K	
NetRunner	
500ET, 1000E, 2000E	: 3A-1.5A
Marathon 2K, 3K	
NetRunner 75E	: 2A-1A
Frequency	: 47-63 Hz

Um die Kühlung des Gerätes nicht zu beschränken, ist es notwendig um das Gerät herum an allen Seiten ca 5 cm Raum zu lassen.

Stellen Sie das Gerät in der Nähe einer geerdeten Schutzkontaktsteckdose so auf, dass diese leicht erreichbar und zugänglich ist.

Der Zugang ins Innere des Gerätes ist nur einem qualifizierten Techniker gestattet.

Ehe der Netzstecker aus der Steckdose gezogen wird, müssen sämtliche äusserliche Verbindungen vom Gerät getrennt werden.

Warnung

Vor öffnen des Gerätes, muss der Netzstecker aus der Steckdose gezogen werden.

Lithium Batterie Warnung

Explosionsgefahr besteht wenn die Batterie nicht richtig ersetzt ist. Die Batterie darf nur mit einer gleichen oder gleichwertigen Batterie ersetzt werden.

Netzteil ist mit automatischer Umschaltung entsprechend der Versorgungsspannung versorgt.

Die Netzleitung sollte ein harmonisierter Typ (HAR) sein, mit der Bezeichnung H05VV-F oder H05VVH2-F, 3G 0.75²mm, mit einem Schutzkontakt - und einem Kaltgerätestecker (IEC 320).

Technische Daten

Nennspannung	: 100-240 V~ -5%, +10%
Nennstrom	
Marathon	
5K Turbo, 10K, 20K	
NetRunner	
500ET, 1000E, 2000E	: 3A-1.5A
Marathon 2K, 3K	
NetRunner 75E	: 2A-1A
Frequenz	: 47-63 Hz

Pour assurer un refroidissement adéquat, maintenir un espace libre de 5 cm (2 pouces) tout autour de l'appareil.

Installer la prise AC à proximité de l'appareil, dans un rayon d'accès facile.

Ouverture de cet appareil est permise par un technicien autorisé seulement.

Avant de débrancher la prise de courant, assurer que toutes les connexions externes ont été déconnecté de l'appareil.

Avertissement

Débrancher la prise de courant avant d'entreprendre aucun travail de réparation de l'appareil.

Batterie Au Lithium Avertissement

Un danger d'explosion existe si la batterie est remplacée incorrectement. Remplacer avec une batterie identique ou similaire, recommandée par le fabriquant. Disposer des batteries utilisées selon la méthode prescrite par le fabriquant.

Ce modèle s'adapte automatiquement au courant électrique ou voltage de la prise murale.

En Europe, brancher l'appareil à la prise murale au moyen d'un fil "HAR" comprenant 3 cables H05VV-F ou H05VVH2-F de 0.75²mm chacun, avec à une extrémité une prise de terre genre SHUCKO et à l'autre une prise IEC 320.

Donnees Techniques

Voltage d'Accès	: 100-240 V~ -5%, +10%
Courant d'Accès	
Marathon	
5K Turbo, 10K, 20K	
NetRunner	
500ET, 1000E, 2000E	: 3A-1.5A
Marathon 2K, 3K	
NetRunner 75E	: 2A-1A
Fréquence	: 47-63 Hz

Notification of FCC Requirements

NOTE: 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 instruction manual, 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.

Changes or modifications to this product, that could increase the amount of Radio Frequency Emissions from this product, without the expressed written approval of MICOM Communications Corp., could cause the product and the user to violate the FCC's Rules and Regulations, thus requiring the product to be turned off or disconnected.

If this unit is used on a DTE which requires use of shielded cables for compliance with FCC Part 15, then use of a filtered pin connector may be required to maintain FCC compliance. See the Installation section for specific applications.

Notification of Canadian Requirements

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

United Kingdom Requirement: Interconnection of Ports Warning

Interconnection directly, or by way of other apparatus, of ports marked "SAFETY WARNING. See instructions for use", with ports marked or not so marked may produce hazardous conditions on the network. The advice of a competent engineer must be obtained before such a connection is made. None of the ports provide isolation sufficient to satisfy the relevant parts of BS 6301. Apparatus connected to the ports, must either have been approved to the relevant parts of BS 6301 or to have been previously evaluated against BS 6301 British Telecom Technical Guides 2 or 26, and given permission to attach. Other usage will invalidate any approval given to this apparatus.

Any or all of the ports on the following modules may be configured as non-network ports:

- Communications Control Modules (CCM): 6 D-type ports
- Up to 4 Channel Expansion Modules (CEM): up to 6 D-type or 12 RJ45 ports
- LAN modules (including RTS, RLB, or IRM): AUI, BNC, and 8-pin modular jack ports
- NMS module: 1 log port, 1 command port
- Up to 4 2-port voice cards
- Alarm port

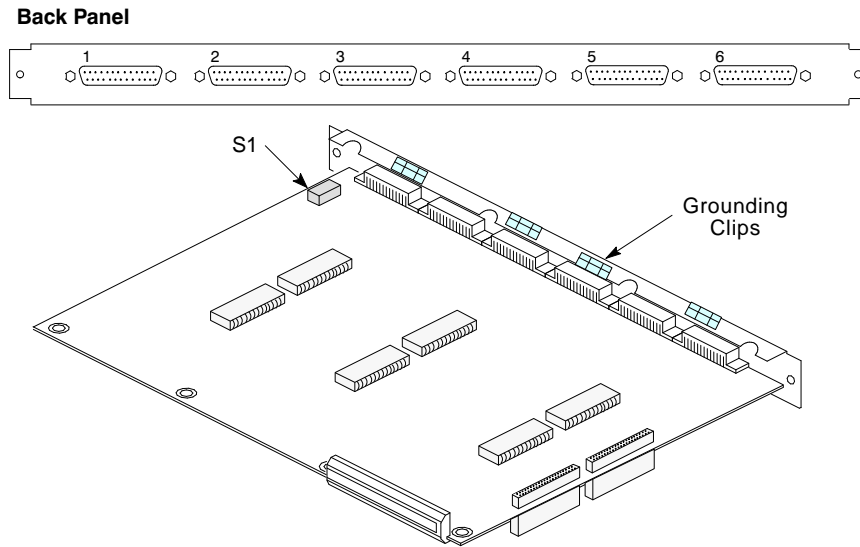
Introduction

The following table lists optional data channel expansion modules (CEM) for NetRunner, Marathon and STADIA integration hub (refer to Figures 1, 2 and 3).

Model No.	Connects to	Device Type	Used
5000E/6	six units	sync or async	For interconnect link channel expansion.
5000E/6A	six units	async	For standard channel expansion.
5000E/6DMA	six units	sync or async	As interconnect link for direct memory access (DMA).
5000E/12	twelve units	async	For standard channel expansion.
5000E/12LD	twelve units	async	Has built-in line drivers. Used with integration units that require longer cables.

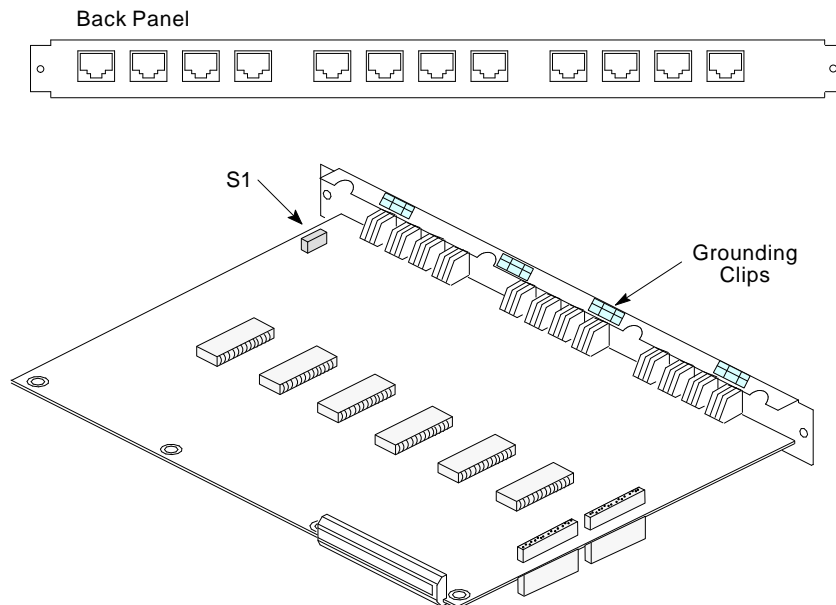
This manual provides cable and strapping information for the modules listed here. For detailed information about expansion module configuration, installation functionality or for information on the integration unit, refer to its Startup Guide or System Manual set.

In this manual, the NetRunner, Marathon and STADIA integration hub are hereafter referred to as an integration unit.



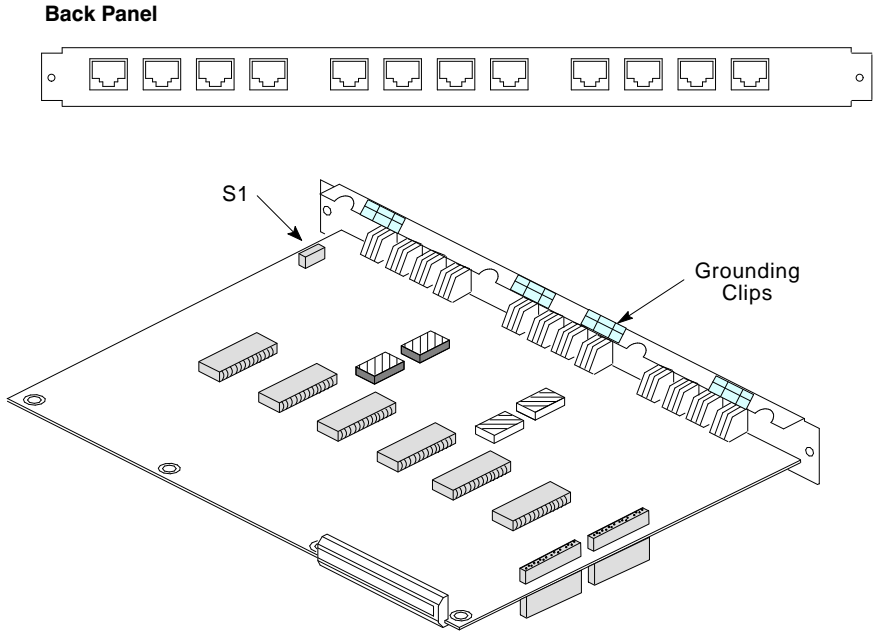
Note: Do not remove grounding clips. They must be on the back panel to ensure the unit meets regulatory agency standards.

Figure 1. Six-Channel Expansion Module Circuit Card and Back Panel



Note: Do not remove grounding clips. They must be on the back panel to ensure the unit meets regulatory agency standards.

Figure 2. 5000E/12 Twelve-Channel Expansion Module Circuit Card and Back Panel



Note: Do not remove grounding clips. They must be on the back panel to ensure the unit meets regulatory agency standards.

Figure 3. 5000E/12LD Twelve-Channel Expansion Module with Line Driver, Circuit Card and Back Panel

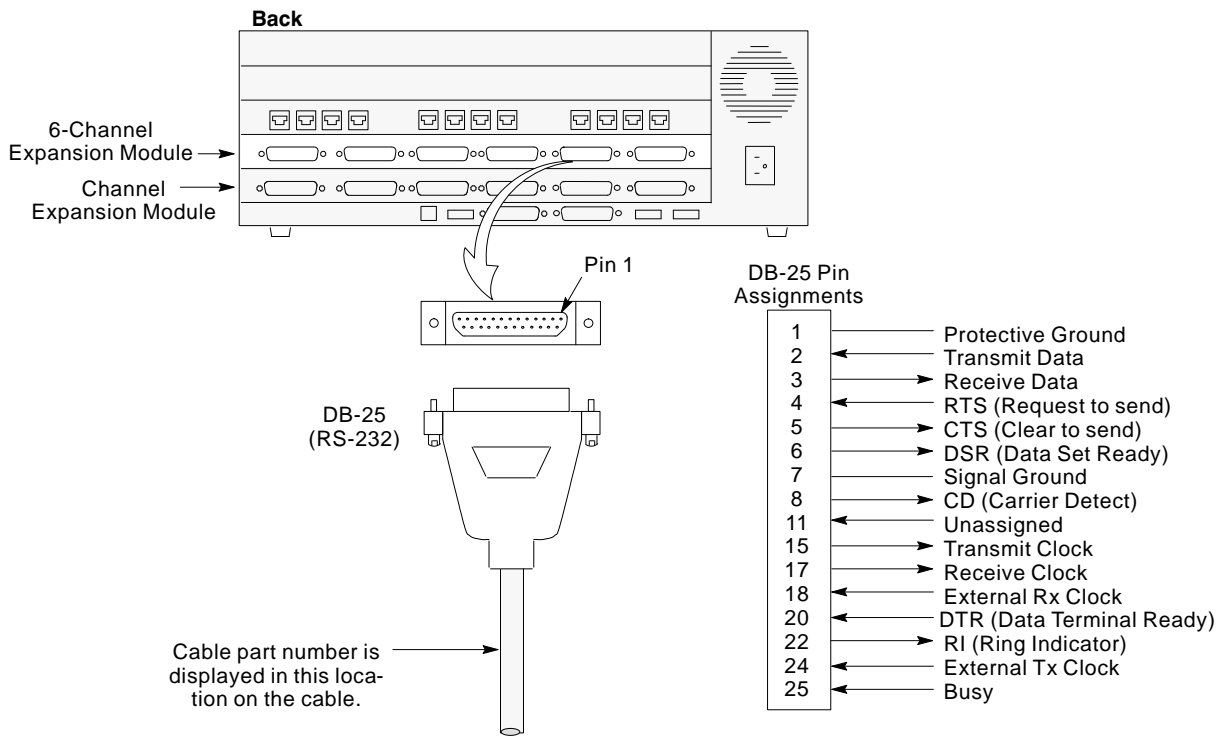
Connectors and Cabling

In many cases, the channel expansion module will arrive installed in the integration unit. If the Channel Expansion Module has not been pre-installed, refer to the unit's Installation Manual.

All cables connected to the channel expansion module must be shielded. This is to make sure that the unit complies with various standards and safety requirements.

Due to interference potential, cables should not be run parallel to ac wiring and should not be placed near fluorescent lights or other high magnetic fields.

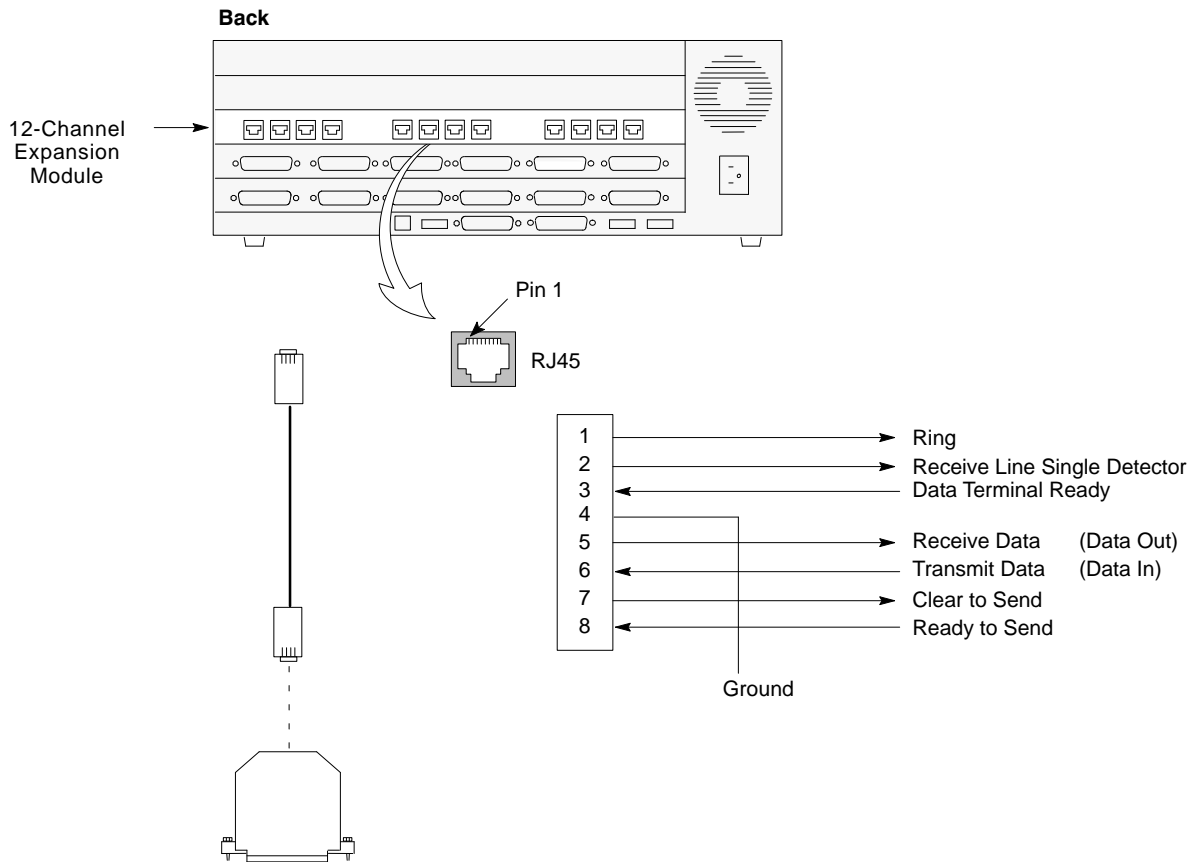
Figure 4 describes the pin assignments for six-channel expansion modules and lists the cables which may be used with them. Figures 5 and 6 describe the pin assignments for twelve-channel expansion modules and list the cables which may be used with them.



Module Description	Model No.	Type of Cable Connector	Cable Part No.	Application/Description
6-Channel Expansion Module	5000E/6	DB-25	345-5340-015	To DTE (Male) Straight
	5000E/6A	(RS-232)		
	5000E/6DMA	DCE	345-5341-015	To Modem, DCE (Male) Crossover

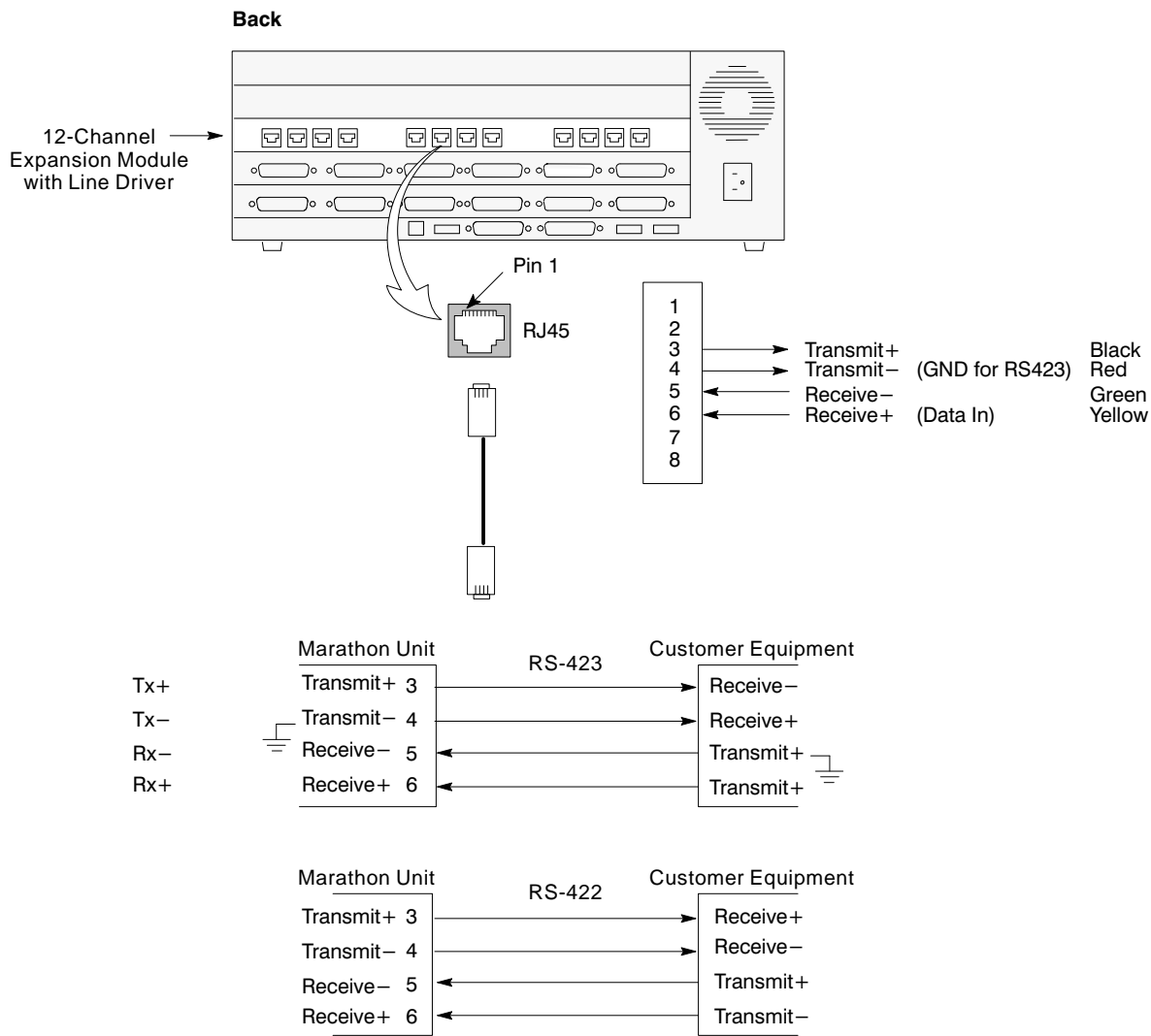
NOTE: See *Module Stacking Order* on page 11 for a discussion of possible stacking positions for Channel Expansion Module and Communications Control Module.

Figure 4. 5000E/6, 5000E/6A, and 5000E/6DMA Six-Channel Expansion Module Pin Assignments and Cable Information



Module Description	Model No.	Type of Cable Connector	Cable Part No. ¹	Application/Description
12-Channel Expansion Module	5000E/12	RJ45 (RJ-1D-to-RS-232) DCE	Adapters: 345-5348-001	To DTE (Male) Straight
			345-5349-001	To DCE (Male) Crossover
			345-5350-001	To DTE (Female) Straight
¹ Part number for U.S.A. and Canadian cables. Check with MICOM for international cable information.				

Figure 5. 5000E/12 Twelve-Channel Expansion Module Pin Assignments and Cable Information



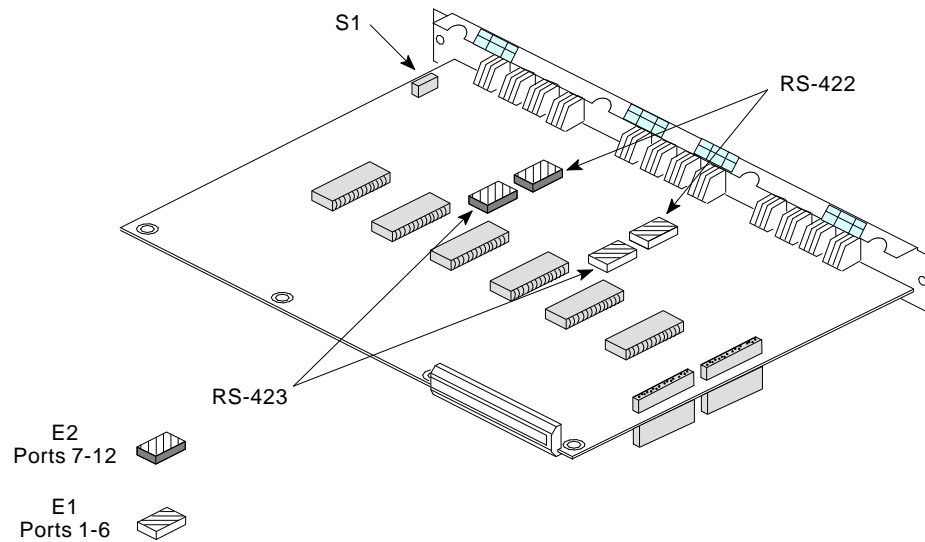
Module Description	Model No.	Type of Cable Connector	Cable Part No. ¹	Application/Description
12-Channel Expansion Module with Line Driver	5000E/12LD	RJ45 (RS422/423) DCE	345-1028-001	Straight cable, all applications
¹ Part number for U.S.A. and Canadian cables. Check with MICOM for International cable information.				

Figure 6. 5000E/12LD Twelve-Channel Expansion Module with Line Driver, Pin Assignments and Cable Information

Strapping the 5000E/12LD for RS-422 or RS-423 Operations

The 5000E/12LD twelve-channel expansion module with line driver can be strapped for RS-422 or RS-423 operations, but not for both. Jumpers for E1 (ports 1-6) and E2 (ports 7-12) must both be set identically, for either RS-422 or RS-423 operations.

Refer to Figure 12 for the jumper positions for E1 and E2. Use this figure to make sure your 5000E/12LD is configured as you would like it to be. If the configuration is incorrect, move the jumpers to the correct locations.



Note: The module can be configured for RS-422 or RS-423 operations, but not for both. Both E1 and E2 *must* be configured identically.

Figure 7. 5000E/LD 12-Channel Expansion Module with Line Driver, Showing E1 and E2 Jumper Locations for RS-422 and RS-423 Operations

READER'S COMMENTS

MICOM welcomes your evaluation of this manual and any suggestions you may have. These help us to improve the quality and usefulness of our publications.

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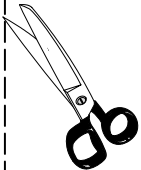
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