EXJSET™

Version 3.22

For the EXJ™ Register

Instruction Manual

TABLE OF CONTENTS

iii

*I*ntroduction

1

```
┌─────────────────────────────┐
│ Search Specifications       │
└─────────────────────────────┘
              │
┌─────────────────────────────┐
│ Meter Identification        │
└─────────────────────────────┘
              │
┌─────────────────────────────┐
│ Communications Parameters   │
└─────────────────────────────┘
              │
┌─────────────────────────────┐
│ Displayed Register Selection│
└─────────────────────────────┘
              │
┌─────────────────────────────┐
│ Channel Labels              │
└─────────────────────────────┘
              │
┌─────────────────────────────┐
│ Divisor/Decimal-Point       │
└─────────────────────────────┘
              │
┌─────────────────────────────┐
│ Demand Intervals            │
└─────────────────────────────┘
              │
┌─────────────────────────────┐
│ Miscellaneous               │
└─────────────────────────────┘
              │
┌─────────────────────────────┐        ┌─────────────────────────────┐
│ Total Register Values       │────────│ New Register Values         │
└─────────────────────────────┘        └─────────────────────────────┘
              │
┌─────────────────────────────┐        ┌─────────────────────────────┐
│ Password Selection          │────────│ New Password                │
└─────────────────────────────┘        └─────────────────────────────┘
              │
┌─────────────────────────────┐
│   Optional Setup - Menu     │
│                             │
│   Modem                     │
│   Mass Memory               │
│   KVA Calculation           │        ┌─────────────────────────────┐
│   Upload Format             │────────│ Upload Format Work Screen   │
│   Set Binary Read           │        └─────────────────────────────┘
│   Leave Optional Setup      │
│                             │
└─────────────────────────────┘
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This manual explains how to use EXJSET™ Software to configure the EXJ™ Register in JEM1 meters.

1-1

Many of JEM1's family of electronic meters contain the Scientific Columbus EXJ™ Register, a multifunction programmable register/communication's controller. This Instruction Manual is designed for people who wish to use the EXJSET™ software to configure EXJ Registers in JEM1 meters.

EXJSET software enables you to setup and modify the configuration of the EXJ registers in JEM1 solid-state meters. By using EXJSET, you can download configuration instructions by direct line or telephone modem. This set of instructions, called a record, will configure the meter's registers, allowing the meter to perform more functions, such as measuring electrical consumption during peak demand periods.

Each EXJ is divided into five channels: four standard channels and one to calculate the kilovolt amperes (kVA). The proper configuration of these channels expands the meter's usefulness, by providing adjustable parameters.

Organization of Manual

The manual is divided into four chapters:

Chapter 1	Introduction
Chapter 2	Search Specifications
Chapter 3	Meter Identification and Configuration
Chapter 4	Optional Setup Menu

There is also an Appendix listing the model numbers and channel assignments of JEM1 meters.

This manual is based on the 3.22 version of EXJSET software. It is to be used with the *EXJ Register User's Guide, Supplement to JEM1 User's Manual, Revision C (YD-09494-001-N)* when determining values for divisors and decimal points.

Version 3.22 of EXJSET software can be used to configure versions 1.56, 2.10, 2.11, 2.12, 2.20, 2.21, 2.22, and 2.23 of EXJ software. Not all of the above verisons of EXJ software exist; some of them are reserved for future use.

Throughout this manual, each stage of the configuration process is related to a specific computer screen, beginning with instructions regarding accessing and leaving each screen, followed by a text description, an illustration and information about the screen's use.

INTRODUCTION

Hardware and Software Requirements
Getting Started with EXJSET

Computer key references in this manual begin with capital letters, e.g., the F7 key, the PgUp key. Screen titles are shown in capital letters, e.g., the METER IDENTIFICATION screen.

Hardware and Software Requirements

EXJSET can be used on COMPAQ Desk Pro®, COMPAQ Desk Pro 286®, IBM PC/XT™, PC/AT™, or 100% compatible. The minimum hardware requirements are listed below:

1. 256K RAM.
2. One 360K Floppy disk drive.
3. CGA or equivalent video interface with color or monochrome monitor.
4. A serial port.

EXJSET should be used on a system running under DOS 3.0 or higher. In order for EXJSET to run properly, a config.sys file must have the file parameter set to at least 20 (FILES=20). See your DOS User's Reference for more information about config.sys files.

Getting Started with EXJSET

1. Open your EXJSET package. Open the envelope containing the program disks. Be sure you have the following items in your package. If you are missing anything, contact your Scientific Columbus representative immediately.

• 5-1/4" Disks:
  • 1-EXJSET Software Disk
• 3-1/2" Disks:
  • 1-EXJSET Software Disk
• The EXJSET™ Instruction Manual
• Customer Support Brochure
• EXJSET cable serial data 5 wire J-2, Part Number (10713-001)

2. Make a duplicate of your master diskette. Place the original in the vinyl disk pages provided and use the copies for installation. EXJSET is installed onto and executed from either a hard disk or a floppy disk.

3. To begin using EXJSET, simply place the software disk in your computer's A drive, go to the "A:" prompt, and type EXJSET. The SEARCH SPECIFICATION screen will immediately appear.
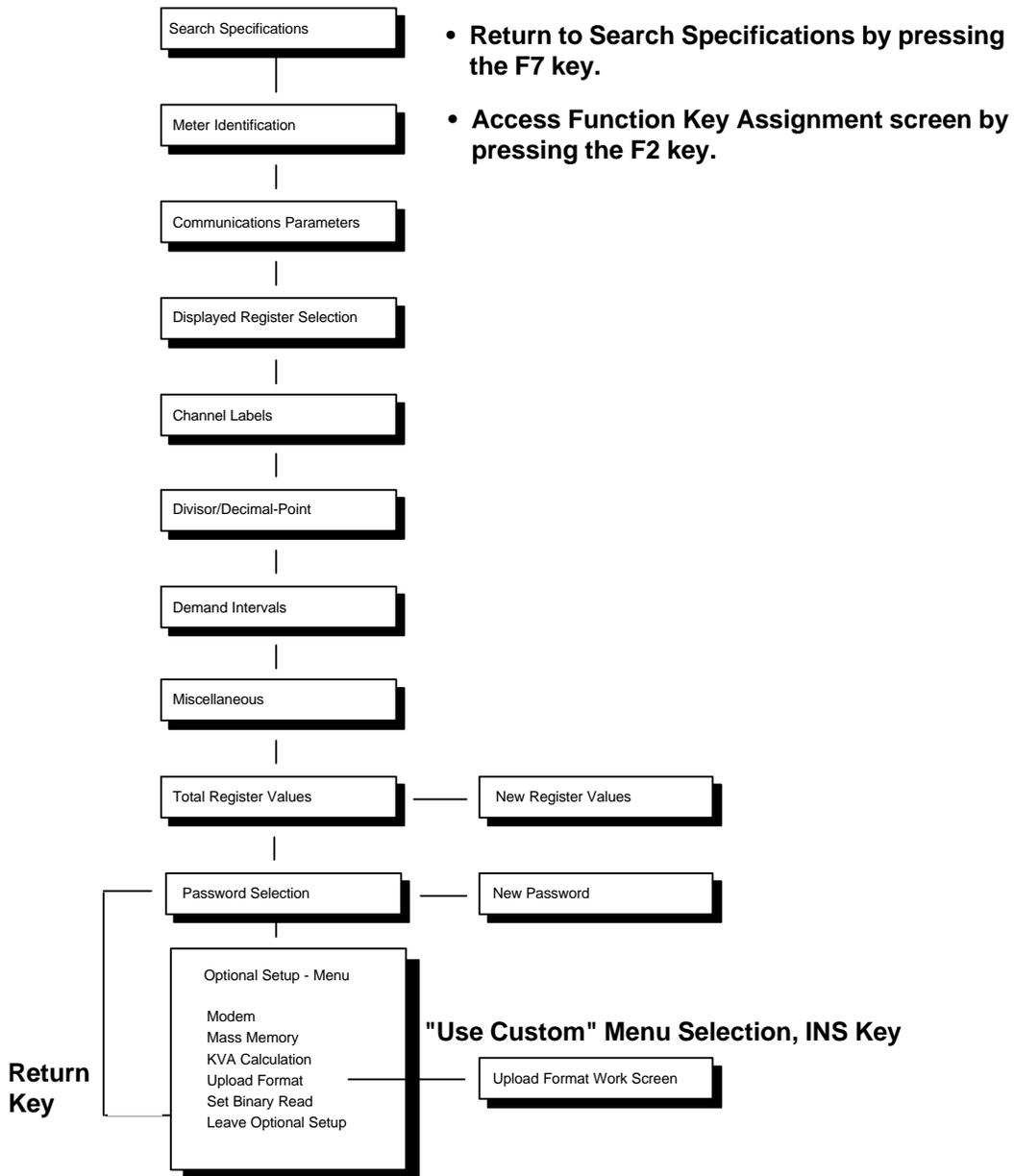
1

Screen Sequence

The following flow diagram presents the arrangement of the screens as you move through the configuration process.

| Search Specifications |

- **Return to Search Specifications by pressing the F7 key.**

- **Access Function Key Assignment screen by pressing the F2 key.**

| Meter Identification |

| Communications Parameters |

| Displayed Register Selection |

| Channel Labels |

| Divisor/Decimal-Point |

| Demand Intervals |

| Miscellaneous |

| Total Register Values | — | New Register Values |

| Password Selection | — | New Password |

Optional Setup - Menu

Modem
Mass Memory
KVA Calculation
Upload Format
Set Binary Read
Leave Optional Setup

Return Key

"Use Custom" Menu Selection, INS Key

| Upload Format Work Screen |

1-4

INTRODUCTION

• Except in special cases described later in this manual, you can move to the next screen in the configuration process by pressing the PgDn key and the previous screen with the PgUp key.

• You can return to the beginning of the configuration process (Meter Identification) by pressing Ctrl-Home.

• If you want to go to the Optional Setup menu while in the Configuration Process, press the Ctrl-End or PgUp keys.

HELP screens are available to you, throughout the software program, by pressing the F1 key.

After you have moved out of the SEARCH SPECIFICATION screen, you will have access to the FUNCTION KEY ASSIGNMENT screen shown below. Once the configuration process is complete, you will use this screen to add, clean, update or print records.

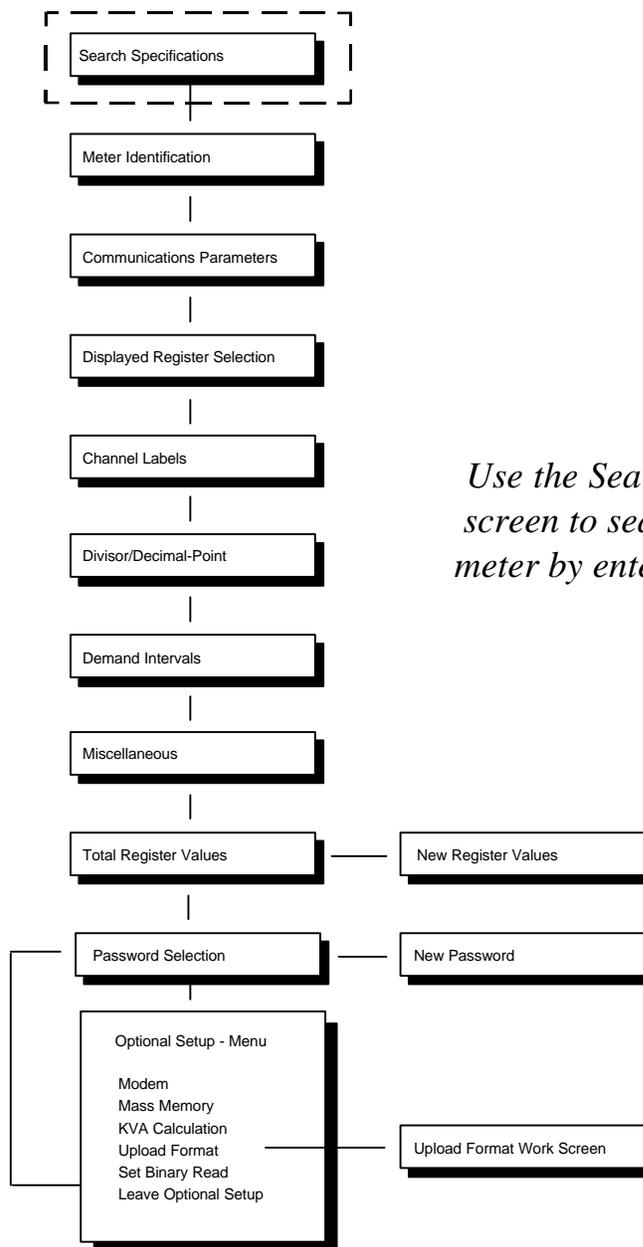|				
Function Key Assignment				
Help	F1		F2	This Screen
Previous Record	F3		F4	Next Record
Clean Record	SFT F5		F6	Update Record
Add Record	F5			
Enter Search Fields	F7		F8	Print Record
Previous Match	F9		F10	Next Match
Press any key to return				

For More Information

Please read, fill out, and send in the
"Customer Support Plan" card found in
the inside front pocket of the "Data
Management Products" binder.
Registering this card grants you Scientific
Columbus' warranty and provides you
with customer support services offered by
our Product Support Group.

*S*earch *S*pecifications

Search Specifications

Meter Identification

Communications Parameters

Displayed Register Selection

Channel Labels

Divisor/Decimal-Point

Demand Intervals

Miscellaneous

Total Register Values — New Register Values

Password Selection — New Password

Optional Setup - Menu

Modem
Mass Memory
KVA Calculation
Upload Format — Upload Format Work Screen
Set Binary Read
Leave Optional Setup

Use the Search Specifications screen to search for a specific meter by entering valid search parameters.

2-1

SEARCH SPECIFICATIONS

Accessing, Leaving, Using

Accessing and Leaving the Search Specification Screen

When you enter the EXJSET software, the first Configuration Screen you see is the SEARCH SPECIFICATION screen.

If you are already connected by a direct line to a group of pre-configured meters, you can immediately search for a specific meter by entering any or all of the valid search parameters into the blank fields of the SEARCH SPECIFICATION screen. If you have previously saved records, you can use this screen to search for a specific record. Valid search parameters to locate a specific meter are the meter's Serial Number, Model Number, Version and Name.

Press the PgDn key and the EXJSET software will move you to the METER IDENTIFICATION screen, then press F10 to search for a record that matches your specifications.

If you don't want to initiate a record search, press the PgDn key and you will move to a blank METER IDENTIFICATION screen, where you can create a new record.

If you wish to return to the SEARCH SPECIFICATION screen at a later point in the configuration process, press the F7 key.

Using the Search Specification Screen

The SEARCH SPECIFICATION screen allows you to specify the search parameters for records already created and saved in the database. EXJSET can search for one, or any combination of two or more, of the following parameters you have previously assigned to the records:

• Serial number
• Model number
• Version number
• Name

Once you have specified the search parameters for a record-search operation, you can leave this screen and begin the search through the records in the system's database by pressing the F10 key to search forward and the F9 key to search backward.

Setting the Search Parameters

2

To specify one of more of the search
parameters, use the Up- and Down-Arrow
keys (or Tab/Shift-Tab key operations) to
move the highlighted field. Type the
appropriate characters into the field and
press the Enter key to complete the
selection.

Suppose you want to search for records
created for meters having Model number
232P. First use the Up- or Down-Arrow
keys to move the highlighted cursor to the
Model field, then type 232P and press the
Enter key. The cursor will move over to
the Version filed, where you can narrow
the search to Version parameters by
entering the desired version in this field.

If you change your mind about using a
search parameter you have already
entered, move the highlighted cursor to
that field and enter the revised data. You
can eliminate an entire field from the
search specification by entering all blanks
in the field.

After you have established your search
specifications, press the PgDn key and
then the F10 key to initiate the search. If
no match is found, EXJSET will give you
the error message: "Record Not Found."
In this case, you should review and adjust
your search specifications, or establish a
new record through the METER
IDENTIFICATION screen.

Meter Configuration 3

```
┌─────────────────────────┐
│  Search Specifications  │
└─────────────────────────┘
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─
  ┌─────────────────────────┐
  │   Meter Identification  │
  └─────────────────────────┘

  ┌─────────────────────────┐
  │ Communications Parameters│
  └─────────────────────────┘

  ┌─────────────────────────────┐
  │ Displayed Register Selection │
  └─────────────────────────────┘

  ┌─────────────────────────┐
  │     Channel Labels      │
  └─────────────────────────┘

  ┌─────────────────────────┐
  │   Divisor/Decimal-Point │
  └─────────────────────────┘

  ┌─────────────────────────┐
  │    Demand Intervals     │
  └─────────────────────────┘

  ┌─────────────────────────┐
  │     Miscellaneous       │
  └─────────────────────────┘
```
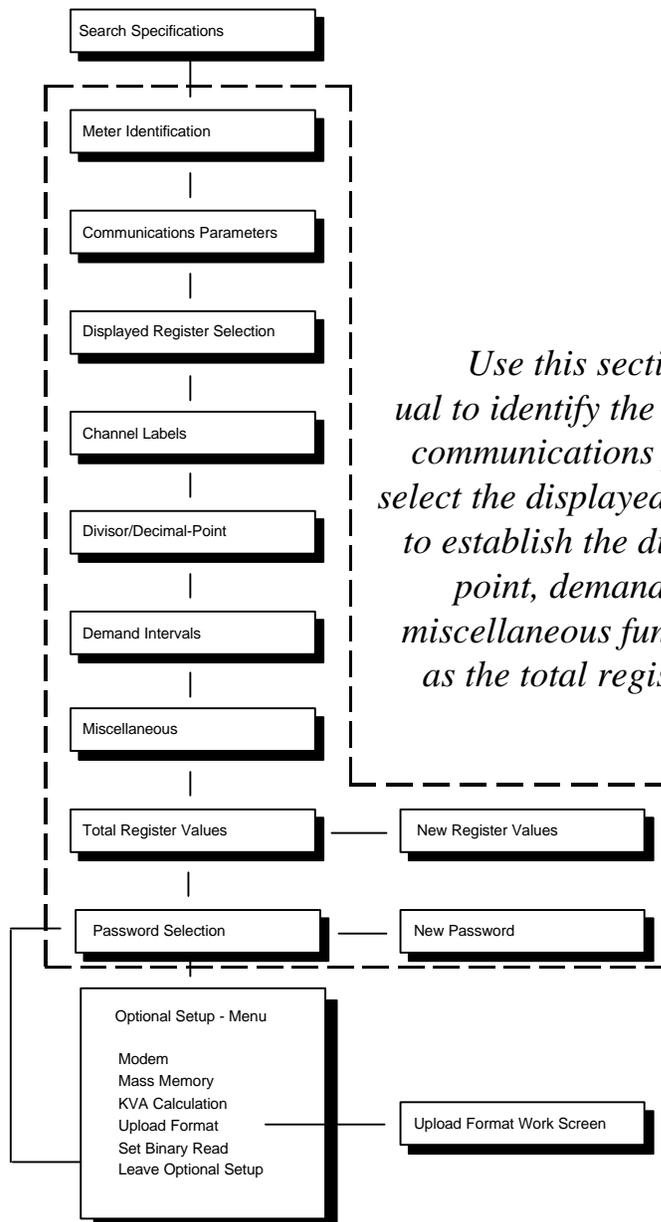
Use this section of the manual to identify the meter, to setup communications parameters, to select the displayed registers, and to establish the divisor/decimal-point, demand intervals, and miscellaneous functions, as well as the total register values and password.

```
  ┌─────────────────────────┐      ┌─────────────────────────┐
  │  Total Register Values  │──────│   New Register Values   │
  └─────────────────────────┘      └─────────────────────────┘

  ┌─────────────────────────┐      ┌─────────────────────────┐
  │   Password Selection    │──────│      New Password       │
  └─────────────────────────┘      └─────────────────────────┘
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─

  ┌─────────────────────────┐
  │  Optional Setup - Menu  │
  │                         │
  │   Modem                 │
  │   Mass Memory           │
  │   KVA Calculation       │      ┌──────────────────────────┐
  │   Upload Format         │──────│ Upload Format Work Screen│
  │   Set Binary Read       │      └──────────────────────────┘
  │   Leave Optional Setup  │
  └─────────────────────────┘
```

METER IDENTIFICATION AND CONFIGURATION

Meter Identification Screen

Accessing and Leaving the Meter Identification Screen

The procedure for accessing the METER IDENTIFICATION screen depends on where you are in the system at the time you want to access it:

- If you are in the SEARCH SPECIFICATION screen, pressing the PgDn screen takes you directly to the METER IDENTIFICATION screen.

- From any screen except SEARCH SPECIFICATION, you can always "page up" to METER IDENTIFICATION by repeatedly pressing the PgUp key.

From any of the screens in the main configuration sequence, you can go directly to the METER IDENTIFICATION screen by holding down the Ctrl key and pressing the Home key (Ctrl-Home). If you are working with one of the Optional Setup screens, you must PgUp or PgDn to the OPTIONAL SETUP menu before a Ctrl-Home operation can take you directly to the METER IDENTIFICATION screen.

The procedure for leaving the METER IDENTIFICATION screen depends on where you want to go:

- Press the F7 key if you want to go to the SEARCH SPECIFICATION screen.
- Press the PgDn key if you want to go to the next screen in the main sequence, the COMMUNICATIONS PARAMETERS screen.
- Hold down the Ctrl key and press the End key if you want to go directly to the OPTIONAL SETUP menu.

Since METER IDENTIFICATION is the first screen in the main configuration sequence, pressing the PgUp key does not allow you to leave this screen.

From the METER IDENTIFICATION screen, you can specify the parameters subsequently used for locating the record during a search operation. These parameters are the meter's:

- Serial number
- Model number
- Version
- Name

Fields are also provided for entering some optional information that appears only on printouts of the record:

- Location
- City
- State
- Zip Code

METER IDENTIFICATION AND CONFIGURATION

3

Using the Meter Identification Screen

The METER IDENTIFICATION screen serves two important purposes.

1. It provides the means for identifying a specific meter and its database record for searching and record-keeping purposes. A unique file number for each database record appears in the lower right of this screen.

2. It provides the menu options for three critical EXJSET operations:

   - CONFIGURE METER
   - DELETE RECORD
   - EXIT PROGRAM

```
┌─────────────────────────────────────────────┐
│        JEM-1/EXJ CONFIGURATION SYSTEM         │
│            ─── METER IDENTIFICATION ───       │
│  ┌────────────┐ ┌──────────┐ ┌────────────┐   │
│  │ SERIAL  ▇▇ │ │ MODEL    │ │ VERSION    │   │
│  └────────────┘ └──────────┘ └────────────┘   │
│   ┌─────────────────────────────────────┐     │
│   │ NAME     │                          │     │
│   │ LOCATION │                          │     │
│   └─────────────────────────────────────┘     │
│   ┌─────────────────────────────────────┐     │
│   │ CITY     │                          │     │
│   │ STATE    │     ZIP CODE             │     │
│   └─────────────────────────────────────┘     │
│  ┌──────────────┬──────────────┬───────────┐  │
│  │CONFIGURE METER│DELETE RECORD │EXIT PROGRAM│ │
│  └──────────────┴──────────────┴───────────┘  │
│  F2-KEYS  F5-ADD  F8-PRINT  F9-SRCH BKWD  F10-SRCH FWD   0 │
└─────────────────────────────────────────────┘
```

Entering Meter Identification Data

You can enter or revise the data in any of the meter identification fields. Use the Up- and Down-Arrow keys (or Tab and Shift-Tab keystrokes) to move the highlighted cursor to the desired field. Type the desired information in the field, then press the Enter key to complete the entry.

Selecting One of the Menu Options

The three items arranged along the bottom of the METER IDENTIFICATION screen are menu options. You cannot type data into them.

When you are ready to leave the EXJSET software and return your computer to its main operating system (DOS), move the highlighted cursor to the EXIT PROGRAM option and press the Enter key. This operation is available at all times.

The two other menu options, CONFIGURE METER and DELETE RECORD, are not accessible until the configuration process is complete. For instance, you cannot configure or delete a meter with record #0. (The record number appears in the lower-right corner.) Once the configuration process is complete, you can initiate either of these operations by moving the highlighted cursor to the desired item and pressing the Enter key.

METER IDENTIFICATION AND CONFIGURATION

Communications Parameters Screen

Accessing the Communications Parameters Screen

The COMMUNICATIONS PARAMETERS screen can be accessed only by doing a PgDn from the previous screen (METER IDENTIFICATION) or PgUp from the subsequent screen in the main sequence (DISPLAYED REGISTER SELECTION).

Using the Communications Parameters Screen

The COMMUNICATIONS PARAMETERS screen specifies the communications format, meter address, computer port to be used for configuration operations, and whether or not communications between the computer and meter will be direct or through a modem.

This screen provides a means for specifying four kinds of configuration parameters:

1. the actual communications format for the meter
2. the meter's address
3. whether the configuration process is to take place over a direct or modem (telephone) connection
4. which computer port to be used: COM1 or COM2.

If you need to connect to a group of meters by modem, you can use the COMMUNICATIONS PARAMETERS screen to perform this function. Move the highlighted cursor to the desired item in the Connection field and press the Enter key. Whenever you select the MODEM COM1 or MODEM COM2 option in this fashion, a Phone No. box appears below the Connection menu. Type the telephone number that was used for making the modem connection with the meter.

Note: The EXJSET software assumes your telephone system uses tone dialing. If only pulse dialing is available, prefix the telephone number with an uppercase letter P. For example: P221-4495. If you will be dialing through a PBX system or "outside line", place a comma between the 9 (the usual prefix number) and the phone number, itself. For example: 9,221-4495. If you are dialing long distance, include all numbers dialed, i.e., 1-area code-number.

METER IDENTIFICATION AND CONFIGURATION

You can change the Phone No. entry by typing the new number in the Phone No. field.

```
┌─────────────────────────────────────────┐
│      JEM-1/EXJ CONFIGURATION SYSTEM      │
│                                          │
│  ┌────────────────────────────────────┐ │
│  │      COMMUNICATIONS PARAMETERS      │ │
│  │                                     │ │
│  │ ┌─────────────────────────────────┐ │ │
│  │ │ Baud Rate, Parity, Data Bits,   │ │ │
│  │ │          Stop Bit               │ │ │
│  │ │                                 │ │ │
│  │ │ 300,E,7,1   300,0,7,1  300,N,8,1│ │ │
│  │ │ 600,E,7,1   600,0,7,1  600,N,8,1│ │ │
│  │ │1200,E,7,1  1200,0,7,1 ∅1200,N,8,1│ │ │
│  │ └─────────────────────────────────┘ │ │
│  │                    Use 1200,N,8,1 for│ │
│  │ ┌──────────────┐   JART compatibility│ │
│  │ │Meter Address │ 10 │                │ │
│  │ └──────────────┘                    │ │
│  │ ┌─────────────────────────────────┐ │ │
│  │ │          Connection             │ │ │
│  │ │                                 │ │ │
│  │ │ ∅DIRECT COM1   MODEM COM1       │ │ │
│  │ │  DIRECT COM2   MODEM COM2 ┌─────┐│ │ │
│  │ │              Phone No. 221-4495  │ │ │
│  │ └─────────────────────────────────┘ │ │
│  └────────────────────────────────────┘ │
│ F1-HELP                          #     0 │
└─────────────────────────────────────────┘
```

The upper portion of the screen is a menu of communications formats, including the baud rate, parity, number of data bits and number of stop hits. The currently selected format is highlighted on the screen and has an arrow pointing to it. To change the communications-format selection, use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to move the highlighted cursor to the desired item. Then press the Enter key to complete the selection.

To set the Meter Address, use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to move the highlighted cursor to the Meter Address field. Type the desired meter address and press the Enter key.

The Connection menu lets you specify whether you want the next CONFIGURE METER operation to take place via a direct connection to the meter or through a modem. The currently selected option is highlighted on the screen and has an arrow pointing to it.

To change the Connection selection, move the highlighted cursor to the desired item in the Connection field and press the Enter key.

Note: When using the modem option, the Baud rate must be set to 1200 baud.

METER IDENTIFICATION AND CONFIGURATION

Displayed Register Selection Screen

Accessing the Displayed Register Selection Screen

The DISPLAYED REGISTER SELECTION screen can be accessed only by doing a PgDn from the previous screen (COMMUNICATIONS PARAMETERS) or a PgUp from the subsequent screen in the main sequence (CHANNEL LABELS).

Using the Displayed Register Selection Screen

The purpose of the DISPLAYED REGISTER SELECTION SCREEN is to select the register values that are to appear on the display.

Use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to move the highlighted cursor to the item to be changed. Press the Y or N keys to select Yes or No, or press the Left- or Right-Arrow keys to toggle to the opposite response.

JEM-1/EXJ CONFIGURATION SYSTEM

DISPLAYED REGISTER SELECTION

	TOTAL DEMAND	PkDMD	CumDMD	1minDMD	TimeOf PeakDMD
CH1	No	No	No	No	No	No
CH2	No	No	No	No	No	No
CH3	No	No	No	No	No	No
CH4	No	No	No	No	No	No
CH5		No	No	No	No	No

Select "Yes" to display, "No" to not display.

F1-HELP   #   0

METER IDENTIFICATION AND CONFIGURATION

Channel Labels Screen

3

Accessing the Channel Labels Screen

The CHANNEL LABELS screen can be accessed only by doing a PgDn from the previous screen (DISPLAYED REGISTER SELECTION) or a PgUp from the subsequent screen in the main sequence (DIVISOR/DECIMAL-POINT).

Using the Channel Labels Screen

The CHANNEL LABELS screen allows you to assign names to each of the channels. A different name can be assigned to the total register and demand registers for each channel.

Use the Up- and Down-Arrow keys, or Tab/Shift-Tab keystrokes, to move the highlighted cursor to the desired entry field. Type the desired information into the field and press the Enter key to complete the entry.

```
┌─────────────────────────────────────────────────┐
│         JEM-1/EXJ CONFIGURATION SYSTEM           │
│                 CHANNEL LABELS                   │
│              ┌────────┐┌────────┐┌────────┐      │
│              │ TOTAL  ││ DEMAND ││CHANNEL │      │
│              │REGISTER││REGISTERS││DIRECTION│     │
│              └────────┘└────────┘└────────┘      │
│  ┌─────────┐ ┌──────┐  ┌──────┐  ┌──────┐        │
│  │CHANNEL 1│ │████ h│  │      │  │      │        │
│  └─────────┘ └──────┘  └──────┘  └──────┘        │
│  ┌─────────┐ ┌──────┐  ┌──────┐  ┌──────┐        │
│  │CHANNEL 2│ │    h │  │      │  │      │        │
│  └─────────┘ └──────┘  └──────┘  └──────┘        │
│  ┌─────────┐ ┌──────┐  ┌──────┐  ┌──────┐        │
│  │CHANNEL 3│ │    h │  │      │  │      │        │
│  └─────────┘ └──────┘  └──────┘  └──────┘        │
│  ┌─────────┐ ┌──────┐  ┌──────┐  ┌──────┐        │
│  │CHANNEL 4│ │    h │  │      │  │      │        │
│  └─────────┘ └──────┘  └──────┘  └──────┘        │
│  ┌─────────┐ ┌──────┐  ┌──────┐  ┌──────┐        │
│  │CHANNEL 5│ │//////│  │      │  │      │        │
│  └─────────┘ └──────┘  └──────┘  └──────┘        │
│  CAUTION: The entries on this screen affect only │
│           the channel names displayed on the     │
│           EXJ. The types of measurements which    │
│           the EXJ accumulates are determined by   │
│           the JEM-1 hardware configuration and    │
│           are not affected by renaming the        │
│           channels. See the JEM-1 manual to find  │
│  F1-HELP  the channel assignments for any JEM-1   │
│           model number.                    #   0  │
└─────────────────────────────────────────────────┘
```

METER IDENTIFICATION AND CONFIGURATION

Divisor/Decimal-Point Screen

Accessing the Divisor/Decimal-Point Screen

The DIVISOR/DECIMAL-POINT screen can be accessed only by doing a PgDn from the previous screen (CHANNEL LABELS) or a PgUp from the subsequent screen in the main sequence (DEMAND INTERVALS).

Using the Divisor/Decimal-Point Screen

The DIVISOR/DECIMAL-POINT screen provides the means for specifying the decimal point location on register displays and specifying the scaling divisor for calculating the register data. See the *EXJ Register User's Manual, Supplement to JEM1 User's Manual, Revision C* for more information about determining values for divisors and decimal points.

Use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to position the highlighted cursor in the field where you want to enter divisor or decimal-point values. Type the desired value and press the Enter key to complete the entry.

```
          JEM-1/EXJ CONFIGURATION SYSTEM
                   CHANNEL LABELS


              ┌──────────┬─────────────────────────┐
              │TOTAL REG │ DECIMAL POINT LOCATION** │
              │DIVISOR * ├───────────┬─────────────┤
              │          │ TOTAL REG │ DEMAND REGS │
  ┌───────────┼──────────┼───────────┼─────────────┤
  │ CHANNEL 1 │    1     │     6     │      6      │
  ├───────────┼──────────┼───────────┼─────────────┤
  │ CHANNEL 2 │    1     │     6     │      6      │
  ├───────────┼──────────┼───────────┼─────────────┤
  │ CHANNEL 3 │    1     │     6     │      6      │
  ├───────────┼──────────┼───────────┼─────────────┤
  │ CHANNEL 4 │    1     │     6     │      6      │
  ├───────────┼──────────┼───────────┼─────────────┤
  │ CHANNEL 5 │//////////│//////////│      6      │
  └───────────┴──────────┴───────────┴─────────────┘

   *   This entry affects   ** EXAMPLES:
       only the total registers.  For a display of XXXXXX enter 6.
                                   For a display of XXXX.XX enter 4.
                                   For a display of X.XXXXX enter 1.

  F1-HELP                                      #    0
```

3-8

METER IDENTIFICATION AND CONFIGURATION

Demand Intervals Screen

Accessing the Demand Intervals Screen

The DEMAND INTERVALS screen can be accessed only by doing a PgDn from the previous screen (DIVISOR/ DECIMAL-POINT) or a PgUp from the subsequent screen in the main sequence (MISCELLANEOUS).

Using the Demand Intervals Screen

This screen allows you to select a demand interval and demand sub-interval for the meter.

Use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to move the highlighted cursor to the item to be changed. Enter the desired interval from the keyboard and press the Enter key to complete the entry. The rules for determining these values are strict, and the system will not allow you to leave this screen until the values are consistent with those rules.

For example, DEMAND INTERVAL MINUTES, must be a value evenly divisible into 60; that is, 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60.

Permissible values for SUB INTERVAL MINUTES depend upon the value you enter for DEMAND INTERVAL MINUTES. First, the value for the sub-interval must be evenly divisible into the current demand interval; and second, the result of the division must be 15 or less. A block interval is set by making SUB INTERVAL MINUTES equal to DEMAND INTERVAL MINUTES.

```
┌─────────────────────────────────────────┐
│                                          │
│      JEM-1/EXJ CONFIGURATION SYSTEM      │
│                                          │
│                                          │
│   ┌──────────────────────────────────┐   │
│   │ DEMAND INTERVAL MINUTES     15   │   │
│   ├──────────────────────────────────┤   │
│   │ SUB INTERVAL MINUTES        15   │   │
│   └──────────────────────────────────┘   │
│                                          │
│                                          │
│      NOTE:  For block interval set the Sub interval│
│             mintues to the same value as the       │
│             Demand interval minutes.               │
│                                          │
│                                          │
│                                          │
│ F1-HELP                           #    0 │
└─────────────────────────────────────────┘
```

METER IDENTIFICATION AND CONFIGURATION

Miscellaneous Screen

Accessing the Miscellaneous Screen

The MISCELLANEOUS screen can be accessed only by doing a PgDn keystroke from the previous screen (DEMAND INTERVALS) or a PgUp from the subsequent screen in the main sequence (TOTAL REGISTER VALUES).

Using the Miscellaneous Screen

The MISCELLANEOUS screen offers a variety of settings, including the line frequency, clock and timing operations, BCC-check on/off, Auto Freeze at midnight, and Auto print on/off. See *EXJ Register User's Manual, Supplement to JEM1 User's Manual, Revision C* for more information about each of these items.

The Line Freq parameter can be set to 50 or 60 Hz. The current selection is highlighted on the screen and has an arrow pointing to it. To change the line-frequency setting, move the highlighted cursor to the desired line frequency, then press the Enter key to complete the selection.

The remaining items on the screen can be changed between Yes and No in the following way:
(1) Use the Up- and Down-Arrow keys, or Tab/Shift-Tab keystrokes, to move the highlighted cursor to the Yes/No item to be changed.
(2) Press the Y or N key to set the parameter as desired, or use the Left- or Right-Arrow keys to toggle the selection between Yes and No.

```
        JEM-1/EXJ CONFIGURATION SYSTEM


                    MISCELLANEOUS

     Line Freq                50 ∅60 Hz

     Clock Enabled            Yes   (Yes/No)
     Line Sync                Yes   (Yes/No)
     Set EXJ to Computer Time Yes   (Yes/No)
     Daylight Savings Time    Yes   (Yes/No)
     Auto freeze at midnight  No    (Yes/No)

     External interval tracking No  (Yes/No)
     Check BCC                No    (Yes/No)
     Auto Print               No    (Yes/No)


 F1-HELP                                    #    0
```

METER IDENTIFICATION AND CONFIGURATION

Accessing the Total Register Values Screen

The TOTAL REGISTER VALUES screen can be accessed only by doing a PgDn keystroke from the previous screen (MISCELLANEOUS) or PgUp keystroke from the subsequent screen in the main configuration sequence (PASSWORD SELECTION).

Using the Total Register Values Screen

The TOTAL REGISTER VALUES screen allows you to determine whether you want the meter to use its present register values or to use values you preset from this screen. If you choose to preset the total consumption register values, you can set them for channels 1 through 4.

The two items on the menu located near the top of the screen let you select whether you want to use the current register values or preset those values during the next CONFIGURE METER operation. The currently selected item on this menu is highlighted on the screen and has an arrow pointing to it. To change the selection, move the highlighted cursor to the desired item and press the Enter key to complete the selection.

Whenever you select the second item, ALLOW USER PRESET REGISTERS and press enter, a REGISTER VALUES WORKSCREEN appears on the screen. Use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to move the highlighted cursor to the register field you want to change. Type the desired preset values, then press the Enter key.

Note: Register preset values entered on this screen are not permanently stored in the database. Once the meter is configured with the specified preset values, those values are removed from the record in the database.

JEM-1/EXJ CONFIGURATION SYSTEM

TOTAL REGISTER VALUES

∅ USE EXISTING REGISTER VALUES
ALLOW USER PRESET REGISTERS

	NEW TOTAL REG VALUES
CHANNEL 1	000000
CHANNEL 2	000000
CHANNEL 3	000000
CHANNEL 4	000000

F1-HELP   #   0

METER IDENTIFICATION AND CONFIGURATION

Password Selection Screen

Accessing the Password Selection Screen

The PASSWORD SELECTION screen can be accessed only by doing a PgDn keystroke from the previous screen (TOTAL REGISTER VALUES) or a PgUp keystroke from the subsequent screen in the main sequence (OPTIONAL SETUP menu).

Using the Password Selection Screen

The initial password is the EXJSET's cold start password, 000000. The PASSWORD SELECTION screen gives you the option of retaining the current password or entering a new one.

The two items on the menu located near the top of the screen let you select whether you want to leave the EXJSET's current password unchanged or set a new password to be used after you have complete the next CONFIGURE METER operation for the meter. The currently selected item on this menu is highlighted on the screen and has an arrow pointing to it. To change the selection, move the highlighted cursor to the desired item and press the Enter key to complete the selection.

Whenever you select the second item, CHANGE PASSWORD and press enter, a block appears where you are to enter the new password. Move the highlighted cursor to this block, then enter the new password.

```
┌─────────────────────────────────────────┐
│                                          │
│    JEM-1/EXJ CONFIGURATION SYSTEM        │
│                                          │
│         PASSWORD SELECTION               │
│                                          │
│  ┌────────────────────────────────────┐ │
│  │ KEEP PREVIOUS PASSWORD             │ │
│  ├────────────────────────────────────┤ │
│  │ ∅  CHANGE PASSWORD                 │ │
│  └────────────────────────────────────┘ │
│                                          │
│  ┌────────────────────────────────────┐ │
│  │  ENTER NEW PASSWORD:  000000       │ │
│  └────────────────────────────────────┘ │
│                                          │
│                                          │
│ F1-HELP                           #   0  │
└─────────────────────────────────────────┘
```

$O_{ptional}\,S_{etup}\,M_{enu}$ 4

```
┌─────────────────────────┐
│ Search Specifications   │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Meter Identification    │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Communications Parameters│
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Displayed Register Selection │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Channel Labels          │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Divisor/Decimal-Point   │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Demand Intervals        │
└─────────────────────────┘
            │
┌─────────────────────────┐
│ Miscellaneous           │
└─────────────────────────┘
            │
┌─────────────────────────┐     ┌─────────────────────────┐
│ Total Register Values   │─────│ New Register Values     │
└─────────────────────────┘     └─────────────────────────┘
            │
┌─────────────────────────┐     ┌─────────────────────────┐
│ Password Selection      │─────│ New Password            │
└─────────────────────────┘     └─────────────────────────┘
```
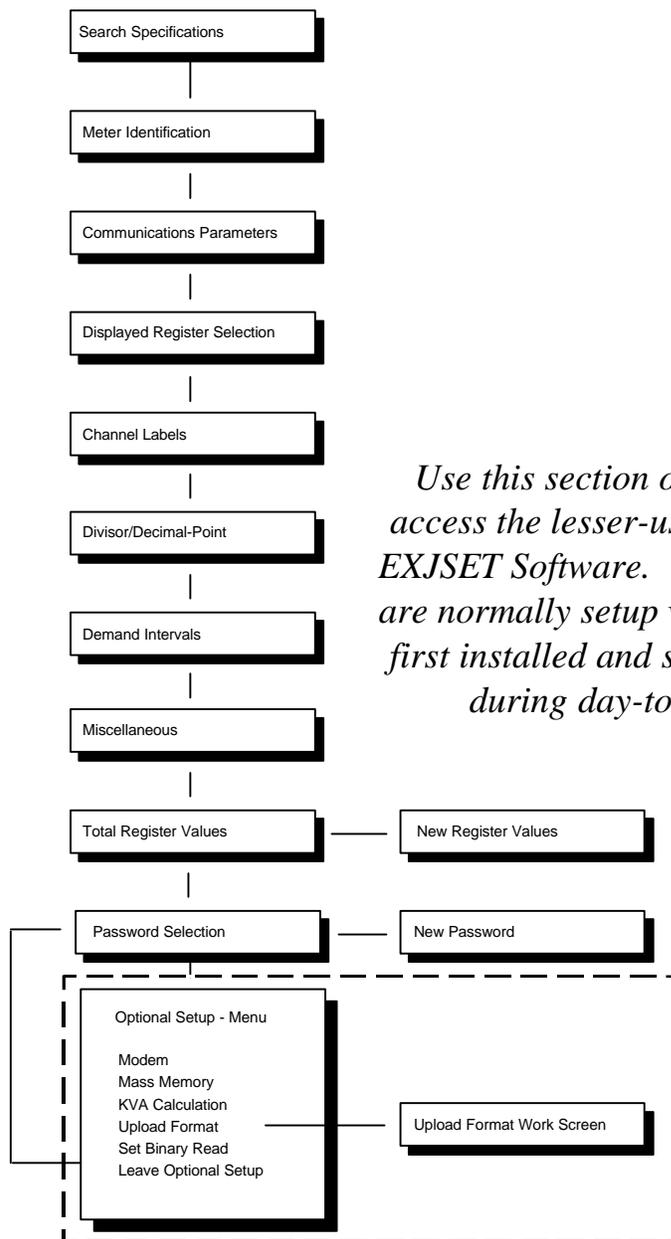
Use this section of the manual to access the lesser-used functions of EXJSET Software. These functions are normally setup when a meter is first installed and seldom changed during day-to-day operation.

```
┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
  ┌─────────────────────────┐
│ │   Optional Setup - Menu │                               │
  │                         │
│ │      Modem              │                               │
  │      Mass Memory        │
│ │      KVA Calculation    │   ┌─────────────────────────┐ │
  │      Upload Format      │───│ Upload Format Work Screen│
│ │      Set Binary Read    │   └─────────────────────────┘ │
  │      Leave Optional Setup│
│ └─────────────────────────┘                               │
└ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
```

4-1

OPTIONAL SETUP MENU

Using the Optional Setup Menu

Using the Optional Setup Menu

The EXJSET software's OPTIONAL SETUP menu is the entry and exit point for five additional configuration operations:

- MODEM SETUP SCREEN
- MASS MEMORY CONFIGURATION
- KVA CALCULATION PARAMETERS
- UPLOAD CONFIGURATION
- BINARY READ CONFIGURATION

These 5 screens have been separated because most users never need to change this information.

You must access the OPTIONAL SETUP menu before you can select any of these operations and set their parameters.

The OPTIONAL SETUP menu is the last screen in the main sequence of screens described previously in this manual. You can access this menu in two ways. First, you can PgDn through the main sequence of screens until you reach the OPTIONAL SETUP screen, or you can do a Ctrl-End key operation to jump directly to this menu screen from any other in the main configuration sequence.

```
JEM-1/EXJ CONFIGURATION SYSTEM

                    ┌──── OPTIONAL SETUP ────┐
                    │                        │
                    │  Modem                 │
                    │  Mass Memory           │
                    │  KVA Calculation       │
                    │  Upload Format         │
                    │  Set binary Read       │
                    │  Leave Optional Setup  │
                    │                        │
                    └────────────────────────┘

F1-HELP                                    #    0
```
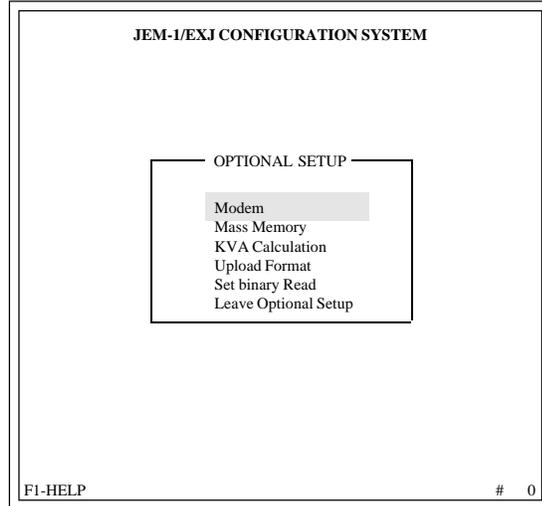
Once you have accessed the OPTIONAL SETUP screen, you can select one of the menu items by moving the highlighted cursor to the desired item and pressing the Enter key. Use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to move the highlighted cursor.

You can leave the OPTIONAL SETUP screen by doing a PgUp keystroke, or selecting the Leave Optional Setup item on the menu. Both procedures take you to the previous screen in the main sequence (PASSWORD SELECTION). Or you can do a Ctrl-Home operation to jump directly to the first screen in the main sequence (METER IDENTIFICATION).

4

Accessing and Leaving the Modem Setup Screen

The MODEM SETUP SCREEN can be accessed only by selecting the Modem item from the OPTIONAL SETUP menu and pressing enter. The only way to leave the MODEM SETUP SCREEN is by pressing the PgUp or PgDn keys to return to the OPTIONAL SETUP menu.

Using the Modem Setup Screen

The purpose of this screen is to let you adjust the modem parameters for the EXJ register. The values you set from this screen will be loaded into the register when you do the next configuration operation.

The Answer Start Time and Answer Stop Time define the daily window when the register will automatically answer calls from the computer via a modem. If you want to make the meter available 24 hours a day, use the default answer-time settings: 00:00 for the start time and 23:59 for the stop time. If you want to limit the answering window to early morning off-hours, enter times such as 01:00 and 06:00. This example lets the register answer modem calls between 1 a.m. and 6 a.m. daily. Notice that the hours are specified in 24-hour military time.

To change the answer times, move the highlighted cursor to the time element you want to change, type the desired figures, then press the Enter key to complete the entry. Hours and minutes are entered separately in this fashion.

Delay Rings Count refers to the number of "rings" the meter's built-in modem allows before answering. To change this value, move the highlighted cursor to the entry field for Delay Rings Count, type the desired number of rings, then press the Enter key.

Communications Time Out refers to the number of seconds the meter's modem remains on the line without detecting the carrier tone from a caller. This feature lets the modem "hang up" in the event of a call from a non-modem source or a loss of carrier signal during a communications sequence. Whenever you want to change this time-out interval, move the highlighted cursor to the entry field for Communications Time Out, type the desired number of time-out seconds, then press the Enter key to complete the entry.

OPTIONAL SETUP MENU

Modem Setup Screen
(continued)

The Modem Enable option is relevant only when you are working with a meter that does not have provisions for detecting the presence of its own modem. To change the Modem Enable status, move the highlighted cursor to the Entry field, then press the Y or N key as desired or use the Left- or Right-Arrow keys to toggle the status between Yes and No.

```
            JEM-1/EXJ CONFIGURATION SYSTEM


              ┌──── MODEM SETUP SCREEN ────┐
              │                            │
   Answer Start Time          00:00    hh:mm (24-hr time)

   Answer Stop Time           23:59    hh:mm (24-hr time)

   Delay Rings Count             01    rings (1-16)

   Communications Time Out      300    sec. (7-600)

   Modem Enable                 Yes    (Yes/No)



 F1-HELP                                          #    0
```

4

Accessing and Leaving the Mass Memory Configuration Screen

The MASS MEMORY CONFIGURATION screen can be accessed only by selecting the Mass Memory item from the OPTIONAL SETUP menu and pressing enter. The only way to leave the MASS MEMORY CONFIGURATION screen is by pressing the PgUp or PgDn keys to return to the OPTIONAL SETUP menu.

Using the Mass Memory Configuration Screen

The MASS MEMORY CONFIGURATION screen provides the means for adjusting the meter's mass-memory specifications. These specifications include:

• Mass memory interval
• Maximum mass memory queue size
• Number of mass memory channels to be used
• Mass memory channel assignments
• Mass memory erase, Yes or No

The value assigned to the first item on the screen, Mass Memory Interval, is closely linked to the demand and sub-demand intervals you have already selected for the current meter record, using the DEMAND INTERVALS screen. The demand and sub-demand intervals are summarized for you in the upper-right corner of the MASS MEMORY CONFIGURATION screen. However, these values can be changed only from the DEMAND INTERVALS screen.

To set the Mass Memory Interval properly, move the highlighted cursor to the entry field for this item, then type a two-digit number that specifies the desired Mass Memory Interval length in minutes. This value must meet the following criteria:

• Mass Memory Interval is not greater than 60.
• Mass Memory Interval is evenly divisible into 60.
• The smallest of the three intervals (mass memory, demand and demand sub-interval) must be evenly divisible into the other two.

EXJSET does not allow you to leave this screen until the specified Mass Memory Interval is consistent with these rules.

```
        JEM-1/EXJ CONFIGURATION SYSTEM
           MASS MEMORY CONFIGURATION

Mass Memory Interval         60 min.         Current Demand Intervals
Max Mass Mem Queue Size65535 bytes(0-65535)  Dmd interval:      15 min.
Number of Channels  0  1  2  3  ⌀4           Sub-Dmd interval: 15 min.

              ─── Mass Memory Channel Assignments ───

  ┌─────────────┐ ┌─────────────┐ ┌─────────────┐ ┌─────────────┐
  │Mass Mem CH1 │ │Mass Mem CH2 │ │Mass Mem Ch3 │ │Mass Mem CH4 │
  └─────────────┘ └─────────────┘ └─────────────┘ └─────────────┘

  REG  ⌀  CH1     REG     CH1      REG     CH1      REG     CH1
  REG     CH2     REG  ⌀  CH2      REG     CH2      REG     CH2
  REG     CH3     REG     CH3      REG  ⌀  CH3      REG     CH3
  REG     CH4     REG     CH4      REG     CH4      REG  ⌀  CH4


           ┌─────────────────────────────────┐
           │   Erase Mass Memory  No  (Yes/No) │
           └─────────────────────────────────┘

 F1-HELP                                          #    0
```

Note: Since the allowable values for Mass Memory Interval depend upon the values currently assigned for the demand and sub-demand intervals, it is important that you set these two values from the DEMAND INTERVALS screen prior to setting the Mass Memory Interval on this screen.

To set the Max Mass Mem Queue Size, move the highlighted cursor to that entry field, type the desired number of bytes, from 0 to 65535, then press the Enter key to complete the entry.

To set the Number of Channels, use the Up- and Down-Arrow keys (or Tab/Shift-Tab keystrokes) to move the highlighted cursor to the desired Number of Channels, then press the Enter key. The current selection is highlighted on the screen and has a small arrow pointing to it.

The middle portion of the MASS MEMORY CONFIGURATION screen is used for assigning a register channel to any of the four mass-memory channels. The register assignments are relevant only for mass-memory channels you are using. Current register assignments for each mass-memory channel are highlighted on the screen and have a small arrow pointing to them. To change any of these assignments, move the highlighted cursor to the desired register channel and press the Enter key.
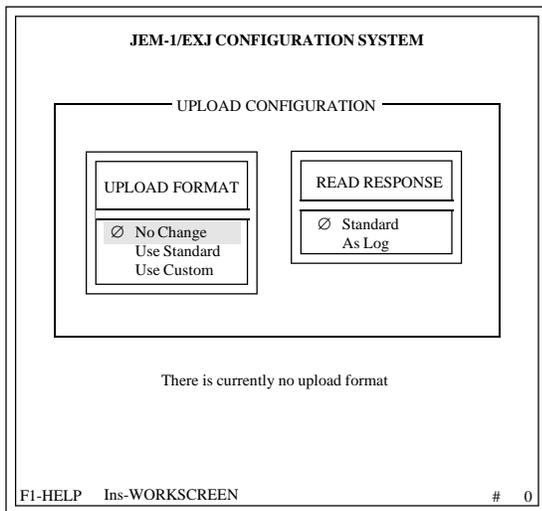
Whenever you want to erase the mass memory in the meter, move the highlighted cursor to the entry field for the item, Erase Mass Memory. Press the Y or N key as desired, or use the Left- or Right-Arrow key to toggle the selection between Yes and No. When you attempt to configure the meter with Erase Mass Memory set to Yes, EXJSET will warn you of this fact and give you a chance to change your mind.

OPTIONAL SETUP MENU

KVA Calculations Screen

4

Accessing and Leaving the KVA Calculations Screen

The KVA CALCULATIONS screen can be accessed only by selecting the item, KVA Calculation, from the OPTIONAL SETUP menu and pressing enter. The only way to leave the KVA CALCULATIONS screen is by pressing the PgUp or PgDn keys to return to the OPTIONAL SETUP menu.

Using the KVA Calculations Screen

This screen gives you the ability to select the function (Q-hours or Varhours) this model has and the channel that corresponds to that "reactive pulse source." This will allow the meter to properly calculate the VA demand.

The currently selected values are highlighted on the screen and have a small arrow pointing to them. To change any of the settings, move the highlighted cursor to the desired item and press the Enter key.

```
┌─────────────────────────────────────┐
│   JEM-1/EXJ CONFIGURATION SYSTEM     │
│                                      │
│   ┌─── KVA CALCULATIONS ─────────┐   │
│   │                              │   │
│   │   ┌──────────────────────┐   │   │
│   │   │       Format         │   │   │
│   │   ├──────────────────────┤   │   │
│   │   │ ∅  Q-HOUR            │   │   │
│   │   │    VARHOUR           │   │   │
│   │   └──────────────────────┘   │   │
│   │                              │   │
│   │   ┌──────────────────────┐   │   │
│   │   │   Reactive Pulse     │   │   │
│   │   │       Source         │   │   │
│   │   ├──────────────────────┤   │   │
│   │   │    CHANNEL 2         │   │   │
│   │   │ ∅  CHANNEL 3         │   │   │
│   │   │    CHANNEL 4         │   │   │
│   │   └──────────────────────┘   │   │
│   │                              │   │
│   └──────────────────────────────┘   │
│                                      │
│ F1-HELP                     #    0   │
└─────────────────────────────────────┘
```
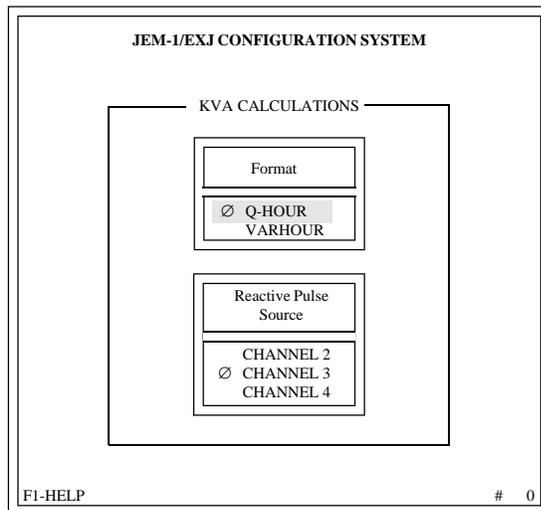
OPTIONAL SETUP MENU

Upload Configuration Screen

Accessing and Leaving the Upload Configuration Screen

The UPLOAD CONFIGURATION screen can be accessed only by selecting the Upload Format item from the OPTIONAL SETUP menu and pressing enter. The only way to leave the UPLOAD CONFIGURATION screen is by pressing the PgUp or PgDn keys to return to the OPTIONAL SETUP menu.

```
┌─────────────────────────────────────────┐
│      JEM-1/EXJ CONFIGURATION SYSTEM      │
│                                          │
│  ┌────── UPLOAD CONFIGURATION ───────┐   │
│  │                                   │   │
│  │ ┌─────────────┐  ┌─────────────┐  │   │
│  │ │UPLOAD FORMAT│  │READ RESPONSE│  │   │
│  │ ├─────────────┤  ├─────────────┤  │   │
│  │ │ Ø  No Change│  │ Ø  Standard │  │   │
│  │ │ Use Standard│  │    As Log   │  │   │
│  │ │ Use Custom  │  └─────────────┘  │   │
│  │ └─────────────┘                   │   │
│  │                                   │   │
│  └───────────────────────────────────┘   │
│                                          │
│      There is currently no upload format │
│                                          │
│ F1-HELP   Ins-WORKSCREEN          #    0 │
└─────────────────────────────────────────┘
```

Using the Upload Format Feature

The UPLOAD CONFIGURATION SCREEN provides the means for formatting the ASCII log response and setting the ASCII read response as standard or like the log response.

Setting the Upload Format

The UPLOAD FORMAT menu includes three items:

- No Change: Leave the meter's current upload format unchanged.
- Use Standard: Configure with the cold-start upload format.
- Use Custom: Use a custom upload format you design for your particular application.

The currently selected item on the menu is highlighted on the screen and has a small arrow pointing to it.

4

Setting the Read Response (ASCII)

The second menu on the UPLOAD CONFIGURATION screen lets you select the Standard read response or a response that is the same as the meter's Log response.

The current selection is highlighted on the screen and has a small arrow pointing to it. To change the selection, move the highlighted cursor to the desired item and complete the entry by pressing the Enter key.

Creating a Custom Upload Format

Whenever you want to create a custom upload format, begin by selecting Use Custom from the UPLOAD CONFIGURATION menu or by pressing the Ins key. The resulting UPLOAD FORMAT WORKSCREEN is divided into two tables: a Command Select List and an Upload Format table. The Command Select List shows the upload commands that are available for your use; the Upload Format table shows the current sequence of commands that comprise your custom upload format.

When you first access the UPLOAD FORMAT WORKSCREEN, notice a blinking triangle in the upper-left corner of the Command Select List. This means the system is expecting you to specify a command to be added to the Upload Format table. Press the Left- or Right-Arrow key and you will see the blinking triangle move for editing.

The blinking triangle indicates which of the two tables will respond to your keystrokes. You can switch tables by pressing the Left- or Right-Arrow keys. The only way to leave the UPLOAD FORMAT WORKSCREEN and continue your work from UPLOAD CONFIGURATION screen is to press the PgUp or PgDn key while the blinking triangle is at the Command Select List.

JEM-1/EXJ CONFIGURATION SYSTEM

UPLOAD FORMAT WORKSCREEN

Command Select List		Upload Format
S	Spaces	1 2 spaces
T	Text	2 Values for Ch 1, Reg 1
V	Channel/register value	3 Values for Ch 2, Reg 1
N	Billing period reset flag	4 Line feed
P	New peak flag	5 Carriage return
L	Line feed	6
C	Carriage return	
D	Date and time	
B	BCC character	
R	Time left in demand interval	
I	Value of demand interval	
W	Value of sub-interval	
Z	Standard format (all regs)	
A	Unit address	
\	Start of literal	

F1-HELP   #   0

To create a Custom Upload Format from this workscreen, first make certain the blinking triangle is at the Command Select List. Then use the Up- and Down-Arrow keys to move the highlighted cursor to the command to be added to the Upload Format table, and press the Enter key to make the selection. More conveniently, you can simply press the letter corresponding to those printed beside the commands; S for Spaces, T for Text, P for New peak flag, etc. In most cases, you will see the selected command appearing on the next available position on the Upload Format table.

Five of the commands, however, require additional information before they can become part of the Upload Format table. These special commands are:

> Spaces
> Text
> Channel/register value
> New peak flag
> Start of literal

Whenever you select one of these five commands, an entry field appears below the Command Select List. This field requests the necessary information: number of spaces, literal text, channel numbers and register values, and a register value for the new peak flag. The command appears on the Upload Format table as soon as you type the requested information and press the Enter key. If you change your mind about one of these entries before you have pressed the Enter key, you can abort the entry by pressing the Esc key.

There is room on the Upload Format table for 40 consecutive upload commands, although only 14 of them can be shown on the screen at one time. If you want to review a list of commands that is too long to fit on the screen, press the Left- or Right-Arrow key to move the blinking triangle to the Upload Format table. Then you can use the Up- and Down-Arrow, Home and End keys to browse through the list. Remember to press the Left- or Right-Arrow key to switch your keyboard actions back to the Command Select List.

You can edit an existing list of commands on the Upload Format table, removing commands and adding new commands anywhere on the list. To delete a line from the Upload Format table, press the Left- or Right-arrow key to activate that table (set the blinking triangle to the upper-left corner). Move the highlighted cursor to the line you want to delete, then press the Del key. You will see the line deleted from the list, and note that all lines below it move up one location.

To insert new lines into an existing Upload Format table, first activate the Upload Format table, then move the highlighted cursor to the line where the new command is to be inserted. Press the Ins key, and you will see a blank line inserted at that place and all following commands bumped down one line. Press the Left- or Right-Arrow key to activate the Command Select List, then select the command or series of commands to be inserted. Remove any blank lines, that might remain on the Upload Format table by activating that table and using the Del feature to delete them.

Note: Even though a standard or custom upload format might appear on the Upload Format table of the workscreen, it is not sent to the meter during configuration unless you have also selected one of those options on the UPLOAD FORMAT table. If you select the No Change item from the UPLOAD FORMAT table, no format will be configured, regardless of the content of the Upload Format table on the workscreen.

4

OPTIONAL SETUP MENU

Binary Read Configuration Screen

Accessing and Leaving the Binary Read Configuration Screen

The BINARY READ CONFIGURATION screen can be accessed only by selecting the item, Set Binary Read, from the OPTIONAL SETUP menu and pressing enter. The only way to leave the BINARY READ CONFIGURATION screen is by pressing the PgUp or PgDn keys to return to the OPTIONAL SETUP menu.

Using the Binary Read Configuration Screen

The BINARY READ CONFIGURATION screen provides the means for setting up custom binary-read formats.

Select one of the items on the menu at the top of the screen by moving the highlighted cursor to the desired item and pressing the Enter key. If you select No Change, no new binary-read information will be sent to the meter during the subsequent CONFIGURE METER operation. Otherwise, EXJSET will send the standard format (Use Standard is selected) or a custom format (Set Binary Read is selected).

Whenever you select Use Standard, the standard Channel/Register sequence appears on the SEQUENCE table along the bottom of the screen. The registers in this table indicate the sequence in which they will be transmitted.

```
        JEM-1/EXJ CONFIGURATION SYSTEM
           BINARY READ CONFIGURATION

          ┌─────────────────────────┐
          │   BINARY READ FORMAT     │
          │ ┌─────────────────────┐  │
          │ │ Ø  No Change        │  │
          │ │    Use Standard     │  │
          │ │    Set Binary Read  │  │
          │ └─────────────────────┘  │
          └─────────────────────────┘

         Total Demand Peak Cum 1min T.O.P.

          ┌─────────────────────────┐
          │ Ch 1   11  12  13  14  15  16 │
          │ Ch 2   21  22  23  24  25  26 │
          │ Ch 3   31  32  33  34  35  36 │
          │ Ch 4   41  42  43  44  45  46 │
          │ Ch 5   51  52  53  54  55  56 │
          └─────────────────────────┘

          ┌─────── SEQUENCE ───────┐
          │                        │
          └────────────────────────┘

 F1-HELP      Binary read sequence will not be changed        #    0
```

OPTIONAL SETUP MENU

Binary Read Configuration Screen
(continued)

4

You can alter this sequence to suit your needs by selecting Set Binary Read. Once you make this selection, you will find you can move the highlighted cursor to locations in the sequence-selection table located in the middle of the screen. Set up your own sequence by moving the highlighted cursor to a desired element and pressing the Enter key. Your selection immediately appears at the end of the current sequence in SEQUENCE table.

Press the Del key whenever you want to remove the last entry in the SEQUENCE table.

The meter works with a sequence of 20 items. If your application requires fewer than 20 items, you can leave the remaining items blank on the SEQUENCE table. If you do that, EXJSET will configure the meter with selection 11 (Channel 1 Total) in the blank locations.

Or you can fill the remaining locations by repeating the selected sequence. When you select Use Standard, for example, you can see the sequence of ten readings occurring twice in the SEQUENCE table. This technique fills all 20 locations.

```
        JEM-1/EXJ CONFIGURATION SYSTEM
             BINARY READ CONFIGURATION

            ┌─ BINARY READ FORMAT ─┐
            │  ∅  No Change         │
            │     Use Standard      │
            │     Set Binary Read   │
            └──────────────────────┘

    Total Demand Peak Cum 1min T.O.P.
    Ch 1   11   12   13   14   15   16
    Ch 2   21   22   23   24   25   26
    Ch 3   31   32   33   34   35   36
    Ch 4   41   42   43   44   45   46
    Ch 5   █    52   53   54   55   56

            ┌──── SEQUENCE ────┐
            │ 11 12 15 21 22   │
            └──────────────────┘

 F1-HELP   This is your CUSTOM binary read sequence   #  0
```

After you have completely selected the sequence on the BINARY READ CONFIGURATION screen, you can return to the OPTIONAL SETUP menu, by pressing the PgUp or PgDn keys. Select the Leave Optional Setup operation, using the highlighted cursor.

As a reminder, you can exit EXJSET by moving the highlighted cursor to Exit Program on the METER IDENTIFICATION screens.

A*ppendix*

APPENDIX

Model Numbers and Channel Assignments

JEM®1 MODEL NUMBERS AND CHANNEL ASSIGNMENTS

FUNCTIONS	CHANNEL ASSIGNMENT				MODEL NUMBERS			
	1	2	3	4	1 ELEMENT	2 ELEMENT	3 ELEMENT	2-1/2 ELEMENT
JEM 100 SERIES - SINGLE FUNCTION METERS								
kWh		kWh				JEM 102	JEM 103	JEM 104
kvar		kvar				JEM 112	JEM 113	JEM 114
Vh		Vh			JEM 121			
Vh expanded scale		Vh			JEM 121-09			
Ih		Ah			JEM 131	JEM 132	JEM 133	JEM 134
I (Analog only)					JEM 141	JEM 142	JEM 143	JEM 144
kVAh		kVAh				JEM 152	JEM 153	JEM 154
I²h		Ah			JEM 161	JEM 162	JEM 163	JEM 164
Dual V²h		V²h			JEM 171	JEM 172	JEM 173	JEM 174
JEM 200 SERIES - BIDIRECTIONAL METERS								
± kWh	kWh+⁺		kWh ⁻			JEM 202	JEM 203	JEM 204
± kQh	kQh ⁺		kQh ⁻			JEM 202.1	JEM 203.1	JEM 204.1
± kVARh	kvarh⁺		kvar ⁻			JEM 212	JEM 213	JEM 214
JEM 300 SERIES - DUAL FUNCTION METERS								
kWh/kQh	kWh		kQh			JEM 302	JEM 303	JEM 304
kWh/kvarh (lag)	kWh		kvarh			JEM 312	JEM 313	JEM 314
± kWh/kvar	kWh ⁺		kWh⁻			JEM 322	JEM 323	JEM 324
kWh/kvar		kWh				JEM 342	JEM 343	JEM 344
kWh/kVAh	kWh		kVAh		JEM 351	JEM 352	JEM 353	JEM 354
kWh/kvarh (lead)	kWh		kVARh			JEM 362	JEM 363	JEM 364
kVAh/kQh	kVAh	V²h	kQh			JEM 372	JEM 373	JEM 374
± kWh/V²h	kWh ⁺		kWh⁻			JEM 382	JEM 383	JEM 384
kWh/Ih	kWh		Ah			JEM 392	JEM 393	N/A

FUNCTIONS	CHANNEL ASSIGNMENT				MODEL NUMBERS			
	1	2	3	4	1 ELEMENT	2 ELEMENT	3 ELEMENT	2-1/2 ELEMENT
JEM 400								
kWh/Volt		kWh				JEM 402	JEM 403	JEM 404
± kWh/Volt	kWh $^+$		kWh $^-$			JEM 412	JEM 413	JEM 414
kWh/I		kWh				JEM 422	JEM 423	JEM 424
± kWh/I	kWh $^+$		kWh $^-$			JEM 432	JEM 433	JEM 434
± kWh/I²h	kWh $^+$	kWh $^-$	A²h			JEM 432.1	JEM 433.1	JEM 434.1
kWh/var/Volt		kWh				JEM 442	JEM 443	JEM 444
± kWh/var/Volt	kWh $^+$		kWh $^-$			JEM 452	JEM 453	JEM 454
kWh/Volt/I		kWh				JEM 462	JEM 463	JEM 464
± kWh/Volt/I	kWh $^+$		kWh $^-$			JEM 472	JEM 473	JEM 474
kWh/kVA analog		kWh				JEM 482	JEM 483	JEM 484
kWh/kvarh/Volt	kWh		kvarh			JEM 492	JEM 493	JEM 494
JEM 500 SERIES - 3 FUNCTION METERS								
kWh/Vh/kQh	kWh	Vh	kQh			JEM 502	JEM 503	JEM 504
kWh/V²h/kQh	kWh	V²h	kQh			JEM 512	JEM 513	JEM 514
kWh/V2h/kvarh	kWh	V²h	kvarh			JEM 522	JEM 523	JEM 524
kWh/Vh/kVAh	kWh	Vh	kVAh			JEM 532	JEM 533	JEM 534
kWh/Vh/kvarh	kWh	Vh	kvarh		JEM 541	JEM 542	JEM 543	JEM 544
kWh/kvarh/V	kWh		kvarh			JEM 552	JEM 553	JEM 554
JEM 600 SERIES - 3 FUNCTION METERS								
± kWh/ ± kvarh	kWh $^+$	kWh $^-$	kvarh $^+$	kvarh $^-$		JEM 602	JEM 603	JEM 604
± kWh/kQh	kWh $^+$	kWh $^-$	kQh			JEM 612	JEM 613	JEM614
± kWh/ ± kQh	kWh $^+$	kWh $^-$	kQh $^+$	kQh $^-$		JEM 612.1	JEM 613.1	JEM614.1
kWh/ ± kvarh	kWh	kvarh $^+$	kVAh $^-$			JEM 622	JEM 623	JEM 624
± kWh/kVAh	kWh $^+$	kWh $^-$	kVAh			JEM 632	JEM 633	JEM 634
± kWh/kQh/V²h	kWh $^+$	V²h	kWh $^-$	kQh		JEM 642	JEM 643	JEM 644
kWh/Vh/ ± kvarh	kWh	Vh	kvarh $^+$	kvarh $^-$		JEM 652	JEM 653	JEM 654
Wh/V²h/ ± varh	kWh	V²h	kvarh $^+$	kvarh $^-$		JEM 662	JEM 663	JEM 664
kVAh/ ± varh	kVAh	kvarh $^+$	kvarh $^-$			JEM 672	JEM 673	JEM 674
± kWh/V²h/kvarh	kWh $^+$	V²h	kWh $^-$	kvarh		JEM 682	JEM 683	JEM 684
± kWh/kvarh	kWh $^+$	kWh $^-$	kvarh			JEM 692	JEM 693	JEM694

*I*ndex

INDEX

INDEX

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