Figure E-8: Two Expansion BTSes Cabling Diagram

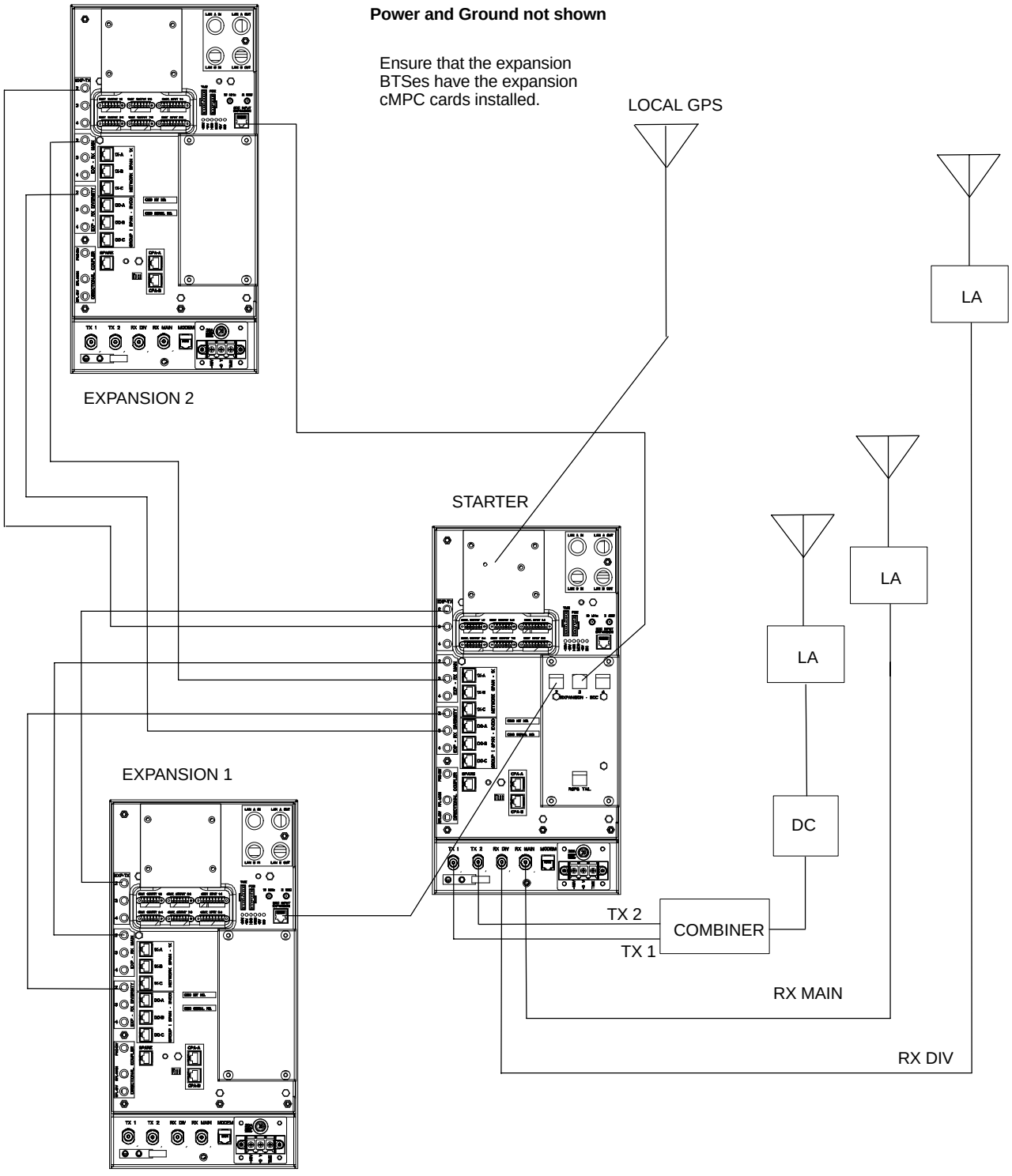


Figure E-9: One Expansion BTS Cabling Diagram

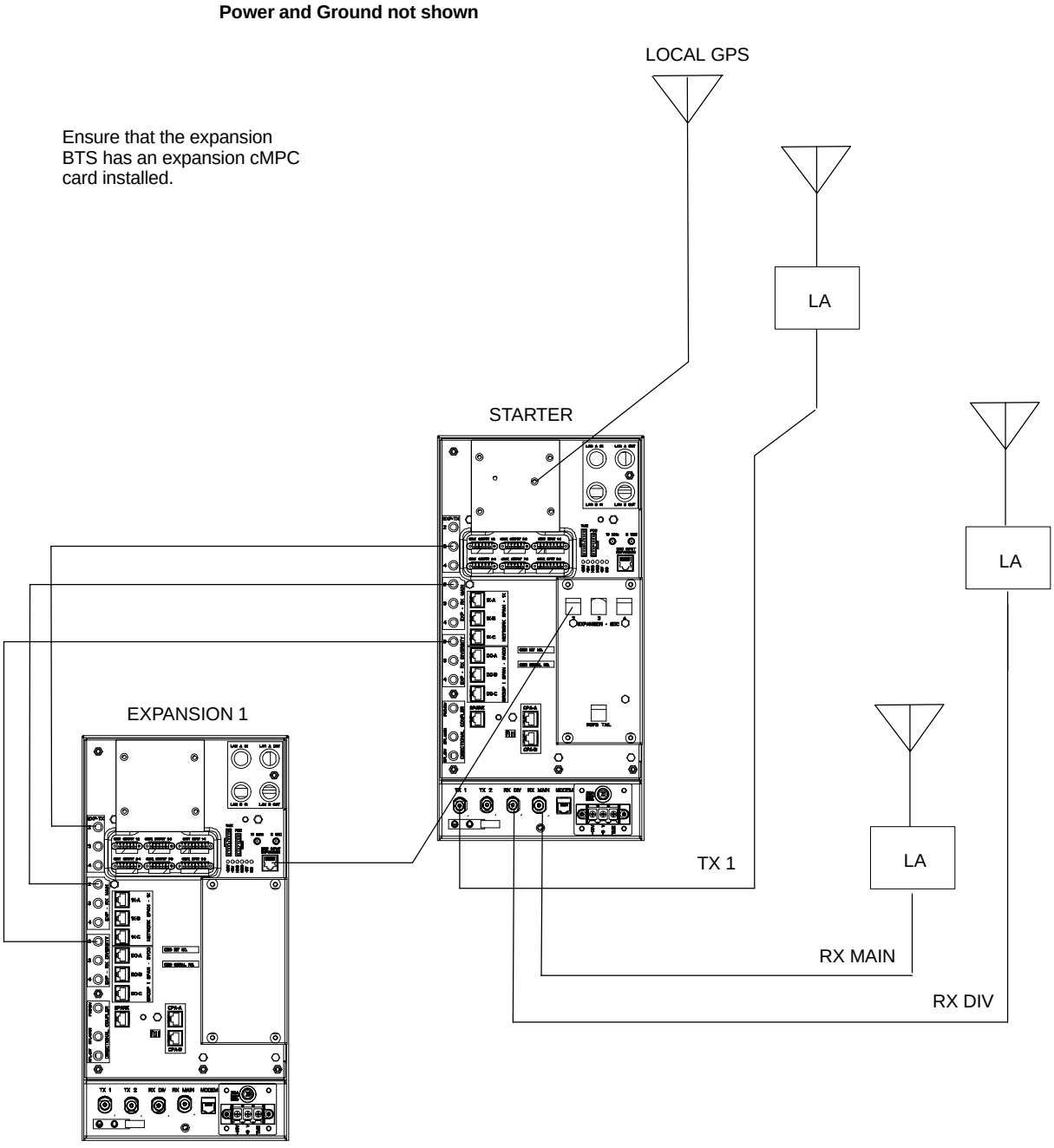


Table E-11: BBX (Carrier) to cCLPA Via RS485	
BTS	**cCLPA**
Starter – BBX1	cCLPA–1
Starter – BBX4	cCLPA–1
Expansion 1 – BBX1	cCLPA–2
Expansion 1 – BBX4	cCLPA–2
Expansion 2 – BBX1	cCLPA–1
Expansion 2 – BBX4	cCLPA–1
Expansion 3 – BBX1	cCLPA–2
Expansion 3 – BBX4	cCLPA–2

Table E-12 shows in tabular format the BTS–to–cCLPA cabling of Figure E-1.

Table E-12: Starter and Three Expansion BTS Cabling for Circuit or Packet to Dual cCLPAs	
BTS	**cCLPA**
Starter – BBX1	CPA–A (CPA–1)
Starter – BBX4	CPA–A (CPA–1)
Expansion 1 – BBX1	CPA–B (CPB–2)
Expansion 1 – BBX4	CPA–B (CPB–2)
Expansion 2 – BBX1	CPA–A (CPA–1)
Expansion 2 – BBX4	CPA–A (CPA–1)
Expansion 3 – BBX1	CPA–B (CPA–2)
Expansion 3 – BBX4	CPA–B (CPA–2)

Starter and Two Expansion BTSes to cCLPA Cabling

Table E-13 shows in tabular format the BTS–to–cCLPA cabling of Figure E-2.

Table E-13: Starter and Two Expansion BTS Cabling for Circuit or Packet to Dual cCLPAs	
BTS	**cCLPA**
Starter – BBX1	CPA–A (CPA–1)
Starter – BBX4	CPA–A (CPA–1)
Expansion 1 – BBX1	CPA–B (CPB–2)
Expansion 1 – BBX4	CPA–B (CPB–2)
Expansion 2 – BBX1	CPA–A (CPA–1)
Expansion 2 – BBX4	CPA–A (CPA–1)

Starter and One Expansion BTS to cCLPA Cabling

Table E-14 shows in tabular format the BTS–to–cCLPA cabling of Figure E-3.

Table E-14: Starter and One Expansion BTS Cabling for Circuit or Packet to Dual cCLPAs	
BTS	**cCLPA**
Starter – BBX1	CPA–A (CPA–1)
Starter – BBX4	CPA–A (CPA–1)
Expansion 1 – BBX1	CPA–B (CPB–2)
Expansion 1 – BBX4	CPA–B (CPB–2)

Multiple Compact BTS Configuration (Outdoor)

Introduction

This section covers only the outdoor version of the multiple Compact BTS configuration.

Materials Needed

The following materials are required to configure expansion BTSes.

- Varied length cables with RJ45 connectors
- Varied length cables with RF connectors
- Conduit (customer supplied)
- DC Power source (custoemr supplied)
- Battery Backup (customer supplied)

External Combiner and Directional Coupler

A combiner and directional coupler are required for some of the configurations. The following are the recommended specifications for the combiner and directional coupler.

Table E-15: Combiner and Directional Coupler Specifications

Item	Specifications
Combiner	
Connector:	N–Type
Frequency Range:	Up to 2 GHz
Insertion Loss:	3.5 dB maximum
Return Loss:	16 dB minimum
Average Input Power:	60 Watts minimum
Directional Coupler	
Connector:	N–Type
Frequency Range:	810 to 950 MHz
Coupling:	30 +/–1 dB
Directivity:	28 dB minimum
Return Loss:	18 dB minimum
Average Input Power:	10 Watts minimum

- Motorola recommended directional coupler is P/N 809643T03
- Recommended cable with combiner is Andrew LDF4–50 or equivalent

- Directional coupler and combiner are not environmentally protected , and so must be placed within the TME.

ExpansionCompact BTS Installation Procedure

Follow the procedure in Table E-16for installation of multiple Compact BTSes.

Table E-16: Procedure for Installing Expansion Compact BTSes

Step	Action
1	Follow the procedure in Chapter 4 for installing a Compact BTS in a rack.
2	For a 3 BTS expansion configuration, follow Figure E-1. Proceed to step 3.
2a	For a 2 BTS expansion configuration, follow Figure E-2. Proceed to step 3.
2b	For a 1 BTS expansion configuration, follow Figure E-3. Proceed to step 3.
3	If conduit is not used, dress cables as necessary.
4	Perform Optimization and ATP as described in Chapter 6. *LMF Help* provides further information.

Frame ID Switch Settings

Refer to Chapter 5, Figure 5-1 or Figure 5-2 or Table 5-1 through Table 5-4 for the Frame DIP Switch settings.

Figure E-10: Three Expansion BTSes Cabling Diagram

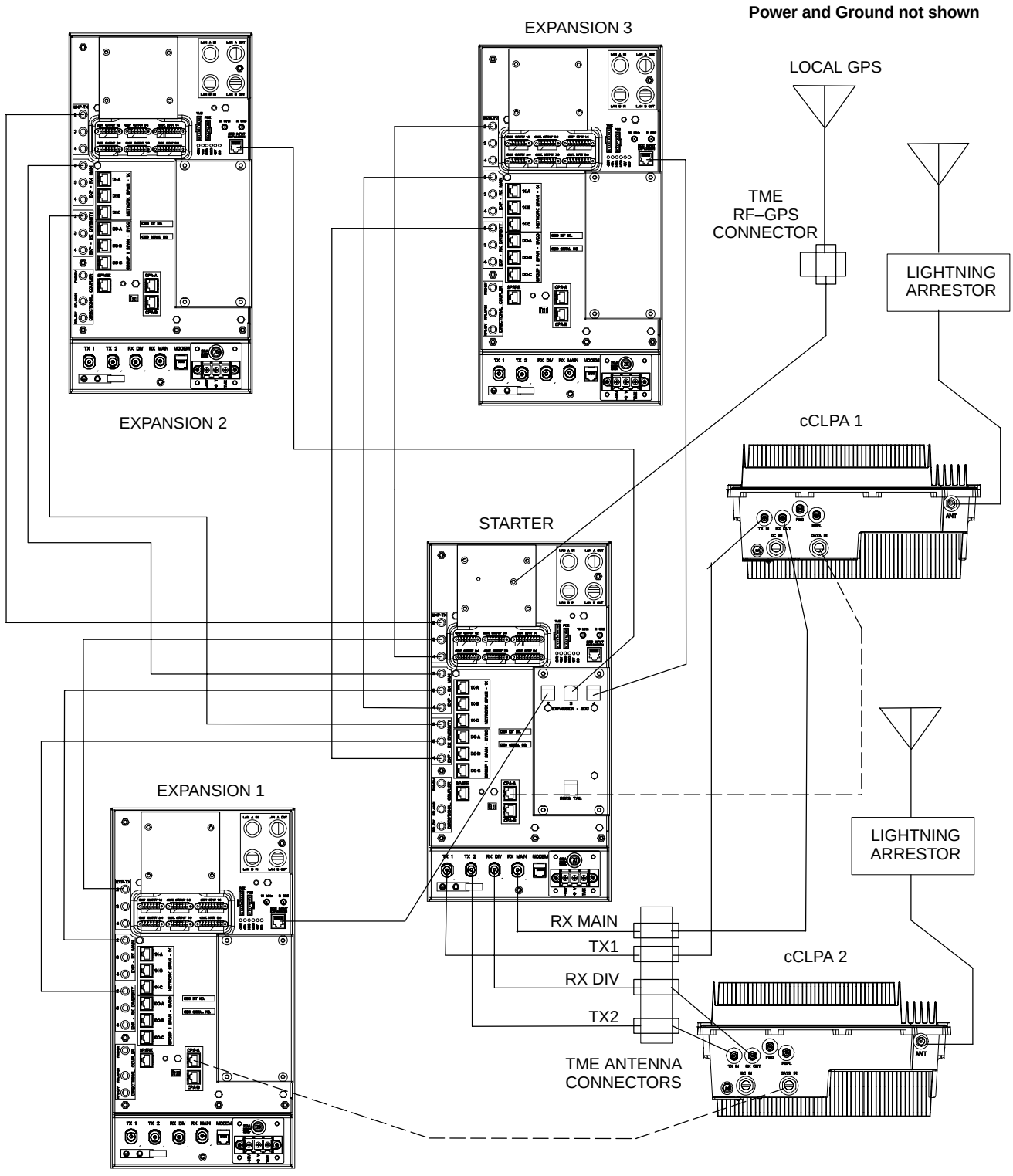


Figure E-11: Outdoor Two Expansion BTSes Cabling Diagram

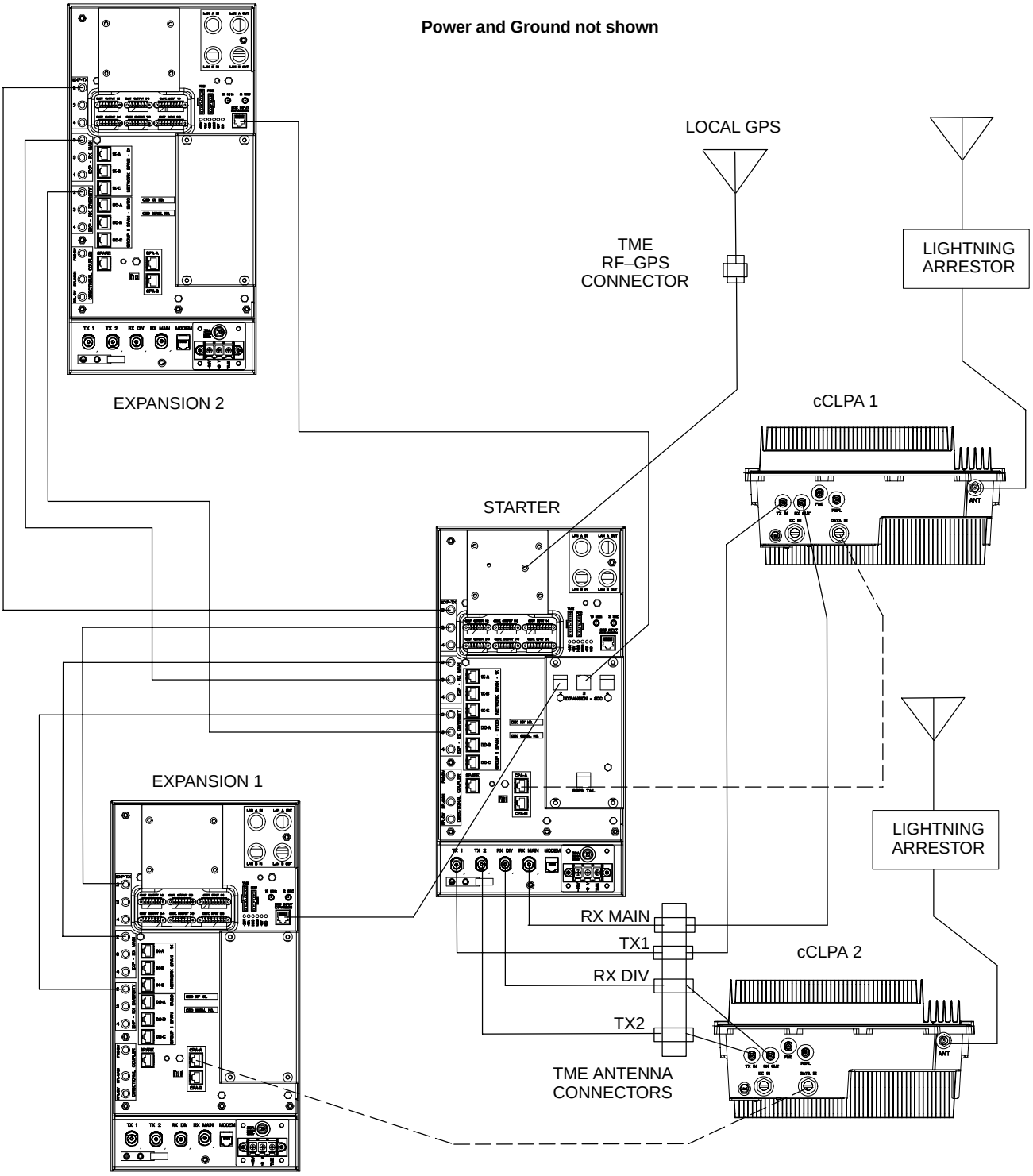
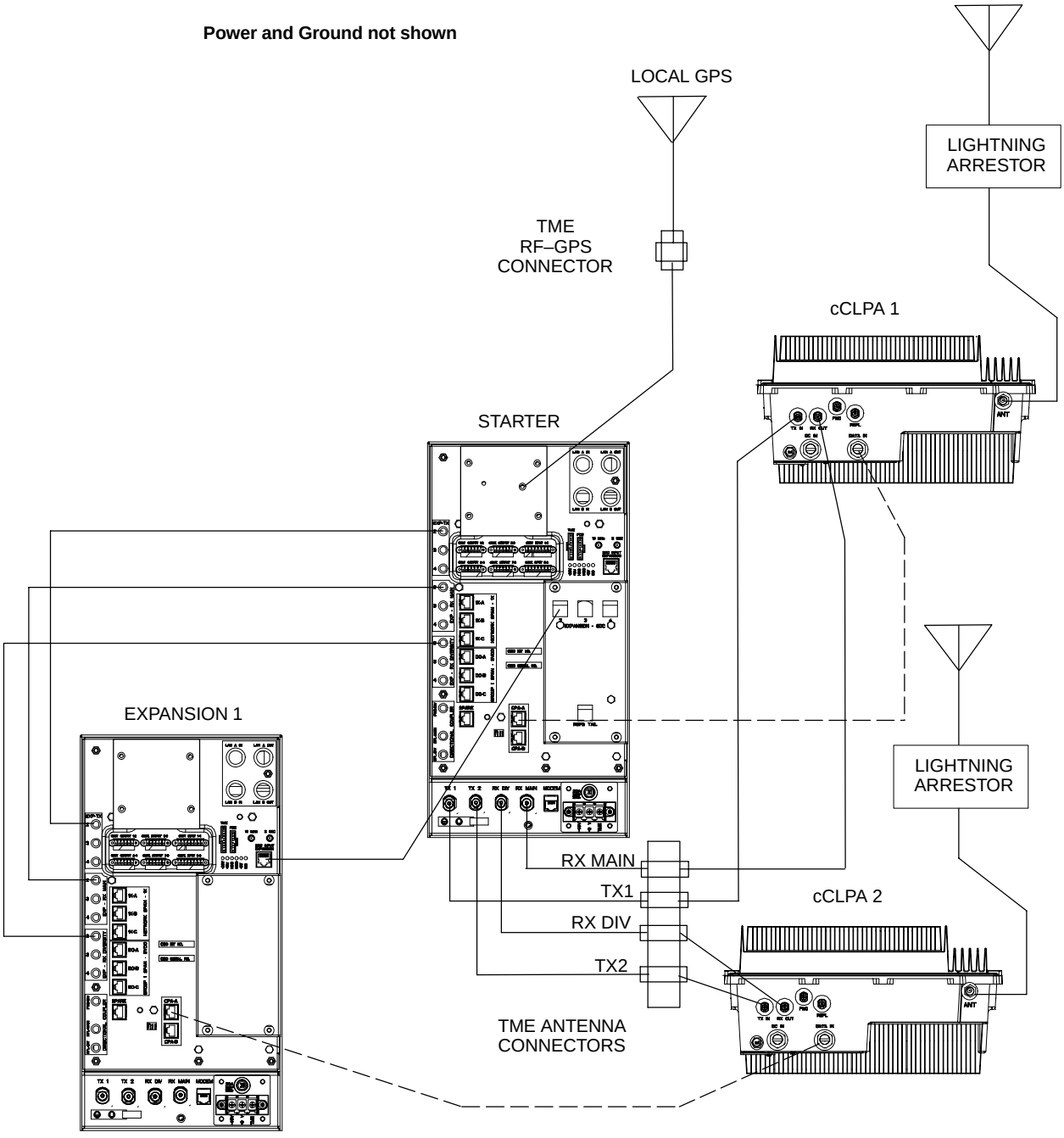


Figure E-12: Outdoor One Expansion BTS Cabling Diagram



Other Diagrams

For single cCLPA and no cCLPA, refer to the diagrams for indoor and allow for the TME connectors as shown in the diagrams presented in this appendix.

Appendix F: Logical BTS Configuration

Appendix Content

Notes

Logical BTS LAN Configuration for Compact BTS (Indoor)

Introduction

This appendix covers only the Logical BTS configuration for cicruit Compact BTS. The diagrams cover only the LAN connections. This configuration is set up to be used only with other Compact BTSes. Power and ground cabling are not shown.

The LAN operates at 10Mbps which is an ethernet standard. It provides an interface for each GLI in the confiiguration.

Refer to Figure 6-1 for location of the LAN connectors. In circuit mode, the LAN connections are used by the LMF to download data, and for use in calibration, acceptance testing, and optimization.

Use these diagrams in conjunction with the diagrams for expansion BTSes in Appendix E.

Logical BTS for 1.9 GHz, +27V A or B band circuit configurations is not supported.

Materials Needed

The following materials are required to configure LAN connections BTSes.

- 7 – RG–58 U cables (Length depends on spacing)
- 14 – BNC, Terminaton Resistor Plugs (IEC 169–8 spec)
- 2 – BNC, 50 Ohm terminations

BTS ID Switch Settings

Refer to Chapter 5, Figure 5-1 or Figure 5-2 or Table 5-1 through Table 5-4 for the BTS DIP Switch settings.

F

Figure F-1: Three Expansion BTSes LAN Cabling Diagram

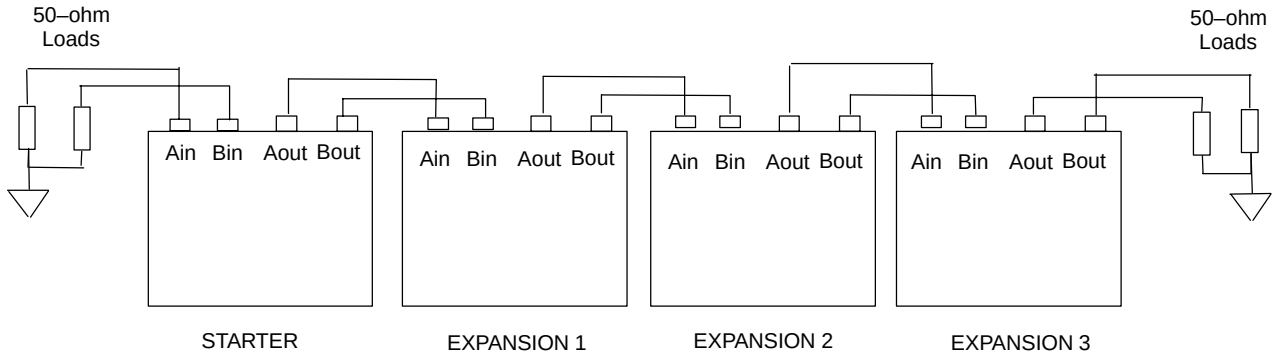


Figure F-2: Two Expansion BTSes LAN Cabling Diagram

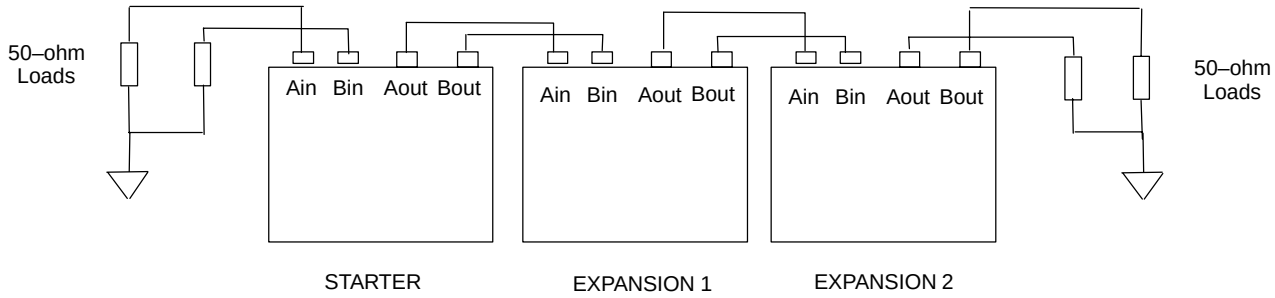
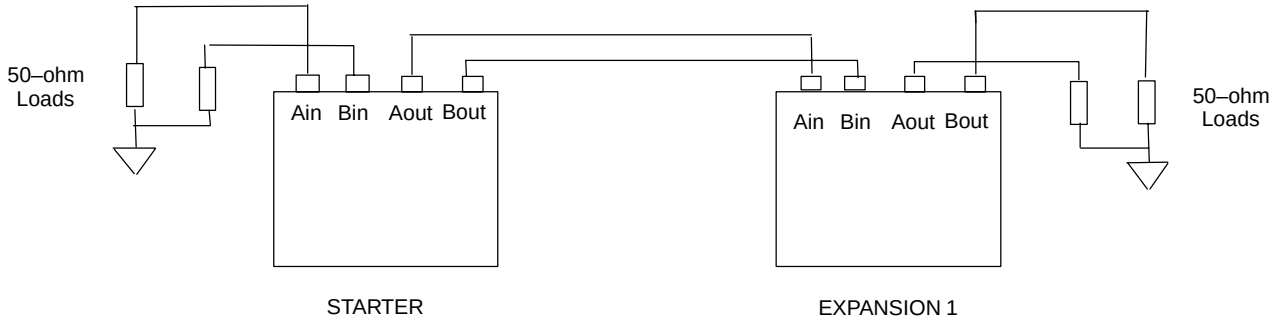


Figure F-3: One Expansion BTS LAN Cabling Diagram



Logical BTS LAN Cabling Installation Procedure

Follow the procedure in Table F-1 for installation of LAN cables for Logical BTS.

Table F-1: Procedure for Installing LAN Cabling for Logical BTS

Step	Action
1	Follow the procedure in Chapter 4 for installing a Compact BTS in a rack.
2	For a 3 BTS expansion configuration, follow Figure F-1. Proceed to step 3.
2a	For a 2 BTS expansion configuration, follow Figure F-2. Proceed to step 3.
2b	For a 1 BTS expansion configuration, follow Figure F-3. Proceed to step 3.
3	Route LAN cables through conduit from Starter to Expansion BTS 1.
4	Route LAN cables through conduit from Starter to Expansion BTS 2 or 3 (depending on configuration).
5	If in use, route LAN cables from Expansion BTS 1 to Expansion BTS 2.
6	If in use, route LAN cables from Expansion BTS 2 to Expansion BTS 3.
7	Ensure that unused LAN connections are terminated in 50 ohms.
8	If not already performed, proceed to Appendix E for expansion cabling diagrams.
9	Perform Optimization and ATP as described in Chapter 6. *LMF Help* provides further information.

Notes

Appendix G: Integrated BTS Router Preliminary Operations

Appendix Content

Notes

Integrated BTS Router Preliminary Operations – Introduction

Introduction

The information and procedures provided are performed in cases where the GLI3 load and span parameters need to be verified.

Preliminary Operations

Implementing the Integrated BTS Router (IBR) function requires some preliminary checks of the GLI3 cards which will be used. This appendix provides the procedures to accomplish these checks. The checks are:

- Verification that IBR–capable software is installed on GLI3 cards which will be used for IBR
- Verification that span parameter settings on GLI3 cards match the requirement for the spans at the BTS where the cards will be installed.

When to Perform the Verifications

All preliminary verifications provided in this chapter can be performed at either the BTS site or in a central facility equipped to power–up the GLI3 cards. Depending on the circumstances of the cards' use, however, it may be advantageous in reducing the on–site upgrade time and logistics to perform some of the verifications prior to installation at the BTS site. Table G-1 lists card conditions of use and the corresponding suggested verification locations for the software version and span parameter settings.

Table G-1: Suggested Preliminary Verification Locations

GLI3 Card Condition	Installation Location	Software Version Verification Location	Span Parameter Settings Verification Location
Installed and operating (circuit or packet)	Site where installed	At site	Not required unless span type will change
	Different operating site from where currently installed	At site where currently installed	Before or after installation at different site

Verify GLI3 Software Version and Span Parameter Settings

Software Version Verification – Before upgrading a BTS to packet backhaul with an IBR, the software version installed in the GLI3 card or cards must be verified. If the installed software version does not support IBR functionality, it must be upgraded to a version which does. For BTS sites which are already in operation, the upgrade can be done through a network download to the GLI3 once it is installed. For cards to be installed in new BTS sites not previously in operation, the upgrade requires special procedures, and must be done with Motorola Field Operations or Account Team assistance.

Span Parameter Settings – Prior to initializing a GLI3 card for the first time in a live circuit BTS or IBR packet BTS site, the span parameter settings in the card must be verified as matching those provisioned in the OMC–R database. If the settings are not correct, the card will be unable to communicate with the RAN network elements and the site will not go into service. Procedures are included in this section to change the GLI3 card span parameter settings if this is necessary to match those required for the BTS.

Required Items

The following items are required to perform the verification:

- Local Maintenance Facility (LMF) computer with the LMF application program version installed which is compatible with the software release installed on the BSS refer to Chapter 6 Optimization/ATP in this manual.
- *One* of the following
  - Motorola cable part number CGDSMMICABLE219112
  - Fabricated DB–9 receptacle–to–8–contact MMI connector cable (see the MMI Cable Fabrication Section of Appendix D for fabrication instructions and Figure 6-9 for connection)
  - SLN2006A MMI Interface Kit (this kit is no longer available to order), consisting of the following:
    - Motorola Model TRN9666A null modem board
    - Motorola 3009786R01 MMI cable or equivalent
- (For use with SLN2006A only) Straight–through RS–232 cable, DB–9 to DB–9, and DB–9 to DB–25 connector adapter (see Figure D-1)

Verifying GLI3 Software Version and Span Parameter Settings

Follow the procedure in Table G-2 to verify GLI3 card software version and span parameter settings.

Table G-2: Verify GLI3 Software Version and Span Parameter Settings

Step	Action
1	If it has not been done, start a GLI3 MMI communication session on the LMF computer as described in Table 6-11.
2	Verify the installed software version by entering the following at the GLI3 prompt: **display version**
3	Response to the command will depend on the operating mode of the card. Responses similar to the following will be displayed for:

3a	– Cards in *circuit* mode:
	
	`GLI3>  display version`
	`01.09.1980 20:01:59 MGLI-002-2  OOS-SBY   BTS-CDMA 16.41.200.14`
	
	`RAM version: 16.41.200.14`
	`ROM version: 16.41.200.14`
	`Built: Tue Oct 21 09:52:28 2003 il27-2112`
	
	`Bootrom version: 16.41.200.12`
	`Bootrom Built: Thu Oct  2 03:11:34 2003 IL27-0775`
	
	`Bootblock version: 16.1.59.00`
	`Bootblock Built: Wed Apr 10 07:08:06 2002 RIPCORD004`
	
	`This GLI board is in RAM`
	`Booted from /nvram00/loads/gli3_ckt_rom_upgrade.elf`
	`Next boot from /nvram00/loads/gli3_ckt_rom_upgrade.elf`
	`GLI3>`

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Table G-2: Verify GLI3 Software Version and Span Parameter Settings

Step	Action

3b	– For cards in *packet* mode:
	
	`GLI3>  display version`
	`03.23.2004 18:16:07 MGLI-250-1  CC PRESENT BTS-CDMA 16.41.00.11`
	
	`INTERNAL RAM VERSION: 16.41.0.11`
	`RAM Built: Tue Mar  2 04:59:33 2004 il27-2112`
	
	`BOOTROM VERSION: 16.41.00.08`
	`BOOTROM Built: Tue Feb 17 10:52:27 2004 il27-0507`
	
	`BOOTBLOCK VERSION: 16.1.59.00`
	`BOOTBLOCK Built: Wed Apr 10 07:08:06 2002 RIPCORD004`
	
	`SYSTEM VERSION: 2.16.4.50.15`
	`COMMITTED VERSION: 2.16.4.50.15`
	`NEXT VERSION: 2.16.4.50.15`
	`BACK UP VERSION 2.16.4.50.10`
	`CURRENT RELEASE PATH: /nvram00/screl/2.16.4.50.15/`
	`CURRENT LIF: /nvram00/screl/2.16.4.50.15/NE_LIF.xml`
	`CURRENT IMAGE: /nvram00/screl/2.16.4.50.15/gli_ram.bin.0108`
	`CODE SERVER: 128.0.0.1`
	
	`GLI3>`

4	Note the bootROM or System version numbers displayed and determine if the GLI3 is loaded with IBR–capable code as follows: • If the booROM version number is 2.16.41.00.08 or later, the GLI3 is IBR–capable • If the System version number is `2.16.4.50.`7 or later (for example, 2.16.4.50.25), the GLI3 is IBR–capable **NOTE** If the card is to be installed in a new BTS site which has not previously been in operation, contact the local Motorola Account Team for assistance in upgrading the card with IBR–capable software version.

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Table G-2: Verify GLI3 Software Version and Span Parameter Settings

Step	Action

5	Verify the span parameter settings for frame format, equalization, and linkspeed by entering the following at the `GLI3>` prompt:
	
	config ni current
	
	The system will respond with a display similar to the following:
	
	`The frame format in flash is set to use T1_2.`
	`Equalization:`
	`  Span A - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span B - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span C - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span D - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span E - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span F - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	
	`Linkspeed: Default (56K for T1 D4 AMI, 64K otherwise)`
	`Currently, the link is running at the default rate`
	`The actual rate is 0`
	
	NOTE
	• Defaults for span equalization are 0–131 feet for T1/J1 spans and 120 Ohm for E1.
	• Default linkspeed is 56K for T1 D4 AMI spans and 64K for all other types.
	• There is no need to change from defaults unless the provisioned span configuration requires it.

6	The span parameter settings in the GLI must match those provisioned in the OMC–R database for the BTS. If they do not, proceed to Table G-3 in the Change GLI3 Span Parameter Settings section.
7	If no other MMI actions are required for the card, terminate the MMI communication session and disconnect the LMF computer from the card.

Change GLI3 Span Parameter Configuration

If span parameter settings in the GLI3 card do not match the OMC–R database span parameters for the BTS where they are to be installed, follow the procedure in Table G-3 to change them.

Table G-3: Set GLI3 Span Parameter Configuration

Step	Action
1	If it has not been done, start a GLI3 MMI communication session on the LMF computer as described in Table 6-11.

2	At the `GLI3>` prompt, enter the following:
	
	config ni format
	
	The terminal will display a response similar to the following:
	
	`COMMAND SYNTAX: config ni format option`
	`Next available options:`
	`LIST – option : Span Option`
	`E1_1 : E1_1 – E1 HDB3 CRC4 no TS16`
	`E1_2 : E1_2 – E1 HDB3 no CRC4 no TS16`
	`E1_3 : E1_3 – E1 HDB3 CRC4 TS16`
	`E1_4 : E1_4 – E1 HDB3 no CRC4 TS16`
	`T1_1 : T1_1 – D4, AMI, No ZCS`
	`T1_2 : T1_2 – ESF, B8ZS`
	`J1_1 : J1_1 – ESF, B8ZS (Japan) – Default`
	`J1_2 : J1_2 – ESF, B8ZS`
	`T1_3 : T1_3 – D4, AMI, ZCS`
	`>`
	
	NOTE
	With this command, all active (in–use) spans will be set to the same format.

3	To set or change the span type, enter the correct option from the list at the entry prompt (>), as shown in the following example:
	
	`>` **T1_2**
	
	NOTE
	The entry is case–sensitive and must be typed *exactly* as it appears in the list. If the entry is typed incorrectly, a response similar to the following will be displayed:
	
	`CP: Invalid command`
	`01.061980 00:11'59 MGLI-000-2 INS-ACT BTS-CDMA 16.1.68.00`
	
	`GLI3>`

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Table G-3: Set GLI3 Span Parameter Configuration

Step	Action

4	An acknowledgement similar to the following will be displayed:
	
	`The value has been programmed. It will take effect after the next reset.`
	`GLI3>`

5	If the current GLI span rate must be changed, enter the following MMI command:
	
	config ni linkspeed
	
	A response similar to the following will be displayed :
	
	`Next available options:`
	` LIST – linkspeed : Span Linkspeed`
	`56K : 56K (default for T1_1 and T1_3 systems)`
	
	`64K : 64K (default for all other span configurations)`
	`>`
	
	NOTE
	With this command, all active (in–use) spans will be set to the same linkspeed.

6	To set or change the span linkspeed, enter the required option from the list at the entry prompt (>), as shown in the following example: `>` **64K**

	NOTE
	The entry is case–sensitive and must be typed *exactly* as it appears in the list. If the entry is typed incorrectly, a response similar to the following will be displayed:
	
	`CP: Invalid command`
	`01.061980 00:12'04 MGLI-000-2 INS-ACT BTS-CDMA 16.1.68.00`
	
	`GLI3>`

7	An acknowledgement similar to the following will be displayed:
	
	`The value has been programmed. It will take effect after the next reset.`
	`GLI3>`

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Table G-3: Set GLI3 Span Parameter Configuration	
Step	**Action**

8	If the span equalization must be changed, enter the following MMI command:
	
	config ni equal
	
	A response similar to the following will be displayed:
	
	`COMMAND SYNTAX: config ni equal span equal`
	`Next available options:`
	`LIST – span : Span`
	`a : Span A`
	`b : Span B`
	`c : Span C`
	`d : Span D`
	`e : Span E`
	`f : Span F`
	`>`

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Table G-3: Set GLI3 Span Parameter Configuration

Step	Action

9	At the entry prompt (>), enter the designator from the list for the span to be changed as shown in the following example:
	
	`> a`
	A response similar to the following will be displayed :
	
	`COMMAND SYNTAX: config ni equal a equal`
	`Next available options:`
	`LIST - equal : Span Equalization`
	`0 : 0-131 feet (default for T1/J1)`
	`1 : 132-262 feet`
	`2 : 263-393 feet`
	`3 : 394-524 feet`
	`4 : 525-655 feet`
	`5 : LONG HAUL`
	`6 : 75 OHM`
	`7 : 120 OHM (default for E1)`
	`8 : T1 Long Haul mode. No Attenuation`
	`9 : T1 Long Haul mode. 7.5 dB Attenuation`
	`10 : T1 Long Haul mode. 15.0 dB Attenuation`
	`11 : T1 Long Haul mode. 22.5 dB Attenuation`
	`12 : E1 Long Haul mode.`
	`>`
	
	! CAUTION
	When selecting span equalization settings, comply with the following or the BTS may operate erratically or unpredictably:
	• For *ALL* BTS types, *do not select any* of the following settings if they are displayed:
	– 5 LONG HAUL
	– 6 75 OHM
	– 11 T1 Long Haul mode. 22.5 dB Attenuation
	– 12 E1 Long Haul mode
	
	• For four–digit BTSs supported with Channel Service Units (CSU), *do not select any* of the following additional settings:
	– 8 T1 Long Haul mode. No Attenuation
	– 9 T1 Long Haul mode. 7.5 dB Attenuation
	– 10 T1 Long Haul mode. 15.0 dB Attenuation

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Table G-3: Set GLI3 Span Parameter Configuration

Step	Action

10	At the entry prompt (>), enter the code for the required equalization from the list as shown in the following example:
	
	`> 0`
	A response similar to the following will be displayed :
	
	`> 0`
	`The value has been programmed. It will take effect after the next reset.`
	`GLI2>`

11	Repeat steps 8 through 10 for each in–use span.

12	**NOTE**
	This step *must* be performed for GLI3 cards operating on a *packet* image to ensure the span parameter changes will replace the previous settings.
	
	For a GLI3 card in *packet* mode, enter the following:
	
	rmfile /nvram00/config/hlp_param.txt
	
	A response similar to the following will be displayed :
	
	`GLI3> rmfile /nvram00/config/hlp_param.txt`
	`11.24.2003 23:14:57 MGLI-004-1 CC PRESENT BTS-CDMA 16.40.00.09`
	
	`Removing file: /nvram00/config/hlp_param.txt`
	`Successfully removed file: /nvram00/config/hlp_param.txt`
	
	`GLI3>`

13	*** IMPORTANT** • After executing the **config ni format**, **config ni linkspeed**, and/or **config ni equal** commands, the affected MGLI/GLI board *MUST* be reset and reloaded for changes to take effect. • Although defaults are shown in the software, *always* consult site–specific documentation for span type, equalization, and linkspeed used at the site where the cards are to be installed. Reset the card using the MMI **reset** command.

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Table G-3: Set GLI3 Span Parameter Configuration	
Step	**Action**

14	Once the card has completed resetting, execute the following command to verify span settings are as required:
	
	config ni current
	
	A response similar to the following will be displayed :
	
	`The frame format in flash is set to use T1_2.`
	`Equalization:`
	`  Span A - 0-131 feet`
	`  Span B - 0-131 feet`
	`  Span C - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span D - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span E - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	`  Span F - Default (0-131 feet for T1/J1, 120 Ohm for E1)`
	
	`Linkspeed: 64K`
	`Currently, the link is running at 64K`
	`The actual rate is 0`

15	If the span configuration is not correct, perform the applicable step from this table to change it and repeat steps 12, 13, and 14 to verify required changes have been programmed.
16	If no other MMI actions are required for the card, terminate the MMI communication session and disconnect the LMF computer from the card.

Notes

Appendix H: Integrated BTS Router Installation

Appendix Content

H

Notes

Integrated BTS Router Installation – Introduction

Background

The IBR capability was developed to provide a low–cost solution for providing CDMA packet backhaul benefits at cell sites with lower traffic volumes. The IBR function is implemented by using the GLI3 card Concentration Highway Interface (CHI) bus 2 processor to perform the router function. This is accomplished through changes in the GLI3 card software. A card with the IBR–capable software can perform as a circuit GLI3 card, as a GLI3 with IBR, and as a GLI3 used with external BTS router groups. The card has the capability to recognize the environment in which it is installed and autoselect the appropriate operating mode (circuit, IBR packet, external BTS router packet).

Span line channel capability for an IBR–equipped *SC*480 BTS is limited to those available on a single T1 or E1 span.

New Packet BTS Installation

This section covers the actions necessary for implementing IBR packet capability in the installation of a new BTS. Procedures unique to this implementation are contained in this section. When procedures required in this implementation are contained in other parts of this publication or in other publications, the user will be specifically directed to them at the appropriate places in this section.

Prerequisites

The following must be accomplished prior to traveling to the BTS site for IBR implementation:

- The BTS has been installed as described in Chapter 4 of this manual.
- *One* of the following:
  - GLI3 card(s) for the site have been verified as having IBR–capable software image installed
  - Motorola Field Operations or Account Team member is identified to travel to the BTS site to perform GLI3 IBR–capable software installation, if required
- GLI3 card(s) for the BTS are on hand for transport to the BTS site or are verified to be at the BTS site
- Required publications to support IBR implementation activities are on hand for transportation to the BTS site

Implementing IBR Functionality

Follow the procedure in Table H-1 to implement IBR functionality for the BTS.

Table H-1: Implement IBR Functionality in New BTS

Step	Action
1	Upon arrival at the site, contact the OMC–R and notify the operator that site operations are starting.
2	If the BTS has not been initially powered up, apply power to the BTS in accordance with the Power Pre–Power–up Tests and Initial Power–up Tests and Procedures described in Chapter 5 of this manual.
3	Once the BTS is fully powered up with these procedures, the GLI3 card should have been seated in the correct slot. If it is not, seat the card at this time and allow each to complete its initialization.
4	*If it was not previously done*, follow the procedure in Table G-2 to: • Verify the software version in the GLI3 card(s) • Verify the span parameter settings in each GLI3 card match those established for the site in the OMC–R database
5	If the GLI3software requires upgrading for IBR capability, request Motorola Field Operations or Account Team assistance in upgrading the software.
6	If GLI3 card span parameter settings do not match those required, change them as necessary by following the procedure in Table G-3.

. . . continued on next page

Table H-1: Implement IBR Functionality in New BTS	
Step	**Action**
7	Refer to the site documentation for IBR spans and inspect the BTS span cabling connections to be sure they match Figure H-1.
8	Correct any cabling discrepancies between the BTS span cabling and site documentation, referring to Figure H-1 and the Install Span and Alarm Cables and Span Line Cable Pin Numbering Chapter 4 of this manual as required.
9	If the BTS requires optimization and/or ATP, perform them at this time by following the applicable procedures in Chapter 6 of this manual.
10	When all preparations for BTS operation are completed, contact the OMC–R and notify the operator that the BTS is ready for operation and request notification when the operator no longer requires support on–site.
11	When advised that there is no further requirement for on–site support of BTS and IBR initialization, proceed to Chapter 8 and follow the procedures to prepare to leave the site.

BTS Span Connections

The illustration in this section provides the detail of span connection for a non–redundant BTS to support IBR packet operation. The required configuration for IBR in redundant BTS is a single span.

BTS Span Cable

All connections in the BTS span connection diagram for IBR are based on the use of the following Motorola–standard BTS span cable:

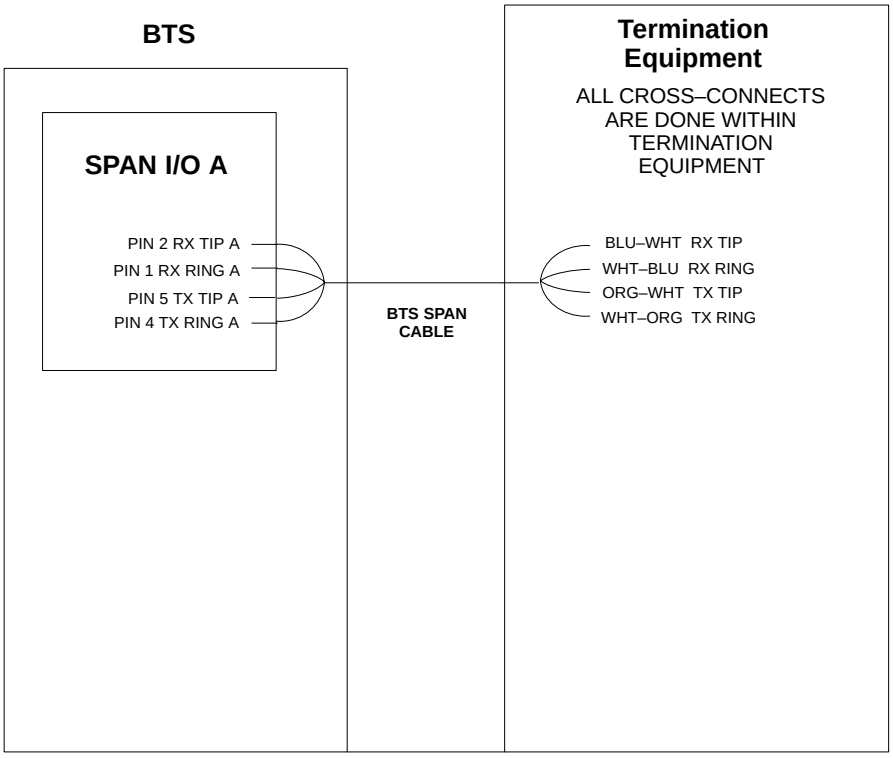
Table H-2: BTS Span Cables

Item	Part Number	Qty	Description
BTS span cable	CGDS1583461 or CGDS1583462	1	Cable, 50–wire, shielded twisted 25 pair, 100 ohm, 24–AWG, 7.6 m (25 ft – CGDS1583461) or 15.2 m (50 ft – CGDS1583462), one male 50–contact TELCO connector attached. One end of cable is un–terminated to allow connection to site termination equipment.

One Span Frame

Figure H-1 illustrates the connection details for one span to support packet operation with IBR for non–redundant BTS.

Figure H-1: Cabling Compact BTS Packet Operation Integrated BTS Router Spans – One Span



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H

Notes

Appendix I: Packet Backhaul Configuration

Appendix Content

Notes

Packet Backhaul BTS

Introduction

For Packet Backhaul, the *LMF Help* should be accessed for the appropriate procedures.

Packet Backhaul BTS Procedures

Optimization Procedures

- Click on *LMF Help*
- Select *Optimization/ATP Process*
- Select *Optimization procedure for SC48X*
  - Important CDF Parameters
  - CSA
  - Optimization of SC48X High Power Configuration
  - Optimization of SC48X Low Power Configuration
  - Optimization of SC48X High Power in Logical Configuration
  - Optimization of SC48X Low Power in Logical Configuration
  - Calibrating Procedures for SC48X Expansion Frame Configurations

Follow the appropriate procedure identified in the *LMF Help.*

Notes

Appendix J: Highway Cell Configuration

Appendix Content

Notes

BTS for Highway Cell Configuration

Introduction

The highway cell configuration is a 1 carrier, two sector with no RX diversity and one duplexed antenna. The configuration is for 1.9 GHz and +27 V.

The 1.9 GHz, +27V A & B–Band does not support highway configuration.

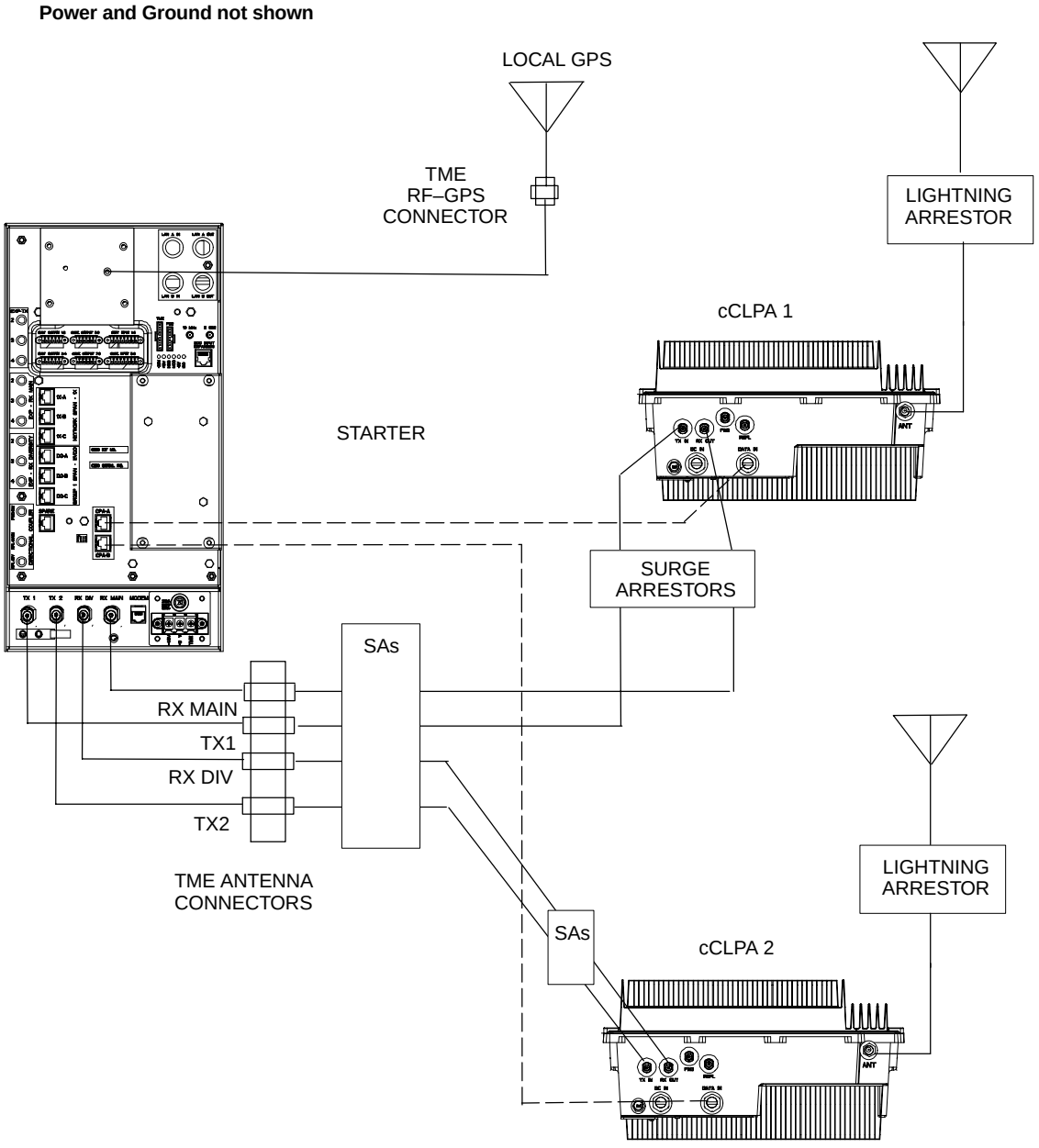
Highway Cell Configuration

Figure J-1 shows a typical highway cell configuration.

DC power may be provided by a +27V Power Distribution Enclosure or other equivalent power source.

Units may be pole or wall mounted. Type of mounting used is determined by the customer.

Figure J-1: Typical Highway Cell Configuration Diagram



Numbers

A

B

C

D

M

N

O

P

R

S

T

U

V

W

X

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Technical Information

1X SC480 BTS HARDWARE INSTALLATION, OPTIMIZATION/ATP, AND FRU

SOFTWARE RELEASE 2.16.5.X

1.9 GHZ

CDMA2000 1X

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STANDARD SPECIFICATIONS – FOR REFERENCE–DO NOT MODIFY

PAPER:	1st. LEVEL TABS:	2nd. LEVEL TABS:	FINISHING:
Body: 70 lb.	Single Sided	Single Sided	3–Ring Binder Slant–D
Inside Cover: 65 lb. Cougar	5 Cuts	7 Cuts	3–Hole Punched (5/16–in. dia.)
Tabs: 110 lb. Index	Clear Mylar	Clear Mylar	Shrink Wrap Body
Binder Cover: Standard TED cover – 10 pt. Carolina	Pantone 2706–C	White	
	Black Ink	Black Ink	

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Other: Meet with manager to determine the deliverable.

SPECIAL INSTRUCTIONS