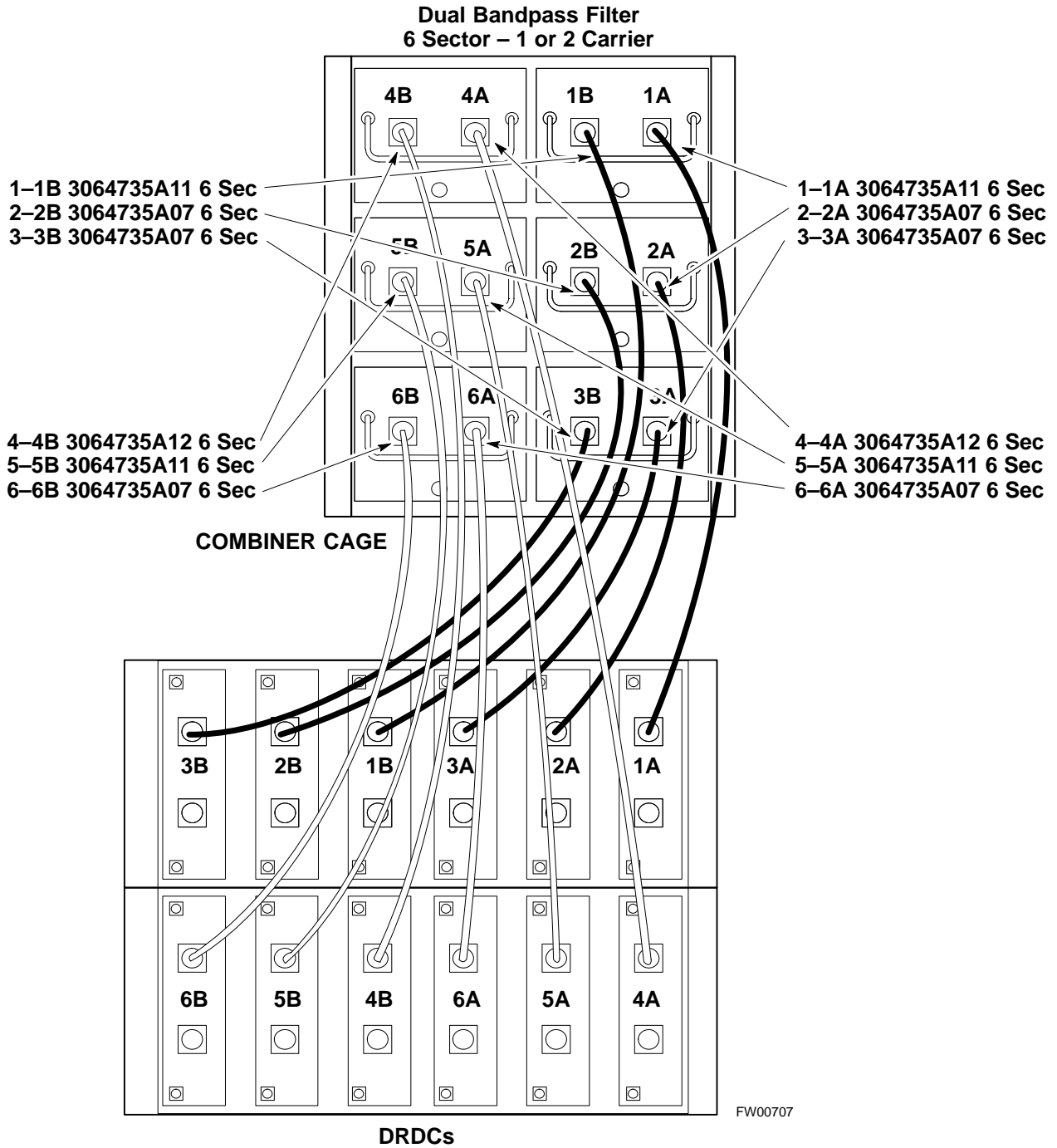


RF Cabinet Interconnect Cables – continued

Figure H-14: SC 4812ET BTS Combiner DRDC/TRDC Cable Connection



H

MPC Functional Description

The MPC card provides (see Figure H-15) low-noise amplification for all RX path signals. The low noise, high gain design improves frame RX sensitivity and overcomes the splitting loss in the receive path. DC voltages are monitored on the RF devices and regulators and are used to generate hard and soft alarms. The MPC is not redundant at the card-level, but includes dual-path amplifiers which provide soft-fail redundancy for all sectors.

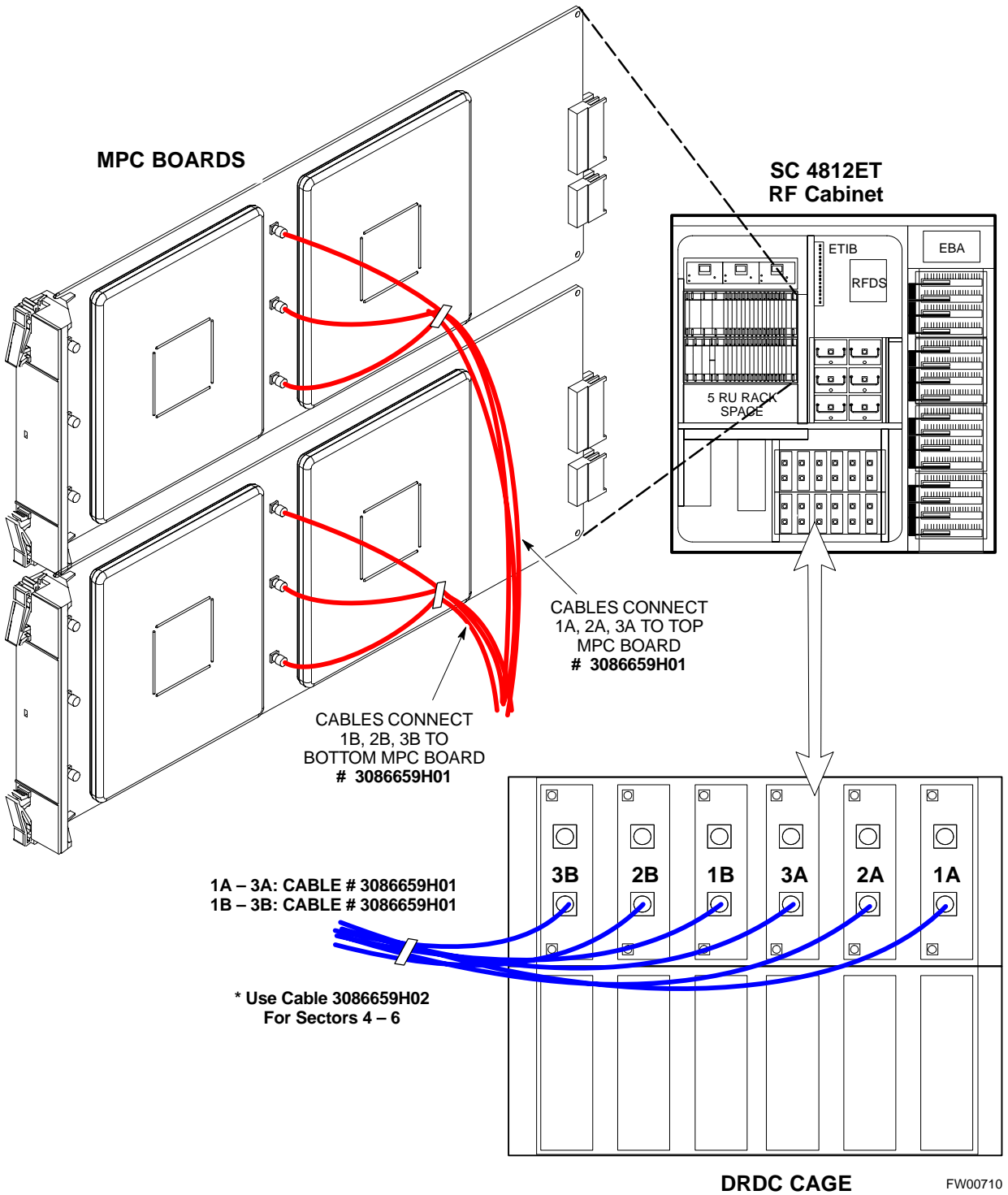
MPC to DRDC Cabling

The cables connecting the MPC cards to the DRDCs for a three sector RF cabinet are shown in Figure H-15. A six sector RF cabinet would have six more DRDC's and they would be connected to the front of the MPC cards.



RF Cabinet Interconnect Cables – continued

Figure H-15: DRDC To C-CCP Cage MPC Boards Cable Connections



H

RFDS Cabling Details

Figure H-16 shows the components of the RFDS. Table H-2 depicts the cabling for a 3-Sector Duplexed configuration and Table H-3 depicts the cabling for a 6-Sector Duplexed configuration. Figure H-17 shows the connection of the RFDS to the BTS combiners.

Figure H-16: RFDS Cable Connectors

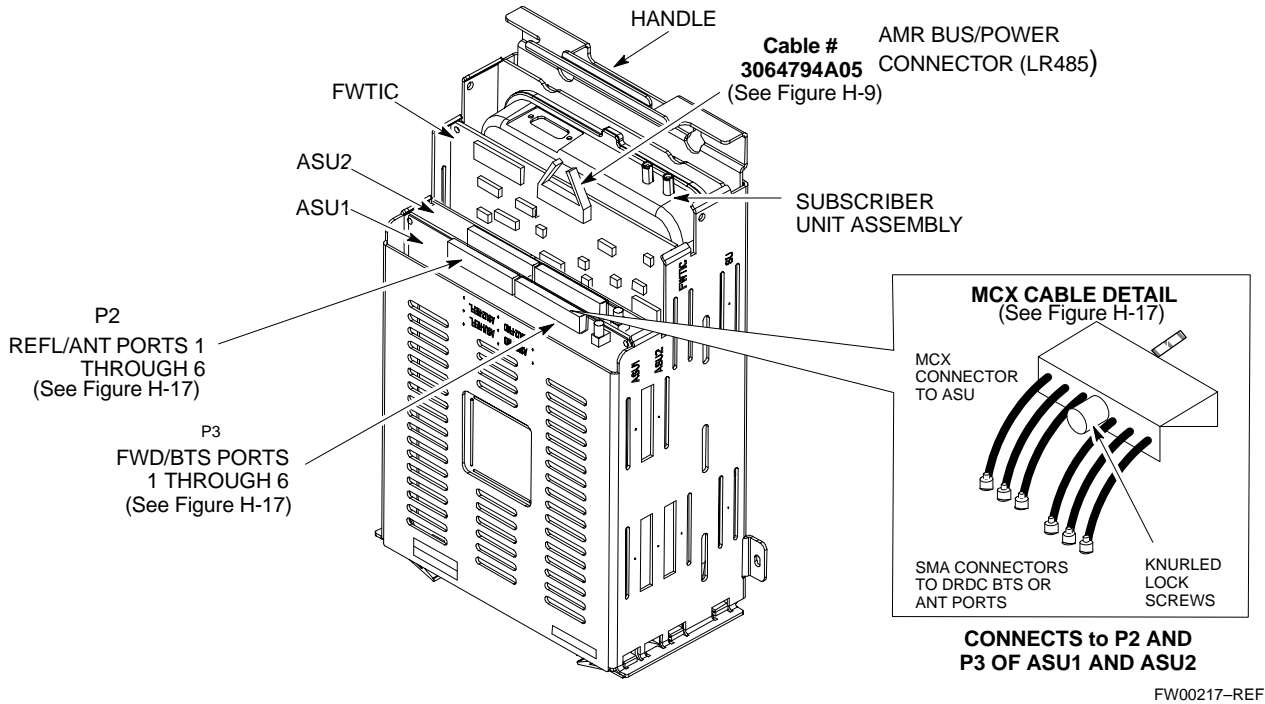


Table H-2: SC 4812ET Series 3-Sector Duplexed Directional Coupler to RFDS Cabling Table

DRDC Label	Directional Coupler Port	Cobra RFDS Port
ASU 1 – FWD (six pack MCX)		
1A BTS	Sector 1 Main BTS	ASU1-FWD BTS-1
1B BTS	Sector 1 Diversity BTS	ASU1-FWD BTS-2
2A BTS	Sector 2 Main BTS	ASU1-FWD BTS-3
2B BTS	Sector 2 Diversity BTS	ASU1-FWD BTS-4
3A BTS	Sector 3 Main BTS	ASU1-FWD BTS-5
3B BTS	Sector 3 Diversity BTS	ASU1-FWD BTS-6
ASU 1 – REF (six pack MCX)		
1A ANT	Sector 1 Main ANT	ASU1-REF ANT-1
1B ANT	Sector 1 Diversity ANT	ASU1-REF ANT-2
2A ANT	Sector 2 Main ANT	ASU1-REF ANT-3
2B ANT	Sector 2 Diversity ANT	ASU1-REF ANT-4
3A ANT	Sector 3 Main ANT	ASU1-REF ANT-5
3B ANT	Sector 3 Diversity ANT	ASU1-REF ANT-6

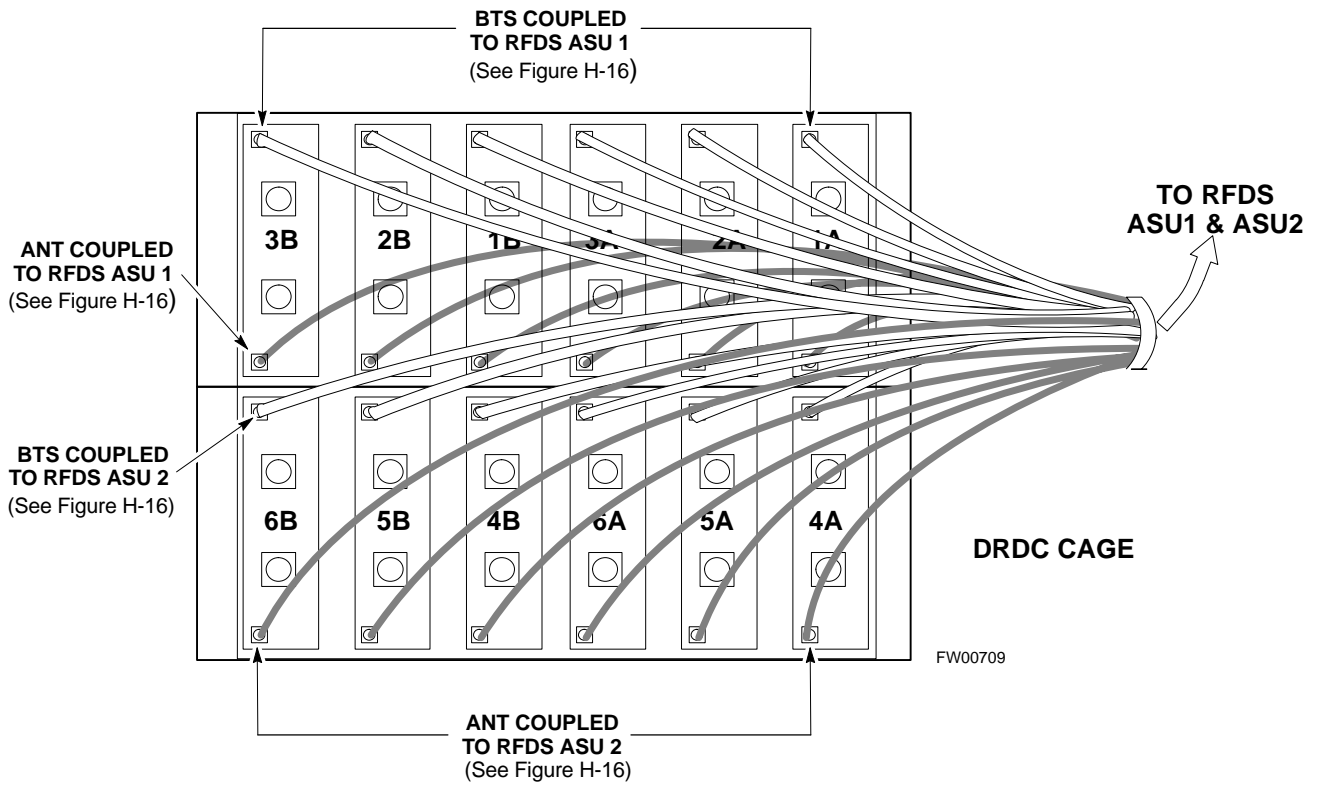
H

RF Cabinet Interconnect Cables – continued

Table H-3: SC 4812ET Series 6-Sector Duplexed Directional Coupler to RFDS Cabling Table		
DRDC Label	Directional Coupler Port	Cobra RFDS Port
ASU 1 – FWD (six pack MCX)		
1A BTS	Sector 1 Main BTS	ASU1–FWD BTS–1
1B BTS	Sector 1 Diversity BTS	ASU1–FWD BTS–2
2A BTS	Sector 2 Main BTS	ASU1–FWD BTS–3
2B BTS	Sector 2 Diversity BTS	ASU1–FWD BTS–4
3A BTS	Sector 3 Main BTS	ASU1–FWD BTS–5
3B BTS	Sector 3 Diversity BTS	ASU1–FWD BTS–6
ASU 2 – FWD (six pack MCX)		
4A BTS	Sector 4 Main BTS	ASU2–FWD BTS–1
4B BTS	Sector 4 Diversity BTS	ASU2–FWD BTS–2
5A BTS	Sector 5 Main BTS	ASU2–FWD BTS–3
5B BTS	Sector 5 Diversity BTS	ASU2–FWD BTS–4
6A BTS	Sector 6 Main BTS	ASU2–FWD BTS–5
6B BTS	Sector 6 Diversity BTS	ASU2–FWD BTS–6
ASU 1 – REF (six pack MCX)		
1A ANT	Sector 1 Main ANT	ASU1–REF ANT–1
1B ANT	Sector 1 Diversity ANT	ASU1–REF ANT–2
2A ANT	Sector 2 Main ANT	ASU1–REF ANT–3
2B ANT	Sector 2 Diversity ANT	ASU1–REF ANT–4
3A ANT	Sector 3 Main ANT	ASU1–REF ANT–5
3B ANT	Sector 3 Diversity ANT	ASU1–REF ANT–6
ASU 2 – REF (six pack MCX)		
4A ANT	Sector 4 Main ANT	ASU2–REF ANT–1
4B ANT	Sector 4 Diversity ANT	ASU2–REF ANT–2
5A ANT	Sector 5 Main ANT	ASU2–REF ANT–3
5B ANT	Sector 5 Diversity ANT	ASU2–REF ANT–4
6A ANT	Sector 6 Main ANT	ASU2–REF ANT–5
6B ANT	Sector 6 Diversity ANT	ASU2–REF ANT–6



Figure H-17: SC 4812ET BTS Combiner DRDC/TRDC RFDS Cable Connection



50 Pair Punchblock

The 50 pair punchblock is the main interface point for RGPS, span lines, customer I/O, Power Cabinet alarm lines, and the modem. The punchblock provides primary protection for all lines. Refer to Figure H-18 and Table H-4 for punchblock pin-out.



CAUTION

SC4812ET Span Line Labeling for Span B and Span C is swapped

- On the SC4812ET's, the span cable internal to the base station that connects the 50 pin header on the I/O plate to the CSU has Span B and Span C (RJ-45) connectors mis-labeled.
- CFE will punch down the span on the 50 pair punchblock as per Motorola documentation and punchdown chart. When connecting the span input to the CSU re-label "Span B" cable to "Span C" cable to "Span B". Connect to CSU as per documentation
- Note: The labeling issue on the cable from the I/O plate to the CSU Part Number 3086601H01 Rev C shall be corrected on revision "D" to address this issue. The cut over date to Rev. D will be approximately January 30, 2001.

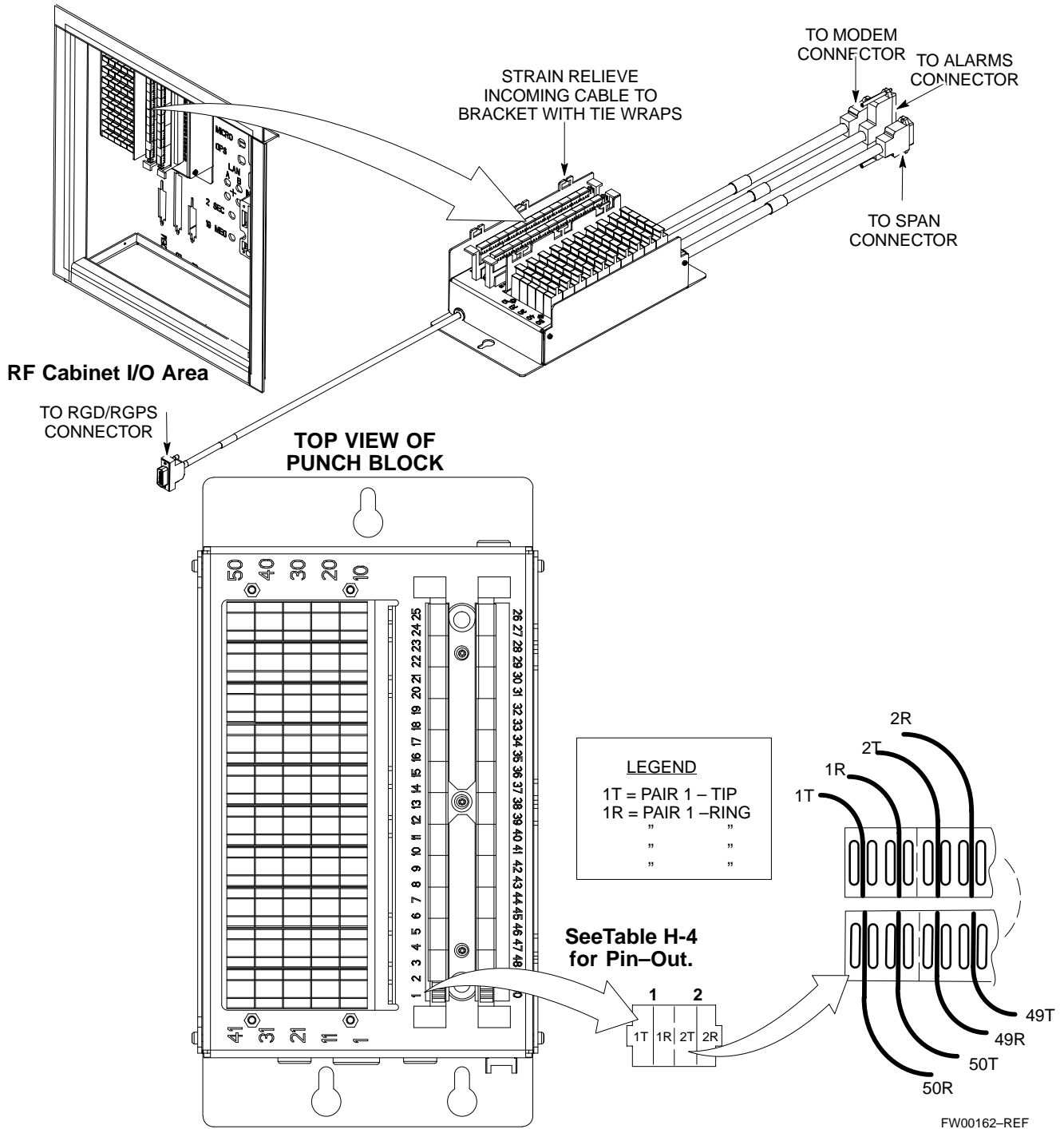


CAUTION

A wiring discrepancy exists between the manuals and the frame for remote GPS.

- The TX and RX are reversed in the ETIB, leading to inoperability of the RGPS. The RGPS will not work in either a single standalone or multiple frame configuration.
- Swap the White and White/Bk wires to punch pins 44T and 44R. The Green and Green/Bk go to 45T and 45R. This will correct non-expansion configurations.
- Single frame and expansion BTSs without RGPS can use this workaround as a permanent solution.
- For expansion with RGPS required a new cable (P/N 3086433H10) will correct the problem.

Figure H-18: 50 Pair Punchblock



H

RF Cabinet Interconnect Cables – continued

Alarm and Span Line Cable Pin/Signal Information

Table H-4 lists the complete pin/signal identification for the 50-pin punch block.

Table H-4: Pin-Out for 50-Pair Punchblock				
Punchblock Cable Connector	Function	Signal Name	Punch Pin	Ext. Cable Wire Color
ALARM	Power Cabinet	Power Cab Control – NC	1T	Blue
		Power Cab Control – NO	1R	Blk/Blue
		Power Cab Control–Com	2T	Yellow
		Reserved	2R	N/C
		Rectifier Fail	3T	Blk/Yellow
		AC Fail	3R	Green
		Power Cab Exchanger Fail	4T	Blk/Grn
		Power Cab Door Alarm	4R	White
		Power Cab Major Alarm	5T	Blk/White
		Battery Over Temp	5R	Red
		Power Cab Minor Alarm	6T	Blk/Red
		Reticifier Over Temp	6R	Brown
		Power Cab Alarm Rtn	7T	Blk/Brn
	HSO/LFR Extension	LFR_HSO_GND	7R	
		EXT_1PPS_POS	8T	
		EXT_1PPS_NEG	8R	
	LFR Antenna	CAL_+	9T	
		CAB_–	9R	
		LORAN_+	10T	
		LORAN_–	10R	
	Pilot Beacon	Pilot Beacon Alarm – Minor	11T	
		Pilot Beacon Alarm – Rtn	11R	
		Pilot Beacon Alarm – Major	12T	
		Pilot Beacon Control–NO	12R	
		Pilot Beacon Control – COM	13T	
		Pilot Beacon Control – NC	13R	

... continued on next page



RF Cabinet Interconnect Cables – continued

Table H-4: Pin-Out for 50-Pair Punchblock

Punchblock Cable Connector	Function	Signal Name	Punch Pin	Ext. Cable Wire Color
ALARM	Customer Outputs	Customer Outputs 1 – NO	14T	
		Customer Outputs 1 – COM	14R	
		Customer Outputs 1 – NO	14T	
		Customer Outputs 1 – COM	14R	
		Customer Outputs 1 – NC	15T	
		Customer Outputs 2 – NO	15R	
		Customer Outputs 2 – COM	16T	
		Customer Outputs 2 – NC	16R	
		Customer Outputs 3 – NO	17T	
		Customer Outputs 3 – COM	17R	
		Customer Outputs 3 – NC	18T	
		Customer Outputs 4 – NO	18R	
		Customer Outputs 4 – COM	19T	
		Customer Outputs 4 – NC	19R	

... continued on next page



RF Cabinet Interconnect Cables – continued

Table H-4: Pin-Out for 50-Pair Punchblock

Punchblock Cable Connector	Function	Signal Name	Punch Pin	Ext. Cable Wire Color
ALARM	Customer Inputs	Customer Inputs 1	20T	
		Cust_Rtn_A_1	20R	
		Customer Inputs 2	21T	
		Cust_Rtn_A_2	21R	
		Customer Inputs 3	22T	
		Cust_Rtn_A_3	22R	
		Customer Inputs 4	23T	
		Cust_Rtn_A_4	23R	
		Customer Inputs 5	24T	
		Cust_Rtn_A_5	24R	
		Customer Inputs 6	25T	
		Cust_Rtn_A_6	25R	
		Customer Inputs 7	26T	
		Cust_Rtn_A_7	26R	
		Customer Inputs 8	27T	
		Cust_Rtn_A_8	27R	
		Customer Inputs 9	28T	
		Cust_Rtn_A_9	28R	
		Customer Inputs 10	29T	
		Cust_Rtn_A_10	29R	

... continued on next page



RF Cabinet Interconnect Cables – continued

Table H-4: Pin-Out for 50-Pair Punchblock

Punchblock Cable Connector	Function	Signal Name	Punch Pin	Ext. Cable Wire Color	
SPAN I/O	Span 1	RCV_TIP_A	30T		
		RCV_RING_A	30R		
		XMIT_TIP_A	31T		
		XMIT_RING_A	31R		
	Span 2	RCV_TIP_B	32T		
		RCV_RING_B	32R		
		XMIT_TIP_B	33T		
		XMIT_RING_B	33R		
	Span 3	RCV_TIP_C (Note)	34T		
		RCV_RING_C (Note)	34R		
		XMIT_TIP_C (Note)	35T		
		XMIT_RING_C(Note)	35R		
	Span 4	RCV_TIP_D (Note)	36T		
		RCV_RING_D (Note)	36R		
		XMIT_TIP_D (Note)	37T		
		XMIT_RING_D(Note)	37R		
	Span 5	RCV_TIP_E (Note)	38T		
		RCV_RING_E (Note)	38R		
		XMIT_TIP_E (Note)	39T		
		XMIT_RING_E(Note)	39R		
	Span 6	RCV_TIP_F (Note)	40T		
		RCV_RING_F (Note)	40R		
		XMIT_TIP_F (Note)	41T		
		XMIT_RING_F(Note)	41R		
		NOTE Span 3 through 6 are spares for expansion purposes			

... continued on next page



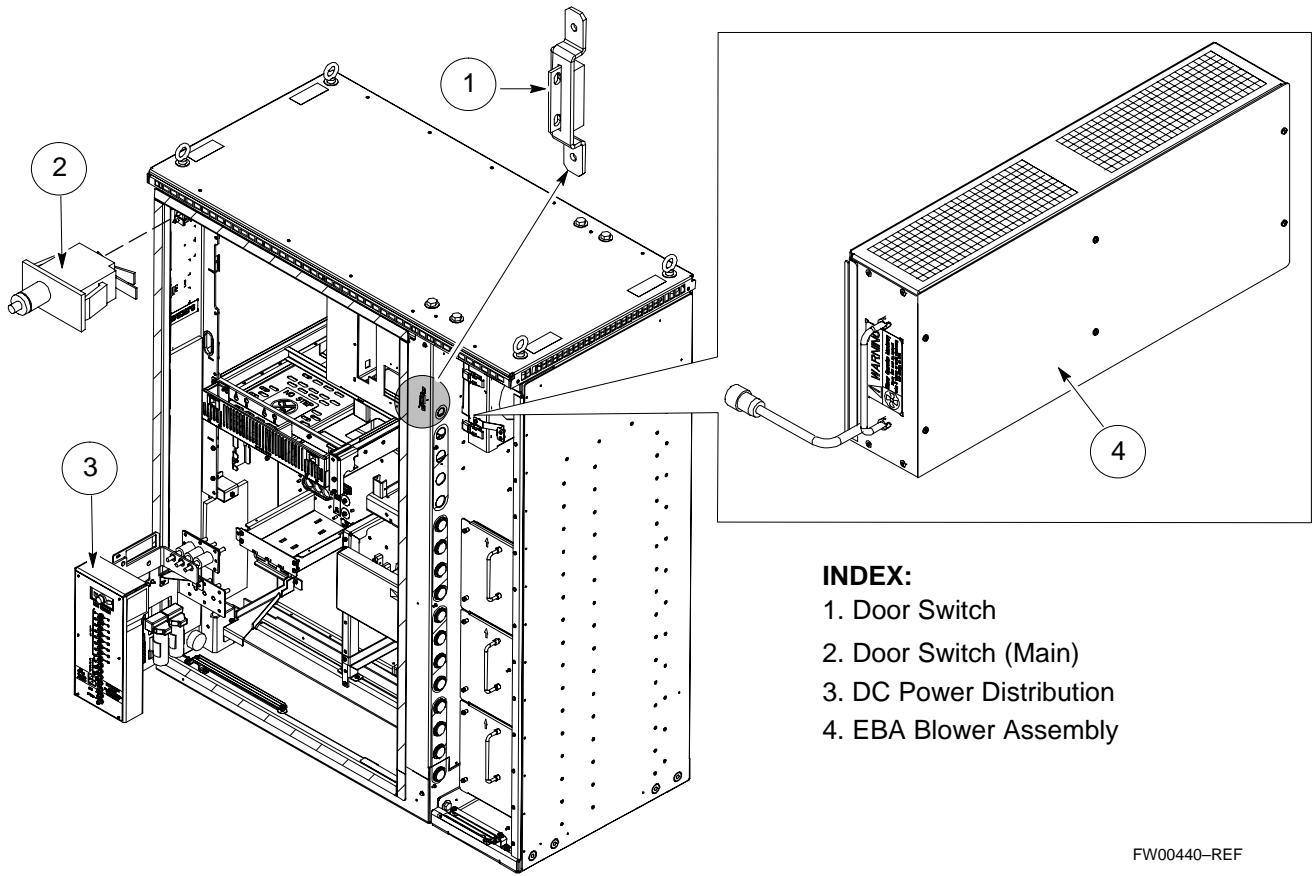
RF Cabinet Interconnect Cables – continued

Table H-4: Pin-Out for 50-Pair Punchblock

Punchblock Cable Connector	Function	Signal Name	Punch Pin	Ext. Cable Wire Color
RGD/RGPS	For frame without RGD Expansion Punchblock Single Frame BTS;RGPS Head Connection OR Multiple Frame BTS; RGD Connection at RGPS Secondary Frame	GPS_Power_A	42T	Yellow
		GPS_Power_A_Return	42R	Yellow/Black
		GPS_Power_B	43T	Blue
		GPS_Power_B_Return	43R	Blue/Black
		GPS_TXD+	44T	White
		GPS_TXD-	44R	White/Black
		GPS_RXD+	45T	Green
		GPS_RXD-	45R	Green/Black
		Signal Ground (TDR+)	46T	Red
		Signal Ground (TDR-)	46R	Red/Black
		GPS_1PPS+	47T	Brown
		GPS_1PPS-	47R	Brown/Black
RGD/RGPS	For frame with RGD Expansion Punchblock OR Multiple Frame BTS; RGPS Head Connection at RGPS Primary Frame	GPS_Power_A	42T	Yellow
		GPS_Power_A_Return	42R	Yellow/Black
		GPS_Power_B	43T	Blue
		GPS_Power_B_Return	43R	Blue/Black
		GPS_TXD+	44T	White
		GPS_TXD-	44R	White/Black
		GPS_RXD+	45T	Green
		GPS_RXD-	45R	Green/Black
		Signal Ground (TDR+)	46T	Red
		Master Frame (TDR-)	46R	Red/Black
		GPS_1PPS+	47T	Brown
		GPS_1PPS-	47R	Brown/Black
MODEM		Reserved	48T	
		Reserved	48R	
RGD/RGPS		Chassis Ground	49T	N/A
None		No Connection	49R	None
ALARM		Reserved	50T	None
		Reserved	50R	None



Figure H-19: SC 4812ET RF Cabinet Parts Locator



H

Appendix I: GPIB Addresses

Appendix Content

GPIB Addresses	
Introduction	I-1
HP437 Power Meter GPIB Address	I-1
Gigatronics 8541C Power Meter GPIB Address	I-2
Motorola CyberTest GPIB Address	I-3
HP8935 Test Set GPIB Address	I-4
Setting HP8921A and HP83236A/B GPIB Address	I-6
Advantest R3465 GPIB Address	I-8
RS232 GPIB Interface Box	I-9
CDMA 2000 Test Equipment Preparation	
Advantest R3267 Spectrum Analyzer GPIB Address	I-10
Advantest R3562 Signal Generator GPIB Address	I-11
Agilent E4406A Transmitter Tester GPIB Address	I-12
Agilent E4432B Signal Generator GPIB Address	I-14



GPIB Addresses

Introduction

Use the procedures in this appendix to verify and/or change the GPIB addresses of the applicable test equipment.

HP437 Power Meter GPIB Address

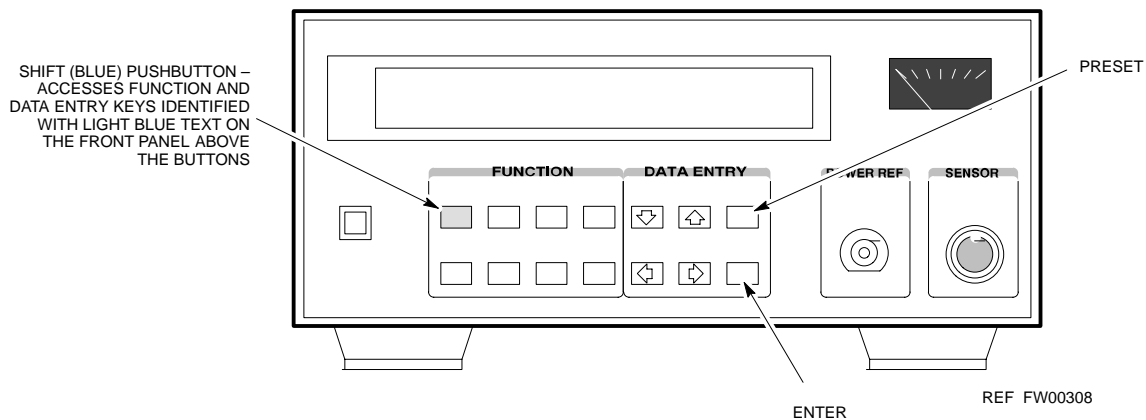
Follow the steps in Table I-1 to verify and, if necessary, change the HP437 GPIB address.

NOTE

This procedure assumes that the test equipment is set up and ready for testing.

Table I-1: Verify and/or Change HP437 Power Meter GPIB Address	
Step	Action
1	Press Shift and PRESET (see Figure I-1).
2	Use the ▲ arrow key to navigate to HP-IB ADRS and press ENTER . The HP-IB address is displayed. NOTE HP-IB is the same as GPIB.
3	If the current GPIB address is not set to 13 , perform the following to change it: <ul style="list-style-type: none"> – Use the ▲ ▼ arrow keys to change the HP-IB ADRS to 13. – Press ENTER to set the address.
4	Press Shift and ENTER to return to a standard configuration.

Figure I-1: HP437 Power Meter



GPIB Addresses – continued

Gigatronics 8541C Power Meter GPIB Address

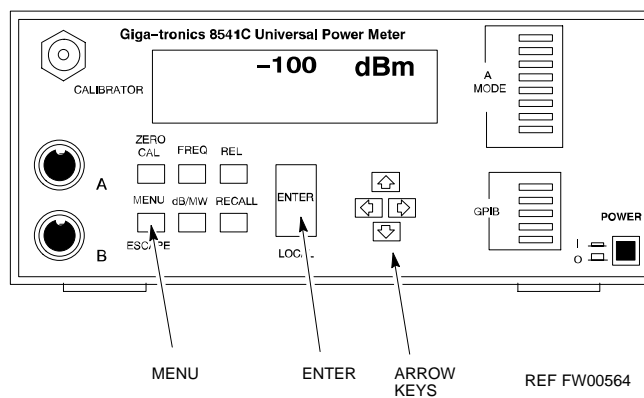
Follow the steps in Table I-2 to verify and, if necessary, change the Gigatronics 8541C power meter GPIB address.

NOTE

This procedure assumes that the test equipment is set up and ready for testing.

Table I-2: Verify and/or Change Gigatronics 8541C Power Meter GPIB Address	
Step	Action
	! CAUTION Do not connect/disconnect the power meter sensor cable with AC power applied to the meter. Disconnection could result in destruction of the sensing element or miscalibration.
1	Press MENU (see Figure I-2).
2	Use the ▼ arrow key to select CONFIG MENU and press ENTER .
3	Use the ▼ arrow key to select GPIB and press ENTER . The current Mode and GPIB Address are displayed.
4	If the Mode is not set to 8541C , perform the following to change it: Use the ◀▶ arrow keys as required to select MODE . Use the ▼▲ arrow keys as required to set MODE to 8541C .
5	If the GPIB address is not set to 13 , perform the following to change it: Use the ▶ arrow key to select ADDRESS . Use the ▼▲ arrow keys as required to set the GPIB address to 13 .
6	Press ENTER to return to normal operation.

Figure I-2: Gigatronics 8541C Power Meter Detail



Motorola CyberTest GPIB Address

Follow the steps in Table I-3 to verify and, if necessary, change the GPIB address on the Motorola CyberTest. Changing the GPIB address requires the following items:

- Motorola CyberTest communications analyzer
- Computer running Windows 3.1/Windows 95
- Motorola CyberTAME software program “TAME”
- Parallel printer port cable (shipped with CyberTest)

NOTE

This procedure assumes that the test equipment is set up and ready for testing.

Table I-3: Verify and/or Change Motorola CyberTest GPIB Address

Step	Action
1	On the LMF desktop, locate the CyberTAME icon. Double click on the icon to run the CyberTAME application.
2	In the CyberTAME window taskbar, under Special , select IEEE.488.2 .
3	CyberTAME software will query the CyberTest Analyzer for its current GPIB address. It then will open the IEEE 488.2 dialog box. If the current GPIB address is not 18, perform the following procedure to change it: <ul style="list-style-type: none">– Use the up or down increment arrows, or double-click in the field and type the number.– Click on the OK button. The new address will be written to the CyberTest via the parallel port and saved.
	NOTE Verify that the address has been set by repeating steps 2 and 3. The new address should now appear in the IEEE 488.2 dialog box Address field.



GPIB Addresses – continued

HP8935 Test Set GPIB Address

Follow the procedure in Table I-4 to verify and, if necessary, change the HP8935 GPIB address.

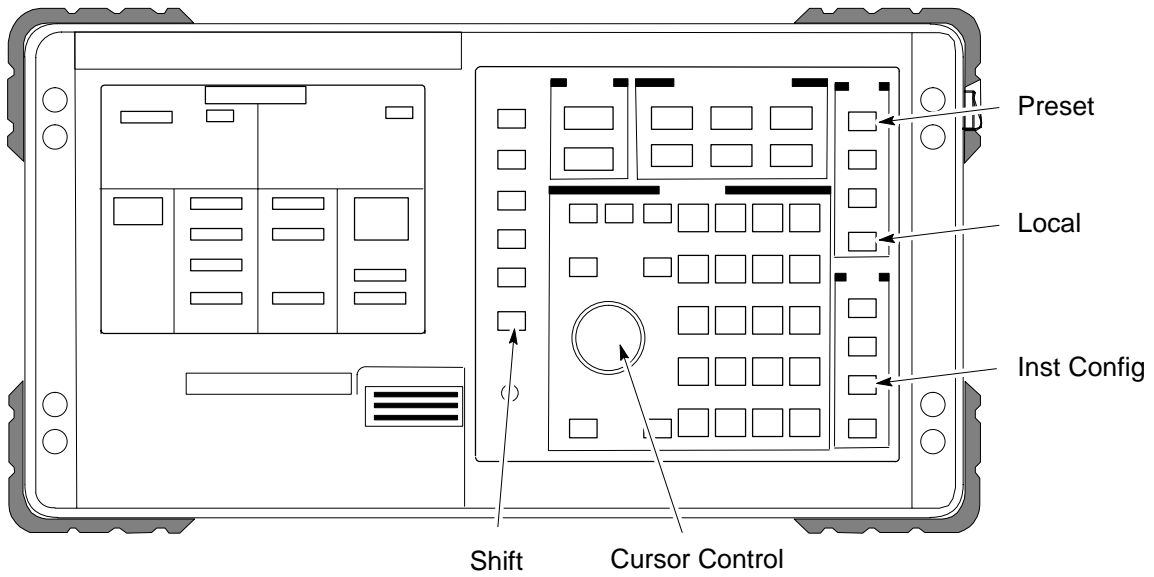
NOTE

This procedure assumes that the test equipment is set up and ready for testing.

Table I-4: Verify and/or Change HP8935 GPIB Address

Step	Action
	<p>* IMPORTANT</p> <p>The HP I/O configuration MUST be set to Talk & Listen, or NO device on the GPIB bus will be accessible. (Consult test equipment OEM documentation for additional information as required.)</p>
1	<p>To verify that the GPIB addresses are set correctly, press Shift and LOCAL on the HP8935 (see Figure I-3). The current HP-IB address is displayed at the top of the screen.</p> <p>NOTE HP-IB is the same as GPIB.</p>
2	<p>If the current GPIB address is not set to 18, perform the following to change it:</p> <ul style="list-style-type: none">– Press Shift and Inst Config.– Turn the Cursor Control knob to move the cursor to the HP-IB Adrs field.– Press the Cursor Control knob to select the field.– Turn the Cursor Control knob as required to change the address to 18.– Press the Cursor Control knob to set the address.
3	<ul style="list-style-type: none">• Press Preset to return to normal operation.

Figure I-3: HP8935 Test Set



FW00885



GPIB Addresses – continued

Setting HP8921A and HP83236A/B GPIB Address

Follow the procedure in Table I-5 to verify and, if necessary, change the HP8921A HP83236A GPIB addresses.

NOTE

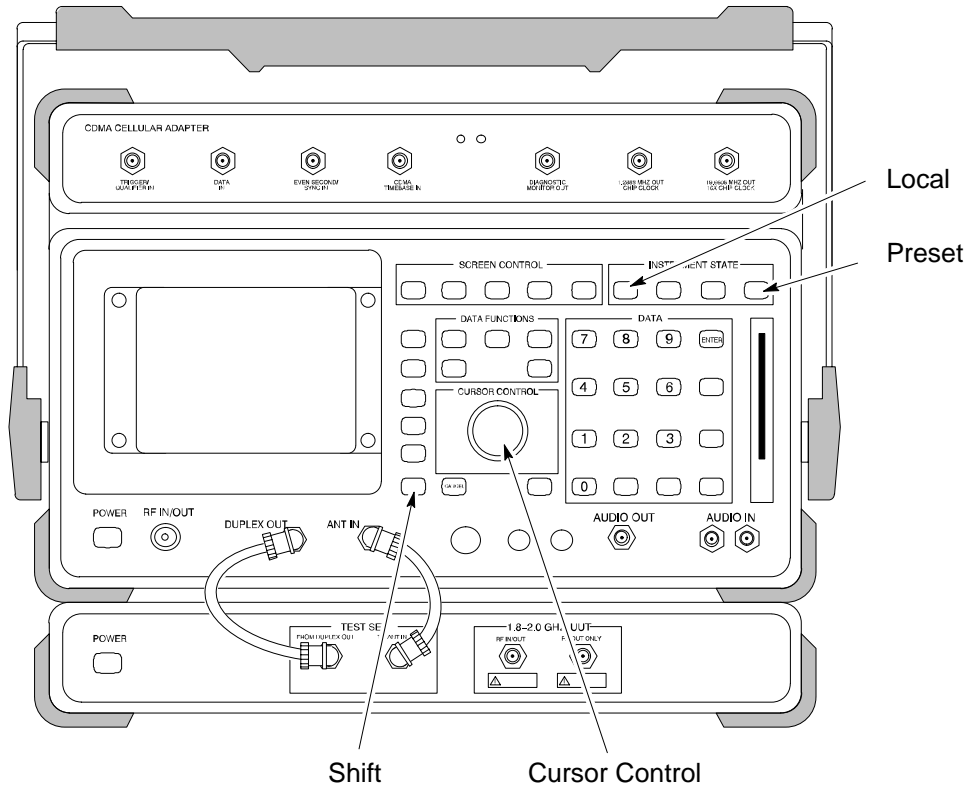
This procedure assumes that the test equipment is set up and ready for testing.

Table I-5: Verify and/or Change HP8921A and HP83236A GPIB Addresses

Step	Action
1	To verify that the GPIB addresses are set correctly, press Shift and LOCAL on the HP8921A (see Figure I-4). The current HP-IB address is displayed at the top of the screen. NOTE HP-IB is the same as GPIB.
2	If the current HP-IB address is not set to 18 , perform the following to change it: <ul style="list-style-type: none">– Turn the Cursor Control knob to move the cursor to More and press the knob to select the field.– Turn the Cursor Control knob to move the cursor to I/O Config and press the knob to select the field.– Turn the Cursor Control knob to move the cursor to Adrs and press the knob to select the field.– Turn the Cursor Control knob to change the HP-IB address to 18 and press the knob to set the address.– Press Shift and Preset to return to normal operation.
3	To set the HP83236A (or B) PCS Interface GPIB address= 19 , set the dip switches as follows: <ul style="list-style-type: none">– A1=1, A2=1, A3=0, A4=0, A5=1, HP-IB/Ser = 1

GPIB Addresses – continued

Figure I-4: HP8921A and HP83236A/B



Advantest R3465 GPIB Address

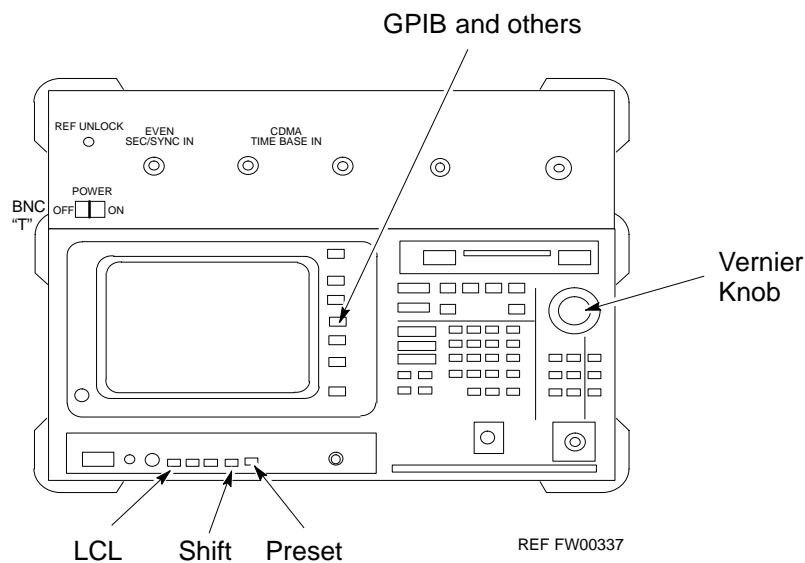
Table I-6 describes the steps to verify and, if necessary, change the GPIB address for the Advantest R3465.

NOTE

This procedure assumes that the test equipment is set up and ready for testing.

Table I-6: Verify and/or Change Advantest R3465 GPIB Address	
Step	Action
1	To verify that the GPIB address is set correctly, perform the following procedure: <ul style="list-style-type: none"> – Press SHIFT then PRESET (see Figure I-5). – Press LCL. – Press the GPIB and Others CRT menu key to view the current address.
2	If the current GPIB address is not set to 18 , perform the following to change it: <ul style="list-style-type: none"> – Turn the vernier knob as required to select 18. – Press the vernier knob to set the address.
3	To return to normal operation, press Shift and Preset .

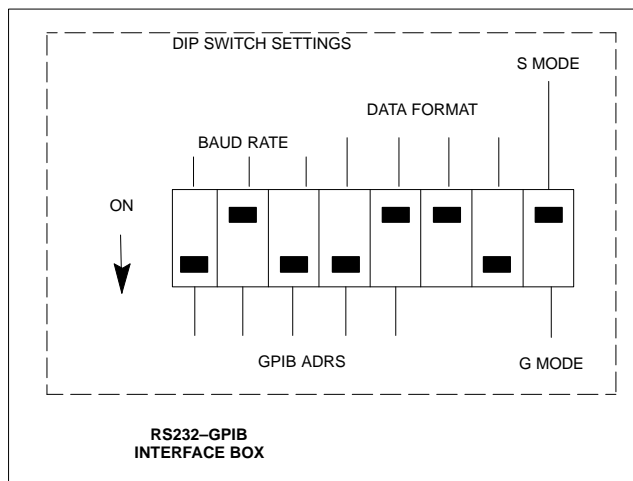
Figure I-5: R3465 Communications Test Set



RS232 GPIB Interface Box

Ensure that the RS232 GPIB interface box dip switches are set as shown in Figure I-6.

Figure I-6: RS232 GPIB Interface Box



CDMA 2000 Test Equipment Preparation

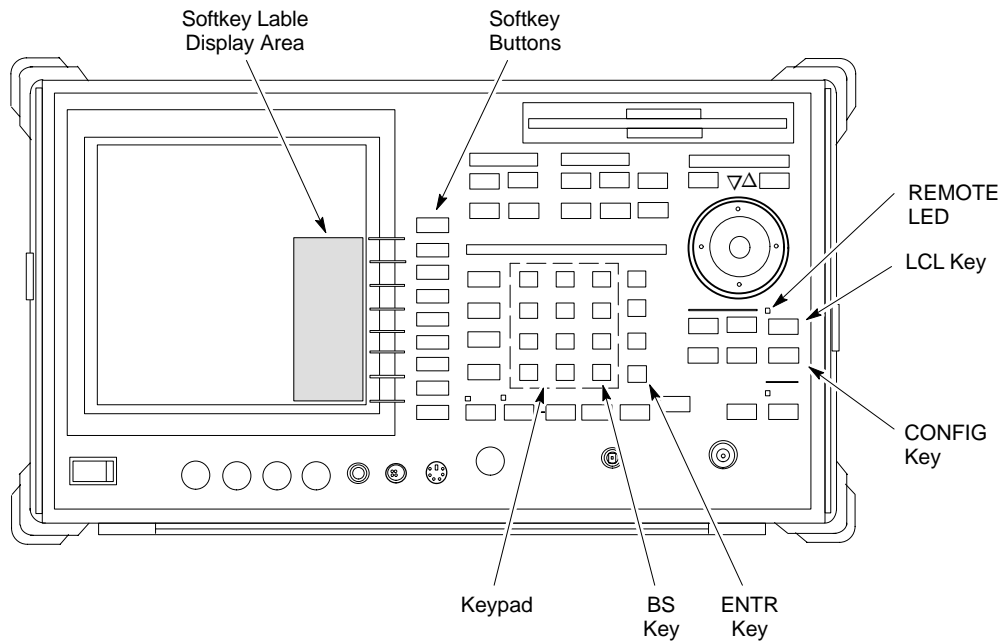
Advantest R3267 Spectrum Analyzer GPIB Address

Perform the procedure in Table I-7 and refer to Figure I-7 to verify and, if necessary, change the Advantest R3267 spectrum analyzer GPIB address.

Table I-7: Verify and Change Advantest R3267 GPIB Address

Step	Action
1	If the REMOTE LED is lighted, press the LCL key. <ul style="list-style-type: none"><li data-bbox="269 636 529 667">– The LED turns off.
2	Press the CONFIG key. <ul style="list-style-type: none"><li data-bbox="269 730 1373 793">– The CONFIG softkey labels will appear in the softkey label display area of the instrument display.<li data-bbox="269 804 1292 835">– The current GPIB address will be displayed below the GPIB Address softkey label.
3 3a 3b 3c	If the current GPIB address is not set to 18 , perform the following to change it: <ul style="list-style-type: none"><li data-bbox="269 898 1406 1003">– Press the GPIB Address softkey.<ul style="list-style-type: none"><li data-bbox="310 940 1406 1003">— A GPIB Address entry window will open in the instrument display showing the current GPIB address.<li data-bbox="269 1014 1406 1119">– Enter 18 on the keypad in the ENTRY section of the instrument front panel.<ul style="list-style-type: none"><li data-bbox="310 1045 1406 1119">— Characters typed on the keypad will replace the address displayed in the GPIB Address entry window. <p data-bbox="253 1140 342 1171">NOTE</p> <p data-bbox="253 1182 1365 1245">To correct an entry, press the BS (backspace) key at the lower right of the keypad to delete one character at a time.</p> <ul style="list-style-type: none"><li data-bbox="269 1276 1382 1381">– Press the ENTR key to the lower right of the keypad to enter the address.<ul style="list-style-type: none"><li data-bbox="310 1308 854 1339">— The GPIB Address entry window closes.<li data-bbox="310 1350 1382 1381">— The new address is displayed in the bottom portion of the GPIB Address softkey label.

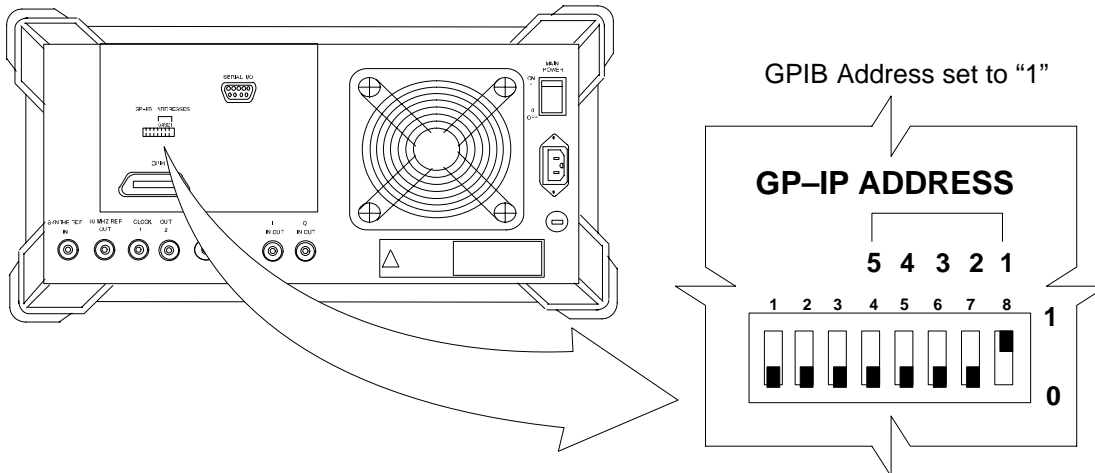
Figure I-7: Setting Advantest R3267 GPIB Address



Advantest R3562 Signal Generator GPIB Address

Set the GP-IB ADDRESS switch on the rear of the Advantest R3562 signal generator to address 1 as shown in Figure I-8.

Figure I-8: Advantest R3562 GPIB Address Switch Setting



**Agilent E4406A Transmitter
Tester GPIB Address**

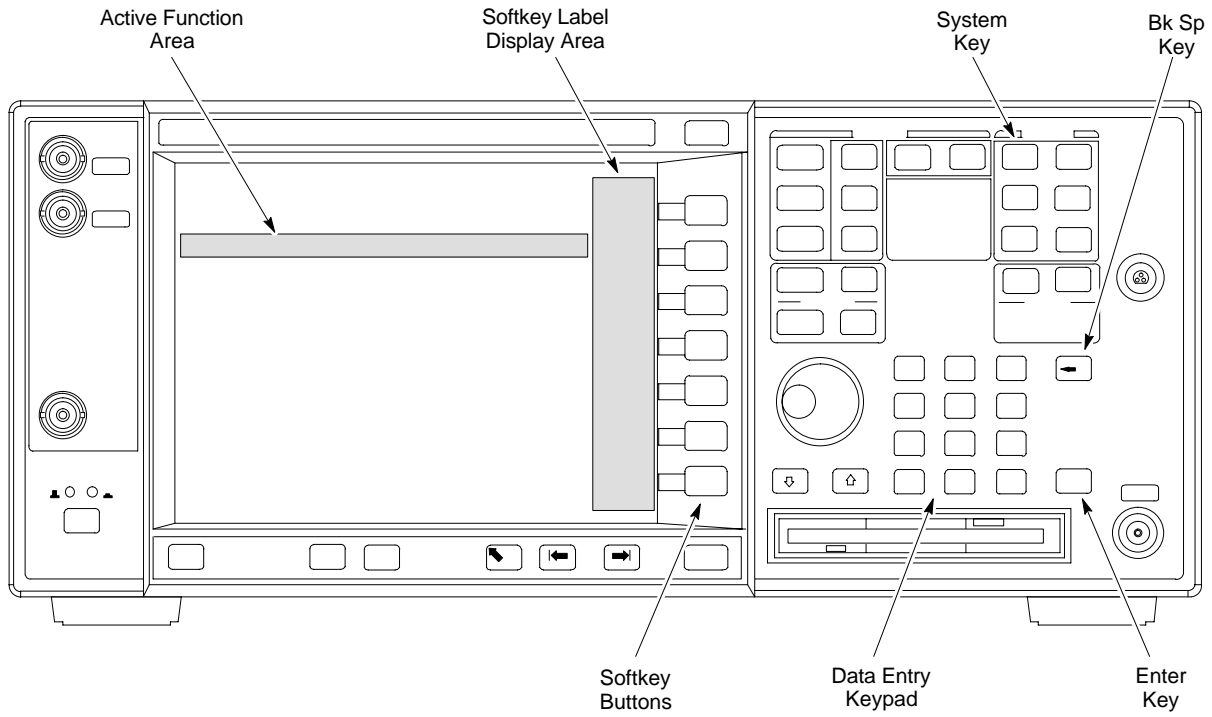
Follow the procedure in Table I-8 and refer to Figure I-9 to verify and, if necessary, change the Agilent E4406A GPIB address.

Table I-8: Verify and Change Agilent E4406A GPIB Address

Step	Action
1	In the SYSTEM section of the instrument front panel, press the System key. <ul style="list-style-type: none"> – The softkey labels displayed on the right side of the instrument screen will change.
2	Press the Config I/O softkey button to the right of the instrument screen. <ul style="list-style-type: none"> – The softkey labels will change. – The current instrument GPIB address will be displayed below the GPIB Address softkey label.
3	If the current GPIB address is not set to 18 , perform the following to change it: <ul style="list-style-type: none"> 3a – Press the GPIB Address softkey button. <ul style="list-style-type: none"> — In the on–screen Active Function Area, GPIB Address will be displayed followed by the current GPIB address. 3b – On the front panel Data Entry keypad, enter the communications system analyzer GPIB address of 18. <ul style="list-style-type: none"> — The GPIB Address label will change to Enter. — Digits entered with the keypad will replace the current GPIB address in the display. <p>NOTE To correct an entry, press the Bk Sp key at the upper right of the keypad to delete one character at a time.</p> <ul style="list-style-type: none"> 3c – Press the Enter softkey button or the keypad Enter key to set the new GPIB address. <ul style="list-style-type: none"> — The Config I/O softkey labels will reappear. — The new GPIB address will be displayed under the GPIB Address softkey label.



Figure I-9: Setting Agilent E4406A GPIB Address



Agilent E4432B Signal Generator GPIB Address

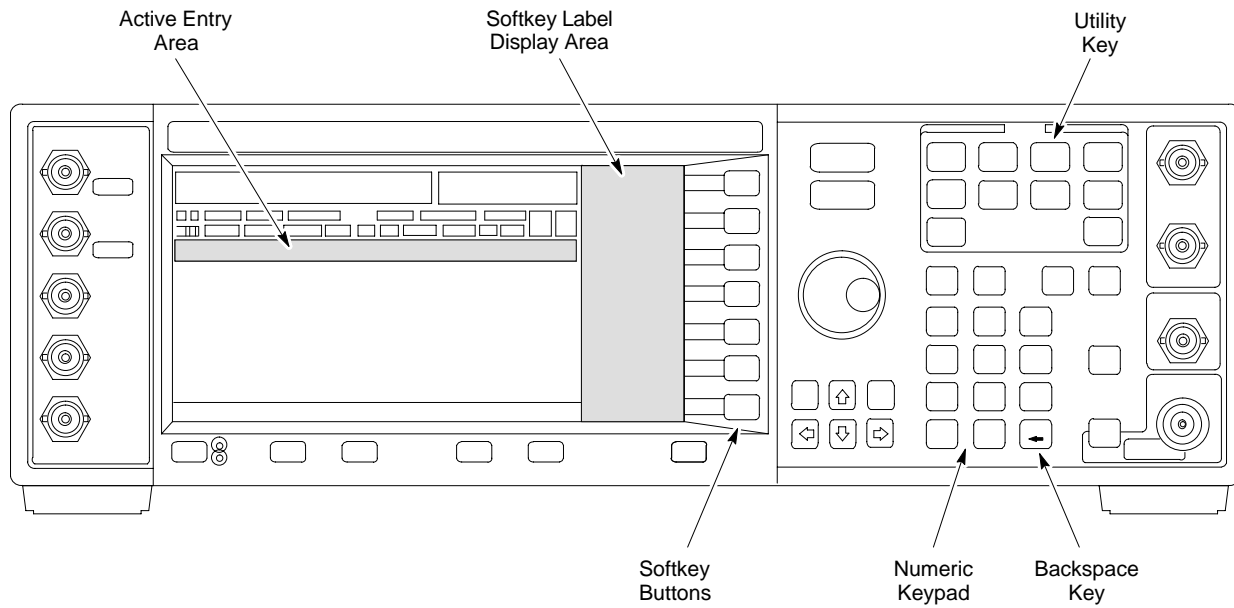
Follow the procedure in Table I-9 and refer to Figure I-10 to verify and, if necessary, change the Agilent E4432B GPIB address.

Table I-9: Verify and Change Agilent E4432B GPIB Address

Step	Action
1	In the MENUS section of the instrument front panel, press the Utility key. <ul style="list-style-type: none"> – The softkey labels displayed on the right side of the instrument screen will change.
2	Press the GPIB/RS232 softkey button to the right of the instrument screen. <ul style="list-style-type: none"> – The softkey labels will change. – The current instrument GPIB address will be displayed below the GPIB Address softkey label.
3	If the current GPIB address is not set to 1 , perform the following to change it: <ul style="list-style-type: none"> 3a – Press the GPIB Address softkey button. <ul style="list-style-type: none"> — The GPIB Address label and current GPIB address will change to boldface. — In the on–screen Active Entry Area, Address: will be displayed followed by the current GPIB address. 3b – On the front panel Numeric keypad, enter the signal generator GPIB address of 1. <ul style="list-style-type: none"> — The GPIB Address label will change to Enter. — Digits entered with the keypad will replace the current GPIB address in the Active Entry display. <p>NOTE To correct an entry, press the backspace key at the lower right of the keypad to delete one character at a time.</p> 3c – Press the Enter softkey button to set the new GPIB address. <ul style="list-style-type: none"> — The new GPIB address will be displayed under the GPIB Address softkey label.



Figure I-10: Setting Agilent E4432B GPIB Address



Appendix J: Download ROM Code

Appendix Content

Downloading ROM Code with the LMF	J-1
Exception Procedure – Downloading ROM Code	J-1

Downloading ROM Code with the LMF

Exception Procedure – Downloading ROM Code

This procedure is not part of a normal optimization.

Perform this procedure only on an exception basis when no alternative exists to load a BTS device with the correct version of ROM code.

NOTE

One GLI must be INS_ACT (bright green) before ROM code can be downloaded to non-GLI devices.



CAUTION

The correct ROM and RAM codes for the software release used on the BSS must be loaded into BTS devices. To identify the correct device ROM and RAM code loads for the software release being used on the BSS, refer to the Version Matrix section of the SC™ CDMA Release Notes (supplied on the tape or CD-ROM containing the BSS software).

All devices in a BTS must be loaded with the ROM and RAM code specified for the software release used on the BSS before any optimization or ATP procedures can be performed.

If a replacement device is loaded with ROM code which is not compatible with the BSS software release being used, the device ROM code can be changed using the LMF before performing the BTS optimization and ATPs. *A device loaded with later release ROM code can not be converted back to a previous release ROM code in the field without Motorola assistance*

If it is necessary to download ROM code to a device from the LMF, the procedure in Table J-1 includes steps *for both ROM and RAM code download using the LMF.*

Prerequisites

Prior to performing this procedure, ensure the correct ROM and RAM code files exist in the LMF computer's applicable `<x>:\<lmf home directory>\cdma\loads\<codeload#>\code` folder for each of the devices to be loaded.



CAUTION

The Release level of the ROM code to be downloaded must be the one specified for the software release installed in the BSS. The release level of the ROM code resident in the other devices in the BTS must also be correct for the BSS software release being used. ROM code must not be downloaded to a frame loaded with code for a BSS software release with which it is not compatible.

This procedure should only be used to upgrade replacement devices for a BTS. It should NOT be used to upgrade all devices in a BTS. If a BTS is to be upgraded from R15.x to R16.0, the upgrade should be done by the OMC-R using the DownLoad Manager.

Table J-1: Download ROM and RAM Code to Devices

Step	Action
1	Click on the device to be loaded. NOTE More than one device of the <i>same</i> type can be selected for download by either clicking on each one to be downloaded or from the BTS menu bar Select pull-down menu, select the <i>device</i> item that applies. Where: <i>device</i> = the type of device to be loaded (BBX, CSM, MCC)
2	From the BTS menu bar Device pull-down menu, select Status . – A status report window will appear.
3	Make a note of the number in the HW Bin Type column. NOTE “HW Bin Type” is the Hardware Binary Type for the device. This code is used as the last four digits in the filename of a device’s binary ROM code file. Using this part of the filename, the ROM code file can be matched to the device in which it is to be loaded.
4	Click OK to close the status window.
5	Click on the device to be loaded.
6	* IMPORTANT The LMF will not automatically select ROM code files for download. ROM code files must be selected <i>manually</i> . From the BTS menu bar Device pull-down menus, select Download > Code Manual . – A file selection window will appear.
7	Double-click on the version folder with the desired version number for the ROM code file (for example <i>2.16.0.x</i>).
8	Double-click the Code folder. – A list of ROM and RAM code files will be displayed.

... continued on next page

J

Downloading ROM Code with the LMF – continued

Table J-1: Download ROM and RAM Code to Devices

Step	Action
9	<p>! CAUTION A ROM code file with the correct HW Bin Type must be chosen. Using a file with the wrong HW Bin Type can result in unpredictable operation and damage to the device.</p> <p>Click on the ROM code file with the filename which matches the device type and HW Bin Type number noted in step 3 (for example, file bbx_rom.bin.0604 is the ROM code file for a BBX with a HW Bin Type of 0604).</p> <ul style="list-style-type: none"> – The file should be highlighted.
10	<p>Click on the Load button.</p> <ul style="list-style-type: none"> – A status report window is displayed showing the result of the download. <p>NOTE If the ROM load failed for some devices, load them <i>individually</i> by clicking on one device, perform steps 6 through 10 for it, and repeat the process for each remaining device.</p>
11	Click OK to close the status window.
12	From the LMF window menu bar Tools pull-down menus, select Update NextLoad > CDMA .
13	In the left-hand pane of the window which opens, click on the BTS number for the frame being loaded (for example, <i>BTS-14</i>).
14	<p>On the list of versions displayed in the right-hand pane, click the button next to the version number of the folder that was used for the ROM code download (for example, <i>2.16.0.x</i>) and click Save.</p> <ul style="list-style-type: none"> – A pop-up message will appear showing the CDF has been updated.
15	Click on the OK button to dismiss the pop-up message.
16	Click on the device that was loaded with ROM code.
17	<p>NOTE RAM code is automatically selected for download.</p> <p>From the BTS menu bar Device pull-down menus, select Download > Code/Data to download RAM code and dds file data.</p> <ul style="list-style-type: none"> – A status report is displayed showing the result of the download.
18	Click OK to close the status window.
19	Observe the downloaded non-GLI device to ensure it is OOS_RAM (yellow).
20	Click on the device which was loaded with code.
21	<p>From the BTS menu bar Device pull-down menu, select Status.</p> <p>Verify that the correct ROM and RAM version numbers are displayed in the status report window.</p>
22	Click OK to close the status window.

Appendix K: Optimizing Companion Frame

Appendix Content

Optimizing Companion Frame	
Optimizing the TX section of the Companion Frame –	K-1
Optimizing the RX section of the Companion Frame –	K-2

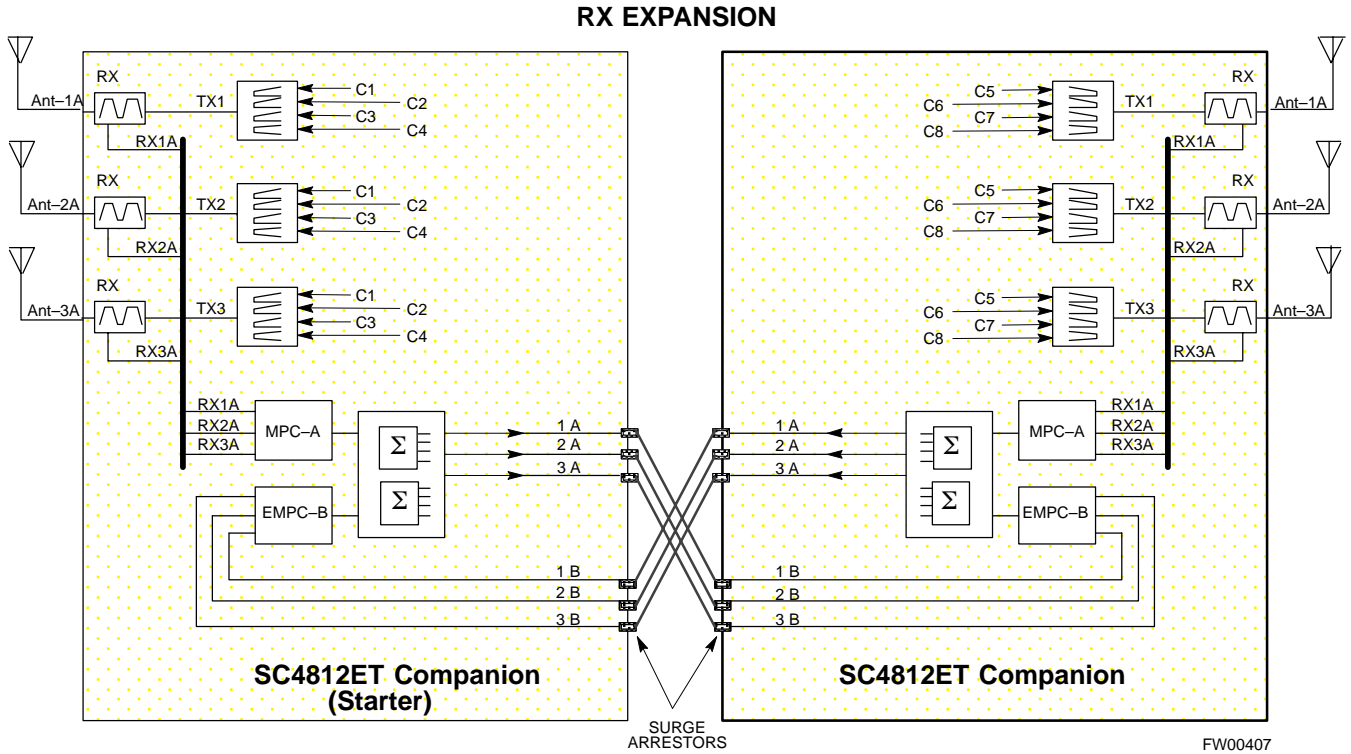
Optimizing Companion Frame

Optimizing the TX section of the Companion Frame –

The optimization/ATP procedure for the transmit side of the Companion Frame is identical to that of the SC4812ET BTS.

Table K-1: Optimizing the TX section of the Companion Frame		
✓	Step	Action
	1	Please refer to the TX Optimization/ATP – Chapter 3 of this manual for step-by-step TX Optimization/ATP instructions for the standalone frame
	2	Run the TX tests.

Figure K-1: Cabling of SC 4812ET Companion BTS to SC 4812ET Companion BTS (3 Sector)



Optimizing Companion Frame – continued

Optimizing the RX section of the Companion Frame –

RX (Main) Optimization/ATP

To test the RX Main antenna system follow the instructions in Table K-2 and refer to illustration Figure K-1(3-sector configuration).

Table K-2: Optimizing the RX (Main) section of the Companion Frame		
✓	Step	Action
	1	Connect the RX test cables to the antenna ports 1A–3A (for 3-sector optimization) or antenna ports 1A–6A (for 6-sector optimization).
	2	Login the LMF and select MPC (see Figure K-2 for display screen and field location).
	3	Run the RX tests.

RX (Diversity) Optimization/ATP (Single Frame)

To test the RX Diversity antenna system follow the instructions in Table K-3.

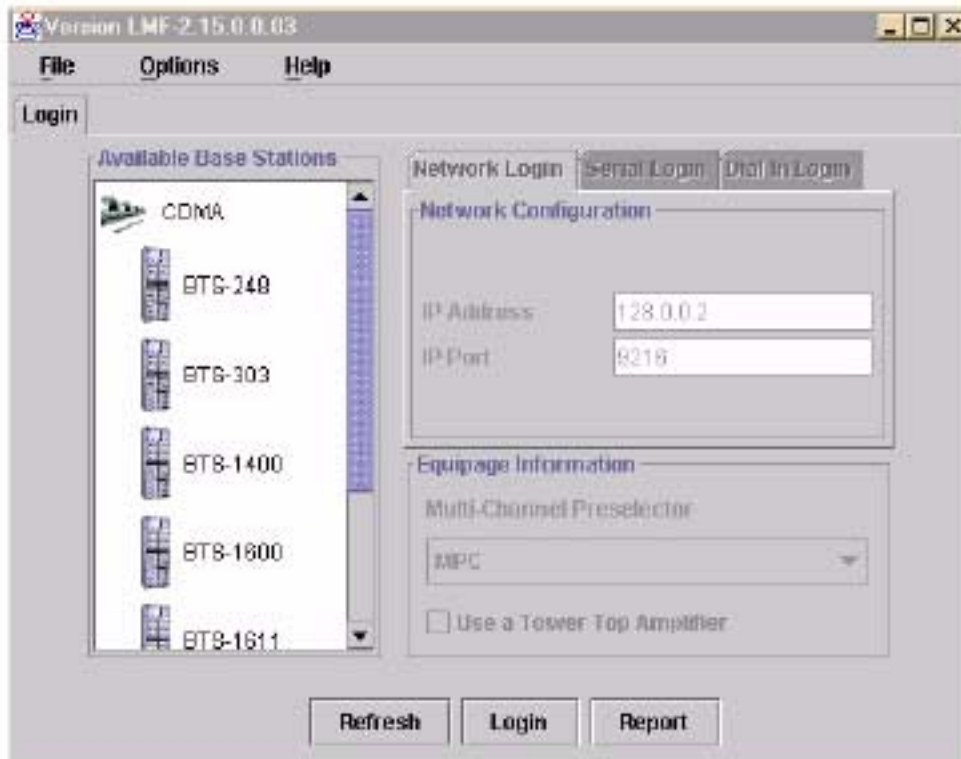
Table K-3: Optimizing the RX (Diversity) on a Single Frame		
✓	Step	Action
	1	Connect the RX test cables to the expansion ports on the I/O plates labeled 1B–3B (for 3-sector optimization) or expansion ports 1B–6B (for 6-sector optimization).
	2	Login the LMF under EMPC (see Figure K-2 for display screen and field location).
	3	Run the RX tests.

RX (Diversity) Optimization/ATP (Two Frame)

To test the RX Diversity antenna configuration on a two frame Companion BTS system follow the instructions in Table K-4.

Table K-4: Optimizing the RX (Diversity) on a Two Frame Companion Site		
✓	Step	Action
	1	<p>Connect RX expansion cables from the expansion ports on the other Companion frame labeled 1A–3A (for 3-sector optimization) or expansion ports 1A–6A (for 6-sector optimization) to the 1B–3B (for 3-sector optimization) or expansion ports 1B–6B (for 6-sector optimization) see Figure K-1 for an illustration of the configuration.</p> <p>NOTE Connect the cables from the 2nd frame A ports to the B ports of the 1st frame.</p>
	2	<p>Login using the LMF select MPC (see Figure K-2 for field location on LMF display screen)</p> <p>NOTE</p> <ul style="list-style-type: none"> – Although the test will be done to one frame, the RX cable will be connected to the other frame’s corresponding antenna ports. – The other frame has to be powered up and include all the RX Path Components.

Figure K-2: WinLMF Display Screen



Numbers

- 10BaseT/10Base2 Converter, 1-7
- 2-way Splitter, 1-11
- 3-Sector Duplexed Directional Coupler to RFDS Cabling Table, H-22
- 4812ET RF Cabinet Internal FRU Locations, H-3
- 6-Sector Duplexed Directional Coupler to RFDS Cabling Table, H-23

A

- Acceptance Test Procedures ATP , 1-1
- Acronyms, 1-11
- ACTIVE LED
 - GLI, 6-25
 - MCC, 6-27
- Advantest R3465, 3-46
 - GPIB, I-8
- Alarm and Span Line Cable Pin/Signal Information, 3-6
- ALARM LED, GLI, 6-25
- Alarm Monitor window, 3-99
- Alarm Reporting Display, 3-99
- All Cal/Audit Test, 3-86
- All inclusive, TX ATP test outline – CCP shelf 1, primary, 4-14
- All tests fail on a single antenna, Troubleshooting, RFDS, 6-21
- AMR, 1-19
- Applying AC Power, 2-5
- ATP
 - generate failure report, 4-14
 - generate report, 4-14

- test matrix/detailed optimization, B-1
- ATP – Code Domain Power, 4-11
- ATP – Frame Error Rate (FER), 4-13
- ATP – Pilot Time Offset, 4-10
- ATP – Reduced, 4-2
- ATP – Spectral Purity Transmit Mask, 4-7
- ATP – Waveform Quality (rho), 4-9
- ATP Report, 4-14
- ATP Test Procedure, 4-6

B

- Basic Troubleshooting Overview, 6-1
- Battery Charge Test (Connected Batteries), 2-10
- Battery Discharge Test, 2-10
- Bay Level offset calibration failure, 6-6
- BBX, gain set point vs SIF output considerations, C-1
- BBX2, 1-19
- BBX2 Connector, 6-14
- BBX2 LED Status Combinations, 6-27
- Broad Band Receiver. *See* BBX
- BTS
 - download, 3-28
 - Ethernet LAN interconnect diagram, 3-19
 - LMF connection, 3-9, 3-17
 - system software download, 3-3
- BTS Cabinet, 1-27
- Create CAL File, 3-87

C

- C-CCP Backplane, H-6
- C-CCP Backplane Troubleshooting, Procedure, 6-14
- C-CCP shelf, 1-19

Index – continued

- cable calibration, automatic, test set–up, 3-50, 3-51
 - Advantest R3267/R3562, 3-51
 - Advantest R3465, 3-50
 - Agilent 8935, 3-50
 - Agilent E4406A/E4432B, 3-51
 - CyberTest, 3-50
 - HP 8921A, 3-50
 - Cables Connection for 10 MHz Signal and GPIB , F-2, F-4
 - Calibrate BLO, 3-73
 - Calibrating Cables, 3-67
 - Calibrating Test Cable Setup, PCS Interface HP83236B, F-11
 - Calibrating Test Equipment, 3-67
 - Calibration
 - data file calibration, BLO, 3-75
 - In–Service, G-15
 - Calibration Audit failure, 6-7
 - calibration data file, description of, BLO, 3-75
 - Cannot communicate to Communications Analyzer, 6-3
 - Cannot communicate to Power Meter, 6-2
 - Cannot Download DATA to any device card, 6-4
 - Cannot ENABLE device, 6-5
 - Cannot Log into cell–site, 6-2
 - Cannot perform carrier measurement, 6-9
 - Cannot perform Code Domain Noise Power measurement, 6-9
 - Cannot perform Rho or pilot time offset measurement, 6-8
 - Cannot perform Txmask measurement, 6-8
 - CCD, 1-19
 - CCP, shelf 1 – all inclusive TX ATP test outline, primary, 4-14
 - CDF
 - site configuration, 3-2
 - site equipage verification, 3-3
 - site type and equipage data information, 2-1
 - CDMA
 - allocation diagram for the North American, cellular telephone frequency spectrum, D-4
 - optimization/ATP test matrix, B-1
 - cdpower test, 4-11
 - Cell Site
 - equipage verification, 2-1
 - types configuration, 3-2
 - Cell Site Data File. *See* CDF
 - Cell Site Field Engineer CFE, 1-1
 - Channel Service Unit, 3-4
 - CIO, 1-19
 - CIO Connectors, 6-14
 - CLI, 1-2
 - Clock Sync Module. *See* CSM
 - Code Domain Power and Noise Floor Levels, 4-12
 - Code Domain Power/Noise, 4-11
 - Communication test set, rear panel, F-2, F-4
 - Communications System Analyzer, 1-8
 - Communications system analyzer , 1-8
 - Components Located on CIO Card, H-10
 - Connecting test equipment to the BTS, 3-45
 - Connector Functionality
 - Backplane, Troubleshooting, 6-13
 - Troubleshooting, Backplane, 6-13
 - Copy CAL Files From Diskette to the CBSC, 5-2
 - Copy CDF Files from CBSC, 3-12
 - Copy Files from LMF to Diskette, 5-1
 - Copying CAL files from CDMA LMF to the CBSC, 5-1
 - Copying CAL files to the CBSC, 5-2
 - CSM, 1-19
 - and LFR primary functions, 3-35
 - CSM frequency verification, 3-37
 - CSM LED Status Combinations, 6-23
 - Customer I/O, 1-20
 - CyberTest, 3-46
 - CyberTest Communication Analyzer, 1-8
- ## D
- DC Power Pre–test (BTS Frame), 2-7
 - DC Power Problems, C–CCP Backplane Troubleshooting, 6-17
 - DC/DC Converter LED Status Combinations, 6-22

Detailed, optimization/ATP test matrix, B-1

Devices, download. *See* Download

Digital Control Problems, 6-15

 C-CCP Backplane Troubleshooting, 6-15

Digital Multimeter, 1-9

Directional Coupler, 1-9

Download

See also Devices

 BTS, 3-28

 BTS system software, 3-3

Download BLO Procedure, 3-81

download ROM and RAM code. *See* ROM code

Download/Enable MCCs, 3-34

Download/Enable MGLIs, 3-30

Duplexer/Directional Coupler DDC, 1-18, 1-19, 1-20,
 1-21, 1-29

E

E1, isolate BTS from the E1 spans, 3-4

Enable CSMs & BDCs, 3-32

Equipment Overview, 1-14

Equipment warm-up, 3-49

Ethernet LAN

 interconnect diagram, 3-19

 transceiver, 1-7

ETIB I/O Connectors, H-12

Every test fails, Troubleshooting, RFDS, 6-20

F

fer test, 4-13

Files, calibration data file, BLO, 3-75

Folder Structure Overview, 3-13, 3-16

Frame, equipage preliminary operations, 2-1

FREQ Monitor Connector, CSM, 6-24

Frequency counter, optional test equipment, 1-10

G

Gain set point, C-1

General optimization checklist, test data sheets, A-4

Gigatronics 8542B power meter, illustration, I-2

Gigatronics Power Meter, 3-46

GLI. *See* Master (MGLI2) and Slave (SGLI2) Group
 Line Interface

GLI Connector, 6-13

GLI Ethernet A and B Connections, 6-14

GLI LED Status Combinations, 6-25

GLI Pushbuttons and Connectors, 6-26

GLI2, 1-19

GLI2 Front Panel Operating Indicators, 6-26

GPIB, F-1, F-5, F-7

 Advantest R3465, I-8

 HP83236A/B, I-6

 HP8921A, I-6

 HP8935, I-4

 power meter

 Gigatronics 8542B, I-2

 HP437B, I-1

 set address, Motorola CyberTest, I-3

GPIB Cables, 1-8

GPS, receiver operation, test data sheets, A-5

GPS Initialization/Verification

 estimated position accuracy, 3-38

 surveyed position accuracy, 3-38

GPS satellite system, 3-33

Graphical User Interface Overview, 3-21

Group Line Interface. *See* GLI

H

Hardware Requirements, 1-5

High Stability 10 MHz Rubidium Standard, 1-11

High-impedance Conductive Wrist Strap, 1-10

HP 437B, 3-46

HP 83236A, F-5

HP 8921, 3-46

HP83236A/B, GPIB, I-6

HP8921A, F-5

 GPIB, I-6

HP8935, GPIB, I-4

HP8935 Analyzer, 1-8

HSO, 1-19

HSO Initialization/Verification, 3-35

I

I and Q values, E-1

In-Service Calibration, G-15

test set-up diagrams

DRDC, Advantest, 3-58

TRDC, Advantest, 3-60

Initial HP8921A setup, F-11

Initial Installation of Boards/Modules, preliminary operations, 2-1

Initial power tests, test data sheets, A-3

Installation and Update Procedures, 3-10

Intercabinet I/O, 1-21

Internal FRU, 1-28

Internal FRUs, 1-18

IS-97 specification, E-1

ISB Inter Shelf Bus connectors, 6-13

L

LAN, BTS frame interconnect, illustration, 3-19

LED Status Combinations for all Modules except GLI2 CSM BBX2 MCC24 MCC8E, 6-22

LFR, 1-19

receiver operation, test data sheets, A-6

Line Build Out parameters

configure, 5-4

verify, 5-3

LMF, 3-10, F-1, F-7

to BTS connection, 3-4, 3-9, 3-17

view CDF information, 3-3

LMF Removal, 5-6

Load Center Wiring, 2-5

Local Area Network (LAN) Tester, 1-10

Logging In to a BTS, 3-22

Logging Out, 3-25

LORAN-C Initialization/Verification, 3-43

LPA errors, 6-5

LPA Module LED, 6-28

LPA Shelf LED Status Combinations, 6-28

LPAC Interface Board, H-11

M

major components, 1-17

Manual, layout, 1-1

Master Group Line Interface. *See* MGLI

MASTER LED, GLI, 6-25

MCC LED Status Combinations, 6-27

MCC/CE, 4-11

MGLI2, board detail, MMI port connections, 5-4

MMI common connections, 3-27

MMI Connection, 3-27

MMI Connector

CSM, 6-24

GLI, 6-26

MMI Connectors, MCC, 6-27

MMI equipment setup, 3-27

Model SLN2006A MMI Interface Kit, 1-8

Module status indicators, 6-22

Motorola, SC9600 Base Transceiver Subsystem, 1-1

MPC, 1-19

Multi Channel Card. *See* MCC

Multi-FER test Failure, 6-10

N

New Installations, 1-3

No AMR control, 6-16

No BBX2 control in the shelf, 6-16

No DC input voltage to Power Supply Module, 6-18

No DC voltage +5 +65 or +15 Volts to a specific GLI2 BBX2 or Switch board, 6-19

No GLI2 Control through span line connection, 6-15

No GLI2 Control via LMF, 6-15

No or missing MCC24 channel elements, 6-17

No or missing span line traffic, 6-16

North American, cellular telephone system frequency spectrum, CDMA allocation, D-4

Null modem cable detail, 1-8

O

Online Help, 1-2

- Optimization, 1-1
- optimization/ATP, test set-up, 3-55
 - Advantest R3267/R3562
 - DRDCs, 3-58
 - TRDCs, 3-60
 - Advantest R3465, 3-55
 - Agilent 8935
 - DRDCs, 3-57
 - TRDCs, 3-59
 - Agilent E4406A/E4432B
 - DRDCs, 3-57
 - TRDCs, 3-59
 - CyberTest, 3-55
 - HP 8921A, 800 MHz, 3-56
 - HP 8921A, 1.9 GHz, 3-56
- Optimization/ATP Test Matrix, 1-3
- Optional Test Equipment, 1-10
- Optional test equipment, frequency counter, 1-10
- Oscilloscope, 1-10
- P**
- Pilot Time Offset. *See* PN
- Ping, 3-19
- PN
 - offset programming information, E-1
 - offset usage, E-1
- PN offset per sector, E-1
- PN Offset Usage , E-1
- Power Delta Calibration
 - Advantest, G-4
 - HP8921A, G-2
 - HP8935, G-7
- Power Input, 6-13
- Power Meter, 1-9
 - illustration, F-18, I-1
 - Pre-calibration, F-18
- Power meter
 - GPIB
 - Gigatronics 8542B, I-2
 - HP437B, I-1
 - illustration, Gigatronics 8542B, I-2
- Power Supply Module Interface, 6-13
- Pre-calibration, Power Meter, F-18
- Pre-power tests, test data sheets, A-3
- Preliminary operations
 - cell Site types, 2-1
 - test data sheets, A-2
- Prepare to Leave the Site
 - External test equipment removal, 5-1
 - LMF Removal, 5-6
 - Reestablish OMC-R control, 5-7
 - Verify T1/E1, 5-7
- Prepare to leave the site
 - re-connect BTS IFM connector, 5-6
 - re-connect BTS T1 spans, 5-6
- Procedures to Copy CAL Files From Diskette to the CBSC, 6-2, 6-3, 6-4
- Product Description, 1-2
- Pseudorandom Noise. *See* PN
- ptoff test, 4-10
- Punch Block, 3-6
- PWR/ALM and ACTIVE LEDs, MCC, 6-27
- PWR/ALM LED
 - BBX2, 6-27
 - CSM, 6-23
 - DC/DC Converter, 6-22
 - generic, 6-22
 - MCC, 6-27
 - MPC and EMPC Card, H-20
- R**
- RAM code, described, 3-28
- Re-connect BTS IFM connector, 5-6
- Re-connect BTS T1 Spans, 5-6
- Receive Distribution Card RXDC, 1-29
- Reduced ATP, 4-2
- Reduced ATP passes but forward link problem prevails, 6-8
- Reestablish OMC-R control, 5-7
- Removing and Installing LPAs for the SC 4812ET, H-7
- Required documents, 1-4, 1-28
- Required Test Equipment
 - Ethernet LAN transceiver, 1-7
 - substitute equipment, 1-5
- RESET Pushbutton, GLI, 6-26
- Resetting BTS modules, 5-1

RF Adapters, 1-10
RF Attenuators, 1-9
50 Pair Punchblock, H-25
RF Path Bay Level Offset Calibration, 3-73
RF Test Cable, 1-10
RFDS – Fault Isolation, 6-20
RFDS Cabling Details, H-22
RFDS calibration
 description, 3-96
 procedure, 3-96
RFDS FRU, H-14, H-22
RFDS Location, SC 4812ET, 1-23
RFDS parameters, 3-89
 checking, 3-89
 setting, 3-89
RFDS Test Subscriber Unit, 3-29
RFDS TSU Calibration Channel Frequencies, 3-96
rho test, 4-9
ROM code
 described, 3-28
 download caution, J-2
 downloading, J-1
 procedure, J-2
RS–232 to GPIB Interface, 1-7
Rubidium Standard Timebase, 3-46
RX, antenna VSWR, test data sheets, A-16
RX and TX paths fail, Troubleshooting, RFDS, 6-20
RX Frame Error Rate (FER) ATP, 4-13

S

SC 4812 BTS Optimization/ATP Test Matrix, B-2
SC 4812ET BTS Combiner, H-8, H-9, H-16, H-17,
 H-18, H-19, H-21, H-24
SCLPA, convergence test data sheets, A-7
Selecting Test Equipment, 3-64
Set Antenna Map Data, 3-94
Set RFDS Configuration Data, 3-95
Set Span Parameter Configuration, procedure, 5-4
Setting Cable Loss Values, 3-71

Setting Control Port, 3-5
Setting Coupler Loss Value, 3-72
SGLI2, board detail, MMI port connections, 5-4
SIF, output considerations vs BBX gain set point, C-1
Site, equipage verification, 3-3
Site checklist, verification data sheets, A-2
site equipage, CDF file, 3-2
Span Framing Format
 configure, 5-4
 verify, 5-3
SPAN I/O Functional Description, Introduction, H-13
Span Line (T1/E1) Verification Equipment, 1-10
Span Line connector , 6-13
Span Parameter Configuration
 set, procedure, 5-4
 verification, procedure, 5-3
Span Problems no control link, Troubleshooting, 6-29
SPANS LED, 6-25
Spectrum Analyzer, 1-10
Spectrum Analyzer , HP8594E, 3-46
STATUS LED, GLI, 6-25
SYNC Monitor Connector, CSM, 6-24
System Connectivity Test, F-5

T

T1, isolate BTS from the T1 spans, 3-4
Telco Interface Board TIB, 1-29
Test data sheets
 Alarm verification, A-16
 general optimization checklist, A-4
 GPS receiver operation, A-5
 initial power tests, A-3
 LFR receiver operation, A-6
 pre–power tests, A-3
 preliminary operations, A-2
 RX antenna VSWR, A-16
 SCLPA convergence, A-7
 site checklist, A-2
 TX antenna VSWR, A-15
 TX BLO, A-8, A-13
 verification of test equipment used, A-1
Test equipment, verification data sheets, A-1

Index – continued

- Test equipment connections , F-1
 - preliminary Agilent E4406A/E4432B set-up, F-10
 - Test Equipment Policy, 1-4
 - Test Equipment Setup, 3-45
 - Test Equipment Setup Calibration for TX Bay Level Offset, 3-70, F-15
 - Test Equipment Setup Chart, 3-47
 - Test equipment setup RF path calibration, 3-77
 - Test Set Calibration, 3-63
 - Timing Reference Cables, 1-9
 - Transmit TX path audit, 3-82
 - Transmit TX path calibration, 3-78
 - Transmit/Receive Module TRX, 1-28
 - Troubleshooting
 - DC Power Problems, 6-17
 - Span Problems no control link, 6-29
 - TX and RX Signal Routing, 6-19
 - Troubleshooting CSM Checklist, 6-11
 - Troubleshooting Forward Link Failure (BTS Passed Reduced ATP), 6-8
 - TSU NAM, programming
 - description, 3-92
 - parameter ranges, 3-93
 - parameters, 3-92
 - procedure, 3-98
 - TX
 - antenna VSWR, test data sheets, A-15, A-16
 - BLO test data sheets, A-8, A-13
 - TX & RX Path Calibration, 3-73
 - TX and RX Frequency vs Channel , D-2
 - TX and RX Signal Routing, C-CCP Backplane Troubleshooting, 6-19
 - TX Audit Test, 3-83
 - TX Bay Level Offset and TX ATP test equipment setup calibration, 3-69
 - TX calibration, set-up, 3-52
 - Advantest R3267, 3-54
 - Advantest R3465, 3-53
 - Agilent 8935, 3-52
 - Agilent E4406A, 3-54
 - CyberTest, 3-52
 - HP 8921A, 3-53
 - TX Code Domain Power ATP, 4-11
 - tx fine adjust, E-1
 - TX Mask Verification, spectrum analyzer display, illustration, 4-8
 - TX Output Acceptance Tests – Introduction
 - Code domain power, 4-5
 - Pilot time offset, 4-5
 - Spectral purity TX mask, 4-5
 - Waveform Quality (rho), 4-5
 - TX Path Calibration, 3-74
 - TX Pilot Time Offset ATP, 4-10
 - TX Spectral Purity Transmit Mask ATP, 4-7
 - TX Waveform Quality (rho) ATP, 4-9
 - TX/RX OUT Connections, 4-3
 - txmask test, 4-7
- ## U
- Updating CDMA LMF Files, 5-1
- ## V
- Verify, test equipment used, test data sheets, A-1
 - Verify GLI ROM code load, 3-29
 - Verify Span Parameter Configuration, procedure, 5-3
 - Virtual BTS, 1-14
- ## W
- Walsh channels, 4-11
- ## X
- XCVR Backplane Troubleshooting, 6-13
 - Xircom Model PE3-10B2, LMF to BTS connection, 3-17

