

PRODUCT INTRODUCTION

MX368041A/B

W-CDMA Software

MX368041A/B-10

3GPP Release 5 Signal Pattern

MX368041A/B-11

HSDPA Signal Pattern

ANRITSU CORPORATION

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MX368041A/B **W-CDMA Software (for MG3681A)**
MX368041A/B-10 **3GPP Release 5 Signal Pattern (Discontinued)**
MX368041A/B-11 **HSDPA Signal Pattern**
Update News

The basic signal pattern files based on 3GPP standard supplement the MX368041A/B Software. Moreover, the abundant signal pattern files based on Release 5 are packed by MX368041A/B-10 and MX368041A/B-11.

The signal pattern files are updated in connection with revision of 3GPP standard.

The present document introduces the following contents of the MX368041A/B Software and MX368041A/B-10/11 to the customers who already have MG3681A+MU368040A+MX368041A/B (+MX368041A/B-10/11).

- Version-up history
- How to check Version
- How to upgrade
- File configuration in PC memory card
- Signal pattern list

MX368041A/B Version-up history

Version	Release (yyyy.mm.dd)	Contents
2.10	2004. 3. 1	Patch <ul style="list-style-type: none"> ● Correction of Puncturing bit length at setting to 2 or more transport blocks in TrCH, and Convolutional coding 1/3 or 1/2 * Detailed to the other pages
Service	2004. 1.15	Signal Pattern (3GPP 2003-09/12 edition) <ul style="list-style-type: none"> ● Correction of the scrambling code of BS Test Models Carriers: <u>fc1</u> <u>fc2</u> <u>fc3</u> <u>fc4</u> Scrambling code: 0, 1, 2, 3 [HEX] ↓ 0, 10, 20, 30 [HEX]
2.09	2003. 6.10	Firmware improvement <ul style="list-style-type: none"> ● ACLR improvement when selecting the multi-carrier signal pattern in MX368041A/B-10
2.08	2002. 8.28	MX368041B release <ul style="list-style-type: none"> ● MX368041A is the same version number as MX368041B
2.06	2002. 5.30	Patch <ul style="list-style-type: none"> ● Correction of signal output at setting to add DTX(Discontinuous Transmission) in DL RMC for BTFD * Detailed to the other pages
Service	2002. 3.20	Signal Pattern (3GPP 2001-12 edition) <ul style="list-style-type: none"> ● Standardization of TFCI bits (filled with "1") in BS Test Models S-CCPCH (Corrected "0")
2.05	2002. 1. 9	Option addition <ul style="list-style-type: none"> ● Maximum output level +8dB gain by MG3681A-42 RF High Level Output Signal Pattern (3GPP 2001-09 edition) <ul style="list-style-type: none"> ● Revision of OCNS parameter ● Revision of BS Test Models parameter ● Standardization of BS Test Models multi-carrier signal ● Standardization of downlink interference signal for UE RX test
2.04	2001. 7.31	Expansion unit addition <ul style="list-style-type: none"> ● AWGN combination output by MU368060A AWGN unit Signal Pattern (3GPP 2001-06 edition) <ul style="list-style-type: none"> ● Revision of OCNS parameter
2.03	2001. 5.21	Upgrade CD-ROM for W-CDMA real-time signal generation Signal Pattern (3GPP 2001-03 edition)

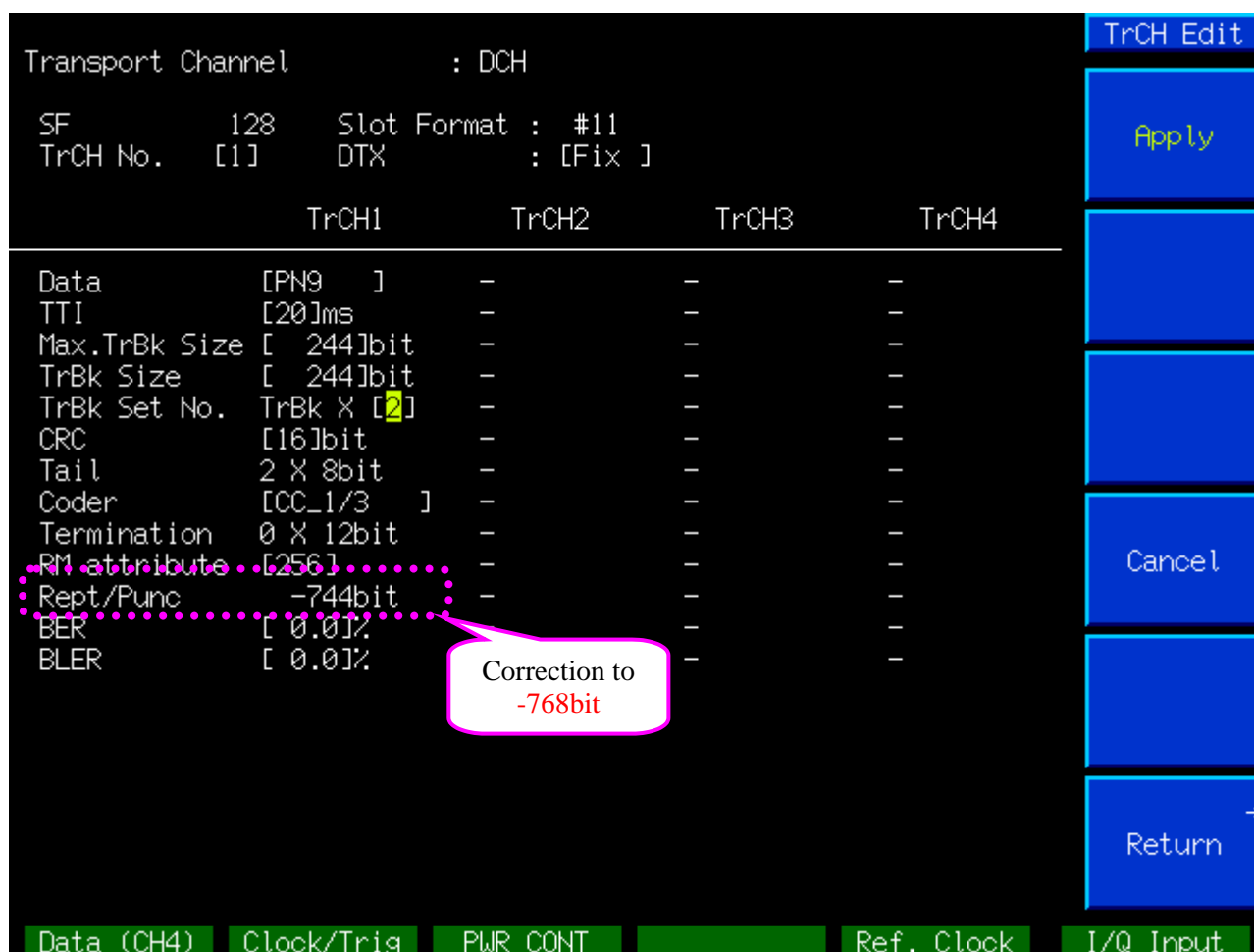
MX368041A/B-10 Version-up history

Version	Release (yyyy.mm.dd)	Contents																								
1.02	2004. 3. 1	Signal Pattern (3GPP 2003-12) <ul style="list-style-type: none"> ● Correction of SCH power level in BS Test Models <ul style="list-style-type: none"> - Test Model 1 2 carriers <table style="margin-left: 40px; border: none;"> <tr><td>P-CCPCH</td><td>-10 dB</td><td></td><td>-10 dB</td></tr> <tr><td>P-SCH</td><td>-16 dB</td><td>⇒</td><td>-13 dB</td></tr> <tr><td>S-SCH</td><td>-16 dB</td><td></td><td>-13 dB</td></tr> </table> - Test Model 5 Single carrier, 2 carriers <table style="margin-left: 40px; border: none;"> <tr><td>P-CCPCH</td><td>-11 dB</td><td></td><td>-11 dB</td></tr> <tr><td>P-SCH</td><td>-17 dB</td><td>⇒</td><td>-14 dB</td></tr> <tr><td>S-SCH</td><td>-17 dB</td><td></td><td>-14 dB</td></tr> </table> 	P-CCPCH	-10 dB		-10 dB	P-SCH	-16 dB	⇒	-13 dB	S-SCH	-16 dB		-13 dB	P-CCPCH	-11 dB		-11 dB	P-SCH	-17 dB	⇒	-14 dB	S-SCH	-17 dB		-14 dB
P-CCPCH	-10 dB		-10 dB																							
P-SCH	-16 dB	⇒	-13 dB																							
S-SCH	-16 dB		-13 dB																							
P-CCPCH	-11 dB		-11 dB																							
P-SCH	-17 dB	⇒	-14 dB																							
S-SCH	-17 dB		-14 dB																							
1.01	2004. 1.15	Signal Pattern (3GPP 2003-09/12 edition) <ul style="list-style-type: none"> ● Correction of the scrambling code of BS Test Models Carriers: fc1 fc2 fc3 fc4 Scrambling code: 0, 1, 2, 3 [HEX] <div style="text-align: center; margin-left: 100px;">↓</div> 0, 10, 20, 30 [HEX] 																								
1.00	2003. 6.10	Signal Pattern (3GPP 2003-03 edition) <ul style="list-style-type: none"> ● Release 																								

MX368041A/B-11 Version-up history

Version	Release (yyyy.mm.dd)	Contents																								
1.01	2004. 3. 1	Signal Pattern (3GPP 2003-12) <ul style="list-style-type: none"> ● Correction of SCH power level in BS Test Models <ul style="list-style-type: none"> - Test Model 1 2 carriers <table style="margin-left: 40px; border: none;"> <tr><td>P-CCPCH</td><td>-10 dB</td><td></td><td>-10 dB</td></tr> <tr><td>P-SCH</td><td>-16 dB</td><td>⇒</td><td>-13 dB</td></tr> <tr><td>S-SCH</td><td>-16 dB</td><td></td><td>-13 dB</td></tr> </table> - Test Model 5 Single carrier, 2 carriers <table style="margin-left: 40px; border: none;"> <tr><td>P-CCPCH</td><td>-11 dB</td><td></td><td>-11 dB</td></tr> <tr><td>P-SCH</td><td>-17 dB</td><td>⇒</td><td>-14 dB</td></tr> <tr><td>S-SCH</td><td>-17 dB</td><td></td><td>-14 dB</td></tr> </table> ● Correction of 1st Rate Matching buffer length in DL FRC H-Set 4 9600 ⇒ 7200 bits 	P-CCPCH	-10 dB		-10 dB	P-SCH	-16 dB	⇒	-13 dB	S-SCH	-16 dB		-13 dB	P-CCPCH	-11 dB		-11 dB	P-SCH	-17 dB	⇒	-14 dB	S-SCH	-17 dB		-14 dB
P-CCPCH	-10 dB		-10 dB																							
P-SCH	-16 dB	⇒	-13 dB																							
S-SCH	-16 dB		-13 dB																							
P-CCPCH	-11 dB		-11 dB																							
P-SCH	-17 dB	⇒	-14 dB																							
S-SCH	-17 dB		-14 dB																							
1.00	2004. 1.15	Signal Pattern (3GPP 2003-09/12 edition) <ul style="list-style-type: none"> ● Release 																								

Correction of Puncturing bit length at setting to 2 or more transport blocks in TrCH, and Convolutional coding 1/3 or 1/2



TrBk Set No. TrBk x [2], [3] or [4]
 Coder [CC_1/2] or [CC_1/3]

In the above case, error was detected to Puncturing bit length in Rate matching.
 The output signal is also the same error.
 * This setting state is not in 3GPP Reference Measurement Channel.

Correction: Bit length of TTI = (TrBk + CRC + Tail) x [1~4] x [Conv.Coding 1/R] - Puncturing
 E.g. $420 \times 2 = (244 + 16 + 8) \times [2] \times [3] - 768$

↑↑

Error: Bit length of TTI = {(TrBk + CRC) x [1~4] + Tail} x [Conv.Coding 1/R] - Puncturing
 E.g. $420 \times 2 = \{(244 + 16) \times [2] + 8\} \times [3] - 744$

Correction of signal output at setting to add DTX(Discontinuous Transmission) in DL RMC for BTFD

3GPP TS 25.101 UE Radio Transmission and Reception (FDD)

8.10 Blind transport format detection

A.4 DL reference measurement channel for BTFD performance requirements

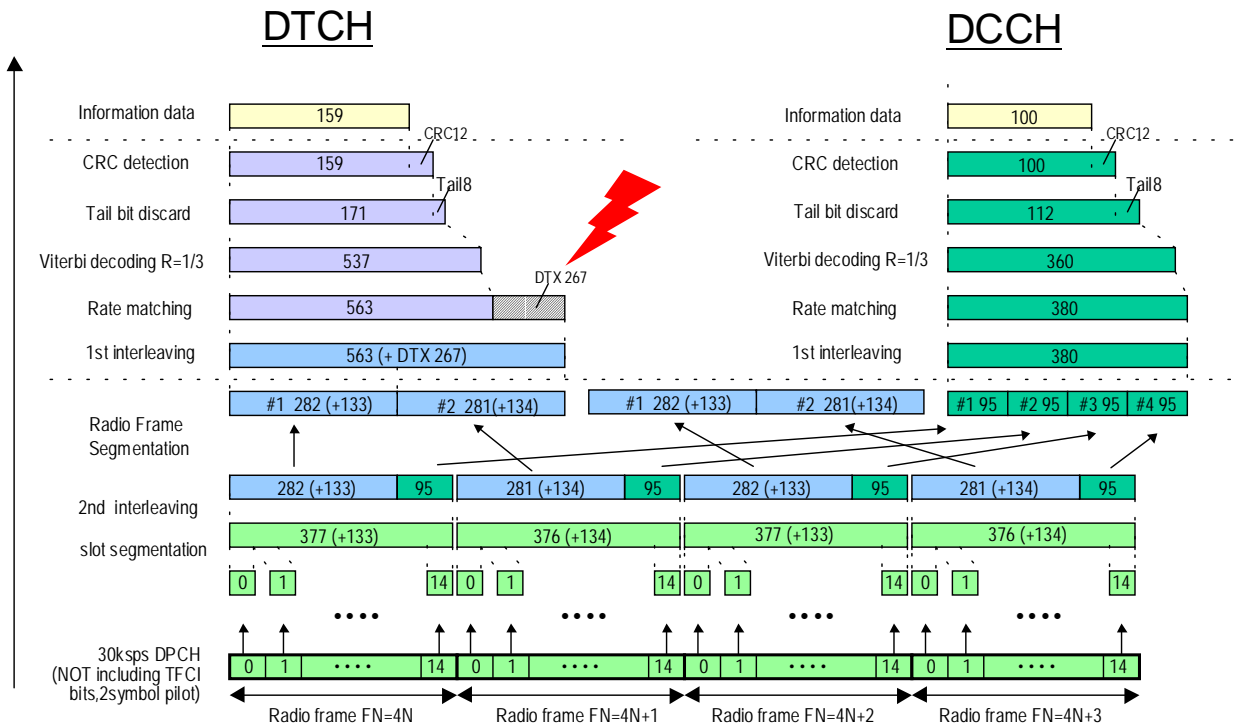


Figure A.10 (Informative): Channel coding of DL reference measurement channel for BTFD (Rate 2)

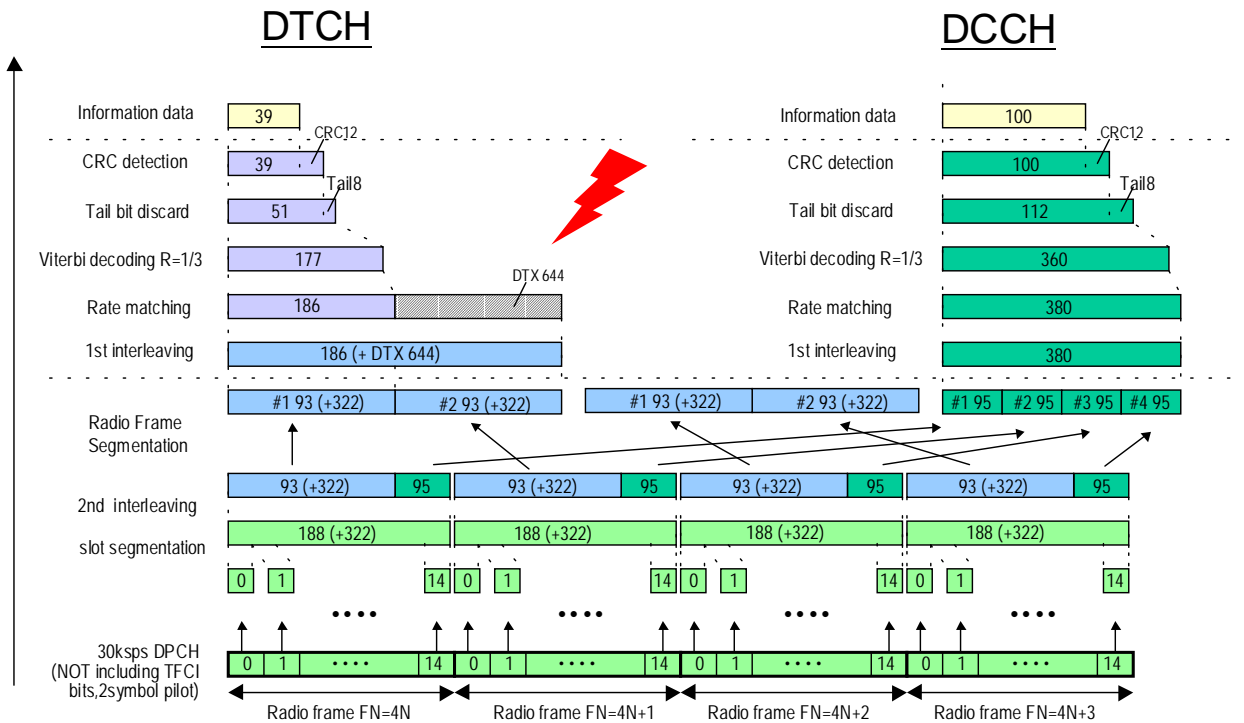


Figure A.11 (Informative): Channel coding of DL reference measurement channel for BTFD (Rate 3)

As shown in the above figure, in setting case that DTX(Discontinuous Transmission) is added to "Rate matching" ...



CDMA Channel 4 - 8 Edit

Channel 4 (Symbol Rate 30.00Kbps)

Channel Type : [DL-DPCH] Power2 : [-10.3dB]

SF : [128] Channelization Code : [127]

Offset : [0Symbol] Scrambling Code Gen.: [1]

Channel 5 (Symbol Rate 15.00Kbps)

Channel Type : [Down-load] Power2 : [-40.0dB]

SF : [256] Channelization Code : [127]

Offset : [0Symbol] Scrambling Code Gen.: [1]

Channel 6 (Symbol Rate 15.00Kbps)

Channel Type : [CPICH] Power2 : [0]

SF : [256] Channelization Code : [0]

Offset : [0Symbol] Scrambling Code Gen.: [1]

3 [F1]

CH4 - CH8

CH4 PhCH Edit

CH6 PhCH Edit

Physical channel : DL-DPCH

Data 1	TPC	TFCI	Data 2	Pilot
(6)	(2)	(0)	(28)	(4)

Slot Format : [#8]

Data : [DCH]

TPC : [555 5555 5555 5555]H

TFCI : -

Antenna : [1]

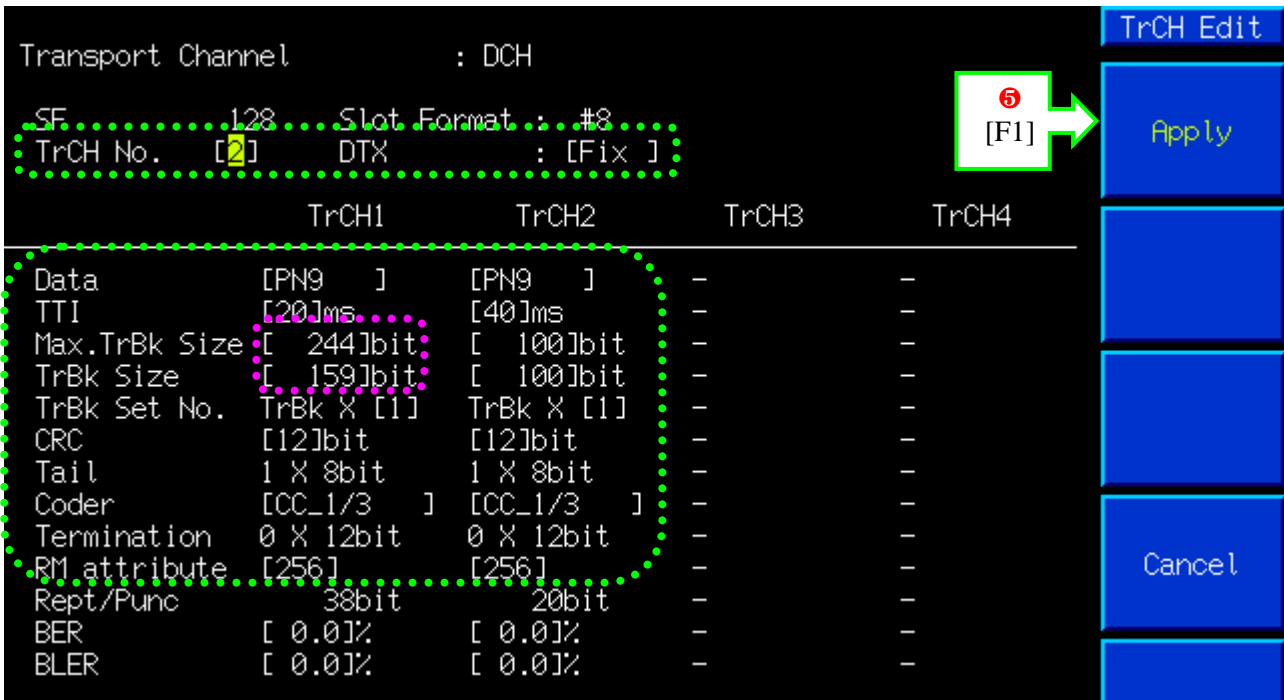
DPCCH/DPDCH Power Ratio : [0.0]dB

BER : -

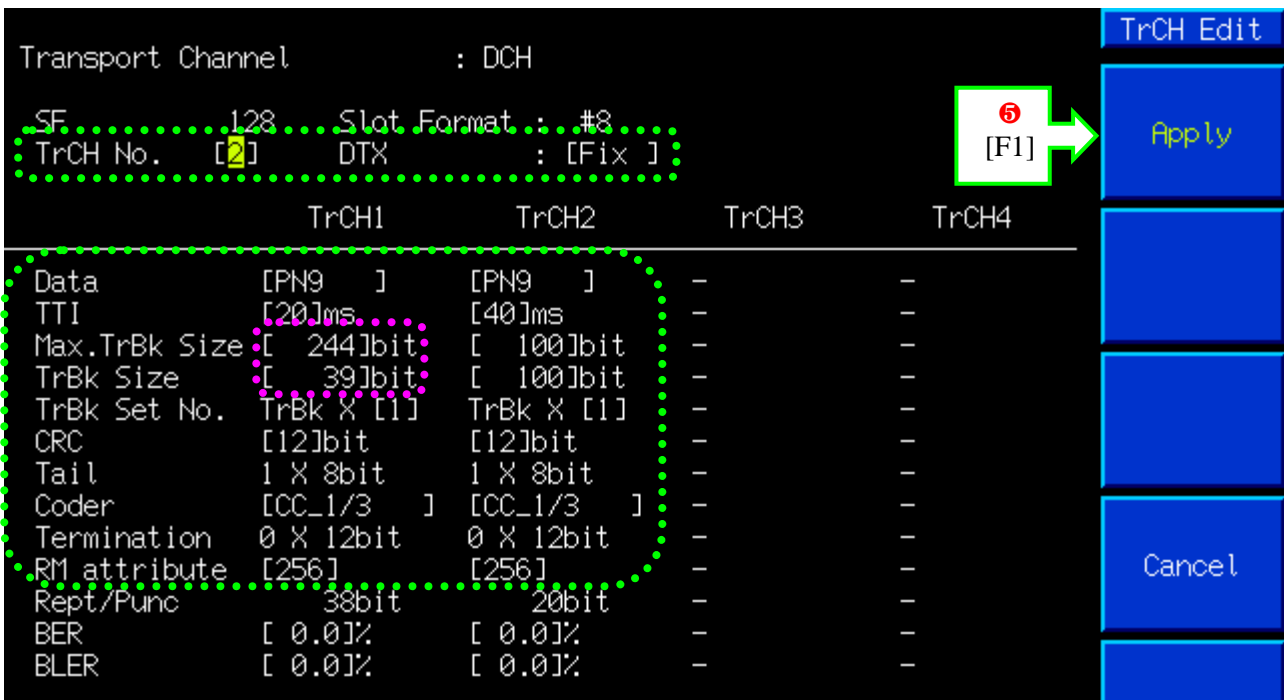
4 [F1]

PhCH Edit

TrCH Edit



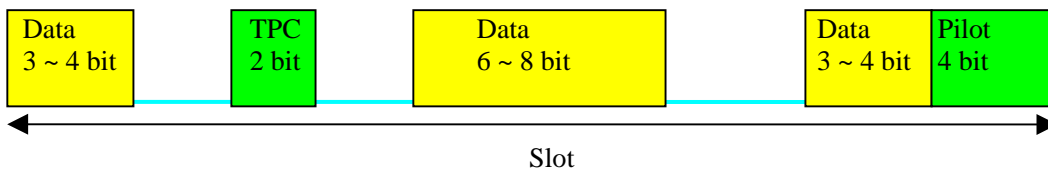
* The setting of (Rate 2)



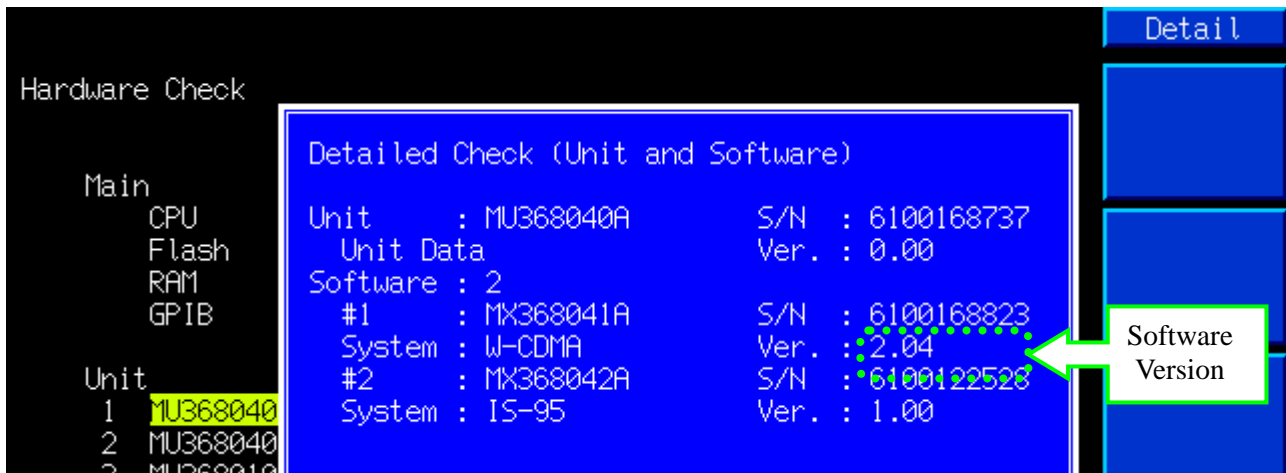
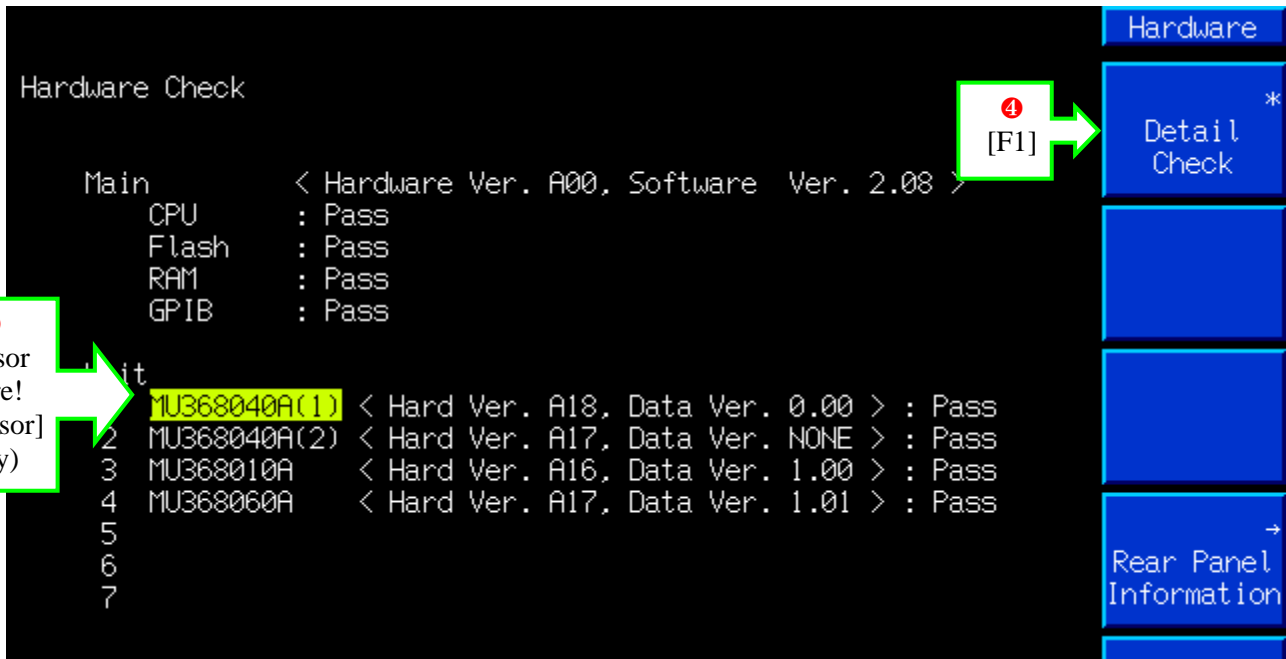
* The setting of (Rate 3)

If the Data area in each Slot is odd bit length in DPCH physical channel, the I/Q symbol position of data bit "1" rotates 90 degrees data. This error was detected.

In this case, when the signal is received, it is judged that the bit is not transmitted.



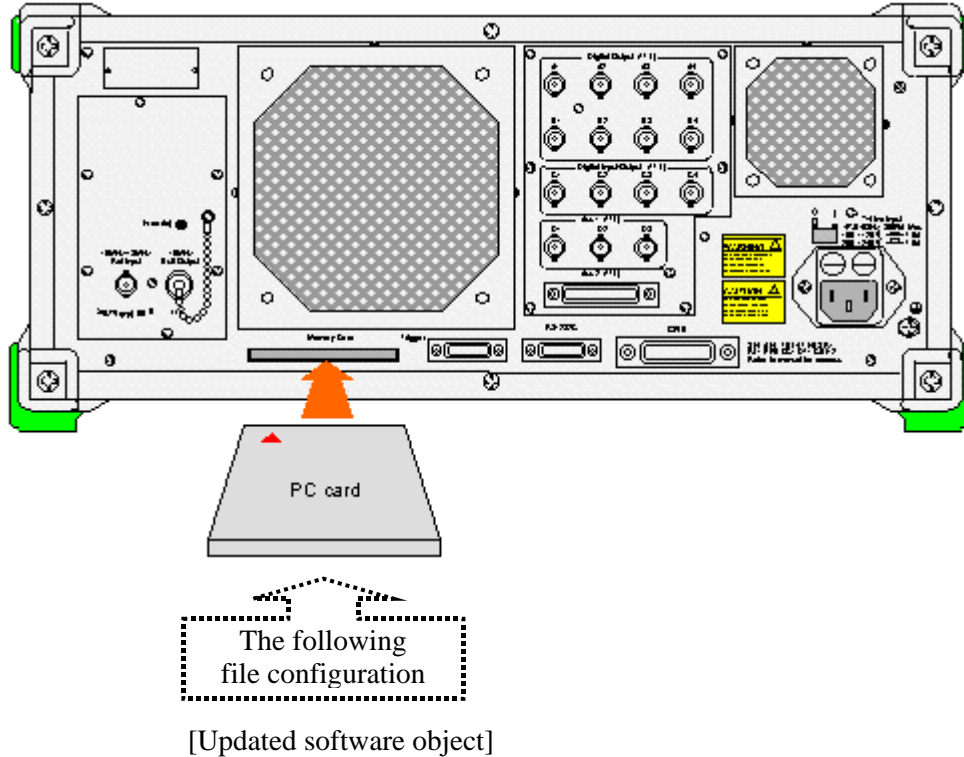
How to check Version



How to upgrade

Please consult with our sales staff about updated firmware object.

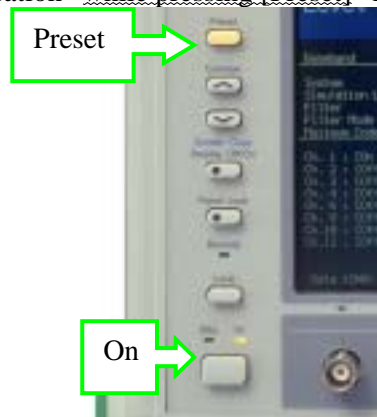
1. Please prepare clear PC memory card (MX368041A/B card that the file and folder are empty).
2. Please copy to PC memory card like the following page.
3. Please power-off MG3681A.
4. Please insert PC memory card in [Memory Card] on the rear panel of MG3681A.



5. Please power-on MG3681A (while pressing [Preset]).
(All LED on a front panel light up simultaneously. → Release the [Preset].)



DSP program has been updated by Version 2.06, so in case of the upgrade from Version 2.05 or less, operation "while pressing [Preset]" is required.



Power-on while pressing [Preset] is changed to the state of Master Reset
(initial setting in the factory).

The data of BPM(Basic Parameter Memory) and APM(All Parameter Memory) saved by [Memory] function are erased, so Memory data should be backed up to a PC memory card if necessary.

1) Backup to a PC memory card:


[Memory] → [F6]etc. → [F3]Basic PRM Export / [F5]All PRM Export

2) Download from a PC memory card:

[Memory] → [F6]etc. → [F2]Basic PRM Import / [F4]All PRM Import

6. The firmware is upgraded in 1 to 2 minutes.





File configuration in PC memory card

The signal pattern files are saved in each folder .
























*****.cmb *****.dat *****.dli
 *****.txt

MX368041A/B Version 2.10

	DL2002-3-99BASIC Folder : The latest extracted basic signal pattern files (25 patterns Red characters)
	DL2002-3-99FULLSET Folder : The latest full signal pattern files (62 patterns)
	Manritsu Folder : Firmware
	*****.cmb *****.dat *****.dli *****.txt Files : The same extracted basic signal pattern files as the inside of the folder (25 patterns Red characters)










MX368041A/B-10 Version 1.02













	BS-TestModel1 Folder : TS25.141 Test Model 1 Single carrier (12 patterns)
	BS-TestModel1MC Folder : TS25.141 Test Model 1 2 carriers (6 patterns Blue characters)
	BS-TestModel2 Folder : TS25.141 Test Model 2 (4 patterns)
	BS-TestModel3 Folder : TS25.141 Test Model 3 (8 patterns)
	BS-TestModel4 Folder : TS25.141 Test Model 4 (4 patterns)
	BS-TestModel5 Folder : TS25.141 Test Model 5 Single carrier (12 patterns Blue characters)
	BS-TestModel5MC Folder : TS25.141 Test Model 5 2 carriers (6 patterns Blue characters)
	DL-RMC Folder : TS25.101 DL RMC (13 patterns)
	DL-Interferer Folder : TS25.101 W-CDMA Modulated Interferer (1 patterns)
	DL-RMC4PILOT Folder : TS25.101 DPCCH as phase reference (3 patterns Blue characters)

	DL-OTD	Folder	: TS25.101 Open-loop Transmit diversity mode	(6 patterns Blue char.)
	DL-Compressed	Folder	: TS25.101 Downlink compressed mode	(15 patterns Blue characters)
	DL-BTFD	Folder	: TS25.101 BTFD	(9 patterns Blue characters)
	DL-PCH	Folder	: TS25.101 PCH	(3 patterns Blue characters)
	DL-AMR	Folder	: Downlink AMR	(9 patterns)
	DL-ISDN	Folder	: Downlink ISDN	(3 patterns)
	UL-RMC	Folder	: TS25.104 UL RMC	(4 patterns)
	UL-RACH_CPCH	Folder	: TS25.104 RACH / CPCH	(5 patterns Blue characters)
	UL-SSDT	Folder	: TS25.104 SSDT	(2 patterns Blue characters)
	UL-AMR	Folder	: Uplink AMR	(3 patterns)
	UL-ISDN	Folder	: Uplink ISDN	(1 patterns)

MX368041A/B-11

Version 1.01

	BS-TestModel1	Folder	: TS25.141 Test Model 1	Single carrier	(12 patterns)
	BS-TestModel1MC	Folder	: TS25.141 Test Model 1	2 carriers	(6 patterns Blue characters)
	BS-TestModel2	Folder	: TS25.141 Test Model 2		(4 patterns)
	BS-TestModel3	Folder	: TS25.141 Test Model 3		(8 patterns)
	BS-TestModel4	Folder	: TS25.141 Test Model 4		(4 patterns)
	BS-TestModel5	Folder	: TS25.141 Test Model 5	Single carrier	(12 patterns Blue characters)
	BS-TestModel5MC	Folder	: TS25.141 Test Model 5	2 carriers	(6 patterns Blue characters)
	DL-RMC	Folder	: TS25.101 DL RMC		(13 patterns)
	DL-Interferer	Folder	: TS25.101 W-CDMA Modulated Interferer		(1 patterns)

	DL-RMC4PILOT Folder : TS25.101 DPCCH as phase reference	(3 patterns Blue characters)
	DL-OTD Folder : TS25.101 Open-loop Transmit diversity mode	(6 patterns Blue char.)
	DL-Compressed Folder : TS25.101 Downlink compressed mode	(15 patterns Blue characters)
	DL-BTFD Folder : TS25.101 BTFD	(9 patterns Blue characters)
	DL-PCH Folder : TS25.101 PCH	(3 patterns Blue characters)
	DL-FRC Folder : TS25.101 DL FRC	(8 patterns Green characters)
	DL-AMR Folder : Downlink AMR	(9 patterns)
	DL-ISDN Folder : Downlink ISDN	(3 patterns)
	UL-RMC Folder : TS25.104 UL RMC	(4 patterns)
	UL-RACH_CPCH Folder : TS25.104 RACH / CPCH	(5 patterns Blue characters)
	UL-SSDT Folder : TS25.104 SSDT	(2 patterns Blue characters)
	UL-AMR Folder : Uplink AMR	(3 patterns)
	UL-ISDN Folder : Uplink ISDN	(1 patterns)



In order to download the signal patterns by F5 [Pattern Download], please **copy** the required signal pattern files to the **root directory** in a PC memory card.

The already downloaded unnecessary signal patterns can be deleted by F4 [Pattern Clear].



The download capacity by F5 [Pattern Download] is up to 32 signal patterns.

The screenshot shows a blue-themed menu with the following text:

Freq. 3000 000 000 00 MHz
 Level 5 0 dB

Baseband : [On] Q Mod. :

1:BS116_7	11:D32T48s0	22:UL_AMR#1
2:BS132_7	12:DAMR18s0	23:UL_AMR#2
3:BS164_7	13:DAMR28s0	24:UL_AMR#3
4:BS2_7	14:DAMR38s0	25:UL_ISDN
5:BS316_7	15:DISDN8s0	26:
6:BS332_7	16:DL_C31	27:
7:BS4_7	17:DL_INTR	28:
8:D32T18s0	18:ULRMC12k	29:
9:D32T28s0	19:ULRMC144	30:
10:D32T38s0	20:ULRMC384	31:
	21:ULRMC64k	32:

Total Share : Symbol = 22 Wave = 45

AWGN : [off] C/N : Wanted - Noise -

Data (CH4) Clock/Trig PWR CONT Ref. Clock I/

Knob Step Cursor

52:DISDN8s9
 53:DL_C31
 54:DL_INTR
 55:ULRMC12k
 56:ULRMC144
 57:ULRMC384
 58:ULRMC64k
 59:UL_AMR#1
 60:UL_AMR#2
 61:UL_AMR#3
 62:UL_ISDN

Symbol = 1
 Wave = 3

All signal patterns on the root directory in PC memory card is appeared.

Signal pattern list

Contents

- Release 3GPP specifications release date
- Title 3GPP specifications name
- Number 3GPP specifications number
- Test item Type of test
- Channel combination Type of channel combination to output
- DPCH parameter Type of DPCH parameter
- Signal pattern name Signal pattern display name

Release		2001-03	2001-06	2001-09	2001-12	2002-03	2002-06	2002-09	2002-12	2003-03	2003-06	2003-09	2003-12	
Title	Number	Release 1999 (upside) / Release 5 (downside)												
Physical Channel Format	TS25.211	V3.6.0	V3.7.0	V3.8.0	V3.9.0	V3.10.0	V3.11.0	V3.12.0 V5.2.0	- V5.3.0	-	- V5.4.0	- V5.5.0	-	
Channel Coding	TS25.212	V3.5.0	V3.6.0	V3.7.0	V3.8.0	V3.9.0	V3.10.0	V3.11.0 V5.2.0	- V5.3.0	- V5.4.0	- V5.5.0	- V5.6.0	- V5.7.0	
Spreading and modulation	TS25.213	V3.5.0	V3.6.0	-	V3.7.0	-	V3.8.0	- V5.2.0	-	- V5.3.0	-	- V5.4.0	V3.9.0 V5.5.0	
UE Radio Transmission and Reception (FDD)	TS25.101	V3.6.0	V3.7.0	V3.8.0	V3.9.0	V3.10.0	V3.11.0	- V5.4.0	V3.12.0 V5.5.0	V3.13.0 V5.6.0	V3.14.0 V5.7.0	V3.15.0 V5.8.0	V3.16.0 V5.9.0	
UTRA(BS) FDD; Radio transmission and reception	TS25.104	V3.6.0	V3.7.0	V3.8.0	V3.9.0	V3.10.0	-	- V5.4.0	V3.11.0 V5.5.0	V3.12.0 V5.6.0	- V5.7.0	-	- V5.8.0	
Base station conformance testing (FDD)	TS25.141	V3.5.0	V3.6.0	V3.7.0	V3.8.0	V3.9.0	V3.10.0	V3.11.0 V5.4.0	V3.12.0 V5.5.0	V3.13.0 V5.6.0	- V5.7.0	-	- V5.8.0	
Channel coding and multiplexing examples	TR25.944	V3.4.0	V3.5.0	-	-	-	-	-	-	-	-	-	-	
Test item	Channel combination	DPCH parameter	Signal pattern name											
TS25.141 6.1.1 Transmitter Test Models	TS25.141 6.1.1.1 Test Model 1	16 DPCH	BS1_16	-	BS116_7 BS116_71 BS116_72 BS116_73	BS116_8 BS116_81 BS116_82 BS116_83	-	-	-	-	-	-	BS11657 BS116571 BS116572 BS116573	-
		(2 carriers)							B11654d B11654d2	B11655d B11655d2	-	-	B11657d B11657d2	B11657d B11657d2
		32 DPCH	BS1_32	-	BS132_7 BS132_71 BS132_72 BS132_73	BS132_8 BS132_81 BS132_82 BS132_83	-	-	-	-	-	-	BS13257 BS132571 BS132572 BS132573	-
	(2 carriers)							B13254d B13254d2	B13255d B13255d2	-	-	B13257d B13257d2	B13257d B13257d2	
	64 DPCH	BS1_64	-	BS164_7 BS164_71 BS164_72 BS164_73	BS164_8 BS164_81 BS164_82 BS164_83	-	-	-	-	-	-	BS16457 BS164571 BS164572 BS164573	-	
	(2 carriers)							B16454d B16454d2	B16455d B16455d2	-	-	B16457d B16457d2	B16457d B16457d2	
	TS25.141 6.1.1.2 Test Model 2	-	BS2	-	BS2_7 BS2_71 BS2_72 BS2_73	BS2_8 BS2_81 BS2_82 BS2_83	-	-	-	-	-	-	BS257 BS2571 BS2572 BS2573	-
	TS25.141 6.1.1.3 Test Model 3	16 DPCH	BS3_16	-	BS316_7 BS316_71 BS316_72 BS316_73	BS316_8 BS316_81 BS316_82 BS316_83	-	-	-	-	-	-	BS31657 BS316571 BS316572 BS316573	-
		32 DPCH	BS3_32	-	BS332_7 BS332_71 BS332_72 BS332_73	BS332_8 BS332_81 BS332_82 BS332_83	-	-	-	-	-	-	BS33257 BS332571 BS332572 BS332573	-

	TS25.141 6.1.1.4 Test Model 4	-	BS4	-	BS4_7 BS4_71 BS4_72 BS4_73	BS4_8 BS4_81 BS4_82 BS4_83	-	-	-	-	-	-	BS457 BS4571 BS4572 BS4573	-
	TS25.141 6.1.1.4A Test Model 5	2 HS-PDSCH + 6 DPCH (2 carriers)						BS5_254 BS5_2541 BS5_2542 BS5_2543	BS5_255 BS5_2551 BS5_2552 BS5_2553	-	-	BS5_257 BS5_2571 BS5_2572 BS5_2573	BS5_257 BS5_2571 BS5_2572 BS5_2573	
							BS5_254d BS5_254d2	BS5_255d BS5_255d2	-	-	BS5_257d BS5_257d2	BS5_257d BS5_257d2		
		4 HS-PDSCH + 14 DPCH (2 carriers)						BS5_454 BS5_4541 BS5_4542 BS5_4543	BS5_455 BS5_4551 BS5_4552 BS5_4553	-	-	BS5_457 BS5_4571 BS5_4572 BS5_4573	BS5_457 BS5_4571 BS5_4572 BS5_4573	
							BS5_454d BS5_454d2	BS5_455d BS5_455d2	-	-	BS5_457d BS5_457d2	BS5_457d BS5_457d2		
		8 HS-PDSCH + 30 DPCH (2 carriers)						BS5_854 BS5_8541 BS5_8542 BS5_8543	BS5_855 BS5_8551 BS5_8552 BS5_8553	-	-	BS5_857 BS5_8571 BS5_8572 BS5_8573	BS5_857 BS5_8571 BS5_8572 BS5_8573	
								BS5_854d BS5_854d2	BS5_855d BS5_855d2	-	-	BS5_857d BS5_857d2	BS5_857d BS5_857d2	
TS25.101 7 Receiver characteristics 8 Performance requirement	TS25.101 Annex C.3.1	TS25.101 Annex A.3.1	DL_C31	-	-	-	-	-	-	-	-	-	-	-
	TS25.101 Annex C.3.2		DL_C32T1	D32T17s0	D32T18s0 D32T18s8 D32T18s9	-	-	-	-	-	-	-	-	-
		TS25.101 Annex A.3.2	DL_C32T2	D32T27s0	D32T28s0 D32T28s8 D32T28s9	-	-	-	-	-	-	-	-	-
		TS25.101 Annex A.3.3	DL_C32T3	D32T37s0	D32T38s0 D32T38s8 D32T38s9	-	-	-	-	-	-	-	-	-
		TS25.101 Annex A.3.4	DL_C32T4	D32T47s0	D32T48s0 D32T48s8 D32T48s9	-	-	-	-	-	-	-	-	-
	TS25.101 Annex C.4	TS25.101 Table C.6	-	-	DL_INTR	-	-	-	-	-	-	-	-	-
8.3 in multi-path (Case7) Test21~25	TS25.101 Annex C.3.5	TS25.101 Annex A.4A						4Ps0 4Ps8 4Ps9	-	-	-	-	-	-
8.6.1 open-loop transmit diversity	TS25.101 Annex C.3.3	TS25.101 Annex A.3.1						OTD1s0 OTD1s8 OTD1s9	-	-	-	-	-	-
							OTD2s0 OTD2s8 OTD2s9	-	-	-	-	-	-	
8.9 Downlink compressed mode	TS25.101 Annex C.3.2	TS25.101 Annex A.5						D32T11540 DCP11548 DCP11549	-	-	-	-	-	-

		TR25.944 4.1.1.3.1.1 DCCH 4.1.1.3.1.2 AMR TFCS#2 4.1.1.3.2.2	DL_AMR#2	DAMR27s0	DAMR28s0 DAMR28s8 DAMR28s9	-	-	-	-	-	-	-	-
		TR25.944 4.1.1.3.1.1 DCCH 4.1.1.3.1.2 AMR TFCS#3 4.1.1.3.2.2	DL_AMR#3	DAMR37s0	DAMR38s0 DAMR38s8 DAMR38s9	-	-	-	-	-	-	-	-
		TR25.944 4.1.1.3.1.1 DCCH 4.1.1.3.1.6 ISDN 4.1.1.3.2.5	DL_ISDN	DISDN7s0	DISDN8s0 DISDN8s8 DISDN8s9	-	-	-	-	-	-	-	-
-	TS25.104 Annex A.1	TR25.944 4.1.2.2.1.1 DCCH 4.1.2.2.1.2 AMR TFCS#1 4.1.2.2.2	UL_AMR#1	-	-	-	-	-	-	-	-	-	-
		TR25.944 4.1.2.2.1.1 DCCH 4.1.2.2.1.2 AMR TFCS#2 4.1.2.2.2	UL_AMR#2	-	-	-	-	-	-	-	-	-	-
		TR25.944 4.1.2.2.1.1 DCCH 4.1.2.2.1.2 AMR TFCS#3 4.1.2.2.2	UL_AMR#3	-	-	-	-	-	-	-	-	-	-
		TR25.944 4.1.2.2.1.1 DCCH 4.1.2.2.1.6 ISDN 4.1.2.2.2	UL_ISDN	-	-	-	-	-	-	-	-	-	-

BS11657

```

Pattern Contents (No. 7:BS11657 )
Channel combination :
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 16
(TEST MODEL 1 in 3G TS25.141 V5.7.0)
ch1 : P-CCPCH + SCH
ch2-3 : OFF
ch4 : S-CCPCH
ch5 : PICH
ch6-11: OFF
ch12 : CPICH
additional ch : DPCH x 16 ch
Scrambling code number = 00h

```

- * Scrambling code number = 10 HEX: BS116571
- * Scrambling code number = 20 HEX: BS116572
- * Scrambling code number = 30 HEX: BS116573

BS13257

```

Pattern Contents (No. 8:BS13257 )
Channel combination :
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 32
(TEST MODEL 1 in 3G TS25.141 V5.7.0)
ch1 : P-CCPCH + SCH
ch2-3 : OFF
ch4 : S-CCPCH
ch5 : PICH
ch6-11: OFF
ch12 : CPICH
additional ch : DPCH x 32 ch
Scrambling code number = 00h

```

- BS132571
- BS132572
- BS132573

BS16457

```

Pattern Contents (No. 9:BS16457 )
Channel combination :
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 64
(TEST MODEL 1 in 3G TS25.141 V5.7.0)
ch1 : P-CCPCH + SCH
ch2-3 : OFF
ch4 : S-CCPCH
ch5 : PICH
ch6-11: OFF
ch12 : CPICH
additional ch : DPCH x 64 ch
Scrambling code number = 00h

```

- * Scrambling code number = 10 HEX: BS164571
- * Scrambling code number = 20 HEX: BS164572
- * Scrambling code number = 30 HEX: BS164573

BS257

```

Pattern Contents (No.10:BS257 )
Channel combination :
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 3
(TEST MODEL 2 in 3G TS25.141 V5.7.0)
ch1 : P-CCPCH + SCH
ch2-3 : OFF
ch4 : S-CCPCH
ch5 : PICH
ch6-11: OFF
ch12 : CPICH
additional ch : DPCH x 3 ch
Scrambling code number = 00h

```

- BS2571
- BS2572
- BS2573

BS31657

```

Pattern Contents (No.11:BS31657 )
Channel combination :
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 16
(TEST MODEL 3 in 3G TS25.141 V5.7.0)
ch1 : P-CCPCH + SCH
ch2-3 : OFF
ch4 : S-CCPCH
ch5 : PICH
ch6-11: OFF
ch12 : CPICH
additional ch : DPCH x 16 ch
Scrambling code number = 00h

```

- * Scrambling code number = 10 HEX: BS316571
- * Scrambling code number = 20 HEX: BS316572
- * Scrambling code number = 30 HEX: BS316573

BS33257

```

Pattern Contents (No.12:BS33257 )
Channel combination :
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 32
(TEST MODEL 3 in 3G TS25.141 V5.7.0)
ch1 : P-CCPCH + SCH
ch2-3 : OFF
ch4 : S-CCPCH
ch5 : PICH
ch6-11: OFF
ch12 : CPICH
additional ch : DPCH x 32 ch
Scrambling code number = 00h

```

- BS332571
- BS332572
- BS332573

- * P-CCPCH: Conformity to TS25.141 6.1.1.6.1 P-CCPCH
- * PICH: Conformity to TS25.141 6.1.1.6.2 PICH

BS457

```

Pattern Contents (No.13:BS457 )
Channel combination :
P-CCPCH + SCH + CPICH
(TEST MODEL 4 in 3G TS25.141 V5.7.0)
ch1 : P-CCPCH + SCH
ch2-11: OFF
ch12 : CPICH
additional ch : OFF

```

- * Scrambling code number = 10 HEX: BS4571
- * Scrambling code number = 20 HEX: BS4572
- * Scrambling code number = 30 HEX: BS4573

BS5_257

```

Pattern Contents (No.14:BS5_257 )
Channel combination : (ver1.02)
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 6
+ HS-SCCH x 2 + HS-DSCH x 2
(TEST MODEL 5 in 3G TS25.141 V5.7.0)
ch1-12: OFF
additional ch : All Channels
Scrambling code number = 00h

```

- BS5_2571
- BS5_2572
- BS5_2573

BS5_457

```

Pattern Contents (No.15:BS5_457 )
Channel combination : (ver1.02)
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 14
+ HS-SCCH x 2 + HS-DSCH x 4
(TEST MODEL 5 in 3G TS25.141 V5.7.0)
ch1-12: OFF
additional ch : All Channels
Scrambling code number = 00h

```

- * Scrambling code number = 10 HEX: BS5_4571
- * Scrambling code number = 20 HEX: BS5_4572
- * Scrambling code number = 30 HEX: BS5_4573

BS5_857

```

Pattern Contents (No.16:BS5_857 )
Channel combination : (ver1.02)
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 30
+ HS-SCCH x 2 + HS-DSCH x 8
(TEST MODEL 5 in 3G TS25.141 V5.7.0)
ch1-12: OFF
additional ch : All Channels
Scrambling code number = 00h

```

- BS5_8571
- BS5_8572
- BS5_8573

B11657d

```

Pattern Contents (No. 1:B11657d )
Channel combination : 2 multi-carrier signal
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 16
(TEST MODEL 5 in 3G TS25.141 V5.7.0) (ver1.02)
ch1-12: OFF
additional ch : 2 multi-carrier signal
carrier1:Scrambling code number = 00h
offset frequency = -2.5MHz
carrier2:Scrambling code number = 10h
offset frequency = +2.5MHz

```

- * Scrambling code number = 20,30 HEX: BS11657d2

B13257d

```

Pattern Contents (No. 2:B13257d )
Channel combination : 2 multi-carrier signal
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 32
(TEST MODEL 5 in 3G TS25.141 V5.7.0) (ver1.02)
ch1-12: OFF
additional ch : 2 multi-carrier signal
carrier1:Scrambling code number = 00h
offset frequency = -2.5MHz
carrier2:Scrambling code number = 10h
offset frequency = +2.5MHz

```

- BS13257d2

- * P-CCPCH: Conformity to TS25.141 6.1.1.6.1 P-CCPCH
- * PICH: Conformity to TS25.141 6.1.1.6.2 PICH

B16457d

```

Pattern Contents (No. 3:B16457d )
Channel combination : 2 multi-carrier signal
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 64
(TEST MODEL 5 in 3G TS25.141 V5.7.0) (ver1.02)
chl-12: OFF
additional ch : 2 multi-carrier signal
carrier1:Scrambling code number = 00h
offset frequency = -2.5MHz
carrier2:Scrambling code number = 10h
offset frequency = +2.5MHz

```

B5_257d

```

Pattern Contents (No. 4:B5_257d )
Channel combination : 2 multi-carrier signal
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 8
+ HS-SCCH x 2 + HS-PDSCH x 2
(TEST MODEL 5 in 3G TS25.141 V5.7.0) (ver1.02)
chl-12: OFF
additional ch : 2 multi-carrier signal
carrier1:Scrambling code number = 00h
offset frequency = -2.5MHz
carrier2:Scrambling code number = 10h
offset frequency = +2.5MHz

```

* Scrambling code number = 20,30 HEX: BS16457d2

B5_257d2

B5_457d

```

Pattern Contents (No. 5:B5_457d )
Channel combination : 2 multi-carrier signal
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 14
+ HS-SCCH x 2 + HS-PDSCH x 4
(TEST MODEL 5 in 3G TS25.141 V5.7.0) (ver1.02)
chl-12: OFF
additional ch : 2 multi-carrier signal
carrier1:Scrambling code number = 00h
offset frequency = -2.5MHz
carrier2:Scrambling code number = 10h
offset frequency = +2.5MHz

```

B5_857d

```

Pattern Contents (No. 6:B5_857d )
Channel combination : 2 multi-carrier signal
P-CCPCH + SCH + PICH + S-CCPCH + CPICH + DPCH x 30
+ HS-SCCH x 2 + HS-PDSCH x 8
(TEST MODEL 5 in 3G TS25.141 V5.7.0) (ver1.02)
chl-12: OFF
additional ch : 2 multi-carrier signal
carrier1:Scrambling code number = 00h
offset frequency = -2.5MHz
carrier2:Scrambling code number = 10h
offset frequency = +2.5MHz

```

* Scrambling code number = 20,30 HEX: B5_457d2

B5_857d2

* P-CCPCH: Conformity to TS25.141 6.1.1.6.1 P-CCPCH

* PICH: Conformity to TS25.141 6.1.1.6.2 PICH

DL_C31

```
Pattern Contents (No.18:DL_C31 )
Channel combination : TS25.101 V3.6.0 Annex C3.1
for Reference sensitivity level

ch1 : P-CCPCH + P/S-SCH
ch2-3 : OFF
ch4 : DL-DPCH (30 kbps)
      3G TS25.211 V3.6.0, TS25.212,213 V3.5.0
      3G TS25.101 V3.6.0 Annex A.3.1
      DL reference measurement channel 12.2 kbps
ch5 : PICH
ch6 : CPICH
ch7-12: OFF
Add ch: OFF
```

D32T18s0

```
Pattern Contents (No. 5:D32T18s0)
Channel combination : TS25.101 V3.8.0 Annex C3.2
for Performance requirement
Demodulation of DCH TEST1 (BLER=10-2)

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (30 kbps)
      3G TS25.211 V3.7.0, TS25.212,213 v3.6.0
      3G TS25.101 v3.7.0 Annex A.3.1
      DL reference measurement channel 12.2 kbps
ch5 : PICH
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V3.8.0 table C.6)
      Scrambling code number = 00h
```

- * Scrambling code number = 80 HEX: D32T18s8
- * Scrambling code number = 90 HEX: D32T18s9

D32T28s0

```
Pattern Contents (No. 6:D32T28s0)
Channel combination : TS25.101 V3.8.0 Annex C3.2
for Performance requirement
Demodulation of DCH TEST2 (BLER=10-2)

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (120 kbps)
      3G TS25.211 V3.7.0, TS25.212,213 V3.6.0
      3G TS25.101 V3.7.0 Annex A.3.2
      DL reference measurement channel 64 kbps
ch5 : PICH
ch6 : CPICH
ch2-3, ch7-12: OFF
Add ch: OCNS (TS25.101 V3.8.0 table C.6)
      Scrambling code number = 00h
```

- D32T28s8
- D32T28s9

D32T38s0

```
Pattern Contents (No. 7:D32T38s0)
Channel combination : TS25.101 V3.8.0 Annex C3.2
for Performance requirement
Demodulation of DCH TEST3 (BLER=10-2)

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (240 kbps)
      3G TS25.211 V3.7.0, TS25.212,213 V3.6.0
      3G TS25.101 v3.7.0 Annex A.3.3
      DL reference measurement channel 144 kbps
ch5 : PICH
ch6 : CPICH
ch2-3, ch7-12: OFF
Add ch: OCNS (TS25.101 V3.8.0 table C.6)
      Scrambling code number = 00h
```

- * Scrambling code number = 80 HEX: D32T38s8
- * Scrambling code number = 90 HEX: D32T38s9

D32T48s0

```
Pattern Contents (No. 8:D32T48s0)
Channel combination : TS25.101 V3.8.0 Annex C3.2
for Performance requirement
Demodulation of DCH TEST4 (BLER=10-2)

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (480 kbps)
      3G TS25.211 V3.7.0, TS25.212,213 v3.6.0
      3G TS25.101 v3.7.0 Annex A.3.4
      DL reference measurement channel 384 kbps
ch5 : PICH
ch6 : CPICH
ch2-3, ch7-12: OFF
Add ch: OCNS (TS25.101 V3.8.0 table C.6)
      Scrambling code number = 00h
```

- D32T48s8
- D32T48s9

- * P-CCPCH: 11 bits SFN is mapped on BCH.
- * DL-DPCH: DPCH_Ec/Ior conforms to BLER=10⁻² of “Demodulation of DCH”.
- * PICH: Conformity to TS25.141 6.1.1.6.2 PICH
- * OCNS: PN9 that added offset to initial value in each code
OCNS of one frame cycle which reset PN9 in each frame

DL_INTR

4Ps0

```

Pattern Contents (No.19:DL_INTR )
Channel combination : TS25.101 V3.8.0 Annex C.4
for Modulation Interfere
ch1 : P-CCPCH + SCH
ch2-3 : OFF
ch4 : OFF
ch5 : PICH
ch6-11: OFF
ch12 : CPICH
additional ch : OCNS (TS25.101 V3.8.0 table C.6)
Scrambling code number = 2000h

```

```

Pattern Contents (No. 1:4Ps0 )
Channel combination : TS25.101 V5.4.0 Annex C3.5
for Performance requirement Demodulation of DCH
in multi-path fading propagation condition TEST21
ch1 : P-CCPCH + P/S-SCH
ch4 : DPCH (30 kbps)
3G TS25.141 V5.4.0 Annex A.4A
DL RMC using DPCH with 4 pilot bits
as phase reference
ch5 : PICH
ch6 : CPICH
ch2-3, ch7-12: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
Scrambling code number = 00h

```

* SCH: S-SCH_SSC = Group 0

* Scrambling code number = 80 HEX: 4Ps8

* Scrambling code number = 90 HEX: 4Ps9

OTD1s0

OTD2s0

```

Pattern Contents (No.20:OTD1s0 )
Channel combination : TS25.101 V5.4.0 Annex C3.3
for Performance requirement Demodulation of DCH in
open-loop transmit diversity mode TEST1 antenna 1
ch1 : P-CCPCH + P/S-SCH (TSTD)
ch2 : CPICH
ch4 : DL-DPCH (30 kbps)
3G TS25.101 v5.4.0 Annex A.3.1
DL reference measurement channel 12.2 kbps
ch5 : PICH
ch3, 6-12: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
Scrambling code number = 00h

```

```

Pattern Contents (No.21:OTD2s0 )
Channel combination : TS25.101 V5.4.0 Annex C3.3
for Performance requirement Demodulation of DCH in
open-loop transmit diversity mode TEST1 antenna 2
ch1 : P-CCPCH + P/S-SCH (TSTD)
ch2 : CPICH
ch4 : DL-DPCH (30 kbps)
3G TS25.101 v5.4.0 Annex A.3.1
DL reference measurement channel 12.2 kbps
ch5 : PICH
ch3, 6-12: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
Scrambling code number = 00h

```

* Scrambling code number = 80 HEX: OTD1s8

OTD2s8

* Scrambling code number = 90 HEX: OTD1s9

OTD2s9

* OCNS: Not STTD encoding

* P-CCPCH: 11 bits SFN is mapped on BCH.

* PICH: Conformity to TS25.141 6.1.1.6.2 PICH

* OCNS: PN9 that added offset to initial value in each code
OCNS of one frame cycle which reset PN9 in each frame

DCP11540

```

Pattern Contents (No.12:DCP11540)
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Downlink compressed mode Test1

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (Normal frame)
ch5 : DL-DPCH (Compressed frame)
      TS25.101 v5.4.0 Annex A.3.1
      DL reference measurement channel 12.2 kbps
      TS25.101 v5.4.0 Annex A.5 pattern 1 set 1
ch6 : CPICH
ch12 : PICH (32bit "FFFF0000" repeat)
ch2-3, 7-11: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
    
```

- * Scrambling code number = 80 HEX: DCP11548
- * Scrambling code number = 90 HEX: DCP11549

DCP12540

```

Pattern Contents (No.13:DCP12540)
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Downlink compressed mode Test1

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (Normal frame)
ch5 : DL-DPCH (Compressed frame)
      TS25.101 v5.4.0 Annex A.3.1
      DL reference measurement channel 12.2 kbps
      TS25.101 v5.4.0 Annex A.5 pattern 1 set 2
ch6 : CPICH
ch12 : PICH (32bit "FFFF0000" repeat)
ch2-3, 7-11: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
    
```

- DCP12548
- DCP12549

DCP21540

```

Pattern Contents (No.14:DCP21540)
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Downlink compressed mode Test1

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (Normal frame)
ch5 : DL-DPCH (Compressed frame)
      TS25.101 v5.4.0 Annex A.3.1
      DL reference measurement channel 12.2 kbps
      TS25.101 v5.4.0 Annex A.5 pattern 2 set 1
ch6 : CPICH
ch12 : PICH (32bit "FFFF0000" repeat)
ch2-3, 7-11: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
    
```

- * Scrambling code number = 80 HEX: DCP21548
- * Scrambling code number = 90 HEX: DCP21549

DCP22540

```

Pattern Contents (No.15:DCP22540)
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Downlink compressed mode Test1

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (Normal frame)
ch5 : DL-DPCH (Compressed frame)
      TS25.101 v5.4.0 Annex A.3.1
      DL reference measurement channel 12.2 kbps
      TS25.101 v5.4.0 Annex A.5 pattern 2 set 2
ch6 : CPICH
ch12 : PICH (32bit "FFFF0000" repeat)
ch2-3, 7-11: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
    
```

- DCP22548
- DCP22549

DCP23540

```

Pattern Contents (No.16:DCP23540)
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Downlink compressed mode Test1

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (Normal frame)
ch5 : DL-DPCH (Compressed frame)
      TS25.101 v5.4.0 Annex A.3.1
      DL reference measurement channel 12.2 kbps
      TS25.101 v5.4.0 Annex A.5 pattern 2 set 3
ch6 : CPICH
ch12 : PICH (32bit "FFFF0000" repeat)
ch2-3, 7-11: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
    
```

- * Scrambling code number = 80 HEX: DCP23548
- * Scrambling code number = 90 HEX: DCP23549

- * P-CCPCH: 11 bits SFN is mapped on BCH.
- * OCNS: PN9 that added offset to initial value in each code
OCNS of one frame cycle which reset PN9 in each frame

BTFD1s0

```

Pattern Contents (No. 2:BTFD1s0 )
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Blind transport format detection (rate 1)

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (30 kbps)
      3G TS25.101 v5.4.0 Annex A.4
      DL reference measurement channel
      for BTFD 12.2 kbps
ch5 : PICH
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
      Scrambling code number = 00h
    
```

- * Scrambling code number = 80 HEX: BTFD1s8
- * Scrambling code number = 90 HEX: BTFD1s9

BTFD2s0

```

Pattern Contents (No. 3:BTFD2s0 )
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Blind transport format detection (rate 2)

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (30 kbps)
      3G TS25.101 v5.4.0 Annex A.4
      DL reference measurement channel
      for BTFD 7.95 kbps
ch5 : PICH
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
      Scrambling code number = 00h
    
```

- BTFD2s8
- BTFD2s9

BTFD3s0

```

Pattern Contents (No. 4:BTFD3s0 )
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Blind transport format detection (rate 3)

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (30 kbps)
      3G TS25.101 v5.4.0 Annex A.4
      DL reference measurement channel
      for BTFD 1.95 kbps
ch5 : PICH
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
      Scrambling code number = 00h
    
```

- * Scrambling code number = 80 HEX: BTFD3s8
- * Scrambling code number = 90 HEX: BTFD3s9

PCHs0

```

Pattern Contents (No.22:PCHs0 )
Channel combination : TS25.101 V5.4.0 Annex C3.2
for Performance requirement
Demodulation of PCH TEST1
ch1 : P-CCPCH + P/S-SCH
ch4 : PCH (30 kbps)
      3G TS25.101 V5.4.0 Annex A.6
      DL reference measurement channel for PCH
ch5 : PICH
ch6 : CPICH
ch2-3, ch7-12: OFF
Add ch: OCNS (TS25.101 V5.4.0 table C.6)
      Scrambling code number = 00h
    
```

- PCHs8
- PCHs9

- * P-CCPCH: 11 bits SFN is mapped on BCH.
- * PICH: Conformity to TS25.141 6.1.1.6.2 PICH
- * OCNS: PN9 that added offset to initial value in each code
OCNS of one frame cycle which reset PN9 in each frame

F1P0s0

```

Pattern Contents (No.21:F1P0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.00)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=40h(P=5,0=1),Xrs=0,Xtbs=29h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC QPSK H-Set1 RV=0)
        Channelization Code = 1,2,3,4,5)
        Scrambling code number = 00h
    
```

F1A0s0

```

Pattern Contents (No.20:F1A0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.00)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=30h(P=4,0=1),Xrs=1,Xtbs=24h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC 16QAM H-Set1 RV=0)
        Channelization Code = 1,2,3,4)
        Scrambling code number = 00h
    
```

F2P0s0

```

Pattern Contents (No.23:F2P0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.00)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=40h(P=5,0=1),Xrs=0,Xtbs=29h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC QPSK H-Set2 RV=0)
        Channelization Code = 1,2,3,4,5)
        Scrambling code number = 00h
    
```

F2A0s0

```

Pattern Contents (No.22:F2A0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.00)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=30h(P=4,0=1),Xrs=1,Xtbs=24h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC 16QAM H-Set2 RV=0)
        Channelization Code = 1,2,3,4)
        Scrambling code number = 00h
    
```

F3P0s0

```

Pattern Contents (No.25:F3P0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.00)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=40h(P=5,0=1),Xrs=0,Xtbs=29h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC QPSK H-Set3 RV=0)
        Channelization Code = 1,2,3,4,5)
        Scrambling code number = 00h
    
```

F3A0s0

```

Pattern Contents (No.24:F3A0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.00)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=30h(P=4,0=1),Xrs=1,Xtbs=24h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC 16QAM H-Set3 RV=0)
        Channelization Code = 1,2,3,4)
        Scrambling code number = 00h
    
```

F4P0s0

```

Pattern Contents (No.26:F4P0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.01)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=40h(P=5,0=1),Xrs=0,Xtbs=29h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC QPSK H-Set4 RV=0)
        Channelization Code = 1,2,3,4,5)
        Scrambling code number = 00h
    
```

F5P0s0

```

Pattern Contents (No.27:F5P0s0 )
Channel combination : TS25.101 V5.7.0 Annex C5.1
for Performance requirement HSDPA (ver. 1.00)

ch1 : P-CCPCH + P/S-SCH
ch2 : CPICH
ch4 : DL-DPCH (RMC 12.2kbps)
ch5 : HS-SOCH (Xccs=40h(P=5,0=1),Xrs=0,Xtbs=29h,
             Xhap=0to5,Xrv=0,Xnd=0/1,Xue=0)
ch6-11: OCNS (PN9)
ch12 : PICH (Dummy)
Add ch: HS-PDSCH (FRC QPSK H-Set5 RV=0)
        Channelization Code = 1,2,3,4,5)
        Scrambling code number = 00h
    
```

- * P-CCPCH: 11 bits SFN is mapped on BCH.
- * DL_DPCH: DPCH_Ec/Ior conforms to $BLER=10^{-2}$ of “Demodulation of DCH”.
- * PICH: Conformity to TS25.141 6.1.1.6.2 PICH

DAMR18s0

```

Pattern Contents (No. 9:DAMR18s0)
Channel combination : TS25.101 V3.6.0 Annex C3.2
TR25.944 V3.5.0 DL AMR speech TFCS #1

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (30 kbps)
      3G TS25.211 V3.7.0,TS25.212,213 V3.6.0
      3G TR25.944 V3.5.0 4.1.1.3.1.1 DCH
                        4.1.1.3.1.2 AMR TFCS #1
                        4.1.1.3.2.2
ch5 : PICH (3G TS25.141 V3.6.0 6.1.1.6.2 PICH)
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V3.6.0 table C.6)
      Scrambling code number = 00h

```

- * Scrambling code number = 80 HEX: DAMR18s8
- * Scrambling code number = 90 HEX: DAMR18s9

DAMR28s0

```

Pattern Contents (No.10:DAMR28s0)
Channel combination : TS25.101 V3.6.0 Annex C3.2
TR25.944 V3.5.0 DL AMR speech TFCS #2

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (30 kbps)
      3G TS25.211 V3.7.0,TS25.212,213 V3.6.0
      3G TR25.944 V3.5.0 4.1.1.3.1.1 DCH
                        4.1.1.3.1.2 AMR TFCS #2
                        4.1.1.3.2.2
ch5 : PICH (3G TS25.141 V3.6.0 6.1.1.6.2 PICH)
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V3.6.0 table C.6)
      Scrambling code number = 00h

```

- DAMR28s8
- DAMR28s9

DAMR38s0

```

Pattern Contents (No.11:DAMR38s0)
Channel combination : TS25.101 V3.6.0 Annex C3.2
TR25.944 V3.5.0 DL AMR speech TFCS #3

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (30 kbps)
      3G TS25.211 V3.7.0,TS25.212,213 V3.6.0
      3G TR25.944 V3.5.0 4.1.1.3.1.1 DCH
                        4.1.1.3.1.2 AMR TFCS #3
                        4.1.1.3.2.2
ch5 : PICH (3G TS25.141 V3.6.0 6.1.1.6.2 PICH)
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V3.6.0 table C.6)
      Scrambling code number = 00h

```

- * Scrambling code number = 80 HEX: DAMR38s8
- * Scrambling code number = 90 HEX: DAMR38s9

DISDN8s0

```

Pattern Contents (No.17:DISDN8s0)
Channel combination : TS25.101 V3.6.0 Annex C3.2
TR25.944 V3.5.0 DL ISDN

ch1 : P-CCPCH + P/S-SCH
ch4 : DL-DPCH (120 kbps)
      3G TS25.211 V3.7.0,TS25.212,213 V3.6.0
      3G TR25.944 V3.5.0 4.1.1.3.1.1 DCH
                        4.1.1.3.1.6 ISDN
                        4.1.1.3.2.5
ch5 : PICH (3G TS25.141 V3.6.0 6.1.1.6.2 PICH)
ch6 : CPICH
ch2-3, 7-12: OFF
Add ch: OCNS (TS25.101 V3.6.0 table C.6)
      Scrambling code number = 00h

```

- DISDN8s8
- DISDN8s9

- * P-CCPCH: 11 bits SFN is mapped on BCH.
- * DL_DPCH: DPCH_Ec/Ior conforms to BLER=10⁻² of “Demodulation of DCH”.
- * PICH: Conformity to TS25.141 6.1.1.6.2 PICH
- * OCNS: PN9 that added offset to initial value in each code
OCNS of one frame cycle which reset PN9 in each frame

ULRMC12k

```
Pattern Contents (No. 8;ULRMC12k)
Channel combination : TS25.104 V3.6.0 Annex A.2
UL reference measurement channel for 12.2 kbps

ch1 : DPCCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (60 kbps)
      3G TS25.211 V3.6.0, TS25.212,213 V3.5.0
ch5-12: OFF
Add ch: OFF
```

ULRMC64k

```
Pattern Contents (No.11;ULRMC64k)
Channel combination : TS25.104 V3.6.0 Annex A.3
UL reference measurement channel for 64 kbps

ch1 : DPCCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (240 kbps)
      3G TS25.211 V3.6.0, TS25.212,213 v3.5.0
ch5-12: OFF
Add ch: OFF
```

ULRMC144

```
Pattern Contents (No. 9;ULRMC144)
Channel combination : TS25.104 V3.6.0 Annex A.4
UL reference measurement channel for 144 kbps

ch1 : DPCCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (480 kbps)
      3G TS25.211 V3.5.0, TS25.212,213 V3.5.0
ch5-12: OFF
Add ch: OFF
```

ULRMC384

```
Pattern Contents (No.10;ULRMC384)
Channel combination : TS25.104 V3.6.0 Annex A.5
UL reference measurement channel for 384 kbps

ch1 : DPCCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (960 kbps)
      3G TS25.211 V3.6.0, TS25.212,213 V3.5.0
ch5-12: OFF
Add ch: OFF
```

PRE

```
Pattern Contents (No. 3:PRE )
Channel combination : TS25.141 V5.4.0 Annex A.8
UL reference measurement channel
for UL RACH Preamble

ch1-3 : OFF
ch4 : UL RACH PREAMBLE
Scramble=0 Signature=0
ch5-12: OFF
Add ch: OFF
```

R168

```
Pattern Contents (No. 4:R168 )
Channel combination : TS25.141 V5.4.0 Annex A.7
UL reference measurement channel
for UL RACH 168bits

ch1-3,6-12: OFF
ch4,5 : UL RACH 168bits
TFCI=0 Scramble=0 Signature=0
```

R360

```
Pattern Contents (No. 5:R360 )
Channel combination : TS25.141 V5.4.0 Annex A.7
UL reference measurement channel
for UL RACH 360bits

ch1-3,6-12: OFF
ch4,5 : UL RACH 360bits
TFCI=0 Scramble=0 Signature=0
```

C168

```
Pattern Contents (No. 1:C168 )
Channel combination : TS25.141 V5.4.0 Annex A.8
UL reference measurement channel
for UL CPOH 168bits

ch1-3,6-12: OFF
ch4,5 : UL CPOH 168bits
TFCI=0 Scramble=0,8192 Signature=0
```

C360

```
Pattern Contents (No. 2:C360 )
Channel combination : TS25.141 V5.4.0 Annex A.8
UL reference measurement channel
for UL CPOH 360bits

ch1-3,6-12: OFF
ch4,5 : UL CPOH 360bits
TFCI=0 Scramble=0,8192 Signature=0
```

SSDTa

```
Pattern Contents (No. 6:SSDTa )
Channel combination : TS25.141 V5.4.0 Annex A.2
UL reference measurement channel
for 12.2 kbps (SSDT)

ch1-3 : OFF
ch4 : DPDPCH (60 kbps)
ch5 : DPDPCH slot format = #4 Cell ID "A"
ch6-12: OFF
Add ch: OFF
```

SSDTb

```
Pattern Contents (No. 7:SSDTb )
Channel combination : TS25.141 V5.4.0 Annex A.2
UL reference measurement channel
for 12.2 kbps (SSDT)

ch1-3 : OFF
ch4 : DPDPCH (60 kbps)
ch5 : DPDPCH slot format = #4 Cell ID "B"
ch6-12: OFF
Add ch: OFF
```

UL_AMR#1

```
Pattern Contents (No.12:UL_AMR#1)
Channel combination : TS25.104 V3.6.0 Annex A.1
TR25.944 V3.4.0 UL AMR speech TFCS #1

ch1 : DPOCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (60 kbps)
      36 TS25.211 V3.6.0,TS25.212,213 V3.5.0
      36 TR25.944 v3.4.0 4.1.2.2.1.1 DCCH
                          4.1.2.2.1.2 AMR TFCS #1
                          4.1.2.2.2.2
ch5-12: OFF
Add ch: OFF
```

UL_AMR#2

```
Pattern Contents (No.13:UL_AMR#2)
Channel combination : TS25.104 V3.6.0 Annex A.1
TR25.944 V3.4.0 UL AMR speech TFCS #2

ch1 : DPOCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (60 kbps)
      36 TS25.211 V3.6.0,TS25.212,213 V3.5.0
      36 TR25.944 v3.4.0 4.1.2.2.1.1 DCCH
                          4.1.2.2.1.2 AMR TFCS #2
                          4.1.2.2.2.2
ch5-12: OFF
Add ch: OFF
```

UL_AMR#3

```
Pattern Contents (No.14:UL_AMR#3)
Channel combination : TS25.104 V3.6.0 Annex A.1
TR25.944 V3.4.0 UL AMR speech TFCS #3

ch1 : DPOCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (60 kbps)
      36 TS25.211 V3.6.0,TS25.212,213 V3.5.0
      36 TR25.944 v3.4.0 4.1.2.2.1.1 DCCH
                          4.1.2.2.1.2 AMR TFCS #3
                          4.1.2.2.2.2
ch5-12: OFF
Add ch: OFF
```

UL_ISDN

```
Pattern Contents (No.15:UL_ISDN )
Channel combination : TS25.104 V3.6.0 Annex A.1
TR25.944 V3.4.0 UL ISDN

ch1 : DPOCH slot format = #0
ch2-3 : OFF
ch4 : DPDPCH (240 kbps)
      36 TS25.211 V3.6.0,TS25.212,213 V3.5.0
      36 TR25.944 v3.4.0 4.1.2.2.1.1 DCCH
                          4.1.2.2.1.6 ISDN
                          4.1.2.2.2.5
ch5-12: OFF
Add ch: OFF
```




Specifications are subject to change without notice.

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