Product Introduction

MX370112A/MX269912A

TD-SCDMA IQproducer

MG3710A
Vector Signal Generator

MS269xA/MS2830A
Signal Analyzer

MG3710A Vector Signal Generator

MS269xA-020, MS2830A-020/021 Vector Signal Generator option
for MS269xA/MS2830A Signal Analyzer

MX370112A/MX269912A

TD-SCDMA IQproducer
Product Introduction

MG3710A
Vector Signal Generator

MS269xA
Signal Analyzer

MS2830A
Signal Analyzer

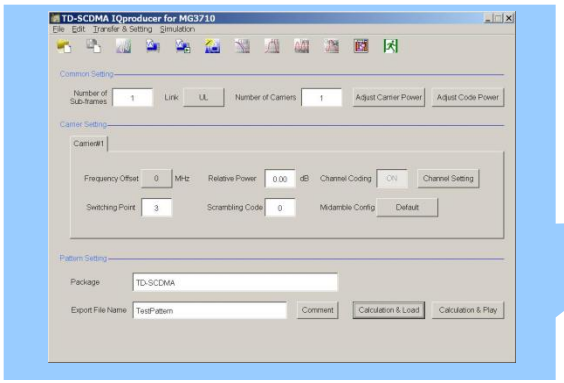
Version 1.00

ANRITSU CORPORATION

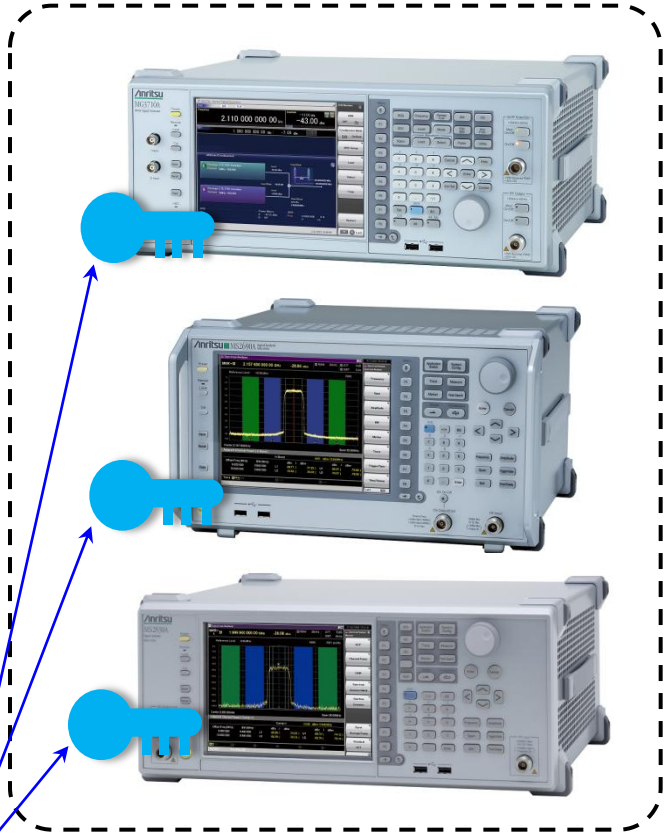
What is TD-SCDMA IQproducer?

The TD-SCDMA IQproducer is PC software for changing parameters and generating waveform patterns in compliance with TD-SCDMA specifications standardized by 3GPP TS25.221, TS25.222, TS25.223, TS25.105, TS25.142 (supports TRx tests excluding performance tests).
The software runs under the Windows OS installed in the MG3710A, MS2690A/91A/92A-020, and MS2830A-020/021.
It outputs modulation signals by selecting generated waveform patterns.

TD-SCDMA IQproducer



Install



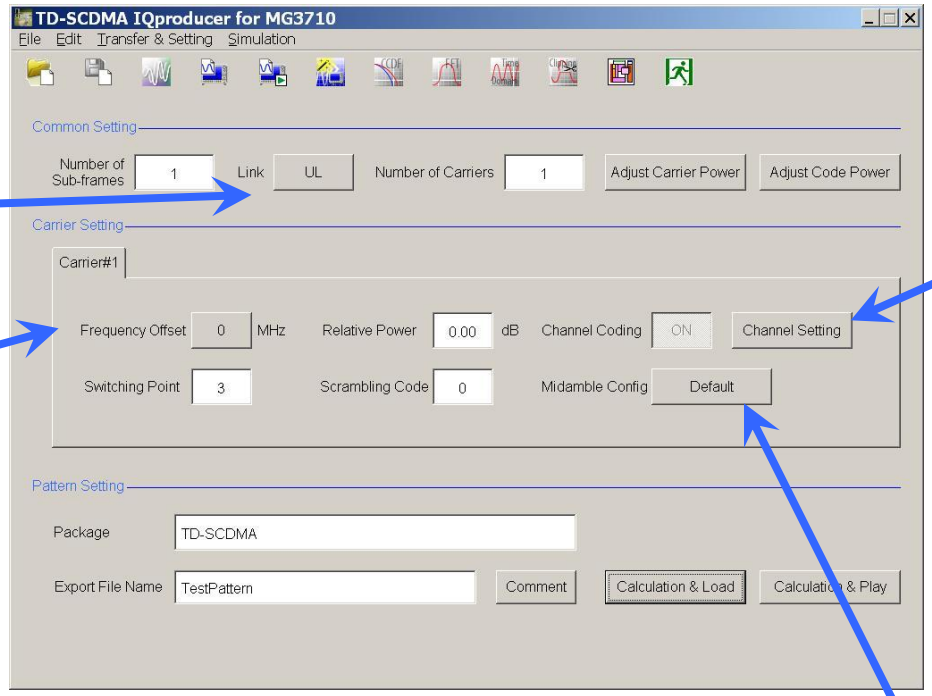
- Generating waveform patterns using TD-SCDMA IQproducer => The main frame requires a license.
The unlicensed software will run on the PC to test waveform pattern generation but an unlicensed SG cannot output signals because it does not recognize the waveform patterns.

- Generating waveform patterns using EDA Tools (C, MATLAB, Microwave Office) => Free license

Main Screen

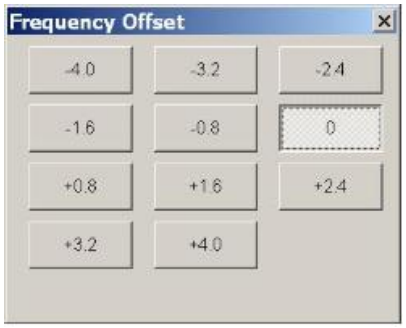
When TD-SCDMA is selected, the Main screen displays all setting parameters.
Supports both uplink and downlink and settings for up to 6 carriers.

TD-SCDMA IQproducer Main Screen



Uplink / Downlink

Frequency Offset



Channel Setting (see next page.)

Midamble Config

***Read the "MX3701xxA IQproducer" and "MX269xxxA series Software" brochure for detail parameter setting range.**

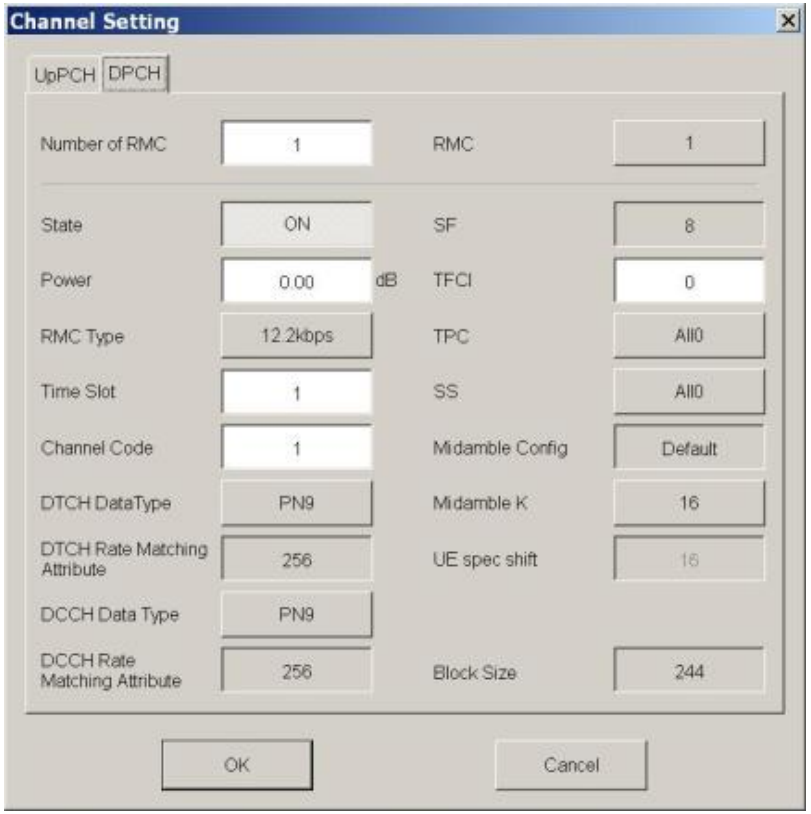
Channel Setting Screen (1/4)

Click Channel Setting to edit downlink channel (when DL is set for Link under Common Setting) or uplink channel (when UL is set for Link under Common Setting), respectively.

Uplink
- UpPCH
- DPCH

Uplink / UpPCH

Uplink / DPCH

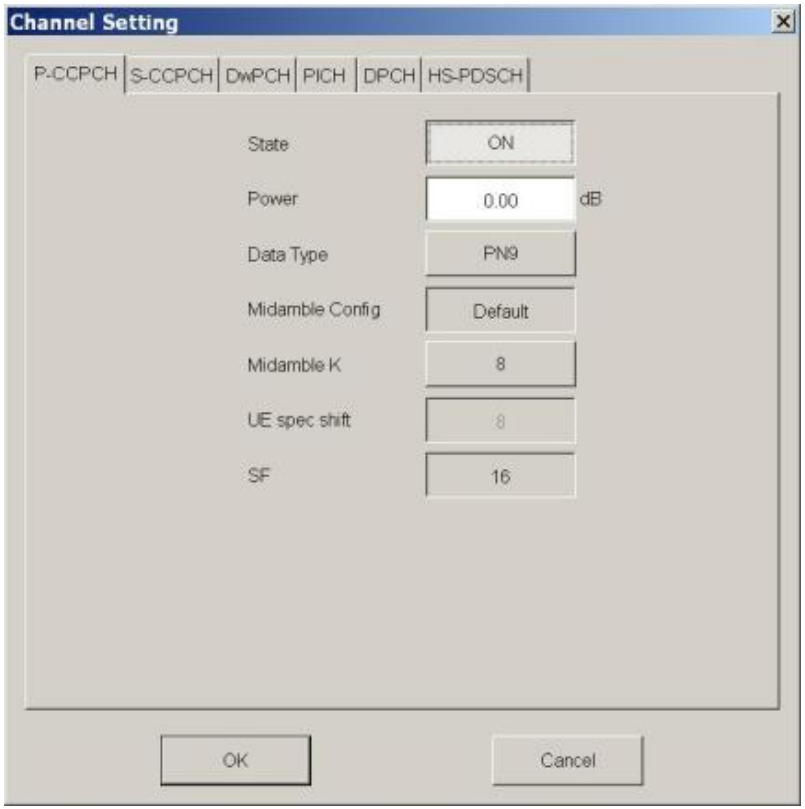


Channel Setting Screen (2/4)

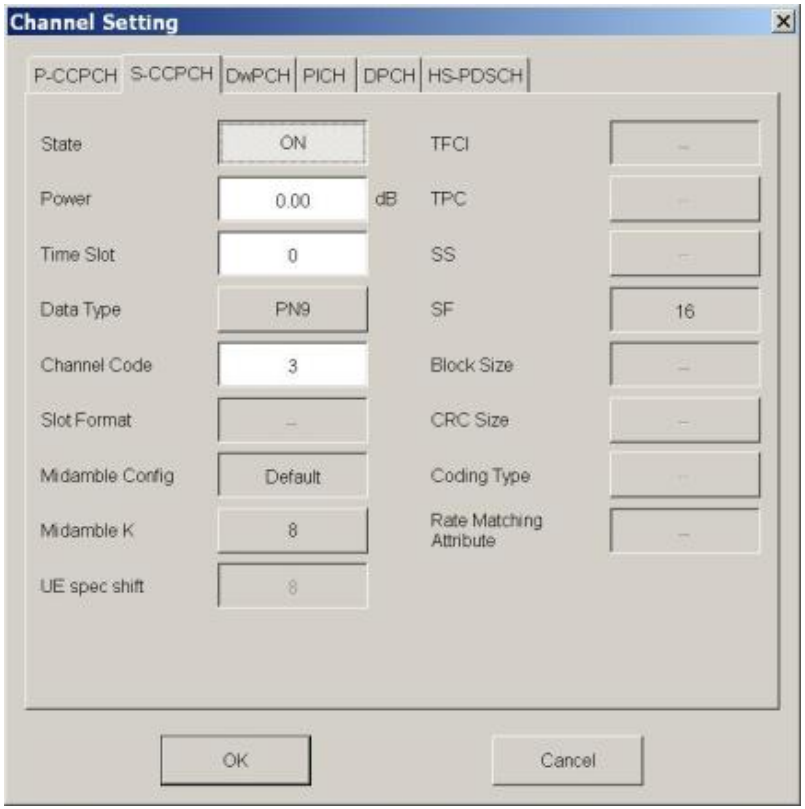
Downlink

- P-CCPCH
- S-CCPCH
- DwPCH
- PICH
- DPCH
- HS-PDSCH

Downlink / P-CCPCH



Downlink / S-CCPCH

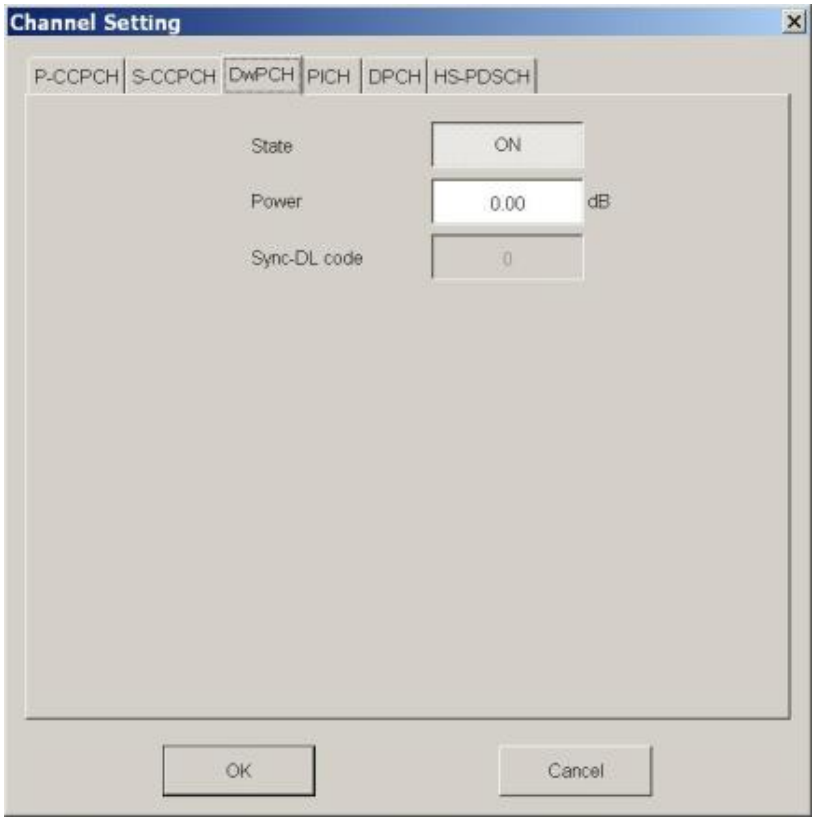


Channel Setting Screen (3/4)

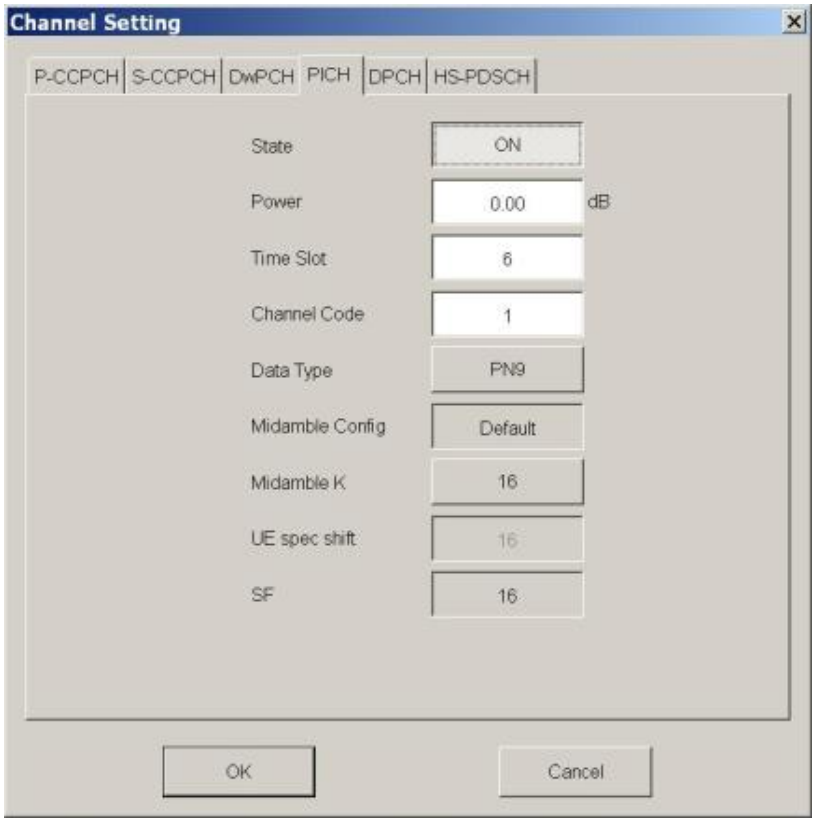
Downlink

- P-CCPCH
- S-CCPCH
- DwPCH
- PICH
- DPCH
- HS-PDSCH

Downlink / DwPCH



Downlink / PCH

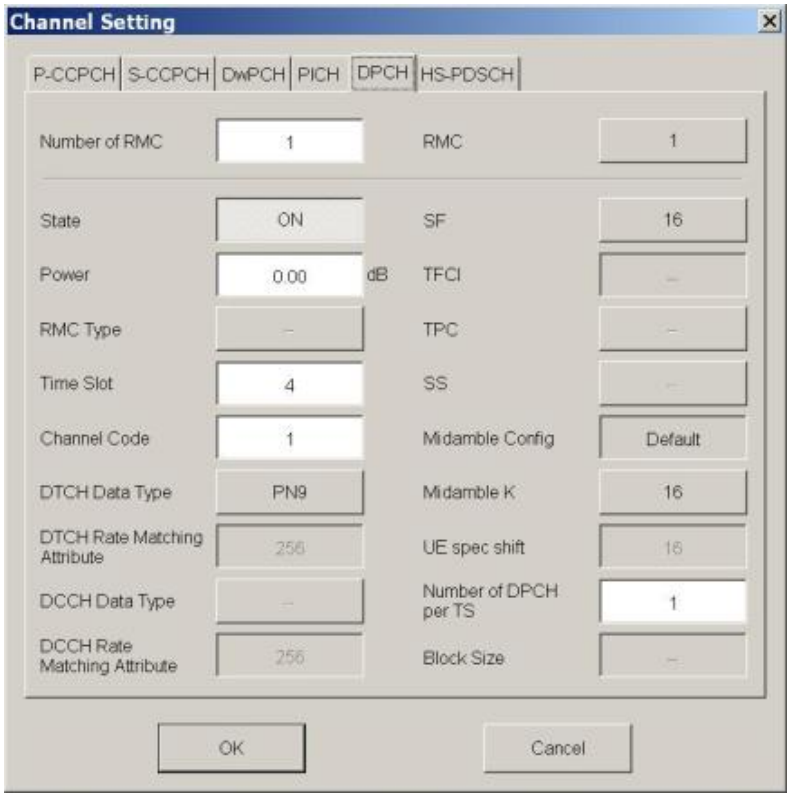


Channel Setting Screen (4/4)

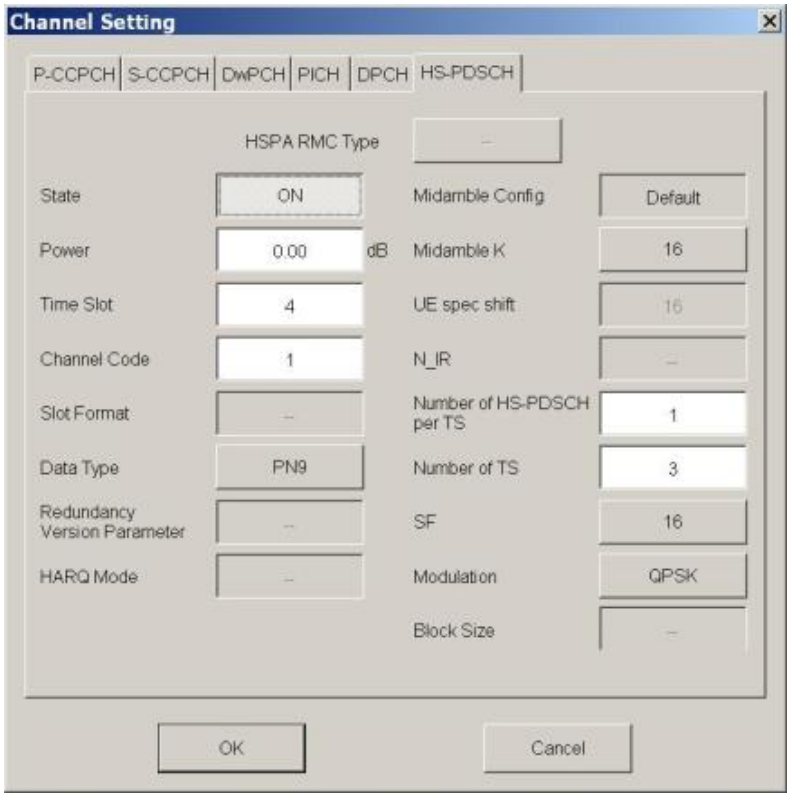
Downlink

- P-CCPCH
- S-CCPCH
- DwPCH
- PICH
- DPCH
- HS-PDSCH

Downlink / DPCH



Downlink / HS-PDSCH



Number of Carriers, Number of sub-frame Setting

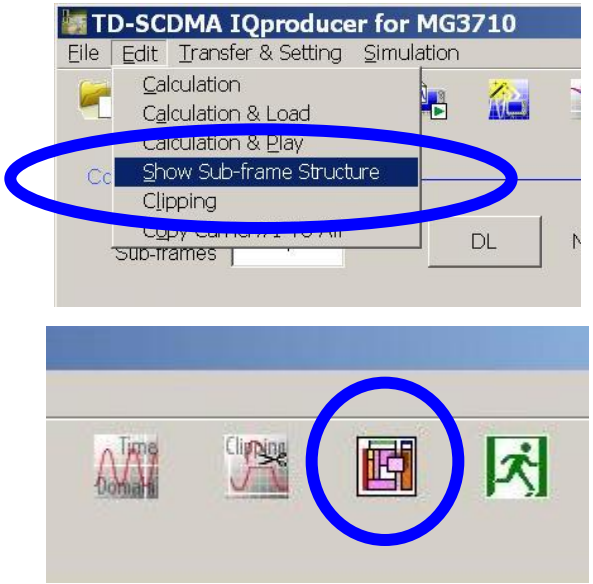
The Carrier Setting tabs are displayed correspond to the value set by Number of Carriers in Common Setting.

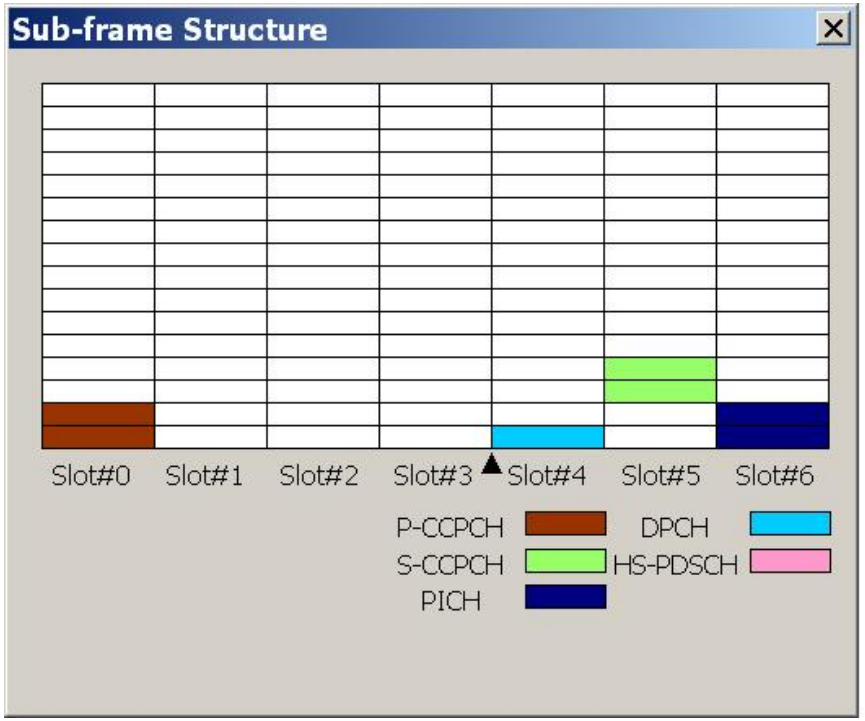
Instru-ment	Number of Carriers	Select Option					
MS269x	Memory	256 Msamples			---		
	1	10485			---		
	2	5242			---		
	3～6	2621			---		
MS2830	Memory Option	Without Option 27(Memory 256Msamples)			With Option 27(Memory 256Msamples)		
	1	2621			10485		
	2	1310			5242		
	3～6	655			2621		
MG3710	Memory Option	Without Memory Option		With Option 45, 75		With Option 46, 76	
	Combination of Baseband Signal Option	Without Option 48, 78	With Option 48, 78	Without Option 48, 78	With Option 48, 78	Without Option 48, 78	With Option 48, 78
	Memory	64 M samples	64 M samples x2	256 M samples	256 M samples x2	1024 M samples	1024 M samples x2
	1	2621	5242	10485	20971	20971	20971
	2	1310	2621	5242	10485	10485	10485
	3～6	655	1310	2621	5242	5242	5242

Sub-frame Structure Screen (1/2)

Displays RU (Resource Unit) for each channel in different colors.
Arranges in cells for 7 slots (for 1 Sub-Frame) in RU units.
- Horizontal axis: Time Slot, 7RU
- Vertical axis: Channel Code, 16RU

Note that this screen is only for display, and thus cannot be edited.





Downlink: The RU (Resource Unit) of each channel to be displayed when Link is DL: P-CCPCH, S-CCPCH, PICH, DPCH, HS-PDSCH. DwPCH is not displayed.
Uplink: The RU (Resource Unit) of each channel to be displayed when Link is UL: DPCH. UpPCH is not displayed.

Sub-frame Structure Screen (2/2)

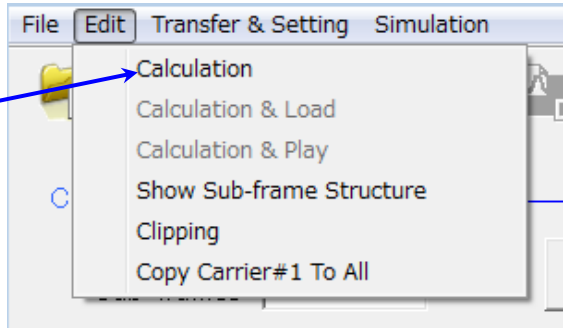
For the details about how many RUs, Time Slots, and Chanel Codes a single channel occupies, refer to Table.

The numbers of RUs, Time Slots, and Channel Codes occupied by a single channel

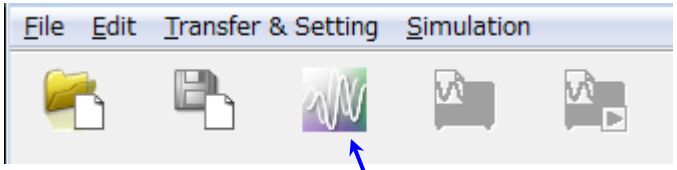
Channel or RMC Type	No. of Time Slot	No. of Channel Code	No. of RU
C-CCPCH	1	2	2
S-CCPCH	1	2	2
PICH	1	2	2
DPCH (Link = DL)	1	Number of DPCH per TS	Number of DPCH per TS
HS-PDSCH	Number of TS	Number of HS-PDSCH per TS	(Number of TS) × (Number of HS-PDSCH per TS)
RMC UL 12.2kbps	1	2	2
RMC UL 64kbps	1	8	8
RMC UL 144kbps	2	8	16
RMC UL 384kbps	4	10	40

Waveform Generation: Calculation

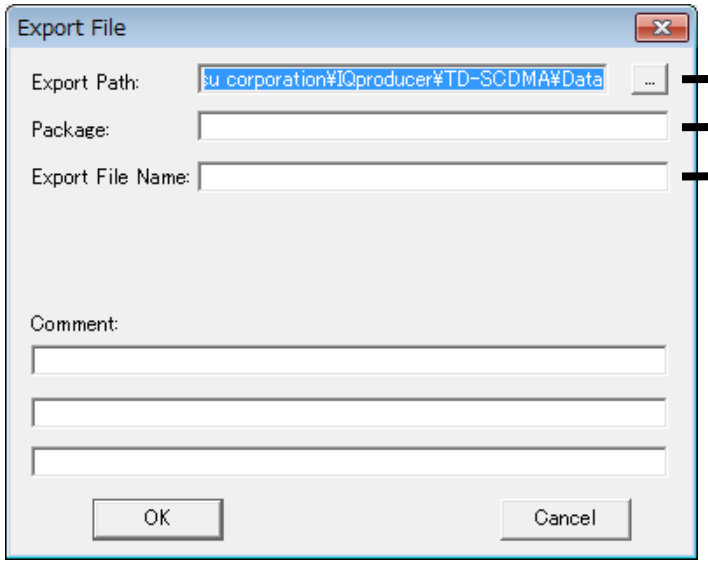
After setting parameters, click the [Calculation] icon to generate the waveform pattern.



Generates waveform pattern



Generates waveform pattern



File export destination folder

Name of waveform pattern package: 31 characters max.

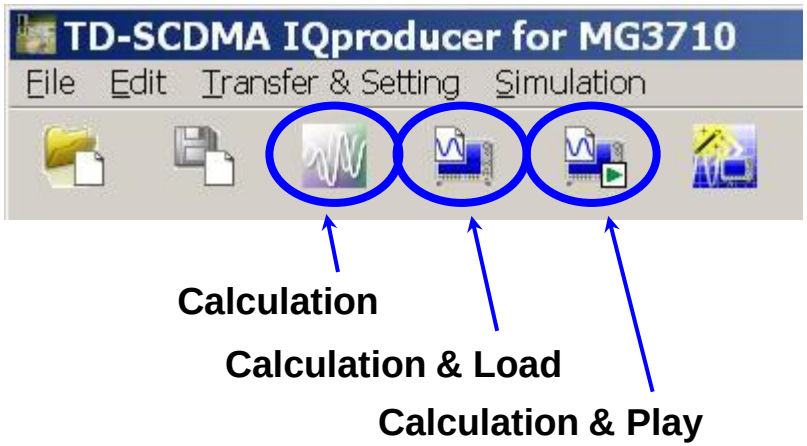
Name of waveform pattern file: 20 characters max.

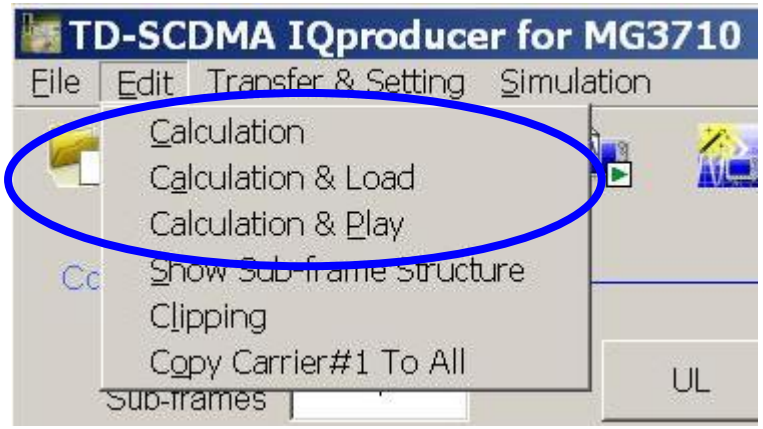
Comment on screen
38 characters max. per line

Calculation & Load & Play

MG3710A only

After setting parameters, click the [Calculation] icon to generate the waveform pattern.





Calculation:

Generates a waveform pattern after parameters are set.
/Calculation/

Calculation & Load:

After waveform generation is finished, the created waveform pattern is loaded into the MG3710A waveform memory.
/Calculation/ > /Load/

Calculation & Play:

After waveform generation is finished, the created waveform pattern is loaded and selected at the MG3710A waveform memory.
/Calculation/ > /Load/ > /Select/

File size of waveform patterns

MG3710A only

The presence/absence of the ARB Memory Expansion (option) and Baseband Signal Combination Function (option) is selected. Selecting the ARB Memory Expansion (option) and the Baseband Signal Combination Function (option) generates a bigger waveform pattern, while selecting the Baseband Signal Combination Function (option) generates a waveform pattern. If an uninstalled option is selected, sometimes the created waveform pattern may not be usable. Set the combination of installed options based on the following setting items.

Items	Combinations of Options
Memory 64M samples	None
Memory 64M samples × 2	Option48 and Option 78
Memory 256M samples	Option45 or Option 75
Memory 256M samples × 2	Option 45 and Option 48 or Option 75 and Option 78
Memory 1024M samples	Option46 or Option 76
Memory 1024M samples × 2	Option 46 and Option 48 or Option 76 and Option 78

The maximum size of the generated waveform pattern for each of the setting items is shown below.

Items	Maximum Size
Memory 64M samples	64M samples
Memory 64M samples × 2 (With Option48, 78)	128M samples
Memory 256M samples	256M samples
Memory 256M samples × 2 (With Option48, 78)	512M samples
Memory 1024M samples	512M samples
Memory 1024M samples × 2 (With Option48, 78)	512M samples

File size of waveform patterns

MS269xA/MS2830A only

MS2830A:

Select whether the ARB memory expansion option 256Msamples is installed.

Selecting With Option27 (Memory 256M samples) supports creation of larger waveform patterns. If the ARB memory expansion option is not installed, the generated waveform pattern may not be able to be used. Waveform patterns cannot be created with a size greater than 64M samples when Without Option27 (Memory 256M samples) is selected. Select either according to the presence of ARB memory expansion option.

Model	Items	ARB Memory Expansion
MS2830A	With Option27 (Memory 256M samples)	1 GB
	Without Option27 (Memory 256M samples)	256 MB

MS269xA:

ARB Memory Expansion (option) is not available for MS269xA. Only Memory 256M samples, 1 GB is available.

Anritsu

Specifications are subject to change without notice.

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