

# Heal Force Thermal Cyclers

PCR platform you can depend on





# A trusted brand delivering your choice

For over 10 years we have specialized in thermal cyclers with proven performance and unmatched combination of features, just right for every laboratory, whether you run only a few samples per week or perform high-through processes.

Thousands of our products are in daily use around the globe, helping scientists, health professionals and laboratory managers achieve high levels of accuracy and consistency in their work.

Our dedication to PCR is a guarantee that we will continue to provide best solutions with the best services for many years to come.

We believe in giving our customers a choice in how they use our thermal cyclers, supported by excellent service and support. We aim to deliver value for our customers who partner with us and we believe that responsibility is the keystone for all our business activities.



## Welcome to Heal Force

2003

The Thermal Cycler manufacturer center was established in Hangzhou, in the same year we cooperated with other innovative Gene companies, and developed the first real-time PCR detection system which was put into mass production.

2005

Membrane liquid-based cell production machine, and 32 well PCR Thermal Cycler (K320) were successfully developed and put into production



# Global coverage, Service and support

Every Heal Force solution comes complete with one extra feature – first class service and support wherever you are in the world. Our service engineers apply their expertise to guide installation, validation and maintenance of your PCR thermal cycler solution in compliance with all the relevant codes.

## Delivering Service Excellence

First-time-fix and customized service contracts to suit budgets and demand.

## Training

'Hands on' operation training (on or off site) to get you up and running first time.

## Right Solution, First Time

We combine the information about your applications - sequencing, cloning, genotyping, mutagenesis, ect, lab design and budget to ensure you get the right solution for your particular needs.



Launched 64-well PCR Thermal Cycler

2007

The gradient Thermal Cycler K960 was successfully developed and put into production

2009

Completed the research and development of the smart gradient Thermal Cycler B960, and put into production

2010

Launched an intelligent gradient Thermal Cycler with large color touch screen.

2012

A brand new generation of real-time PCR ....

2015



# Heal Force Thermal Cyclers...Your Choice

## Solutions finder

This guide will help you select the best solution for your application needs. Our team of technical/application specialists are available to answer questions ,as well as provide friendly, expert advice. ✉ [export@healforce.com](mailto:export@healforce.com)

Model	T960	B960	K960	KF960	K640	K160
Block Formats	96×0.2ml (A) , 54×0.5ml (B) , 96×0.2ml+77×0.5ml (C) , 384well (D)				64×0.2ml (A) 36×0.5ml (B)	30×0.2ml (A) 9×0.5ml (B) 16×0.2+9×0.5ml (C)
Temp Range	0°C-99.9°C	0°C-99.9°C	0°C-99.9°C	0°C-99.9°C	4°C-99.9°C	0°C-99.9°C
Display Interface	7" LCD	5.7" LCD	5.7" LCD	5.7" LCD	4.3" LCD	12864 LCD
Max.Heating Ramp Rate	5.0°C/s	4.5°C/s	4.0°C/s	4.0°C/s	2.5°C/s	2.0°C/s
Max.Cooling Ramp Rate	5.0°C/s	4.0°C/s	3.5°C/s	3.5°C/s	2.5°C/s	2.0°C/s
Heating/cooling adjustable rate	0.1°C/s-4.0°C/s	0.1°C/s-4.0°C/s	1.0°C/s-4.0°C/s	1.0°C/s-4.0°C/s	-	-
Uniformity	±0.2°C	±0.2°C	±0.2°C(20-75°C)	±0.2°C(20-75°C)	-	±0.3°C(20-75°C)
Accuracy	±0.1°C	±0.1°C	±0.2°C	±0.2°C	±0.2°C	±0.2°C
Gradient Temp Range	30-99°C	30-99°C	30-99°C	-	-	-
Thermal Gradient Span	1-30°C	1-30°C	2-30°C	-	-	-
Gradient Uniformity	±0.2°C(single row)	±0.2°C(single row)	±0.2°C(single row)	-	-	-
Hot Lid Temp	20-110°C	20-110°C	30-115°C	30-115°C	-	-
Temp Control Mode	Block, tube*	Block, tube*	Block, tube	Block, tube	Block	Block
Memory Capacity	2000**	1000**	200	200	9	3
Max. No. of Cycle	999	999	99	99	99	99
Communication	USB2.0/RS 232/RJ45	USB2.0/RS 232/RJ45	USB2.0/RS 232	USB2.0/RS 232	-	Serial port
Intelligent Diagnosis	108	108	-	-	-	-
Size(W×D×H,mm)	380×270×250	380×270×250	380×270×250	380×270×250	370×260×290	160×140×120
Weight(kg)	8.1	7.8	7.2	7.2	4.9	2.2

\*10-100ul Optioal

\*\* Unlimited with use of USB memory stick



## Outstanding thermal performance and superior uniformity

If you are like most researchers, you want to get results faster. A key components of overall protocol run time is the time to reach target temperature, which is determined by the average ramp rate and the time for the sample block to reach thermal uniformity. Heal Force thermal cyclers' sample blocks with unique design and treatment heat and cool more quickly to target temperature than standard blocks, so average ramp rates are increased and overall run times are reduced.

In PCR, precise and accurate block control is paramount. Heal Force thermal cyclers have six independently controlled thermal electric modules (TEs)\*, the heating and cooling elements of the thermal cycler, to maintain tight temperature uniformity at all points during a run - even during ramping. Precise, uniform heating and cooling assures superior reproducibility and highest quality results.

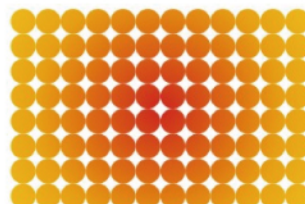
\* Applicable for T960/B960/K960/KF960



Superior uniformity with rapid arrival at target temperature



Gradient temperature diagram



Conventional temperature diagram

## Flexible and interchangeable sample blocks

Since PCR is central to genomics research, you need a flexible platform that can adapt as your research evolves. Heal Force thermal cyclers' modular design gives you a whole new level of versatility. Easy-to-change sample blocks in variety of well formats and materials let you configure a system for a wide range of PCR and cycle sequencing methods - today and tomorrow.

### T960/B960/K960/KF960 Reaction Modules for PCR

96-well Reaction Module, Gradient Enabled*	- Holds 96×0.2ml tubes or one 96-well plate
54-well Reaction Module, Gradient Enabled*	- Holds 54×0.5ml tubes
96-well+77-well Reaction Module, Gradient Enabled*	- Holds 96×0.2ml tubes, one 96-well plate or 77×0.5ml tubes
384-well Reaction Module.	- Holds one 384-well plate

### K640 Reaction Modules for PCR

64-well Reaction Module	- Holds 64×0.2ml tubes
36-well Reaction Module	- Holds 36×0.5ml tubes

### K160 Reaction Modules for PCR

30-well Reaction Module	- Holds 30×0.2ml tubes
9-well Reaction Module	- Holds 9×0.5ml tubes
16-well+9-well Reaction Module	- Holds 16×0.2ml tubes or 9×0.5ml tubes

\* Gradient function is not applicable to KF960

# Genemate T960's advanced technology highlight

## Overview

The Genemate T960 Touch cycler is the flagship of Heal Force thermal cycling platform, offering unmatched performance for fast, accurate results and a state-of-the-art interface with new ways to optimize protocols and meet any researcher's unique needs. Choose from multiple interchangeable reaction modules, Use the intuitive touch screen interface, Optimize PCR assays using the gradient feature, Transport your files and data with a USB flash drive, Connected to your laptop/PC for remote monitoring and future upgrading... What else do you need from a PCR cycler?

## Intuitive touch screen makes running PCR easier than ever before!

The powerful, yet simple-to-operate user interface on the T960 system is driven by the 7-inch colorful touch screen. The large and intuitive graphical screen allows for real-time viewing of your temperature profiles. Additionally, the large navigation buttons put programming of the T960 Thermal Cycler at your fingertips. Set-up and navigation do not require the use of a stylus or mouse.



T960 Intuitive Touch Screen

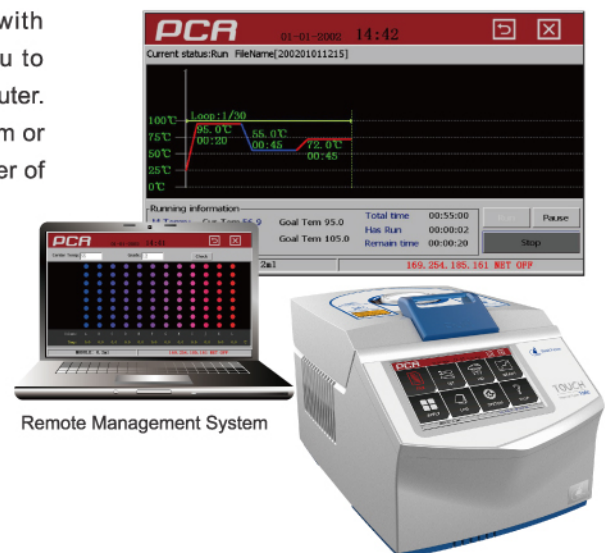
## Realization of intelligence!

Adopt the windows CE operating system to ensure the realization of intelligent instrument, with more than 100 self-diagnostic functions.

T960 achieves the network connection independently, users can visit our official website to update version, which prevent the complex operations and inconvenience of the traditional program updating.

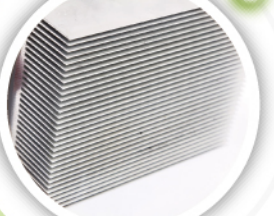
## Remote Management System from anywhere and everywhere!

Access your T960 Thermal Cyclers everywhere you go with optional Remote Management Software, which allows you to manage and monitor over 200 thermal cyclers from your computer. Create and edit methods on your computer and download from or upload to your Thermal Cyclers systems as needed. The power of the T960 Thermal Cycler is just a click away.



Remote Management System

Windows CE  
Win CE 4.0.0 (Build 9 on Aug 22 2021)



#### Reliable lids

- Specially designed lids reduce the evaporation during PCR
- Hinge utilized in laptop industry makes lid open more flexible
- Knob helps to accommodate a wide variety of PCR consumables

#### Environment & user friendly

- Optimized to very low energy consumption
- With its ultra-quiet ventilation, low noise levels are achieved, Enjoy it!

#### Patented portable design for blocks

- Versatile configuration options
- Gold/Silver coated blocks increase heat conduction efficiency
- Portable design is easy for sample blocks interchange without maintenance

#### Powerful heart and memory

- 2000 protocols on board, unlimited with use of USB memory stick
- ARM Platform, Windows CE operating system
- USB2.0, RS232, RJ45 communication port

#### Large colorful touch screen display

- 7 inches full color display, with touch screen operation
- Intuitive graphical programming
- Make a reservation and alarm for daily lab work
- Support the function of TM value calculation

#### Simple data transfer

- Portability: Transfer methods between Genemate systems via USB Ports
- Backup: Store your most important methods on a USB memory stick
- Storage: Store an unlimited number of methods by using a USB memory stick
- Uploads: Update firmware when enhancements become available



# B960

# Smart Gradient Thermal Cycler

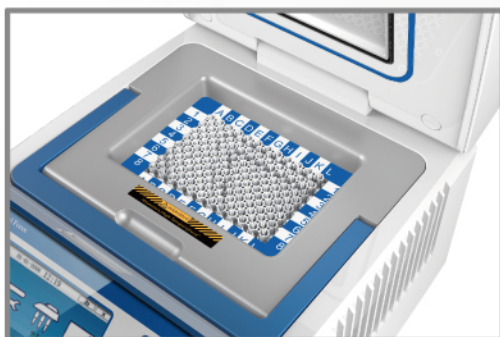
## Reliable guarantee for the accuracy of the temperature

Temperature extended control mode which is closer to required experiment temperature control and is able to effectively avoid the system error caused by the disaccord of the temperature points among the instrument's display temperature, actual block temperature and the temperature required for reagents. So as to improve the accuracy of the experiment and ensure the high efficiency, Strict temperature control debugging program makes sure that each instrument can meet the needs of different experiments.

12 channel temperature probes detect simultaneously, which ensure the homogeneity of sample temperature. The hermetic-space technique can efficiently eliminate PCR marginal effect. The technique of outside temperature probe tracing the inside curve testing can effectively ensure the accuracy of sample temperature.



Adjustable Hot Lid

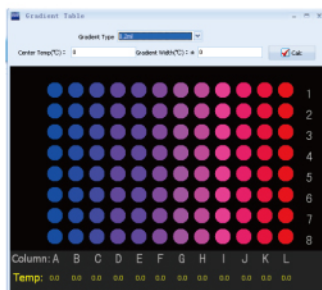


Interchangeable Blocks

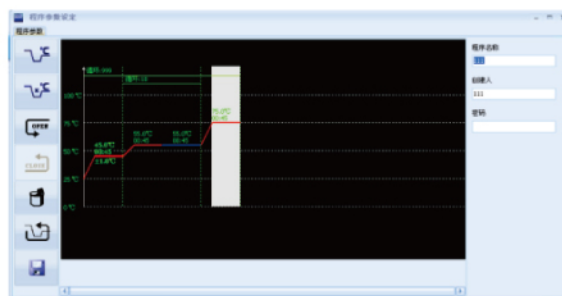


Communication Ports





Gradient Calculator by PC Software



Protocol set by PC Software

## Features

- Convenient and flexible module change
- Hermetic seal protects blocks from condensation, maximizing their life.
- Two-stage hot lid pressure regulator, endures good sealing performance
- Gold-plated or silver-plated module improves the efficiency of heat conduction
- Large size and color super-high-definition LCD screen.
- Intuitive and user-friendly interface, makes programming quick and easy.
- Infinitely adjustable lid knob, suitable for various types of tubes.
- Memory function in case of power-down.
- Low noise, low energy consumption, long service life.
- Heat lid could be positioned at any angle for easy sample access
- Metal material lid, more reliable and safe.
- Hard disk and mouse can be linked.
- Linked with PC for its multiple control.
- Windows operating system.
- Convenient, free-charge program upgraded.
- Remote diagnosis system for easy maintenance
- Achieve circulation nesting.
- 110-220V international general voltage.



Remote Management System

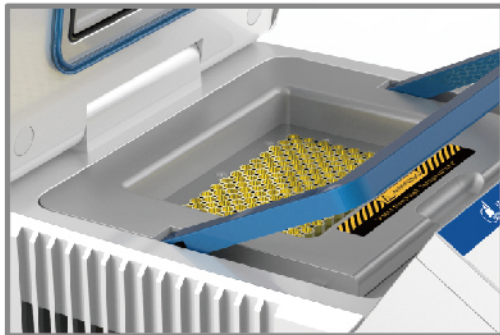


# K960

## Gradient Thermal Cycler

### The most advanced semiconductor technology (Peltier based)

No matter how you configure your K960 gradient thermal cycler system, it provides the high-end performance you need, easily adapts to meet your lab's changing PCR needs, and helps you stay within your budget. Designed for trouble-free, long-life operation even in the most rigorous environments, the K960 delivers outstanding reproducibility—well-to-well, sample-to-sample, and instrument-to-instrument.



Interchangeable Blocks



Adjustable Hot Lid



Hermetic Seal Protects Blocks from Condensation



## Product features

- Convenient and flexible module replacement modular.
- Large size super-high-definition LCD screen.
- Intuitive, user-friendly interface makes program easier and faster.
- Memory function in case of power-down.
- Low noise , low energy consumption, long service life.
- Solemn, elegant appearance, innovative design.
- Adjustable hot lid prevents reagents form evaporating.
- Optimal panel keypad design for convenient operation.
- Heated lid could be positioned at any angle.
- Handle-module, more secure and convenient for module replacement, improving interchanging efficiency and long life span.

## Instrument working conditions:

Ambient temperature: 5℃-30℃

Relative humidity: < 90%

Power supply: AC110V±22V, 220V±22V,250VA,50Hz±10Hz

## Instrument storage conditions:

Ambient temperature: -20℃-55℃

Relative humidity: < 90%



### Technical parameters

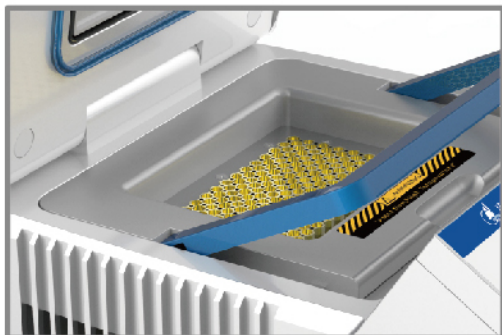
<b>Model</b>	K960-A; K960-B; K960-C; K960-D
<b>Capacity</b>	96×0.2mL(A); 54×0.5mL(B); 96×0.2mL+77×0.5ml (C); 384well (D)
<b>Temp range</b>	0℃~99.9℃ (Rt≤30℃)
<b>Max cooling rate</b>	≥3.5℃/s
<b>Max heating rate</b>	≥4.0℃/s
<b>Heating/cooling rate</b>	1℃/s~4℃/s (Adjustable)
<b>Uniformity</b>	±0.2℃ (20~75℃), ±0.3℃ (95℃)
<b>Accuracy</b>	±0.2℃
<b>Gradient temp range</b>	30℃~99℃
<b>Gradient spread</b>	2℃~30℃

<b>Gradient uniformity</b>	≤0.2℃
<b>Heated lid temp</b>	30℃~115℃
<b>Environment model</b>	Manual select
<b>Temp control</b>	block,tube,calculated
<b>Stored program No.</b>	200
<b>Max. No. of Cycle</b>	99
<b>Display</b>	5.7inch,320×240pels LCD
<b>Communication</b>	USB2.0 / Rs232
<b>Size</b>	380mm(W)×270mm(D)×250mm(H)
<b>Weight</b>	7.2kg
<b>Power supply</b>	110V-220V international general voltage

# KF960 Thermal Cycler

## Overview

Do not let poor instruments compromise your PCR results. Take control of your experiments! Heal Force KF960 thermal cycling system gives you the power to do the experiments you want to do, the way you want to do them. All that experience—millions of reactions a day—adds up to confidence, whether you're doing a few samples, or a few thousand. KF960 supports your constant strive for exceptional uniformity and meaningful results.



Interchangeable Blocks



Adjustable Hot Lid



Hermetic Seal Protects Blocks from Condensation





## Product features

- Convenient and flexible module replacement mode.
- Large size super-high-definition LCD screen.
- Intuitive, friendly user interface makes program easier and faster.
- Memory function in case of power-down.
- Low noise, low energy consumption, long application life.
- Solemn, elegant appearance, innovative model.
- Unique rotating stall heat-regulating function.
- Optimal panel design for more convenient operation.
- Heated lid could be stopped at any angle.
- Handle-module, more secure and convenient module replacement, improving using efficiency and expanding using years.

## Instrument working conditions:

Ambient temperature: 5°C-30°C

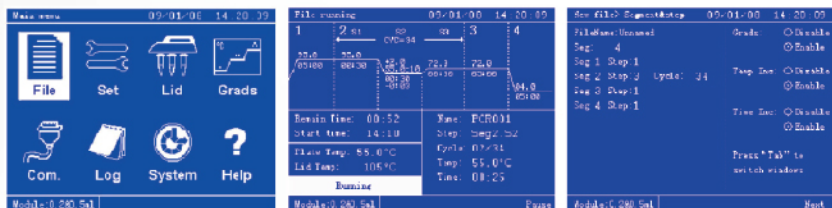
Relative humidity: < 90 %

Power supply: AC110V±22V, 220V±22V,250VA,50Hz±10Hz

## Instrument storage conditions:

Ambient temperature: -20°C-55°C

Relative humidity: < 90%



### Technical parameters

<b>Model</b>	KF960-A; KF960-B; KF960-C; KF960-D
<b>Capacity</b>	96×0.2mL(A); 54×0.5mL(B); 96×0.2mL+77×0.5ml (C); 384well (D)
<b>Temp range</b>	0°C~99.9°C (Rt≤30°C)
<b>Max cooling rate</b>	≥3.5°C/s
<b>Max heating rate</b>	≥4.0°C/s
<b>Heating/cooling rate</b>	1°C/s~4°C/s (Adjustable)
<b>Uniformity</b>	≤±0.2°C (20~75°C)
<b>Accuracy</b>	≤±0.2°C

**Heated lid temp** 30°C~115°C

**Environment model** Manually select

**Temp control** block, tube, calculated

**Stored program No.** 200

**Max. No. of Cycle** 99

**Display** 5.7inch, 320×240pels LCD

**Communication** USB2.0, RS232

**Size** 380mm(W)×270mm(D)×250mm(H)

**Weight** 7.2kg

# K640 Thermal cycler

## Product features

- Adjustable pressure hot lid, to prevent volatilizing and dewing.
- Hot lid with pressure alarm device, to prevent damaging test tube from too much pressure.
- Convenient and flexible module replacement mode.
- Innovative module wire socket design achieves module replacement without wire.
- The unique separate design of amplification and operating area makes users safer and more convenient.



## Technical parameters

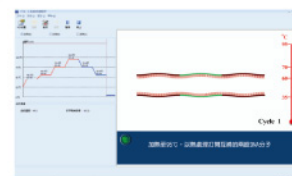
Capacity	64×0.2mL; 36×0.5mL
Temp range	4℃ ~ 99.9℃
Max heating rate	2.5℃/s
Max cooling rate	2.5℃/s
Temp display accuracy	0.1℃
Accuracy	±0.2℃
Temp fluctuation	±0.1℃
Uniformity	±0.3℃ (20~72℃), ±0.5℃ (95℃)
Max program unit	9
Max cycle steps	9
Max cycle No.	99
Max constant temperature time	50m59s
Max constant temperature	preservation time 99h59m
Stored program No.	100
Size	370mm(W)×250mm(D)×230mm(H)
Weight	5kg



# K160 Mini-PCR

## Product features

- It is small-sized and easy to program with an intuitive user interface.
- The lid adopts the high temperature resistant material and applicable to various types of test tube.
- Memory function in case of power-down.
- Two control modes: PCR control through the PC operating software
- It helps students understand PCR process with animated presentation through PC software
- Achieve circulation nesting.

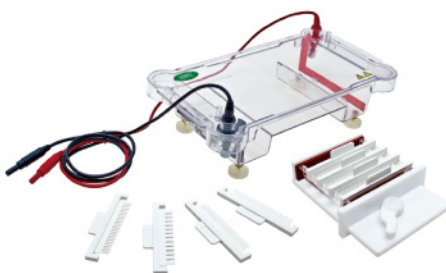


## Technical parameters

Capacity	30×0.2mL(A); 9×0.5mL(B); 16×0.2mL+9×0.5mL(C)
Temp range	0℃~99.9℃ (Rt≤30℃)
Max heating rate	≥2℃/s
Max cooling rate	≥2℃/s
Uniformity	≤±0.3℃ (constant 10s)
Accuracy	≤±0.2℃
Temp control	Block
Stored program No.	3
Max. No. of Cycle	99
Display	12864LCD
Communication	serial port
Size	160mm(W)x140mm(D)x120mm(H)
Weight	2.2kg



## Optional instruments



## **Heal Force Laboratory Equipment**

*Heal Force specialises in the design, development, manufacture and sales of laboratory equipments in the fields of Biosafety protection, Centrifugation, Cell culture, Water purification & Gene amplification.*



### **Biosafety Cabinet**

Heal Force brand stands for the highest standards of safety, ergonomics and performance. Taking advantage of a heritage from over 25 years experience, Heal Force offers safety features, options and accessories beyond the standard requirements, to fulfill virtually all needs. Thousands of units installed in laboratories in more than 100 Countries.

### **Centrifuge**

Neofuge, the name that defines quality centrifuges from Heal Force. Offering bench-top high speed models with or without refrigeration for today' s discerning laboratory technicians. Neofuge series provide excellent centrifugal effect and maximum application versatility.

### **CO<sub>2</sub>/Tri-Gas Incubator**

Heal Force Smart Cell incubator provides you with unsurpassed natural simulation to ensure optimum growth conditions for you culture at all time. That's why it becomes the first choice of researchers in fields of application including tissue engineering, in vitro fertilization, neuroscience, cancer research and other mammalian cell researches.

### **Water Purification**

Well-proved Heal Force water purification system offers ideal and comprehensive solution for a choice of water qualities that range from primary for simple routine washing and rinsing, through to ultra-high grade for the most critical science and analytical applications.

### **Thermal Cycler**

Since PCR is central for molecular biology research, you need flexible solutions that can help you achieve PCR success for virtually any application. Heal Force has been developing new cycling platforms from economical option to advanced series to empower your search. These instruments are renowned for their reliability, accuracy, and user-friendly interfaces.



### **Heal Force Bio-Meditech Holdings Group Nison Instrument (Shanghai) Limited**

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P/N:CL-NISON-EN-LABORATORYEQUIPMENT-PCR-20150803