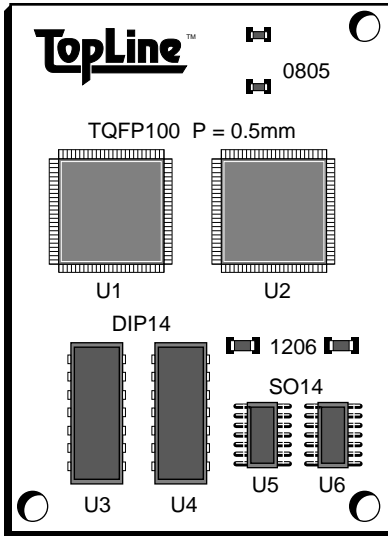




# ECONO KIT II

## MIXED TECHNOLOGY FOR SOLDERING CERTIFICATION



**ACTUAL SIZE:** 2" x 2.75" (50 x 70mm)

TopLine offers an economical, mixed technology kit with fine pitch.

This kit is used by employment agencies for soldering certification.

### FEATURES

- Hot Air Solder Leveling
- LPI Solder Mask
- FR4 Board .062"
- Single Sided
- Tooling Holes .125"
- Plated Throughholes




# ECONO KIT II

## MIXED TECHNOLOGY FOR SOLDERING CERTIFICATION



### KIT ORDERING INFORMATION

COMPONENT	PITCH	 MANUAL ASSEMBLY				
		ORDER NUMBER 938000 1 KIT	ORDER NUMBER 938010 10 KITS	ORDER NUMBER 938025 25 KITS	ORDER NUMBER 938050 50 KITS	ORDER NUMBER 938100 100 KITS
Board		1	10	25	50	100
LQFP100	0.5mm	2	20	50	100	200
SO14	50mil	2	20	50	100	200
DIP14	100mil	2	20	50	100	200
0805 Chip		2	20	50	100	250
1206 Chip		2	20	50	100	250

Note: Kits of 10, 25, 50 and 100 are bulk packed

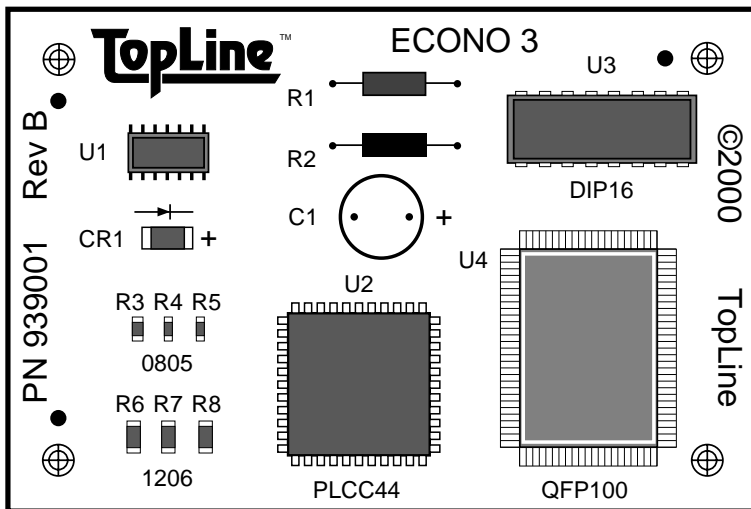
### SPARE PARTS

Components	Quantity	Order Nbr
<i>PC BOARD ONLY</i>	1	938001



# ECONO KIT III

## MIXED TECHNOLOGY FOR SOLDERING CERTIFICATION



TopLine offers an economical, mixed technology kit with popular components including fine pitch.

This kit is used by employment agencies for soldering certification of assemblers.

### FEATURES

- Hot Air Solder Leveling
- LPI Solder Mask
- FR4 Board .062"
- Single Sided
- Plated Throughholes
- Fiducial Marks
- Tooling Holes

**ACTUAL SIZE:** 2" x 3" (50mm x 76mm)




# ECONO KIT III

## MIXED TECHNOLOGY FOR SOLDERING CERTIFICATION



### KIT ORDERING INFORMATION

COMPONENT	PITCH	 <b>MANUAL ASSEMBLY</b>				
		ORDER NUMBER 939000 1Kit	ORDER NUMBER 939010 10 Kits	ORDER NUMBER 939025 25 Kits	ORDER NUMBER 939050 50 Kits	ORDER NUMBER 939100 100 Kits
Board		1	10	25	50	100
QFP100	0.65mm	1	10	25	50	100
PLCC44	1.27mm	1	10	25	50	100
SO16	1.27mm	1	10	25	50	100
DIP16	2.54mm	1	10	25	50	100
0805 Chip		3	30	75	150	300
1206 Chip		3	30	75	150	300
MELF		1	10	25	50	100
1/4W resistor	.5 inch	2	20	50	100	200
AL CAP	.2 inch	1	10	25	50	100

Note: Kits of 10, 25, 50 and 100 are bulk packed

### OPTIONAL ACCESSORIES

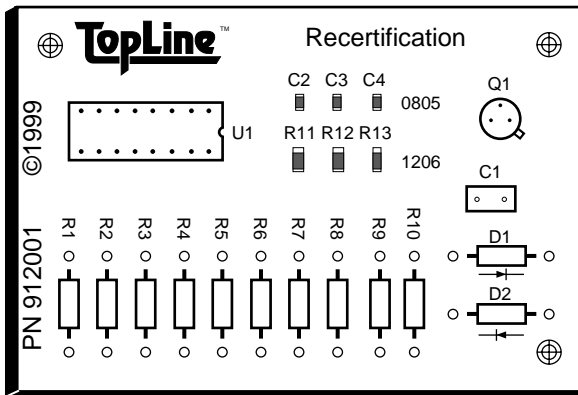
**PARTS PLACEMENT DATA**  
**X, Y, THETA ASCII FILE**  
**ORDER NUMBER 939004**

**SOLDER PASTE STENCIL**  
**ORDER NUMBER 939001**

**SOLDER PASTE ARTWORK**  
**GERBER FILE**  
**ORDER NUMBER 939005**



# ECONO IV MIXED TECHNOLOGY RECERTIFICATION KIT



**ACTUAL SIZE:** 2" x 2.75" (50 x 70mm)

The Econo IV Kit offers an economical mixed technology kit with simple components.

This kit is used for soldering re-certification of assemblers.

### FEATURES


- Hot Air Solder Leveling
- LPI Solder Mask
- FR4 Board .062"
- Single Sided
- Plated Throughholes
- Tooling Holes



# ECONO IV MIXED TECHNOLOGY RECERTIFICATION KIT



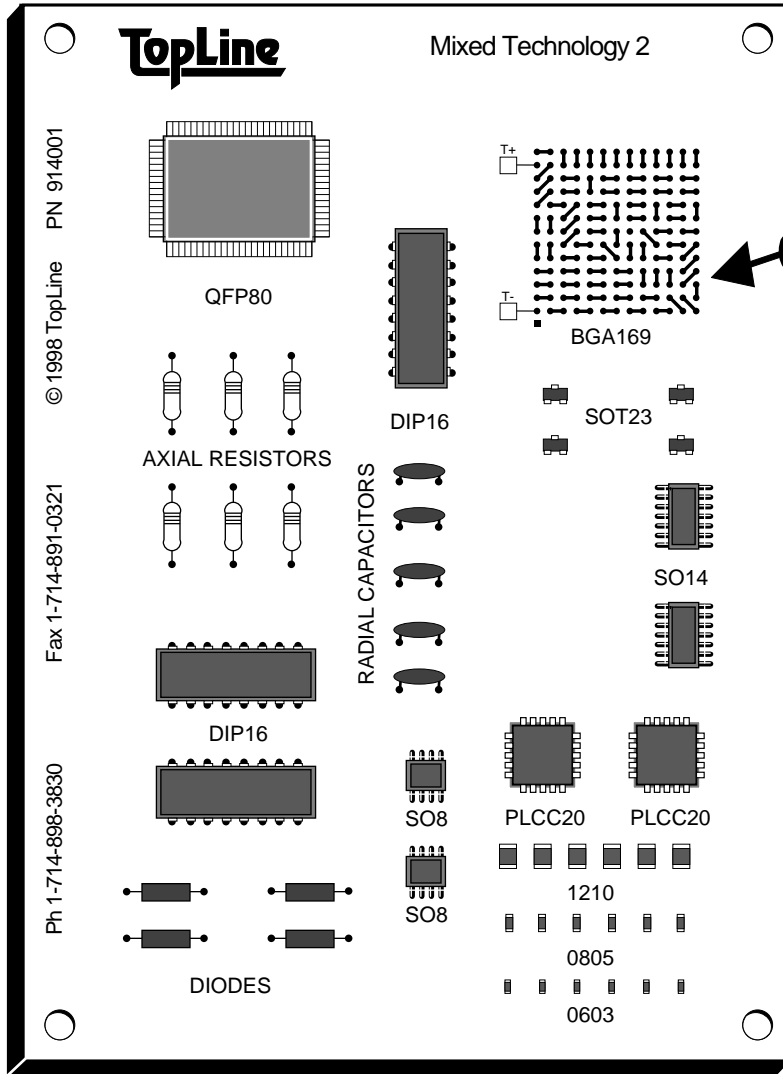
## KIT ORDERING INFORMATION

		 <b>MANUAL ASSEMBLY</b>				
COMPONENT	PITCH	ORDER NUMBER	ORDER NUMBER	ORDER NUMBER	ORDER NUMBER	ORDER NUMBER
		912000 1KIT	912010 10 KITS	912025 25 KITS	912050 50 KITS	912100 100 KITS
Board		1	10	25	50	100
DIP16	IC	1	10	25	50	100
TO-5	Transistor	1	10	25	50	100
CK05	Capacitor	1	10	25	50	100
DO-35	Diode	2	20	50	100	200
0805 Chip	SMD	3	30	75	150	300
1206 Chip	SMD	3	30	75	150	300
1/4 W Resistor	Axial Lead	10	100	250	500	1000

Note: Kits of 10, 25, 50 and 100 are bulk packed.

### OPTIONAL ACCESSORIES

*PC BOARD*  
**ORDER NUMBER 912001**



The mixed technology 2 kit provides plenty of plated throughholes as well as BGA and an easy-to-solder QFP.

**DAISY CHAIN**

PN 914001

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Fax 1-714-891-0321

Ph 1-714-898-3830

Actual Size: 4" x 5.5" (100 x 140mm)

**FEATURES**



- Hot Air Solder Leveling
- LPI Solder Mask
- FR4 Board .062" (standard)
- Single Sided
- Tooling Holes .125"
- Fiducial Marks
- Plated Throughholes



# MIXED TECHNOLOGY 2 KIT



## KIT ORDERING INFORMATION

COMPONENT	PITCH	 MANUAL ASSEMBLY		 MACHINE RUN		
		ORDER NUMBER <b>914000</b> 1 KIT	ORDER NUMBER <b>914010</b> 10 KITS	ORDER NUMBER <b>914025</b> 25 KITS	ORDER NUMBER <b>914050</b> 50 KITS	ORDER NUMBER <b>914100</b> 100 KITS
Board						
QFP80	0.8mm	1	10	25	50	100
BGA169	1.5mm	1	10	25	50	100
SO8	1.27mm	2	25	50	100	200
SO14	1.27mm	2	25	50	100	200
PLCC20	50mil	2	25	50	100	200
SOT23		4	100	250	250	500
1210 Chip		10	100	500	500	1000
0805 Chip		10	100	500	500	1000
0603 Chip		10	100	500	500	1000
<b>THROUGH HOLE COMPONENTS</b>						
DIP16	100mil	3	30	75	150	300
1/4W Resistor	.50"	10	50	500	1000	2500
DO35 Diodes	.50"	10	50	500	1000	2500
Ceramic Cap	.20"	10	50	500	1000	2500

## OPTIONAL ACCESSORIES

**PARTS PLACEMENT DATA**  
**X, Y, THETA ASCII FILE**  
**ORDER NUMBER 914004**

**SOLDER PASTE ARTWORK**  
**GERBER FILE**  
**ORDER NUMBER 914005**

**PC BOARD**  
**ORDER NUMBER 914001**

# PRACTICAL MIXED TECHNOLOGY KIT




P/N 926001

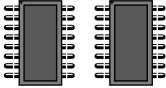
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
Ph 1-714-898-3830



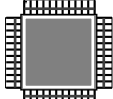
**Practical Kit**



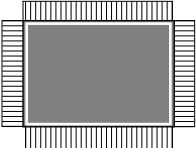
SOM16



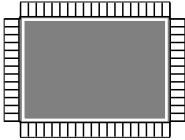
PLCC20




TQFP44 .8mm



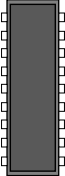
QFP100 .65mm




QFP64 1.0mm



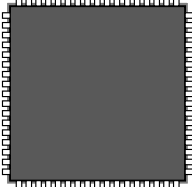
PLCC20




DIP




SOT23



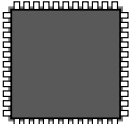
PLCC68



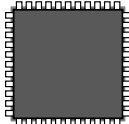
1206 (3216)



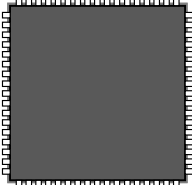
0805 (2012)



PLCC44



PLCC44



PLCC68

A low-cost, mixed technology kit for rework and solder practice. Includes simple-to-handle components. Excellent for beginners. Can also be used for medium speed assembly.

**FEATURES**

- Hot Air Solder Leveling
- LPI Solder Mask
- FR4 Board .062"
- Double Sided
- Tooling Holes .125"
- Fiducial Marks
- Plated Throughholes



Actual Size: 4" x 5.5" (100 x 140mm)



# PRACTICAL MIXED TECHNOLOGY KIT



## KIT ORDERING INFORMATION

COMPONENT	PITCH	 <b>MANUAL ASSEMBLY</b>		 <b>MACHINE RUN</b>		
		<b>ORDER NUMBER</b> <b>926000</b> <b>1 KIT</b>	<b>ORDER NUMBER</b> <b>926010</b> <b>10 KITS</b>	<b>ORDER NUMBER</b> <b>926025</b> <b>25 KITS</b>	<b>ORDER NUMBER</b> <b>926050</b> <b>50 KITS</b>	<b>ORDER NUMBER</b> <b>926100</b> <b>100 KITS</b>
Board		1	10	25	50	100
QFP100	0.65mm	1	10	25	50	100
TQFP44	0.80mm	1	10	25	50	100
QFP64	1.00mm	1	10	25	50	100
PLCC20	50mils	2	25	50	100	200
PLCC44	50mils	2	25	50	100	200
PLCC68	50mils	2	25	50	100	200
SOM16	50mils	2	25	50	100	200
DIP14~18	100mils	1	10	25	50	100
SOT23		10	50	500	500	500
0805 Chip		10	100	500	500	1000
1206 Chip		10	100	250	500	1000

## OPTIONAL ACCESSORIES

<b>PARTS PLACEMENT DATA</b> <b>X, Y, THETA ASCII FILE</b> <b>ORDER NUMBER 926004</b>	<b>PC BOARD</b> <b>ORDER NUMBER 926001</b>
<b>SOLDER PASTE ARTWORK</b> <b>GERBER FILE</b> <b>ORDER NUMBER 926005</b>	



PN 969601

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Fax 1-714-891-0321

Ph 1-714-898-3830

## TopLine Mixed Technology Kit

PLCC 68

QFP100 .65mm

SOL 20

A Tantalum C

B D

Pot.

SOM 16

PLCC 20

MINI MELF

MELF

SO 14

SOT 23

SOT 89

SOT 143

SOT 223

D PAK

0805 (2012)

1206 (3216)

1210 (3225)

1812 (4532)

2225 (5664)

Plated Through holes

Experiment with mixed technology. Combines easy-to-handle SMD components plus plenty of through-hole components on 100mil grid.



### FEATURES

- Hot Air Solder Leveling
- LPI Solder Mask
- FR4 Board .062"
- Double Sided
- Tooling Holes .125"
- Fiducial Marks
- Plated Throughholes

Actual Size: 4" x 5.5" (100 x 140mm)



## KIT ORDERING INFORMATION

COMPONENT	PITCH	 <b>MANUAL ASSEMBLY</b>		 <b>MACHINE RUN</b>		
		ORDER NUMBER	ORDER NUMBER	ORDER NUMBER	ORDER NUMBER	ORDER NUMBER
		969600	969610	969625	969650	969699
		1 KIT	10 KITS	25 KITS	50 KITS	100 KITS
Board		1	10	25	50	100
QFP100	0.65mm	1	10	25	50	100
SO14	50mils	1	10	25	50	100
SOM16	50mils	1	10	25	50	100
SOL20	50mils	1	10	25	50	100
PLCC20	50mils	1	10	25	50	100
PLCC68	50mils	1	10	25	50	100
DIP14~20	100mils	4	40	100	200	400
SOT23 & SOT89		3	30	250	500	500
SOT143		1	10	25	50	100
SOT223		1	10	25	50	100
DKPAK		1	10	25	50	100
Tantalum-A		1	10	25	50	250
Tantalum-B		1	10	25	50	250
Tantalum-C		1	10	25	50	100
Tantalum-D		1	10	25	50	100
MELF		2	20	50	100	250
mini-MELF		6	60	500	500	500
Potentiometer		1	10	25	50	100
0805 Chip		10	100	500	500	500
1206 Chip		10	100	250	500	1000
1210 Chip		10	100	250	500	1000
1812 Chip		2	20	100	100	200
2225 Chip		1	10	100	100	100

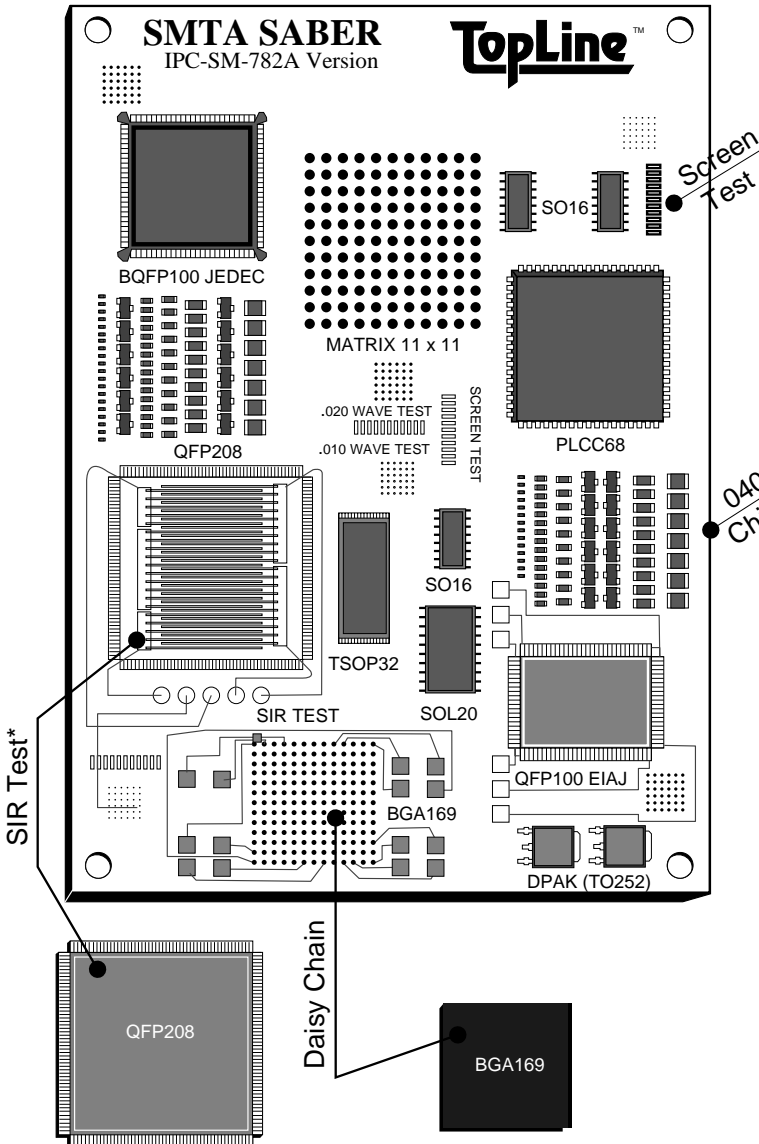
## OPTIONAL ACCESSORIES

<b>PARTS PLACEMENT DATA</b> <b>X, Y, THETA ASCII FILE</b> <b>ORDER NUMBER 969604</b>	<b>PC BOARD</b> <b>ORDER NUMBER 969601</b>
<b>SOLDER PASTE ARTWORK</b> <b>GERBER FILE</b> <b>ORDER NUMBER 969605</b>	



# SABER 4-BOARD ARRAY

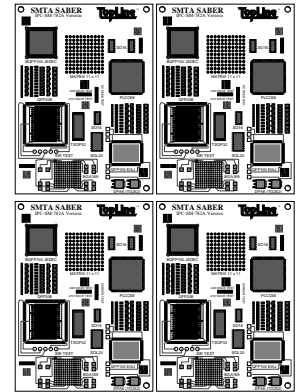
## ADVANCED MIXED TECHNOLOGY



The SABER Board has helped many SMTA members to define and refine their surface mount assembly processes. The SABER Board is used by mainstream surface mount manufacturers throughout the industry to test capabilities such as component placement accuracy, cleanliness (SIR-surface insulation resistance), solder paste screening, solder joint integrity, wave soldering and component placement speed (chip shooting). The SABER Board is supplied as a snap-apart, four board panelized array.

### ACTUAL PANEL SIZE:

8" x 11" (200 x 280mm)



### FEATURES

- Hot Air Solder Leveling
- LPI Solder
- FR4 Board .062"
- Double Sided
- Tooling Holes .125"
- Fiducial Marks
- 4-Board Routed Array





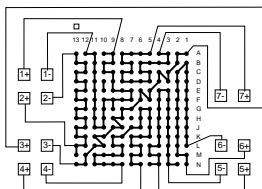
# SABER 4-BOARD ARRAY

## ADVANCED MIXED TECHNOLOGY

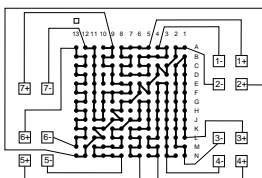


### KIT ORDERING INFORMATION

COMPONENT	PITCH	 <b>MANUAL ASSEMBLY</b>		 <b>MACHINE RUN</b>		
		ORDER NUMBER 950000 4 KITS	ORDER NUMBER 950012 12 KITS	ORDER NUMBER 950024 24 KITS	ORDER NUMBER 950048 48 KITS	ORDER NUMBER 950096 96 KITS
SABER Array		1 Array	3 Arrays	6 Arrays	12 Arrays	24 Arrays
QFP208	0.5mm	4	12	25	50	100
TSOP32	0.5mm	4	12	25	50	100
QFP100	0.65mm	4	12	25	50	100
BQFP100	25mil	4	12	25	50	100
BGA169	1.5mm	4	12	25	50	100
PLCC68	1.27mm	4	12	25	50	100
SO16	1.27mm	12	50	100	200	300
SOL20	1.27mm	4	12	50	50	100
DPAK	1.27mm	10	25	50	100	200
SOT23	1.27mm	100	300	500	1000	3000
0402 Chip	-	100	500	1000	2000	5000
0603 Chip	-	100	500	1000	2000	5000
0805 Chip	-	100	500	1000	2000	5000
1206 Chip	-	100	250	1000	2000	5000
1210 Chip	-	100	200	500	1000	1000
DIP14 ~ 20	100mil	8	25	50	100	200



**BGA AFTER MOUNTING (BACK SIDE)**



**BGA AFTER MOUNTING (TOP SIDE)**

### OPTIONAL ACCESSORIES

**PARTS PLACEMENT DATA**  
**X,Y,THETA ASCII FILE**  
**ORDER NUMBER 950004**

**SOLDER PASTE ARTWORK**  
**GERBER FILE**  
**ORDER NUMBER 950005**

**4-BOARD PANELIZED ARRAY**  
**ORDER NUMBER 950001**

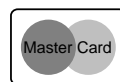


# 2001 Kits & Boards

## HOW TO ORDER

### PAYMENT TERMS

- Credit Terms (Net 30) for established customers.
- American Express, JCB, Mastercard and VISA accepted.



### CONFIRMING PURCHASE ORDERS

- Confirming purchase orders are required for all orders over \$500.

### MINIMUM PER ORDER

- USA/Canada \$50 minimum. • Export \$1000.

### F.O.B. POINT AND SHIPPING

- F.O.B. Garden Grove, California. Please specify preferred method of shipment when placing order.

**TopLine™**

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[www.dummy.tv](http://www.dummy.tv)

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Toll Free USA/Canada 1-800-776-9888  
Tel 1-714-898-3830  
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