

# Teleflex i6000 controls

## Teleflex<sup>®</sup> MARINE

*(electronic control  
— each lever controls  
throttle AND shift)*

CH645XX



CH646XX



CH44XXe



CH5600e



ECU



ACTUATOR



TRIPLE ENGINE  
SELECT PANEL

**Our i6000 combines advanced electronics with over 50 years of mechanical engine control know-how into a system that is the best of all worlds for nearly any boat! The i6000 feels like a control because lever action, throttle and shift response and much more can be tailored to your preferences. Control UP TO 3 ENGINES from ONE CONTROL with Full Power Train Sync!**

## Applications:

i6000 can be used on nearly any boat with 1-2 stations and 1-3 engines, even jet drives.

## Features:

- Works with Nearly Any Boat/Engine!
- Modern & Traditional-styles available.
- Superior feel & sensitivity.
- Independent, adjustable lever feel to suit operator without removing cover!
- Optional Trim Control in the handle!
- Most operation preferences are user-adjustable, including throttle curves, shift delays and much more!
- Full Drive Train Sync with superior memory — Unbeatable One-Hand Control!
- Separate Throttle/Shift Actuators provide great mounting flexibility and double potentiometers for failsafe operation.
- Start-In-Gear Protection, Shift delays.
- Coded Station Select™ (station protection).
- Easy to use emergency “get home” feature.
- Uses standard 3300/33C type control cables on throttle/shift actuator.
- Easy to install with color-coded plug-in connectors.
- Diagnostics (with 100-incident buffer).
- 12 and 24 volt capability.
- Meets/exceeds all applicable standards.

## Use i6000 if . . .

- 1 or 2 stations, 1-3 engines and jets.
- Superior feel and user-adjustable operational preferences are needed.
- Superior One-Touch Engine Sync needed.
- Station Lockout needed.
- Traditional control styling is desired.
- Throttle and Shift are actuated mechanically or electronically.
- Electrical system is 12 or 24 volt.
- Using/adding CANBus/NMEA devices.

**NOTE:** When properly installed, these engine controls will connect to outboard, stern drive and inboard engines, utilizing an electronic interface, special 3300/33C type cables and appropriate engine connection kits.

electronic CANBus control, up to 3 engines and 2 stations

# *i6000 Control System Diagram*

*(dual station, dual engine shown)*



**NOTE:** the "xx" suffix of wire harness part numbers is for the length of the harness in feet. Please see Ordering Guide or part number listing for available lengths for each harness.

Teleflex CANBus network is required for CANBus tachometers and engine synchronization in multi-engine systems:

- CM100xx – Network comm. cable
- CM10050 – CANBus tee
- CM10051 – Male terminator
- CM10052 – Female terminator
- CM10401 – ECU CANBus connection harness

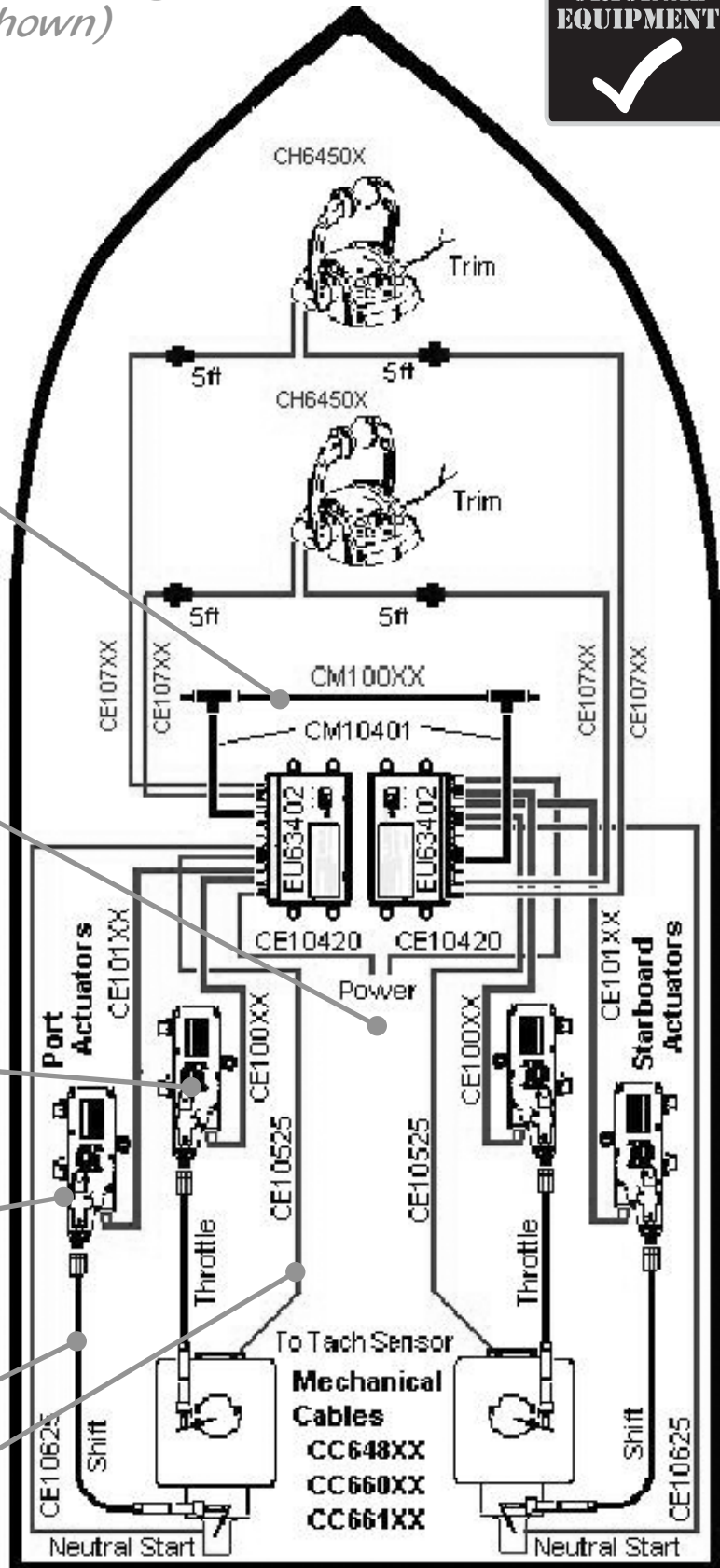
12 or 24 VDC Power must be supplied through a grounded Circuit Breaker providing 10 Amp service for each ECU installed.

Systems with Electronic Shift capability may replace the Mechanical Shift Actuator, its Actuator Cable and its associated wire harness (CE100xx) with wire harness CE108xx, which connects directly from the ECU to the engine's electronic shifter.

Systems with Electronic Throttle Control capability may replace the Mechanical Throttle Actuator, its Actuator Cable and its associated wire harness (CE101xx) with wire harness CE109xx, which connects directly from the ECU to the engine's electronic throttle body.

Wire harness CE106xx connects to the engine's starter or ignition circuit and provides Neutral Start Protection.

Wire harness CE105xx provides tachometer information passed on to the CANBus by the ECU.



CONTROLS electronic CANBus

*Please see next page for Ordering Guide and Part Numbers.*

# Teleflex i6000 controls

## Single Station, Single Engine:

Mechanical throttle & mechanical shift control for ONE engine.

System Code: O-SSSE-TS

ITEM DESCRIPTION	PART #	QTY.	NOTES
<b>BASIC SYSTEM COMPONENTS:</b>			
<b>CONTROL HEAD:</b>			
Control Head (several avail.)	CH64XXX	1	SEE NOTE 1
<b>ACTUATORS:</b>			
Actuator - Throttle (std.)	AC64021	1	
Actuator - Shift (std.)	AC64022	1	SEE NOTE 2
<b>CONTROL CABLE FOR ACTUATOR:</b>			
Control Cable - Actuator	CC648XX	2	SEE NOTE 3
<b>ELECTRONIC CONTROL UNITS (ECUs):</b>			
ECU - Standard	EU64403	1	SEE NOTE 4
<b>CABLES, HARNESSSES &amp; OTHER:</b>			
Harness - ECU-Shift Act.	CE100XX	1	SEE NOTE 5
Harness - ECU-Throttle Act.	CE101XX	1	SEE NOTE 5
i6000 Cable Kit - Sgl. Eng.	i1001-SEX	1	SEE NOTE 6
CAN ECU Com Harness	CM10401	1	(1' harness)
Harness - Neut. Start Protect	CE10625	1	(25' harness)
Harness - Tach Input	CE10525	1	(25' harness)
Battery Cable Kit	CE201XX	1	SEE NOTE 8
Module - DC Relay	i1001	1	
i6000 Instruction Manual	MANUSER6000	1	
<b>OPTIONAL COMPONENTS (select as needed):</b>			
Ext. Harness - Control-ECU	CE107XX	1	SEE NOTE 10
CAN Trunk Cable	CM100XX	1	SEE NOTES 7 & 11
CAN ECU Com Harness	CM10401	1	(1' harm.) SEE NOTE 11
CAN Com Kit (Ts/terminals)	CM20001	1	SEE NOTE 11

## Dual Station, Single Engine:

Mechanical throttle & mechanical shift control for ONE engine.

System Code: O-DSSE-TS

ITEM DESCRIPTION	PART #	QTY.	NOTES
<b>BASIC SYSTEM COMPONENTS:</b>			
<b>CONTROL HEAD:</b>			
Control Head (several avail.)	CH64XXX	2	SEE NOTE 1
<b>ACTUATORS:</b>			
Actuator - Throttle (std.)	AC64021	1	
Actuator - Shift (std.)	AC64022	1	SEE NOTE 2
<b>CONTROL CABLE FOR ACTUATOR:</b>			
Control Cable - Actuator	CC648XX	2	SEE NOTE 3
<b>ELECTRONIC CONTROL UNITS (ECUs):</b>			
ECU - Standard	EU64403	1	SEE NOTE 4
<b>CABLES, HARNESSSES &amp; OTHER:</b>			
Harness - ECU-Shift Act.	CE100XX	1	SEE NOTE 5
Harness - ECU-Throttle Act.	CE101XX	1	SEE NOTE 5
i6000 Cable Kit - Sgl. Eng.	i1001-SEX	1	SEE NOTE 6
CAN ECU Com Harness	CM10401	1	(1' cable)
Harness - Neut. Start Protect	CE10625	1	(25' harness)
Harness - Tach Input	CE10525	1	(25' harness)
CAN Com Kit (Ts/terminals)	CM20001	1	
Battery Cable Kit	CE201XX	1	SEE NOTE 8
Module - DC Relay	i1001	1	
i6000 Instruction Manual	MANUSER6000	1	
<b>OPTIONAL COMPONENTS (select as needed):</b>			
Ext. Harness - Control-ECU	CE107XX	1	SEE NOTE 10
CAN Trunk Cable	CM100XX	1	SEE NOTES 7 & 11
CAN ECU Com Harness	CM10401	1	(1' harm.) SEE NOTE 11
CAN Com Kit (Ts/terminals)	CM20001	1	SEE NOTE 11

Select system components based on number of control stations and engines.

## Single Station, Dual Engine:

Mechanical throttle & mechanical shift control for TWO engines.

System Code: O-SSDE-TS

ITEM DESCRIPTION	PART #	QTY.	NOTES
<b>BASIC SYSTEM COMPONENTS:</b>			
<b>CONTROL HEAD:</b>			
Control Head (several avail.)	CH64XXX	1	SEE NOTE 1
<b>ACTUATORS:</b>			
Actuator - Throttle (std.)	AC64021	2	
Actuator - Shift (std.)	AC64022	2	SEE NOTE 2
<b>CONTROL CABLE FOR ACTUATOR:</b>			
Control Cable - Actuator	CC648XX	4	SEE NOTE 3
<b>ELECTRONIC CONTROL UNITS (ECUs):</b>			
ECU - Standard	EU64403	2	SEE NOTE 4
<b>CABLES, HARNESSSES &amp; OTHER:</b>			
Harness - ECU-Shift Act.	CE100XX	2	SEE NOTE 5
Harness - ECU-Throttle Act.	CE101XX	2	SEE NOTE 5
i6000 Cable Kit - Dual Eng.	i1001-DEXX	1	SEE NOTE 6
CAN ECU Com Harness	CM10401	1	(1' harness)
Harness - Neut. Start Protect	CE10625	1	(25' harness)
Harness - Tach Input	CE10525	1	(25' harness)
CAN Trunk Cable	CM100XX	1	SEE NOTE 7
CAN Com Kit (Ts/terminals)	CM20001	1	
Battery Cable Kit	CE201XX	1	SEE NOTE 8
Module - DC Relay	i1001	1	
i6000 Instruction Manual	MANUSER6000	1	
<b>OPTIONAL COMPONENTS (select as needed):</b>			
Ext. Harness - Control-ECU	CE107XX	2	SEE NOTE 10

## Dual Station, Dual Engine:

Mechanical throttle & mechanical shift control for ONE engine.

System Code: O-DSDE-TS

ITEM DESCRIPTION	PART #	QTY.	NOTES
<b>BASIC SYSTEM COMPONENTS:</b>			
<b>CONTROL HEAD:</b>			
Control Head (several avail.)	CH64XXX	2	SEE NOTE 1
<b>ACTUATORS:</b>			
Actuator - Throttle (std.)	AC64021	2	
Actuator - Shift (std.)	AC64022	2	SEE NOTE 2
<b>CONTROL CABLE FOR ACTUATOR:</b>			
Control Cable - Actuator	CC648XX	4	SEE NOTE 3
<b>ELECTRONIC CONTROL UNITS (ECUs):</b>			
ECU - Standard	EU64403	2	SEE NOTE 4
<b>CABLES, HARNESSSES &amp; OTHER:</b>			
Harness - ECU-Shift Act.	CE100XX	2	SEE NOTE 5
Harness - ECU-Throttle Act.	CE101XX	2	SEE NOTE 5
i6000 Cable Kit - Dual Eng.	i1001-DEXX	1	SEE NOTE 6
CAN ECU Com Harness	CM10401	2	(1' harness)
Harness - Neut. Start Protect	CE10625	1	(25' harness)
Harness - Tach Input	CE10525	1	(25' harness)
CAN Trunk Cable	CM100XX	1	SEE NOTE 7
CAN Com Kit (Ts/terminals)	CM20001	1	
Battery Cable Kit	CE201XX	1	SEE NOTE 8
Module - DC Relay	i1001	1	
i6000 Instruction Manual	MANUSER6000	1	
<b>OPTIONAL COMPONENTS (select as needed):</b>			
Ext. Harness - Control-ECU	CE107XX	2	SEE NOTE 10



**Single Station, Triple Engine:**

Mechanical throttle & mechanical shift control for THREE engines.

**System Code: O-SSTE-TS**

ITEM DESCRIPTION	PART #	QTY.	NOTES
<b>BASIC SYSTEM COMPONENTS:</b>			
<b>CONTROL HEAD:</b>			
Control Head (several avail.)	CH64XXX	1	SEE NOTE 1
<b>ACTUATORS:</b>			
Actuator - Throttle (std.)	AC64021	3	
Actuator - Shift (std.)	AC64022	3	SEE NOTE 2
<b>CONTROL CABLE FOR ACTUATOR:</b>			
Control Cable - Actuator	CC648XX	6	SEE NOTE 3
<b>ELECTRONIC CONTROL UNITS (ECUs):</b>			
ECU - Triple Engine	EU64433	3	SEE NOTE 4
<b>CABLES, HARNESSSES &amp; OTHER:</b>			
Harness - ECU-Shift Act.	CE100XX	3	SEE NOTE 5
Harness - ECU-Throttle Act.	CE101XX	3	SEE NOTE 5
i6000 Cable Kit - Triple Eng.	i1001-TEXX	1	SEE NOTE 9
CAN ECU Com Harness	CM10401	3	(1' harness)
Harness - Neut. Start Protect	CE10625	1	(25' harness)
Harness - Tach Input	CE10525	1	(25' harness)
CAN Trunk Cable	CM100XX	1	SEE NOTE 7
CAN Com Kit (Ts/terminals)	CM20001	1	
Control Panel - Triple Engine	CP67600	1	
"Y" Harness - Triple Engine	CE13000	1	(18" harness)
CAN T-Connector	CM10050	1	
Battery Cable Kit	CE201XX	2	SEE NOTE 8
Module - DC Relay	i1001	2	
i6000 Instruction Manual	MANUSER6000	1	
<b>OPTIONAL COMPONENTS (select as needed):</b>			
Ext. Harness - Control-ECU	CE107XX	3	SEE NOTE 10

**NOTES:**

- CONTROL HEADS — SINGLE ENGINE USE ONLY:**

**CH64600** Top Mount Single Lever no engine trim capability  
**CH64601** Top Mount Single Lever WITH engine trim in handle

**CONTROL HEADS — DUAL AND TRIPLE ENGINE USE:**

**CH64500** Top Mount Dual Lever no engine trim capability  
**CH64502** Top Mount Dual Lever WITH trim in handle

**TRADITIONALLY STYLED UNITS ALSO AVAILABLE:**  
**SINGLE STATION USE ONLY (2 ENGINES MAX.; 1 HEAD/ENGINE):**  
**CH5600e** Top Mount Twin Lever, Domed Binnacle Design  
**CH4451e** Top Mount Twin Lever (smooth action)  
**CH4481e** Top Mount Twin Lever (raked levers, smooth action)  
**CH4482e** Top Mount Twin Lever (raked levers, ratchet action)  
 (Since traditionally-styled controls are designed to look like their mechanical counterparts, they do not have built-in control buttons or displays. When ordering one of these controls, you will also need a Display/Control unit, which requires a 4" wide X 3-1/8" high (minimum) flat mounting surface with a 2-1/2" hole cutout.)  
**CP1100** Display/Control Unit (single engines only)  
**CP1200** Display/Control Unit (dual engines only)
- AC64022 is recommended for most applications; AC64023 is recommended for stern drives and Honda outboards. Systems listed are for mechanically shifted transmissions. For electric shift, order the following components:  
**CE10825** Harness-25', ECU to Transmission (1 per engine)  
**CE10010** Harness-10', ECU to Shift Actuator (1 per engine)  
**AC64022** Actuator - Shift (standard duty) (1 per engine) OR  
**AC64023** Actuator - Shift (high load) (1 per engine)
- XX in part number = cable length in feet. This cable is available in 3-25 foot lengths (in 1-foot increments). Engine connection kits may be required for this cable. Please see engine connection kits section elsewhere in this catalog. (2005 Yamaha 225/250 engines require use of one CA38383P per each actuator control cable.)

**Dual Station, Triple Engine:**

Mechanical throttle & mechanical shift control for THREE engines.

**System Code: O-DSTE-TS**

ITEM DESCRIPTION	PART #	QTY.	NOTES
<b>BASIC SYSTEM COMPONENTS:</b>			
<b>CONTROL HEAD:</b>			
Control Head (several avail.)	CH64XXX	2	SEE NOTE 1
<b>ACTUATORS:</b>			
Actuator - Throttle (std.)	AC64021	3	
Actuator - Shift (std.)	AC64022	3	SEE NOTE 2
<b>CONTROL CABLE FOR ACTUATOR:</b>			
Control Cable - Actuator	CC648XX	6	SEE NOTE 3
<b>ELECTRONIC CONTROL UNITS (ECUs):</b>			
ECU - Triple Engine	EU64433	3	SEE NOTE 4
<b>CABLES, HARNESSSES &amp; OTHER:</b>			
Harness - ECU-Shift Act.	CE100XX	3	SEE NOTE 5
Harness - ECU-Throttle Act.	CE101XX	3	SEE NOTE 5
i6000 Cable Kit - Triple Eng.	i1001-TEXX	1	SEE NOTE 9
CAN ECU Com Harness	CM10401	3	(1' harness)
Harness - Neut. Start Protect	CE10625	1	(25' harness)
Harness - Tach Input	CE10525	1	(25' harness)
CAN Trunk Cable	CM100XX	1	SEE NOTE 7
CAN Com Kit (Ts/terminals)	CM20001	1	
Control Panel - Triple Engine	CP67600	2	
"Y" Harness - Triple Engine	CE13000	1	(18" harness)
CAN T-Connector	CM10050	1	
Battery Cable Kit	CE201XX	2	SEE NOTE 8
Module - DC Relay	i1001	2	
i6000 Instruction Manual	MANUSER6000	1	
<b>OPTIONAL COMPONENTS (select as needed):</b>			
Ext. Harness - Control-ECU	CE107XX	3	SEE NOTE 10

- ECU part numbers/descriptions are as follows:  
**EU64403** ECU for all applications EXCEPT triple engines  
**EU64433** ECU for triple engines only
- XX in part number = harness length in feet. This harness is available in lengths of: 3, 5, 8, 10, 12, 15, and 18 feet.
- XX in part number = cable kit length in feet. This cable kit is available in lengths of: 5 and 10 feet.
- XX in part number = cable length in feet. This CAN trunk cable is available in lengths of: 1, 2, 3, 6, 9, 12, 16, 20 and 30 feet.
- XX in part number = cable kit length in feet. This battery cable kit is available in lengths of: 10 and 20 feet.
- XX in part number = cable kit length in feet. This cable kit is available in lengths of: 5, 10 and 15 feet.
- XX in part number = harness length in feet. This extension harness is available in lengths of: 5, 10, 15, 20, 25 and 30 feet.
- These options are required on single engine systems if connecting other CANBus devices to the system. (They are included as standard in the dual and triple engine systems since multiple engines must communicate during control system operation.)

**JET DRIVE CONTROL SYSTEMS: PLEASE CONTACT TELEFLEX MARINE.**

**TO ENSURE CUSTOMER SATISFACTION,  
 THIS PRODUCT REQUIRES THE SELLER  
 TO BE TECHNICALLY CERTIFIED BY  
 TELEFLEX MARINE.  
 (Please Contact Teleflex Marine for Details.)**

