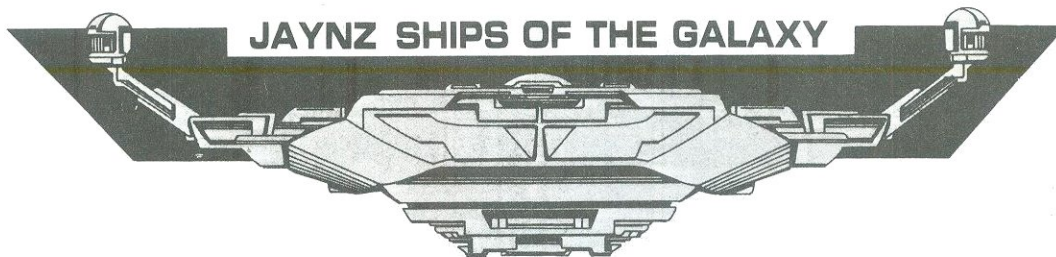
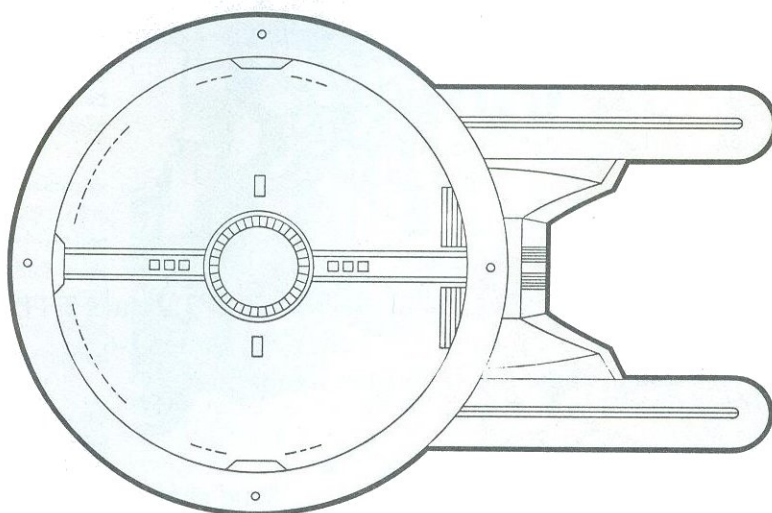
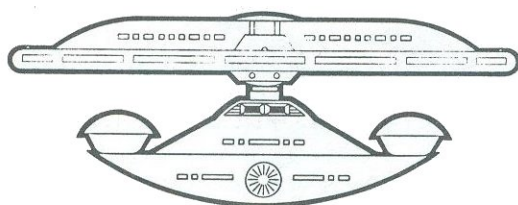
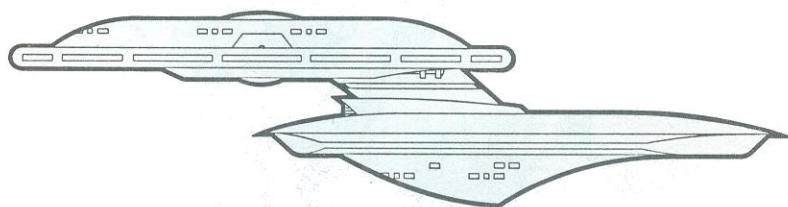


JAYNZ SHIPS OF THE GALAXY



Federation ALBERTO SABELLA Class V Deep Space Tug



CONSTRUCTION DATA:

Model Numbers	Mk.II
Ship Class	V
Date Entering Service	2/1706
Number Constructed	211
Cost	197 MCr

HULL DATA:

Superstructure Points	13
Damage Chart	C
Size:	
Length	117m
Width	76m
Height	50m

Mass Displacement	59,210 mt
Cargo:	
Cargo Units	7 SCU
Cargo Capacity	350 mt
Landing Capability	None
EQUIPMENT DATA:	
Control Computer Type:	M-1
Transporters:	
standard 7-person	2
cargo	1
OTHER DATA:	
Crew	42
Workpods	4
ENGINES AND POWER DATA:	
Total Power Units Available	32
Movement Point Ratio	3/1
Warp Engine Type	FWB-2
Number	2
Power Units Available	14 each
Stress Charts	O/M
Maximum Safe Cruising Speed	Warp 7 (unloaded)
Emergency Speed	Warp 8 (unloaded)
Impulse Engine Type	FIB-2
Power Units Available	4
WEAPONS AND FIRING DATA:	
Beam Weapon Type	FH-1
Number	2 in 1 bank
Firing Arcs	2f
Firing Chart	F
Maximum Power	2
SHIELDS DATA:	
Deflector Shield Type	FSA
Shield Point Ratio	1/1
Maximum Shield Power	9
COMBAT EFFICIENCY:	
D	55.0
WDF	1.0

Space tugs are, by definition, unglamorous vehicles doing an unglamorous job: Hauling cumbersome or disabled spacecraft around a planetary system, into and out of orbit. But the powerful Star Fleet deep-space tugs are a special breed, and the *Alberto Sabella* Class is their proudest exponent. Unlike normal space tugs, which operate close to a starport or space station, deep-space tugs are equipped for operations far from any base, to tow starships at warp speeds back to repair yards or salvage depots. They are the only way a disabled ship or captured prize of war can be recovered, or towed out of the reach of the enemy.

The *Sabellas* were designed in the wake of two significant events in Federation history: the Four Years War, with its heavy toll in ship losses; and the development of commercial supertugs like the *Mule-train* class built for pulling massive cargo containers from asteroid mines to industrial worlds. During the War the Federation was forced to press great numbers of small tugs, commercial and Star Fleet, into service in the front lines, and many of them and their crews, ill-equipped as they were for long-duration duty, suffered greatly. Military Operations and Materiel Command agreed that a new class of deep-space tugs was necessary for service in all front-line bases, to provide rescue and recovery capability near to potential trouble zones.

Space tugs are normally all engine and command pod, but Chandley Works drew up the *Sabella* with lines very much like those of other Star Fleet vessels, complete with a disk-shaped primary hull and a broad secondary hull to which the warp engines were attached. This simplified the design process for the external configuration and the warp stress calculations in particular. A very simple algorithm is

used to determine the stresses any size of load will place on the ship, whether in tractor or pressor mode. The use of the two-hulled design also permitted the placement of roomy and comfortable crew quarters apart from the sizable deck space allocated to the tug's vital engineering functions. Though it is not equipped for long-duration missions like an *Enterprise* Class vessel, a *Sabella* can be away from its source of resupply for up to a standard solar year without hardship to the crew.

The heart of the *Sabella* is its immense tractor/pressor beam arrays, one fore and one aft, that allow it to grapple, tow, or push any vessel up to Class X at warp speeds. Both these systems are located on the main pylon connecting the two hulls, close to both the center of mass and the point of main warp stability. Activation of either system affects the tug's trim and handling capabilities very little as a result, making the *Sabella* a particularly 'forgiving' workhorse.

In addition, each *Sabella* carries four two-man workpods equipped with robotic arms to attach towlines and cables, life-support or power connections to a vessel as needed. These workpods have a normal endurance of eight hours outside the tug's hull; they are not equipped for atmospheric flight.

The normal mission of a *Sabella* is the recovery of vessels stranded in interstellar space. The tug secures relatively intact vessels or hulks, activates its powerful tractors, and hauls it away at warp speed. Because of the careful design of the ship, it can tow vessels of up to Class III size with only a one warp factor reduction in speed — that is, its maximum safe speed becomes Warp 6, and its emergency speed Warp 7. Each weight class above Class III it tows reduces its speed by only one warp factor each, until it reaches Class X. Larger vessels, of course, may be towed by two *Sabellas*, which lose only one warp factor between them above a towed weight of Class III, making their upper weight limit a respectable Class XVII. Of course, such a mass could only be propelled at a maximum speed of Warp 1, but there are few vessels, even among the giant robotic freighters, that even approach such titanic mass. Star Fleet considers this more than ample towing capacity.

Sabellas are not salvage vessels; they do not carry either the tools or the life support to sustain a crew for such tasks. A tow from interstellar space is a lengthy process, and unless the crew aboard any towed vessel already has inherent life support the tug cannot keep them alive. Though armed, *Sabellas* are not warships, and if they must operate in contested space an escort is required. Depending on the amount of damage done to a ship or hulk, setting up for a tow can take as long as a day or as little as twenty minutes — the standing record. They must be protected during that time, when their crews are completely occupied and the vessels are stationary in space.

The *Sabellas* have proven time and again their worth by rescuing vessels that would otherwise have been abandoned in deep space. The entire class of vessels was justified when the *Hortense Milabar* pulled the pirate-stricken liner *Emperor Ankhan* from its doomed course into a star, saving the lives of over 900 passengers and crew, in 2/1910. A more invaluable auxiliary starship would be difficult to conceive.

Sabellas are being manufactured at the shipyards at Sol IV and Sol VI at the rate of six a year. Of the 235 originally built 211 remain in active service; 15 have been sold to private interests, 6 have been lost in action, and 3 have been captured intact by Klingons or Orions.

Original *Alberto Sabella* design by J.M. Kuzee and Pete Rogan.

